

Docket



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

September 9, 1988

Docket No.: 50-267

MEMORANDUM FOR: Jose A. Calvo, Director
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects

FROM: Kenneth L. Heitner, Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects

SUBJECT: SUMMARY OF AUGUST 31, 1988 MEETING WITH PUBLIC SERVICE
COMPANY OF COLORADO (PSC) TO DISCUSS FIRE PROTECTION
AT FORT St. VRAIN (TAC NO. 66508)

A meeting was held at PSC's request to discuss fire protection issues at Fort St. Vrain (FSV). The attendees at the meeting are listed in Enclosure 1.

PSC stated that they are working towards completing all fire protection related modifications. The PSC target date for completing these actions remains the fourth refueling outage. PSC is also contemplating modifications to the ACM system. This would be discussed at a future meeting.

During the meeting, PSC discussed several topics as follows:

1. Fire Protection - PSC stated that an independent audit by Gamewell (Enclosure 2) indicated gaps in fire detection coverage. PSC would add new detectors to mitigate this problem.
2. Concentrated Cable locations - PSC had evaluated other potential concentrated cable locations in the plant. No new concentrated cable locations were found.
3. Emergency Lighting Test - PSC noted that they had not conducted the emergency lighting "T" test as of this date. However, they were still planning to conduct the test during this outage.

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Jose A. Calvo

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PSC also, briefly reviewed a summary of the fire protection licensing basis for FSV. This is included in Enclosure 3.

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Kenneth L. Heitner, Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:
As stated

cc: Service List

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- NRC & Local PDRs
- PDIV R/F
- JCalvo
- KHeitner
- OGC-Rockville
- EJordan
- BGrimes
- NRC Participants
- ACRS (10)
- TMartin Reg. IV
- cc: Service List

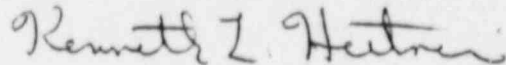
OFC	:PM:PDIV KH:	:	:	:	:	:
NAME	:KHeitner:jc :	:	:	:	:	:
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OFFICIAL RECORD COPY

Jose A. Calvo

- 2 -

PSC also, briefly reviewed a summary of the fire protection licensing basis for FSV. This is included in Enclosure 3.



Kenneth L. Heitner, Project Manager
Project Directorate IV
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:
As stated

cc: Service List

Mr. R. O. Williams, Jr.
Public Service Company of Colorado

Fort St. Vrain

cc:

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Regional Representative
Radiation Programs
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999 19th Street, Suite 1300
Denver, Colorado 80202-2413

NRC PSC MEETING AUGUST 31, 1988

FIRE PROTECTION

<u>NAME</u>	<u>ORGANIZATION</u>
K. L. Heitner	NRC
M. M. Holmes	PSC
G. S. Bates	PSC
G. D. Schmalz	PSC
M. E. Deniston	PSC
H. George	TENERA
D. G. Seymour	PSC
T. F. Westerman	NRC
M. E. Murphy	NRC
T. A. Storey	NRC
D. Kubicki	NRC
E. Tomlinson	NRC



August 16, 1988

Public Service Company of Colorado
2420 West 26th Avenue
Suite 1000
Denver, CO 80211

Attn: Greg Bates

RF: Automatic Fire Detection at the Fort St. Vrain Nuclear Generating
Station
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Greg:

Here is an account of our meeting on Monday afternoon, August 1, 1988, in your office, with yourself and Wayne Kendall representing Public Service Co., and Rob Wagner and myself representing F.A. Systems Inc.

- 1) Public Service Company of Colorado is the "Authority having jurisdiction" as defined in NFPA, and pertaining to the Fort Saint Vrain Nuclear generating Station.
- 2) Reference made to Plan E-2050, sheet 1 of 1, initial issue CN-2003, Elevation 4791'-0
 - A) No added detection required for area between grid lines H-J, and 2-3.3
 - B) No added detection required for men and women restrooms located between grid lines H-J, and 1-2
 - C) No added detection required at the Main Entry or Security room located between grid lines G-H, and 1-2
 - D) No added detection required by Northwest stairs located between grid lines G.5-H, and 1.8-3
 - E) Open grid ceiling located between grid lines G-H, and 2.9-4.8 is protected by detection on elevation 4811'-0"
 - F) No added detection required for area between grid lines E.5-F.5, and 2.3-3.2

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Public Service Company of Colorado
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- G) No added detection required for area between grid lines A1.9-C, and 1-2
- H) Open area between grid lines E-F, and 5-5b.1 is protected by detection on elevation 4811'-0"
- I) No added detection required for area between grid lines D.7-F, and 5b.1-3

The following area's need to be re-surveyed to determine if added detection is required by the Authority having jurisdiction.

- J) Re-survey area in Maintenance shop between grid line E-F, and 1-2 to determine if added detection is required.
- K) Re-survey area of added on Weld Shop located on West side of Maintenance shop to determine if added detection is required.
- L) Re-survey area between grid line C.4-D.5, and 2.8-3.2 to determine if added detection is required.

The following area's are to receive added detection.

- M) Install one R902 smoke detector in top of elevator shaft, that will allow elevator to recall to Level 5 when activated, and have an emergency over ride switch located in the elevator car for Fire Brigade and Security use.
 - N) Install one R7 smoke detector to area between grid lines C.7-D.5, and 4.2-4.8
 - O) Install one R7 smoke detector to area between grid lines C-C.6, and 1.9-3
 - P) Install one R7 smoke detector to area between grid lines U-C, and 5-7
 - Q) Install one R7 smoke detector to area between grid lines F-G, and 5b.1-8
- 3) References: Plan E-2051, sheet 1 of 1, initial issue CN-2003, Elevation 4811'-0"
- A) No added detection required for area between grid lines A-A1.6, and 1-5
 - B) No added detection required for area between grid lines F-G, and 5.2-5.4

Attn: Greg Bates
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- C) No added detection required in area between grid lines C-E.2, and 3-4.5

The following area's need to be re-surveyed to determine if added detection is required by the Authority having jurisdiction.

- D) Re-survey area between grid lines B-C, and 2-3a to determine if added detection is required.

The following area's are to receive added detection.

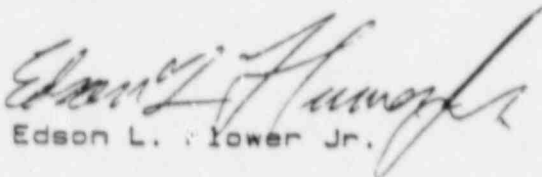
- E) Install one R7 smoke detector in are between grid lines G-H, and 4-5
- F) Install one R7 smoke detector in area between: grid lines G-H, and 2.2-3.6
- G) Install one Linear Beam detector to area between grid lines A-B, and 1-4.5
- H) Install one Linear Beam detector to area between grid lines A-D, and 1-2
- I) Install one R7 smoke detector in area between grid lines B-B.6, and 7-8
- 4) No added protection required on Plan E-2052, sheet 1 of 1, initial issue CN-2003, Elevation 4846'-0"
- 5) Reference made to Plan E-2053, sheet 1 of 1, initial issue CN-2003, Elevation 4756'-0" and 4759'-0"
- A) No added detection required to area between grid lines L-M, and 4a-5.5
- 6) References made to Plan E-2053, sheet 1 of 1, initial issue CN-2003, Elevation 4740'-6"
- A) No added detection required in area between grid lines L-M, and 4c-7
- 7) References made to plane E-2054, sheet 1 of 1, initial issue CN-2003, Elevation 4816'-0"
- A) Re-survey area between grid lines J-J.5, and 4-4a to determine if added detection is required.
- 8) References made to Plan E-2054, sheet 1 of 1, initial issue CN-2003, Elevation 4864'-0"

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- A) No added detection required in area between grid lines J.2-L.5, and 4a.5-7
 - B) Re-survey area between grid lines J-J.3 and 4-4a to determine if added detection is required
 - C) Install one Linear Beam detector to area between grid lines J.5-L.2, and 4a-5
- 9) References made to Plan E-2054, sheet 1 of 1, initial issue CN-2003, Elevation 4781'-0"
- A) No added detection required to area between grid lines J.1-M, and 4a-5.8
 - B) Re-survey area between grid lines K-M, and 5.8-7, if detection is required install one Linear Beam detector.
- 10) No added protection required on Plan E-1951, sheet 1 of 1, initial issue CN-1462C, Building 10 all elevations.

Greg, if you have any questions, revisions, or alterations to these minutes please contact me.

Thank you,



Edson L. Yower Jr.

PUBLIC SERVICE COMPANY OF COLORADO
NUCLEAR REGULATORY COMMISSION
AUGUST 31, 1988

- I. STATUS OF NRC OPEN ITEMS ASSOCIATED WITH THE FSV FPPP
 - 1. FIRE DETECTION
 - 2. CONCENTRATED CABLE LOCATIONS OUTSIDE THE CCA
 - 3. VERIFICATION TEST OF EMERGENCY LIGHTING

- II. UPCOMING NRC APPENDIX R\FPPP AUDIT
 - 1. CONFIRMATION OF GROUND RULES & METHODOLOGY
 - 2. NRC COMMENTS

FSV APPENDIX R METHODOLOGY

A. CONGESTED CABLE AREAS

1. CONGESTED CABLES AREAS (CCA) DEFINED AS CONTROL ROOM, 480V SWITCHGEAR ROOM, AUX ELECTRIC ROOM, & CONGESTED CABLES AREAS ALONG J & G WALLS

2. LIMITING CONSEQUENCES OF CCA FIRE:
MEANS SHALL BE AVAILABLE TO SHUTDOWN\COOLDOWN REACTOR SUCH THAT THE CONSEQUENCES OF DBA 1 ARE NOT EXCEEDED

3. PERFORMANCE GOALS:
 - a. ACHIEVING & MAINTAINING A SUBCRITICAL REACTIVITY CONDITION
 - b. ACHIEVING DEPRESSURIZATION THROUGH THE HELIUM PURIFICATION SYSTEM
 - c. PCRV LINER COOLING FUNCTION
 - d. PROCESS MONITORING FUNCTION
 - e. SUPPORTING FUNCTIONS SUCH AS COOLING, LUBRICATION, ETC. REQUIRED TO SUPPORT SHUTDOWN\COOLDOWN FUNCTIONS

B. NON-CONGESTED CABLE AREAS

1. LIMITING CONSEQUENCES OF A NON-CCA FIRE:
MEANS SHALL BE AVAILABLE TO SHUTDOWN\COOLDOWN THE
THE REACTOR SUCH THAT NO FUEL DAMAGE OCCURS (<2900 F).
NO SIMULTANEOUS RUPTURE OF BOTH PRIMARY COOLANT
BOUNDARY & SECONDARY CONTAINMENT BOUNDARY SUCH THAT
NO UNMONITORED RADIOLOGICAL RELEASES OCCURS.

2. PERFORMANCE GOALS:
 - a. ACHIEVING & MAINTAINING SUBCRITICAL REACTIVITY
CONDITIONS
 - b. MAINTAINING PCRV LINER INTEGRITY & PCRV
STRUCTURAL AND PRESSURE CONTAINMENT INTEGRITY
 - c. REACTOR HEAT REMOVAL FUNCTION
 - d. PROCESS MONITORING FUNCTION
 - e. SUPPORTING FUNCTIONS

C. SPECIFIC CRITERIA

1. G & J WALLS AUTOMATIC SPRINKLERS IN COMPLY WITH EITHER NFPA 13 OR NFPA 15
2. REDUNDANT OR ALTERNATE SHUTDOWN\COOLDOWN CAPABILITY SHALL BE PHYSICALLY & ELECTRICALLY INDEPENDENT OF SPECIFIC FIRE LOCATION
3. REDUNDANT OR ALTERNATE SHUTDOWN\COOLDOWN CAPABILITY SHALL ACCOMMODATE POST FIRE CONDITIONS WHERE OFFSITE POWER IS AVAILABLE AND WHERE OFFSITE POWER IS NOT AVAILABLE FOR 72 HOURS
4. EQUIPMENTS & SYSTEMS, PRIOR TO CONSIDERING ANY POSTULATED FIRE DAMAGE, SHALL BE CAPABLE OF BEING POWERED EITHER BY AN OFFSITE & AN ONSITE POWER SOURCE, OR BY TWO INDEPENDENT ONSITE POWER SOURCES
5. SHUTDOWN\COOLDOWN PROCEDURES IN EFFECT IN EVENT OF ANY SINGLE FIRE
6. NUMBER OF OPERATING SHIFT PERSONNEL, EXCLUSIVE OF FIRE BRIGADE, REQUIRED TO OPERATE SHUTDOWN\COOLDOWN EQUIPMENT SHALL BE ONSITE AT ALL TIMES THE REACTOR IS NOT SHUTDOWN
7. SHUTDOWN\COOLDOWN SYSTEMS & EQUIPMENT NEED NOT BE DESIGNED TO MEET SEISMIC CATEGORY I, SINGLE FAILURE CRITERIA, OR OTHER DESIGN BASIS ACCIDENT CRITERIA (EXCEPT WHERE REQUIRED FOR OTHER REASONS, E.G. BECAUSE OF INTERFACE WITH OR IMPACT ON EXISTING SAFETY SYSTEMS, OR BECAUSE OF ADVERSE VALVE ACTIONS DUE TO FIRE DAMAGE
8. SHUTDOWN\COOLDOWN EQUIPMENT FOR EACH LOCATIONS SHALL BE KNOWN TO BE ISOLATED FROM ASSOCIATED CIRCUITS SO TO PREVENT OPERATION
9. WATER-FILLED MECHANICAL COMPONENTS SHALL NOT BE CONSIDERED DAMAGED BY THE FIRE. WATER-FILLED VALVES & MECHANICAL COMPONENTS WITH MANUAL OPERATORS IN THE FIRE AREA SHALL BE CONSIDERED TO BE MANUALLY OPERABLE WITHIN 1 HOUR AFTER THE START OF THE FIRE