February 6, 1996

MEMORANDUM TO: Dennis M. Crutchfield, Director
Division of Reactor Program Management

FROM: Alfred E. Chaffee, Chief
Events Assessment and
Generic Communications Branch
Division of Reactor Program Management

SUBJECT: OPERATING REACTORS EVENTS BRIEFING
JANUARY 31, 1996 - BRIEFING 96-01

On January 31, 1996, we conducted an Operating Reactors Events Briefing (96-01) to inform senior managers from offices of the EDO, ACRS, AEOD, RES, NRR and regional offices of selected events that occurred since our last briefing on December 13, 1995. Attachment 1 lists the attendees. Attachment 2 presents the significant elements of the discussed events.

Attachment 3 contains reactor scram statistics for weeks ending December 17, December 24, December 31, 1995, January 7, 1996, January 21, and January 28, 1996. There were no scrams reported for the week ending January 14, 1996. No significant events were identified for input into the NRC Performance Indicator Program.

Attachments: As stated (3)

cc w/atts:
See next page

CONTACT: Kathy Gray, NRR
(301) 415-1166

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OFFICE	PECB KGray	E	PECB	E	PECB		PECB		SC/PECB	N	C/PECB	N
NAME	KGray:jkd		DSkeen		SKoenick		EGoodwin		RDennig		ACHaffee	
DATE	2/05/96		2/5/96		2/5/96		2/5/96		2/5/96		2/5/96	

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69 - SRD

IDER-5-1
Operating Experiences
X-IDER-5-Facility Licenses

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cc:

W. Russell, NRR (O-12G18)
F. Miraglia, NRR (O-12G18)
F. Gillespie, NRR (O-12G18)
R. Zimmerman, NRR (O-12G18)
A. Thadani, NRR (O-12G18)
S. Varga, NRR (O-14E4)
J. Zwolinski, NRR (O-14H3)
J. Roe, NRR (O-13E4)
E. Adensam, NRR (O-13E4)
B. Sheron, NRR (O-7D26)
G. Lainas, NRR (O-7D26)
G. Holahan, NRR (O-8E2)
M. Virgilio, NRR (O-8E2)
S. Rosenberg, NRR (O-10E4)
R. L. Spessard, NRR (O-9A2)
B. Boger, NRR (O-10H5)
M. Markley, ACRS (T-2E26)
E. Jordan, AEOD (T-4D18)
C. Rossi, AEOD (T-4A9)
F. Congel, AEOD (T-4D28)
K. Brockman, AEOD (T-4A23)
S. Rubin, AEOD (T-4D28)
M. Harper, AEOD (T-4A9)
V. McCree, EDO (O-17G21)
J. Gilliland, PA (O-2G4)
D. Morrison, RES (T-10F12)
W. Hill, SECY (O-16G15)
T. Martin, Region I
R. Cooper, Region I
S. Ebneter, Region II
E. Merschoff, Region II
S. Vias, Region II
H. Miller, Region III
W. Axelson, Region III
L. Callan, Region IV
J. Dyer, Region IV
K. Perkins, Region IV/WCFO
S. Newton, INPO
J. Zimmer, DOE
D. Trimble (O-14H22)
D. Matthews (O-14H22)
T. Alexion (O-13H3)
W. Beckner (O-13H3)

LIST OF ATTENDEES

OPERATING REACTORS EVENTS FULL BRIEFING (96-01)

JANUARY 31, 1996

NAME	OFFICE	NAME	OFFICE
A. CHAFFEE	NRR	S. LEE	NRR
D. SKEEN	NRR	D. JACKSON	NRR
R. DENNIG	NRR	K. NAIDU	NRR
T. KOSHY	NRR	D. TRIMBLE	NRR
K. GRAY	NRR	K. KAVANAGH	NRR
S. KOENICK	NRR	J. MEDOFF	NRR
N. HUNEMULLER	NRR	E. WEISS	NRR
E. GOODWIN	NRR	P. CAMPBELL	NRR
T. ALEXION	NRR	K. THOMAS	NRR
T. QUAY	NRR	M. SHUAIBI	NRR
M. BIAMONTE	NRR	W. BURTON	EDO
G. LAINAS	NRR	E. ROSSI	AEOD
B. GRIMES	NRR	M. MARKLEY	ACRS
R. JONES	NRR	R. MEYER	RES
S. TINGEN	NRR		

TELEPHONE ATTENDANCE
(AT ROLL CALL)

Regions
Region I
Region II
Region III
Region IV

Resident Inspectors

Misc.
J. Blake, Region II

ATTACHMENT 1

OPERATING REACTORS EVENTS BRIEFING 96-01

LOCATION: O-10 B11, WHITE FLINT
WEDNESDAY, JANUARY 31, 1996, 11:00 A.M.

BRUNSWICK, UNIT 1	SLOW SCRAM TIMES CAUSED BY VITON DIAPHRAGMS IN SCRAM SOLENOID PILOT VALVES
SOUTH TEXAS, UNIT 1	FAILURE OF CONTROL RODS TO INSERT FULLY

PRESENTED BY:

EVENTS ASSESSMENT AND GENERIC COMMUNICATIONS BRANCH
DIVISION OF REACTOR PROGRAM MANAGEMENT, NRR

ATTACHMENT 2

BRUNSWICK, UNIT 1
SLOW SCRAM TIMES CAUSED BY VITON DIAPHRAGMS IN SCRAM SOLENOID PILOT VALVES
JANUARY 23, 1996

PROBLEM

DURING REGULAR SCRAM TIME TESTING THE LICENSEE MEASURED A SIGNIFICANT INCREASE IN SCRAM INSERTION TIMES TO NOTCH 46 (FIVE PERCENT OF FULL IN).

CAUSE

THE VITON DIAPHRAGMS IN THE SCRAM SOLENOID PILOT VALVES (SSPVs) WERE ADHERING TO THE BRASS VALVE SEAT, RETARDING THE START OF ROD MOTION.

SAFETY SIGNIFICANCE

EXCEEDING TECHNICAL SPECIFICATION (TS) SCRAM INSERTION TIME MAY RESULT IN FUEL CLADDING DAMAGE. THE LIMITING TRANSIENT IS A TURBINE TRIP WITHOUT BYPASS VALVES OPENING.

DISCUSSION

- IN RESPONSE TO AN INDUSTRY-WIDE PROBLEM WITH BUNA-N DIAPHRAGMS, THE LICENSEE REFURBISHED THE SSPVs ON ALL 137 CONTROL RODS WITH DIAPHRAGMS MADE FROM A DIFFERENT FLUOROELASTOMER (VITON) DURING THE 5/95 REFUEL OUTAGE.

CONTACT: D. SKEEN, NRR/DRPM/PECB
REFERENCE: 10 CFR 50.72 #29879

AIT: NO
SIGEVENT: TBD

- 5/19/95 - SCRAM TIME TESTING OF ALL CONTROL RODS DURING START UP ESTABLISHED A CORE-WIDE AVERAGE FIVE PERCENT (NOTCH 48 TO NOTCH 46) INSERTION TIME OF 0.307 SECONDS (SEC). THE TS MAXIMUM LIMIT IS 0.358 SEC.

- 9/30/95 - SCRAM TIME DATA RECORDED DURING A SCRAM INDICATED THAT THE CORE-WIDE AVERAGE WAS 0.304 SEC.

- 1/20/96 - SCHEDULED SCRAM TIME TESTING OF A 10% SAMPLE (14 RODS) FOUND 12 THAT EXCEEDED THE TS FIVE PERCENT CORE-WIDE AVERAGE LIMIT.

- THE LICENSEE FORMED AN EVENT TEAM TO INVESTIGATE THE ISSUE.

- 1/21/96 - SIX RODS WERE SELECTED FOR DIAGNOSTIC TESTING AND THE CORE WAS MANEUVERED TO INSERT THE SELECTED RODS.

- 1/22/96 - FOUR OF THE SIX RODS TESTED INDICATED AN INCREASED FIVE PERCENT INSERTION TIME OF 100 MSEC OVER DATA RECORDED ON 9/30/95.

- ANOTHER 10% SAMPLE OF CONTROL RODS WAS SELECTED FOR TESTING. AFTER FINDING THE FIRST FIVE RODS SHOWED AN AVERAGE INCREASE OF MORE THAN 100 MSEC, THE DECISION WAS MADE TO SHUT DOWN THE REACTOR.

- 1/23/96 - DATA WAS RECORDED FOR 79 MORE CONTROL RODS WHEN THE REACTOR WAS MANUALLY SCRAMMED. THE CORE-WIDE AVERAGE FIVE PERCENT INSERTION TIME WAS CALCULATED TO BE 0.380 SEC, WHICH EXCEEDED TS LIMIT.

FOLLOWUP

- ON 12/8/95, VERMONT YANKEE RECORDED SCRAM DATA FOR 77 CONTROL RODS DURING A SCRAM, AND FOUND THE CORE-WIDE AVERAGE FIVE PERCENT INSERTION TIME HAD INCREASED BY 30-40 MSEC OVER PREVIOUS TEST RESULTS. ALL BUNA-N DIAPHRAGMS HAD BEEN CHANGED TO VITON DURING THE REFUEL OUTAGE IN 4/95.

- INVESTIGATION BY GENERAL ELECTRIC, THE VENDOR (ASCO), AND VERMONT YANKEE DETERMINED THAT SEVERAL OTHER BWR PLANTS WERE EXPERIENCING SIMILAR TRENDS IN FIVE PERCENT INSERTION TIMES SIX TO EIGHT MONTHS AFTER INSTALLING THE VITON DIAPHRAGMS.

- ROOT CAUSE FOR THE SLOW TIMES IS ADHERENCE OF VITON DIAPHRAGMS TO THE BRASS VALVE SEAT. THE REASON HAS NOT YET BEEN DETERMINED.

- BRUNSWICK WAS THE FIRST PLANT TO EXCEED THE TS CORE-WIDE FIVE PERCENT INSERTION LIMIT. THUS, THE NRC ISSUED INFORMATION NOTICE 96-07 ON 1/26/96 TO ALERT LICENSEES TO THE PROBLEM.

- THE BRUNSWICK EVENT WAS DISCUSSED AT THE BWR OWNERS GROUP MEETING WITH THE NRC ON 1/26/96. THE DECISION WAS MADE TO ACTIVATE THE REGULATORY RESPONSE GROUP (RRG) AND A LIST OF QUESTIONS FROM THE STAFF WAS GIVEN TO THE OWNERS GROUP.

- 1/30/96 - A TELECONFERENCE BETWEEN THE NRC AND THE RRG UPDATED THE NRC ON INDUSTRY EFFORTS.

  1. A PART 21 REPORT WILL BE ISSUED BY GE ON 2/2/96.

  2. THE RRG WILL RESPOND TO THE LIST OF STAFF QUESTIONS AND PROVIDE AN UPDATE OF THEIR ACTION PLAN BY 2/6/96.

  3. A SECOND TELECONFERENCE WILL TAKE PLACE ON 2/8/96.

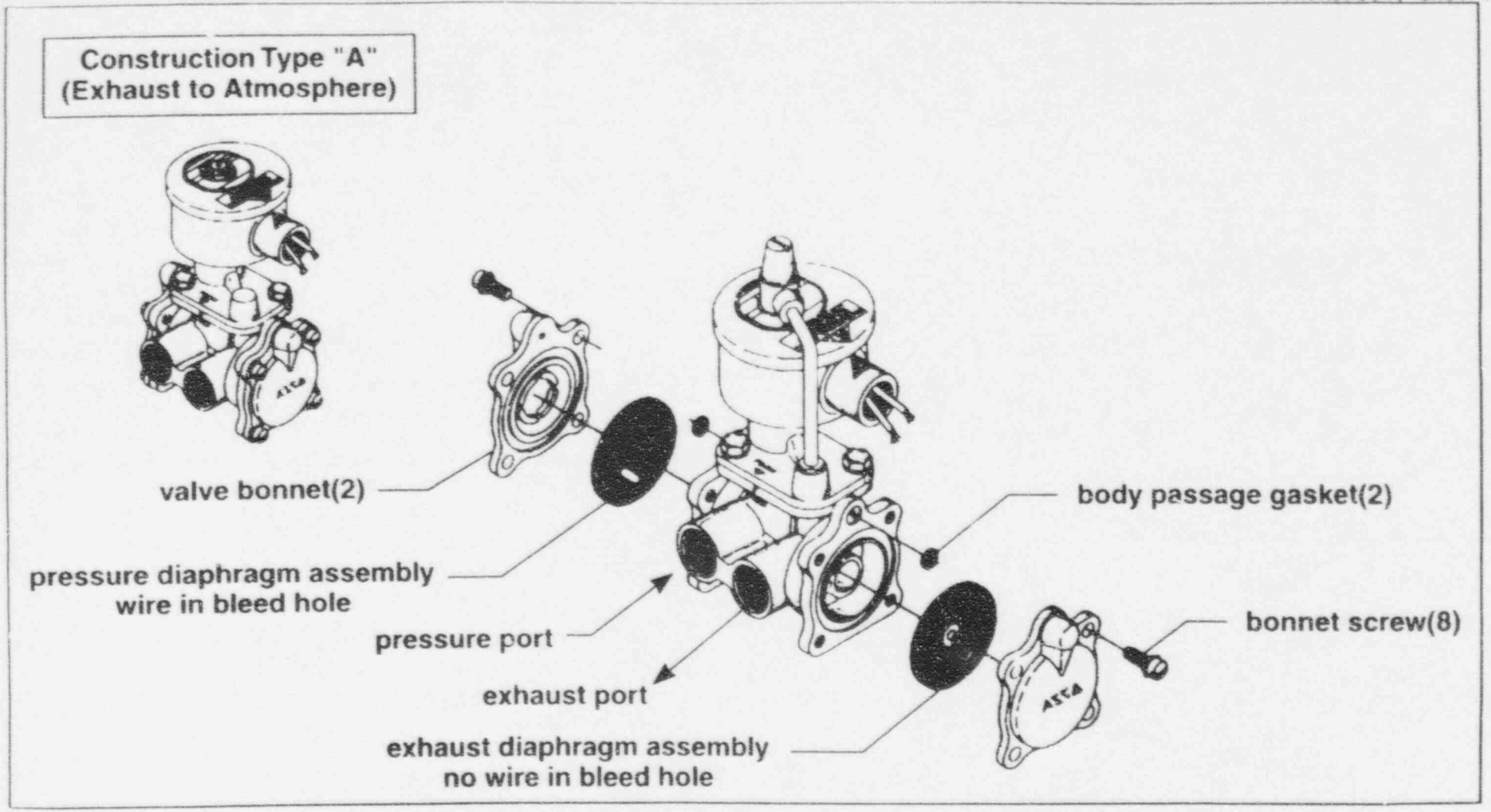
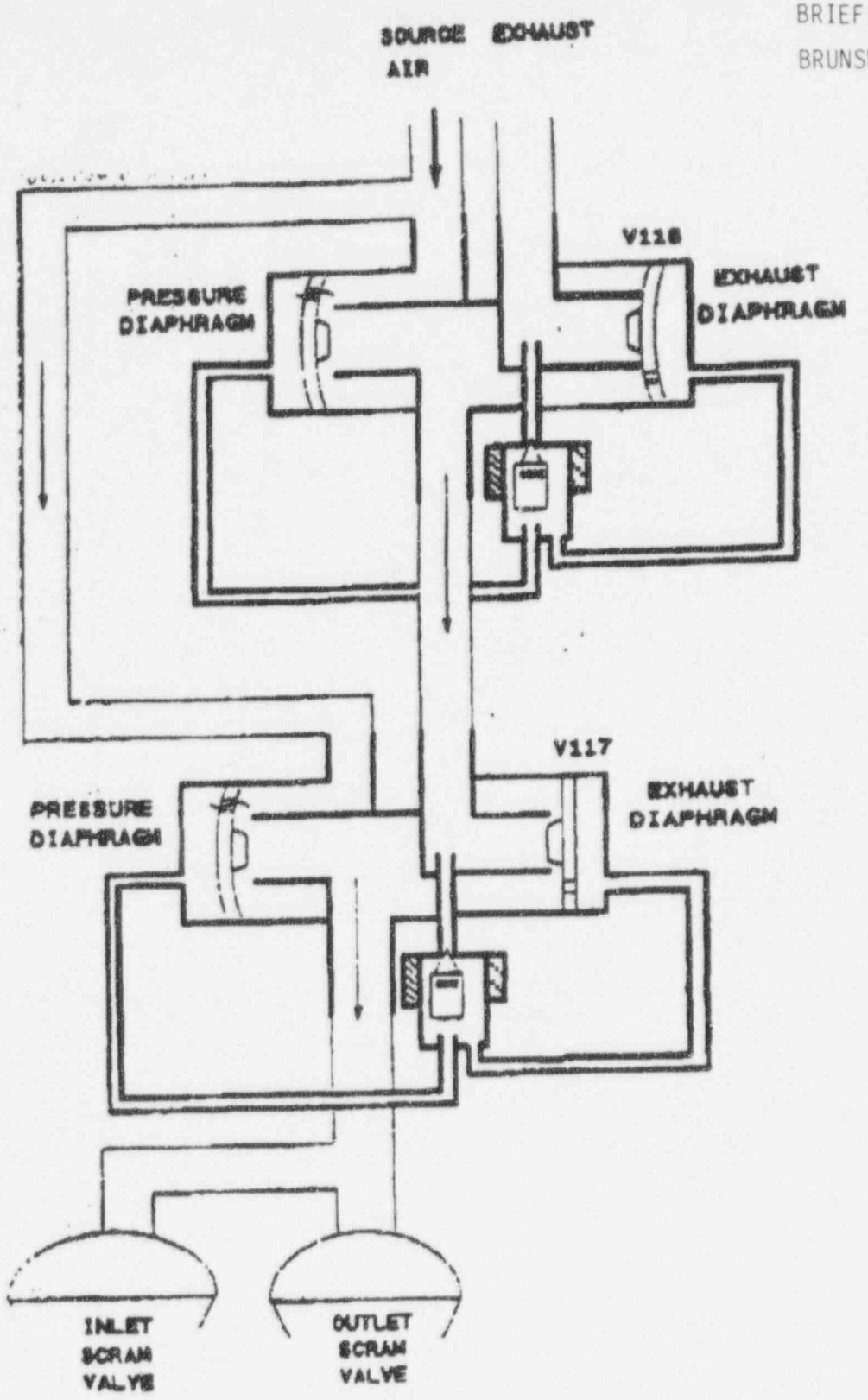
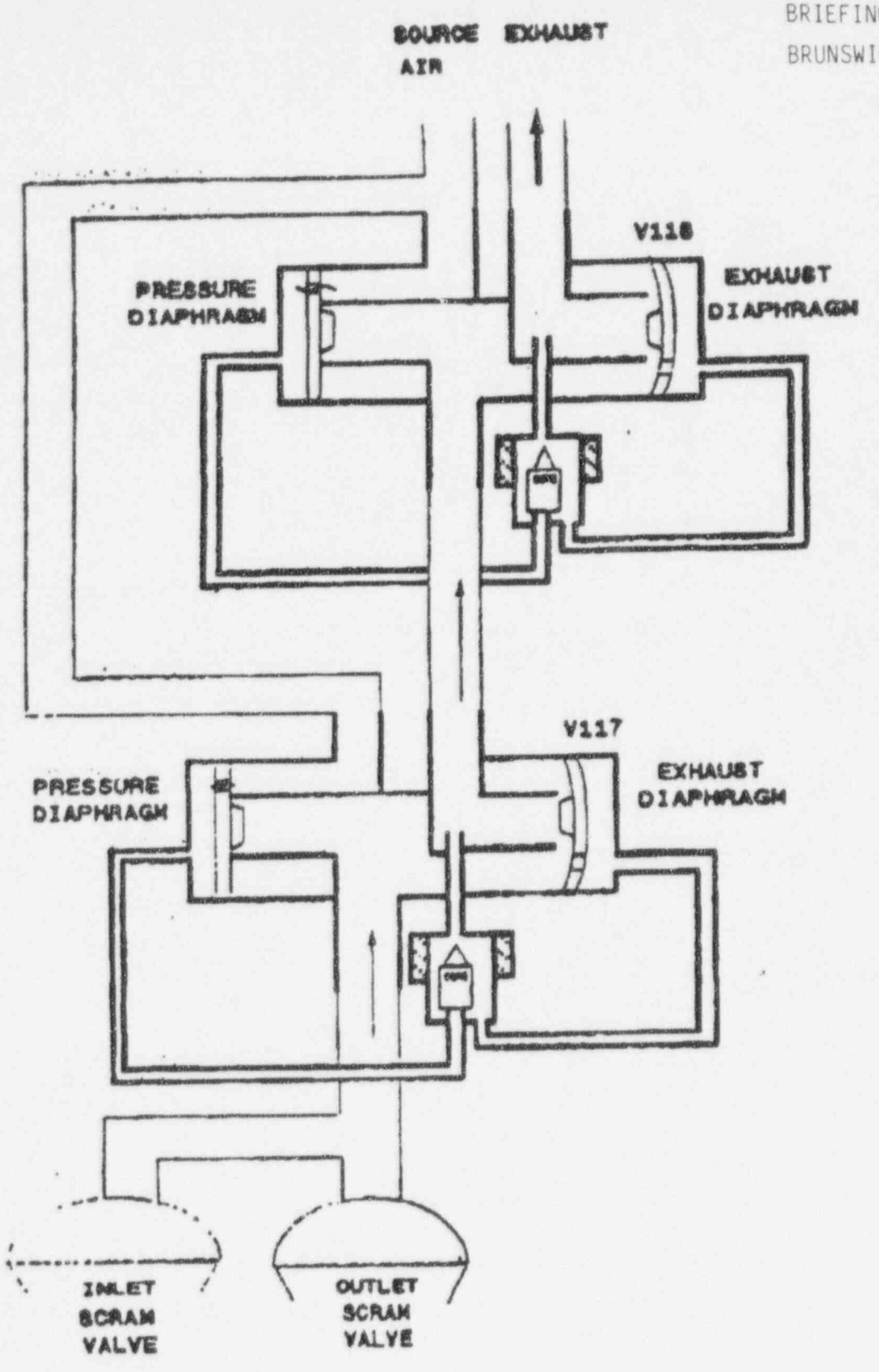


Figure 1 - ASCO model HV-90-405 scram solenoid pilot valve



SCRAM SOLENOID PILOT VALVE SCHEMATIC

(BOTH SOLENOIDS INTIALLY ENERGIZED)



SCRAM SOLENOID PILOT VALVE SCHEMATIC

(BOTH SOLENOIDS DEENERGIZED)

SOUTH TEXAS, UNIT 1
FAILURE OF CONTROL RODS TO INSERT FULLY
DECEMBER 18, 1995

PROBLEM

FOUR ROD CLUSTER CONTROL ASSEMBLIES (RCCAs) FAILED TO FULLY INSERT (SIX STEPS WITHDRAWN) FOLLOWING REACTOR TRIP AND SUBSEQUENT TESTING.

CAUSE

POSSIBLE RESTRICTION IN LOWER GUIDE TUBE, IN LOWER DASHPOT REGION.

SAFETY SIGNIFICANCE

STUCK RODS COULD RESULT IN INADEQUATE SHUTDOWN MARGIN AND HAVE GENERIC IMPLICATIONS.

THE ROD WORTH OF THE LAST SIX STEPS FOR FOUR RCCAs IS NEGLIGIBLE COMPARED TO THE HIGHEST WORTH ROD FULLY WITHDRAWN. SAFETY SIGNIFICANCE FOR THIS INCIDENT IS MINIMAL.

BACKGROUND

- 14 FOOT FUEL ASSEMBLIES.
- THREE 3 FUEL DESIGN VARIATIONS: XL, XLR, V5H.

CONTACT: S. KOENICK, NRR/DRPM/PECB
D. JACKSON, NRR/DRPM/PDST

AIT: NO

REFERENCES: 10 CFR 50.73 #29734
PNO-IV-95-059

SIGEVENT: TBD

- RCCAs LOCATED IN XLR, TWICE-BURNED, HIGH BURNUP FUEL ASSEMBLIES (APPROXIMATELY 43,000 MWD/MTU).

SEQUENCE OF EVENTS

- ON 12/18/95, PILOT WIRE RELAY LOCKOUT CAUSED LOSS OF MAIN AND AUXILIARY TRANSFORMERS RESULTING IN AUTOMATIC TURBINE TRIP/REACTOR TRIP.

- THREE RCCAs FAILED TO FULLY INSERT INTO THE CORE (SIX STEPS WITHDRAWN).

- ONE RCCA INDICATION CHANGED TO ROD BOTTOM WITHIN ONE HOUR; OTHER TWO MANUALLY INSERTED.

- UNIT OPERATED IN NATURAL CIRCULATION FOR 90 MINUTES.

- POWER OPERATED RELIEF VALVE (PORV) ACTUATED THREE TIMES.

- DURING SUBSEQUENT ROD TESTING, THE THREE RCCAs AND ONE OTHER RCCA FAILED TO FULLY INSERT INTO THE CORE (SIX STEPS WITHDRAWN).

- TWO RCCAs DRIFTED TO ROD BOTTOM; OTHER TWO MANUALLY INSERTED.

DISCUSSION

- LICENSEE'S 50.72 REPORT STATES ALL CONTROL RODS FULLY INSERTED, AND ALL SYSTEMS FUNCTIONED AS EXPECTED.

- EMERGENCY OPERATING PROCEDURES REQUIRE INITIATION OF EMERGENCY BORATION IF ALL CONTROL RODS NOT FULLY INSERTED.

- LICENSEE DETERMINED THAT INTENT OF FULLY INSERTED CONTROL RODS WAS MET BASED ON POSITION AND NUMBER OF AFFECTED RCCAs; THEREFORE, DID NOT INITIATE EMERGENCY BORATION. (BORATION OCCURRING WITH CHARGING PUMP SUCTION TO REFUELING WATER STORAGE TANK).

- ROD DROP TRACES INDICATED THAT DROP TIMES DID NOT SIGNIFICANTLY DECREASE UNTIL DASHPOT ENTRY.

- LICENSEE DETERMINED RODS OPERABLE, IN THAT THEY SATISFIED TECHNICAL SPECIFICATIONS ROD DROP TIMES TO DASHPOT (2.8 SECONDS).

- POSSIBLE ROOT CAUSES: DEBRIS, CONTROL ROD DEGRADATION, GUIDE TUBE BOWING, CORROSION PRODUCTS, FUEL ASSEMBLY BOW, THIMBLE TUBE DIAMETRIC REDUCTION, ADVERSE ALIGNMENT OF GUIDE TUBE CARDS, OR DESIGN TOLERANCES.

- LICENSEE EVALUATION INDICATED THAT IF ALL 32 RCCAs IN HIGH BURNUP ASSEMBLIES OF 57 TOTAL RCCAs STOPPED AT 12 STEPS WITHDRAWN, ADEQUATE SHUTDOWN MARGIN WOULD BE MAINTAINED.

- FOREIGN REACTORS HAVE EXPERIENCED SLOW RODS AND STUCK RODS DUE TO CRUD OR ROD BOWING.

- ON 1/30/96, FOLLOWING WOLF CREEK MANUAL SCRAM FROM 80% POWER, FIVE CONTROLS FAILED TO FULLY INSERT.

FOLLOWUP

- LICENSEE SAFETY EVALUATION WITH WESTINGHOUSE SUPPORT DETERMINED RCCAs WERE OPERABLE AND RESUMED POWER OPERATION ON DECEMBER 21, 1995.

- UNIT 2 TESTING DURING RECENT OUTAGE REVEALED NO INSERTION TIME PROBLEMS.

- MEETING WITH LICENSEE HELD ON JANUARY 18, 1996, AT NRR REGARDING SOUTH TEXAS FUEL ISSUES.

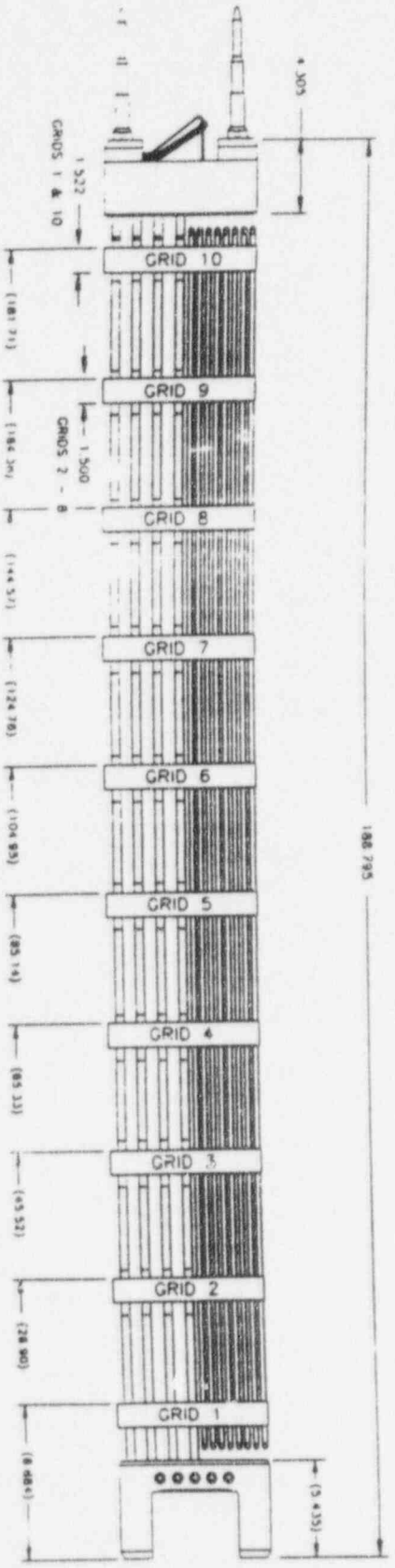
- LICENSEE PROPOSED ACTION PLAN INCLUDES:

  - HOT, FULL FLOW ROD DROP TESTING IN 60 TO 75 DAYS AFTER 12/18/95 REACTOR TRIP.

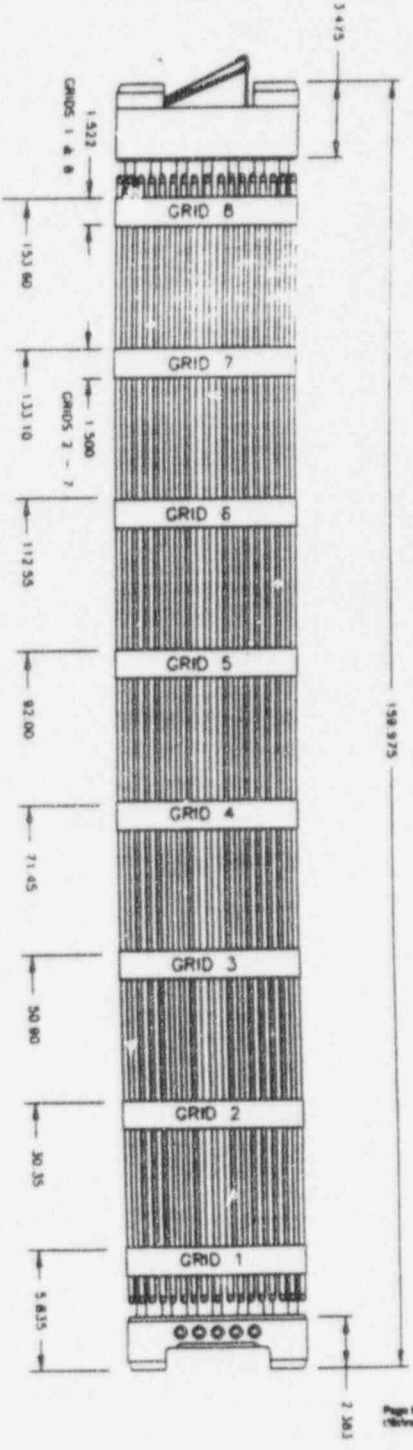
  - HOT, FULL FLOW ROD DROP TESTING DURING REFUELING OUTAGE.

  - APPROVE SAFETY EVALUATION FOR UNIT 2.

STP FUEL ASSEMBLY

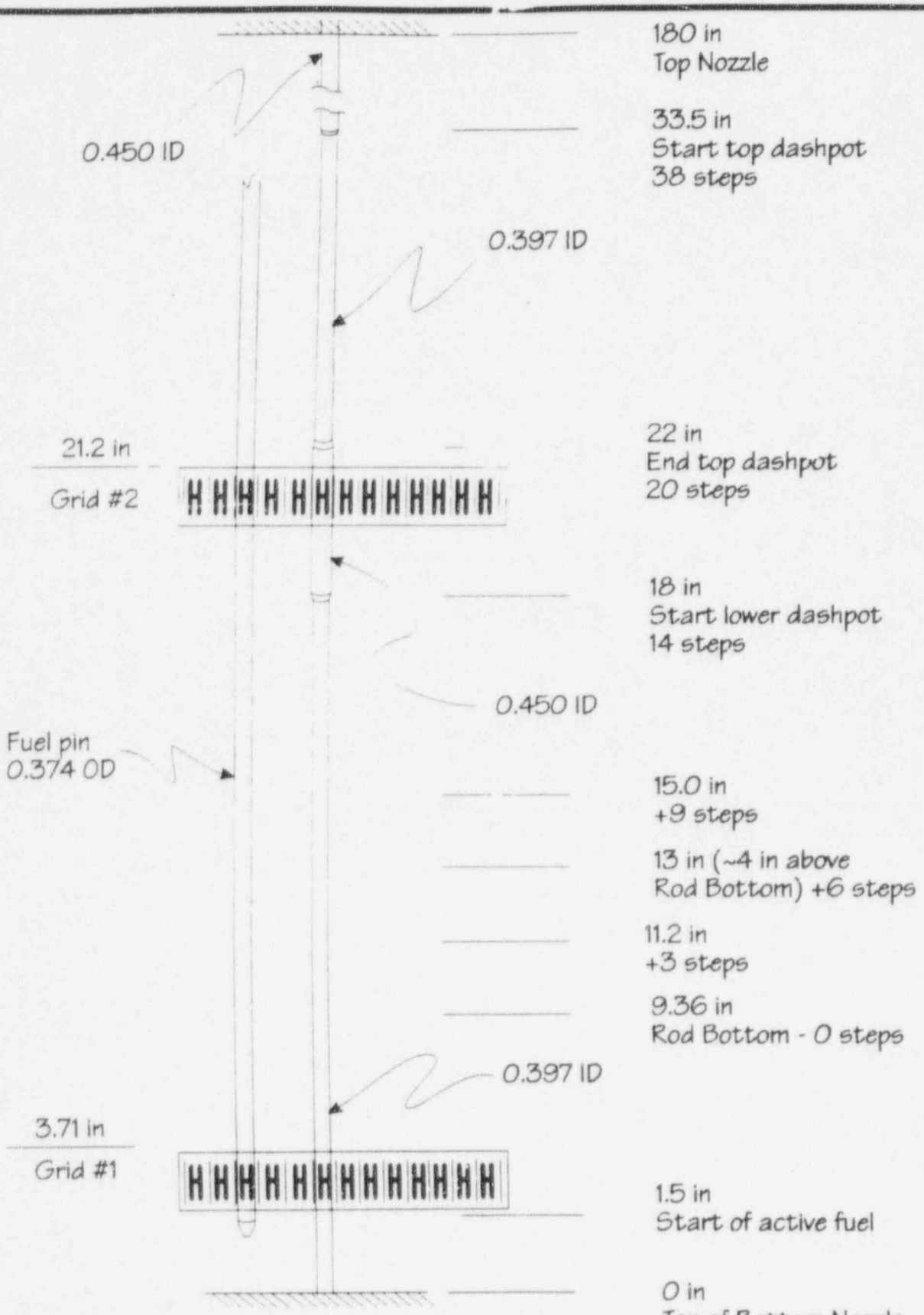


17x17 XLH

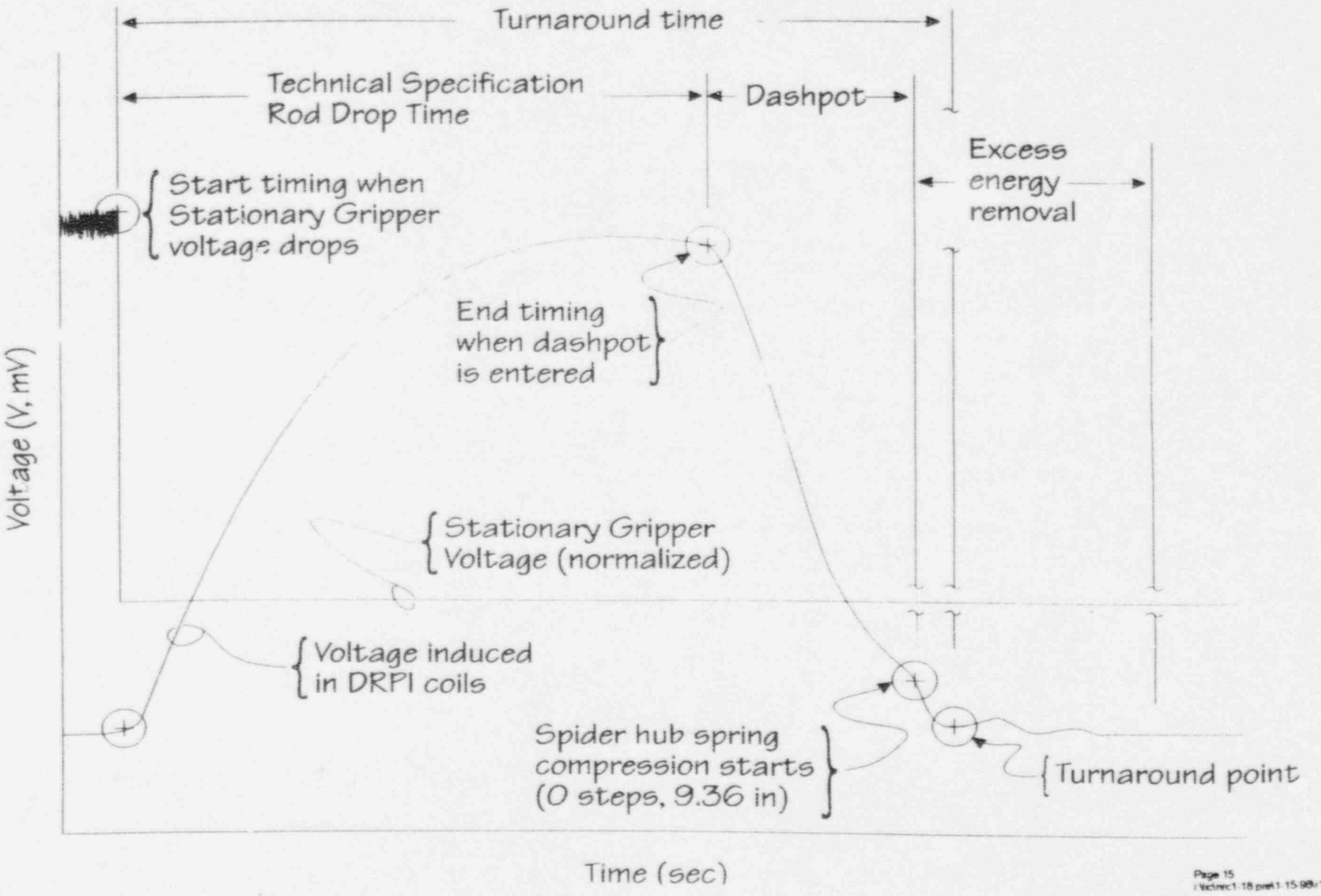


17x17 V5H

LOWER GUIDE TUBE GEOMETRY



TYPICAL ROD DROP TRACE



REACTOR SCRAM

Reporting Period: 12/11/95 to 12/17/95

DATE	PLANT & UNIT	POWER	TYPE	CAUSE	COMPLICATIONS	YTD ABOVE 15%	YTD BELOW 15%	YTD TOTAL
12/13/95	DIABLO CANYON 1	50	SM	External	NO	3	0	3

Note: Year To Date (YTD) Totals Include Events Within The Calendar Year Indicated By The End Date Of The Specified Reporting Period

ATTACHMENT 3

COMPARISON OF WEEKLY SCRAM STATISTICS WITH INDUSTRY AVERAGES

PERIOD ENDING
12/17/95

SCRAM CAUSE	NUMBER OF SCRAMS	1995 WEEKLY AVERAGE (YTD)	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE	1991* WEEKLY AVERAGE
POWER GREATER THAN OR EQUAL TO 15%						
EQUIPMENT FAILURE*	0	1.79	1.52	1.83	2.62	2.83
DESIGN/INSTALLATION ERROR*	0	0.12	0.08	0.04	-	0.02
OPERATING ERROR*	0	0.16	0.21	0.27	0.31	0.04
MAINTENANCE ERROR*	0	0.40	0.54	0.52	0.50	-
EXTERNAL*	1	0.20	0.17	0.13	-	-
OTHER*	0	0.08	-	0.02	-	0.62
Subtotal	1	2.75	2.52	2.81	3.43	3.51
POWER LESS THAN 15%						
EQUIPMENT FAILURE*	0	0.10	0.27	0.38	0.42	0.27
DESIGN/INSTALLATION ERROR*	0	0.00	0.02	-	-	-
OPERATING ERROR*	0	0.14	0.08	0.13	0.15	-
MAINTENANCE ERROR*	0	0.08	-	0.02	0.08	-
EXTERNAL*	0	0.00	-	0.04	-	-
OTHER*	0	0.00	-	-	-	0.19
Subtotal	0	0.32	0.37	0.57	0.65	0.46
TOTAL	1	3.07	2.89	3.38	4.08	3.97

SCRAM TYPE	NO. OF SCRAMS	1995 WEEKLY AVERAGE (YTD)	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE	1991 WEEKLY AVERAGE
TOTAL AUTOMATIC SCRAMS	0	1.95	2.19	2.44	3.06	3.25
TOTAL MANUAL SCRAMS	1	1.12	0.69	0.94	1.02	0.69

TOTALS MAY DIFFER BECAUSE OF ROUNDING OFF

* Detailed breakdown not in database for 1991 and earlier
  - EXTERNAL cause included in EQUIPMENT FAILURE
  - MAINTENANCE ERROR and DESIGN/INSTALLATION ERROR causes included in OPERATING ERROR
  - OTHER cause included in EQUIPMENT FAILURE 1991 and 1990

REACTOR SCRAM

Reporting Period: 12/18/95 to 12/24/95

DATE	PLANT & UNIT	POWER	TYPE	CAUSE	COMPLICATIONS	YTD ABOVE 15%	YTD BELOW 15%	YTD TOTAL
12/18/95	SOUTH TEXAS 1	100	SA	External	NO	3	0	3
12/18/95	OYSTER CREEK 1	100	SA	Equipment Failure	NO	1	0	1
12/19/95	RIVER BEND 1	85	SM	Equipment Failure	NO	1	0	1
12/21/95	SEQUOYAH 2	100	SM	Equipment Failure	NO	4	0	4

Note: Year To Date (YTD) Totals Include Events Within The Calendar Year Indicated By The End Date Of The Specified Reporting Period

COMPARISON OF WEEKLY SCRAM STATISTICS WITH INDUSTRY AVERAGES

PERIOD ENDING
12/24/95

SCRAM CAUSE	NUMBER OF SCRAMS	1995 WEEKLY AVERAGE (YTD)	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE	1991* WEEKLY AVERAGE
POWER GREATER THAN OR EQUAL TO 15%						
EQUIPMENT FAILURE*	3	1.82	1.52	1.83	2.62	2.83
DESIGN/INSTALLATION ERROR*	0	0.12	0.08	0.04	-	0.02
OPERATING ERROR*	0	0.16	0.21	0.27	0.31	0.04
MAINTENANCE ERROR*	0	0.39	0.54	0.52	0.50	-
EXTERNAL*	1	0.22	0.17	0.13	-	-
OTHER*	0	0.08	-	0.02	-	0.62
Subtotal	4	2.79	2.52	2.81	3.43	3.51
POWER LESS THAN 15%						
EQUIPMENT FAILURE*	0	0.10	0.27	0.38	0.42	0.27
DESIGN/INSTALLATION ERROR*	0	0.00	0.02	-	-	-
OPERATING ERROR*	0	0.14	0.08	0.13	0.15	-
MAINTENANCE ERROR*	0	0.08	-	0.02	0.08	-
EXTERNAL*	0	0.00	-	0.04	-	-
OTHER*	0	0.00	-	-	-	0.19
Subtotal	0	0.32	0.37	0.57	0.65	0.46
TOTAL	4	3.11	2.89	3.38	4.08	3.97

SCRAM TYPE	NO. OF SCRAMS	1995 WEEKLY AVERAGE (YTD)	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE	1991 WEEKLY AVERAGE
TOTAL AUTOMATIC SCRAMS	2	1.96	2.19	2.44	3.06	3.25
TOTAL MANUAL SCRAMS	2	1.13	0.69	0.94	1.02	0.69

TOTALS MAY DIFFER BECAUSE OF ROUNDING OFF

* Detailed breakdown not in database for 1991 and earlier
  - EXTERNAL cause included in EQUIPMENT FAILURE
  - MAINTENANCE ERROR and DESIGN/INSTALLATION ERROR causes included in OPERATING ERROR
  - OTHER cause included in EQUIPMENT FAILURE 1991 and 1990

REACTOR SCRAM

Reporting Period: 12/25/95 to 12/31/95

DATE	PLANT & UNIT	POWER	TYPE	CAUSE	COMPLICATIONS	YTD ABOVE 15%	YTD BELOW 15%	YTD TOTAL
12/25/95	SEQUOYAH 1	100	SM	Equipment Failure	NO	4	1	5

Note: Year To Date (YTD) Totals Include Events Within The Calendar Year Indicated By The End Date Of The Specified Reporting Period

COMPARISON OF WEEKLY SCRAM STATISTICS WITH INDUSTRY AVERAGES

PERIOD ENDING
12/31/95

SCRAM CAUSE	NUMBER OF SCRAMS	1995 WEEKLY AVERAGE (YTD)	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE	1991* WEEKLY AVERAGE
POWER GREATER THAN OR EQUAL TO 15%						
EQUIPMENT FAILURE*	1	1.80	1.52	1.83	2.62	2.83
DESIGN/INSTALLATION ERROR*	0	0.12	0.08	0.04	-	0.02
OPERATING ERROR*	0	0.15	0.21	0.27	0.31	0.04
MAINTENANCE ERROR*	0	0.38	0.54	0.52	0.50	-
EXTERNAL*	0	0.21	0.17	0.13	-	-
OTHER*	0	0.08	-	0.02	-	0.62
Subtotal	1	2.74	2.52	2.81	3.43	3.51
POWER LESS THAN 15%						
EQUIPMENT FAILURE*	0	0.10	0.27	0.38	0.42	0.27
DESIGN/INSTALLATION ERROR*	0	0.00	0.02	-	-	-
OPERATING ERROR*	0	0.13	0.08	0.13	0.15	-
MAINTENANCE ERROR*	0	0.08	-	0.02	0.08	-
EXTERNAL*	0	0.00	-	0.04	-	-
OTHER*	0	0.00	-	-	-	0.19
Subtotal	0	0.31	0.37	0.57	0.65	0.46
TOTAL	1	3.05	2.89	3.38	4.08	3.97

SCRAM TYPE	NO. OF SCRAMS	1995 WEEKLY AVERAGE (YTD)	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE	1991 WEEKLY AVERAGE
TOTAL AUTOMATIC SCRAMS	0	1.92	2.19	2.44	3.06	3.25
TOTAL MANUAL SCRAMS	1	1.13	0.69	0.94	1.02	0.69

TOTALS MAY DIFFER BECAUSE OF ROUNDING OFF

* Detailed breakdown not in database for 1991 and earlier
  - EXTERNAL cause included in EQUIPMENT FAILURE
  - MAINTENANCE ERROR and DESIGN/INSTALLATION ERROR causes included in OPERATING ERROR
  - OTHER cause included in EQUIPMENT FAILURE 1991 and 1990

NOTES

1. PLANT SPECIFIC DATA BASED ON INITIAL REVIEW OF 50.72 REPORTS FOR THE WEEK OF INTEREST. PERIOD IS MIDNIGHT SUNDAY THROUGH MIDNIGHT SUNDAY. SCRAMS ARE DEFINED AS REACTOR PROTECTIVE ACTUATIONS WHICH RESULT IN ROD MOTION, AND EXCLUDE PLANNED TESTS OR SCRAMS AS PART OF PLANNED SHUTDOWN IN ACCORDANCE WITH A PLANT PROCEDURE. THERE ARE 111 REACTORS HOLDING AN OPERATING LICENSE.

2. PERSONNEL RELATED PROBLEMS INCLUDE HUMAN ERROR, PROCEDURAL DEFICIENCIES, AND MANUAL STEAM GENERATOR LEVEL CONTROL PROBLEMS.

3. COMPLICATIONS: RECOVERY COMPLICATED BY EQUIPMENT FAILURES OR PERSONNEL ERRORS UNRELATED TO CAUSE OF SCRAM.

4. "OTHER" INCLUDES AUTOMATIC SCRAMS ATTRIBUTED TO ENVIRONMENTAL CAUSES (LIGHTNING), SYSTEM DESIGN, OR UNKNOWN CAUSE.

OEAB SCRAM DATA

Manual and Automatic Scrams for 1987	435
Manual and Automatic Scrams for 1988	291
Manual and Automatic Scrams for 1989	252
Manual and Automatic Scrams for 1990	226
Manual and Automatic Scrams for 1991	206
Manual and Automatic Scrams for 1992	212
Manual and Automatic Scrams for 1993	175
Manual and Automatic Scrams for 1994	150
Manual and Automatic Scrams for 1995 --(YTD 12/31/95)--	159

REACTOR SCRAM

Reporting Period: 01/01/96 to 01/07/96

DATE	PLANT & UNIT	POWER	TYPE	CAUSE	COMPLICATIONS	YTD ABOVE 15%	YTD BELOW 15%	YTD TOTAL
01/04/96	HATCH 1	95	SA	Equipment Failure	NO	1	0	1
01/04/96	RIVER BEND 1	20	SM	Equipment Failure	NO	1	0	1
01/05/96	SAINT LUCIE 2	35	SM	Equipment Failure	NO	1	0	1

Note: Year To Date (YTD) Totals Include Events Within The Calendar Year Indicated By The End Date Of The Specified Reporting Period

COMPARISON OF WEEKLY SCRAM STATISTICS WITH INDUSTRY AVERAGES

PERIOD ENDING
01/07/96

SCRAM CAUSE	NUMBER OF SCRAMS	1996 WEEKLY AVERAGE (YTD)	1995 WEEKLY AVERAGE	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE
POWER GREATER THAN OR EQUAL TO 15%						
EQUIPMENT FAILURE	3	3.00	1.81	1.52	1.83	2.62
DESIGN/INSTALLATION ERROR	0	0.00	0.12	0.08	0.04	-
OPERATING ERROR	0	0.00	0.15	0.21	0.27	0.31
MAINTENANCE ERROR	0	0.00	0.38	0.54	0.52	0.50
EXTERNAL	0	0.00	0.21	0.17	0.13	-
OTHER	0	0.00	0.08	-	0.02	-
Subtotal	3	3.00	2.75	2.52	2.81	3.43
POWER LESS THAN 15%						
EQUIPMENT FAILURE	0	0.00	0.10	0.27	0.38	0.42
DESIGN/INSTALLATION ERROR	0	0.00	-	0.02	-	-
OPERATING ERROR	0	0.00	0.13	0.08	0.13	0.15
MAINTENANCE ERROR	0	0.00	0.08	-	0.02	0.08
EXTERNAL	0	0.00	-	-	0.04	-
OTHER	0	0.00	-	-	-	-
Subtotal	0	0.00	0.31	0.37	0.57	0.65
TOTAL	3	3.00	3.06	2.89	3.38	4.08

SCRAM TYPE	NO. OF SCRAMS	1996 WEEKLY AVERAGE (YTD)	1995 WEEKLY AVERAGE	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE
TOTAL AUTOMATIC SCRAMS	1	1.00	1.92	2.19	2.44	3.06
TOTAL MANUAL SCRAMS	2	2.00	1.13	0.69	0.94	1.02

TOTALS MAY DIFFER BECAUSE OF ROUNDING OFF

REACTOR SCRAM

Reporting Period: 01/15/96 to 01/21/96

DATE	PLANT & UNIT	POWER	TYPE	CAUSE	COMPLICATIONS	YTD ABOVE 15%	YTD BELOW 15%	YTD TOTAL
01/17/96	COMANCHE PEAK 1	100	SA	Maintenance Error	NO	1	0	1
01/21/96	PALO VERDE 2	100	SA	Maintenance Error	NO	1	0	1

Note: Year To Date (YTD) Totals Include Events Within The Calendar Year Indicated By The End Date Of The Specified Reporting Period

COMPARISON OF WEEKLY SCRAM STATISTICS WITH INDUSTRY AVERAGES

PERIOD ENDING
01/21/96

SCRAM CAUSE	NUMBER OF SCRAMS	1996 WEEKLY AVERAGE (YTD)	1995 WEEKLY AVERAGE	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE
POWER GREATER THAN OR EQUAL TO 15%						
EQUIPMENT FAILURE	0	1.00	1.81	1.52	1.83	2.62
DESIGN/INSTALLATION ERROR	0	0.00	0.12	0.08	0.04	-
OPERATING ERROR	0	0.00	0.15	0.21	0.27	0.31
MAINTENANCE ERROR	2	0.67	0.38	0.54	0.52	0.50
EXTERNAL	0	0.00	0.21	0.17	0.13	-
OTHER	0	0.00	0.08	-	0.02	-
Subtotal	2	1.67	2.75	2.52	2.81	3.43
POWER LESS THAN 15%						
EQUIPMENT FAILURE	0	0.00	0.10	0.27	0.38	0.42
DESIGN/INSTALLATION ERROR	0	0.00	-	0.02	-	-
OPERATING ERROR	0	0.00	0.13	0.08	0.13	0.15
MAINTENANCE ERROR	0	0.00	0.08	-	0.02	0.08
EXTERNAL	0	0.00	-	-	0.04	-
OTHER	0	0.00	-	-	-	-
Subtotal	0	0.00	0.31	0.37	0.57	0.65
TOTAL	2	1.67	3.06	2.89	3.38	4.08

SCRAM TYPE	NO. OF SCRAMS	1996 WEEKLY AVERAGE (YTD)	1995 WEEKLY AVERAGE	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE
TOTAL AUTOMATIC SCRAMS	2	1.00	1.92	2.19	2.44	3.06
TOTAL MANUAL SCRAMS	0	0.67	1.13	0.69	0.94	1.02

TOTALS MAY DIFFER BECAUSE OF ROUNDING OFF

REACTOR SCRAM

Reporting Period: 01/22/96 to 01/28/96

DATE	PLANT & UNIT	POWER	TYPE	CAUSE	COMPLICATIONS	YTD ABOVE 15%	YTD BELOW 15%	YTD TOTAL
01/22/96	COMANCHE PEAK 1	100	SM	Equipment Failure	NO	2	0	2
01/23/96	BRUNSWICK 1	28	SM	Equipment Failure	NO	1	0	1
01/27/96	SEABROOK 1	100	SA	Equipment Failure	NO	1	0	1

Note: Year To Date (YTD) Totals Include Events Within The Calendar Year Indicated By The End Date Of The Specified Reporting Period

COMPARISON OF WEEKLY SCRAM STATISTICS WITH INDUSTRY AVERAGES

PERIOD ENDING
01/28/96

SCRAM CAUSE	NUMBER OF SCRAMS	1996 WEEKLY AVERAGE (YTD)	1995 WEEKLY AVERAGE	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE
POWER GREATER THAN OR EQUAL TO 15%						
EQUIPMENT FAILURE	3	1.50	1.81	1.52	1.83	2.62
DESIGN/INSTALLATION ERROR	0	0.00	0.12	0.08	0.04	-
OPERATING ERROR	0	0.00	0.15	0.21	0.27	0.31
MAINTENANCE ERROR	0	0.50	0.38	0.54	0.52	0.50
EXTERNAL	0	0.00	0.21	0.17	0.13	-
OTHER	0	0.00	0.08	-	0.02	-
Subtotal	3	2.00	2.75	2.52	2.81	3.43
POWER LESS THAN 15%						
EQUIPMENT FAILURE	0	0.00	0.10	0.27	0.38	0.42
DESIGN/INSTALLATION ERROR	0	0.00	-	0.02	-	-
OPERATING ERROR	0	0.00	0.13	0.08	0.13	0.15
MAINTENANCE ERROR	0	0.00	0.08	-	0.02	0.08
EXTERNAL	0	0.00	-	-	0.04	-
OTHER	0	0.00	-	-	-	-
Subtotal	0	0.00	0.31	0.37	0.57	0.65
TOTAL	3	2.00	3.06	2.89	3.38	4.08

SCRAM TYPE	NO. OF SCRAMS	1996 WEEKLY AVERAGE (YTD)	1995 WEEKLY AVERAGE	1994 WEEKLY AVERAGE	1993 WEEKLY AVERAGE	1992 WEEKLY AVERAGE
TOTAL AUTOMATIC SCRAMS	1	1.00	1.92	2.19	2.44	3.06
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TOTALS MAY DIFFER BECAUSE OF ROUNDING OFF

NOTES

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Manual and Automatic Scrams for 1995	159
Manual and Automatic Scrams for 1996 --(YTD 01/28/96)--	8

February 6, 1996

MEMORANDUM TO: Dennis M. Crutchfield, Director
Division of Reactor Program Management

FROM: Alfred E. Chaffee, Chief
Events Assessment and
Generic Communications Branch
Division of Reactor Program Management

SUBJECT: OPERATING REACTORS EVENTS BRIEFING
JANUARY 31, 1996 - BRIEFING 96-01

On January 31, 1996, we conducted an Operating Reactors Events Briefing (96-01) to inform senior managers from offices of the EDO, ACRS, AEOD, RES, NRR and regional offices of selected events that occurred since our last briefing on December 13, 1995. Attachment 1 lists the attendees. Attachment 2 presents the significant elements of the discussed events.

Attachment 3 contains reactor scram statistics for weeks ending December 17, December 24, December 31, 1995, January 7, 1996, January 21, and January 28, 1996. There were no scrams reported for the week ending January 14, 1996. No significant events were identified for input into the NRC Performance Indicator Program.

Attachments: As stated (3)

cc w/atts:
See next page

CONTACT: Kathy Gray, NRR
(301) 415-1166

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NAME	KGray:jkd		DSkeen		SKoenick		EGoodwin		RDennig		ACHaffee	
DATE	2/05/96		2/ /96		2/5 /96		2/5 /96		2/5 /96		2/5 /96	

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