DCD-016

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

MAR 09 1983

Dockets Nos. 50-312, 313 & 346

LICENSEES: Sacramento Municipal Utility District (SMUD)
Toledo Edison Company (TECo) and
Arkansas Power & Light Company (AP&L)

FACILITY: Rancho Seco, Davis-Besse 1 and Arkansas Unit 1

SUBJECT: SUMMARY OF MEETING HELD ON JANUARY 27, 1983 WITH SMUD, TECo AND AP&L TO DISCUSS EXTENSION REQUESTS REGARDING THE NRC's DECEMBER 10, 1982 ORDER FOR MODIFICATION OF THE LICENSES FOR INADEQUATE CORE COOLING (ICC) INSTRUMENTATION

By letters dated January 17, 1983 AP&L and Counsels of SMUD and TECo requested extension of time to respond to the Order to permit them time to complete some additional analysis. The meeting was held in response to a NRC request to discuss with the licensee's representatives the basis for their requests. The attendance list and copies of the view-graphs used at the meeting are enclosed.

Discussion

1. AP&L Request for Extension

AP&L request concerns the NUREG-0737 requirement that the Reactor Coolant Pump (RCP) current monitoring instrument be a Class 1E qualified system. The installed Arkansas Unit 1 RCP motor is not a Class 1E nor is some of the equipment associated with current monitoring in a safety grade building. AP&L requested the extension of time in order to complete engineering evaluation to ensure that they could fulfill the requirements of the Order. The staff stated that they consider this to be a technical deviation from the NUREG-0737 technical requirements. AP&L would be required to show that the functional requirements of the system are met and to justify any deviations from the NUREG-0737 requirement including the cost to make the system a Class 1E qualified system. The staff indicated an acceptable response to the Order would be to show that their RCP current monitoring system meets the functional requirements of the Order and to provide a schedule for submission of the justification and costs for any deviation from the NUREG-0737 requirements. On the basis of the above clarification of what is an acceptable response to the Order, the licensee indicated that it would withdraw its extension request.

2. SMUD and TECo Request for Extension

The extension request concerns our requirement for a reactor head level monitor. The licensees acknowledge that the criterion for a monitor with range from the vessel upper head to the bottom of the hot leg as stated in Section II of the Order requires a reactor vessel head level monitor, and that the Davis-Besse and Rancho Seco proposed systems will not meet this criterion.

The licensees request an extension of time to respond to the NRC Order in order to permit them to complete some analyses designed to show that when certain plant modifications are made a vessel head monitor is not needed. They indicated that they will request a hearing on the Order if the staff position does not change after reviewing their analyses.

The major points discussed during the meeting were:
(1) The licensees intend to submit their conceptual designs for a hot leg level monitor and a RCP monitor to provide inventory tracking with pumps off and on, respectively, on the schedule required by the Order.

(2) The licensees described a cost/benefit analysis in progress to evaluate the merits of including reactor vessel head instrumentation. They described problems involving accessibility, routing, and refueling considerations relating to installation of a reactor vessel head monitor. Preliminary estimates on installation costs and personnel exposure were presented, but were well within the bounds of estimates used by the staff when the requirement was justified.

(3) The response of the required instrument system during an approach to ICC was discussed. The licensees pointed out that the large coolant inventory in the hot leg reduced the importance of a vessel head monitor to indicate the approach to ICC. While this is an important design feature, the information presented was considered by the staff when the requirement was established.

(4) An alternate design concept consisting of a vent line from the reactor vessel head to the top of the hot leg was discussed. An analysis is being performed to evaluate the design and performance feasibility of this concept in lieu of a reactor vessel head measurement dp system.

The licensees requested a short delay (until April 15) to complete their analysis and finalize their conceptual design.

In conclusion, we told the licensees that we would consider their request and would inform them of our decision as soon as it is made.

Sydney Miner, Sr. Project Manager
Operating Reactors Branch #4
Division of Licensing

Enclosures:
1. List of Attendees
2. Viewgraphs

cc w/enclosures: See next page

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Original Signed By:
Sydney Miner, Sr. Project Manager
Operating Reactors Branch #4
Division of Licensing

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cc w/enclosures: See next page

OFFICE			ORB#4:DL			
SURNAME			SMiner/cb			
DATE			2/29/83			

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO 1981—335-960

MEETING SUMMARY DISTRIBUTION

Licensee: SMUD, AP&L, TECo

*Copies also sent to those people on service (cc) list for subject plant(s).

Docket File
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JMTaylor, IE
ACRS (10)
NSIC

NRC Meeting Participants:

THuang
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LRubenstein
GLainas
JShea
MFairtile
TDunning
JLieberman
KCyr
SBurns
GSVissing
ADe Agazio
JStolz

Enclosure 1

LIST OF ATTENDEES - JANUARY 27, 1983 MEETING ON ICC INSTRUMENTATION

NRC

Sydney Miner
John Stolz
Tai Huang
Larry Phillips
Lester S. Rubenstein
Gus Lainas
J. J. Shea
M. Fairtile
T. Dunning
Jim Lieberman
Karen Cyr
Stephen Burns
Guy S. Vissing
Albert De Agazio

AP&L

H. Richard Rothwell
B. A. Terwilliger
Jan Kozyra
Dan Howard
M. L. Pendergrass
Don Reuter

Florida Power Corp.

Ronald M. Bright
J. R. Neubaum

GPU Nuclear

E. G. Wallace

B&W

Edward R. Kane
L. M. Holloway
Bob Borsum
J. H. Taylor

Shaw, Pittman, Potts & Trowbridge

Jay Silberg

Bechtel

E. S. Hill

TECo

Larry D. Young
Fred Miller
George A. Bradley

SMUD

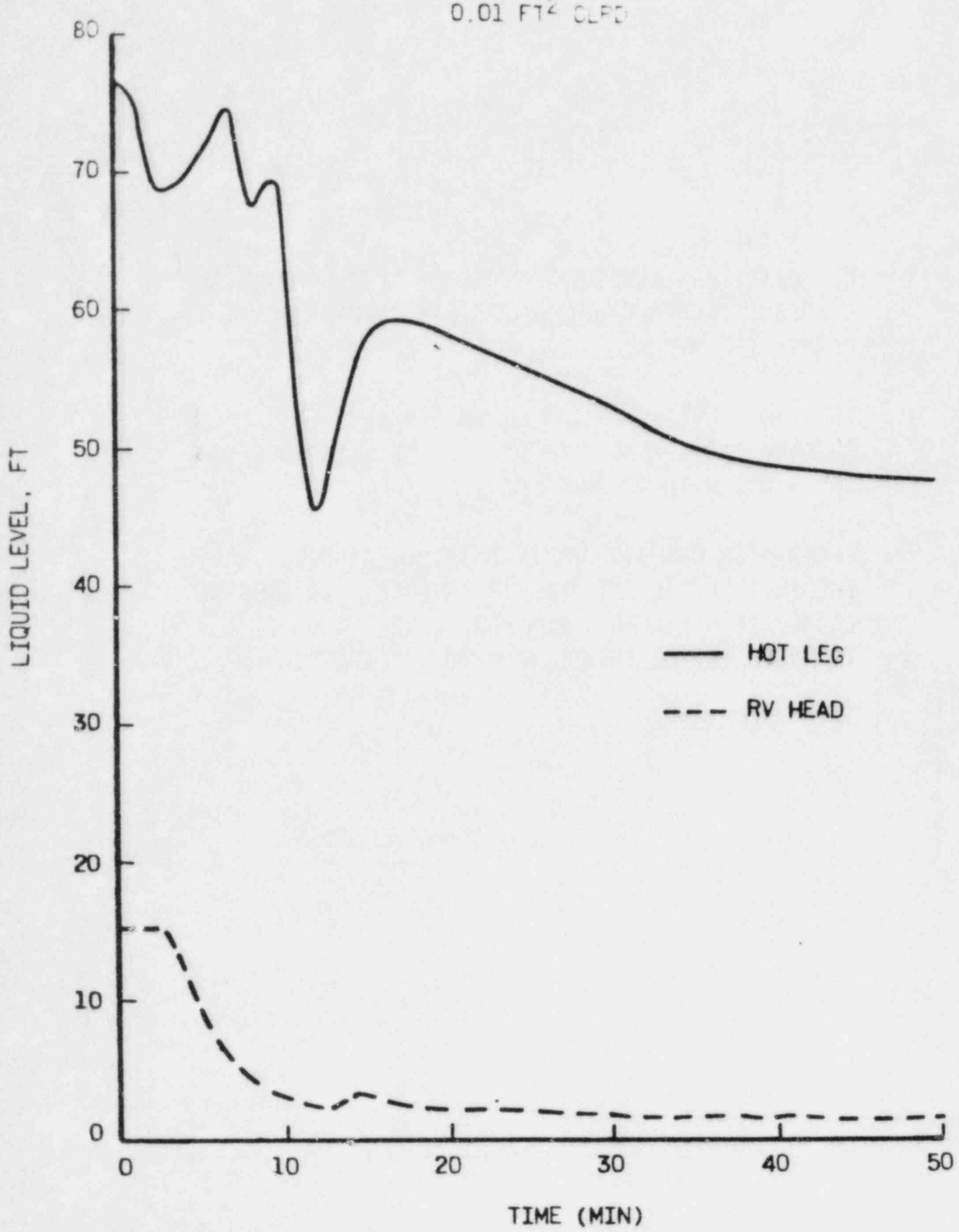
Bob Dieterich

INTRODUCTION

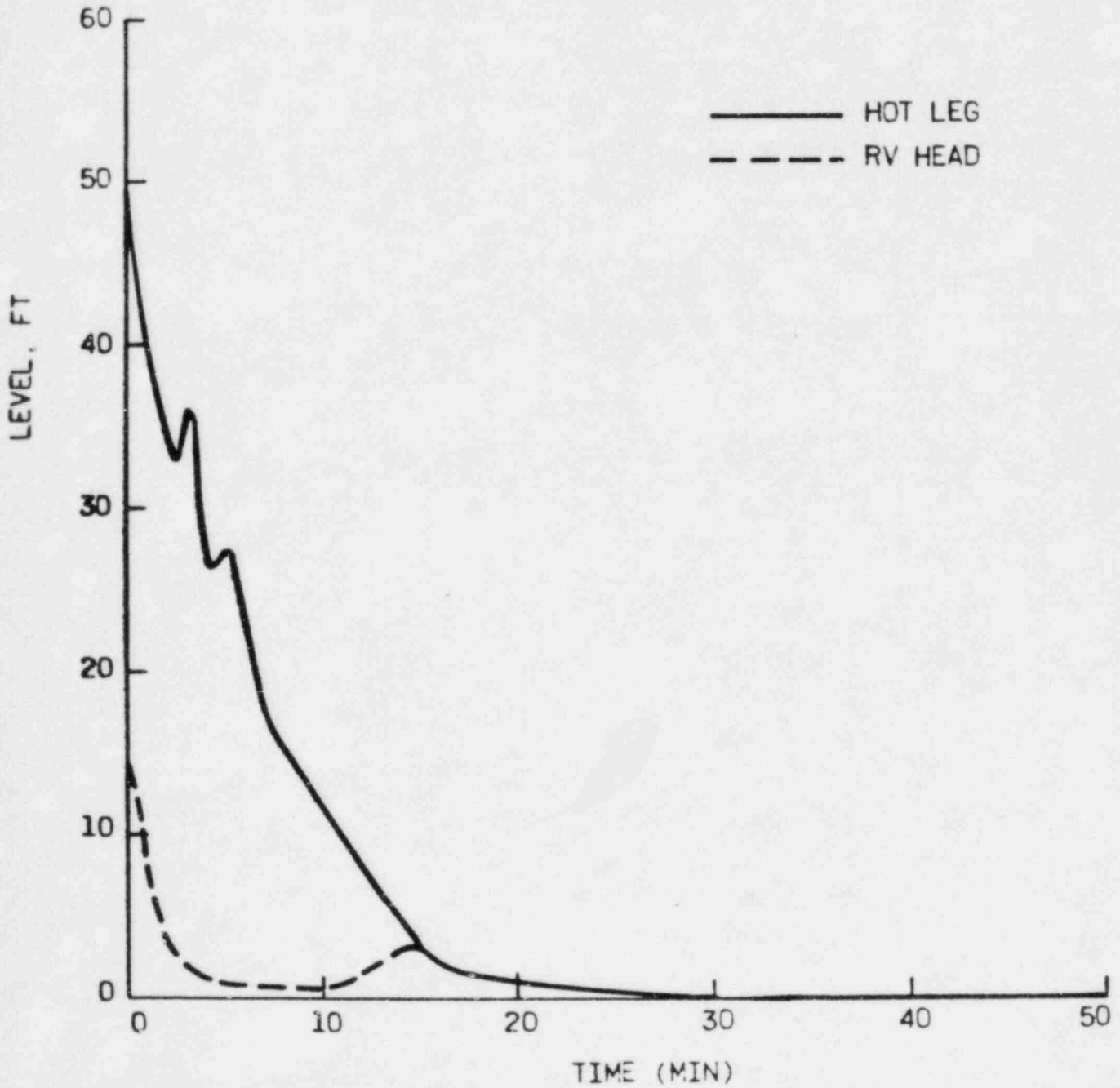
- ALL UTILITIES AGREE THAT HOT LEG LEVEL PROVIDES A USEFUL INCREMENTAL INCREASE IN INFORMATION TO ASSIST THE OPERATOR DURING UNUSUAL TRANSIENTS.

- ADDITIONALLY THE UTILITIES HAVE AGREED TO INSTALL INSTRUMENTATION CAPABLE OF TRENDING INVENTORY WITH RC PUMPS ON.

- REASONABLE QUESTION STILL EXISTS REGARDING THE INCREMENTAL NET BENEFIT IN SAFETY vs. COSTS (MONETARY AND ALARA) FOR HEAD LEVEL INSTRUMENTATION IN ADDITION TO THE ABOVE.


INDICATED LEVEL VS TIME
2772 MWt
RAISED-LOOP PLANT
0.01 FT² CLPD
LIQUID LEVEL, FT
80
70
60
50
40
30
20
10
0
0
10
20
30
40
50
TIME (MIN)
HOT LEG
RV HEAD

INDICATED LEVEL VS. TIME
2772 MWt
LOWER-LOOP PLANT
.04 FT^2 CLPD



LEVEL SYSTEM KEY USES	HOT LEG LEVEL	HEAD LEVEL	TREND PUMPS ON
1. CONTINUOUS TREND OF INVENTORY DEPLETION DURING LOCA WITH PUMPS OFF	X		
2. CONTINUOUS TREND OF INVENTORY DEPLETION DURING LOCA WITH PUMPS ON			X
3. INDICATION OF IMMINENT LOSS OF NATURAL CIRCULATION	X		
4. DIRECT INDICATION OF HEAD BUBBLE		X	
5. STATUS OF SYSTEM REFILL DURING LATE STAGES OF A LOCA	X		
6. OPERATOR INFORMATION FOR TRANSIT FROM LPI TO DHR OPERATION DURING A LOCA	X		

SUMMARY

- UTILITIES CONCUR THAT THERE IS INCREMENTAL VALUE IN ADDING HOT LEG LEVEL INSTRUMENTATION.

- ADDITIONALLY INSTRUMENTATION TO TREND INVENTORY WITH PUMPS ON WILL BE ADDED.

- WE BELIEVE THE ADDITIONAL INCREMENTAL SAFETY IMPROVEMENT OF PROVIDING HEAD LEVEL MEASUREMENT IS SMALL.

- THEREFORE GIVEN THE ADDITION OF HOT LEG LEVEL INSTRUMENTATION AND TRENDING INVENTORY WITH PUMPS ON, AND THE SMALL NEXT INCREMENTAL STEP IN SAFETY OF HEAD LEVEL INSTRUMENTATION, THE DECISION TO ADD HEAD LEVEL OR PROVIDE AN ALTERNATIVE SOLUTION SHOULD BE ALLOWED TO THE INDIVIDUAL UTILITIES.