

FEB 08 1985

Docket No. 50-267

SUMMARY OF MEETING WITH PUBLIC SERVICE COMPANY  
OF COLORADO TO DISCUSS APPENDIX R CONCERNS

A meeting was held on January 31, 1985, in Bethesda, Maryland, between Region IV, NRR, and licensee personnel to discuss compliance with 10 CFR 50, Appendix R (Fire Protection) of the Fort St. Vrain Nuclear Generating Station (FSV). A list of attendees, including the licensee's consultants from Tenera, is provided as Attachment 1. Copies of selected slides from the Tenera presentation are included in Attachment 2.

The licensee discussed the following during their presentation or in response to staff questions:

1. It is possible to maintain safe, forced circulation, shutdown cooling without the Buffer Helium System in operation. This may result in small out-leakage of primary helium or in-leakage of some bearing water.
2. PSC is considering the installation of an entirely new emergency lighting system.
3. PSC will probably change their shutdown model from using the two emergency diesel generators (DG) to power one shutdown train each, to using one emergency DG for one train and a back-feed arrangement using the Alternate Cooling Methods (ACM) DG for backup electrical power to the other train.
4. PSC will have Underwriters Laboratory evaluate all of the involved fire doors to establish the proper fire rating at a schedule to be established.
5. PSC will provide a BTP 9.5-1, Appendix A type evaluation for the new Building 10 by June 1, 1985.
6. Report 4 (of the four-part program) will be submitted for NRC review by April 1, 1985.

The positions which were presented by the staff are:

1. Exposed structural steel must be protected (in accordance with Appendix R requirements) if a fire on one side of the fire barrier can produce damage on the other side of that barrier.
2. While Report 3 gives selective comparisons to NFPA requirements, an evaluation that all applicable NFPA requirements are met is required.
3. The subject of spray systems and cable tray covers is still under staff consideration.

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4. If additional credit is taken for the ACM DG, then increased operability and testing requirements will be necessary.

Following a staff caucus at the conclusion of the discussion session, the staff presented the position that, if the schedules defined in 10 CFR 50.48 cannot be met, compensatory measures in the form of fire watches, additional barriers and/or suppression systems or others would probably be required. Therefore, the licensee was advised to recommend and commit to such measures if scheduler exemptions were requested. In addition, because of a lack of the usual BTP 9.5-1, Appendix A Evaluation Report, the staff will be conducting a rereview of the licensee's Fire Hazards Analysis for compliance with the BTP.

*P. W. Wagner*

P. W. Wagner  
Project Manager

cc:

Public Service Company of Colorado  
ATTN: O. R. Lee, Vice President  
Electric Production  
P. O. Box 840  
Denver, Colorado 80201

Mr. H. L. Brey, Executive Staff  
Assistant, Electric Production  
Public Service Company of Colorado  
P. O. Box 840  
Denver, Colorado 80201

J. W. Gahm, Manager, Nuclear  
Production Division  
Fort St. Vrain Nuclear Station  
16805 WCR 19½  
Platteville, Colorado 80651

bcc distrib. by RIV:

RPB1	Resident Inspector
R. E. Ireland, SPES	P. Wagner, RPB1
RIV File	D. Powers, RPB1
COLORADO STATE DEPT. HEALTH	
D. Eisenhut, D/DL	G. Lainas, DL
K. Heitner, ORB3	J. Taylor, IE
ACRS (10)	NSIC
CHEB	W. Shields, OELD

R. D. Martin, RA  
R. Denise, DRS&P  
E. Haycraft, DRSP/LA

J. Miller, ORB3  
E. Jordan, IE  
ORAB

*P. W. Wagner*  
*2/6/85*

List of Attendees

January 31, 1985

FSV Fire Protection Meeting

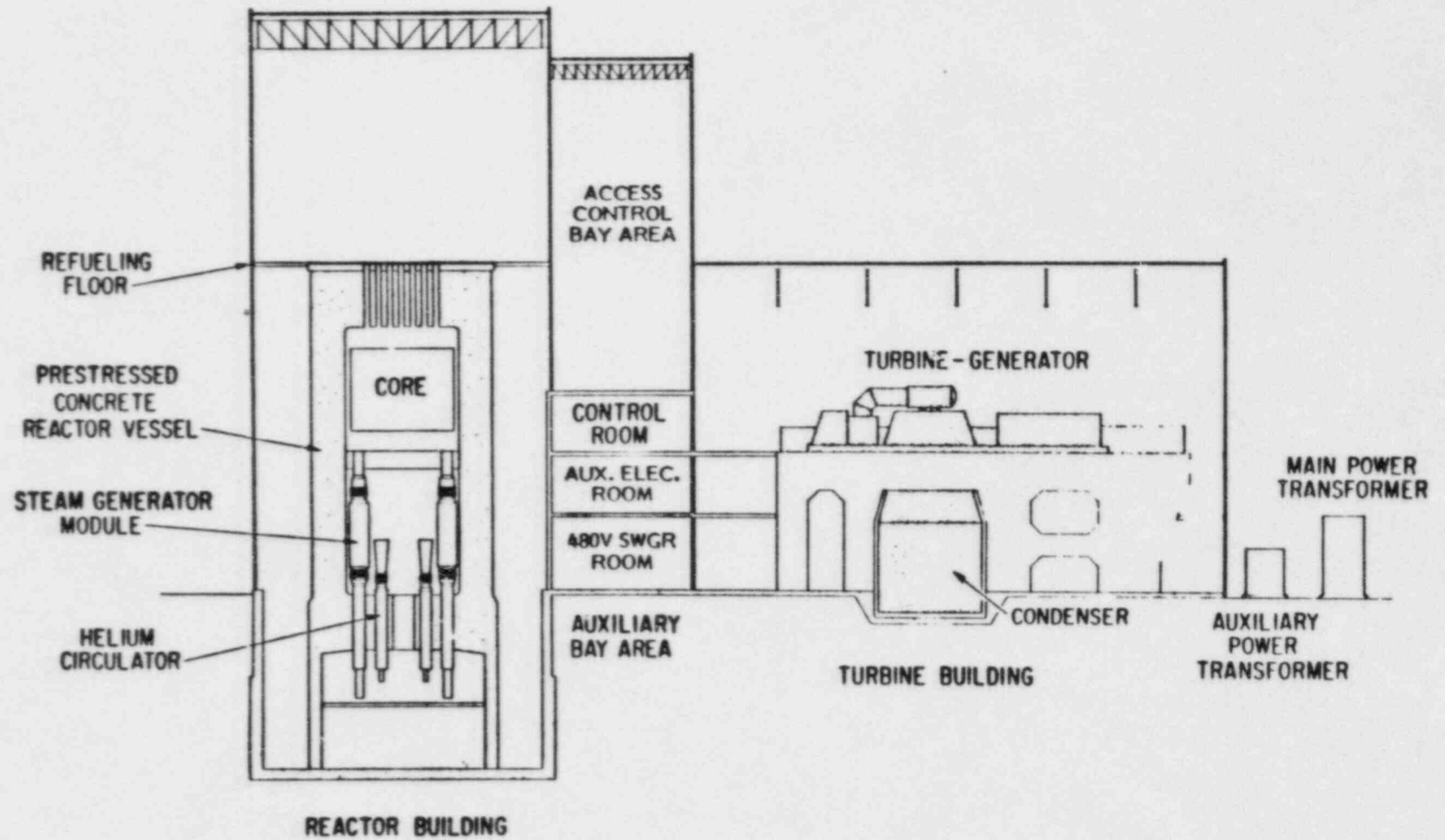
<u>Name</u>	<u>Organization</u>
Philip C. Wagner	NRC/Region IV Project Manager
Kenneth L. Heitner	NRR/DL/Oversight Project Manager
Dennis Kubicki	NRR/DE/CHEB
Thomas V. Wambach	NRR/DL/Lead Project Manager, Fire Protection
Richard E. Ireland	NRC/Region IV
Greg Harrison	TENERA, Bethesda
Michael H. Holmes	PSC/Nuclear Licensing Manager
John R. Reesy	PSC/Nuclear Design Manager
Hank George	TENERA/Manager, Systems Engineering
Jerry Setka	TENERA/Manager, Electrical
Gregory S. Bates	PSC/Supervisor Nuclear Projects, Electrical
James K. Tarpey	PSC Counsel
Felix Trujillo	PSC/Nuclear Engineering, Mechanical
Fred W. Tilson	PSC/Supervisor Nuclear Projects, Mechanical

## AGENDA

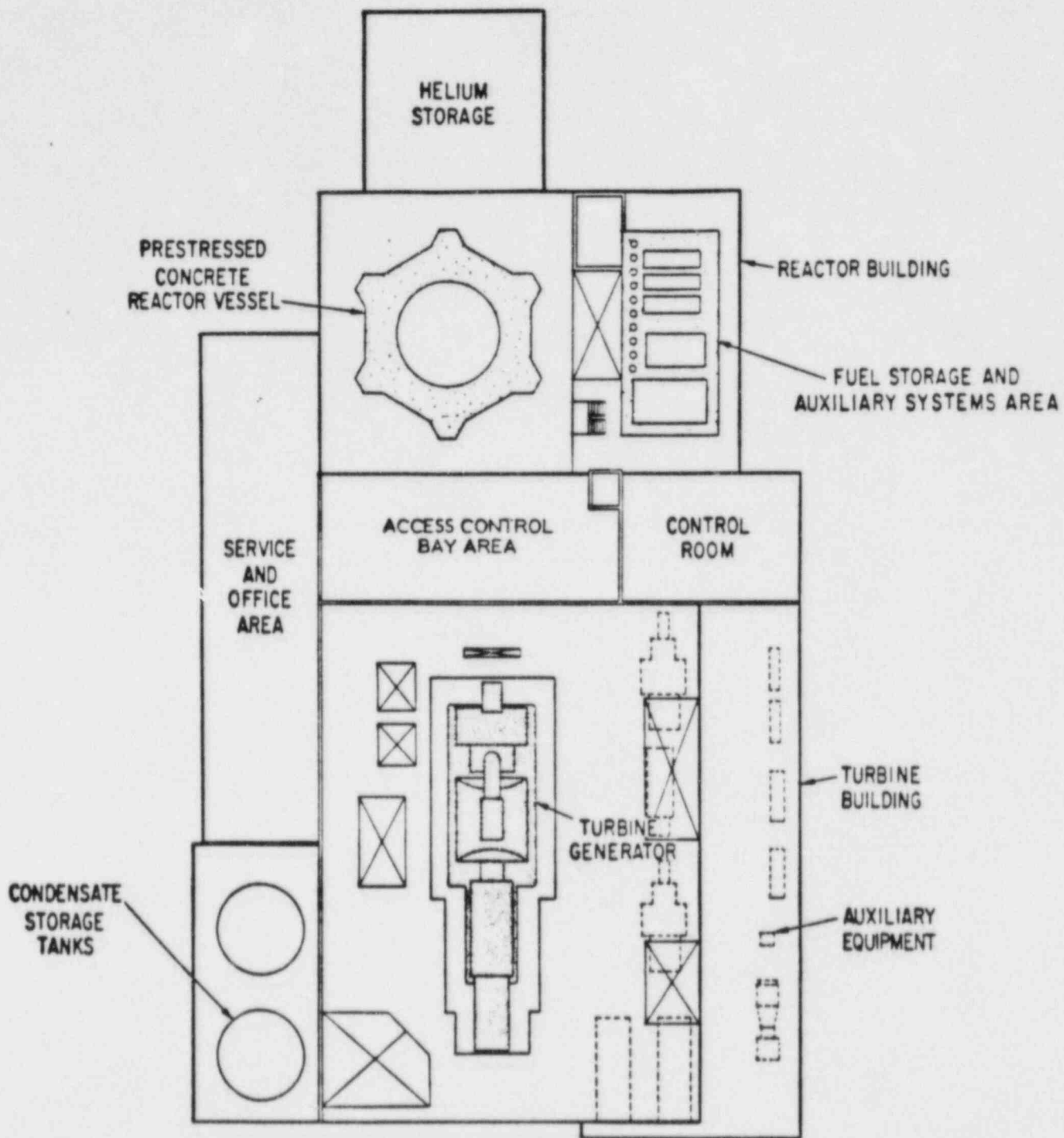
- INTRODUCTION
- PLANT OVERVIEW
- REPORT NO. 1 - SHUTDOWN MODEL
- REPORT NO. 2 - ELECTRICAL REVIEWS
- REPORT NO. 3 - FIRE PROTECTION
- EXAMPLES OF PLANNED APPROACHES TO RESOLVE POTENTIAL DEFICIENCIES
- REPORT NO. 4 - MODIFICATIONS AND EXEMPTIONS
- QUESTIONS

## PLANT OVERVIEW

- BUILDINGS
  - REACTOR BUILDING
  - TURBINE BUILDING
  - ACCESS CONTROL BAY
  - OUT-BUILDINGS
  
- ACCEPTANCE CRITERIA
  - CONGESTED CABLE AREA (CCA)
  - NON-CONGESTED CABLE AREAS (NON-CCA)
  
- MAJOR SYSTEMS FOR CCA EVALUATION
  
- MAJOR SYSTEMS FOR NON-CCA EVALUATION

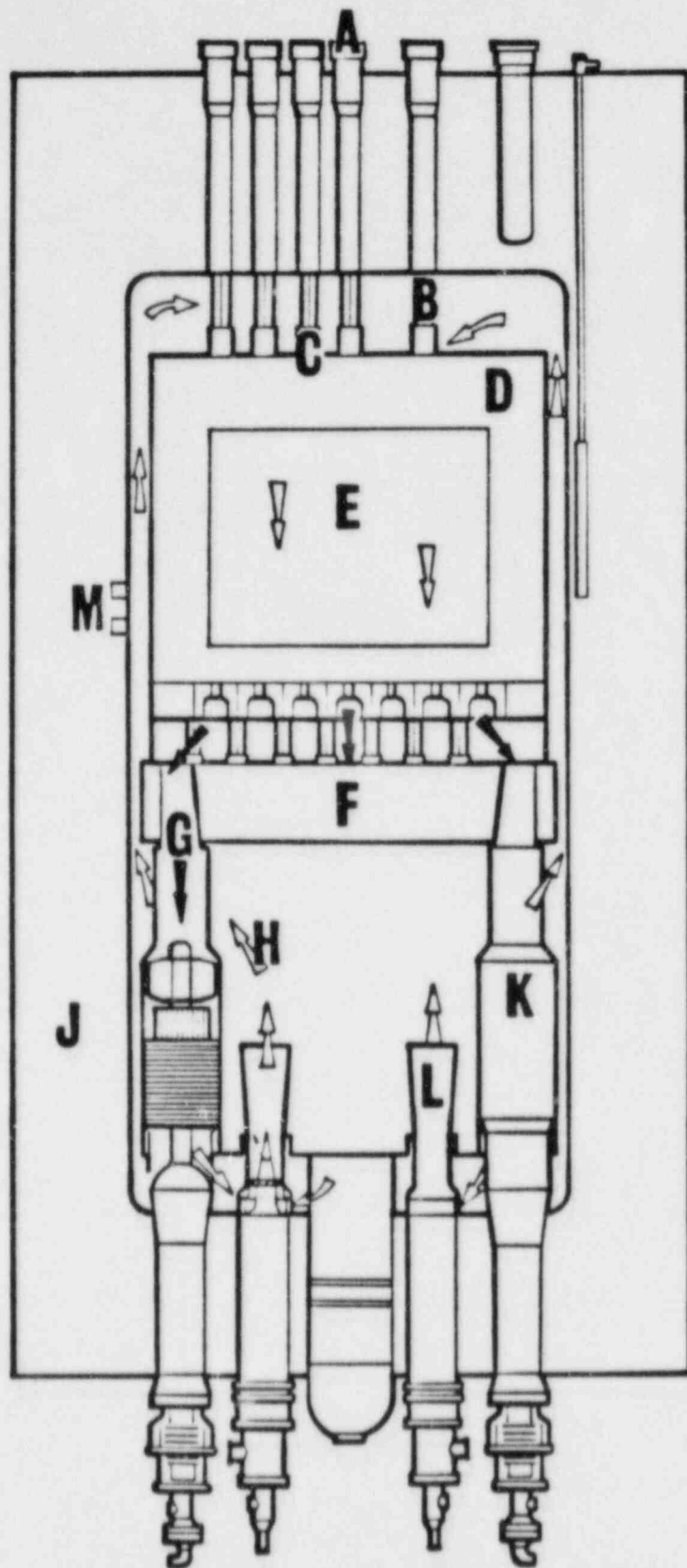


SECTION THROUGH REACTOR BUILDING AND TURBINE BUILDING



PLAN VIEW OF REACTOR BUILDING  
 AND TURBINE BUILDING





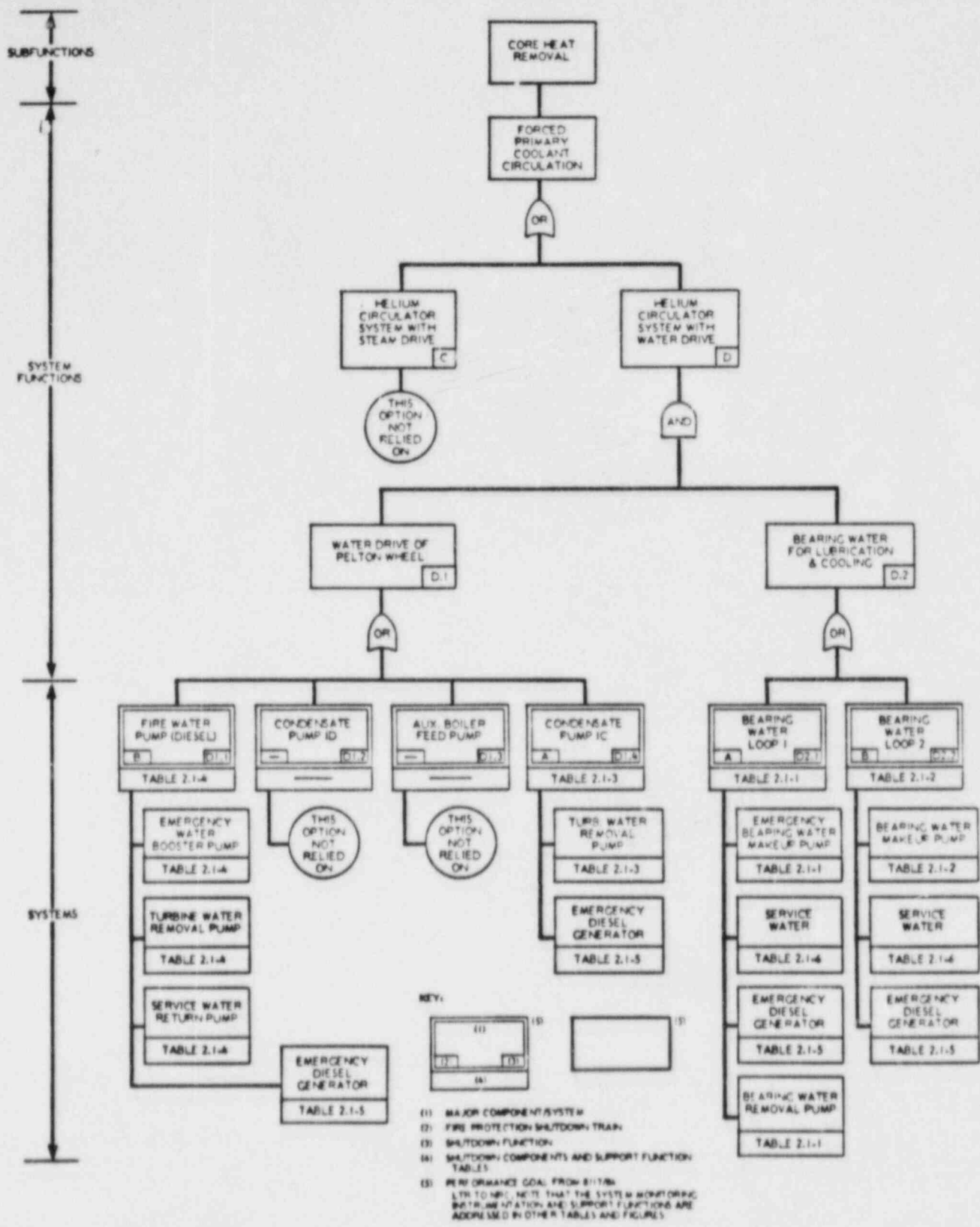
- A. Fueling penetrations
- B. Control rods
- C. Orifice valves
- D. Reflector
- E. Reactor core
- F. Core support floor
- G. Hot helium
- H. Cold helium
- J. Prestressed concrete reactor vessel
- K. Steam generator
- L. Helium circulator
- M. Liner cooling tubes

REACTOR VESSEL CROSS-SECTION

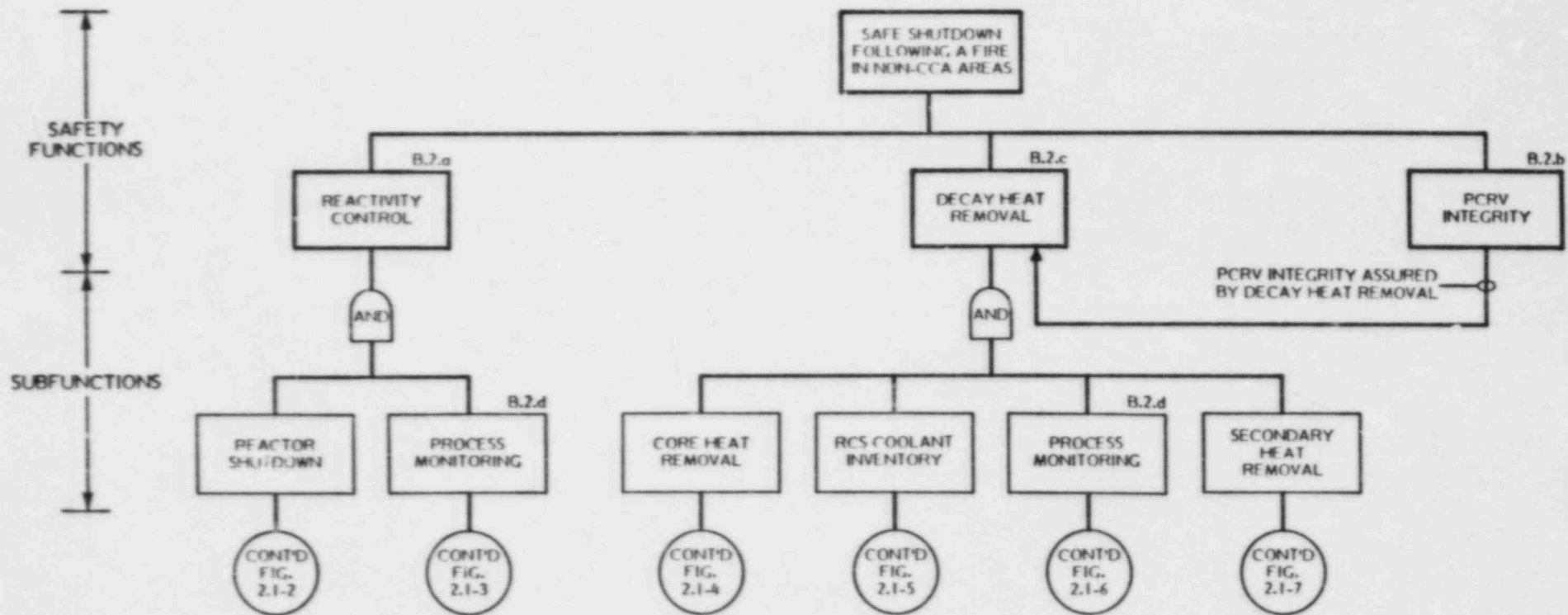


## REPORT NO. 1 - SHUTDOWN MODEL

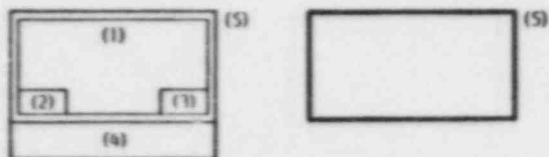
- PERFORMANCE CRITERIA
- ACCIDENT ANALYSIS
- APPROACH IN SELECTING SYSTEMS
- SHUTDOWN MODEL
- SYSTEM COMPONENTS
- SUPPORT SYSTEMS
- POTENTIAL SPURIOUS VALVES OF CONCERN
- PRIMARY SYSTEM PRESSURE BOUNDARY
- CONTROL ROD DRIVE EVALUATION
- ACM SHUTDOWN MODEL
- SUMMARY LIST OF SHUTDOWN COMPONENTS



**FIGURE 2.1-4**  
**SHUTDOWN MODEL - NON-CONGESTED CABLE AREAS**  
**FORCED CIRCULATION COOLDOWN**  
**CORE HEAT REMOVAL**



KEY:



- (1) MAJOR COMPONENT/SYSTEM
- (2) FIRE PROTECTION SHUTDOWN TRAIN
- (3) SHUTDOWN FUNCTION
- (4) SHUTDOWN COMPONENTS AND SUPPORT FUNCTION TABLES
- (5) PERFORMANCE GOAL FROM 8/17/88 LTR TO NRC; NOTE THAT THE SYSTEM MONITORING INSTRUMENTATION AND SUPPORT FUNCTIONS ARE ADDRESSED IN OTHER TABLES AND FIGURES

FIGURE 2.1-1  
SHUTDOWN MODEL - NON-CONGESTED CABLE AREAS  
FORCED CIRCULATION COOLDOWN



## REPORT NO. 2 - ELECTRICAL REVIEWS

- POWER SUPPLIES AND CABLES
- CONTROL CIRCUITS
- INSTRUMENTATION CIRCUITS
- COMMON POWER SUPPLY
- COMMON ENCLOSURES
- ACM EQUIPMENT & SEPARATION
- ELECTRICAL SHUTDOWN COMPONENTS

## REPORT NO. 3 - FIRE PROTECTION

- FIRE AREAS
  - FIRE DOORS
  - DAMPERS
  - PENETRATION SEALS
  - FIRE BARRIERS
  - STRUCTURAL STEEL
- FIRE DETECTION AND SUPPRESSION SYSTEMS
- CABLE AND EQUIPMENT LOCATION
- COMPARISON TO III.G
- POTENTIAL DEFICIENCIES
- EMERGENCY LIGHTING
- VALVE ACCESSIBILITY AND OPERABILITY

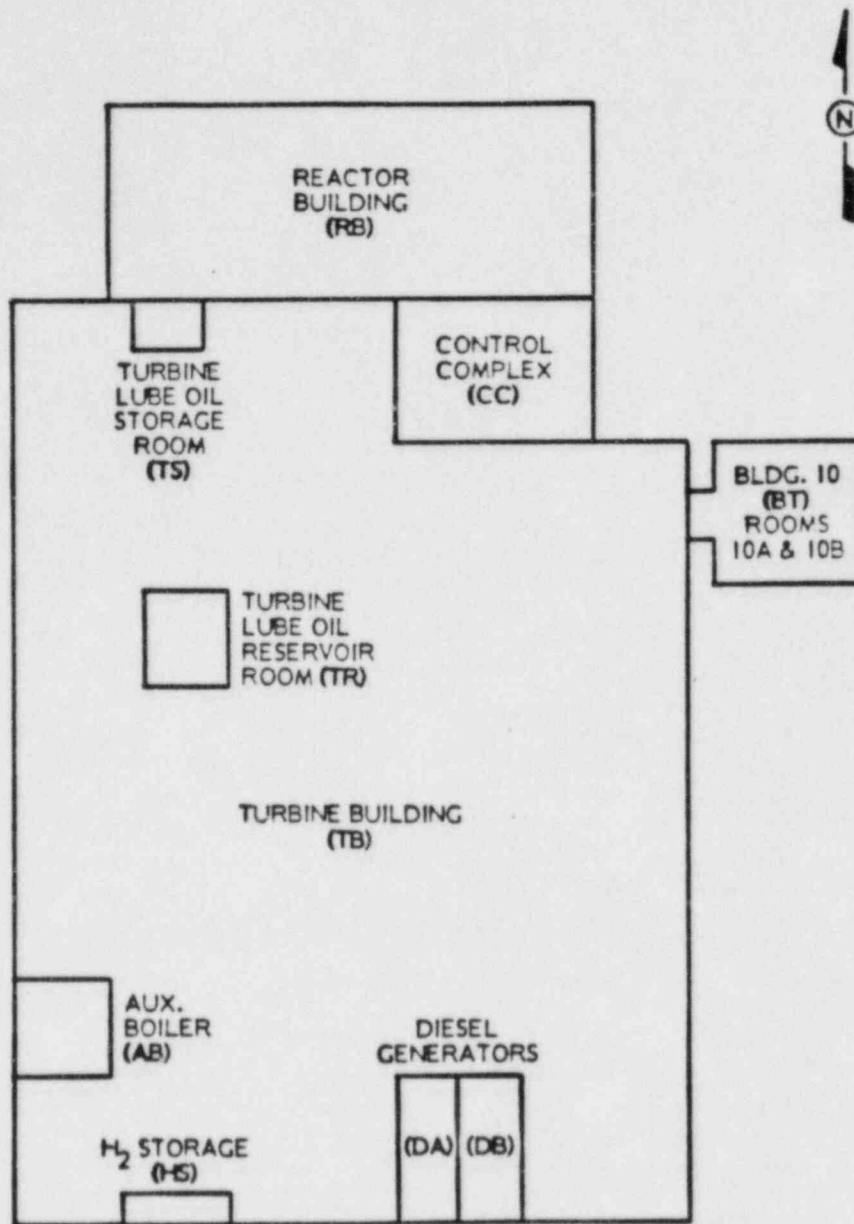


FIGURE 2.1  
 INTERIOR FIRE AREAS  
 GRADE ELEVATION



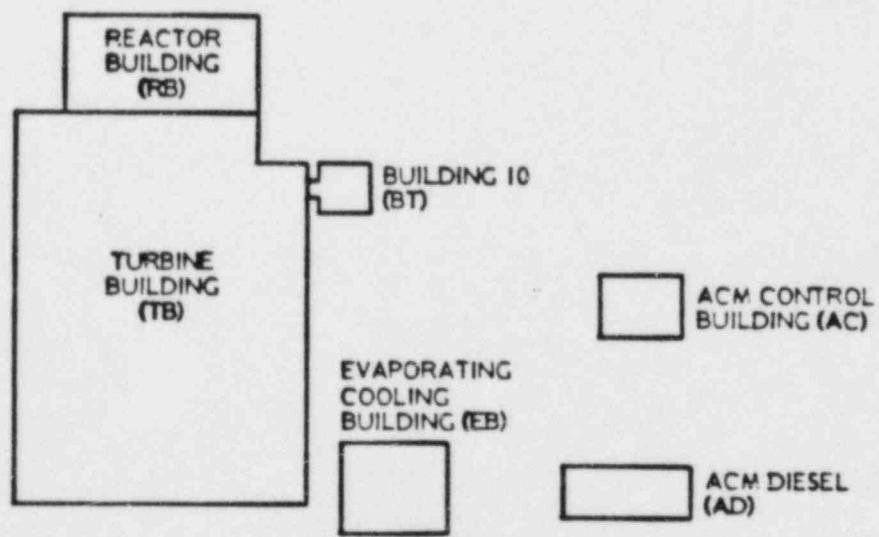
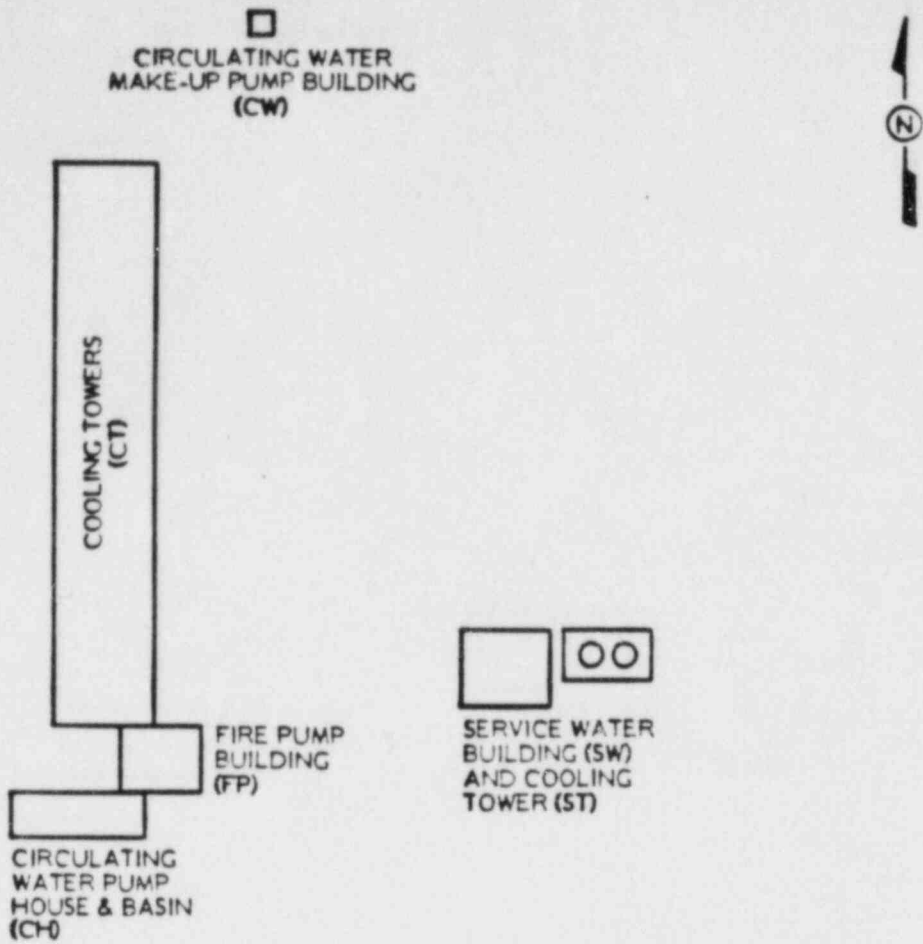


FIGURE 2.2  
 EXTERIOR FIRE AREAS  
 GRADE ELEVATION

**REPORT NO. 4 - MODIFICATIONS AND EXEMPTIONS**

- RESOLUTION OF POTENTIAL DEFICIENCIES
- EXEMPTION REQUESTS
- PROPOSED CHANGES AND MODIFICATIONS
- CHANGES TO SHUTDOWN MODEL
- SCHEDULED FOR SUBMITTAL - FEBRUARY 17, 1985

## SUMMARY OF POTENTIAL MODEL CHANGES

- MONITORING OF HELIUM FLOW AT CIRCULATOR
- SMALL CIRCULATING WATER PUMP IN LIEU OF ONE SERVICE WATER PUMP
- ACM BACKFEED TO 3-ROOM COMPLEX
- OVERFLOW TURBINE BUILDING SUMP IN LIEU OF ONE SERVICE WATER RETURN PUMP
- USE OF ACM DIESEL AS POWER SUPPLY TO CERTAIN TRAIN A EQUIPMENT, THROUGH ACM SWGR