

February 24, 1994

MEMORANDUM FOR: Brian K. Grimes, Director
 Division of Operating Reactor Support

FROM: Alfred E. Chaffee, Chief
 Events Assessment Branch
 Division of Operating Reactor Support

SUBJECT: OPERATING REACTORS EVENTS BRIEFING
 FEBRUARY 23, 1994 - BRIEFING 94-08

On February 23, 1994, we conducted an Operating Reactors Events Briefing (94-08) to inform senior managers from offices of the Commission, AEOD, ACRS, NRR, and regional offices of selected events that occurred since our last briefing on February 16, 1994. Enclosure 1 lists the attendees. Enclosure 2 presents the significant elements of the discussed events.

Robert L. Dennig
 /for/ Alfred E. Chaffee, Chief
 Events Assessment Branch
 Division of Operating
 Reactor Support

Enclosures: As stated

cc w/enclosures:
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cc:

T. Murley, NRR (12G18)
F. Miraglia, NRR (12G13)
F. Gillespie, NRR (12G18)
Acting ADPR, NRR (12G18)
S. Varga, NRR (14E4)
J. Calvo, NRR (14A4)
G. Lainas, NRR (14H3)
J. Roe, NRR (13E4)
J. Zwolinski, NRR (13H24)
E. Adensam, NRR (13E4)
W. Russell, NRR (12G18)
M. Hodges (Acting), NRR (7D26)
A. Thadani, NRR (8E2)
S. Rosenberg, NRR (10E4)
C. Rossi, NRR (9A2)
B. Boger, NRR (10H3)
F. Congel, NRR (10E2)
D. Crutchfield, NRR (11H21)
W. Travers, NRR (11B19)
D. Coe, ACRS (P-315)
E. Jordan, AEOD (MN-3701)
G. Holahan, AEOD (MN-9112)
L. Spessard, AEOD (MN-3701)
K. Brockman, AEOD (MN-3206)
S. Rubin, AEOD (MN-5219)
M. Harper, AEOD (MN-9112)
W. Bateman, EDO (17G21)
F. Ingram, PA (2G5)
E. Beckjord, RES (NLS-007)
A. Bates, SECY (16G15)
T. Martin, Region I
R. Cooper, Region I
S. Ebnetter, Region II
E. Merschhoff, Region II
S. Vias, Region II
J. Martin, Region III
E. Greenman, Region III
L. Callan, Region IV
A. Beach, Region IV
K. Perkins, Region V
S. Richards, Region V

A. Hansen (PDIII-3)
J. Hannon (PDIII-3)
R. Lobel (SCSB)
R. Barrett (SCSB)

bcc: Mr. Sam Newton, Manager
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001


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Alfred E. Chaffee, Chief
Events Assessment Branch
Division of Operating
Reactor Support

Enclosures: As stated

cc w/enclosures:
See next page

ENCLOSURE 1

LIST OF ATTENDEES

OPERATING REACTORS EVENTS FULL BRIEFING (94-08)

FEBRUARY 23, 1994

<u>NAME</u>	<u>OFFICE</u>	<u>NAME</u>	<u>OFFICE</u>
T. KOSHY	NRR	S. VARGA	NRR
R. DENNIG	NRR	C. HARBUCK	NRR
E. GOODWIN	NRR	C. THOMAS	NRR
D. SKEEN	NRR	C. ROSSI	NRR
K. GRAY	NRR	S. SABA	NRR
E. BENNER	NRR	G. ZECH	NRR
N. HUNEMULLER	NRR	S. LONG	NRR
B. GRIMES	NRR	M. WOHL	NRR
D. O'NEAL	NRR	J. DYER	NRR
R. LOBEL	NRR	A. HANSEN	NRR
M. SHANNON	NRR	R. ELLIOTT	NRR
D. GAMBERONI	NRR	V. BENAROYA	AEOD
J. ROE	NRR	D. COE	ACRS
L. REYES	NRR	E. BAKER	OCM

TELEPHONE ATTENDANCE
(AT ROLL CALL)

Regions
Region I
Region III
Region V

Resident Inspectors
T. McMurtray (Point Beach)

IIT/AIT Team Leaders

Misc.

OPERATING REACTORS EVENTS BRIEFING 94-08

LOCATION: 10 B11, WHITE FLINT
WEDNESDAY, FEBRUARY 23, 1994 11:00 A.M.

POINT BEACH,
UNITS 1 AND 2

EMERGENCY DIESEL GENERATORS OUT
OF SERVICE FOR TWIN UNIT

BULLETIN 93-02,
SUPPLEMENT 1

STRAINER PLUGGING ISSUES

PRESENTED BY: EVENTS ASSESSMENT BRANCH
DIVISION OF OPERATING REACTOR
SUPPORT, NRR

POINT BEACH, UNITS 1 AND 2
EMERGENCY DIESEL GENERATORS
OUT OF SERVICE FOR TWIN UNIT
FEBRUARY 8, 1994

PROBLEM

SCHEDULED MAINTENANCE ON ONE EMERGENCY DIESEL GENERATOR (EDG) AND AN EXCITOR FIELD PROBLEM IN THE SECOND EDG RESULTED IN NO EMERGENCY AC POWER FOR TWO UNITS DURING ADVERSE WEATHER CONDITIONS.

CAUSE

- TECH SPEC ALLOWED SCHEDULED SEVEN-DAY MAINTENANCE.
- MAINTENANCE ERROR IN ONE OF THE EDGs.

SAFETY SIGNIFICANCE

INCREASED VULNERABILITY FOR TWO UNIT STATION BLACKOUT.

BACKGROUND

THERE ARE TWO EDGs THAT SERVE BOTH UNITS. EDGs ARE SIZED TO SHUT DOWN ONE UNIT WHILE MITIGATING DESIGN BASES EVENT ON OTHER UNIT.

DISCUSSION

- EDG-1 WAS OUT FOR SCHEDULED MAINTENANCE FOR 5 DAYS STARTING JANUARY 31, 1994.
- EDG-2 WAS OUT FOR SCHEDULED MAINTENANCE FOR 5 DAYS STARTING FEBRUARY 7, 1994.

CONTACT: T. KOSHY, NRR/DORS/OEAB
REFERENCE: 10 CFR 50.72, #26754

AIT: NO
SIGEVENT: TBD

- ON FEBRUARY 8, 2100 HOURS, SURVEILLANCE ON EDG-1 (WHILE EDG-2 WAS OUT) IDENTIFIED VOLTAGE OSCILLATIONS DUE TO DAMAGE TO EXCITOR FIELD AND BUSBAR. THIS DEFICIENCY RESULTED FROM RECENT MAINTENANCE.
- ENFORCEMENT DISCRETION WAS GRANTED FOR 4 HRS. TO RETURN ONE OF THE EDGs TO SERVICE.
- THE SCHEDULED EDG OUTAGES WERE UNDERTAKEN WHILE THE GRID WAS AT MAXIMUM WINTER DEMAND, SNOWING WITH WINDS 30 MPH.
- THE MAINTENANCE ACTIVITY INCLUDES TEAR DOWN OF CYLINDERS, OIL CHANGE, INSPECTION OF CLEARANCES, AND LUBRICATION.

RISK ANALYSIS

- USING ACCIDENT SEQUENCE PRECURSOR (ASP) MODELS, THE CONDITIONAL CORE DAMAGE PROBABILITY (CCDP) FOR POINT BEACH IS BEING EVALUATED.
- THE OPERABILITY OF EXISTING GAS TURBINE PROVIDES AN ORDER OF MAGNITUDE REDUCTION IN THE CCDP VALUES.
- NRR IS REFINING THE ANALYSIS WITH RECENT EVENT SPECIFIC DATA AND PLANT CONDITIONS.
- LICENSEE CONSIDERS OVERHAUL AT POWER TO BE A NET SAFETY BENEFIT.

- LICENSEE DID NOT EXPLICITLY CONSIDER THE INCREASE IN PROBABILITY OF WEATHER RELATED CHALLENGES FROM LOW WINTER TEMPERATURES AND LOAD, SNOWING, AND 30 MPH WINDS.
- CURRENT LICENSEE PLANS ARE TO ADD ONE MORE EDG BY THE END OF THIS YEAR AND A FOURTH ONE NEXT YEAR.

NRC ACTION

- NRR IS CONDUCTING ADDITIONAL REVIEW TO ASSESS THE RISK IMPLICATIONS OF EDG MAINTENANCE AT POWER (DRPW COORDINATING).

ISSUANCE OF BULLETIN 93-02 SUPPLEMENT 1 ON
BWR STRAINER PLUGGING ISSUES

PROBLEM

RECENT EVENTS AND EXPERIMENTAL INFORMATION HAVE INCREASED CONCERN ABOUT THE POTENTIAL FOR BWR EMERGENCY CORE COOLING SYSTEM (ECCS) STRAINER PLUGGING.

CAUSE

EFFECTS ON CAPABILITY OF ECCS PUMPS OF THERMAL INSULATION AND OTHER MATERIALS DISLODGED DURING A LOSS OF COOLANT ACCIDENT (LOCA) ARE GREATER THAN ORIGINALLY ESTIMATED.

SAFETY SIGNIFICANCE

PLUGGING OF THE ECCS PUMP SUCTION STRAINERS COULD REDUCE THE NET POSITIVE SUCTION HEAD (NPSH) AVAILABLE TO THE ECCS PUMPS AND CAUSE THEM TO FAIL DURING A LOCA. POTENTIAL COMMON CAUSE EFFECT.

BACKGROUND

- RESOLUTION OF USI A-43, "CONTAINMENT EMERGENCY SUMP PERFORMANCE," IN 1985 AND ISSUANCE OF REGULATORY GUIDE 1.82 (R.G. 1.82), REVISION 1.
- BARSEBÄCK EVENT, JULY 1992.
- PERRY EVENT, MARCH 1993: LOSS OF RESIDUAL HEAT REMOVAL (RHR) PLUM^D DUE TO DEBRIS ACCUMULATION ON SUCTION STRAINER.

CONTACTS: R. LOBEL, NRR/DSSA/SCSB
J. CARTER, NRR/DORS/OEAB

- NRC STAFF PERFORMED CALCULATIONS FOR ALL DOMESTIC BWRs IN AUGUST 1993.

RECENT TECHNICAL FINDINGS

- RESEARCH CONTRACTOR, SCIENCE AND ENGINEERING ASSOCIATES (SEA), PERFORMS A DETAILED ANALYSIS OF A BWR 4, MARK I.
 - AVERAGED OVER ALL LOCAs, 31% STRAINER BLOCKAGE PROBABILITY
 - PROBABILITY CLOSE TO UNITY FOR LARGE BREAKS
 - STUDY CONTAINS SOME CONSERVATIVE ASSUMPTIONS
 - STUDY DOES NOT MODEL SIGNIFICANT ASPECTS
- OECD INTERNATIONAL SYMPOSIUM IN STOCKHOLM:
JANUARY 26-27, 1994
 - REINFORCED TECHNICAL CREDIBILITY OF NEW HEAD LOSS DATA
 - SUPPORTED DECISIVE ACTIONS TAKEN BY SWEDEN, SWITZERLAND AND FINLAND

SUPPLEMENT TO BULLETIN 93-02

- RECENT FINDINGS FROM SEA REPORT REINFORCED BY THE OECD CONFERENCE IN STOCKHOLM HAVE LED TO THE NEED FOR THE ISSUANCE OF AN "URGENT" BULLETIN.
- THE BULLETIN WILL BE A COMPLIANCE BULLETIN.
- THE BULLETIN WILL REQUEST BWR LICENSEES TO IMPLEMENT THE FOLLOWING INTERIM ACTIONS:
 - APPRISE OPERATORS OF THE VULNERABILITY TO SUPPRESSION POOL STRAINER CLOGGING THROUGH TRAINING AND BRIEFINGS

- ENSURE THAT SYMPTOM-BASED PROCEDURES COVER POTENTIAL LOSS OF NPSH
- INSTITUTE PROCEDURES TO PREVENT, DELAY OR MITIGATE LOSS OF NPSH.
- ALL BWRs ARE REQUESTED TO IMPLEMENT THE INTERIM ACTIONS WITHIN 90 DAYS.
- ALL BWRs ARE REQUIRED TO PROVIDE A WRITTEN CONFIRMATION OF COMPLETION OF INTERIM ACTIONS TO THE STAFF WITHIN 30 DAYS AFTER COMPLETION.
- ALL BWRs ARE REQUIRED TO INDICATE WHETHER THEY INTEND TO IMPLEMENT THE INTERIM ACTIONS IN THE BULLETIN AND PROVIDE A DESCRIPTION OF THEIR INTENDED ACTIONS WITHIN 60 DAYS OF THE DATE OF THE BULLETIN.
- REQUIREMENTS FOR LONG TERM ACTIONS ARE STILL BEING STUDIED BY THE NRC AND THE INDUSTRY (BWROG). FURTHER ACTION WILL BE TAKEN BY THE STAFF FOR THE LONG TERM UPON COMPLETION OF ONGOING STUDIES BY NRC AND THE BWROG.