

MAR 30 1992

MEMORANDUM FOR: Charles E. Rossi, Director
 Division of Operational Events Assessment

FROM: Alfred E. Chaffee, Chief
 Events Assessment Branch
 Division of Operational Events Assessment

SUBJECT: OPERATING REACTORS EVENTS MEETING
 MARCH 25, 1992 - MEETING 92-03

On March 25, 1992, we conducted an Operating Reactors Events meeting (92-03) to inform senior managers from the Commission Office, SECY, ACRS, AEOD, EDO, NRR, and regional offices of selected events that occurred since our last briefing on February 26, 1992. Enclosure 1 lists the attendees. Enclosure 2 presents the significant elements of the discussed events.

Enclosure 3 contains reactor scram statistics for the weeks ending 03/01/92, 03/08/92, 03/15/92 and 03/22/92. Enclosure 4 tabulates one significant event which was identified for input into the NRC performance indicator program.

original signed by Robert L. Dennig
 for
 Alfred E. Chaffee, Chief
 Events Assessment Branch
 Division of Operational
 Events Assessment

Enclosures: As stated

cc w/enclosures:
 See next page

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OPERATING EXPERIENCES

cc:

T. Murley, NRR (12G18)
F. Miraglia, NRR (12G18)
W. Russell, NRR (12G18)
F. Gillaspie, NRR (12G18)
J. Partlow, NRR (12G18)
S. Varga, NRR (14E4)
J. Calvo, NRR (14A4)
G. Lainas, NRR (14H3)
B. Boger, NRR (14A2)
J. Zwolinski, NRR (13H24)
M. Virgilio, NRR (13E4)
D. Crutchfield, NRR (11H21)
W. Travers, NRR (11B19)
J. Richardson, NRR (7D26)
A. Thadani, NRR (8E2)
B. Grimes, NRR (9A2)
F. Congel, NRR (10E2)
J. Roe, NRR (10H5)
M. Pohida, NRR (10E4)
T. Martin, RI
W. Kane, RI
C. Hehl, RI
S. Ebnetter, RII
L. Reyes, RII
B. Davis, RIII
E. Greenman, RIII
R.D. Martin, RIV
B. Beach, RIV
J.B. Martin, RV
R. Zimmerman, RV
P. Boehnert, ACRS (P-315)
E. Jordan, AEOD (MN-3701)
T. Ncvak, AEOD (MN-3701)
L. Spessard, AEOD (MN-3701)
E. Weiss, AEOD (MN-3206)
S. Rubin, AEOD (MN-4106)
M. Harper, AEOD (MN-9112)
W. Bateman, EDO (17G21)
R. Newlin, GPA (2G5)
E. Beckjord, RES (NLS-007)
A. Bates, SECY (16G15)
G. Rammling, OCM (16H3)

D. Brinkman (PDI-1)
R. Capra (PDI-1)
D. Labarge (PDII-4)
F. Hebden (PDII-4)
W. Reckley (PDIV-2)
S. Black (PDIV-2)

bcc: INPO

ATTN: J. Cowan
1100 Circle 75, Suite 1500
Atlanta, GA 30339

ENCLOSURE 1

LIST OF ATTENDEES

OPERATING REACTORS EVENTS FULL BRIEFING (92-03)

MARCH 25, 1992

<u>NAME</u>	<u>OFFICE</u>	<u>NAME</u>	<u>OFFICE</u>
A. CHAFFEE	NRR	B. GRIMES	NRR
R. BENEDICT	NRR	F. HEBDON	NRR
R. DE NIG	NRR	G. LAINAS	NRR
K. BAUMANN	NRR	D. NAUJOCK	NRR
J. CARTER	NRR	R. HERMAN	NRR
D. CAMPBELL	NRR	M. MARKLEY	NRR
J. ...	NRR	D. CARTER	NRR
T. KOS	NRR	S. VARGA	NRR
... SCH	NRR	J. PARTLOW	NRR
...	NRR	T. KOZAK	RII
...	NRR	R. MUSSER	RII
...	NRR	K. HART	SECY
R.	NRR	P. BOEHNERT	ACRS
B. BOGER	NRR	M. FLEISMAN	OCM/KR
		T. NOVAK	AEOD

OPERATING REACTORS EVENTS BRIEFING 92-03
EVENTS ASSESSMENT BRANCH
LOCATION: 10 B11, WHITE FLINT
WEDNESDAY, MARCH 25, 1992, 11:00 A.M.

NINE MILE POINT, UNIT 2

LOSS OF OFFSITE POWER
(AIT)

SEQUOYAH, UNITS 1 AND 2

INOPERABLE ICE
CONDENSER DOORS

WOLF CREEK, UNIT 1

"NOISE" IN CONTAINMENT
DURING HEATUP

LENINGRAD NUCLEAR POWER
STATION, UNIT 3

LOSS OF PRESSURE IN
PRESSURE CHANNEL

NINE MILE POINT, UNIT 2
LOSS OF OFFSITE POWER
MARCH 23, 1992

PROBLEM:

WHILE WORKING ON THE AUXILIARY BOILER RELAY CIRCUIT, OFF-SITE POWER WAS LOST FOR ABOUT 1 HR. ONE DIESEL GENERATOR PROVIDED POWER AND CONTROL ROOM ANNUNCIATORS WERE LOST.

CAUSE:

AN INADVERTENT CONTACT CLOSURE LOST LINE #5 AND WAS SUBSEQUENTLY SEEN BY LINE #6 FOLLOWING A MANUALLY INITIATED TRANSFER.

SAFETY SIGNIFICANCE:

OFFSITE POWER WAS LOST WITH ONLY ONE DIESEL GENERATOR AVAILABLE FOR ONSITE POWER.

DISCUSSION:

- O THE REACTOR HAD BEEN SHUT DOWN SINCE MARCH 4 FOR REFUELING.
- O PART OF THE CORE HAD BEEN OFF-LOADED.
- O OFFSITE POWER LINE #5 SUPPLYING DIV I AND DIV III.
- O OFFSITE POWER LINE #6 SUPPLYING DIV II.
- O "A" UPS WAS ON MAINTENANCE POWER SUPPLY (FROM LINE #5); BACKUP POWER WITH BATTERIES NOT AVAILABLE.
- O "B" UPS WAS ON NORMAL POWER (FROM LINE #6).
- O MAINTENANCE BEING PERFORMED ON AUX BOILER RELAY CIRCUITRY.
- POWER FROM LINE #5.

CONTACT: J. CARTER, NRR/DOEA
REFERENCES: 10 CFR 50.72 #23078 AND
PNO-1-92-14

AIT: YES
SIGEVENT: TBD

- 0 DURING REPLACEMENT OF COVER ON A RELAY, A SEAL IN (S1) CONTACT FOR AN OVERCURRENT DEVICE WAS BUMPED AND ENERGIZED THE LOCKOUT RELAY AND SEALED IT IN. POWER FROM LINE #5 WAS LOST @ 10:08 A.M.
- 0 DIV I DIESEL OUT FOR MAINTENANCE.
- 0 DIV III DIESEL (HPCS) STARTED.
- 0 "B" UPS PROVIDED POWER TO ANNUNCIATORS FOR 20-30 SECONDS AFTER LOSS OF LINE #5; LOADS FROM "A" UPS HAD BEEN TRANSFERRED.
- 0 POWER SUPPLY TO ANNUNCIATORS WAS OVERLOADED CAUSING LOSS OF ANNUNCIATORS.
 - POTENTIAL FOR OVERLOAD IDENTIFIED IN IIT REPORT
- 0 INITIATED MANUAL TRANSFER OF POWER FROM LINE #6. S1 CONTACT NOT RESET PRIOR TO TRANSFER. LOST LINE #6 @ 10:16 A.M.
- 0 DIV II DIESEL STARTED.
- 0 DIV III DIESEL TRIPPED ON OVER TEMPERATURE
 - LACK OF COOLING WATER
- 0 RHR TEMPORARILY LOST; REACTOR VESSEL WATER TEMPERATURE WAS 93F.
- 0 OFFSITE POWER LINE #6 RESTORED TO SWITCHYARD @ 11:01 A.M.
- 0 ALL CONTROL ROOM ANNUNCIATORS RESTORED @ 11:31 A.M.
- 0 SAFETY-RELATED POWER RE-ENERGIZED FROM LINE #5 @ 11:45 A.M.

FOLLOWUP

- 0 AIT BEING SENT TO SITE.

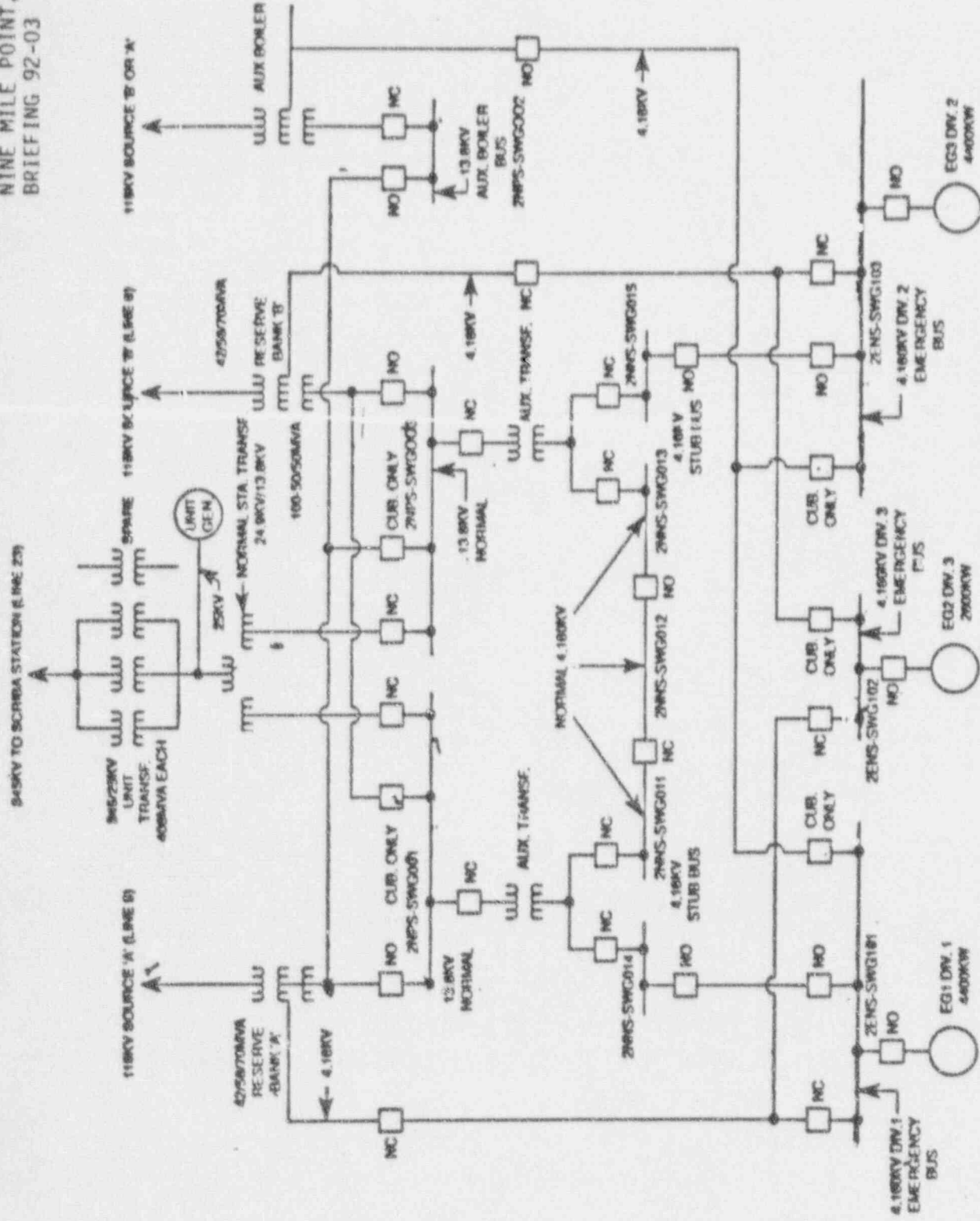


Figure 4.3 AC onsite power system
NINE MILE POINT, UNIT 2

SEQUOYAH, UNITS 1 AND 2
INOPERABLE ICE CONDENSER DOORS
MARCH 18, 1992

PROBLEM:

ICE CONDENSER DOORS STUCK CLOSED.

CAUSE:

WATER UNDER CONCRETE FLOOR FROZE. ITS EXPANSION CAUSED FLOOR TO CRACK AND HEAVE UPWARD, PRESSING DOOR FLASHING UP AGAINST BOTTOM OF DOORS

SAFETY SIGNIFICANCE:

POST-ACCIDENT CONTAINMENT AND COMPARTMENT PRESSURES MIGHT BE HIGHER THAN DESIGN BASIS IF ICE CONDENSER DOORS DO NOT OPEN.

DISCUSSION:

0 ICE CONDENSER CONCEPT:

- ABOUT 2 MILLION POUNDS OF ICE IS STORED IN AN ANNULAR AREA INSIDE CONTAINMENT.
- ICE IS MAINTAINED SOLID BY COLD AIR IN WALLS. ETHYLENE GLYCOL SOLUTION IN EMBEDDED PIPING COOLS THE FLOOR.
- LOWER INLET DOORS, NORMALLY CLOSED, OPEN WHEN DIFFERENTIAL PRESSURE IS GREATER THAN 1 PSF.
- AIR/STEAM MIXTURE PASSES UP AROUND AND THROUGH THE ICE BASKETS (COLUMNS), MELTING THE ICE AND BEING COOLED BEFORE DISCHARGE INTO UPPER CONTAINMENT.
- CONTAINMENT DESIGN PRESSURE IS 12 PSI.

0 FLOOR CONSTRUCTION

- 4-INCH CONCRETE WEAR SLAB OVER 1/4-INCH STEEL PLATE. GLYCOL COOLING TUBES EMBEDDED ABOVE PLATE.
- STEEL PLATE OVER 1-INCH GROUT OVER FOAMED CONCRETE INSULATION OVER STRUCTURAL CONCRETE BASE.

CONTACT: R. BENEDICT, NRR/DOEA
REFERENCE: 10 CFR 50.72 #23047

AIT: NO
SIGEVENT: TBD

O PROBABLE SCENARIO

- WATER FROM DEFROSTING PROBABLY COLLECTED BETWEEN WEAR SLAB AND STEEL PLATE OR BETWEEN PLATE AND GROUT DUE TO INCOMPLETE SEALING.
- WATER EXPANDS WHEN IT FREEZES, CAUSING WEAR SLAB TO HEAVE UPWARD FROM 3/8-INCH TO 2 INCHES. NO SIGN OF FAILURE OF STRUCTURAL CONCRETE BASE.
- HEAVING OF WEAR SLAB PUSHED FLASHING AGAINST BOTTOM OF DOOR. TWENTY SEVEN OF 48 DOORS IN UNIT 2 WERE OBSTRUCTED, AND 11 IN UNIT 1.

O OTHER PLANTS:

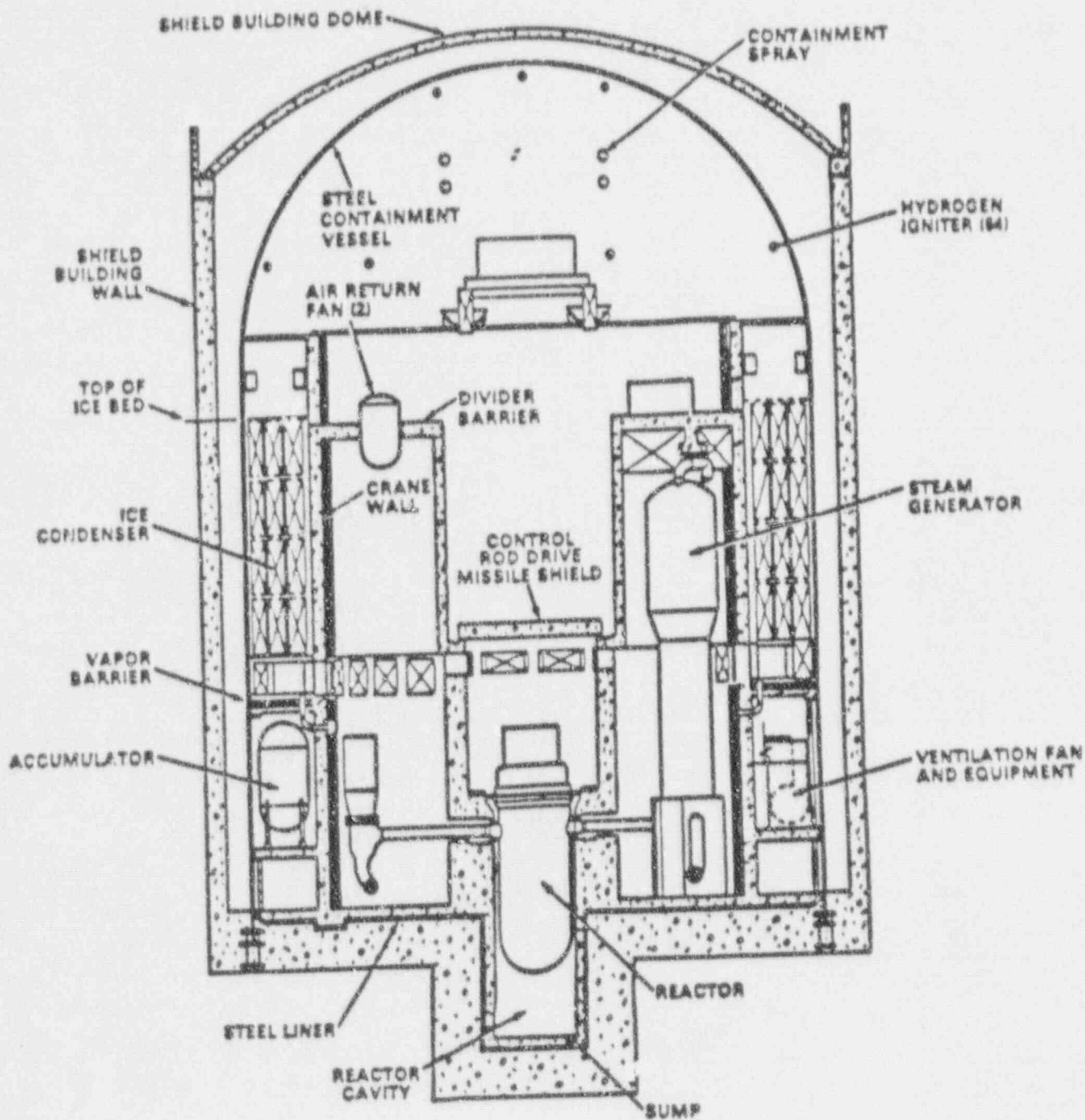
- NO EVIDENCE OF WEAR SLAB CRACKING OR HEAVING.
- DO NOT HEAT THE GLYCOL IN THE FLOOR DURING DEFROST, SO WATER DOES NOT GET UNDER THE WEAR SLAB.

STATUS

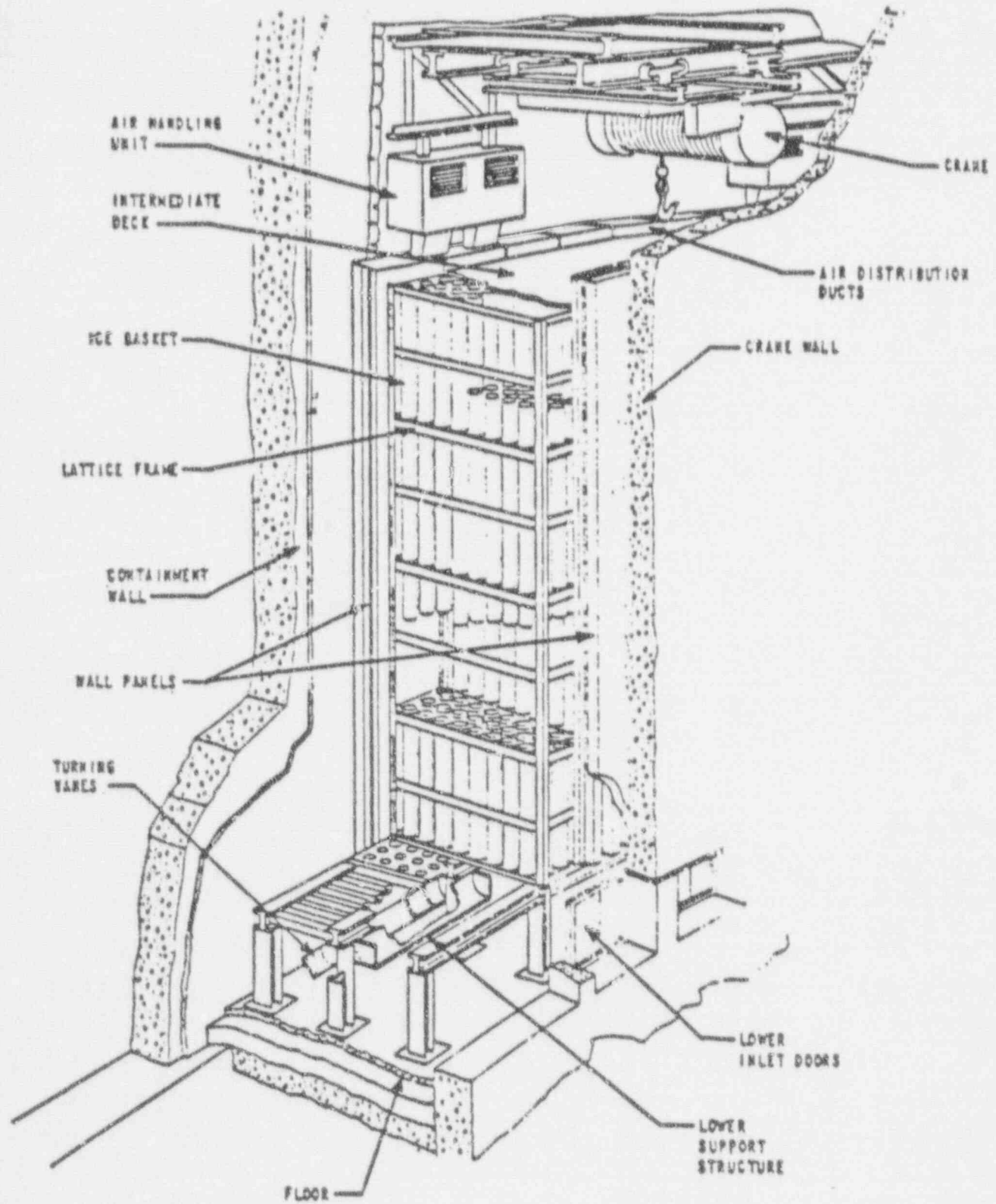
- O BORESCOPE FOUND ICE AND VOIDS ABOVE AND BELOW STEEL PLATE.
- O UNIT 2 DOOR-OPENING FORCE WILL BE MEASURED IN AS-IS CONDITION. UNIT 1 DOOR-OPENING FORCE WAS NOT MEASURED PRIOR TO REMOVING THE JAMMED FLASHING.
- O CAL ISSUED:
 - ROOT CAUSE ANALYSIS.
 - ANALYZE EFFECTS ON OTHER SYSTEMS, STRUCTURES AND COMPONENTS IMPACTED BY THE MECHANISM THAT CAUSED WEAR SLAB MOVEMENT.
 - PLANS FOR SHORT TERM AND LONG TERM CORRECTIVE ACTIONS.

FOLLOWUP:

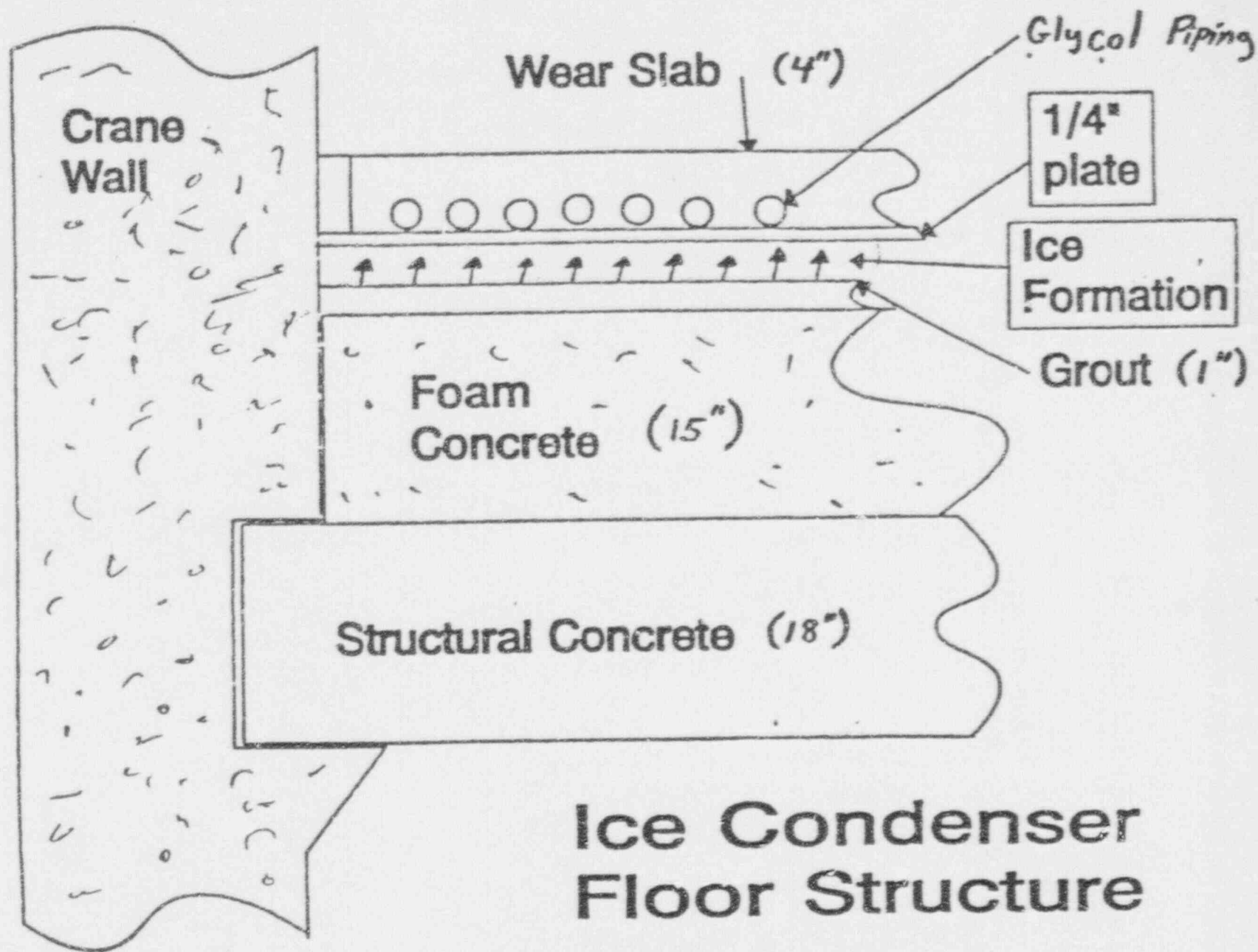
- O INFORMATION NOTICE IS BEING PREPARED.

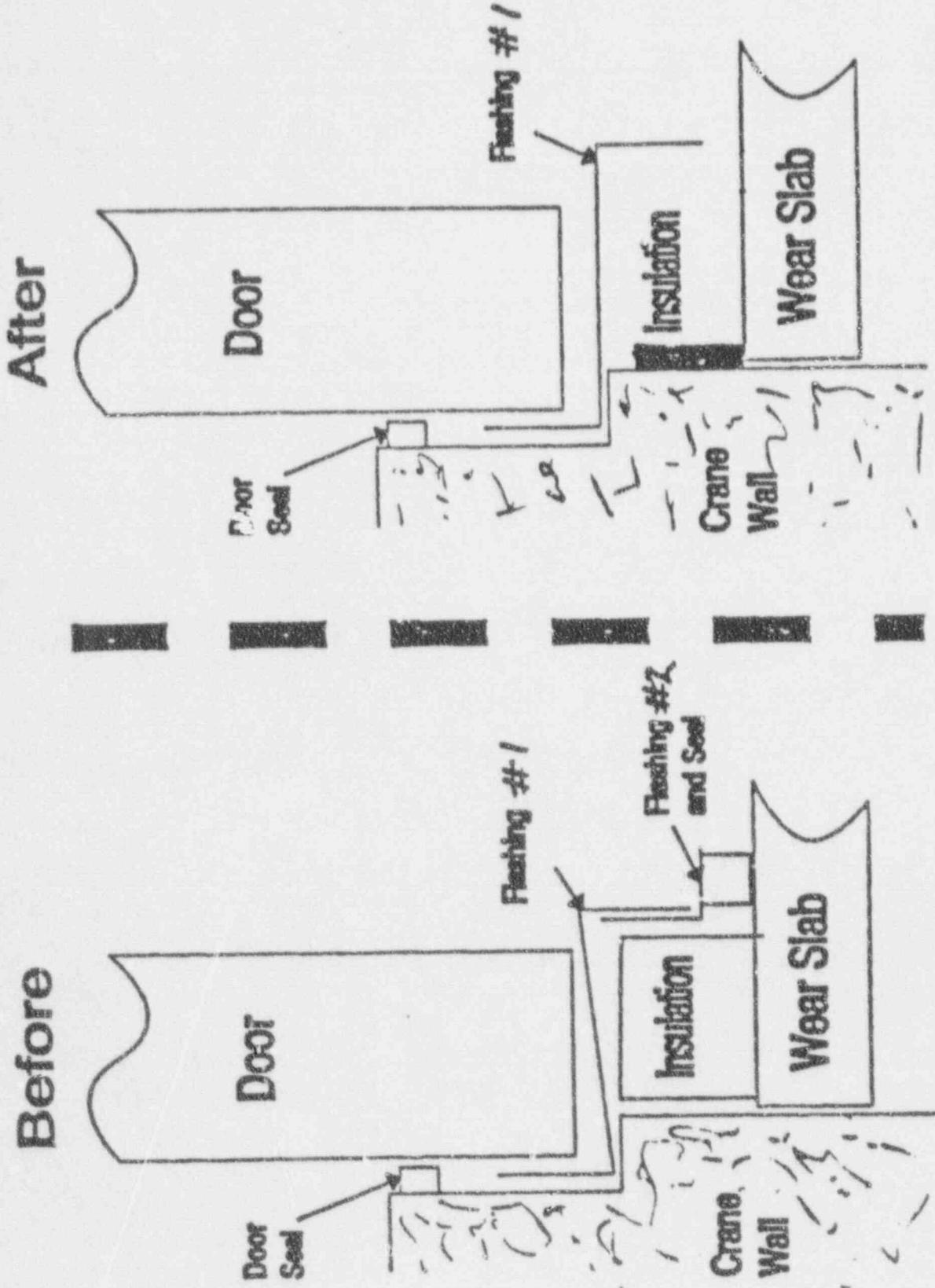


Sequoyah Ice Condenser Containment
(Steel Cylinder with Concrete Shield Building)



General Arrangement of an Ice Condenser





Ice Condenser Lower Inlet Door

WOLF CREEK, UNIT 1
 "NOISE" IN CONTAINMENT
 DURING HEATUP
 FEBRUARY 28, 1992
 MARCH 16, 1992

PROBLEM:

DURING PLANT HEATUP, A LOUD NOISE WAS HEARD IN CONTAINMENT. IN ADDITION, SEISMIC MONITOR AND LOOSE PARTS MONITOR ALARMS WERE RECEIVED.

CAUSE:

REACTOR COOLANT SYSTEM (RCS) INTERMEDIATE LEG SADDLE BLOCK INTERFERENCE.

SAFETY SIGNIFICANCE:

INTERFERENCE DURING HEATUP COULD LEAD TO ADDITIONAL PIPING STRESS.

DISCUSSION:

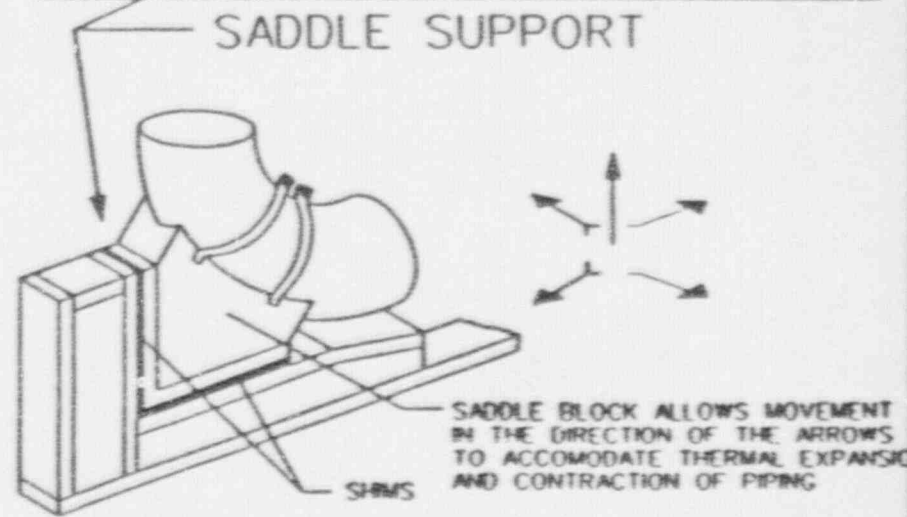
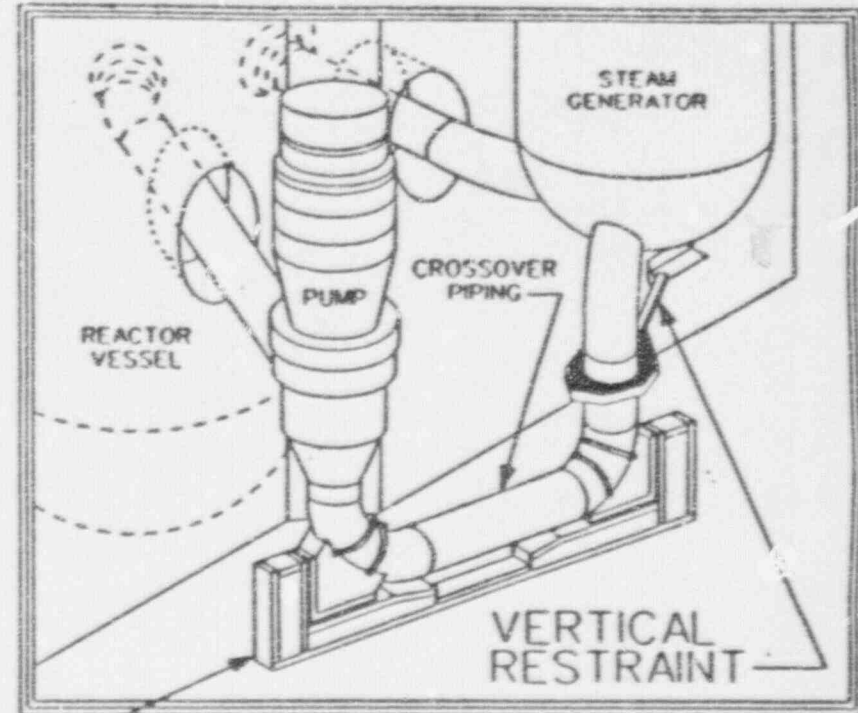
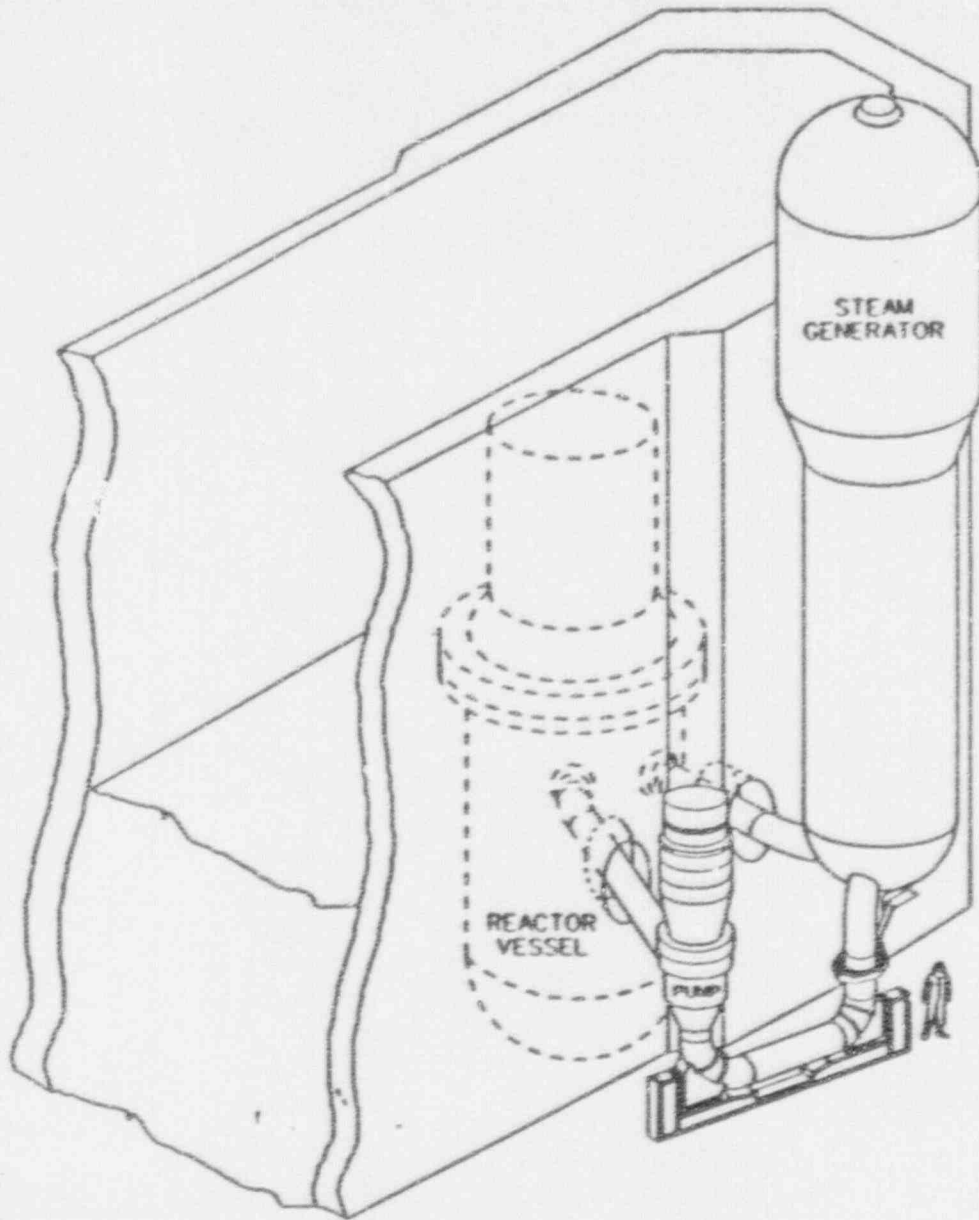
- O ON BOTH OCCASIONS, PLANT HEATUP WAS IN PROGRESS.
- O WHEN TEMPERATURE APPROACHED NORMAL OPERATING TEMPERATURE (557 DEGREES F), A LOUD NOISE WAS HEARD IN CONTAINMENT.
- O DURING THE EVENTS, THE SEISMIC AND LOOSE PARTS ALARMS ACTUATED.
- O DURING THE MARCH 16, 1992, HEATUP, THE LICENSEE TOOK NUMEROUS MEASUREMENTS TO DETERMINE THE SOURCE OF THE "NOISE."
- O THE LICENSEE DETERMINED THE MOST PROBABLE CAUSE OF THE "NOISE" WAS RCS INTERMEDIATE LEG SADDLE BLOCK INTERFERENCE.

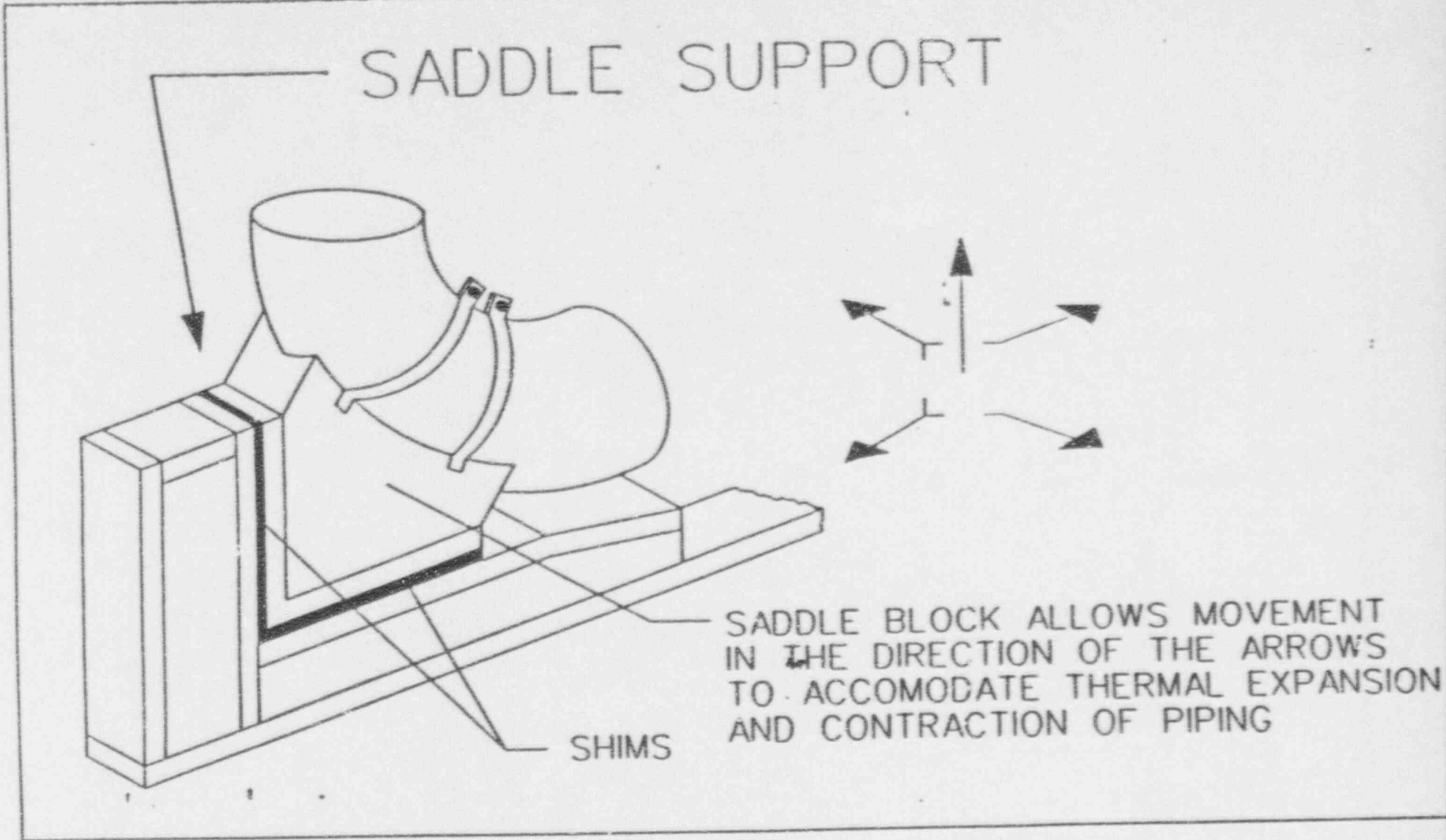
CONTACT: D. GAMBERONI, NRR/DOEA AIT: NO
 REFERENCES: PNO-IV-92-14A DATED 03/05/92, SIGEVENT: NO
 PNO-IV-92-14B DATED 03/17/92, AND
 MORNING REPORT DATED 03/02/92

- O SADDLE BLOCK SHIMS WERE MACHINED DOWN TO ELIMINATE THE INTERFERENCE DURING HEATUP, BUT WERE REMOVED DURING THE HEATUP PRIOR TO REACHING 557 DEGREES F BECAUSE ADDITIONAL MACHINING WAS REQUIRED.
- O ON MARCH 23, 1992, A PLANT HEATUP WAS COMPLETED WITHOUT THE "NOISE."

FOLLOWUP:

- O THE NRC SENT A REACTIVE INSPECTION TEAM TO THE SITE TO INVESTIGATE THE "NOISE."
- O THE LICENSEE MET WITH NRC MANAGEMENT ON MARCH 24, 1992, TO DISCUSS THE EVENTS AND TO PRESENT WESTINGHOUSE PIPING STRESS CALCULATIONS.
- O A MANAGEMENT MEETING, OPEN TO PUBLIC OBSERVATION, WILL BE HELD AT THE SITE ON MARCH 26, 1992, TO DISCUSS THE CAUSE OF THE EVENTS, THE SAFETY SIGNIFICANCE, AND CORRECTIVE ACTIONS TO PREVENT RECURRENCE.





LENINGRAD, UNIT 3
LOSS OF PRESSURE IN PRESSURE CHANNEL
MARCH 24, 1992

PROBLEM:

ONE OF THE UNIT 3 PRESSURE TUBES APPARENTLY EXPERIENCED A SUDDEN PRESSURE LOSS.

CAUSE:

UNKNOWN.

SAFETY SIGNIFICANCE:

REPORTED RELEASE OF RADIOACTIVITY TO ENVIRONMENT.

BACKGROUND:

- 0 FOUR RBMK-1000 REACTORS ARE LOCATED APPROX 50 TO 60 MILES WEST OF ST. PETERSBURG (LENINGRAD)
- 0 RBMK REACTORS ARE GRAPHITE MODERATED, LIGHT WATER COOLED.
- 0 COOLANT IS CIRCULATED THROUGH APPROX 1600 PRESSURE TUBES.

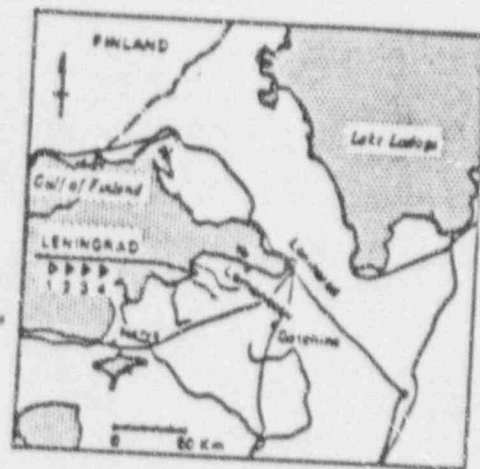
EVENT DESCRIPTION:

- 0 APPROX 2:37 A.M. LOCAL TIME, INDICATIONS OF A SUDDEN PRESSURE LOSS IN ONE PRESSURE TUBE WERE SEEN.
- 0 UNIT WAS SHUTDOWN AFTER EVENT.
- 0 REPORTED THAT IODINE AND NOBLE GASES WERE RELEASED TO ENVIRONMENT.
- 0 RUSSIAN SAFETY AUTHORITIES HAVE DISPATCHED TEAM TO SITE.
- 0 REPORTED THAT EVENT HAS BEEN DOWNGRADED FROM LEVEL 3 TO LEVEL 2 ON IAEA SCALE.

CONTACT: J. RAMSEY, NRR/DOEA
REFERENCE: 10 CFR 50.72 #23087

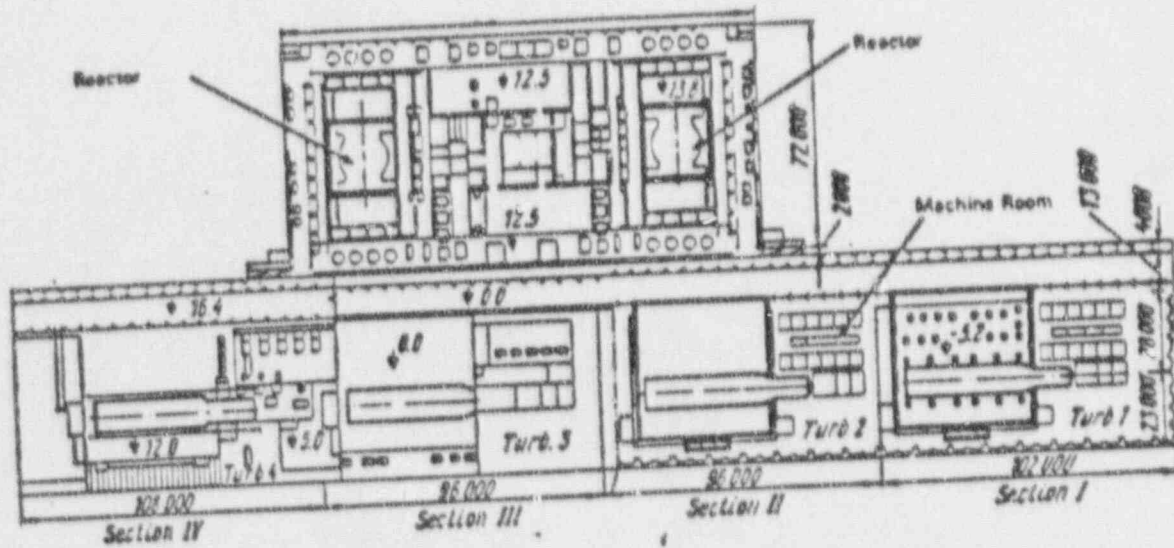
AIT: NO
SIGEVENT: NO

Leningrad Unit 3
March 24, 1992



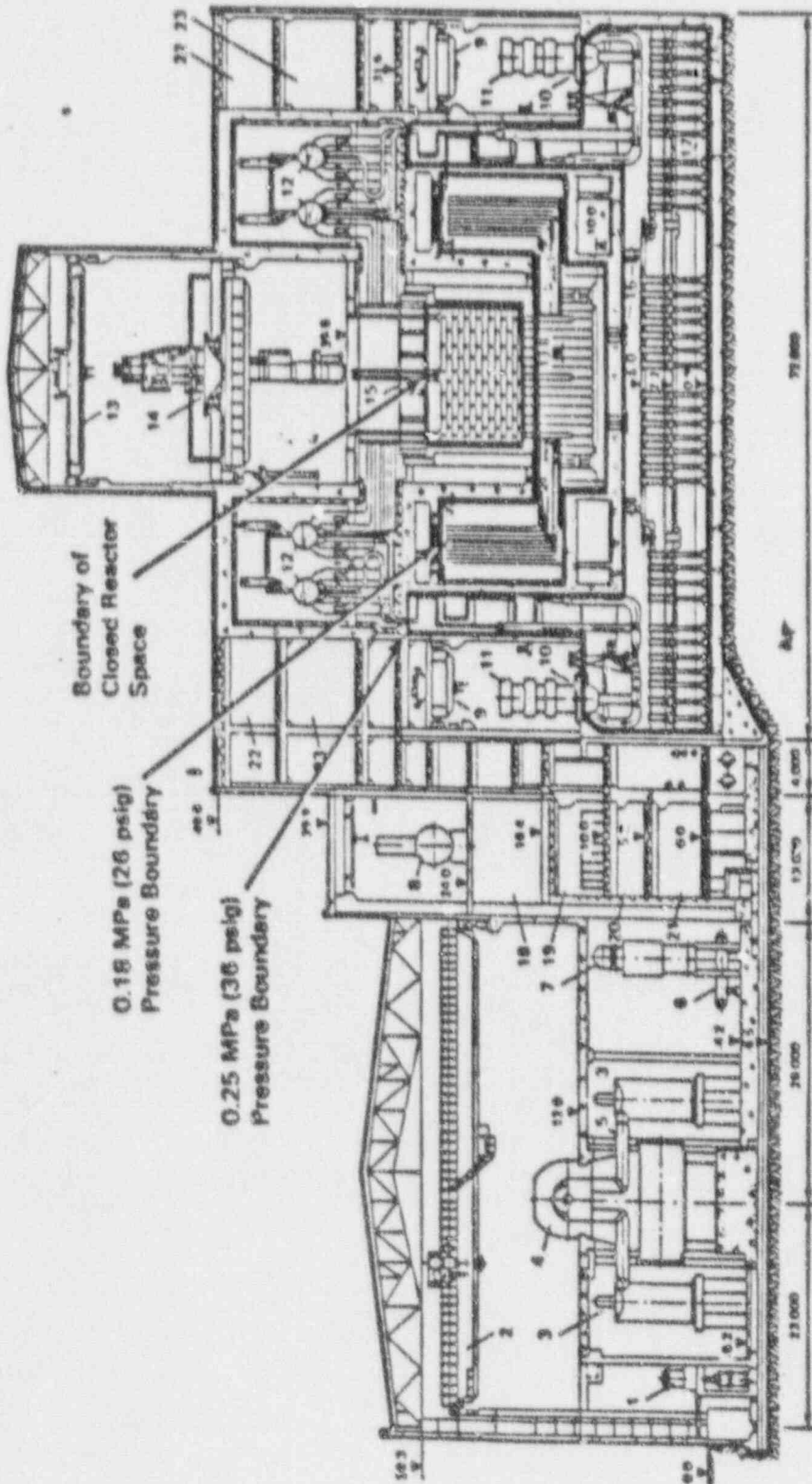
Location of Leningrad Atomic Power Station

Leningrad Unit 3
March 24, 1992



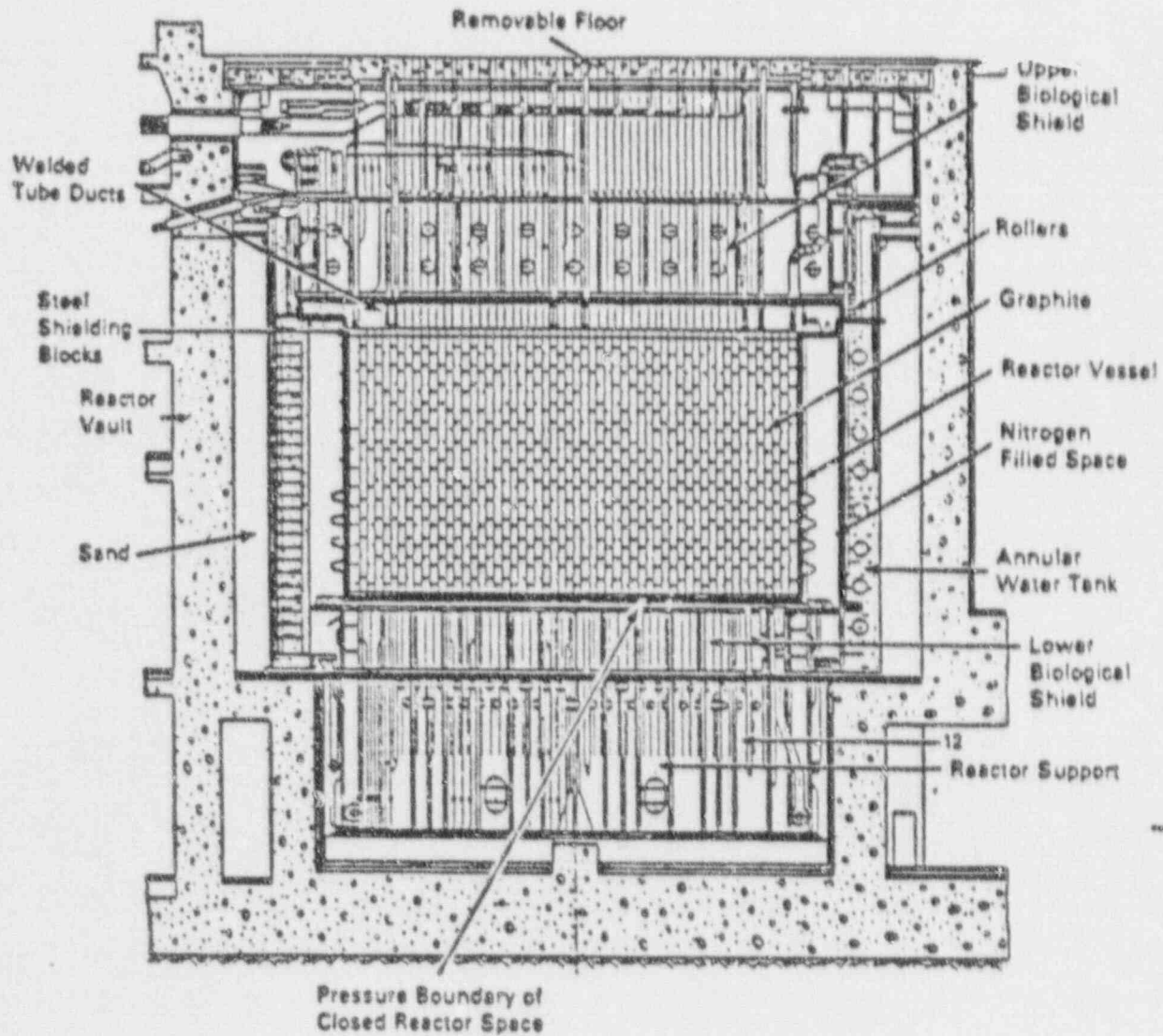
Typical RBMK-1000 Power Station Layout

Leningrad Unit 3
 March 24, 1992



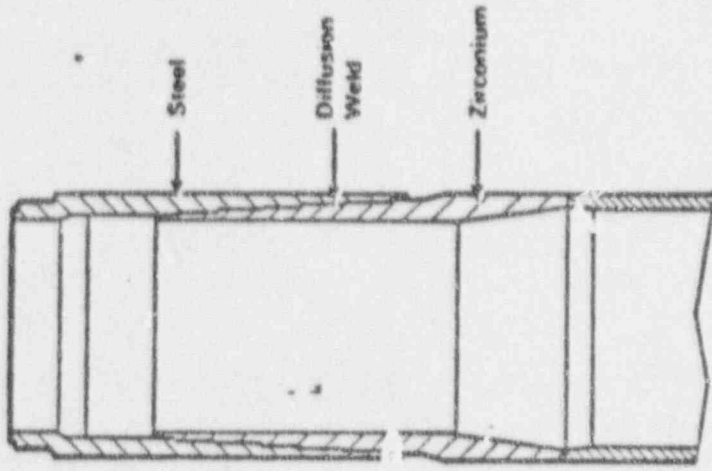
- 1 - First-stage condensate pump; 2 - 126/20-t overhead travelling crane; 3 - Separator-steam superheater; 4 - 8,500-05/3000 steam turbine; 5 - Condenser; 6 - Additional reactor
- 7 - Low-pressure heater; 8 - Deaerator; 9 - 50/10-t overhead travelling crane; 10 - Main circulating pump; 11 - Electric motor of main circulating pump; 12 - Drum separator;
- 13 - 50/10-t remotely controlled overhead travelling crane; 14 - Refueling mechanism; 15 - RISMA; 1000 reactor; 16 - Accident containment vessel; 17 - Bubble-gland;
- 18 - Pipe valve; 19 - Modular control board; 20 - Location beneath control board room; 21 - House watch-gear locations; 22 - Exhaust ventilation plant locations; 23 - Pressure ventilation plant locations

Leningrad Unit 3
 March 24, 1992

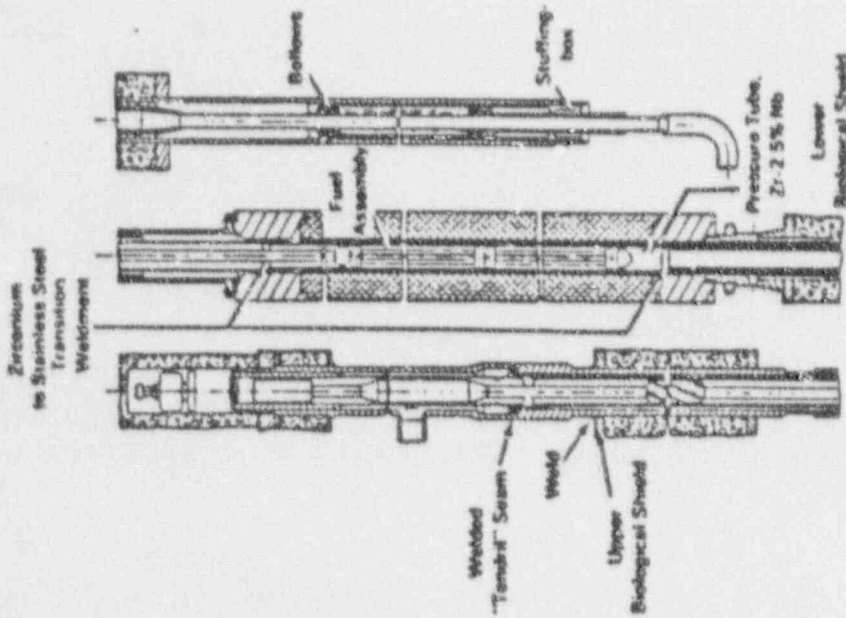


Typical RBMK-1000 Reactor Core Arrangement

Leningrad Unit 3
March 24, 1992

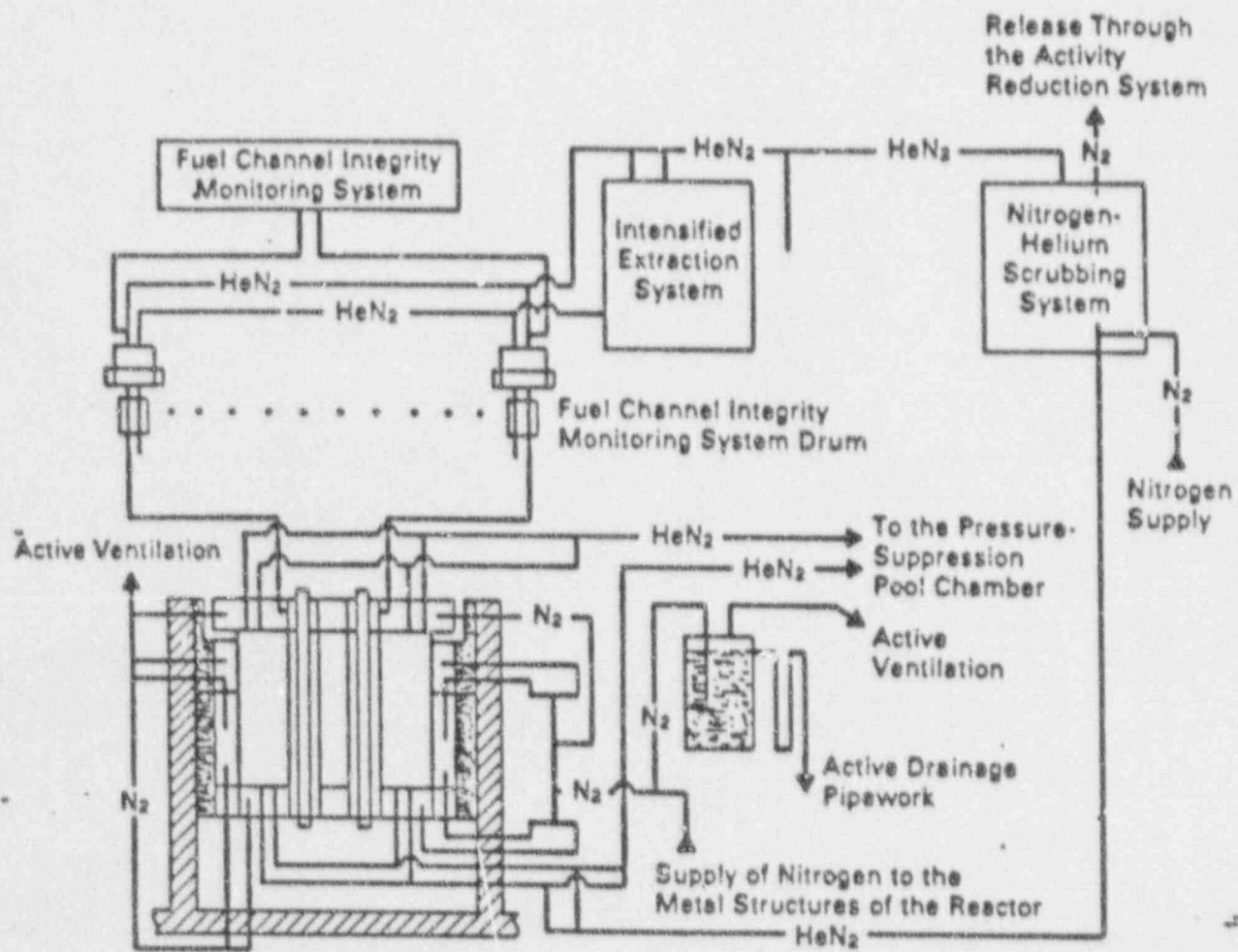


Zirconium-to-stainless
steel transition joint



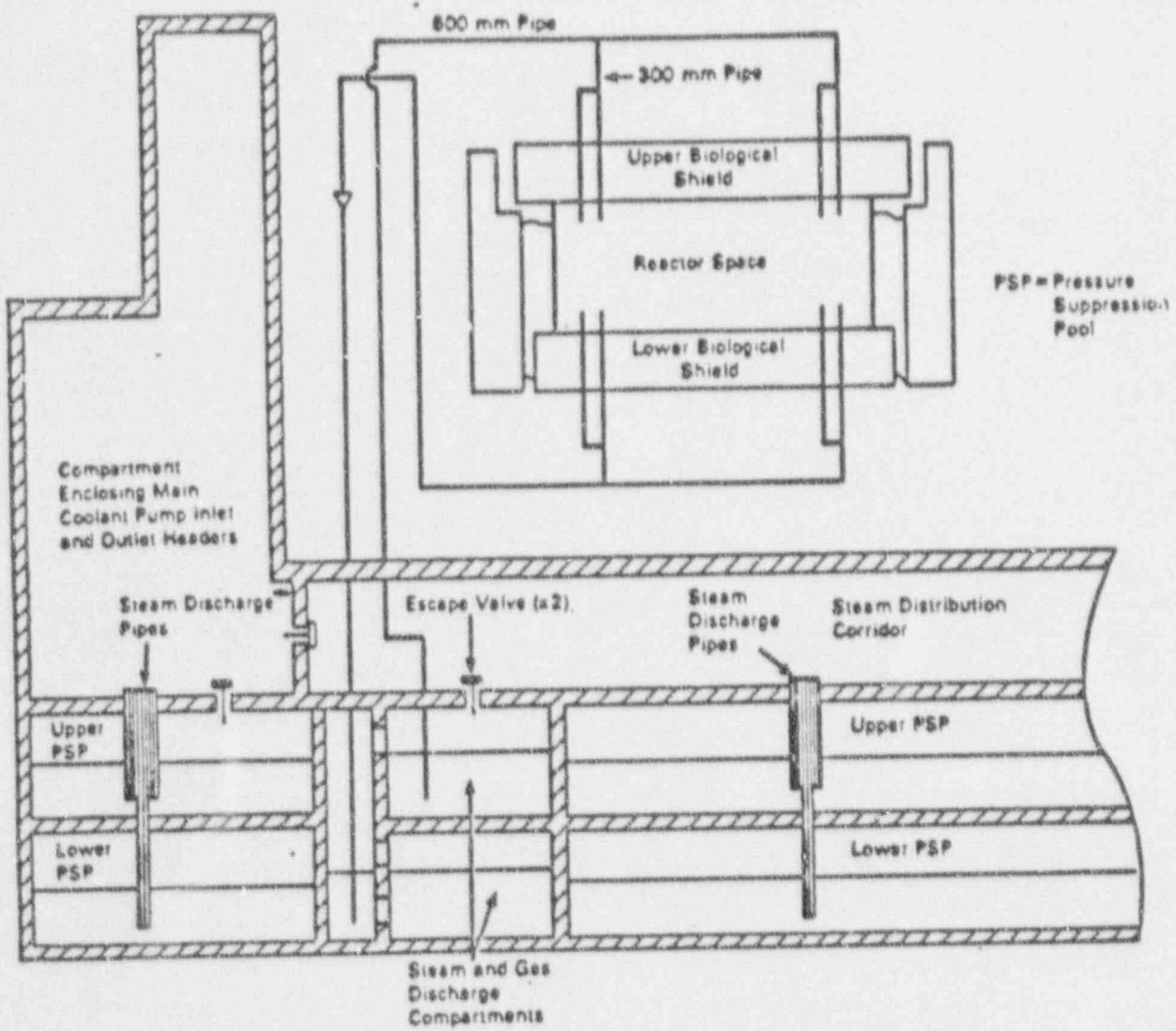
Fuel channel

Leningrad Unit 3
 March 24, 1992



Gas circuit system

Leningrad Unit 3
 March 24, 1992



System to protect the reactor vault from excess pressure

REACTOR SCRAM SUMMARY
WEEK ENDING 03/01/92

I. PLANT SPECIFIC DATA (1)

DATE	SITE	UNIT	POWER	SIGNAL	CAUSE	COMPLI- CATIONS	(3) YTD		YTD TOTAL
							ABOVE 15%	BELOW 15%	
02/24/92	SOUTH TEXAS	2	100	M	EQUIPMENT	NO	2	0	2
02/25/92	BRAIDWOOD	2	100	A	EQUIPMENT	NO	1	0	1
02/27/92	DCONEE	3	100	A	PERSONNEL	NO	2	0	2
02/27/92	CLINTON	1	72	A	EQUIPMENT	NO	2	0	2
02/29/92	GINNA	1	97	A	EQUIPMENT	NO	2	0	2
02/29/92	BRUNSWICK	1	80	A	EQUIPMENT	NO	2	0	2
03/01/92	DAVIS BESSE	1	40	B	PERSONNEL	NO	1	0	1
03/01/92	LASALLE	1	89	A	EQUIPMENT	NO	1	0	1

REACTOR SCRAM SUMMARY
WEEK ENDING 03/08/92

I. PLANT SPECIFIC DATA (1)

DATE	SITE	UNIT	POWER	SIGNAL	CAUSE	COMPLI- CATIONS	(3) YTD		YTD TOTAL
							ABOVE 15%	BELOW 15%	
03/05/92	NORTH ANNA	1	0	M	EQUIPMENT	NO	0	1	1
03/05/92	RIVER BEND	1	100	A	EQUIPMENT	NO	2	0	2
03/06/92	DIABLO CANYON	1	100	A	EQUIPMENT	NO	1	0	1
03/06/92	VERMONT YANKEE	1	0	A	EQUIPMENT	NO	0	1	1
03/06/92	FARLEY	2	11	A	EQUIPMENT	NO	1	1	2

II. COMPARISON OF WEEKLY STATISTICS WITH INDUSTRY AVERAGES

SCRAMS FOR WEEK ENDING
03/01/92

SCRAM CAUSE	NUMBER OF SCRAMS	1992 WEEKLY AVERAGE (YTD)	1991 WEEKLY AVERAGE	1990 WEEKLY AVERAGE	1989 WEEKLY AVERAGE	1988 WEEKLY AVERAGE
POWER GREATER THAN 15%						
EQUIPMENT RELATED	6	3.0	2.9	3.4	3.1	3.0
PERSONNEL RELATED (2)	2	0.8	0.6	0.5	1.0	1.0
OTHER (4)	0	0.0	0.0	0.0	0.1	0.4
Subtotal	8	3.8	3.5	3.9	4.2	4.4
POWER LESS THAN 15%						
EQUIPMENT RELATED	0	0.1	0.3	0.4	0.3	0.6
PERSONNEL RELATED (2)	0	0.0	0.2	0.1	0.3	0.4
OTHER (4)	0	0.0	0.5	0.0	0.0	0.2
Subtotal	0	0.1	0.5	0.5	0.6	1.2
TOTAL	8	3.9	4.0	4.4	4.8	5.6

MANUAL VS AUTO SCRAMS

TYPE	NO. OF SCRAMS	1992 WEEKLY AVERAGE (YTD)	1991 WEEKLY AVERAGE	1990 WEEKLY AVERAGE	1989 WEEKLY AVERAGE	1988 WEEKLY AVERAGE
MANUAL SCRAMS	1	0.8	0.7	1.2	0.9	1.1
AUTOMATIC SCRAMS	7	3.1	3.3	3.2	3.9	4.5

II. COMPARISON OF WEEKLY STATISTICS WITH INDUSTRY AVERAGES

SCRAMS FOR WEEK ENDING 03/08/92

SCRAM CAUSE	NUMBER OF SCRAMS	1992 WEEKLY AVERAGE (YTD)	1991 WEEKLY AVERAGE	1990 WEEKLY AVERAGE	1989 WEEKLY AVERAGE	1988 WEEKLY AVERAGE
POWER GREATER THAN 15%						
EQUIPMENT RELATED	2	2.9	2.9	3.4	1.1	3.0
PERSONNEL RELATED (2)	0	0.7	0.6	0.5	1.0	1.0
OTHER (4)	0	0.0	0.0	0.0	0.1	0.4
Subtotal	2	3.6	3.5	3.9	4.2	4.4
POWER LESS THAN 15%						
EQUIPMENT RELATED	3	0.4	0.3	0.4	0.3	0.6
PERSONNEL RELATED (2)	0	0.0	0.2	0.1	0.3	0.4
OTHER (4)	0	0.0	0.5	0.0	0.0	0.2
Subtotal	3	0.4	0.5	0.5	0.6	1.2
TOTAL	5	4.0	4.0	4.4	4.8	5.6

MANUAL VS AUTO SCRAMS

TYPE	NO. OF SCRAMS	1992 WEEKLY AVERAGE (YTD)	1991 WEEKLY AVERAGE	1990 WEEKLY AVERAGE	1989 WEEKLY AVERAGE	1988 WEEKLY AVERAGE
MANUAL SCRAMS	1	0.8	0.7	1.2	0.9	1.1
AUTOMATIC SCRAMS	4	3.2	3.3	3.2	3.9	4.5

REACTOR SCRAM SUMMARY
WEEK ENDING 03/19/92

1. PLANT SPECIFIC DATA (1)

DATE	SITE	UNIT	POWER	SIGNAL	CAUSE	COMPLI(3) DATIONS	YTD	YTD	YTD TOTAL	
							ABOVE	BELOW		
							152	152		
03/09/92	VOETLE	2	50 A		PERSONNEL	NO	1	0	1	
03/12/92	HADDAM NECK	1	5 A		PERSONNEL	NO	9	1	1	
03/12/92	HADDAM NECK	1	6 A		EQUIPMENT	NO	0	2	2	
03/14/92	SOUTH TEXAS	1	100 A		PERSONNEL	NO	1	0	1	
03/15/92	BRAIDWOOD	2	99 A		PERSONNEL	NO	2	0	2	

REACTOR SCRAM SUMMARY
WEEK ENDING 03/22/92

1. PLANT SPECIFIC DATA (1)

DATE	SITE	UNIT	POWER	SIGNAL	CAUSE	COMPLI(3) DATIONS	YTD	YTD	YTD TOTAL	
							ABOVE	BELOW		
							152	152		
03/16/92	FERMI	2	100 M		EQUIPMENT	NO	1	0	1	
03/18/92	SUSC, HANNA	2	100 M		EQUIPMENT	NO	1	0	1	
03/21/92	MCDUIRE	2	62 A		EQUIPMENT	NO	1	0	1	

III. COMPARISON OF WEEKLY STATISTICS WITH INDUSTRY AVERAGES

SCRAMS FOR WEEK ENDING
03/15/92

SCRAM CAUSE	NUMBER OF SCRAMS	1992 WEEKLY AVERAGE (YTD)	1991 WEEKLY AVERAGE	1990 WEEKLY AVERAGE	1989 WEEKLY AVERAGE	1988 WEEKLY AVERAGE
POWER GREATER THAN 15%						
EQUIPMENT RELATED	0	2.6	2.9	3.4	3.1	3.0
PERSONNEL RELATED (2)	3	0.9	0.6	0.5	1.0	1.0
OTHER (4)	0	0.0	0.0	0.0	0.1	0.4
Subtotal	3	3.5	3.5	3.9	4.2	4.4
POWER LESS THAN 15%						
EQUIPMENT RELATED	1	0.5	0.3	0.4	0.3	0.6
PERSONNEL RELATED (2)	1	0.1	0.2	0.1	0.3	0.4
OTHER (4)	0	0.0		0.5	0.0	0.0
0.2						
Subtotal	2	0.6	0.5	0.5	0.6	1.2
TOTAL	5	4.1	4.0	4.4	4.8	5.6

MANUAL VS AUTO SCRAMS

TYPE	NO. OF SCRAMS	1992 WEEKLY AVERAGE (YTD)	1991 WEEKLY AVERAGE	1990 WEEKLY AVERAGE	1989 WEEKLY AVERAGE	1988 WEEKLY AVERAGE
MANUAL SCRAMS	1	0.8	0.7	1.2	0.9	1.1
AUTOMATIC SCRAMS	4	3.3	3.3	3.2	3.9	4.5

II. COMPARISON OF WEEKLY STATISTICS WITH INDUSTRY AVERAGES

SCRAMS FOR WEEK ENDING
03/22/92

SCRAM CAUSE	NUMBER OF SCRAMS	1992 WEEKLY AVERAGE (YTD)	1991 WEEKLY AVERAGE	1990 WEEKLY AVERAGE	1989 WEEKLY AVERAGE	1988 WEEKLY AVERAGE
POWER GREATER THAN 15%						
EQUIPMENT RELATED	3	2.6	2.9	3.4	3.1	3.0
PERSONNEL RELATED (2)	0	0.9	0.6	0.5	1.0	1.0
OTHER (4)	0	0.0	0.0	0.0	0.1	0.4
Subtotal	3	3.5	3.5	3.9	4.2	4.4
POWER LESS THAN 15%						
EQUIPMENT RELATED	0	0.4	0.3	0.4	0.3	0.6
PERSONNEL RELATED (2)	0	0.1	0.2	0.1	0.3	0.4
OTHER (4)	0	0.0		0.5	0.0	0.0
0.2						
Subtotal	0	0.5	0.5	0.5	0.6	1.2
TOTAL	3	4.0	4.0	4.4	4.8	5.6

MANUAL VS AUTO SCRAMS

TYPE	NO. OF SCRAMS	1992 WEEKLY AVERAGE (YTD)	1991 WEEKLY AVERAGE	1990 WEEKLY AVERAGE	1989 WEEKLY AVERAGE	1988 WEEKLY AVERAGE
MANUAL SCRAMS	2	0.9	0.7	1.2	0.9	1.1
AUTOMATIC SCRAMS	1	3.1	3.3	3.2	3.9	4.5

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.

OE&B 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	--(YTD 03/22/92)--	047

OPERATING REACTOR PLANTS SIGNIFICANT EVENTS

No Sort Specified
 QUERY> Event Type SIG & Event Date >= 09/07/91 & Event Date <= 09/07/91

CLOSURE
RECORD
 EFR 92-008

OR
BRIEFING
 91-16 BENEDICT R.

SIGNIFICANCE
 Safety-Related Cooling System

DESCRIPTION OF EVENT

DATE OF
EVENT
 09/07/91 21788

PLANT & UNIT
 COMECE 1

IMPROPER COOLING WATER VALVE ALIGNMENTS RESULTED
 IN REACTOR VESSEL WATER TEMPERATURE RISING FROM A
 NORMAL 110F TO 187F DURING REFUELING SHUTDOWN.