POLICY ISSUE
(Information)

December 5, 1985 SECY-85-384

FOR: The Commissioners

FROM: William J. Dircks
Executive Director for Operations

SUBJECT: DESIGN ADEQUACY OF THE AUXILIARY PRESSURIZER SPRAY SYSTEM AT PALO VERDE NUCLEAR GENERATING STATION

PURPOSE: To inform the Commission of the staff actions concerning the adequacy of the auxiliary pressurizer spray system as installed at Palo Verde Unit 1 in light of the September 12, 1985 event.

BACKGROUND: This report has been prepared in response to Commissioner Zech's request regarding the subject matter relative to the September 12, 1985 event at Palo Verde Unit 1.

Palo Verde Nuclear Generating Station was designed without power operated relief valves (PORVs) on the pressurizer. The plant design relies on the auxiliary pressurizer spray system (APSS) as a means of rapidly depressurizing the primary coolant system for plant shutdown and accident mitigation. Since the APSS performs safety-related functions, it has been stated by the licensee that it has been designed to safety grade standards.

As discussed in NUREG-1044, "Evaluation of the Need for a Rapid Depressurization Capability for Combustion Engineering Plants," the staff's acceptance of the auxiliary pressurizer spray system in lieu of PORVs prior to the resolution of USI-A45 was based on its understanding that the auxiliary pressurizer spray system was designed to safety grade standards.

Contact:
C. Liang, NRR
x24754

C/5

One of the charging pumps is required to provide auxiliary spray to the pressurizer. In addition, the charging system may be needed to satisfy General Design Criteria (GDC) 26 and 33. To assure that specified acceptable fuel design limits are not exceeded, (1) GDC 26 requires that the plant design include a redundant reactivity control system (e.g., boron addition) and (2) GDC 33 requires that a system be provided to supply reactor coolant makeup for protection against small breaks in the reactor coolant pressure boundary (i.e., when the reactor coolant system is at operating pressure).

DISCUSSION:

I. Palo Verde Event

On September 12, 1985, Arizona Nuclear Power Project (ANPP) conducted a loss-of-load test on the Palo Verde Nuclear Generating Station Unit 1 from approximately 55% power. The plant did not perform as expected. The test resulted in an event involving loss of all offsite power to non-essential loads (including the reactor coolant pumps), turbine trip and reactor trip. The reactor and turbine trips were not expected. During the recovery phase of the event, overcooling of the reactor coolant system (RCS) occurred to the extent that the emergency core cooling systems were automatically initiated, followed by the automatic initiation of containment isolation.

The following two sequences occurred during the event that caused the loss of all three charging pumps:

(1) When the safety injection actuation signal (SIAS) occurred, power to certain suction valves for the charging pumps was lost since the motor control center for these valves was classified as non-essential; and, accordingly, was designed to be automatically shed from the safety related electric buses.

(2) Because of a malfunction of the single water level instrument channel for the volume control tank (VCT), automatic control action was lost which would have transferred the suction of the charging pumps from the VCT to other water sources, if power supplies had been available to realign the valves involved. Also, after the containment isolation signal was received, all makeup flow to the VCT was isolated.

Due to the above sequences, the VCT emptied, the charging pumps became bound on VCT hydrogen cover gas, and the pumps were tripped. This produced a potentially hazardous situation when, to re-establish charging pump flow, the lines from the pumps were locally vented by an operator in an attempt to remove the hydrogen gas. After non-class 1E power was restored, water supply from the RWT via boric acid makeup pumps was delivered to charging pumps, and charging flow to RCP seal injection, and reactor coolant systems were established. Subsequently, the RCS pressure and inventory reached stable conditions and the unusual event was terminated.

II. Staff Actions on Palo Verde Event

As a result of this event, the Region V Office of the NRC issued a Confirmatory Action Letter, dated September 17, 1985, confirming an ANPP commitment not to restart Palo Verde Unit 1 until the issue of appropriate design criteria for the auxiliary spray system was resolved to the satisfaction of the NRC staff. The ANPP letter of September 18, 1985 discussed the September 12, 1985 event and briefly addressed concerns relating to the auxiliary spray system. At a meeting on September 20, 1985, ANPP provided a more in-depth discussion of the events and further discussed the auxiliary spray system.

At the conclusion of the September 20, 1985 meeting, ANPP committed to certain short-term compensatory measures which justified continued operation of the facility while the long-term corrective actions were developed. The staff found these compensatory measures sufficient to allow restart of Palo Verde Unit 1 pending the resolution of the design criteria issue for the auxiliary spray system. On the basis of the ANPP commitments to implement the agreed-upon compensatory measures, the Region V Office of the NRC issued a followup Confirmatory Action Letter, dated September 20, 1985, describing the commitments and stating that adequate short-term compensatory measures are in place for restart of Palo Verde Unit 1. The letter also stated that long-term measures to assure the reliability of the auxiliary spray system would be the subject of future correspondence.

On October 2, 1985, a letter was issued to the licensee pursuant to 10 CFR 50.54(f) to require that the licensee furnish in writing, under oath or affirmation, within 20 days of the date of this letter, its plans, program and schedule to bring Palo Verde Unit 1 into conformance with its licensing basis. A request for additional information was enclosed in this letter as follows:

1. The Palo Verde design includes a safety grade auxiliary pressurizer spray system. As a result of the September 12, 1985 event at Palo Verde Unit 1, it is our view that the auxiliary pressurizer spray system does not meet safety grade standards and that the Palo Verde design is not consistent with the docketed information describing the system design. Therefore, describe the design modifications APSS intends to make to upgrade the auxiliary spray system to safety grade standards and provide the schedule by which this effort will be accomplished.

2. The auxiliary spray system was stated to be safety grade on the Palo Verde docket and then later determined to have single failure vulnerabilities and other deficiencies. Provide a detailed explanation of how the QA process, which should include an independent review and verification of design adequacy, did not detect these deficiencies in the auxiliary spray system. Also provide a description of the corrective actions APSS intends to take to remedy any weaknesses identified in the QA process.

3. Provide a detailed description of what APSS considers to be safety grade design requirements and how these requirements are applied to systems and components that are specified as safety related. In particular, discuss how these requirements were applied to the auxiliary spray system and whether the identified deficiencies in auxiliary spray system were due to a failure to apply them to the system.

The Arizona Nuclear Power Project (ANPP) has responded to the above staff concerns in letters dated October 15, 1985, October 22, 1985, and November 4, 1985. The licensee's submittals include a reanalysis of a postulated steam generator tube rupture event in which the auxiliary pressurizer spray system is assumed inoperable and the pressurizer gas vent valves are used for RCS depressurization during the transient. The staff's preliminary evaluation of this submittal concludes that the results of the reanalysis are acceptable. The ANPP also committed a list of enhancement to be applied to the auxiliary pressurizer spray system (APSS) water supplies. The staff finds these proposed enhancements could improve the reliability of the APSS function. However, the staff is preparing a request for additional information (RAI) for certain clarification of the ANPP submittal. The staff is planning to complete the review of this issue prior to the issuance of Palo Verde Unit 2 license.

The staff addressed this issue in the ACRS Subcommittee meeting November 5, 1985, and ACRS full committee meeting November 7, 1985, on CESSAR/Palo Verde Nuclear Generating Station. The ACRS has not yet written a letter on this matter.

William J. Dircks
Executive Director for Operations

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II.B. Unit 1 Power Ascension Testing Experience

1. General Operating Performance

2. Experience with Power Runback System

   - Load Rejection Test Experience - Root Cause of Problems Experienced

- DEVELOPMENT OF PAT PROGRAM SCHEDULE
  - ACTUAL TEST PROGRAM DURATION AT OTHER CE PLANTS
  - SCOPE OF TESTING FOR PVNGS vs. OTHER CE PLANTS
  - ACTUAL TEST TIME

- TEST PREDICTIONS vs. TEST RESULTS
  - VERY GOOD AGREEMENT BETWEEN PREDICTION/RESULTS
  - NO UNEXPLAINED TEST RESULTS OR PLANT TRANSIENT RESPONSE

- PLANT TRIPS: 7 TRIPS (TWO WHILE TESTING)
  - TWO MAIN FEED PUMP TRIPS
  - ONE CEAC CIRCUIT BOARD FAILURE
  - THREE LOSS OF POWER TRIPS (ONE WHILE TESTING)
  - ONE S/G LOW LEVELS TRIP (WHILE TESTING)

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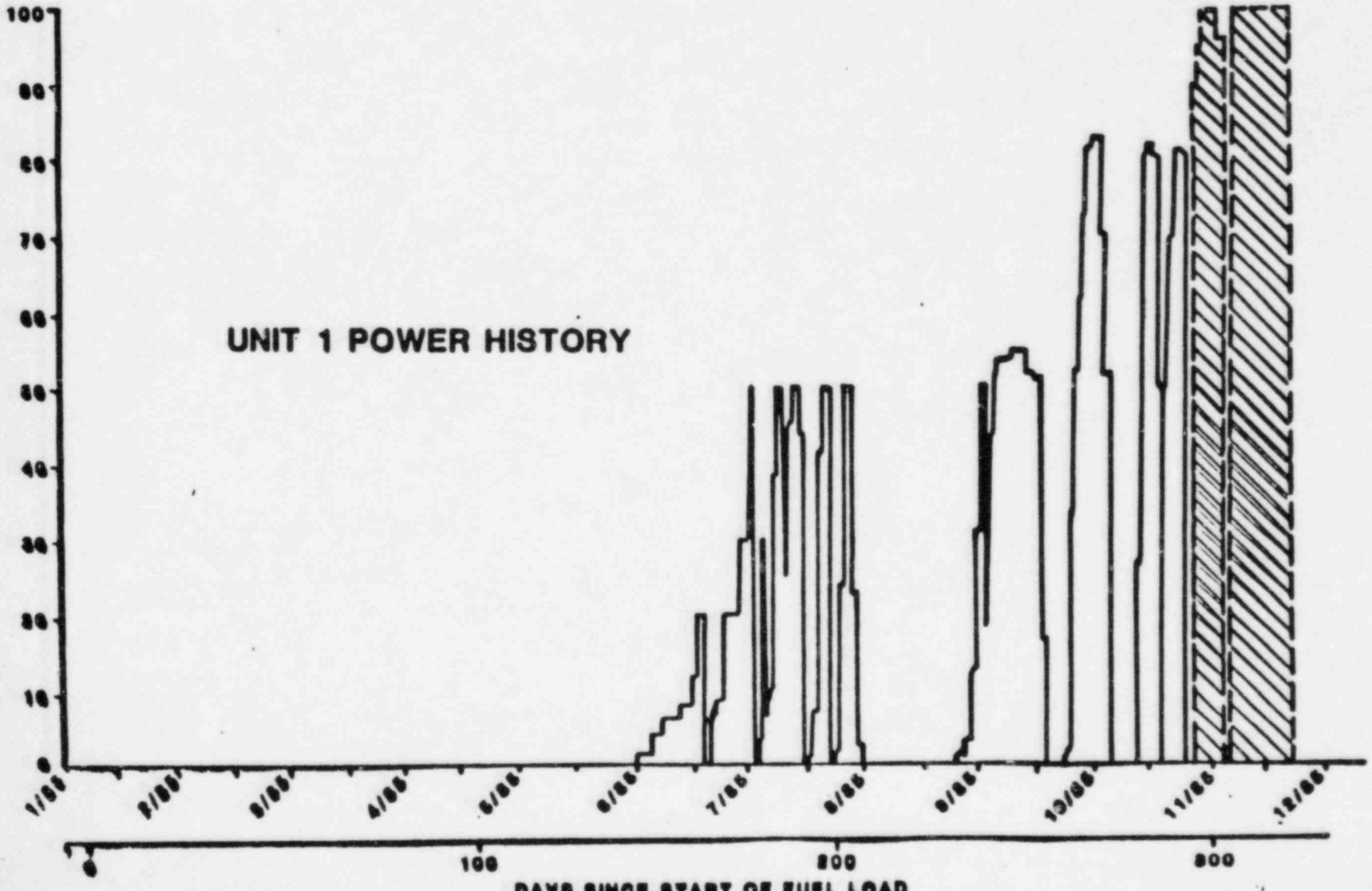
UNIT 1 POWER HISTORY
100
90
80
70
60
50
40
30
20
10
0
1/85
2/85
3/85
4/85
5/85
6/85
7/85
8/85
9/85
10/85
11/85
12/85
0
100
200
300
DAYS SINCE START OF FUEL LOAD

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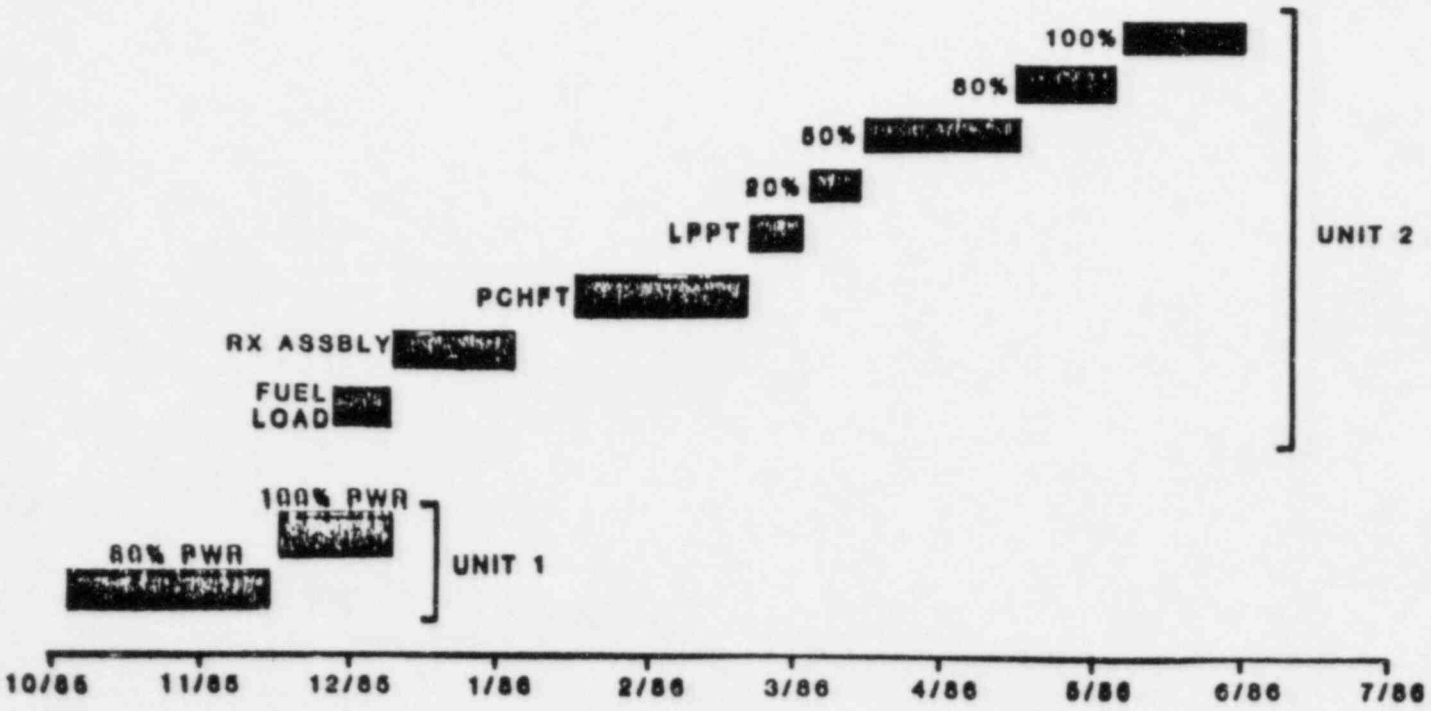
Unit 1 / Unit 2 Schedules



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REACTOR POWER CUTBACK SYSTEM

- A CONTROL GRADE SYSTEM TO ENHANCE THE UNITS AVAILABILITY.

- THE SYSTEM IS DESIGNED TO OPERATE IN CONJUNCTION WITH THE STEAM BYPASS CONTROL SYSTEM TO DROP SELECTED CEA'S FOR:
  - A LOSS OF FEED PUMP
  - A LOAD REJECTION

- TO MATCH STEAM BYPASS CAPABILITY WITH REACTOR POWER.

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EXPERIENCE WITH REACTOR POWER CUTBACK SYSTEM

- TEST PERFORMED
  - LOSS OF FEED PUMP BELOW 50% - SUCCESSFUL
    - NO REACTOR POWER CUTBACK
    - SECOND PUMP ASSUMED LOAD
  - LOSS OF FEED PUMP AT 70% - SUCCESSFUL
    - TURBINE SETBACK
    - NO REACTOR POWER CUTBACK
  - LOSS OF LOAD FROM 50% - INITIAL TEST : UNSUCCESSFUL
    - SECOND TEST : SUCCESSFUL
    - NO REACTOR POWER CUTBACK
  - LOSS OF LOAD FROM 80% - INITIAL TEST : UNSUCCESSFUL
    - REACTOR POWER CUTBACK ACTUATION
    - TURBINE SETBACK

- TESTS TO BE PERFORMED
  - RE-PERFORM LOSS OF LOAD FROM 80%
  - LOSS OF FEED PUMP FROM 100%
  - LOSS OF LOAD FROM 100%

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SUMMARY OF OCTOBER 24, 1985 EVENT

- PLANT WAS PREPARING FOR THE LOSS OF LOAD TEST FROM 80% POWER

- PLANT INITIAL CONDITIONS
  - 83% REACTOR POWER
  - TURBINE/GENERATOR CONNECTED TO GRID
  - ALL STATION LOADS BEING FED FROM OFFSITE POWER SOURCES

- ANTICIPATED RESULTS OF TEST
  - NO REACTOR TRIP
  - RPCS ACTUATES TO REDUCE POWER

- ACTUAL TEST RESULTS
  - REACTOR TRIP CONCURRENT WITH TURBINE TRIP
  - REACTOR POWER CUTBACK DID NOT OCCUR DUE TO REACTOR TRIP
  - ALL SAFETY SYSTEMS PERFORM PER DESIGN

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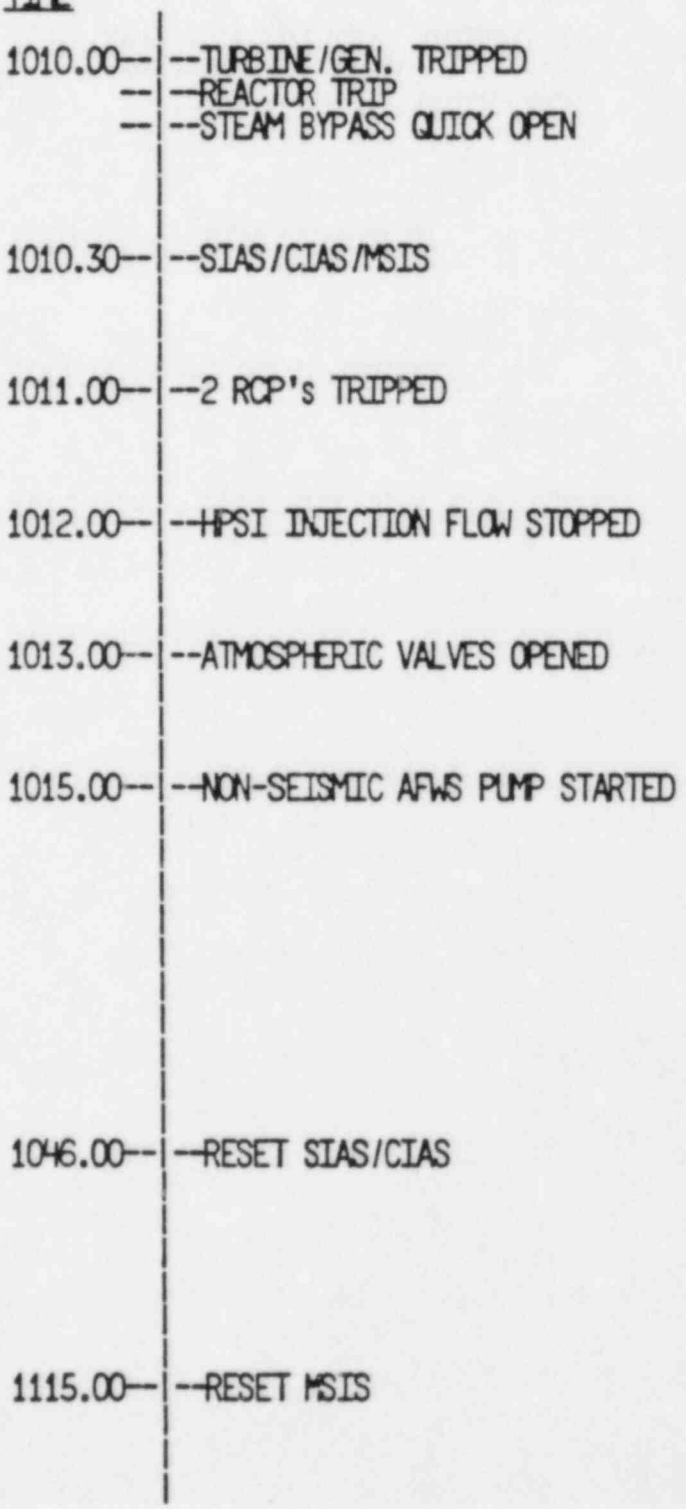
REACTOR TRIP #7 (RPCS)

10-24-85



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ROOT CAUSE EVALUATION
OCTOBER 24, 1985 EVENT

- REACTOR TRIP
  - CAUSE - SG LOW LEVEL SIGNAL TOO FAST TO ACCOMMODATE PRESSURE WAVE
  - CORRECTIVE MEASURE - INCREASE REACTOR TRIP BISTABLE RESPONSE TIME FOR SG LOW LEVEL

- COOLDOWN OF PRIMARY SYSTEM
  - CAUSE - INCORRECT SETPOINT IN STEAM BYPASS CONTROL SYSTEM
  - CORRECTIVE MEASURE - ADJUSTED SETPOINT IN THE STEAM BYPASS CONTROL
    - REVERIFICATION OF ALL SETPOINTS IN SBCS, FWCS, RRS

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II.C. Auxiliary Pressurizer Spray System (APSS)

1. APSS Design

2. APSS Operations, September 12, 1985 Event

   - Root Cause Evaluation

3. APSS Design Enhancement

4. SGTR Analyses

AUXILIARY PRESSURIZER SPRAY

PURPOSE: PROVIDE A MEANS FOR REACTOR COOLANT SYSTEM DEPRESSURIZATION, WHEN MAIN PRESSURIZER SPRAYS ARE NOT AVAILABLE

ESTABLISHED DESIGN CRITERIA:

BRANCH TECHNICAL POSITION RSB 5-1, FOR A CLASS 2 PLANT

- OPERATOR ACTIONS OUTSIDE CONTROL ROOM
- OPERATOR ACTIONS INSIDE CONTAINMENT AFTER SSE
- REMAINING AT HOT STANDBY UNTIL MANUAL ACTIONS OR REPAIRS ARE COMPLETED

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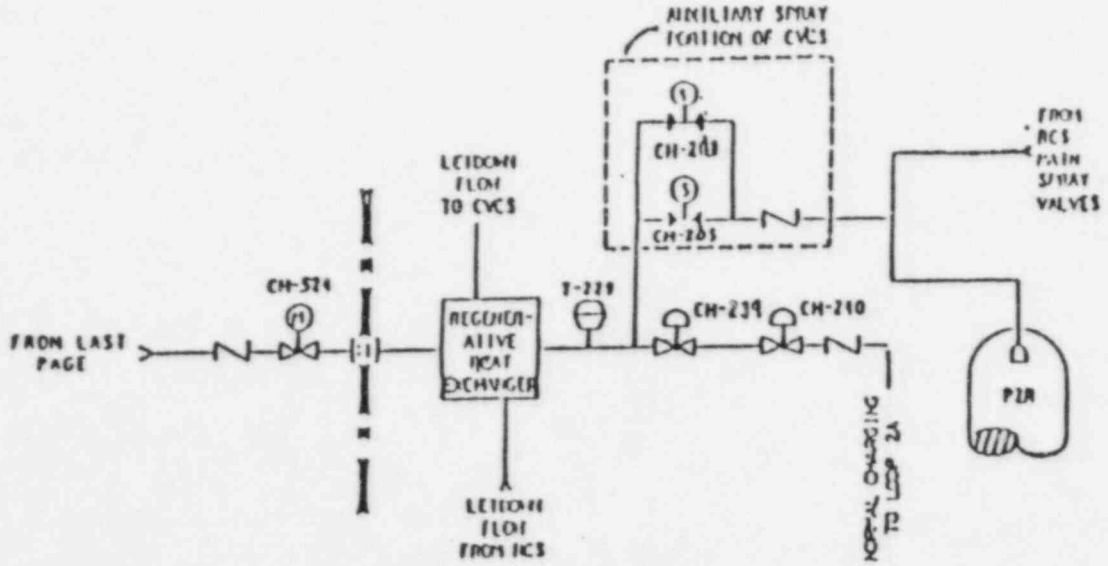
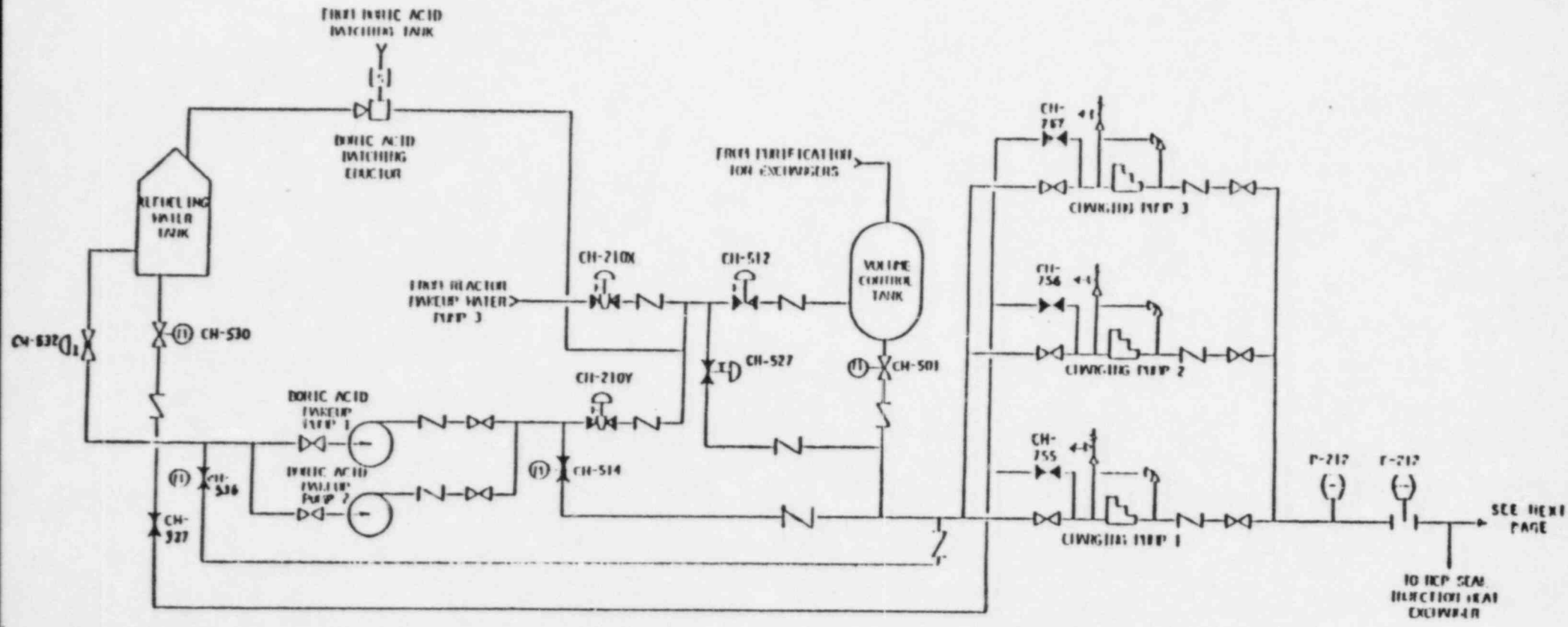
SIMPLIFIED SCHEMATIC OF PALO VERDE CVCS
SHOWING AUXILIARY SPRAY PORTION



CLASSIFICATION OF MAJOR COMPONENTS

COMPONENTS	ASME CODE	SEISMIC CATEGORY	IE POWER	ENVIRONMENTAL QUALIFICATION
CH-524	III, CLASS 2	I	A	YES
CH-239	III, CLASS 2	I	NON-IE	YES
CH-240	III, CLASS 1	I	NON -IE	YES
CH-203	III, CLASS 1	I	B	YES
CH-205	III, CLASS 1	I	A	YES

SIMPLIFIED SCHEMATIC OF PALO VERDE CVCS SHOWING SOURCES OF BORATED WATER FOR AUXILIARY SPRAY



CLASSIFICATION OF MAJOR COMPONENTS

COMPONENTS	ASME CODE	SEISMIC CATEGORY	IE POWER	ENVIRONMENTAL QUALIFICATION
CHARGING PUMPS (3)	III, CLASS 2	I	A/B	YES
CH-501	III, CLASS 2	I	A	BTP 5-1
CH-536	III, CLASS 3	I	A	BTP 5-1

SUMMARY OF

SEPTEMBER 12, 1985 EVENT

- PREPARING TO PERFORM A LOAD REJECTION TEST
- INITIAL PLANT CONDITIONS
  - REACTOR AT 53% POWER
  - TURBINE/GENERATOR CONNECTED TO GRID
  - NON-CLASS STATION LOADS ON GENERATOR
- TEST STARTED BY INITIATING LARGE LOAD REJECTION
- EXPECTED RESULTS OF TEST
  - NO REACTOR POWER CUTBACK SYSTEM ACTUATION
  - NO REACTOR TRIP
- ACTUAL RESULTS OF TEST
  - NO REACTOR POWER CUTBACK SYSTEM ACTUATION
  - REACTOR TRIP OCCURRED

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REACTOR TRIP #4

09-12-85

TIME	
2208.29	OPEN GENERATOR BREAKER 918
2208.53	REACTOR TRIP (RCP SPEED 90%)
2210.00	OPERATOR CLOSES MAIN STEAM LINE DRAINS
2210.53	LOST STATION LOADS
2213.00	NATURAL CIRCULATION ESTABLISHED
2215.00	STARTS NON-SEISMIC AFWS PUMP
2218.00	RESTORED STATION LOADS
	MAIN STEAM LINE DRAIN VALUES REOPEN
2222.00	SIAS/CIAS
2224.00	HPSI FLOW INJECTION STOPS
2230.00	OPERATOR SECURES ALL 3 CHARGING PUMPS
2232.00	LINED UP GRAVITY FEED
0000.00	STARTED BAM PUMPS
0002.00	STARTED CHARGING PUMPS B AND C
0102.00	RESULT SIAS & CIAS
	RESTART 2 RCP'S

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ROOT CAUSE EVALUATION

SEPTEMBER 12,1985

- COOLDOWN OF PRIMARY SYSTEM
  - CAUSE
    - REOPENING OF MAIN STEAM LINE DRAIN VALVES
  - CORRECTIVE MEASURES
    - REMOVE AUTO OPENING OF VALVES ON TURBINE TRIP

- LOSS OF POWER TO NON-ESSENTIAL STATION LOADS
  - CAUSE
    - INABILITY OF THE TURBINE/GENERATOR TO MAINTAIN HOUSE LOADS
  - CORRECTIVE MEASURES
    - MODIFY THE TURBINE SUPERVISORY SYSTEM
    - MODIFY TURBINE ELECTRO-HYDRAULIC CONTROL SYSTEM

- LOSS OF CHARGING FLOW
  - CAUSE
    - INACCURATE VCT LEVEL INDICATION
  - CORRECTIVE MEASURES
    - DAILY SURVEILANCE OF REFERENCE LEG
    - REVISE PROCEDURES TO LINEUP CHARGING PUMP SUCTION
    - MODIFY PROCEDURES TO WARN OPERATORS OF POTENTIAL LOSS OF SUCTION TO THE CHARGING PUMPS
    - VARIOUS ADMINISTRATIVE ENHANCEMENTS
    - DESIGN ENHANCEMENTS

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MODIFICATION SUMMARY

- ADD SECOND, DIVERSE REFERENCE LEG TO VCT LEVEL TRANSMITTERS
  - ADDRESSES ROOT CAUSE OF LOSS OF CHARGING EVENT
  - REPLACES NEED FOR DAILY REFERENCE LEG CHECK

- PROVIDE POWER TO VCT OUTLET AND RWT GRAVITY FEED LINE VALVE FROM 1E MCC
  - ELIMINATES NEED TO MANUALLY RESTORE POWER TO THE VALVES FROM OUTSIDE THE CONTROL ROOM FOLLOWING AN SIAS

- ADD AUTOMATIC ACTUATION TO GRAVITY FEED LINE VALVE
  - ELIMINATES THE NEED TO MANUALLY OPERATE THE GRAVITY FEED LINE VALVE FROM THE CONTROL ROOM DURING LOSS OF OFFSITE POWER CONDITIONS

- LOCK OPEN TWO NORMALLY OPEN VALVES IN AUXILIARY SPRAY FLOW PATH
  - ELIMINATES POTENTIAL FOR ISOLATION OF GRAVITY FEED OR CHARGING LINE DUE TO SPURIOUS ACTUATION OR OPERATOR ERROR

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STEAM GENERATOR TUBE RUPTURE ANALYSIS

- EXPLAIN THE USE OF AUXILIARY PRESSURIZER SPRAY IN THE PALO VERDE STEAM GENERATOR TUBE RUPTURE ANALYSIS

- DEMONSTRATE THAT THE DOSE CONSEQUENCES FOR THE PALO VERDE SGTR ANALYSIS ARE RELATIVELY INSENSITIVE TO THE TIME AUXILIARY PRESSURIZER SPRAY IS INITIATED

- SHOW THAT AN ALTERNATIVE SYSTEM EXISTS TO FACILITATE DEPRESSURIZATION FOLLOWING A STEAM GENERATOR TUBE RUPTURE

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ANALYSIS SUMMARY

(1) PVNGS FSAR APPENDIX 15A

- STEAM GENERATOR TUBE RUPTURE
- LOSS OF OFFSITE POWER
- RECOGNIZED EMERGENCY OPERATING GUIDELINES
- FULLY STUCK OPEN ATMOSPHERIC DUMP VALVE
- AUXILIARY PRESSURIZER SPRAY OPERATION AT 1015 SECONDS

(2) OCTOBER 15, 1985 SUBMITTAL

- SAME AS (1) EXCEPT:
  - AUXILIARY PRESSURIZER SPRAY OPERATION AT TWO HOURS

(3) NOVEMBER 4, 1985 SUBMITTAL

- SAME AS (2) EXCEPT:
  - NO AUXILIARY PRESSURIZER SPRAY
  - PRESSURIZER VENT OPERATION AT TWO HOURS

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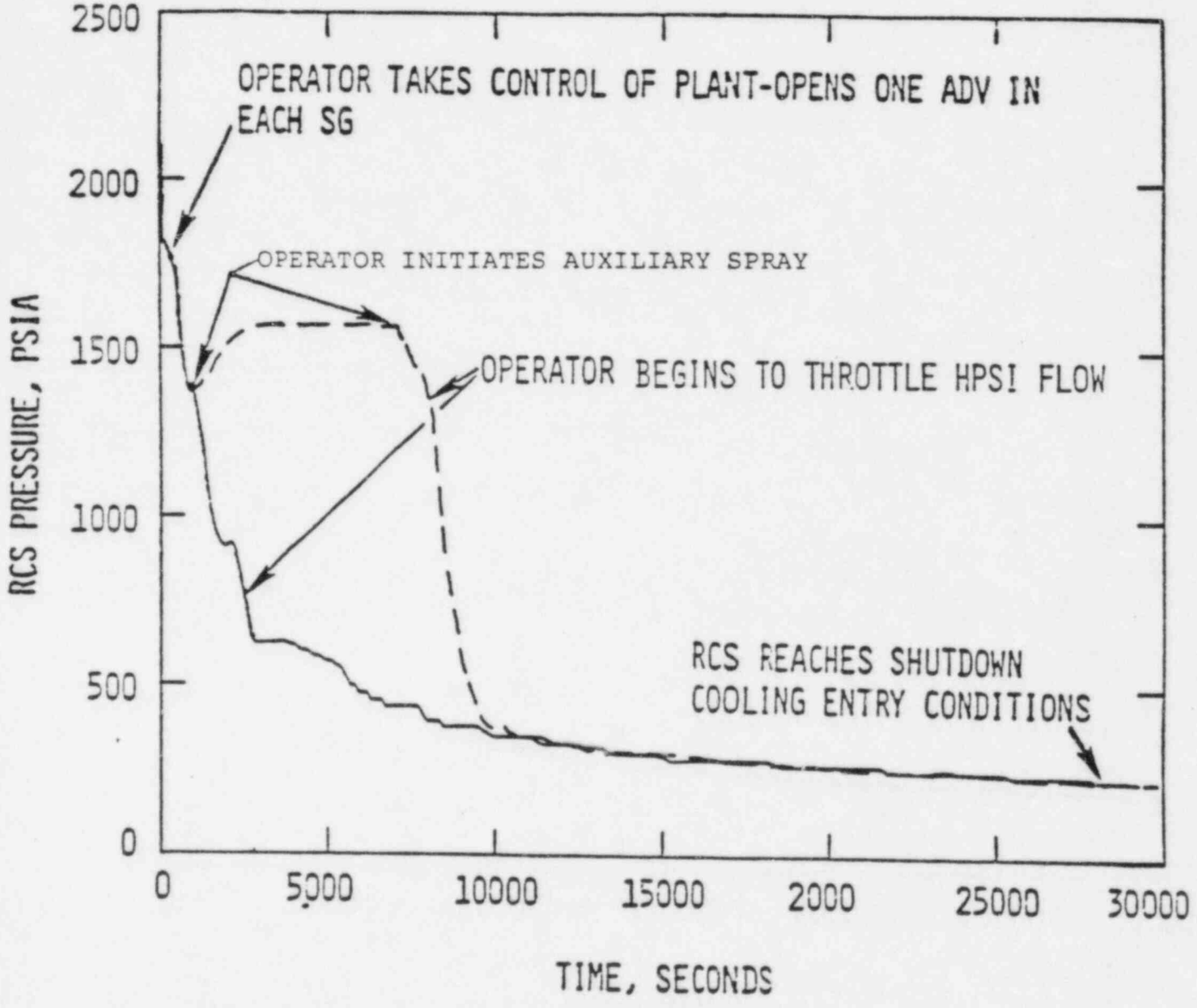
COMPARISON OF THE RCS PRESSURE RESPONSE FOLLOWING A SGTR WITH AUX SPRAY INITIATED AT 1015 SECONDS vs 2 HOURS



STEAM GENERATOR TUBE RUPTURE WITH LOSS OF OFFSITE POWER AND A FULLY STUCK OPEN ATMOSPHERIC DUMP VALVE

PRE-ACCIDENT IODINE SPIKE

THYROID DOSE-REM

	2 HOUR DOSES EXCLUSION AREA BOUNDARY (REM)	8 HOUR DOSE LOW POPULATION ZONE (REM)
PVNGS FSAR APPENDIX 15A AUX-SPRAY AT 1015 SECONDS	200	41
AUX-SPRAY AT TWO HOURS	208	44

10CFR100 DOSE LIMIT IS 300 REM

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DEPRESSURIZATION DURING A SGTR

- DEPRESSURIZATION RESULTS PRIMARILY BY THROTTLING HPSI FLOW

- BEFORE HPSI FLOW IS THROTTLED, LEVEL IN THE PRESSURIZER MUST BE RECOVERED

- AUXILIARY PRESSURIZER SPRAY IS USED TO RESTORE LEVEL

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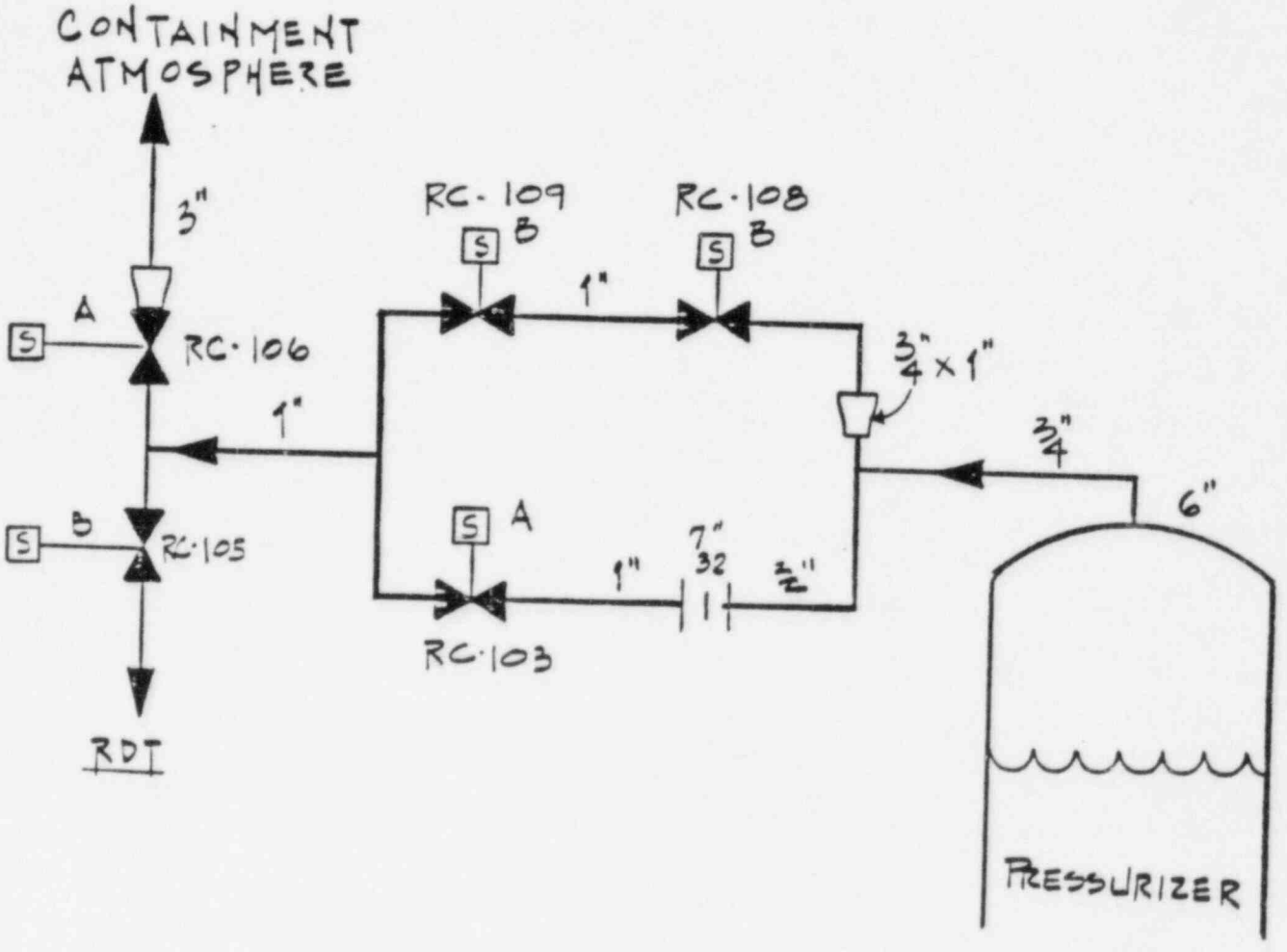
PRESSURIZER VENT PATHS



CLASSIFICATION OF MAJOR COMPONENTS				
COMPONENTS	ASME CODE	SEISMIC CATEGORY	IE POWER	ENVIRONMENTAL QUALIFICATION
RC-103	III. CLASS 2	I	A	YES
RC-105	III. CLASS 2	I	B	YES
RC-106	III. CLASS 2	I	A	YES
RC-108	III. CLASS 1	I	B	YES
RC-109	III. CLASS 1	I	B	YES

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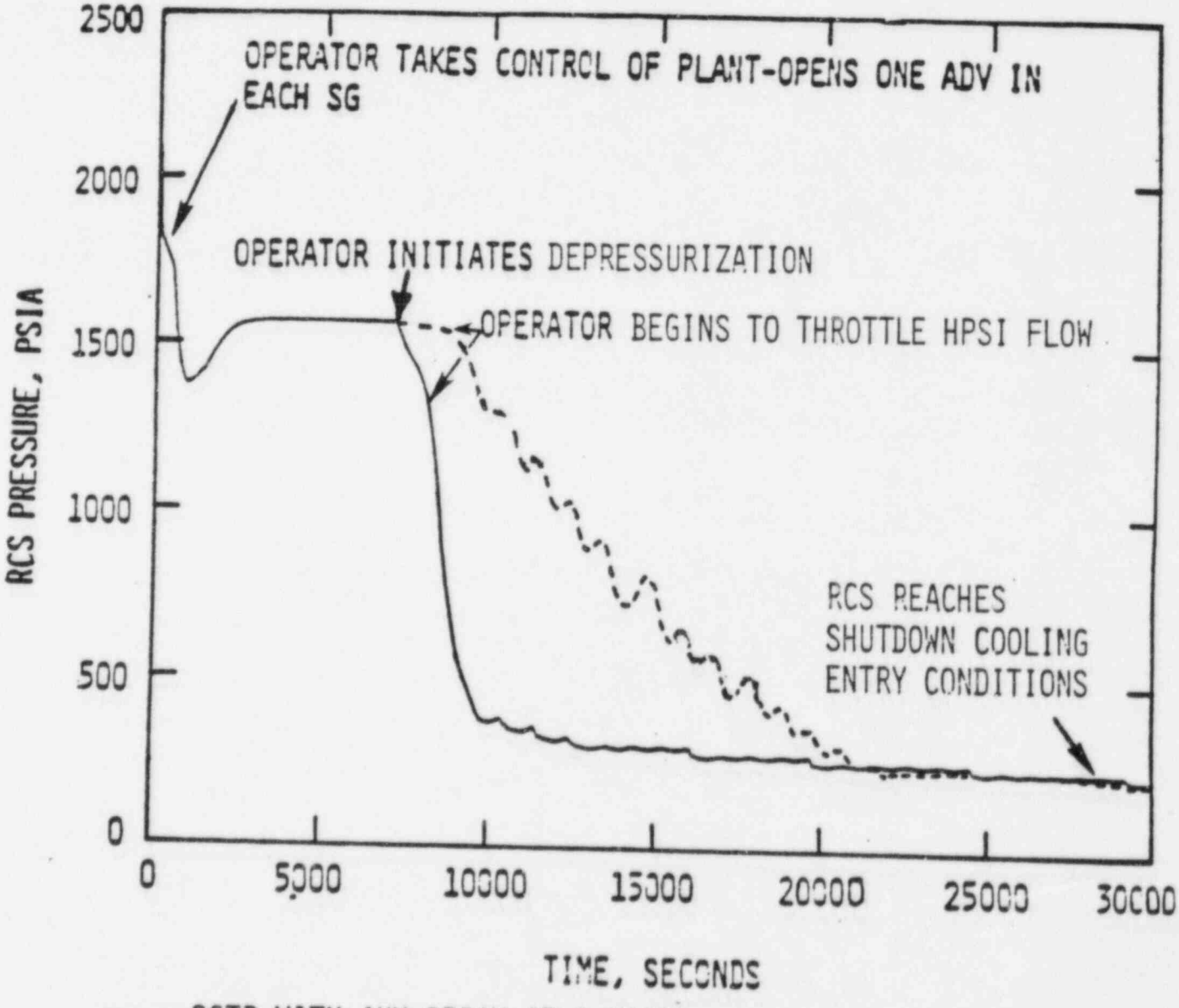
COMPARISON OF THE RCS PRESSURE RESPONSE FOLLOWING A SGTR WITH AUX SPRAY INITIATED AT 2 HOURS vs PRESSURE VENT OPENING AT 2 HOURS



—— SGTR WITH AUX SPRAY AT 2 HOURS

- - - SGTR WITH PRESSURIZER VENT AT 2 HOURS

STEAM GENERATOR TUBE RUPTURE WITH LOSS OF OFFSITE POWER AND A FULLY STUCK OPEN ATMOSPHERIC DUMP VALVE

PRE-ACCIDENT IODINE SPIKE

THYROID DOSE-REM

	2 HOUR DOSES EXCLUSION AREA BOUNDARY (REM)	8 HOUR DOSE LOW POPULATION ZONE (REM)
PVNGS FSAR APPENDIX 15A AUX-SPRAY AT 1015 SECONDS	200	41
AUX-SPRAY AT TWO HOURS	208	44
PRESSURIZER VENT AT TWO HOURS	208	44

10CFR100 DOSE LIMIT IS 300 REM

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SUMMARY

- DOSE RESULTS ARE RELATIVELY INSENSITIVE TO THE TIME OF AUXILIARY PRESSURIZER SPRAY ACTUATION DURING THE FIRST TWO HOURS

- 10CFR100 DOSE LIMITS ARE NOT EXCEEDED WHEN APSS USE IS DELAYED UNTIL TWO HOURS AFTER THE EVENT INITIATION

- AN ALTERNATE SYSTEM EXISTS THAT CAN BE USED TO FACILITATE DEPRESSURIZATION DURING A STEAM GENERATOR TUBE RUPTURE. WITH NO IMPACT ON THE DOSE CONSEQUENCES.

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AUXILIARY PRESSURIZER SPRAY SUMMARY

- THE AUXILIARY PRESSURIZER SPRAY SYSTEM DESIGN MEETS THE REQUIREMENTS OF BTP RSB 5-1.

- THE OPERATORS SUCCESSFULLY DEALT WITH THE LOSS OF CHARGING IN THE SEPTEMBER 12 EVENT.

- COMPENSATORY MEASURES HAVE BEEN TAKEN TO REDUCE THE PROBABILITY OF A TEMPORARY LOSS OF CHARGING. DESIGN ENHANCEMENTS ARE BEING MADE TO REPLACE SOME OF THE COMPENSATORY MEASURES.

- ADDITIONAL STEAM GENERATOR TUBE RUPTURE ANALYSES CLARIFY THE REQUIREMENT FOR USE OF THE AUXILIARY PRESSURIZER SPRAY, OR THE BACKUP VENT, TO MINIMIZE OFFSITE DOSE.

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SUMMARY OF 308TH ACRS MEETING - December 5-7, 1985

R. W. HERNAN

I. Agenda Items of Interest to NRR

- Proposed Rule Change to 10 CFR55 - Operator Licensing
- Requalification of Reactor Operators - Asselstine Questions
- GESSAR II Severe Accident Review and FDA
- Millstone,1 FTOL Review
- Prioritization of New Generic Issues
- Status Review of USI A-45 Resolution
- Status of Implementing Quantitative Safety Goals
- Auxiliary Feedwater System Reliability
- Palo Verde 1 Startup Experience
- Source Term Reassessment - Review of NUREG-0956

II. Letters to be Issued

- Millstone 1 FTOL - letter supports issuance of FTOL.
- Prioritization of new generic issues - letter agrees with the staff's priorities with one exception.
- Rule change on operator licensing - letter endorses rule change with minor comments.

C/6

- It is not clear that all AFW systems have been fully upgraded to safety grade (and are on the Q list) or that they meet the staff's current SRP criteria.

- It is not clear what direction the proposed CRGR package/ generic letter will take in the future, particularly in light of the NRR reorganization.

- The staff was unable to articulate a schedule for resolution of reliability concerns on the AFW systems of several older plants.

- ACRS will issue a letter expressing the above concerns.

I. Palo Verde Unit 1 Startup Experience

- The staff reviewed the Palo Verde 1 power ascension testing experience with the ACRS on November 7, 1985, as requested in the 1981 ACRS letter.

- The ACRS had drafted a letter on this review during the November full-Committee meeting but ran out of time before it could be finalized. During additional discussion on December 7, the ACRS decided not to issue a letter. The staff had not requested a letter and lack of a letter will have no impact on staff licensing actions for Unit 2.

IV. Future Activities

- Subcommittee meetings

• 12/13	QA - IE to discuss IDI, CAT, PAT, etc	IE
	- NRR to discuss allegation resolution	NRR (Brady)
• 1/6	Standard Plant Policy Statement	PWR-B/SSPD
• 1/7	OR Events Briefing(incl San Onofre 1 Rancho Seco and Crystal River)	PWR-A, PWR-B BWR