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Director of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Attention: Mr. Domenic B. Vassallo, Chief  
Operating Reactors Branch No. 2  
Division of Licensing

Subject: James A. FitzPatrick Nuclear Power Plant  
Docket No. 50-333  
Environmental Qualification of Safety-  
Related Electrical Equipment Request  
for Additional Information

Reference: PASNY letter, J.P. Bayne to D.B. Vassallo (NRC)  
dated June 2, 1982 (JPN-82-87), same subject.

Dear Sir:

The referenced letter was inadvertently transmitted  
without its enclosure. That enclosure, entitled "Revised  
Environmental Parameters and TMI Related Equipment", is  
hereby submitted for your use.

If you have any questions, please contact Mr. J.A. Gray, Jr.  
of my staff.

Very truly yours,

J.P. Bayne  
Senior Vice President  
Nuclear Generation

w/ attached:  
w/o attached:

A048

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**RESPONSE TO  
NRC IE BULLETIN 79-01B**

**JAMES A. FITZPATRICK  
NUCLEAR POWER PLANT**

**POWER AUTHORITY OF THE STATE OF NEW YORK**



REVISED  
ENVIRONMENTAL PARAMETERS  
&  
TMI RELATED EQUIPMENT

May 1982

## PREFACE

This report is in response to the NRC issued I&E Bulletin 79-01B (January 19, 1980) requiring all owners of Nuclear Power Plants to perform a detailed review of the environmental qualification of Class 1E electrical equipment to ensure system operability under accident conditions.

The environmental parameters not addressed during the James A. Fitz-Patrick FSAR environmental qualification program, but presently required such as submergence (Containment and Reactor Building), water spray, aging and High Energy Line Break (HELB) outside primary containment are now included.

The qualification analysis performed utilized criteria and guidelines as established by the subject bulletin, the SER, subsequent NRC regional meetings and the NRC meeting held in Bethesda, Maryland on July 7-10, 1981.

Following a design basis loss of Coolant Accident (LOCA) within the primary reactor containment, the Class 1E electrical equipment required to isolate and mitigate the accident will perform its intended function within the "harsh environment" as detailed in the previously submitted "Response to IE Bulletin 79-01B, October 1980" and within this report.

Similarly for a High Energy Line Break (HELB) outside the primary containment analysis shows that all necessary isolation valves will perform their function within the required time frame while subjected to the environment of the accident.

Action plans include equipment replacement, testing or engineering analyses. Although recommendations have been made for equipment replacement, this does not indicate equipment failure. There is a high probability that the equipment could be qualified by test or analysis, including supportive documentation, if either method was chosen. Rather, replacement is the most cost and time effective method to establish environmental qualifications.

The HELB analysis included with the October 1980 submittal resulted in highly conservative results as credit was not taken for the effects of heat sinks. The HELB analysis presented herein includes heat sinks, long term heat sources, and modifications resulting from the fire hazard analysis, thereby providing a more realistic transient response.

In addition to the HELB reanalysis, the following efforts were performed subsequent to the October 1980 submittal:

- a) Field survey to reflect the "As-Built" condition of the plant.
- b) A functional analysis to determine which electrical components previously submitted are not essential for safe shutdown. These items have been marked "Delete" on the systems component evaluation worksheet.

- c) Analysis providing integrated radiation doses based on equipment operating times.
- d) Conducted a plant radiation survey to establish actual radiation exposure rates for Class 1E equipment during the 40 year normal environment.
- e) Analysis providing long term post-HELB and post-LOCA temperature in the Reactor Building.
- f) Analysis providing humidity profile post-HELB and post-LOCA in the Reactor Building.
- g) Analysis providing radiation values post-LOCA in the RHR Heat Exchanger Rooms and Reactor Water Cleanup Pump Rooms.
- h) Equipment Qualification Action Plan commitments resulting from Safe Shutdown System Analysis.
- i) Analysis providing temperature and pressure profiles in the Turbine Building.

The technical summary and assumptions used in establishing the HELB environmental envelope are being included to provide a basis for the implementation of the follow-up qualification program as well as equipment purchase for future modifications.

#### A. HELB Transients

The Reactor Building transients due to High Energy Line Breaks were based on Reference 151. The peak area temperatures resulting from the HELB occur rapidly and are shown in Section 2 of this report. Long term effects from equipment heat loads above the Crescent area do not affect the peak calculated values.

A secondary long term effect is seen from equipment operation in a few areas of the Reactor Building. The areas containing the RHR heat exchangers and the RHR piping (nodes 272-5, 272-11, 272-1 and 272-2) will have a significant long term temperature rise from RHR system operation, and the area containing the inverter (71INV-3B) in long term temperature. In general, however, post-HELB equipment operation increases the overall building temperatures approximately 2°F in 24 hours.

The figures for nodes 272-5, 272-11, 272-1 and 272-2 have been plotted with the Suppression Pool temperature transient from FSAR and figure 14.6-7 superimposed. After a HELB or after a LOCA the RHR equipment will be cooling the Suppression Pool water, and these areas will therefore follow the temperature transient of the pool.

The inverter area on the north side of elevation 344' is not well ventilated by the SGTS, and slowly rises a few degrees above the rest of the building in the long term. A straight line at 110°F has been added to the figure for 344-0 to envelope this effect.

## B. Long Term Post-HELB Temperatures

Although Reference 151 did not account for the equipment heat loads post-HELB above the Crescent area, e.g. MCC's, inverters, emergency lighting, and piping, neither did it take credit for heat losses through the exterior walls and siding, or for operation of the Standby Gas Treatment System (SGTS). After including equipment heat loads transmission heat gain from the Drywell, Suppression Chamber Ceiling, and Fuel Pool Walls (and Fuel Pool surface load), the losses roughly matched the gains. References 148 and 150 showed the slight (2°F) temperature rise which resulted. A slightly higher rise occurs in the inverter area on El. 344' as shown in Reference 149.

## C. Long Term Post-LOCA Temperatures

These heat loads are the same as post-HELB except that the Drywell is also assumed to stay at an average of 175°F for 1 month, after which both the Drywell and Suppression pool heat loads drop out. Normal spent fuel pool cooling was assumed.

## D. Seasonal Variations

Any 6 month qualification period will encompass both winter and summer outside ambient conditions. Depending on the time of year of the postulated accident, the resulting long term building temperature will rise or fall over a period of 6 months. Our calculated values provide an upper bound over this period. Based on average monthly norms presented in FSAR Table 2.21, the minimum long term Reactor Building temperature would be approximately 46°F in January with an outside ambient temperature of 25.1°F. The "thermal inertia" of the building will help damp the day to day variations, but an extended period of cold weather lower than 25°F could drop the Reactor Building temperature below the normal operating minimum temperature of 40°F.

## E. Humidity Analysis

### Relative Humidity Above El. 272'

The R.H. transients are presented in Section 2 for the RHR, HPCI, and RCIC breaks (steam line breaks), and for the RWCU breaks (liquid line breaks).

The transients are based on the site design conditions of 93°F dry bulb and 73°F wet bulb (65° dew point). The steady state relative humidity is very sensitive to the fuel pool temperature and to the external atmosphere relative humidity. However, according to Ref. 152 the ambient wet bulb at Oswego will be above 73°F between 2-1/2 and 5% of the cooling season (4 months). Therefore, the transients provided plus a 10% R.H. margin should be acceptable for long term.

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Normal spent fuel pool cooling (SFPC) was assumed to be lost with loss of offsite power. Operator action to cool the fuel pool via the RHR system would require access to the Reactor Building approximately 6 hours after the HELB.

Assuming normal spent fuel pool cooling is available, the post-LOCA relative humidity will be enveloped by the post-HELB conditions.

#### Relative Humidity in the Crescent Area

The Crescent area relative humidity is conservatively assumed to remain at 100%.

Since the moisture removed from the Reactor Building by the demisters in the Standby Gas Treatment System (SGTS) is returned to the equipment drains sump in the East Crescent, the water level will rise slowly (approximately 1/2" per day, see Refs. 35 and 96) in that area until sump pumps can be made available to pump it out or the STGS operation is terminated.

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129. G.E. Environmental Qualification Test Summary NSE80382, Approved Eng. Test Lab Report #596-0398, Barksdale B2T-M1255.
130. Deleted



131. BWR Equipment Qualification Summary QSR-630-A-01, Environmental Qualification Table C11-1, Magnetrol 5.0-751.
132. Deleted
133. BWR Equipment Qualification Summary QSR-116-A-01, Robertshaw 83842-A8.
134. Limitorque Test Report #600376A dated May 13, 1976; "Nuclear Power Station Qualification Type Test Report - Limitorque Valve Actuators for BWR Service", 10MOV-18.
135. G.E. Environmental Qualification Test Summary NSE80389, Wyle Laboratories Report #12625, dated 6/5/62. Barksdale D24-A150SS.
136. G.E. Environmental Qualification Test Summary NSE80391, Ogden Technology Laboratories Test #5N-AN3-SX, Static-O-Ring Procedure 70526, dated 5/4/71, Static-O-Ring, 5N-AA3-SX.
137. BWR Equipment Qualification Summary 048-A-03, Table E-32-6, Rosemont 1151GP.
138. BWR Equipment Qualification Summary 044-E-01, Test Report #228, 50-551, GEMAC 551-032EKZZ2.
139. G.E. Environmental Qualification Test Summary NSE80373, Ogden Technology Laboratories Test Procedure 70526, dated 5/4/71, Static-O-Ring, 6N-aAA21-V.
140. Deleted
141. BWR Equipment Qualification Summary QSR-078-A-01, GE AKD-5.
142. Normal Reactor Building Radiation Levels in the Vicinity of Class 1E Equipment for NRCB 79-01B, September 3, 1981.
143. Limitorque Test Report #B0058, dated 1/11/80, Limitorque Valve Actuator Qualification for Nuclear Power Station Service.
144. Qualification Test of ASCO Solenoid Valves, Test #AQS21678/TR - Rev. A.
145. NAMCO Controls Test Report No. QTR 111, "Qualification of EA740 Series Limit Switches for Use in Nuclear Power Plants in Compliance with IEEE Standards 323-1974, 382-1972 and 344-1975", October 1, 1981
146. Stone & Webster Calculation (12966-B-76-2), "Determination of East Pipe Tunnel Post-LOCA Space Temperatures", James A. FitzPatrick Nuclear Power Plant
147. Stone & Webster Calculation (12966-PE(N)-001-3), "Revision of Reactor Building Subcompartment Model to Account for Fire Hazard Modifications", James A. FitzPatrick Nuclear Power Plant

148. Stone & Webster Calculation (12966-PE(N)-024-0), "Reactor Building Long Term Temperature Post-LOCA & Post-HELB", James A. FitzPatrick Nuclear Power Plant
149. Stone & Webster Calculation (12966-PE(N)-025-0), "Reactor Building Inverter Room Long Term Steady State Temperature, Post-LOCA & Post-HELB", James A. FitzPatrick Nuclear Power Plant
150. Stone & Webster Calculation (12966-PE(N)-026-0), "Effect of Equipment Heat Loads on the Reactor Building for the First 24 Hours Post-LOCA & Post-HELB", James A. FitzPatrick Nuclear Power Plant
151. Stone & Webster Calculation (12966-PE(N)-003-5), "Revised Results of High Energy Line Break Analysis in the Reactor Building Including Fire Hazard Modifications", James A. FitzPatrick Nuclear Power Plant
152. Evaluated Weather Data for Cooling Equipment Design, Addendum N. 1 Winter and Summer Data, Fluor Products Inc., Copyright 1964, Pg. 40
153. Stone & Webster Calculation (12966-PE(N)-010-0), "Heat Balance and Heat Up Rate of the Spent Fuel Pool Before/After the Loss of the SFPC System with RHR Providing Emergency Cooling, Case III of JPN-80-19", James A. FitzPatrick Nuclear Power Plant
154. Stone & Webster Dwg. No. 11825-FB-4A-10, Reactor Building Floor Drainage El. 227'-6" & 256'-6"
155. Stone & Webster Dwg. No. 11825-FB-4B-10, Reactor Building Floor Drainage El. 272'-0"
156. Stone & Webster Generic Calculation (Generic-PE-219-0), "Condensate Film Thickness After a LOCA"
157. Response to FSAR Question 7.3, Item 8 - FSAR Volume VIII
158. Philadelphia Electric Company Test "A" Report Summary Qualification Test of Electrical Terminal Blocks and Cable Splice Insulation, dated 1/17/79
159. Environmental Qualification Test Report of Raychem Nuclear Cable Brakeout and End Sealing Kits, Report #58442-2, dated April 3, 1981
160. Qualification Report of NAMCO EA180 Limit Switches Report, #QTR-105.
161. Rockbestos Co. Report (Qualification of Firewall III Class 1E Electric Cables (IR Radiation Cross-Linked Insulation)," June 7, 1978

162. Rockbestos Co. Report QR #1804 "Qualification of Firewall EP Class IE Electric Cables", April 6, 1981
163. JAFNPP, FSAR Section 4.8.6 - RHR System (Containment Spray Mode) Design Basis
164. IEEE 323-1974 and NUREG 0588, Cat. 1 Aging Requirements
165. Eaton Co. Qualification Report (Isometrics Test Report, June 1978), LOCA Nuclear Qualification of EPDM/Hypalon Composit Cable
166. Deleted
167. Stone and Webster Letter PAS-25475, dated April 2, 1982 and PAS-25482, dated April 12, 1982 to PASNY. J.O. No. 12966.76. Technical Summary and Enveloping Relative Humidity curves for the Reactor Building Post-LOCA/HELB.
168. JAFNPP (SWEC) System Design Description - Motor Generator Room Ventilation (21-7.3) - System 66, dated Nov. 28, 1973.
169. JAFNPP (SWEC) System Design Description - Heating, Ventilating & Cooling for the Turbine Building (21-8.1) - System 67, dated Ma, 2, 1978.
170. JAFNPP (SWEC) System Design Description - Control Room Air Conditioning System (21-10.A2) - System 70, dated July 19, 1974.
171. JAFNPP (SWEC) System Design Description - Relay Room Air Conditioning System (21-10.A1) - System 70, dated July 19, 1974.

200. Final Report on the Evaluation of Raychem WCSF Cable Splices, PEI-TR-82-4-2 (Reactor Building)
201. Final Report on the Evaluation of Anaconda FR EP Instrumentation Cable, PEI-TR-82-4-3
202. Final Report on the Evaluation of General Electric EB-25 Terminal Blocks, PEI-TR-82-4-4
203. Final Report on the Evaluation of Trombetta Solenoid, G206, PEI-TR-82-4-28
204. Final Report on the Evaluation of Electros witch, 2401C and 2402C, PEI-TR-82-4-16
205. Final Report on the Evaluation of Rockbestos Firewall III, SIS, PEI-TR-82-4-9
206. Final Report on the Evaluation of GE CR2940 Switch PEI-TR-82-4-10
207. Final Report on the Evaluation of GE CR120B Relay PEI-TR-82-4-14
208. Final Report on the Evaluation of NAMCO EA740-80100 Limit Switch PEI-TR-82-4-18
209. Final Report on the Evaluation of Belden Wire Type 83348 PEI-TR-82-4-5
210. Final Report on the Evaluation of Buchanan Terminal and Fuse Blocks, PEI-TR-82-4-13A
211. Final Report on the Evaluation of Buchanan Terminal and Fuse Blocks, PEI-TR-82-4-13B w/in Hoffman NEMA 4 Enclosure
212. Final Report on the Evaluation of Boston Insulated Wire Signal Cable, XLPE-CSPE, PEI-TR-82-4-12
213. Final Report on the Evaluation of Conax RTD W/Seal Assy. PEI-TR-82-4-1
214. Final Report on the Evaluation of Conax EPA PEI-TR-82-4-31
215. Final Report on the Evaluation of Thomas & Betts Tefzel Connectors PEI-TR-82-4-45
216. Final Report on the Evaluation of Magnetrol Level Switch BCS-751-EP, PEI-TR-82-4-17
217. Final Report on the Evaluation of Raychem WCSF Cable Splices, PEI-TR-82-4-37 (Primary Containment)
218. Final Report on the Evaluation of Champlain Switchboard Wire AWM 3271vw-1 PEI-TR-82-4-35

219. Final Report on the Evaluation of General Electric Vulkene Flame Resistant Control Cable PEI-TR-82-4-27
220. Final Report on the Evaluation of Raychem Insulating End Caps PEI-TR-82-4-37A (Reactor Building)
221. Final Report on the Evaluation of Raychem Insulating End Caps with WCSF Outer Sleeves PEI-TR-82-4-37B (Primary Containment)
222. Final Report on the Evaluation of Limitorque Valve Operator SMB-1, PEI-TR-82-4-42
223. Interim Report on the Evaluation of Struthers Dunn 219 Relay with CX3965 Base, PEI-TR-82-4-8
224. Final Report on the Evaluation of Rockbestos Cable RSS-6-104-1981, PEI-TR-82-4-34
225. Final Report on the Evaluation of Target Rock Solenoid Valve 81JJ-004, PEI-TR-82-4-36

## A. The scope of work within this report includes:

1. Master Index Cross Reference List
2. System Component Evaluation Work Sheets
3. List of source information references
4. Notes
5. LOCA & HELB Environmental Curves

To establish qualification of the NSSS supplied Class IE equipment, the General Electric Design Specification 22A2928 was used as the source document. However, General Electric has been requested to provide additional information with regard to qualification and qualification methods for Class IE equipment within their scope of supply (Ref.: Letter G-EPl-0-52 dated April 11, 1980).

B. WORK SHEET CLARIFICATIONS

1. To utilize the Cross-Reference Master List, the System Section Number should be determined from the Index Sheet in front of the report. This section number will be found in the third column of the Master List along with the appropriate page of the work sheet. In addition a Rack/Instrument Cross-Reference Index and a listing of instruments by HELB Nodes is available to locate instruments by Rack or by HELB Node.
2. Where the HELB curves are referenced on the worksheets, the appropriate curve/s number is tabulated in the worksheet "Document Reference Specification Column." The required curve/s will be found in Section 2.
3. Reference numbers tabulated in the "Document Reference - Qualification" column of the work sheets refer to documents listed in Section 24, "Reference Document Master List."
4. An asterisk indicates a parameter not previously considered at the time of license issuance. The resolution of all parameters with an asterisk is found in the "Outstanding Items" column.
5. The use of the word none in the "Outstanding Items" column indicates that the qualification test environment was equal to or more stringent than the expected HELB/LOCA accident environment.
6. The use of the word none in the "Qualification Method" column indicates that no qualification tests were performed for that parameter.
7. Numbered notes, i.e. Note 5, Note 7, etc. are tabulated in Section 25.
8. "Delete" indicates that a functional analysis has determined the equipment is not essential to safe shutdown.

Note: These sheets have not been updated to include the latest environmental and qualification data.



C. REACTOR CORE ISOLATION COOLING SYSTEM (RCIC)

The RCIC is referenced in the "Emergency Operation Procedures" for initiation in the event of a LOCA. Although available, it has not been considered in the safety analysis of the plant and therefore is not required to mitigate the consequences of an accident. We have included it in this report on an "informational basis" and hence does not preclude the original analysis.

D. STANDBY LIQUID CONTROL SYSTEM (SLC)

The SLC system although considered a "special safety system" is needed only in the improbable event that not enough control rods can be inserted in the reactor core to accomplish shutdown and cooldown in the normal manner.

The system is expected not to be needed for unit safety nor required to mitigate a LOCA or HELB.

E. AGING

This item was not addressed during the FSAR environmental qualifications analysis.

F. HIGH ENERGY LINE BREAK (HELB)

HELB analysis for outside primary containment previously relied on separation and redundancy of safety related equipment to insure safe shutdown of the reactor and therefore did not require environmental qualification for HELB. A HELB analysis has been performed and the results factored into the qualification requirements for the equipment. Refer to Section 02 and appropriate work sheets.

G. SUBMERGENCE

Maximum Flood Level within Primary Containment and the Reactor Building is 258'-6" and 227'-11" respectively. (See ref. 71 and 96.) All safety related equipment is located above this level.

H. QUALIFICATION PROGRAM

Each System Component Evaluation Work Sheet with an outstanding item has an explanatory note. The future qualification activities indicated by these notes can be summarized as follows:

- 1) Equipment lacking complete environmental qualification will be replaced. Environmentally qualified replacement equipment will be purchased and installed in accordance with the schedule submitted in the "Response to Safety Analysis Report".
- 2) Equipment with a limited qualified life will be entered into a scheduled replacement program.
- 3) For equipment needing additional environmental qualifications, the BWR Equipment Qualification Owner's Group will provide the necessary qualification program.

SERVICE CONDITIONS

For equipment identified as Inside Primary Containment in the "Master" List, the accident service conditions and typical accident qualification test requirements are given in Table 1 and Attachments 1 and 2. For equipment identified as Outside Primary Containment, the accident service conditions are given in HELB temperature and pressure transient curves. Detailed environmental test specifications and qualification documentation are given on the "System Component Evaluation Work Sheets."



IE BULLETIN 79-01B  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
DOCUMENT NO. 50-333

DOCUMENT REFERENCE NO.

TEMPERATURE	PRESSURE	DESCRIPTION OF NODE	NODE NUMBER
1A	2A	West Crescent	227-1
1B	2B	East Crescent	227-2
1C	2C	HPCI Room	272-1
1D	2D	RCIC Room	272-2
1E	2E	Outside RCIC Room	272-3
1F	2F	Southwest CRD Area	272-4
1G	2G	RHR Heat Exchanger Room A	272-5
1H	2H	Northwest CRD Area	272-6
1J	2J	Northwest Corner	272-7
1K	2K	CRD Repair Area	272-8
1L	2L	Southside Room	272-9
1M	2M	Railroad Bay	272-10
1N	2N	RHR Heat Exchanger Room B	272-11
1P	2P	Southeast CRD Area	272-12
1Q	2Q	Northeast CRD Area	272-13
1R	2R	Neutron Monitoring TIP Room	272-14
1S	2S	Access Area	272-15
1T	2T	Outside + Above CRD Repair	272-16
1U	2U	RWCU Pump Room B	300-1
1V	2V	RWCU Pump Room A	300-2
1W	2W	Open Bay	300-3
1X	2X	Small Hatch Area	300-4
1Y	2Y	North Passage	300-5
1Z	2Z	Northeast Stairway Area	300-6
1AA	2AA	RWCU Heat Exchanger Room	300-7
1AB	2AB	Phase Separator Tank Room	300-8
1AC	2AC	Large Hatch Area	300-9
1AD	2AD	Sludge Pump Room	300-10
1AE	2AE	Combined 326'-9" Elevation	326-0
1AF	2AF	Combined 344'-6" Elevation	344-0
1AG	2AG	Combined 369'-6" Elevation	369-0
1AH	2AH	Lower S-W Torus Room	227-3
1AJ	2AJ	Lower S Torus Room	227-4
1AK	2AK	Lower S-E Torus Room	227-5
1AL	2AL	Lower E Torus Room	227-6
1AM	2AM	Lower N-E Torus Room	227-7
1AN	2AN	Lower N Torus Room	227-8
1AP	2AP	Lower N-W Torus Room	227-9
1AQ	2AQ	Lower W Torus Room	227-10
1AR	2AR	Upper S-W Torus Room	244-1
1AS	2AS	Upper S Torus Room	244-2
1AT	2AT	Upper S-E Torus Room	244-3
1AU	2AU	Upper E Torus Room	244-4
1AV	2AV	Upper N-E Torus Room	244-5
1AW	2AW	Upper N Torus Room	244-6
1AX	2AX	Upper N-W Torus Room	244-7
1AY	2AY	Upper W Torus Room	244-8

IE BULLETIN 79-01B  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
DOCUMENT NO. 50-333

## DOCUMENT REFERENCE NO.

TEMPERATURE	PRESSURE	DESCRIPTION OF NODE	NODE NUMBER
1AZ	2AZ	RCIC Fire Enclosure	--
1BA	--	Small Hatch Area, North Hallway & Long Term Envelope	344-3&4
1BB	--	Post LOCA & Post HELB Long Term Analysis	344-3&4
1BC	--	Post LOCA & Post HELB Long Term Analysis	RB

## DOCUMENT REFERENCE NO.

RELATIVE HUMIDITY	DESCRIPTION OF NODE	NODE NUMBER
3A	Post HELB Dehumidification, RHR, HPCI, RCIC Breaks	RB
3B	Post HELB Dehumidification, RWCU Breaks	RB

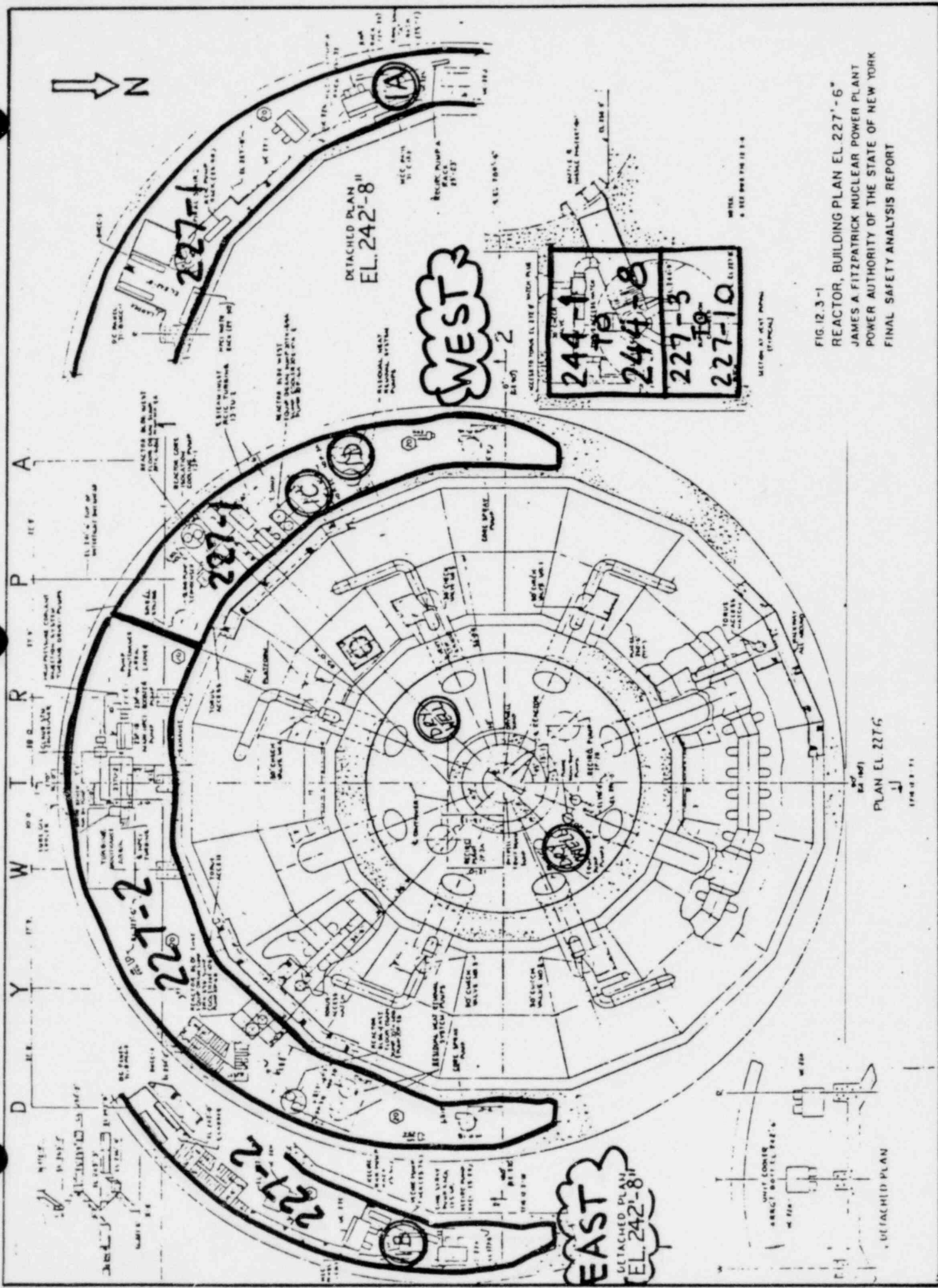
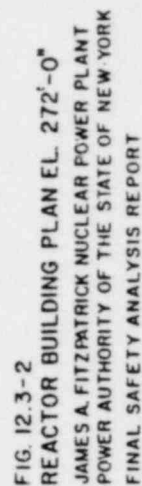


FIG 12.3-1  
 REACTOR, BUILDING PLAN EL 227-6  
 JAMES A FITZPATRICK NUCLEAR POWER PLANT  
 POWER AUTHORITY OF THE STATE OF NEW YORK  
 FINAL SAFETY ANALYSIS REPORT

PLAN EL 227-6

DETACHED PLAN

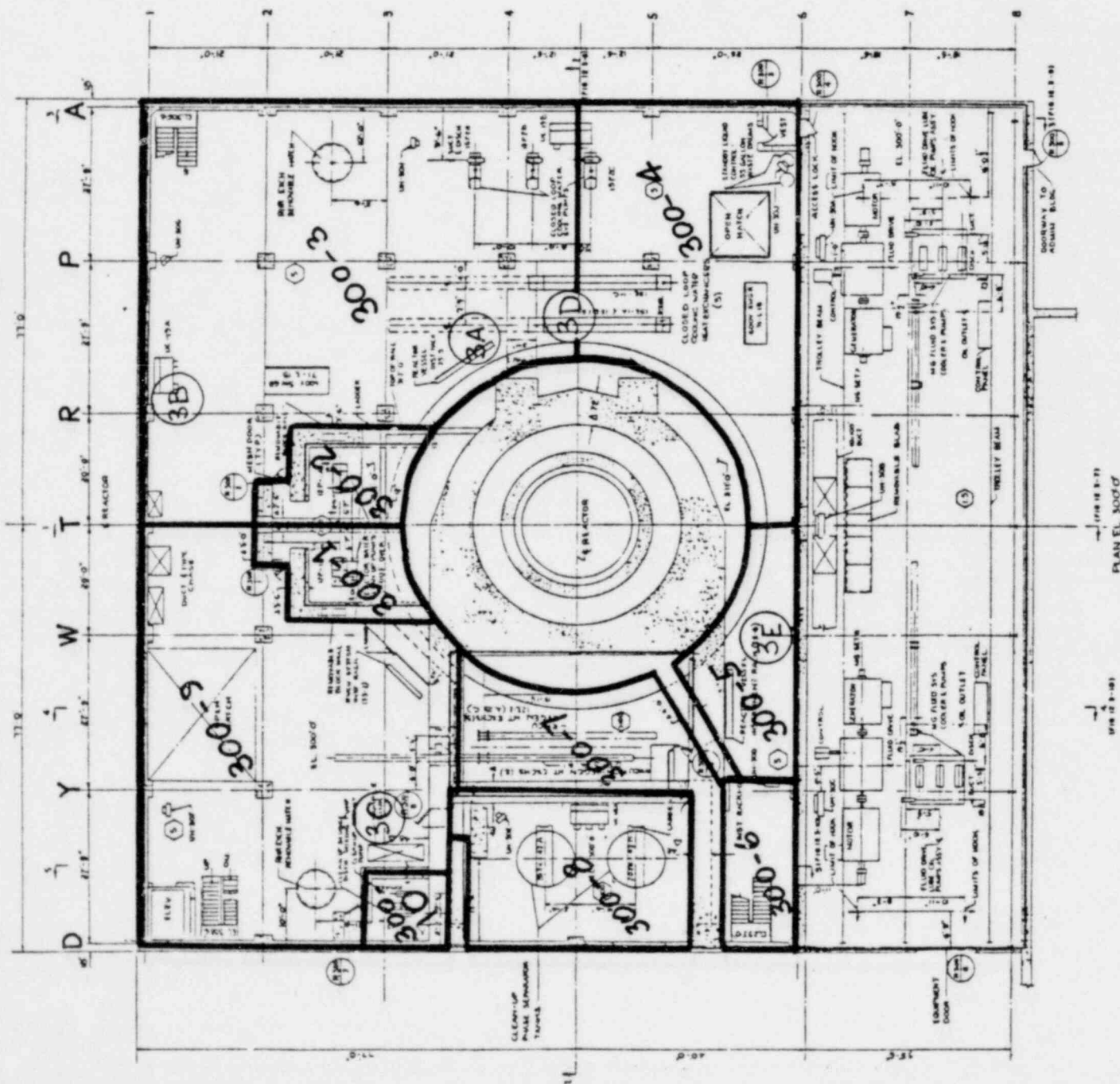






NOTES  
 Δ SEE FIG 12.3-4

FIG. 12.3-3  
 REACTOR BUILDING PLAN-EL. 300'-0"  
 JAMES A. HITZPATRICK NUCLEAR POWER PLANT  
 POWER AUTHORITY OF THE STATE OF NEW YORK  
 FINAL SAFETY ANALYSIS REPORT



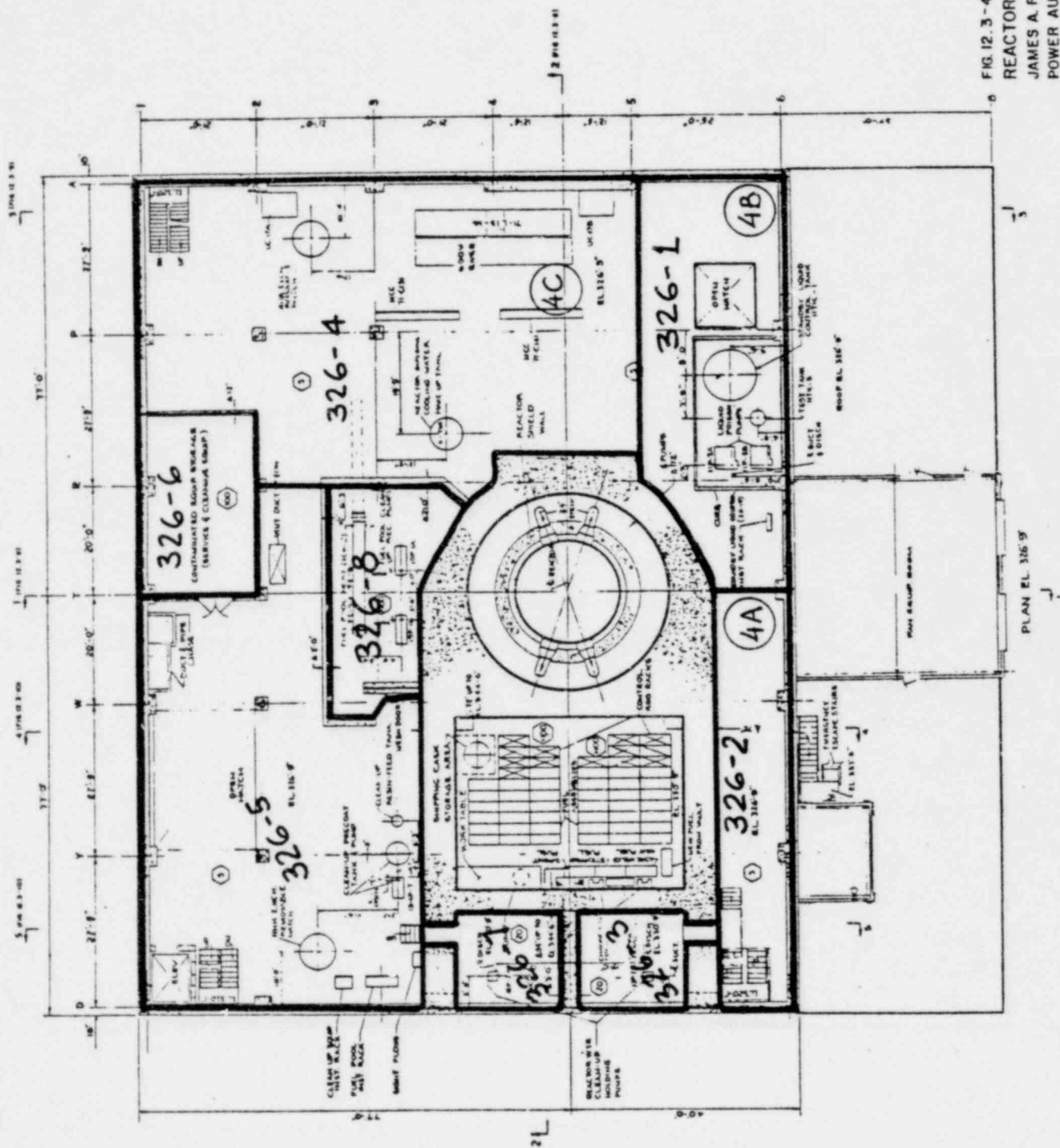


FIG. 12. 3-4  
REACTOR BUILDING PLAN E1.326<sup>1-9</sup>  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
POWER AUTHORITY OF THE STATE OF NEW YORK  
FINAL SAFETY ANALYSIS REPORT

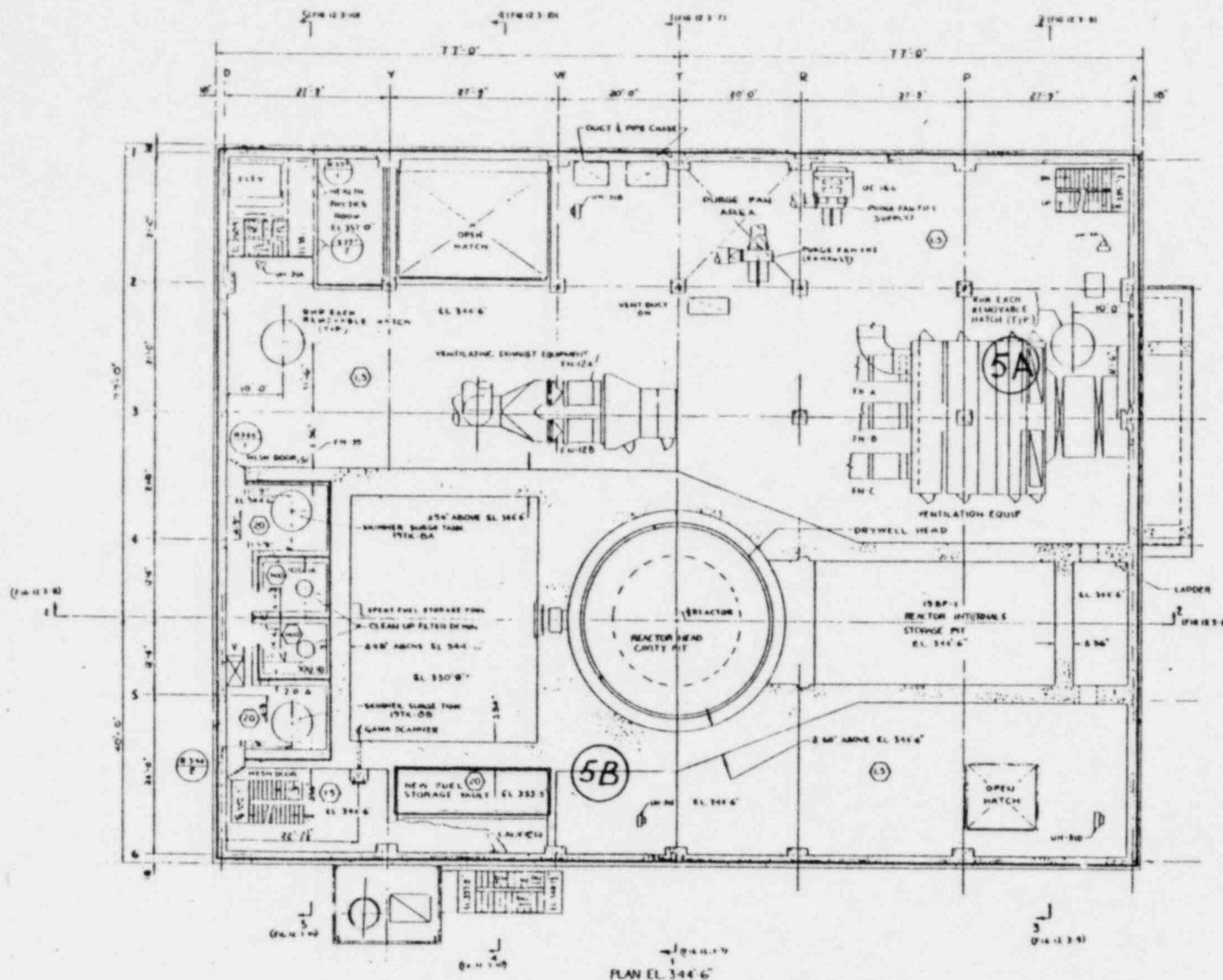
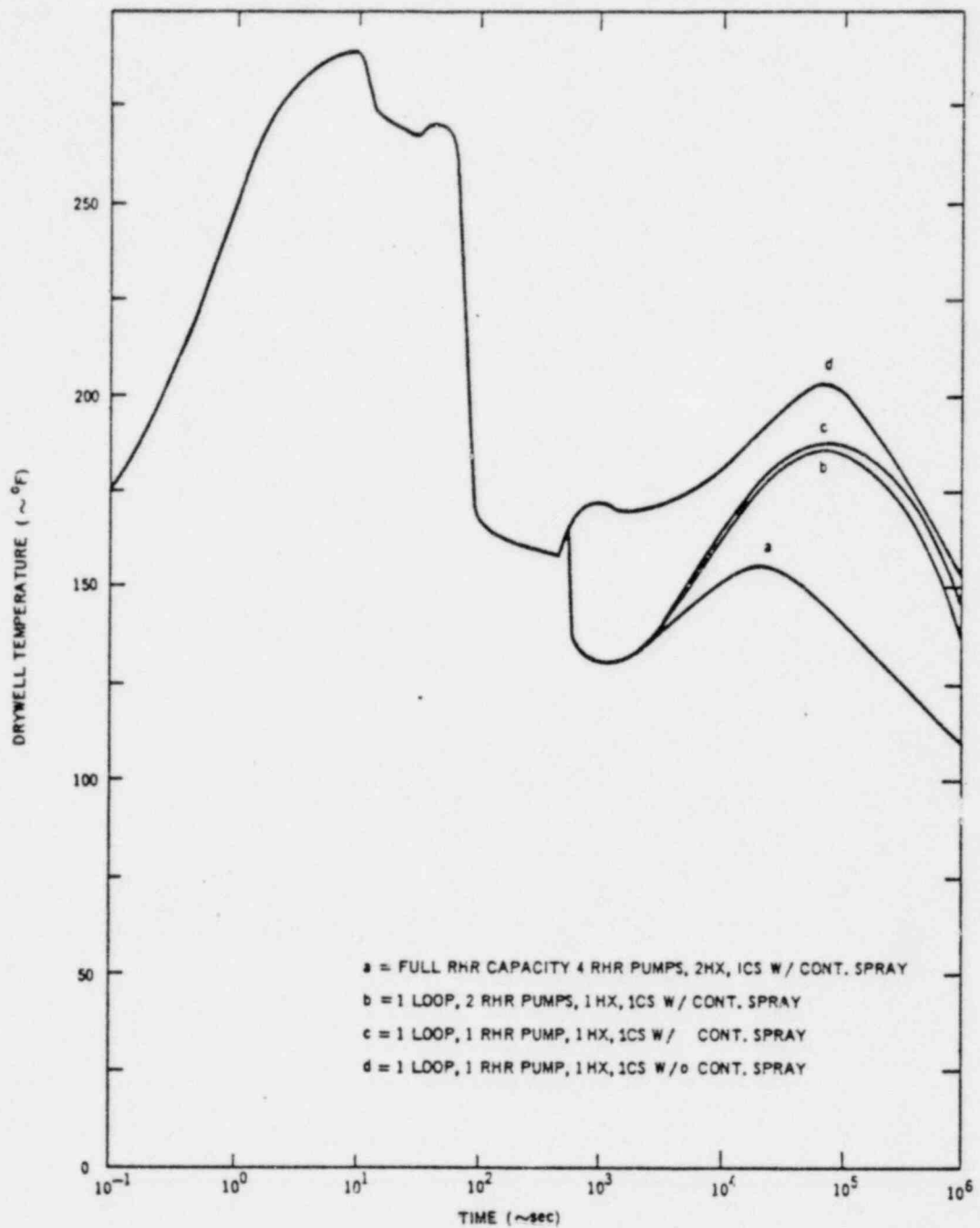


FIG. 12.3-5  
 REACTOR BUILDING PLAN EL. 344'-6"  
 JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
 POWER AUTHORITY OF THE STATE OF NEW YORK  
 FINAL SAFETY ANALYSIS REPORT

## ATTACHMENT #1 (1 OF 3)



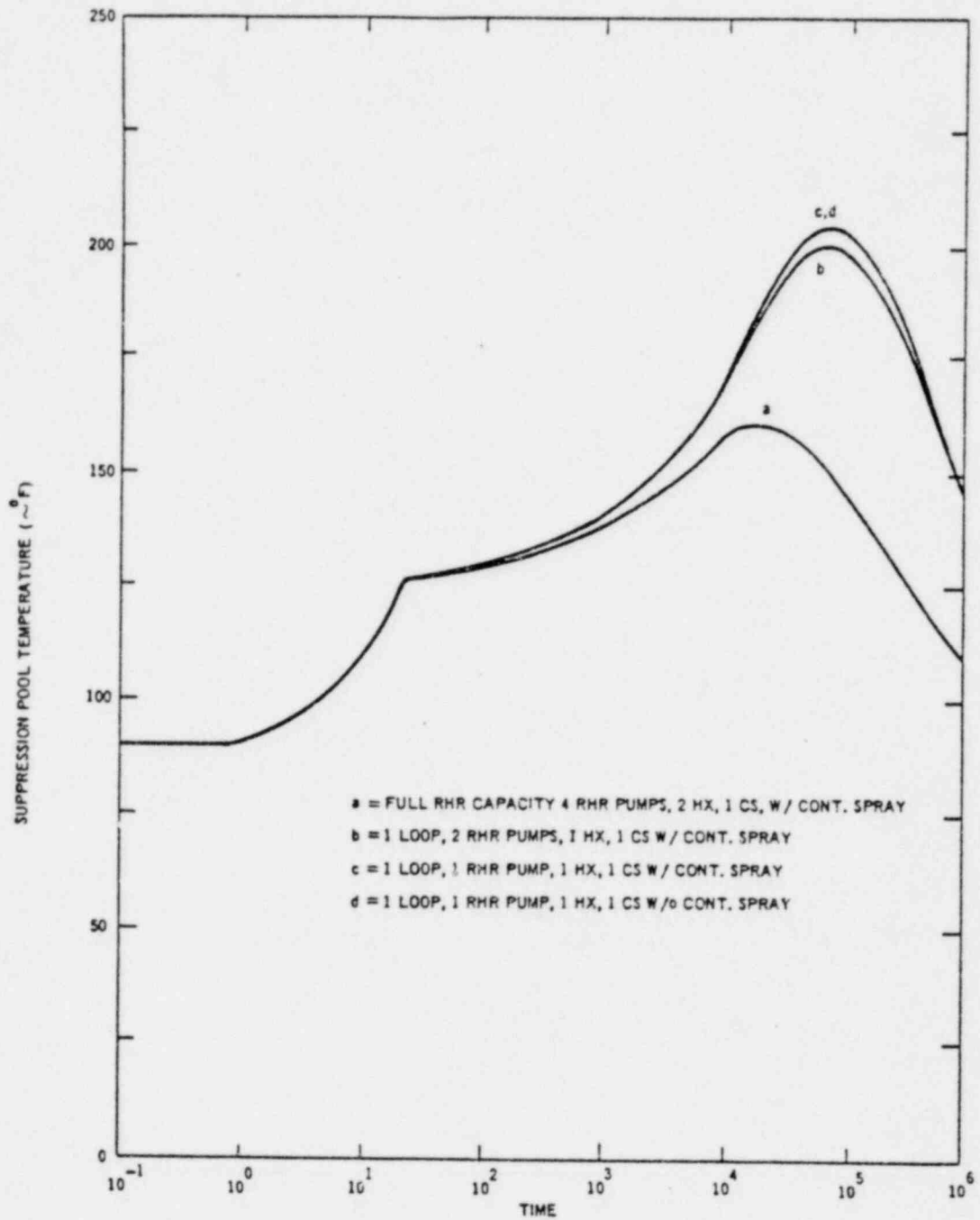
FSAR

FIG. 14.6-6

TRANSIENT RESULTS FROM LOCA -  
DRYWELL TEMPERATUREJAMES A. FITZPATRICK NUCLEAR POWER PLANT  
POWER AUTHORITY OF THE STATE OF NEW YORK  
FINAL SAFETY ANALYSIS REPORT



## ATTACHMENT #1 (2 OF 3)

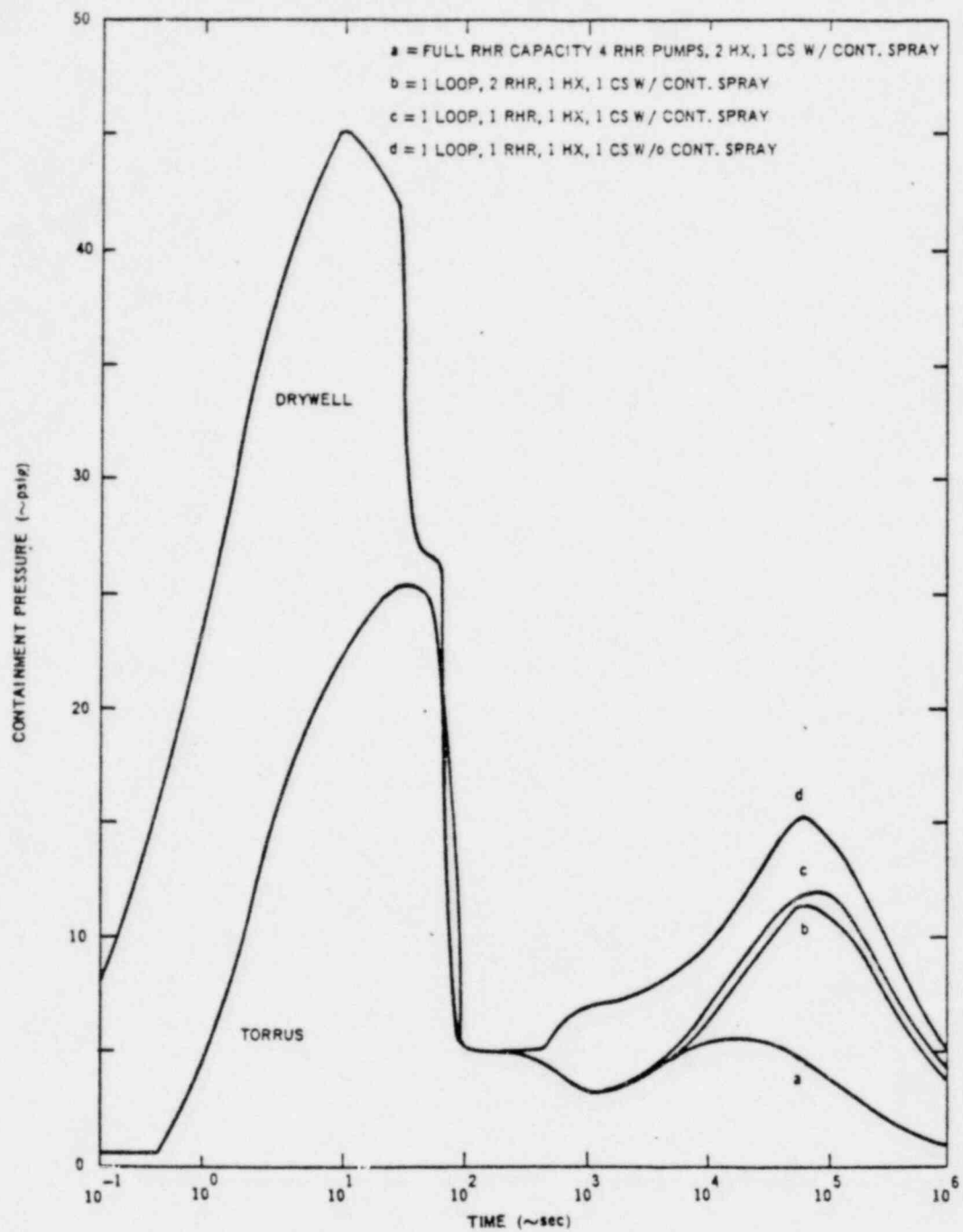


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FIG. 14.6-7

TRANSIENT RESULTS FROM LOCA-  
PRESSURE SUPPRESSION POOL TEMPERATURE  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
POWER AUTHORITY OF THE STATE OF NEW YORK  
FINAL SAFETY ANALYSIS REPORT

## ATTACHMENT #1 (3 OF 3)



FSAR

FIG. 14.6-8

TRANSIENT RESULTS FROM LOCA -  
CONTAINMENT PRESSUREJAMES A. FITZPATRICK NUCLEAR POWER PLANT  
POWER AUTHORITY OF THE STATE OF NEW YORK  
FINAL SAFETY ANALYSIS REPORT

TABLE Q.7.3-2

## QUALIFICATION TEST CONDITIONS

<u>Valve</u>	<u>Test Condition*</u>
Relief valves	1
HPCI steam line isolation valve	2
RCIC steam line isolation valve	2
Reactor vessel head spray isolation valve	2
Main steam line isolation valves	3
Main steam line drain isolation valve	3
RHR shutdown cooling isolation valve	2
Reactor water cleanup isolation valve	2

\*Test conditions refer to qualification test requirements listed on Table Q.7.3-3

TABLE Q.7.3-3

QUALIFICATION TEST REQUIREMENTS

Test Condition	Supplier	Components Must Be Operable Under The Following Conditions				
1	GE	Temperature	340 F	340 F	320 F	250 F
		Pressure	-2 to 56 psig	-2 to 35 psig	-2 to 35 psig	0 to 25 psig
		Rel. humidity	100%	100%	100%	100%
		Duration	45 sec	3 hours	6 hours	1 day
		Radiation				100 days
		1) The total integrated dose during the design basis LOCA added to the long-term operating dose will be $2 \times 10^7$ rads.				
2	S&W	Temperature	304 F	275 to 304 F	200 to 275 F	210 F
		Pressure	56 psig	56 psig	56 psig	56 psig
		Rel. humidity	100%	100%	100%	100%
		Duration	20 sec	200 sec	600 sec	24 hr
		Radiation	600 RAD/hr	600 RAD/hr	600 RAD/hr	600 RAD/hr
			gamma	gamma	gamma	gamma
			0.5 RAD/hr	0.5 RAD/hr	0.5 RAD/hr	0.5 RAD/hr
			neutron	neutron	neutron	neutron
3	S&W	Temperature	310 F			
		Pressure	62 psig			
		Rel. humidity	100%			
		Duration	30 sec			
		Radiation	$3 \times 10^5$ nv fast $\geq 1$ mev			
			75 rad/hr gamma			

Electrical cables must be operable under the following conditions:

Temperature	340 F	281 F	160 F
Pressure	62 psig	56 psig	56 psig
Rel. humidity	>90%	>90%	>90%
Duration	15 min	2 hr	24 hr
Radiation			

- 1) The total integrated dose during the design basis LOCA added to the long-term operating dose will be  $6 \times 10^7$  rads.

LIST OF REFERENCES

REF. NO.

- 1 FSAR Figure 14.6-6 "Transient Results From LOCA - Drywell Temperature"
- 2 FSAR Figure 14.6-7 "Transient Results From LOCA- Pressure Suppression Pool Temperature"
- 3 FSAR Figure 14.6-8 "Transient Results From LOCA - Containment Pressure"
- 4 Response to AEC Question 7.3 of 1/12/72 (Supplement 8)
- 5 Response to AEC Question 7.22 of 8/11/72 (Supplement 12)
- 6 FSAR Appendix I, Figure I.1-1 "General Arrangement, Drywell and Suppression Chamber"
- 7 FSAR Appendix I, Figure I.3-1 "Drywell Elevation"
- 8 Special Report "Effects of a High Energy Piping System Break Outside of Primary Containment," July 22, 1974. (FSAR Volume IX, Supplement 25)
- 9 Response to AEC question 6.3 of 11/29/71 (FSAR Supplement 7)
- 10 Response to AEC Question 9.12 of 8/11/72 (FSAR Supplement 12)

TABLE 1

ACCIDENT SERVICE CONDITIONS AND QUALIFICATION TEST REQUIREMENTS

I. INSIDE PRIMARY CONTAINMENT

<u>Parameter</u>	<u>Accident Service Condition</u>	<u>Typical Qualification Test Requirements</u>
Temperature ( <sup>o</sup> F) and Pressure (Psig)	Transients are given in References 1, 2 and 3 for the Drywell and Suppression Chamber (See Attachment 1)	Transient qualification test requirements are given in tabular form in Reference 4 and justification for these values is provided in Reference 5. (See Attachment 2)
Relative Humidity (%)	100%	100% (See Attachment 2)
Chemical Spray	Not applicable. Demineralized water sprays in the containment and suppression chamber may be manually actuated by the operator but are not an engineered safety feature.	See Reference 5 for typical equipment qualification tested for sprays.
Radiation	Radiation accident service conditions not calculated in FSAR	Qualification test requirements are given in Reference 4 (See Attachment 2)
Submergence	Drywell: Approximately to EL. 261' based on centerline of vents (Reference 7)  Suppression chamber: EL. 244'6 $\frac{1}{2}$ " (Reference 6)	Not required in FSAR

II. OUTSIDE PRIMARY CONTAINMENT

<u>Parameter</u>	<u>Accident Service Condition</u>	<u>Typical Qualification Test Requirements</u>
Temperature ( <sup>o</sup> F) and Pressure (Psig)	Steam Tunnel: Pressure and Temperature transients given in tabular form in Reference 8, response to item 20.  Crescent Area: 130 <sup>o</sup> F, 0.1 psig - given in Reference 8, response to item 20.	Transient qualification test requirements for the MSIV are given in tabular form in Reference 4 (See Attachment 2).  Acceptable without qualification tests, see Reference 8, response to items 11 and 13. Separation and redundancy of safety related equipment considered sufficient.



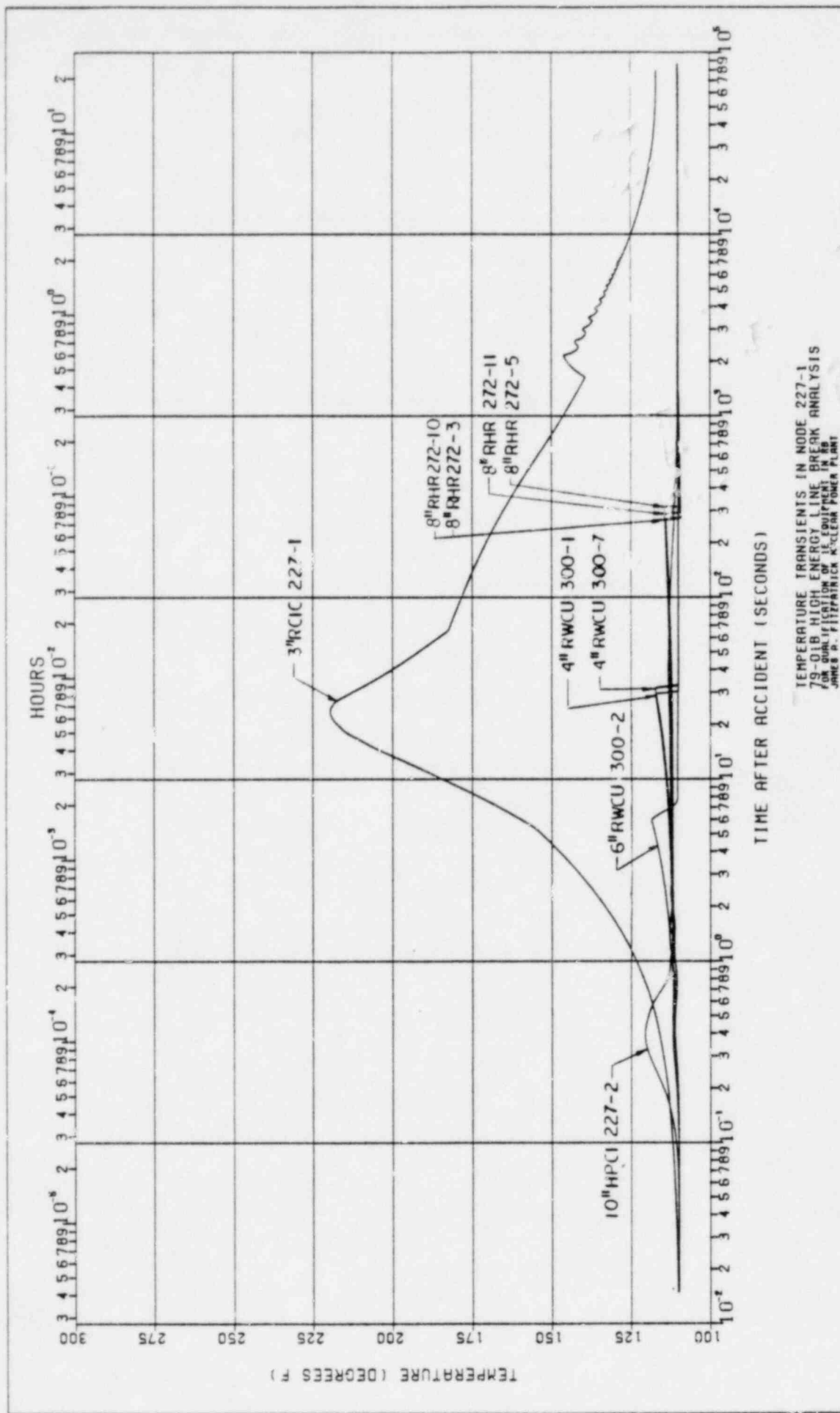
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DOCKET NO. 50-333

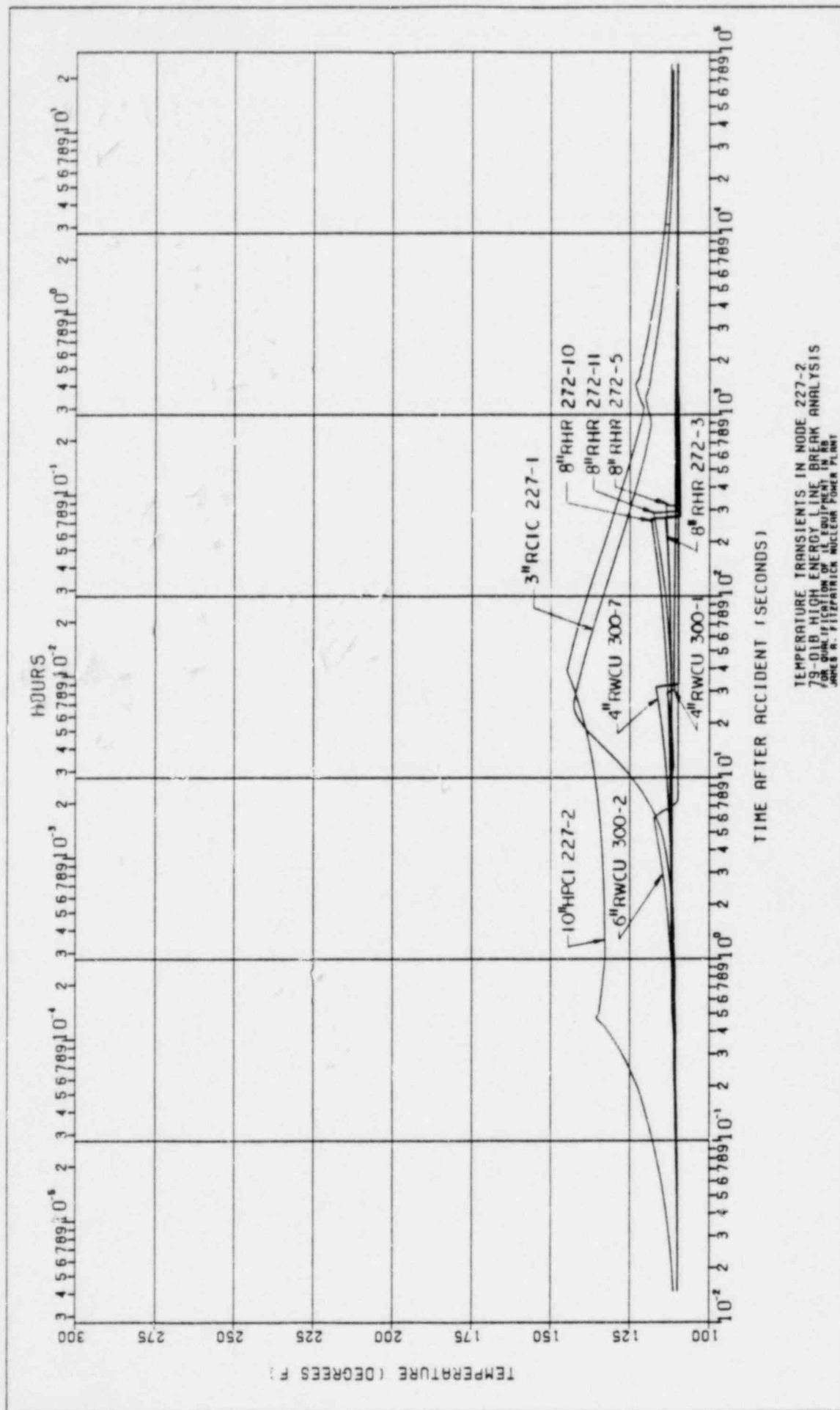
TABLE 1 (Continued)

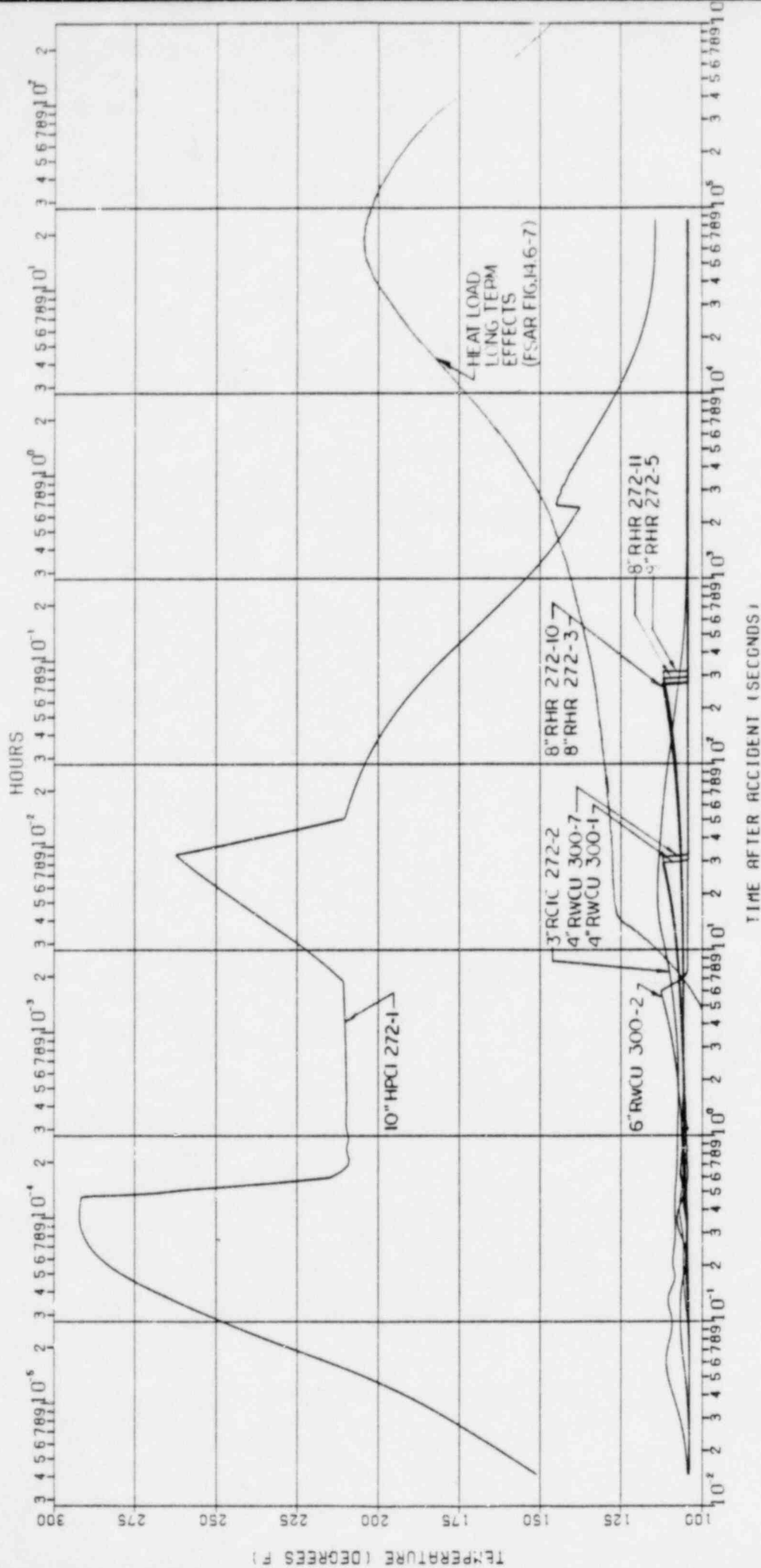
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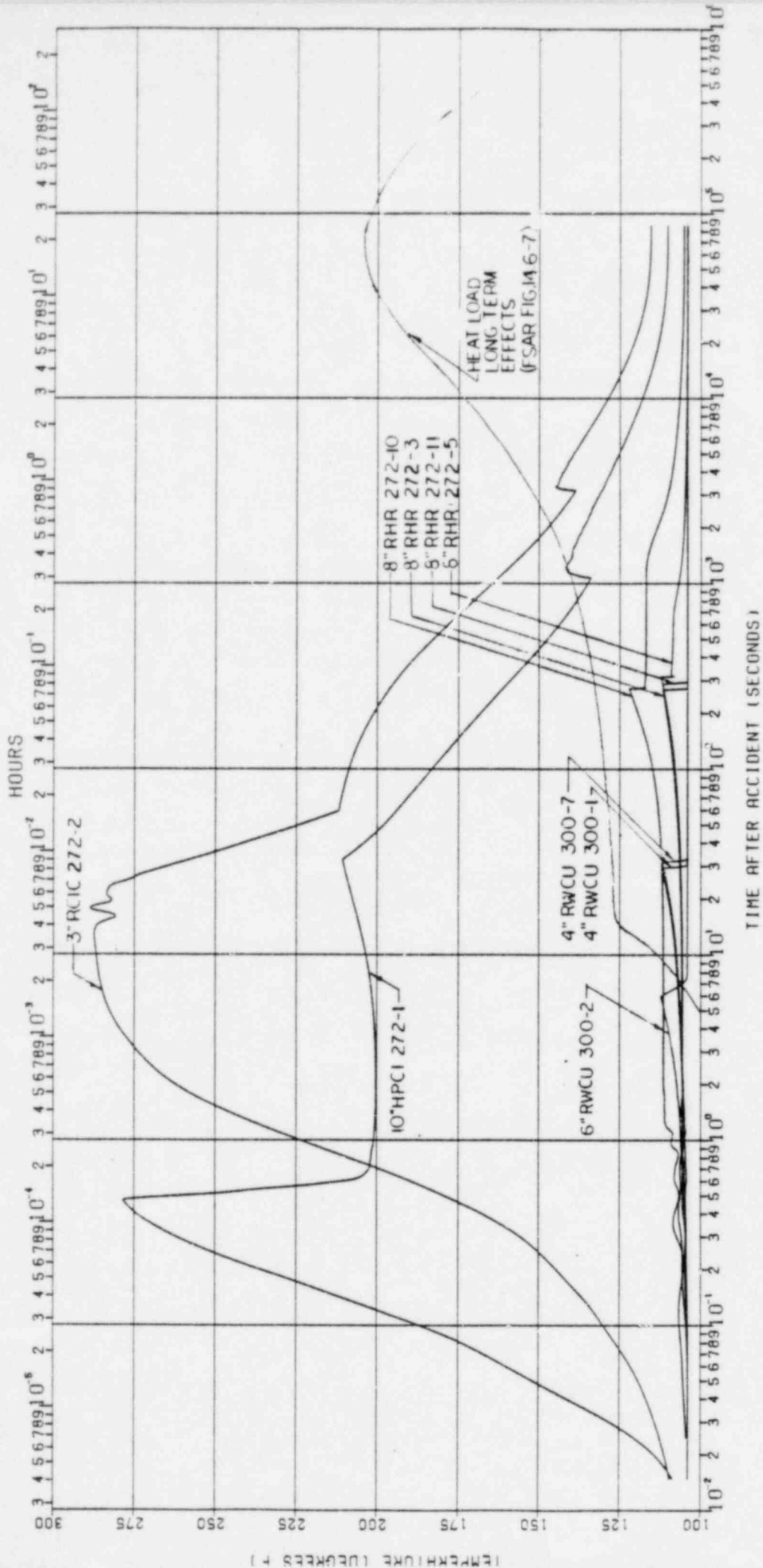
II. OUTSIDE PRIMARY CONTAINMENT

<u>Parameter</u>	<u>Accident Service Condition</u>	<u>Typical Qualification Test Requirements</u>
Relative Humidity (%)	100%	Same as for temperature and pressure in Crescent Area
Chemical Spray	Not Applicable	Not Applicable
Radiation	Radiation accident service conditions not calculated in FSAR	Same as for temperature and pressure in Crescent Area
Submergence	Crescent Area: EL. 237'9" on one side of the water tight bulkhead only (either side, Reference 9.  Screenwell: EL. 255', Reference 10.	Same as for temperature and pressure in Crescent Area  Safety equipment in screenwell above flood level.



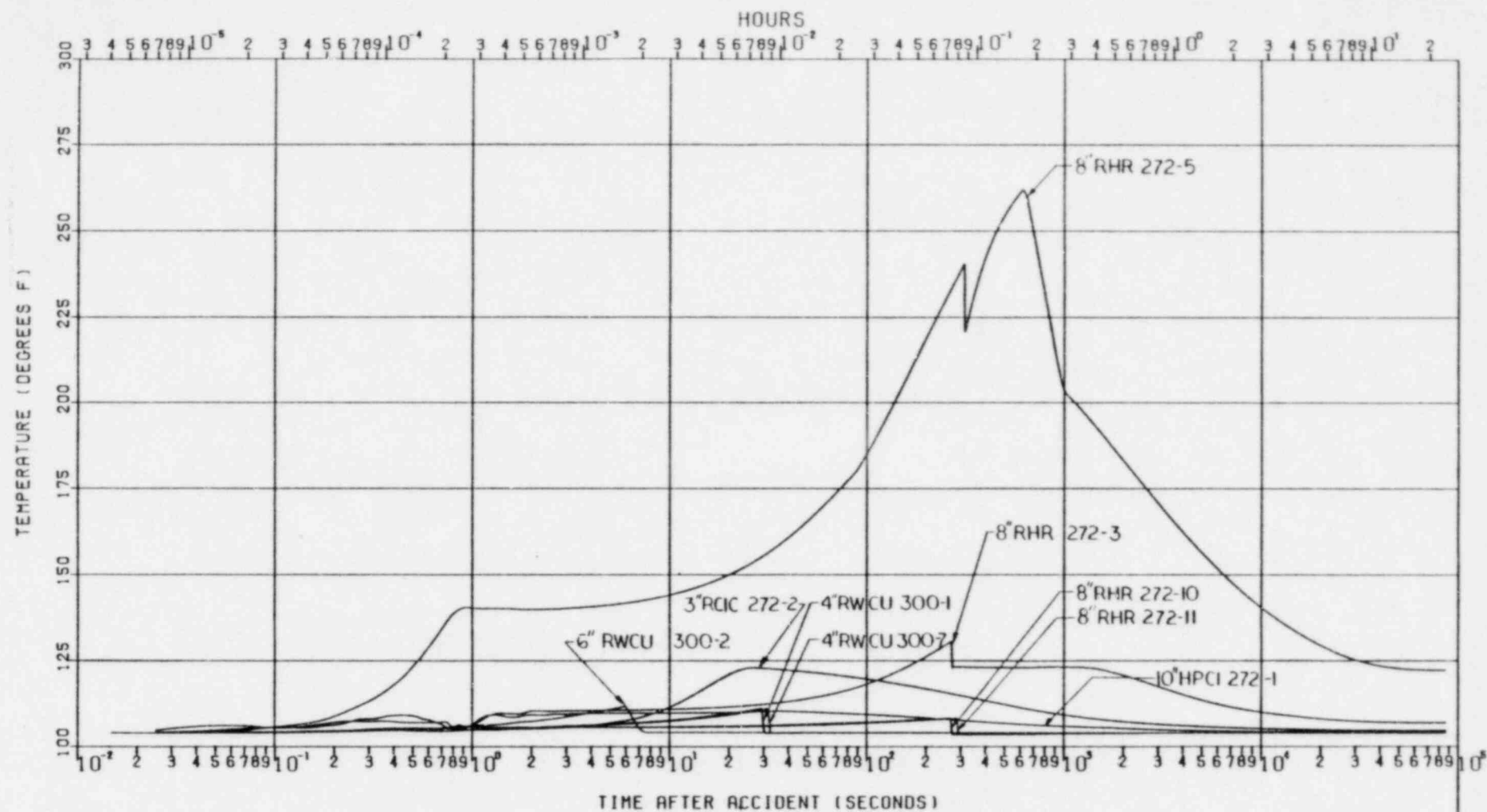




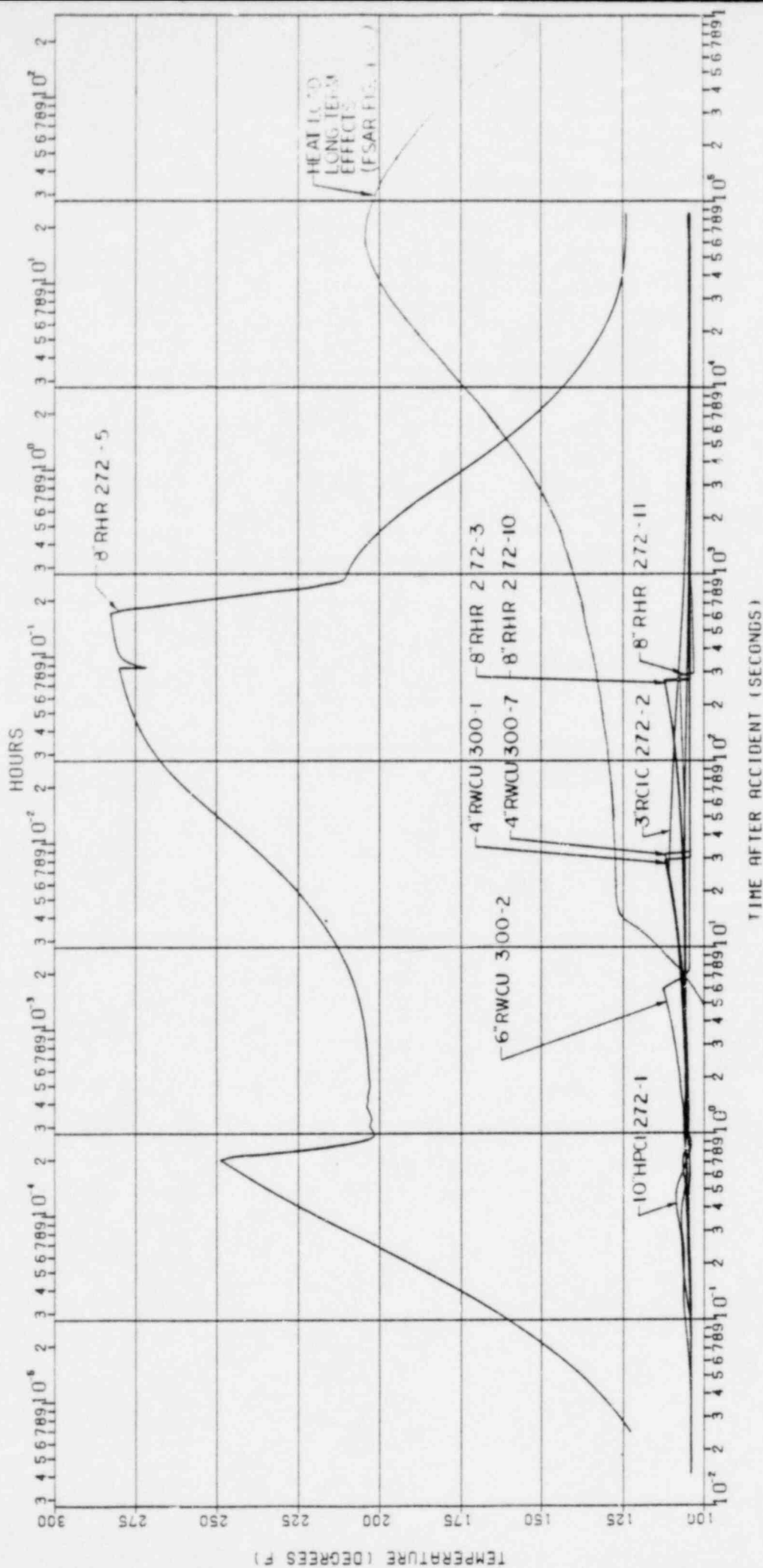




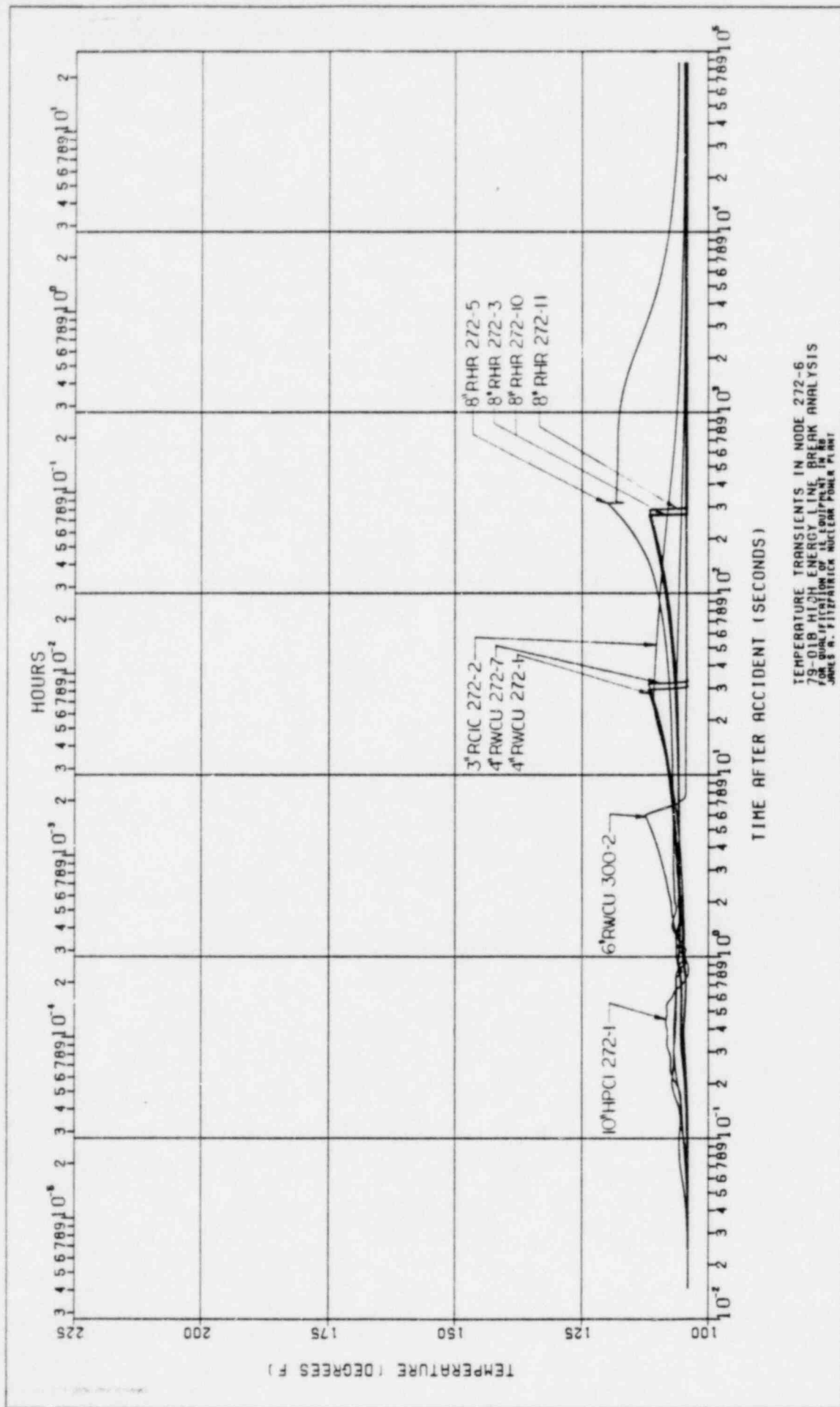


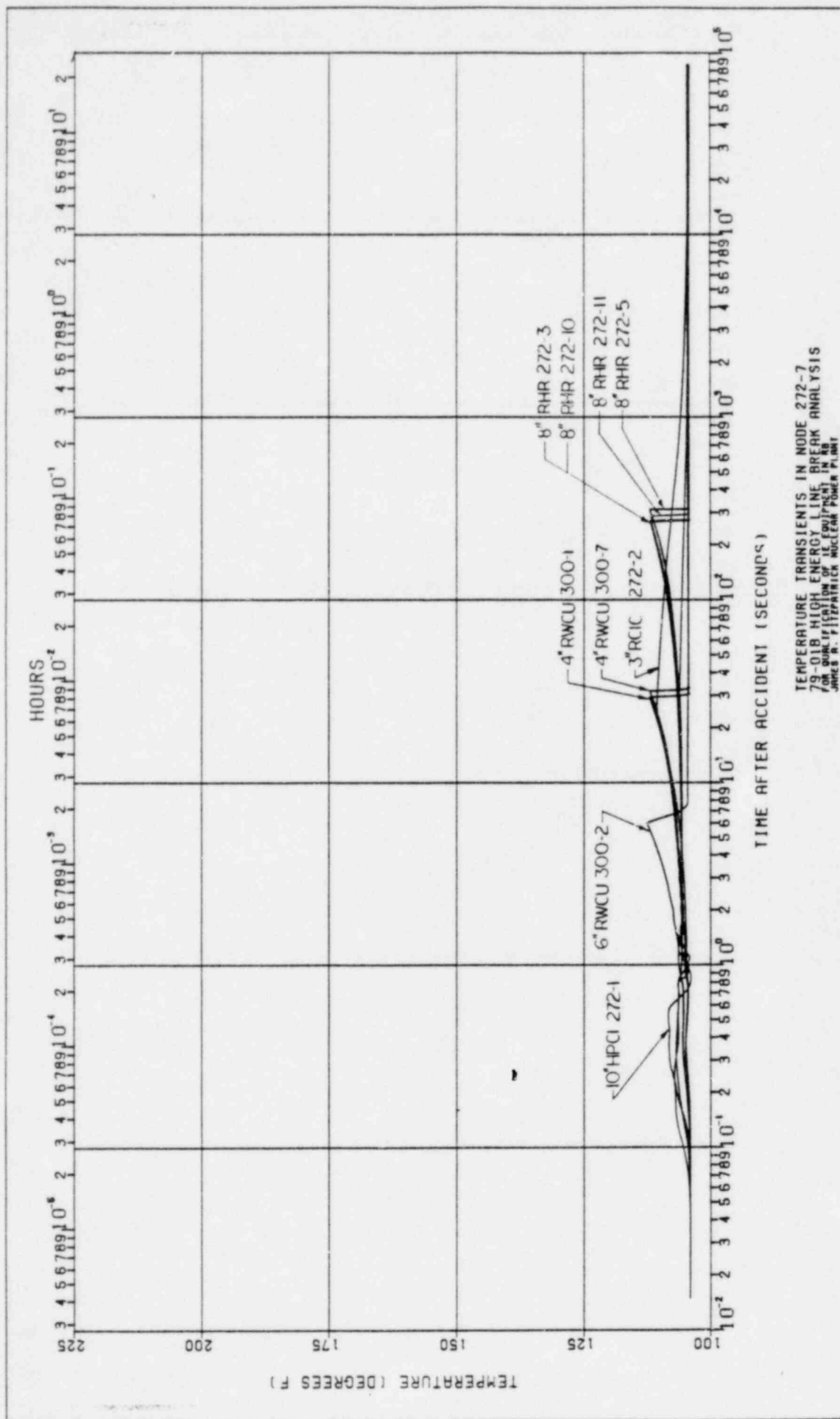


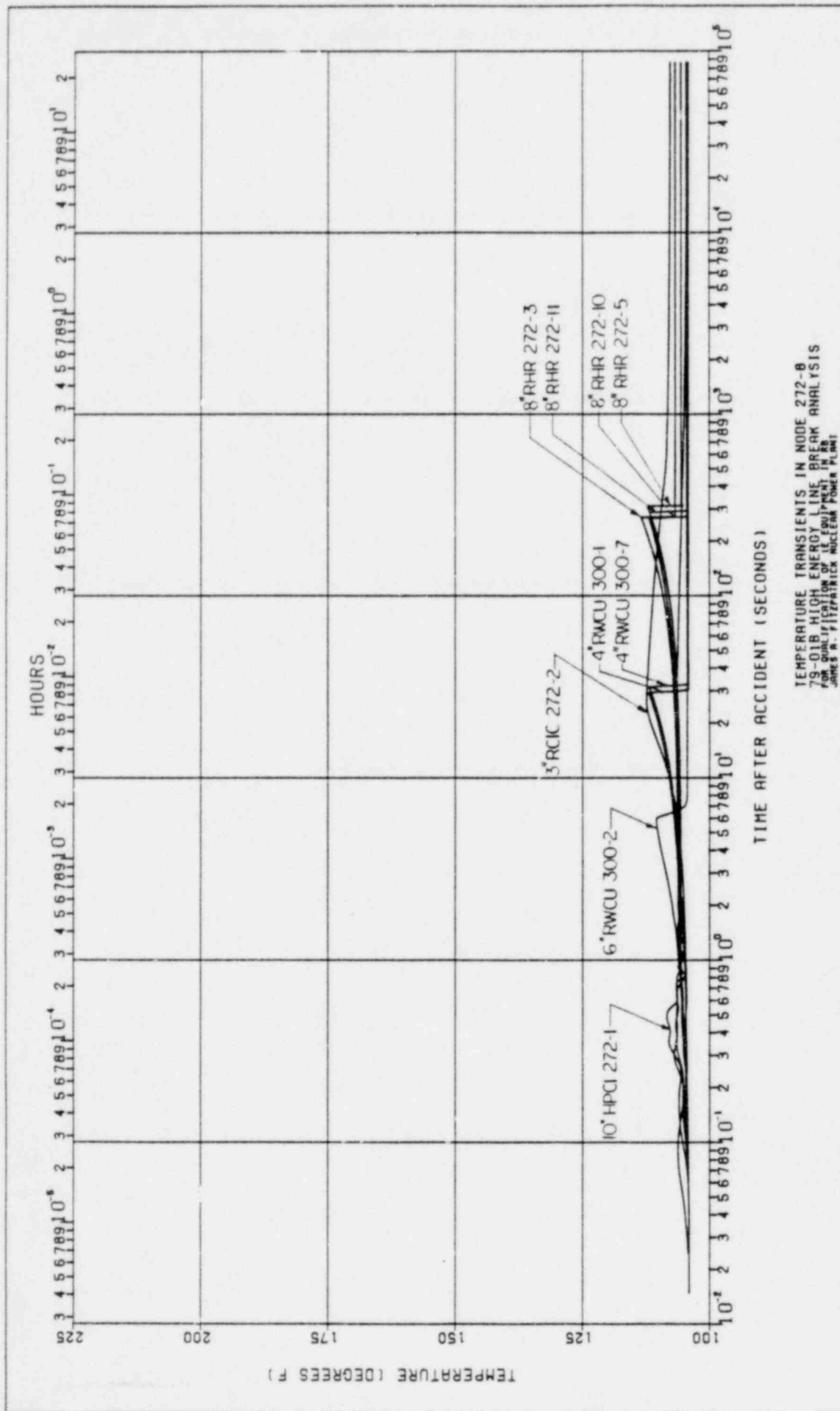
TEMPERATURE TRANSIENTS IN NODE 272-4  
 79-018 HIGH ENERGY LINE BREAK ANALYSIS  
 FOR QUALIFICATION OF IE EQUIPMENT IN RA  
 JAMES A. FITZPATRICK NUCLEAR POWER PLANT

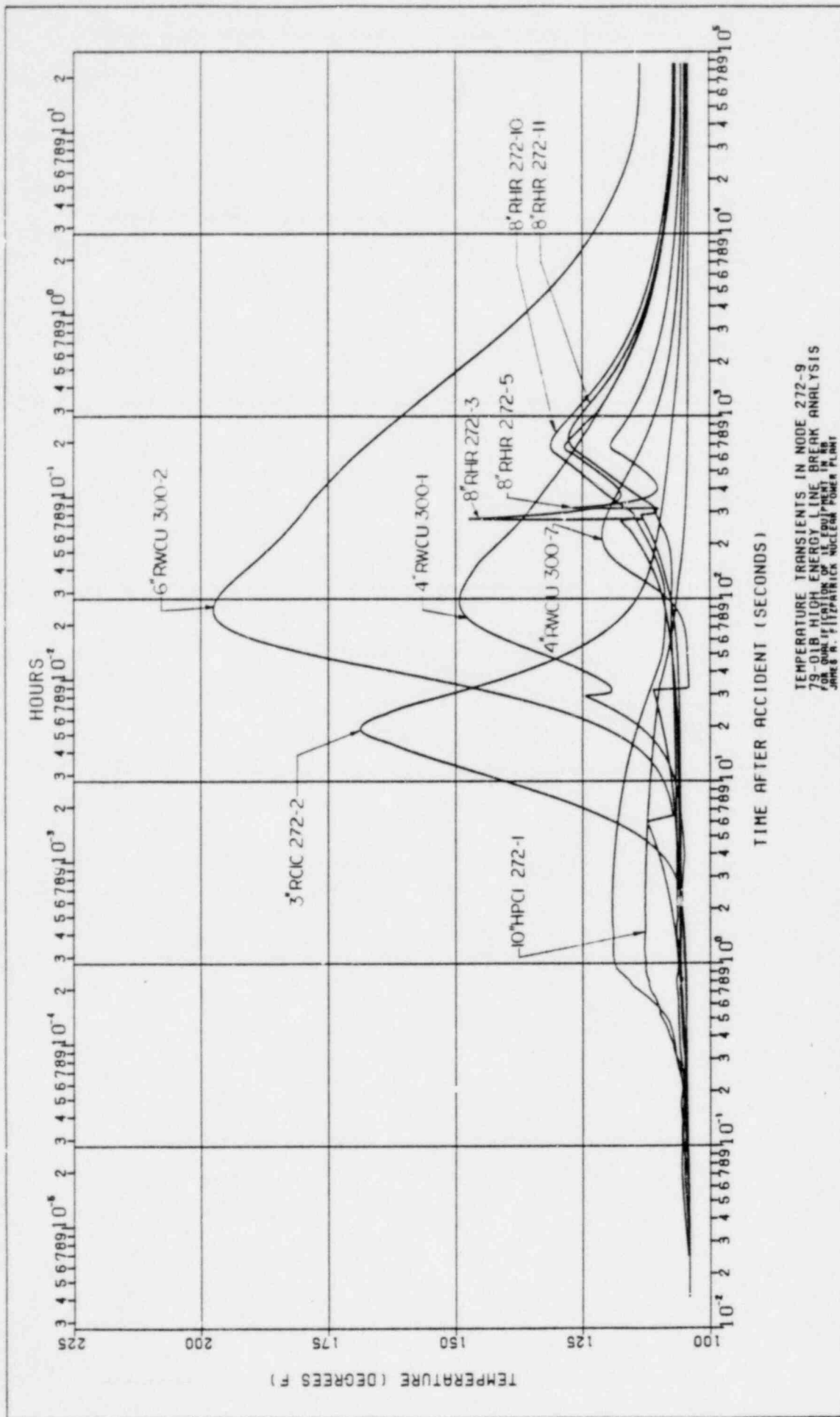


TEMPERATURE TRANSIENTS IN MCGE 272-5  
79-01A HIGH ENERGY LINE BREAK ANALYSIS  
FOR ONE-LOOP OPERATION  
JOHN S. R. FITZPATRICK NUCLEAR POWER PLANT

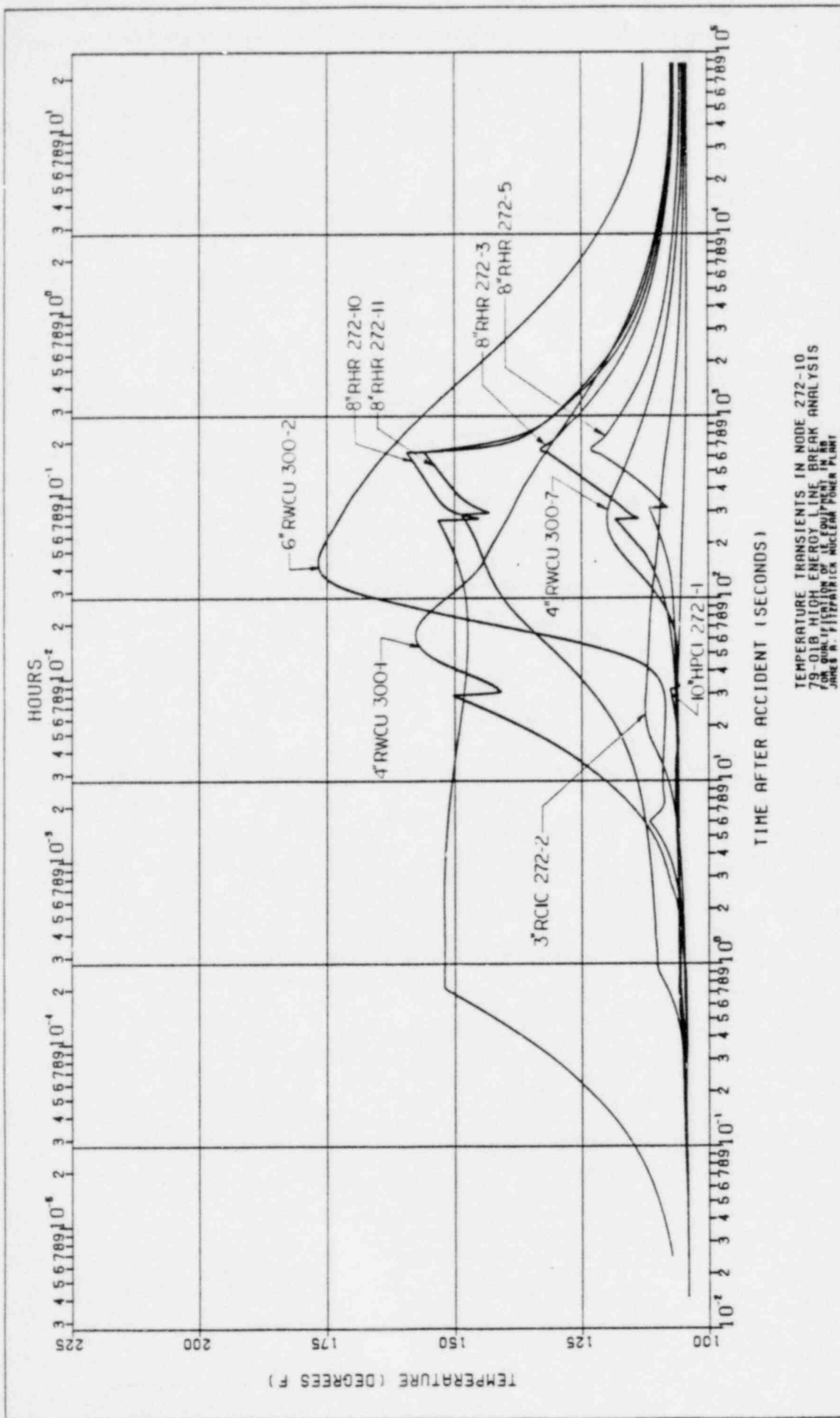


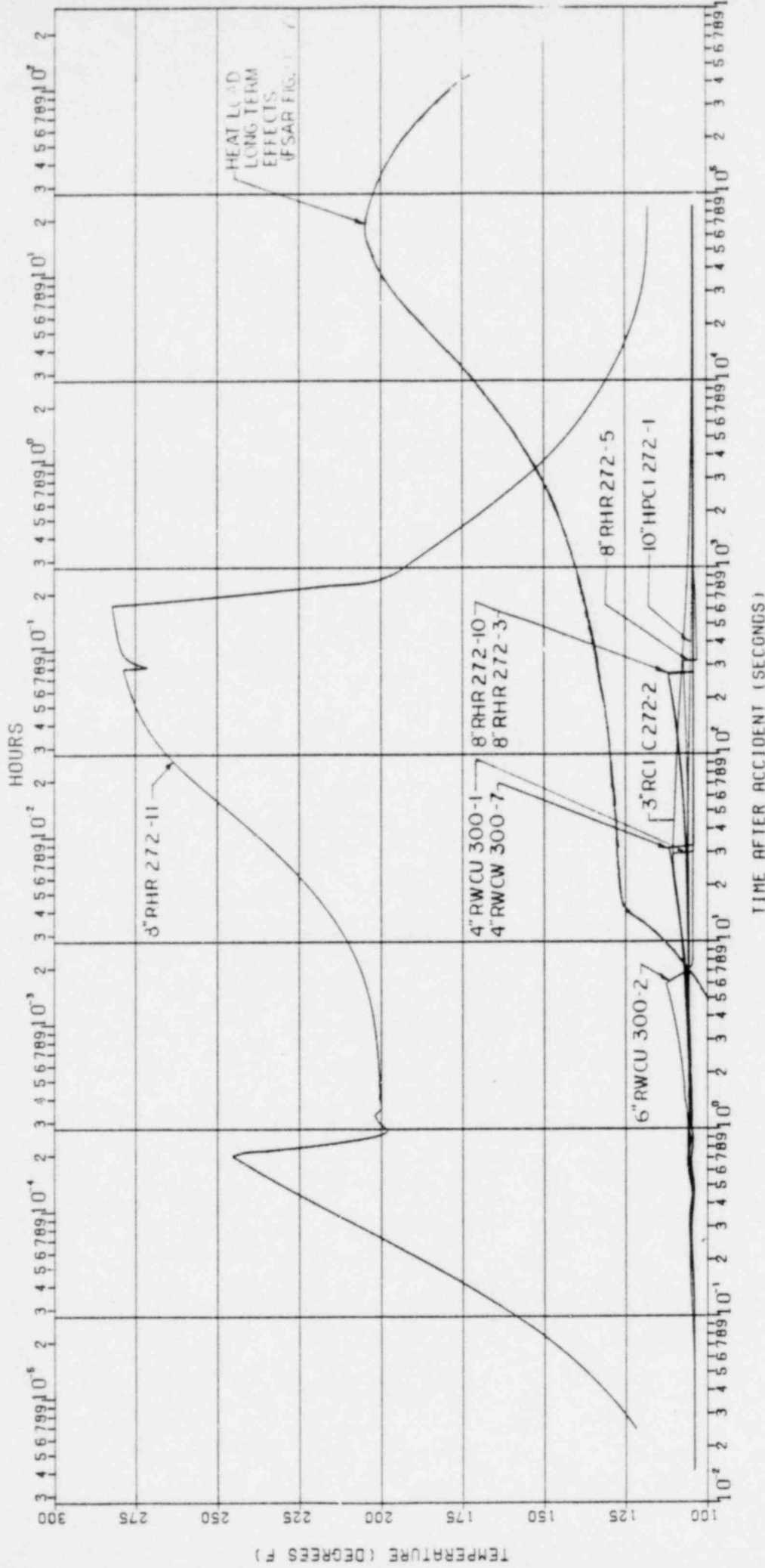






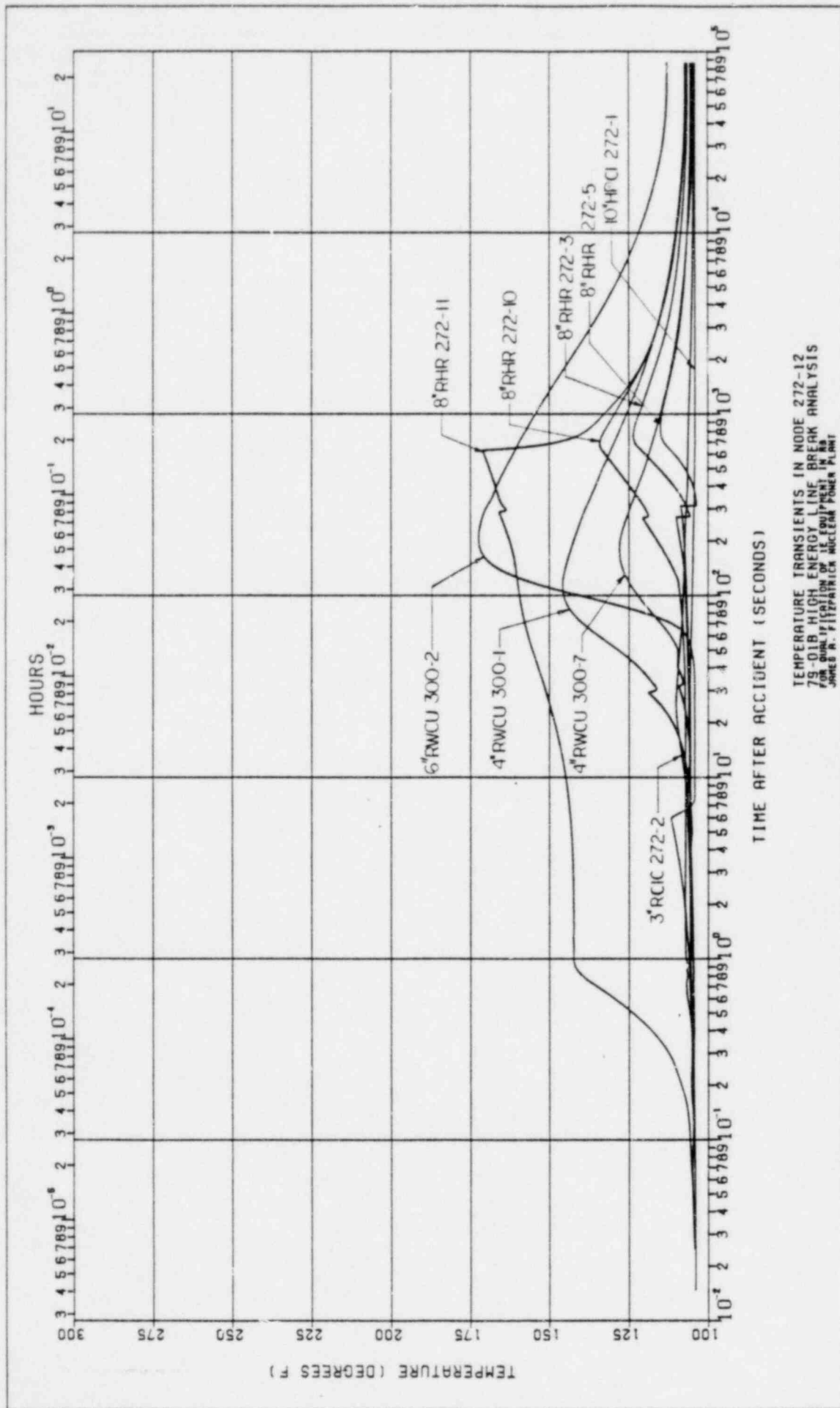


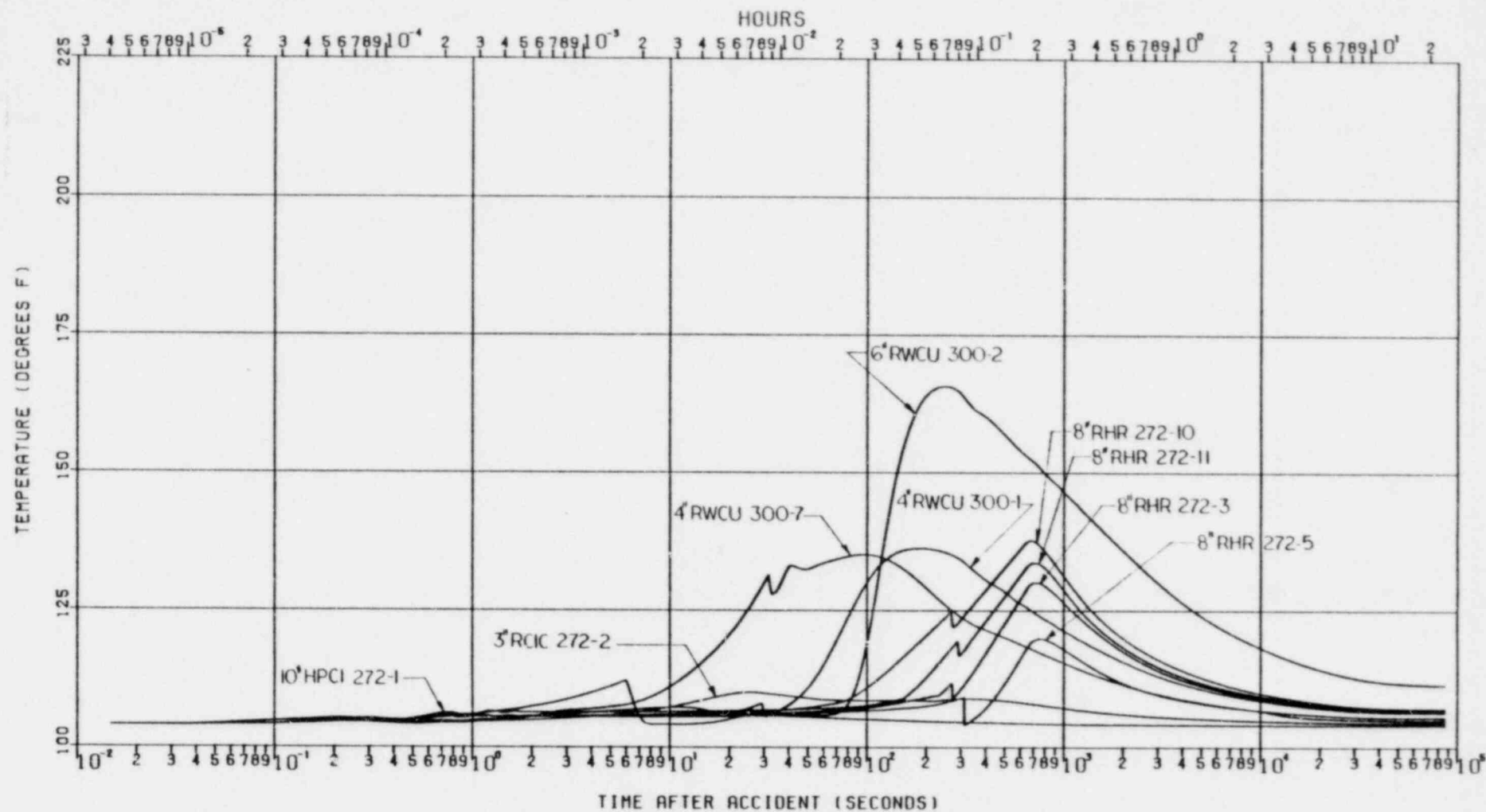




TEMPERATURE TRANSIENTS IN NGCE 272-1  
79-01R HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN SB  
JAMES H. FITZPATRICK NUCLEAR POWER PLANT

REF. IN



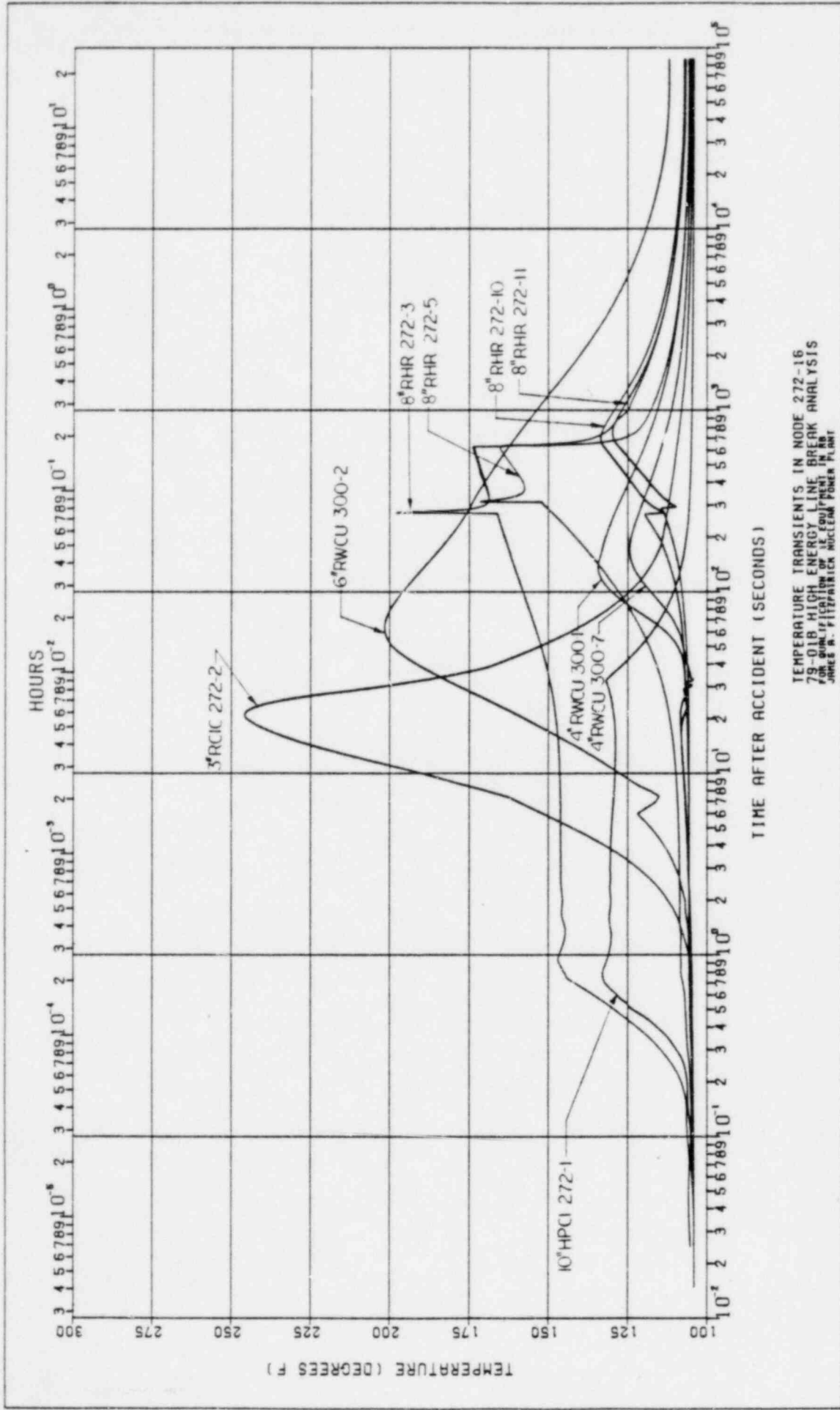


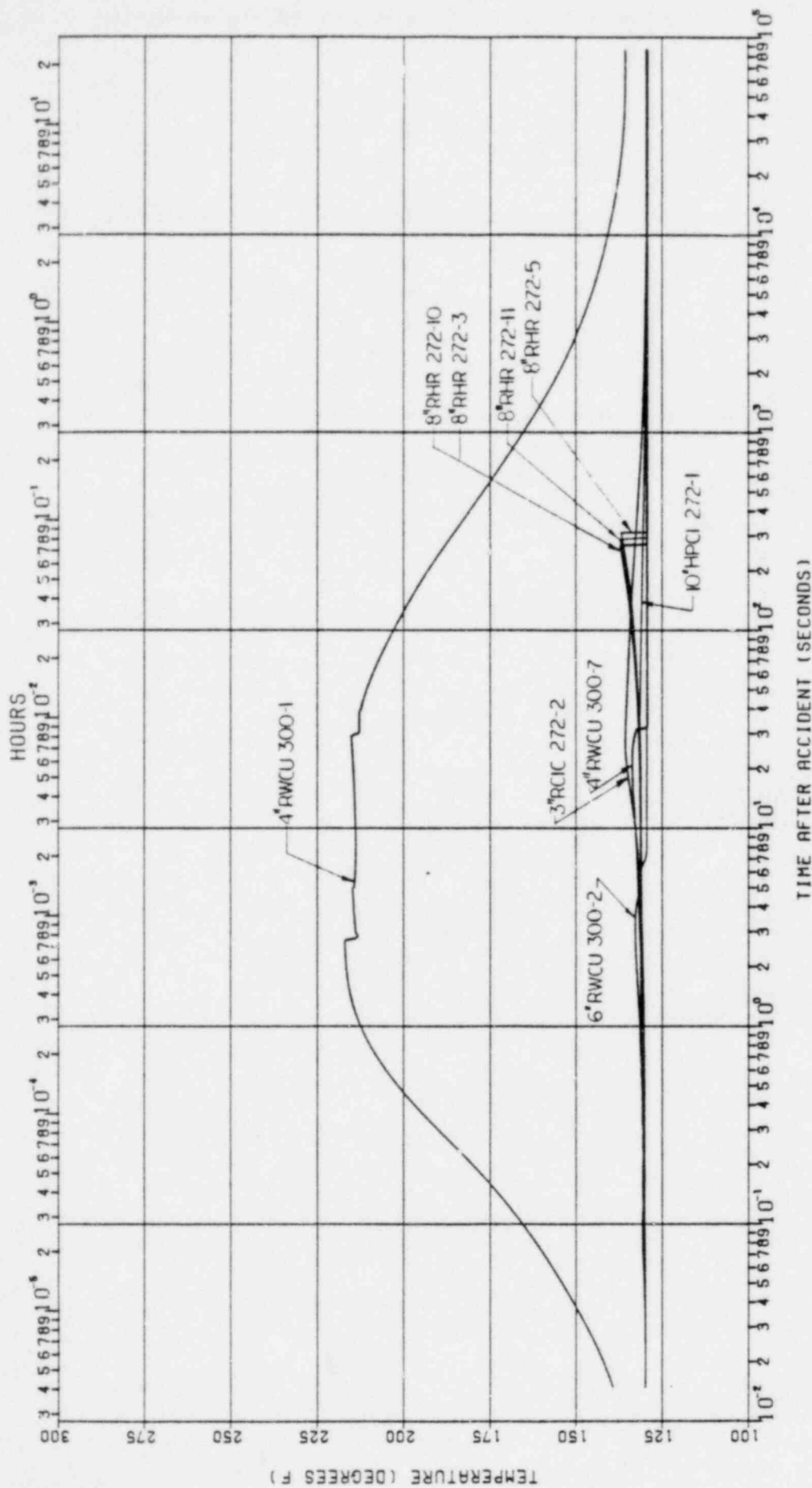
TEMPERATURE TRANSIENTS IN NODE 272-13  
 79-01B HIGH ENERGY LINE BREAK ANALYSIS  
 FOR QUALIFICATION OF IE EQUIPMENT IN RB  
 JAMES A. FITZPATRICK NUCLEAR POWER PLANT

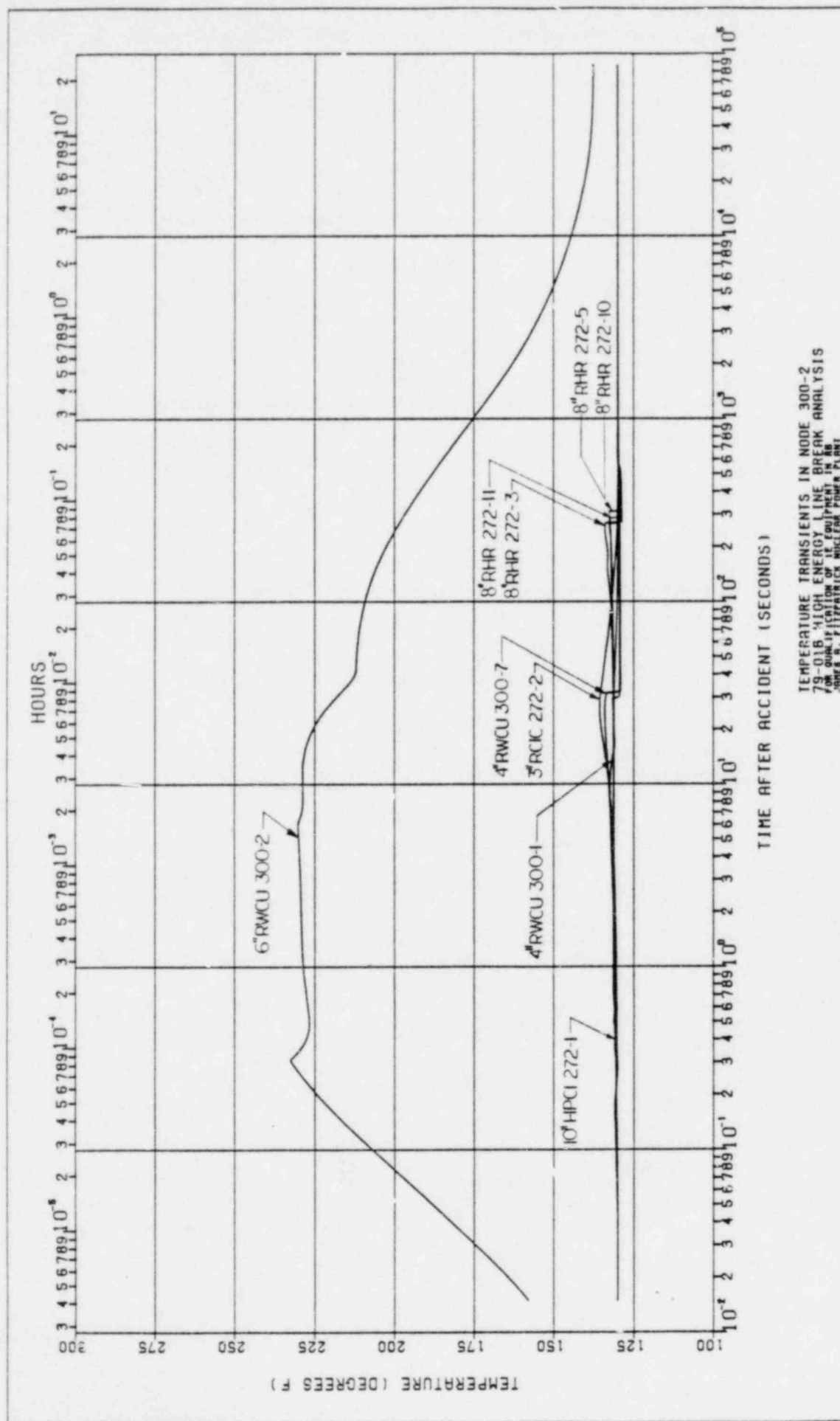
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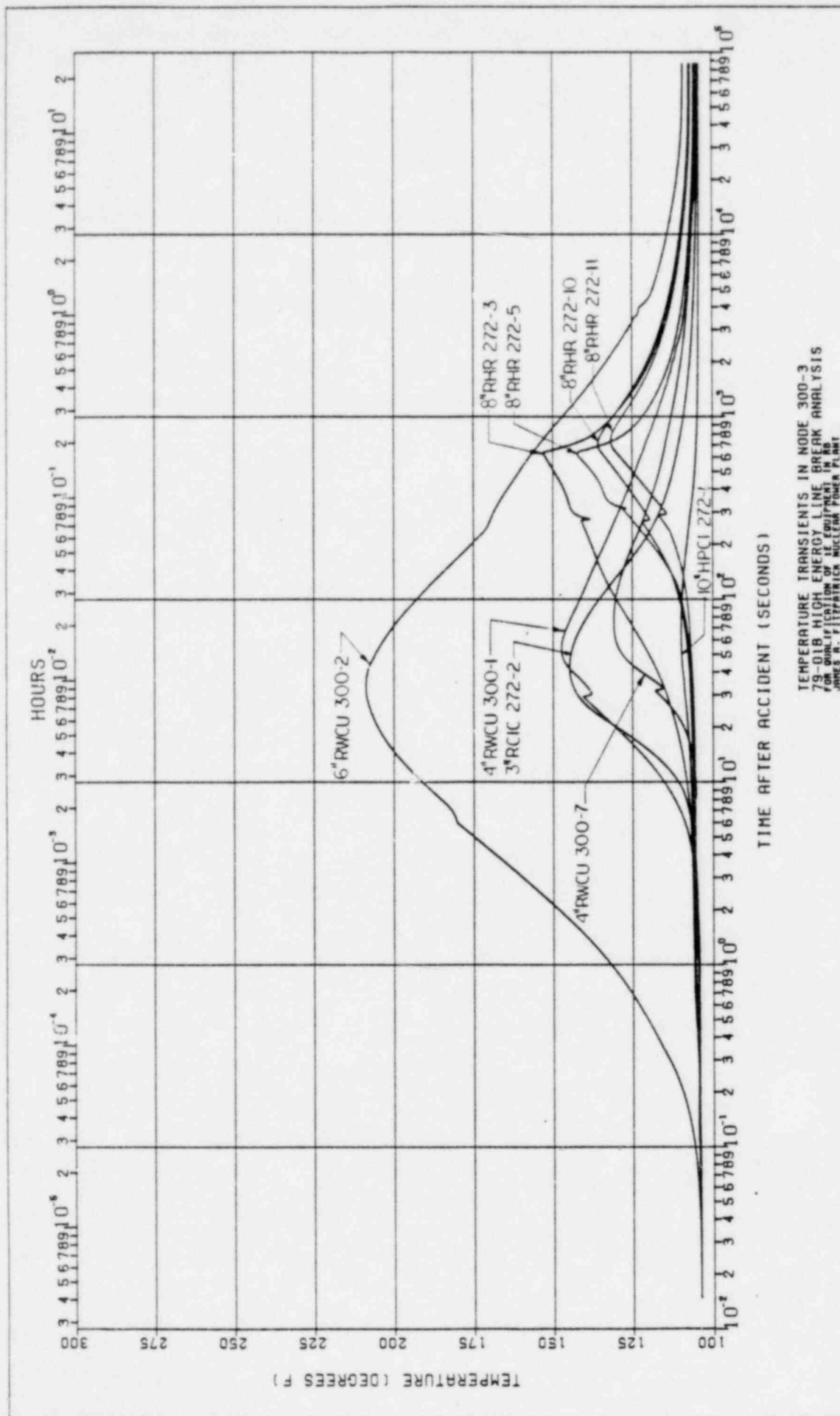
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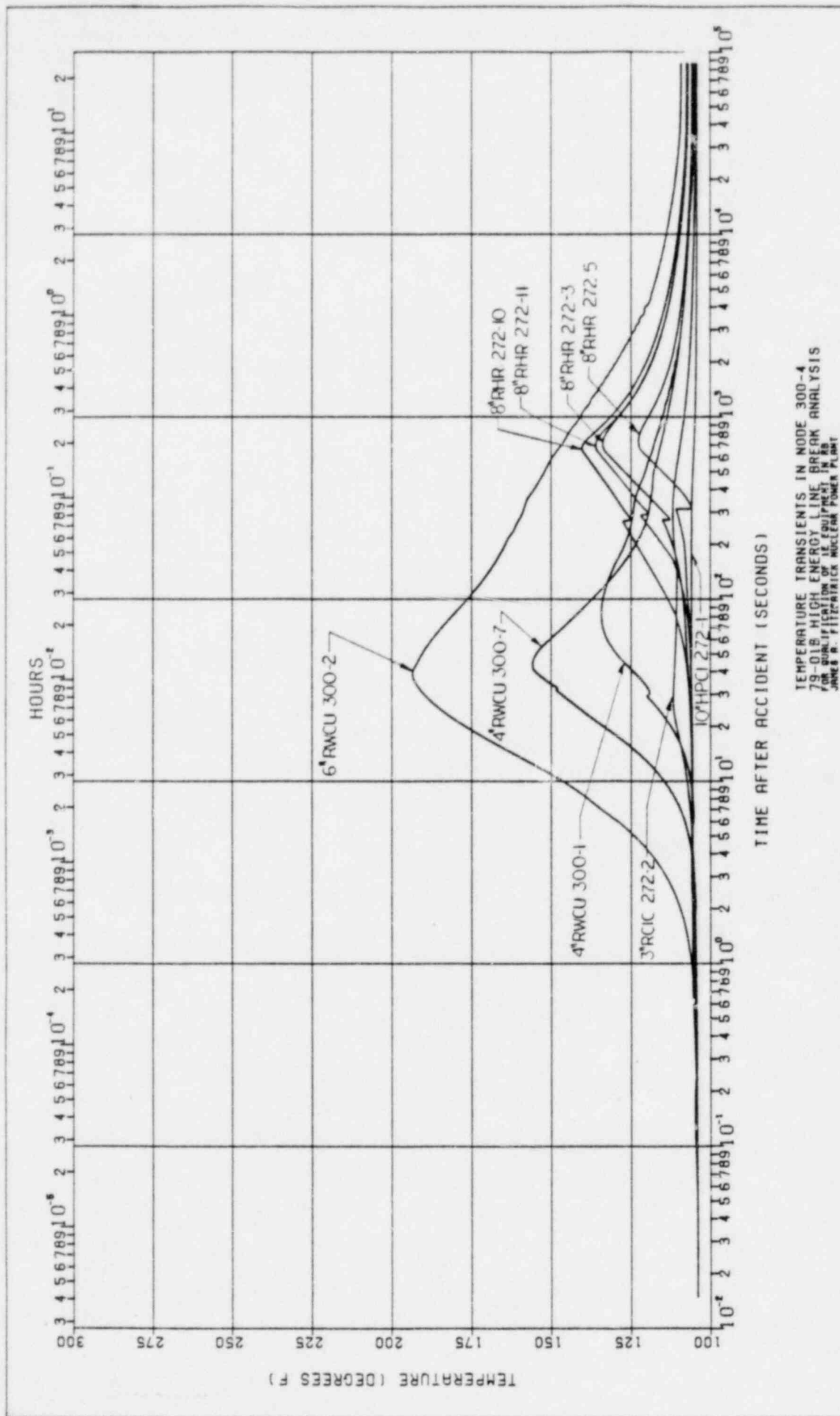


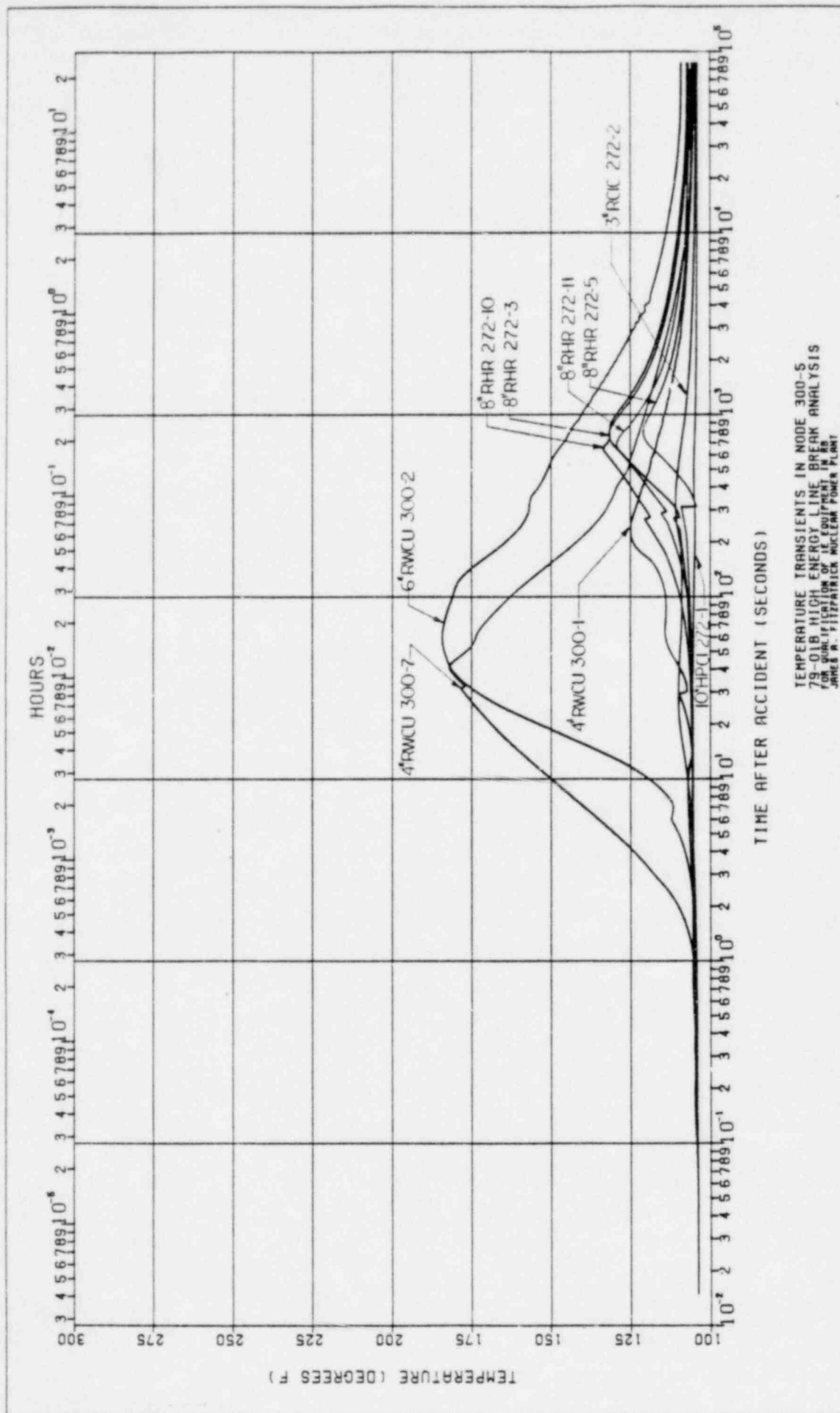


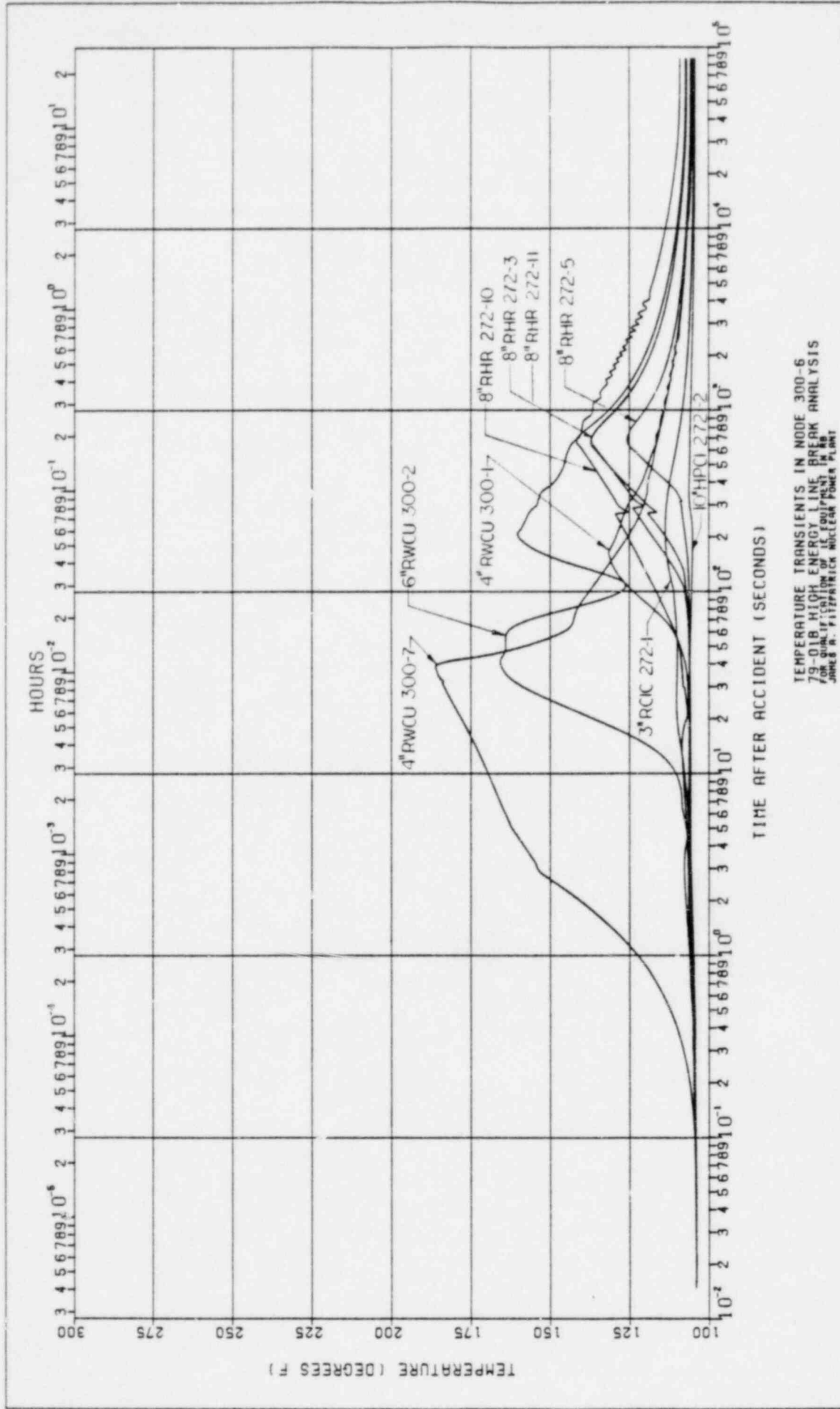




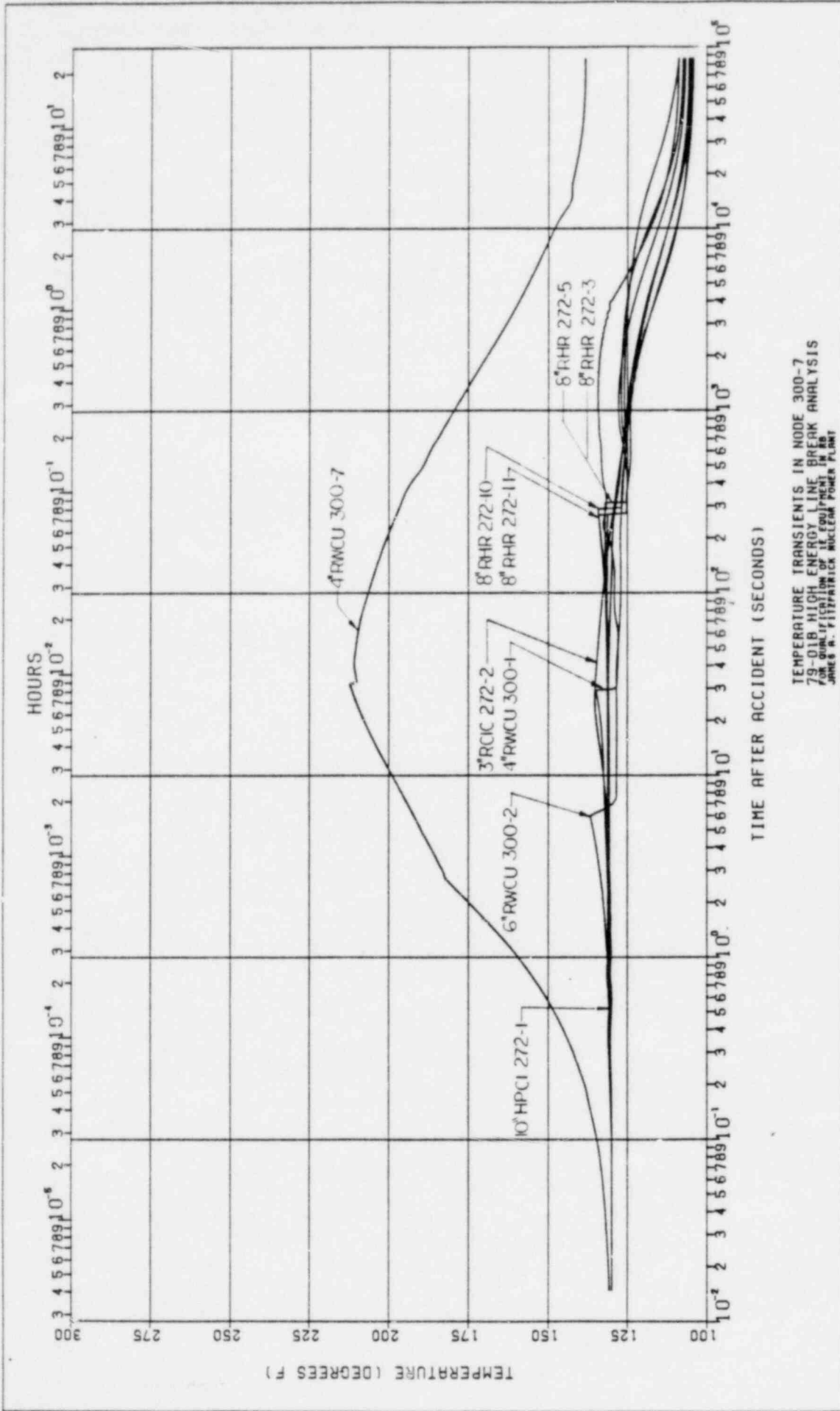


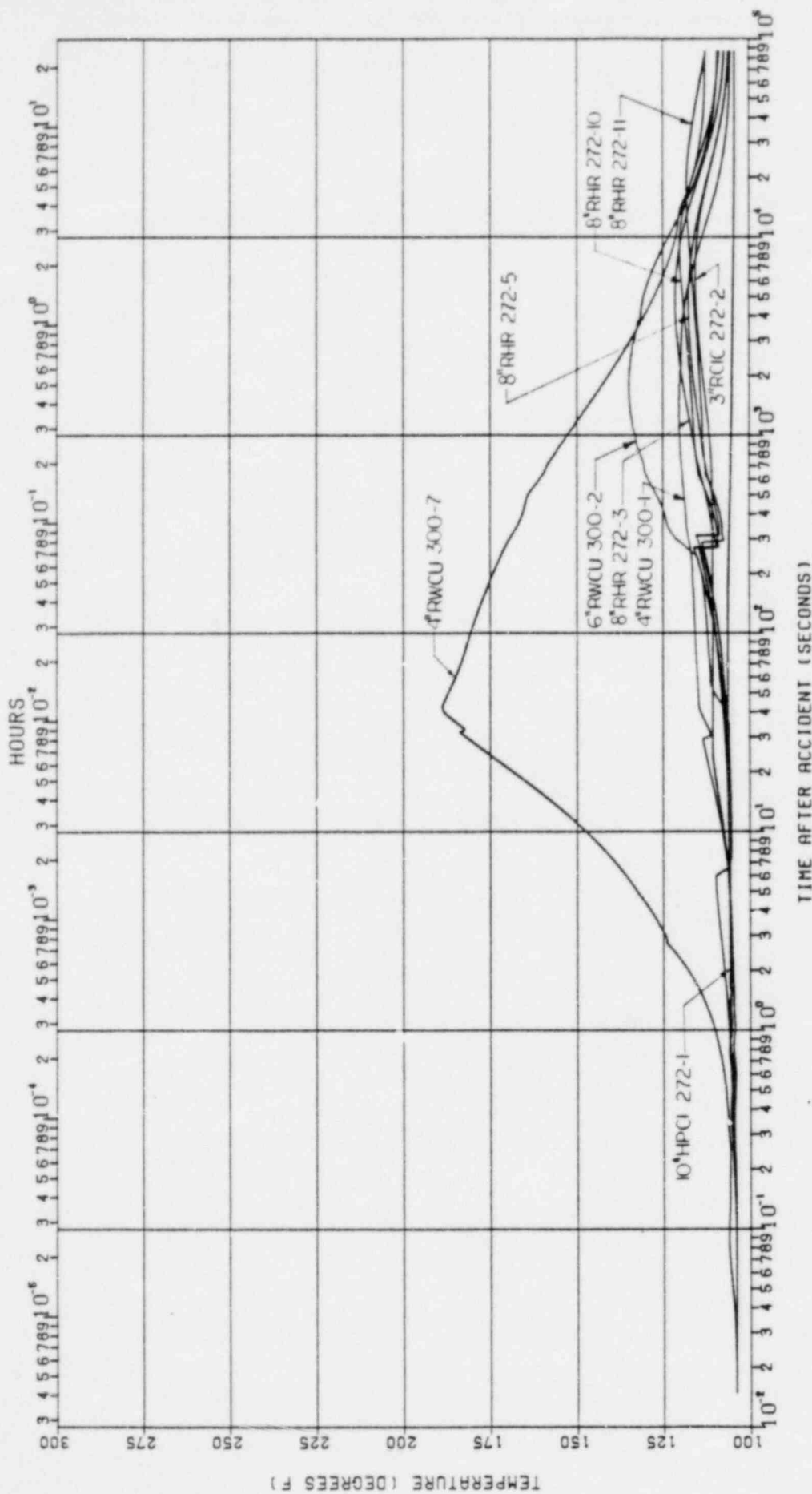


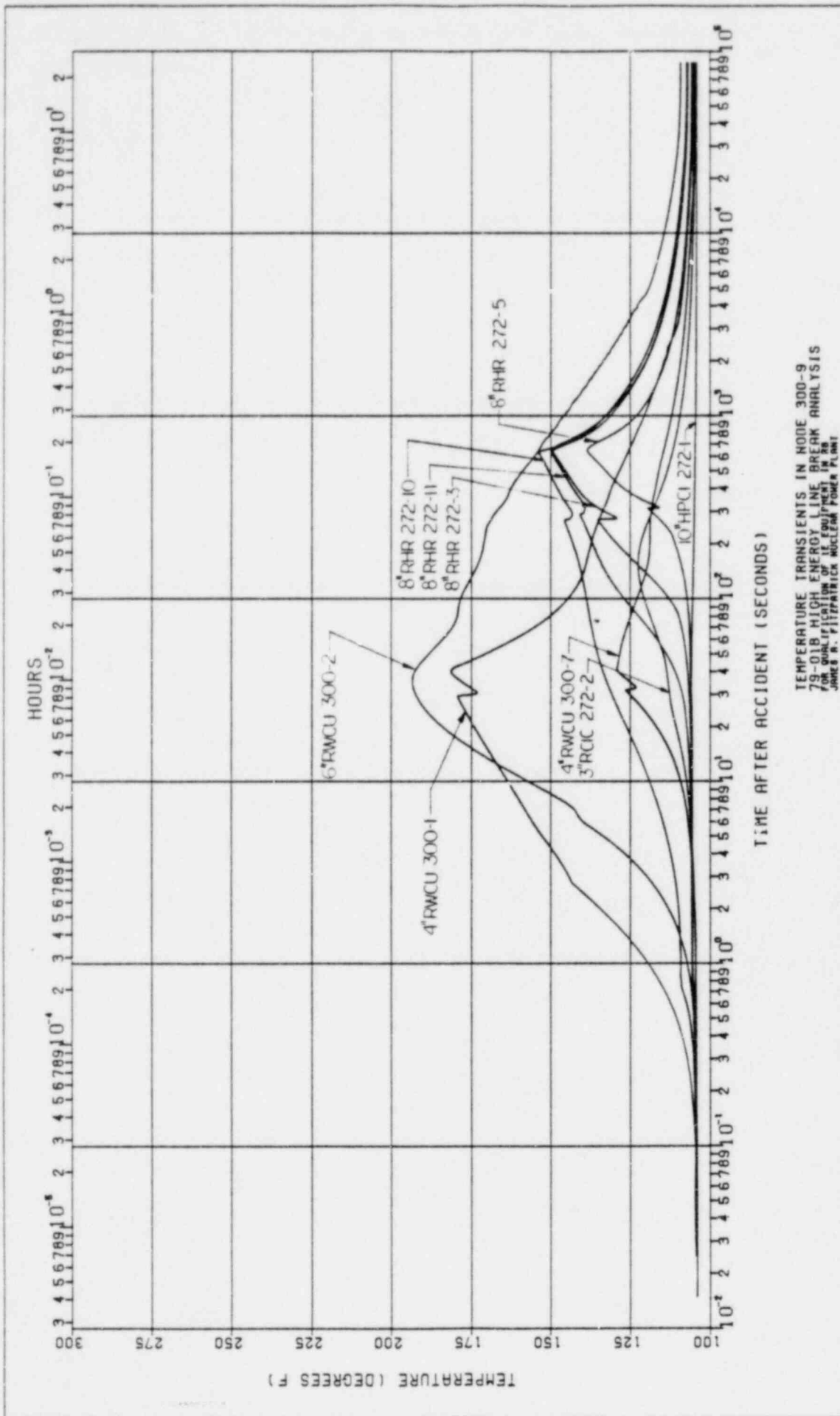


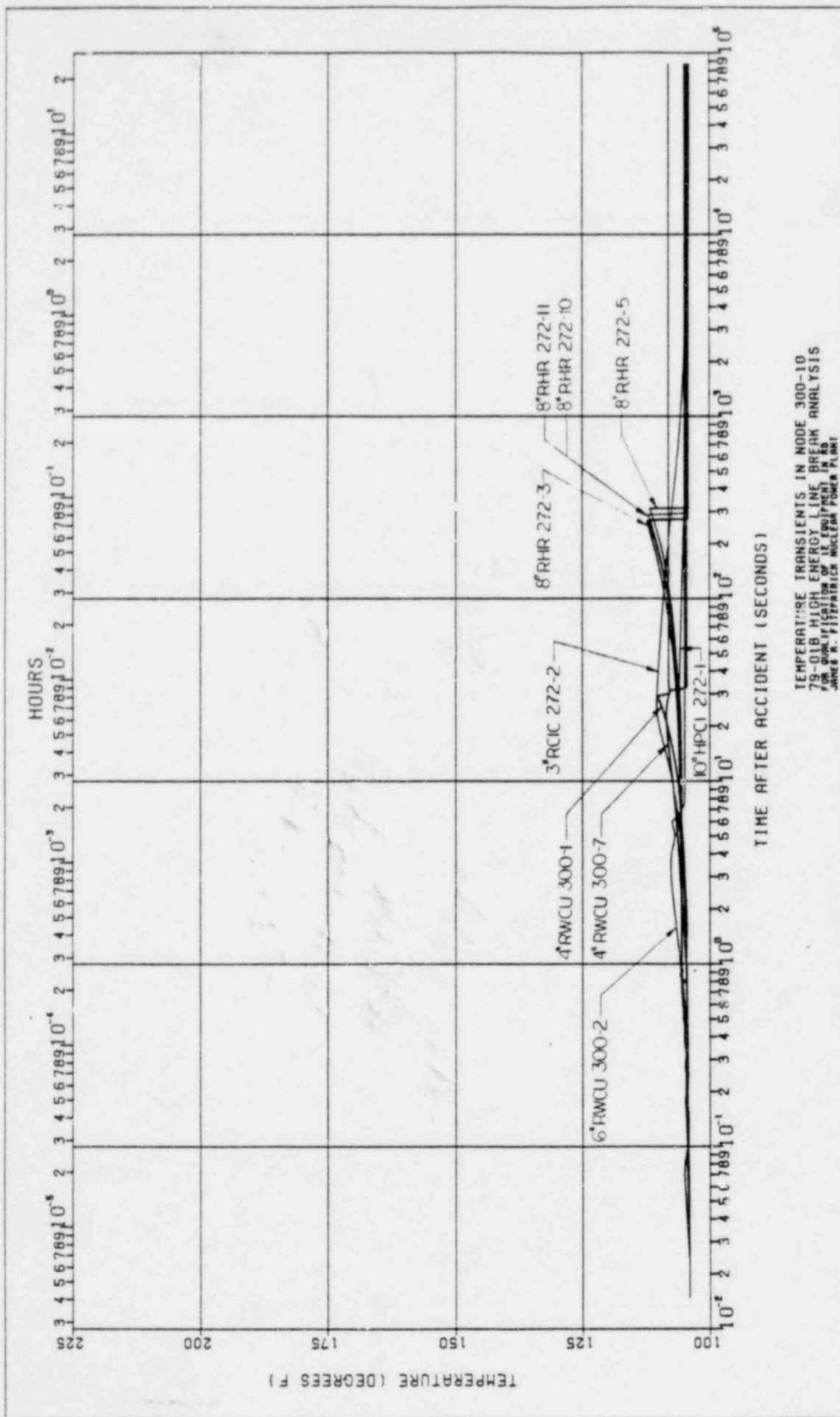




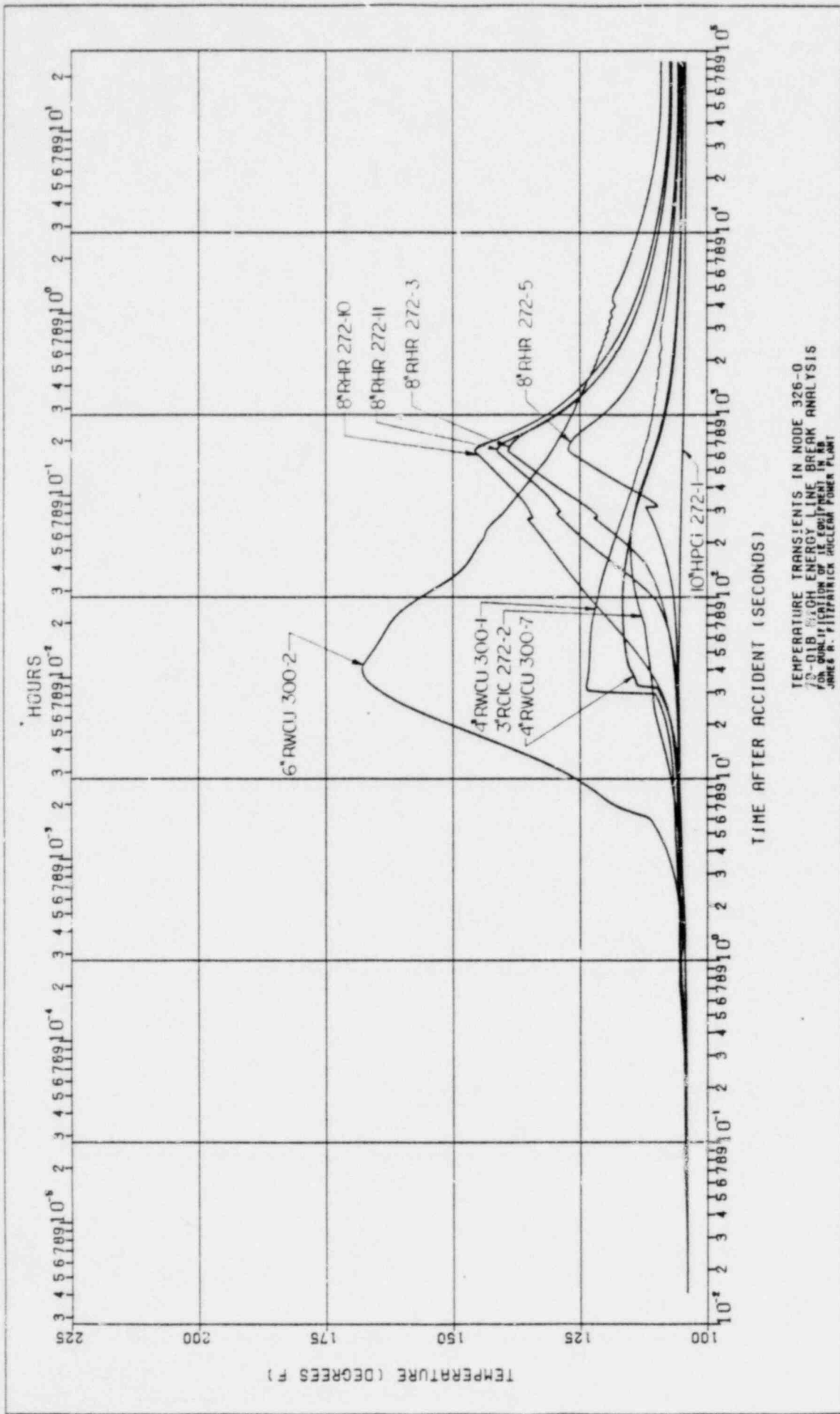


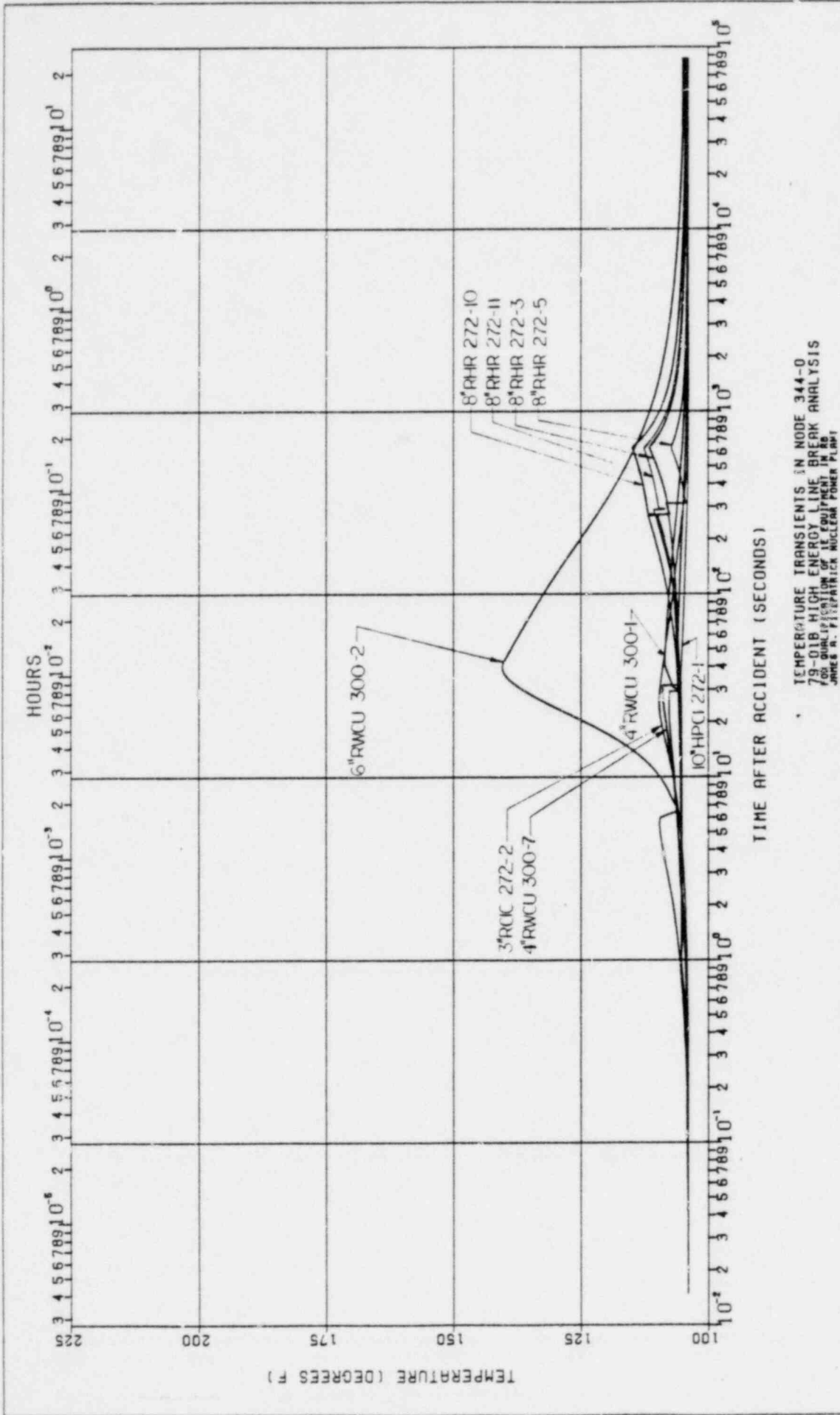


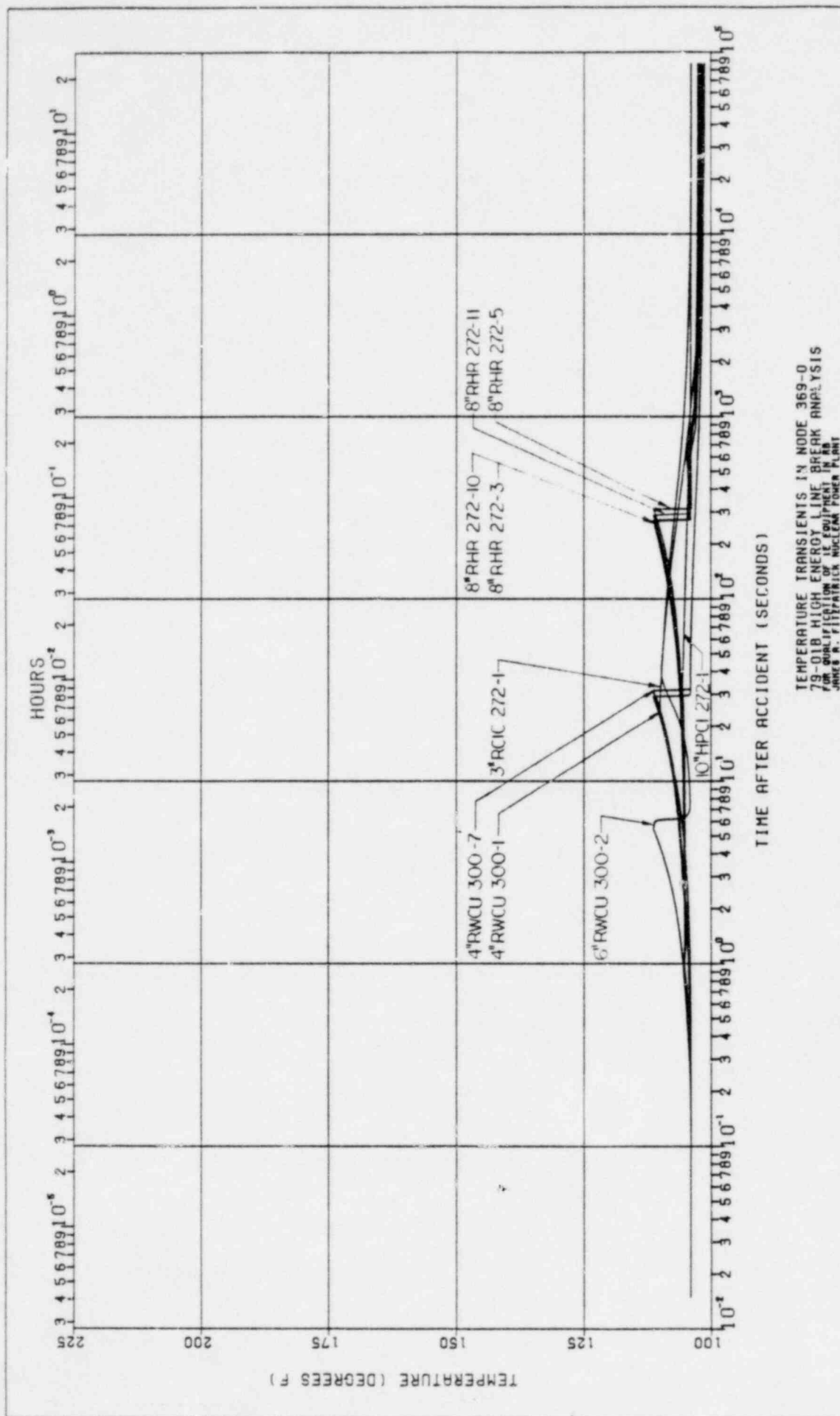




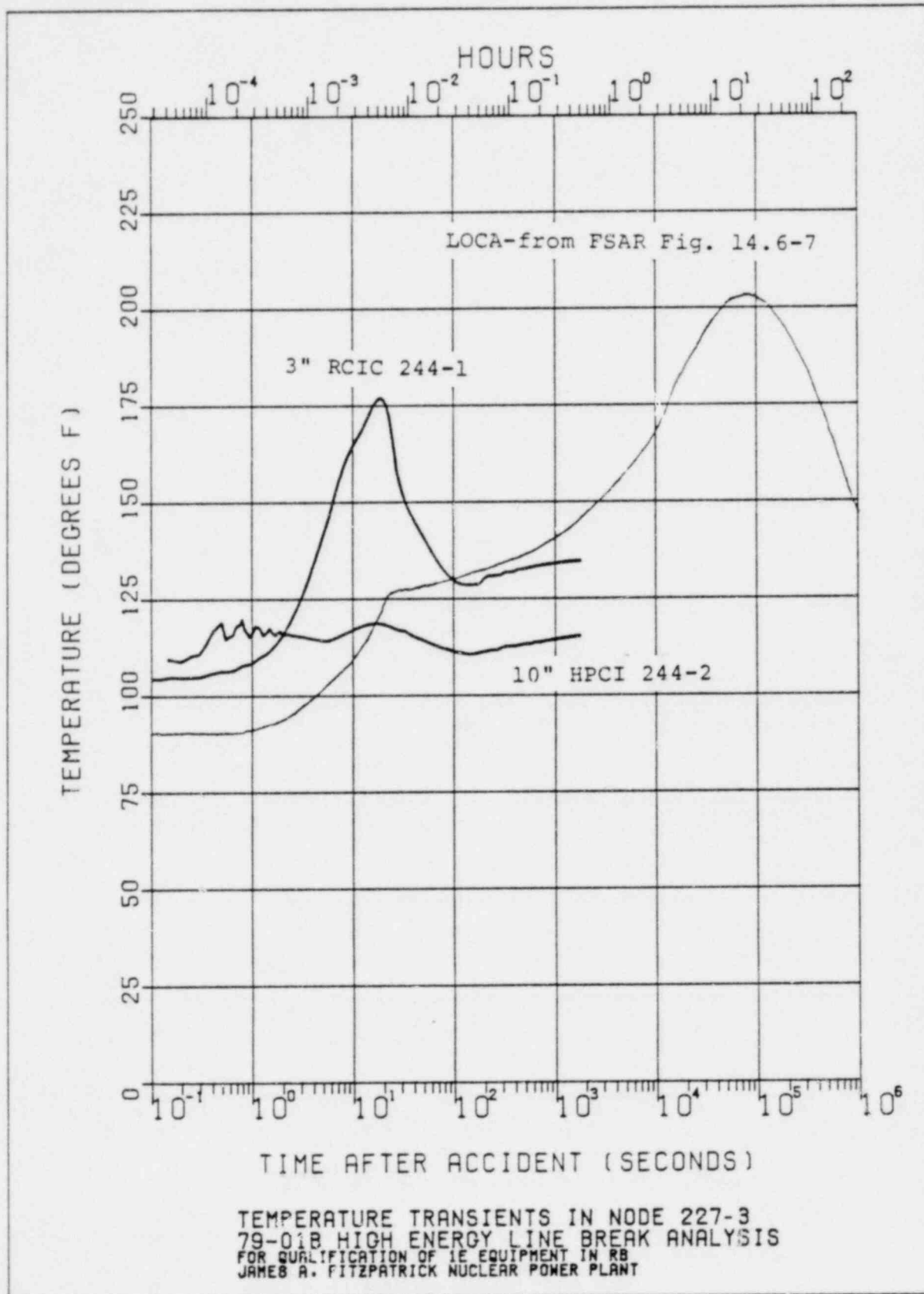
REF. 1AD

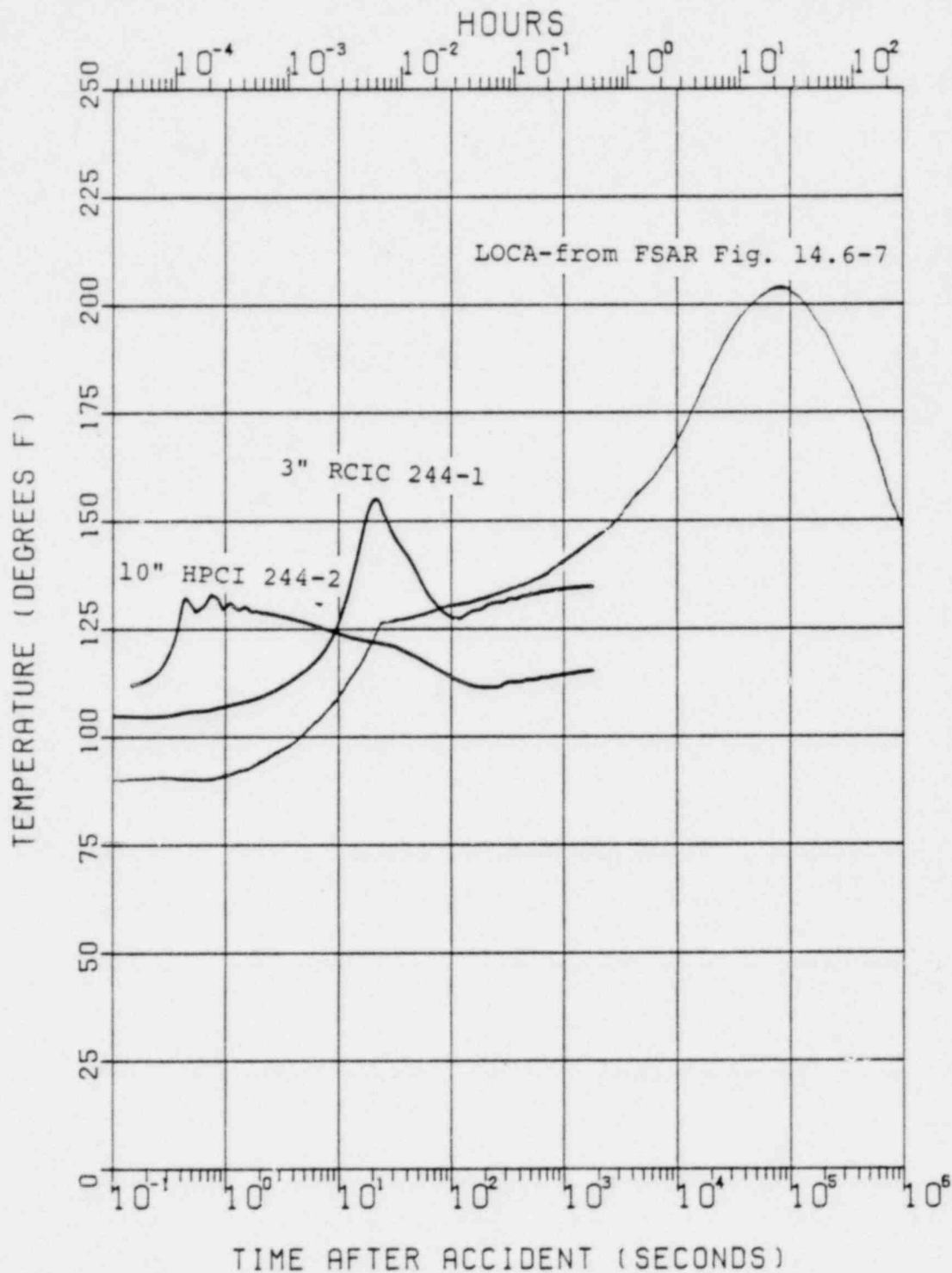




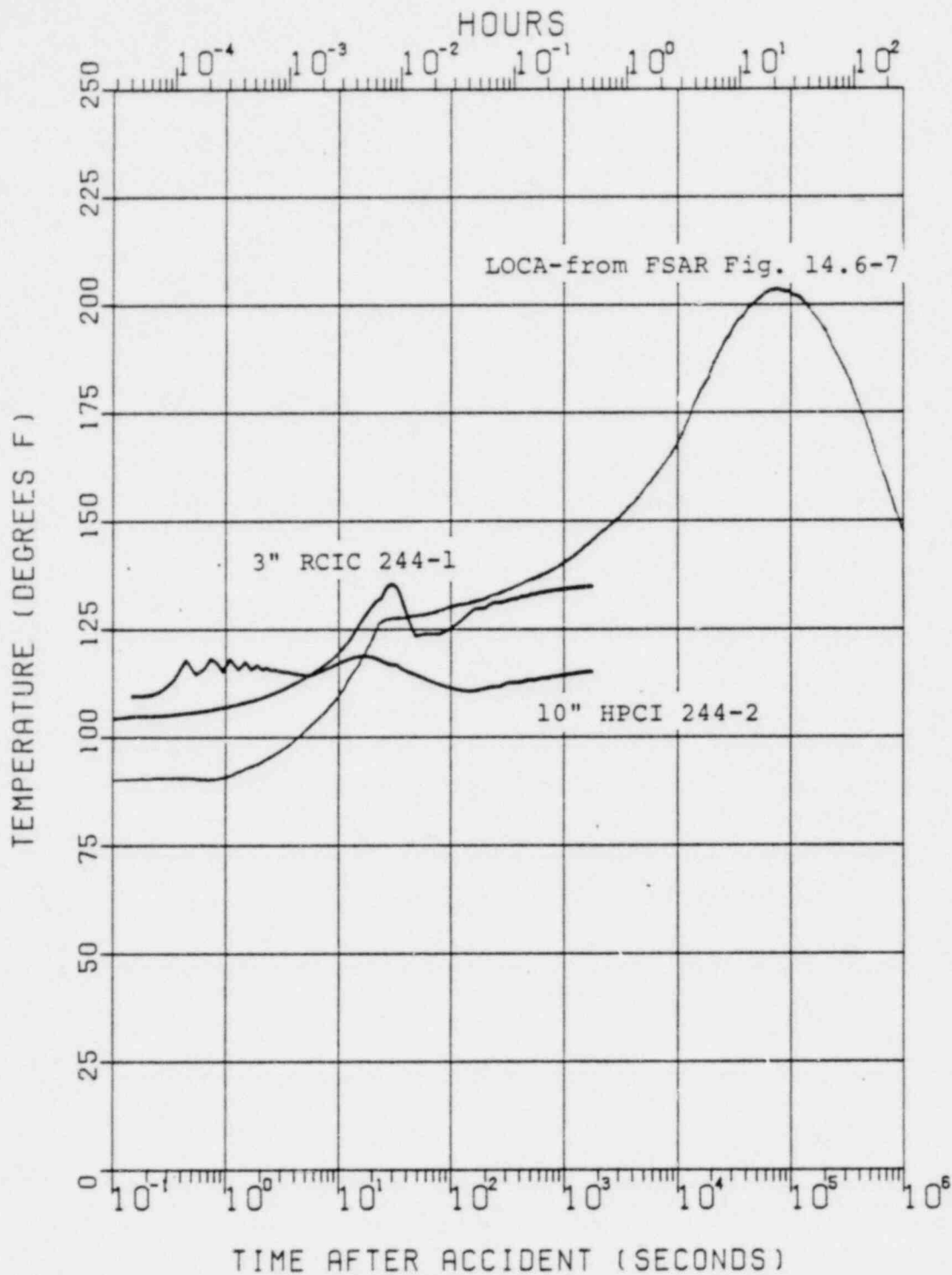




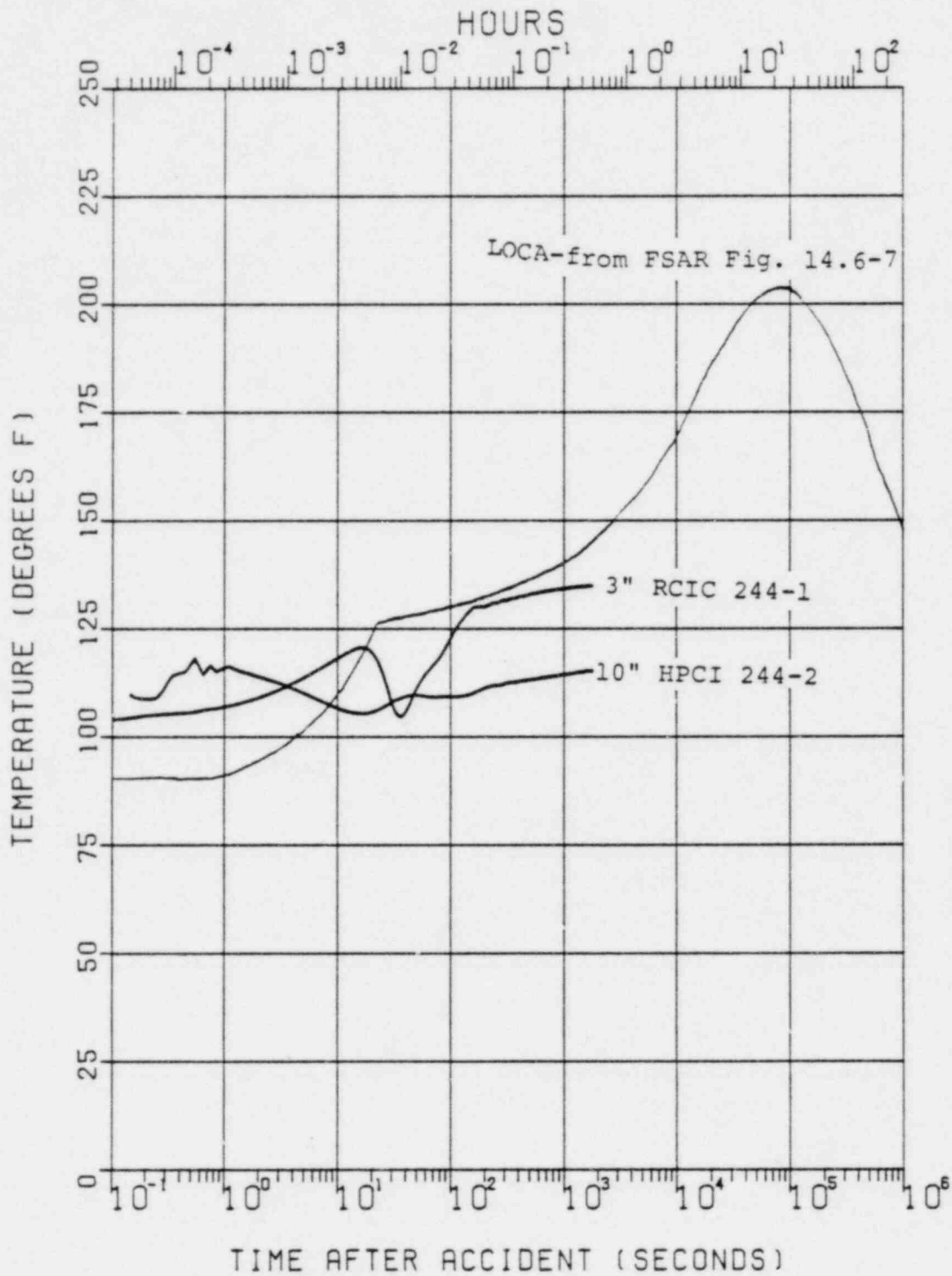




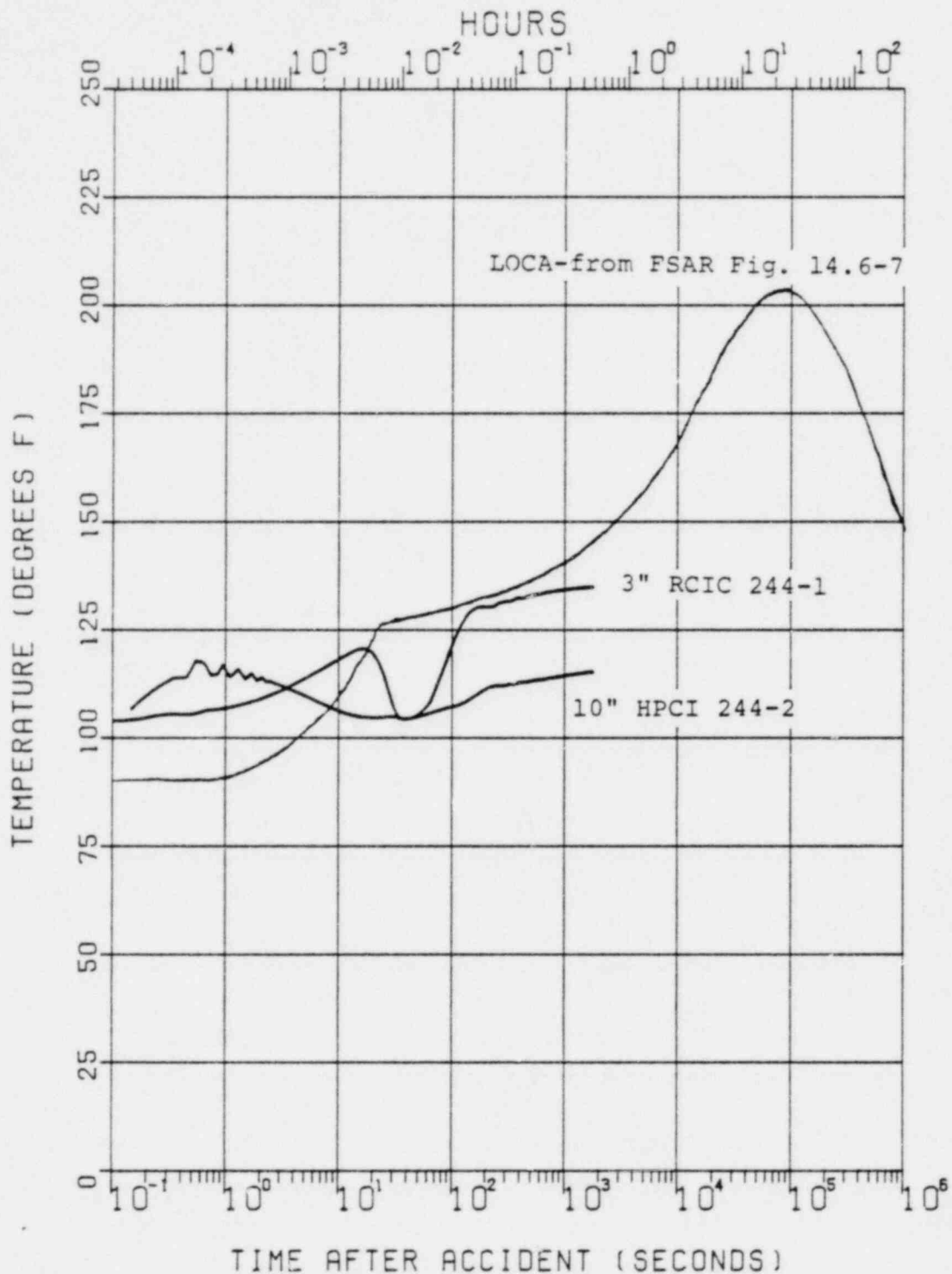
TEMPERATURE TRANSIENTS IN NODE 227-4  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



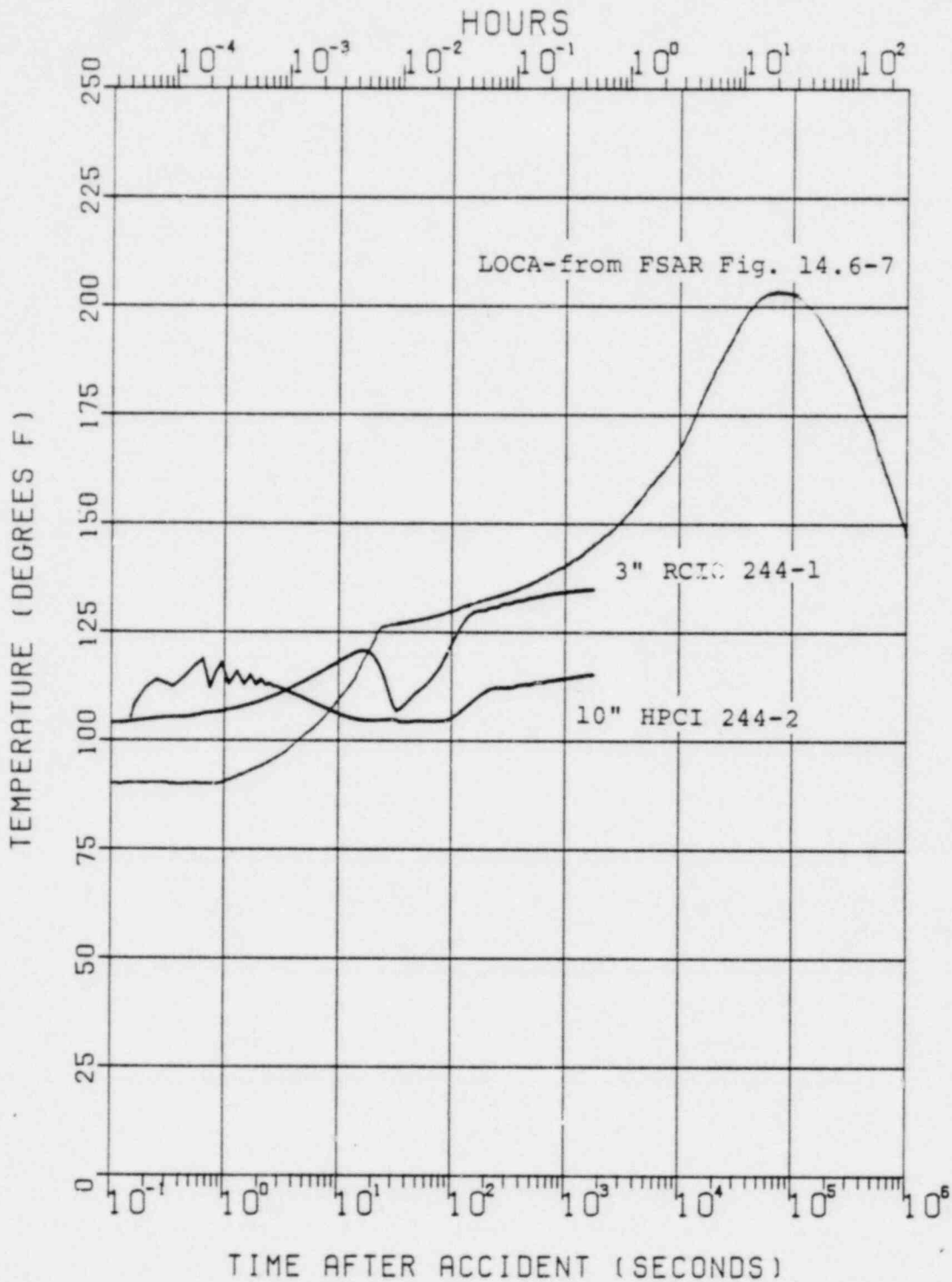
TEMPERATURE TRANSIENTS IN NODE 227-5  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



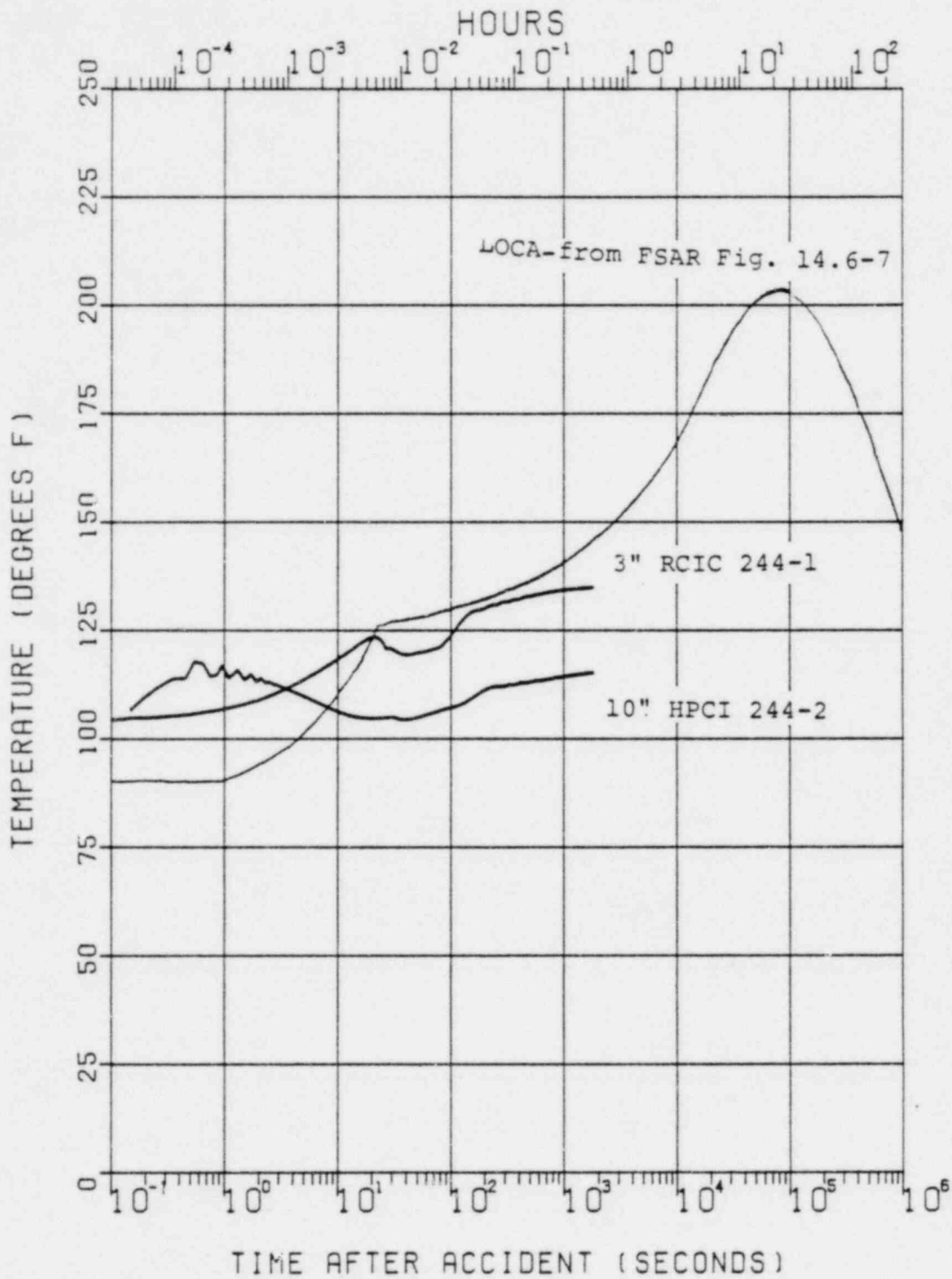
TEMPERATURE TRANSIENTS IN NODE 227-6  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



TEMPERATURE TRANSIENTS IN NODE 227-7  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

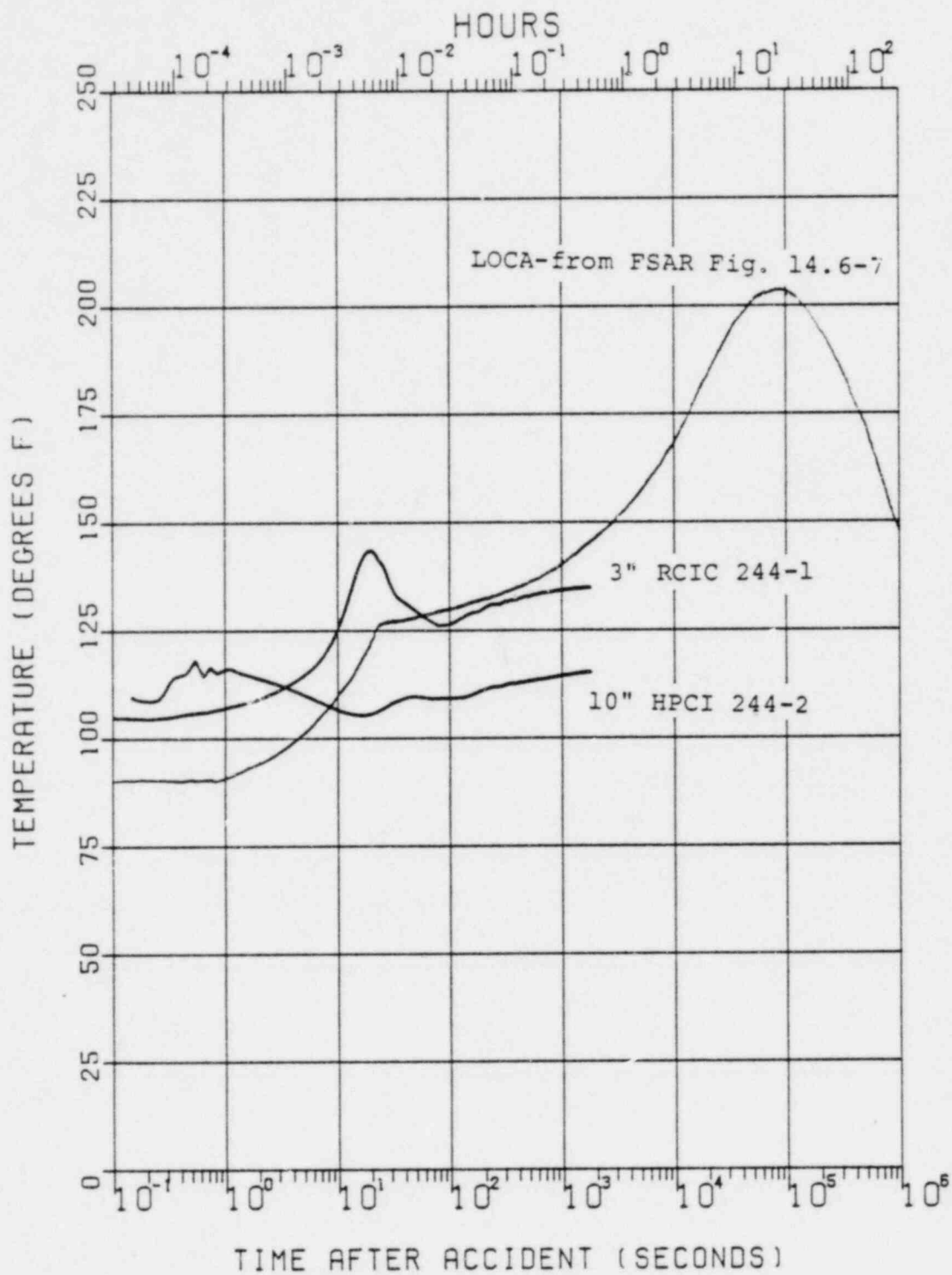


TEMPERATURE TRANSIENTS IN NODE 227-8  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

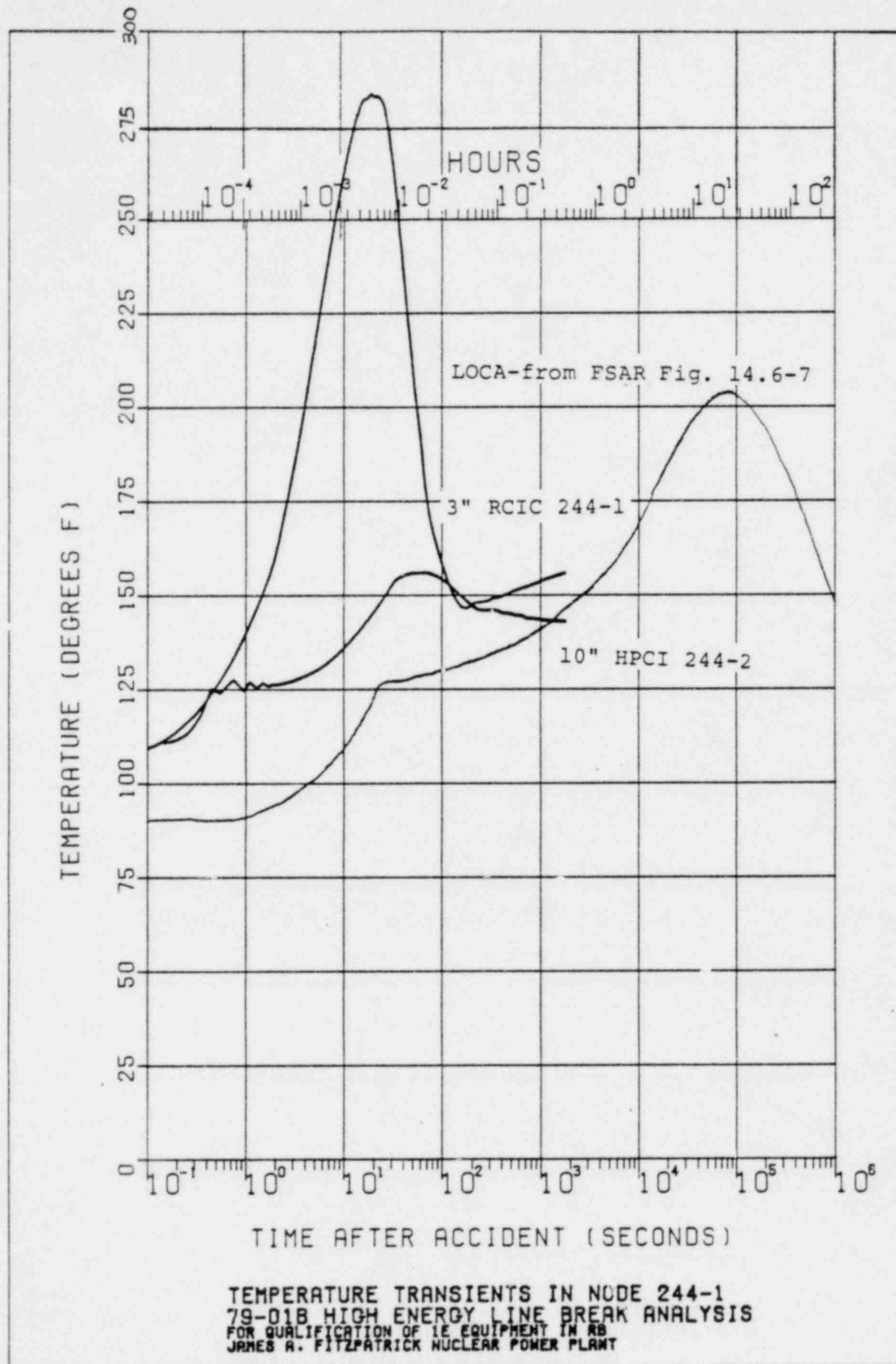


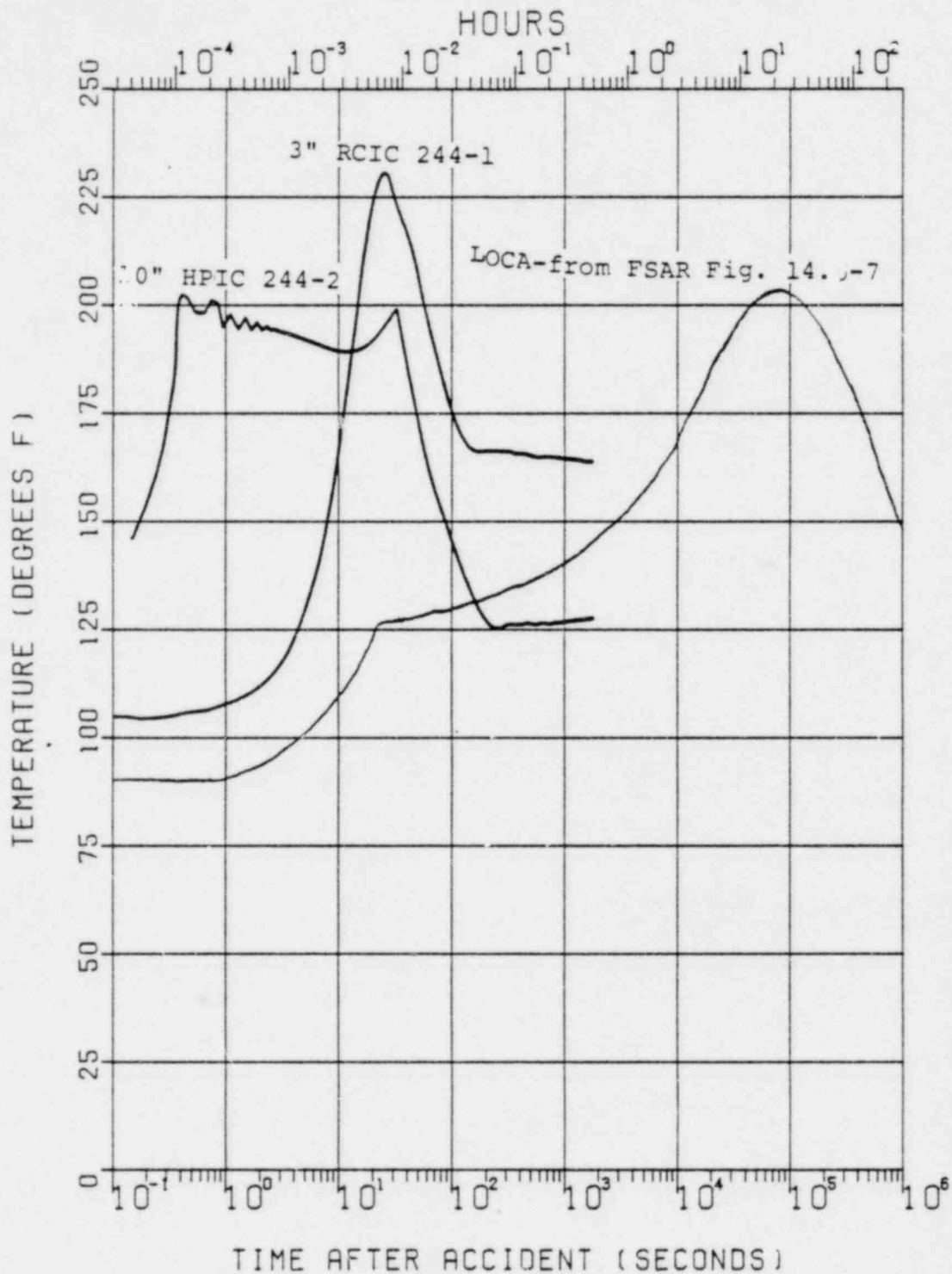
TEMPERATURE TRANSIENTS IN NODE 227-9  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



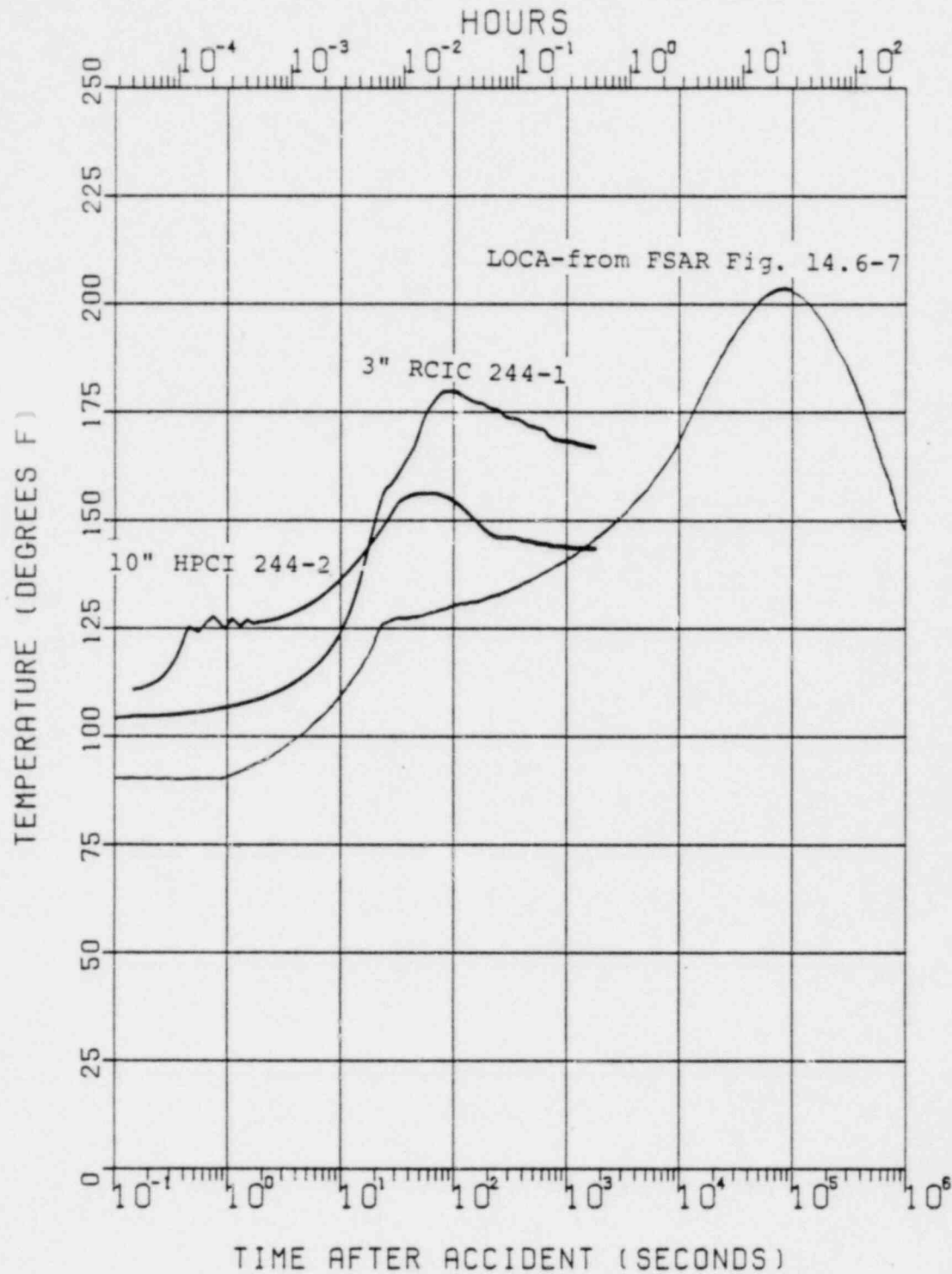


TEMPERATURE TRANSIENTS IN NODE 227-10  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

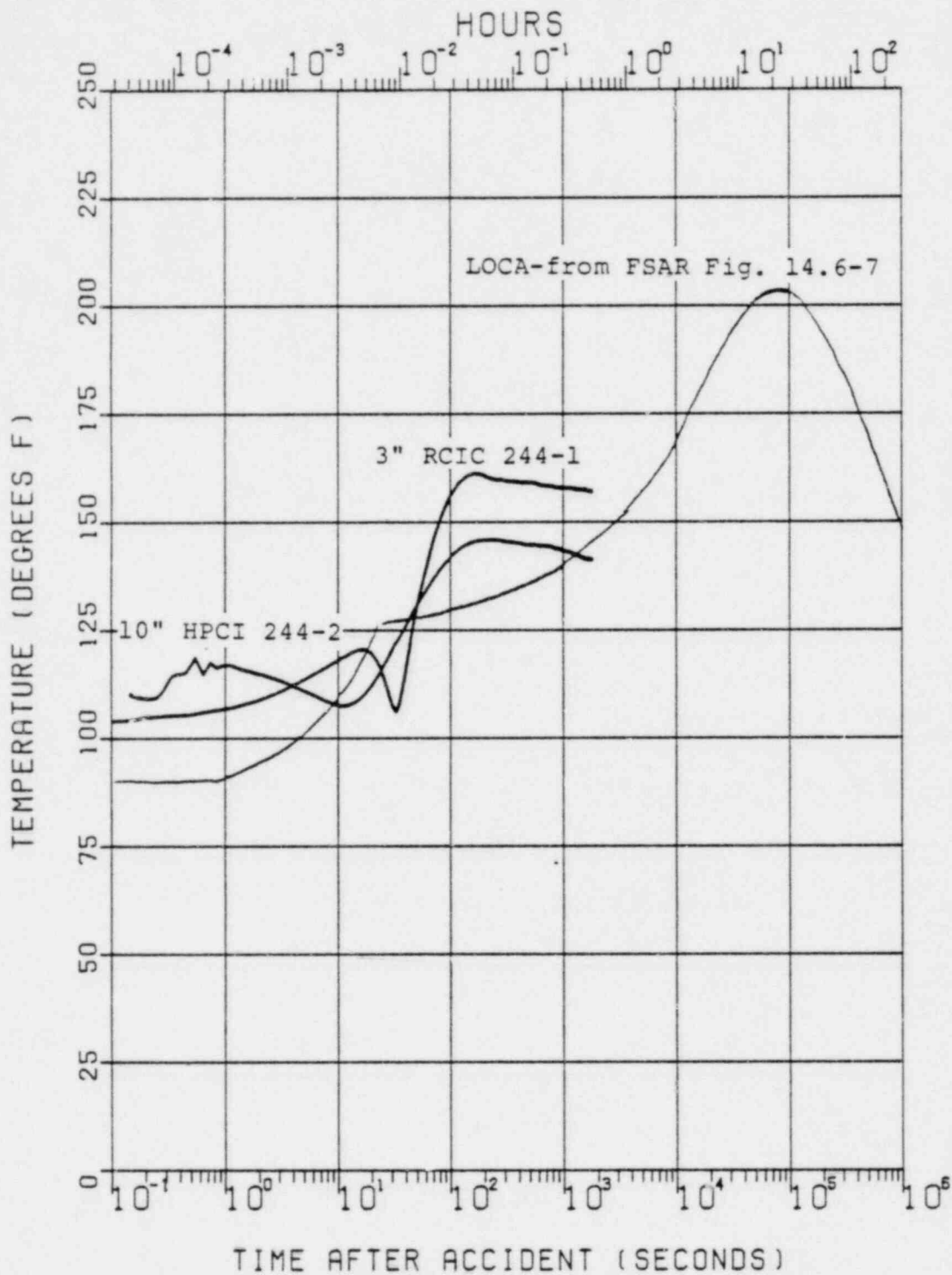




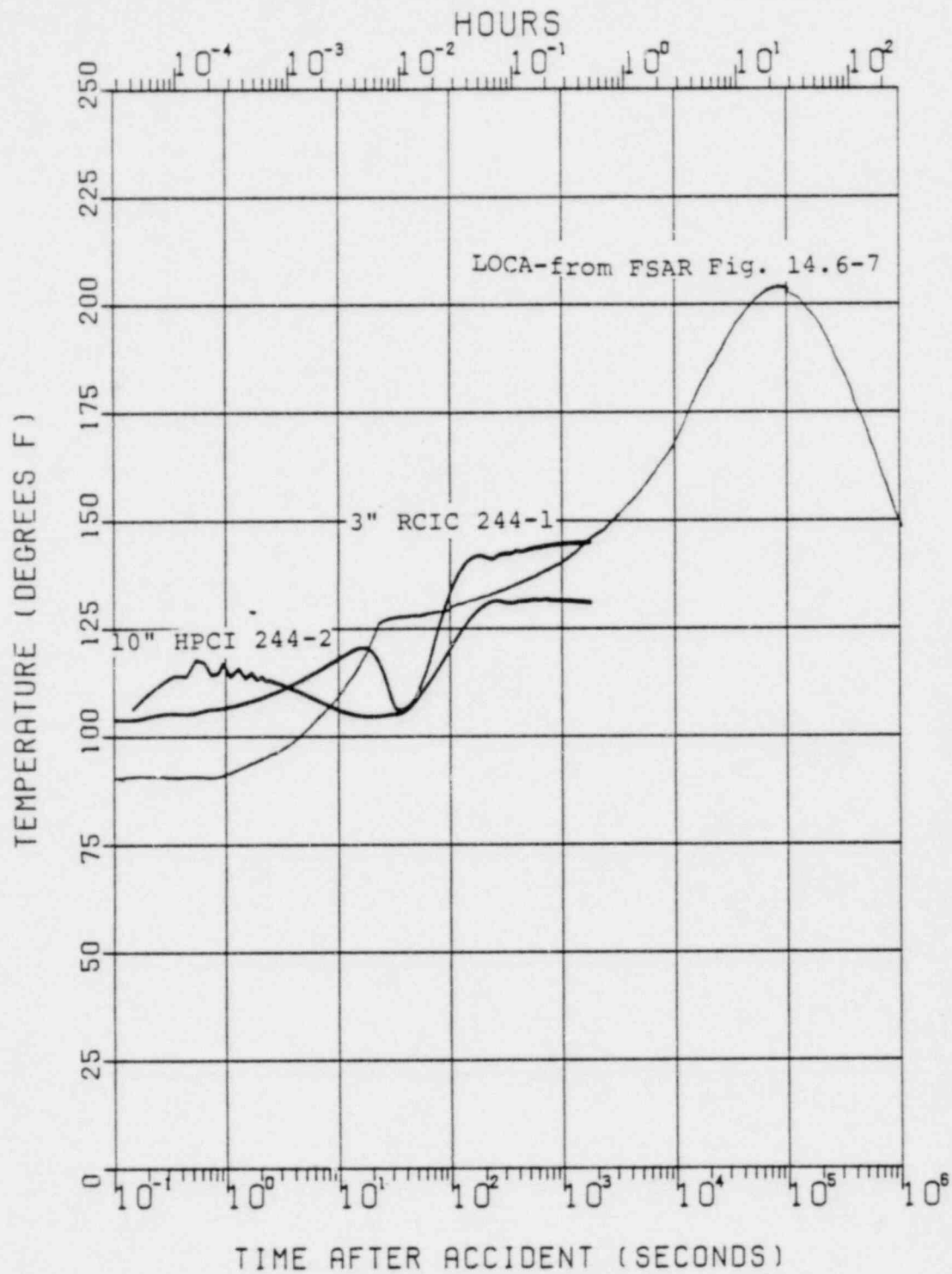
TEMPERATURE TRANSIENTS IN NODE 244-2  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



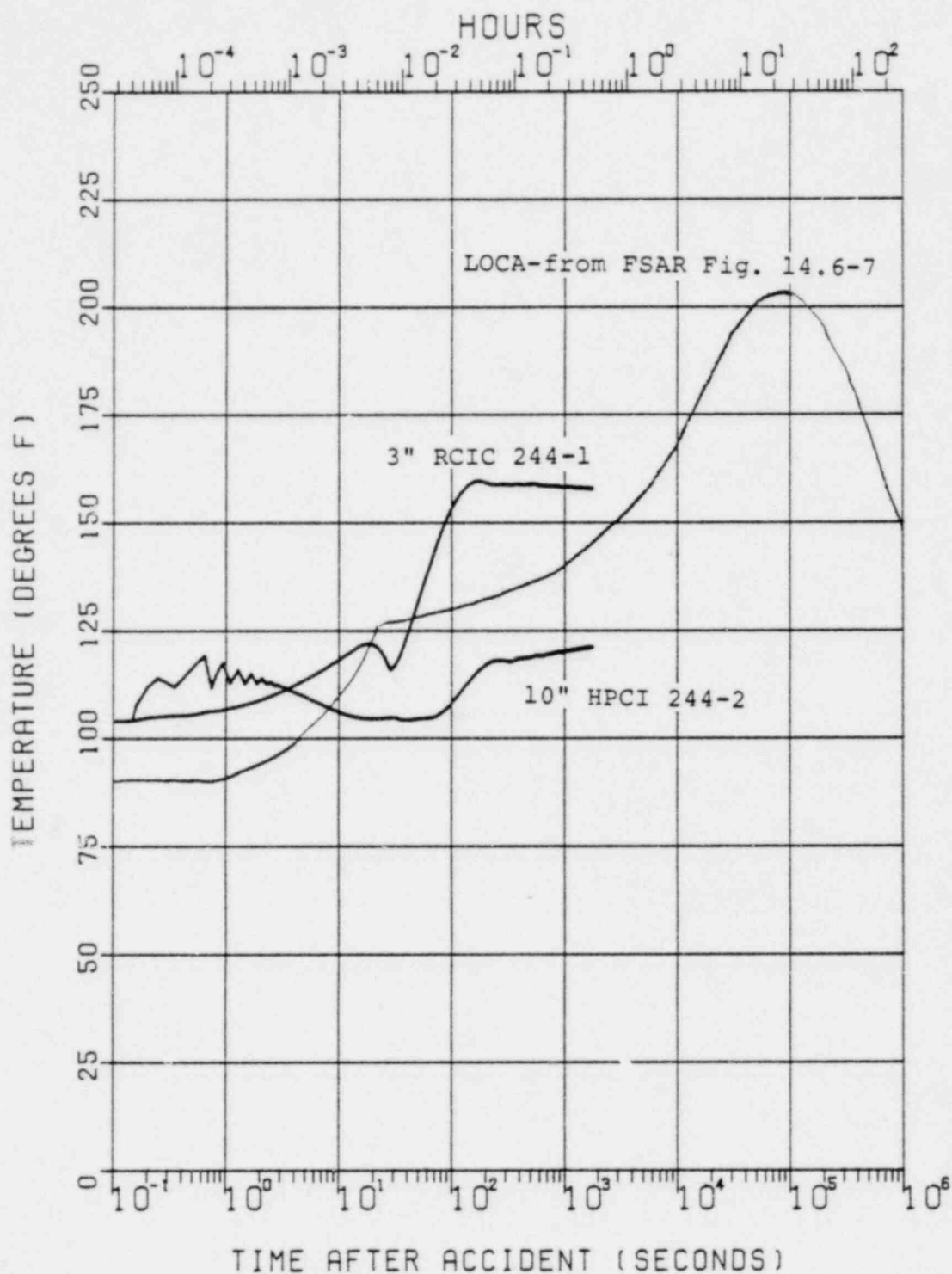
TEMPERATURE TRANSIENTS IN NODE 244-3  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



TEMPERATURE TRANSIENTS IN NODE 244-4  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

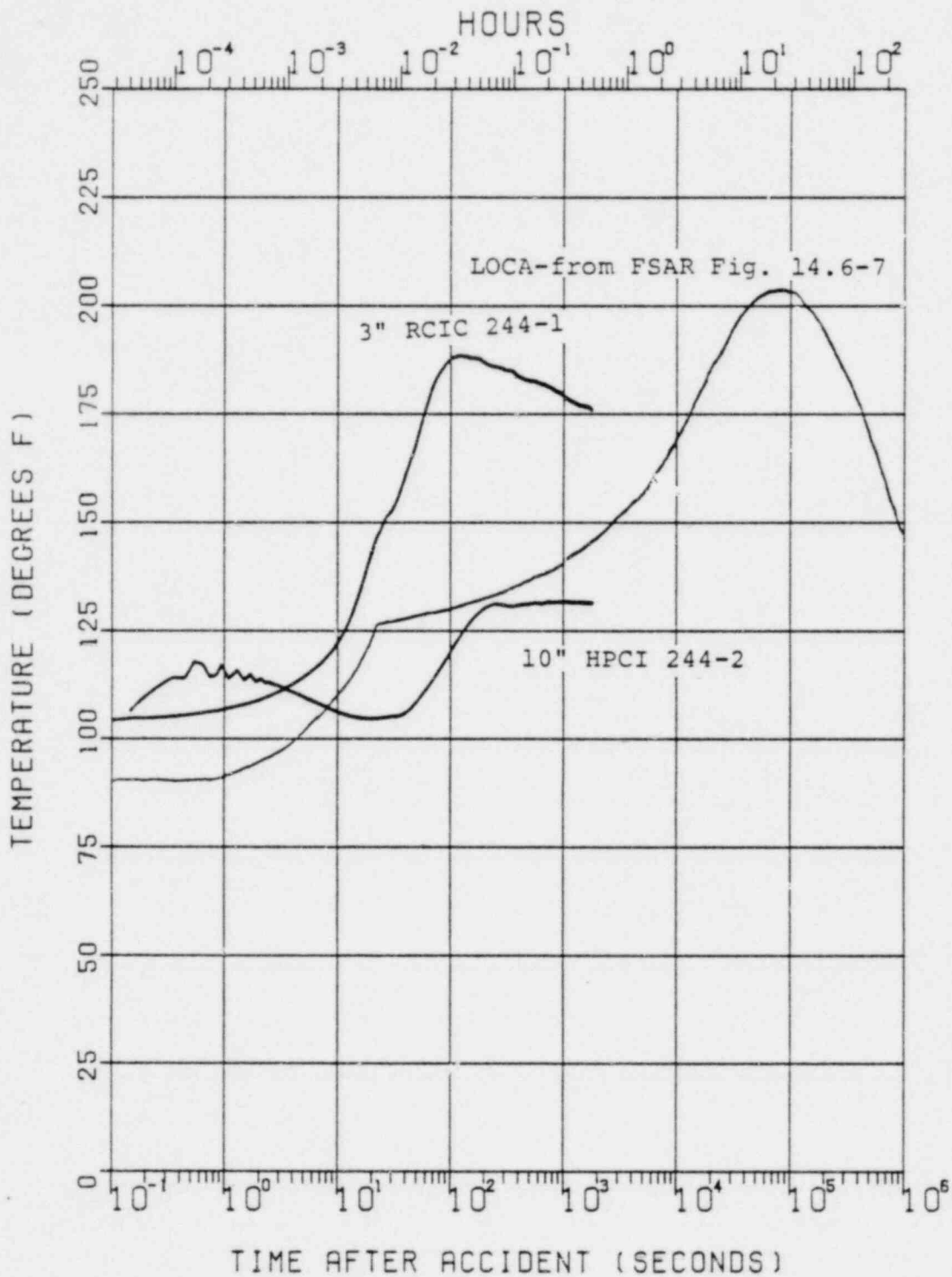


TEMPERATURE TRANSIENTS IN NODE 244-5  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES R. FITZPATRICK NUCLEAR POWER PLANT

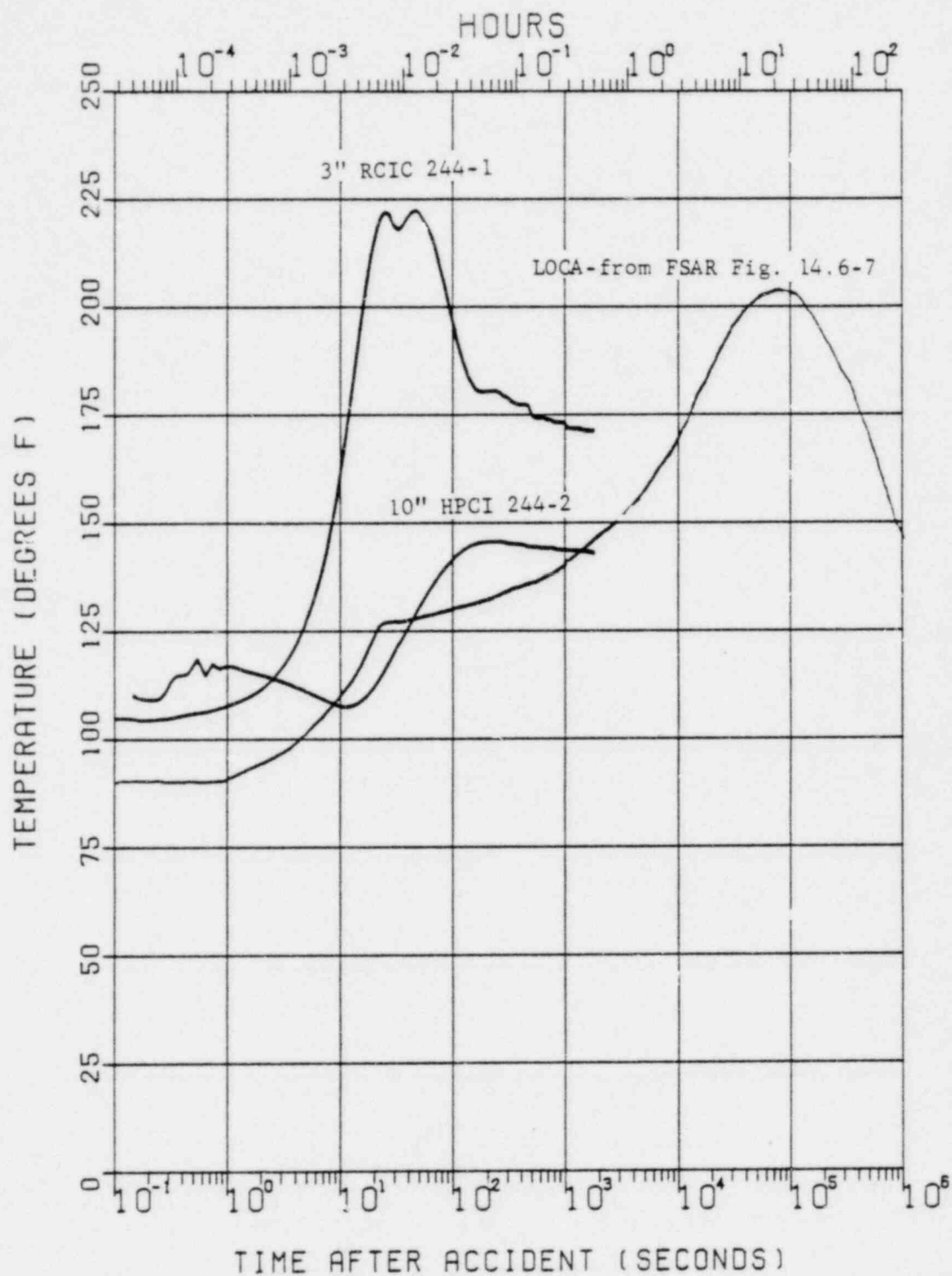


TEMPERATURE TRANSIENTS IN NODE 244-6  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



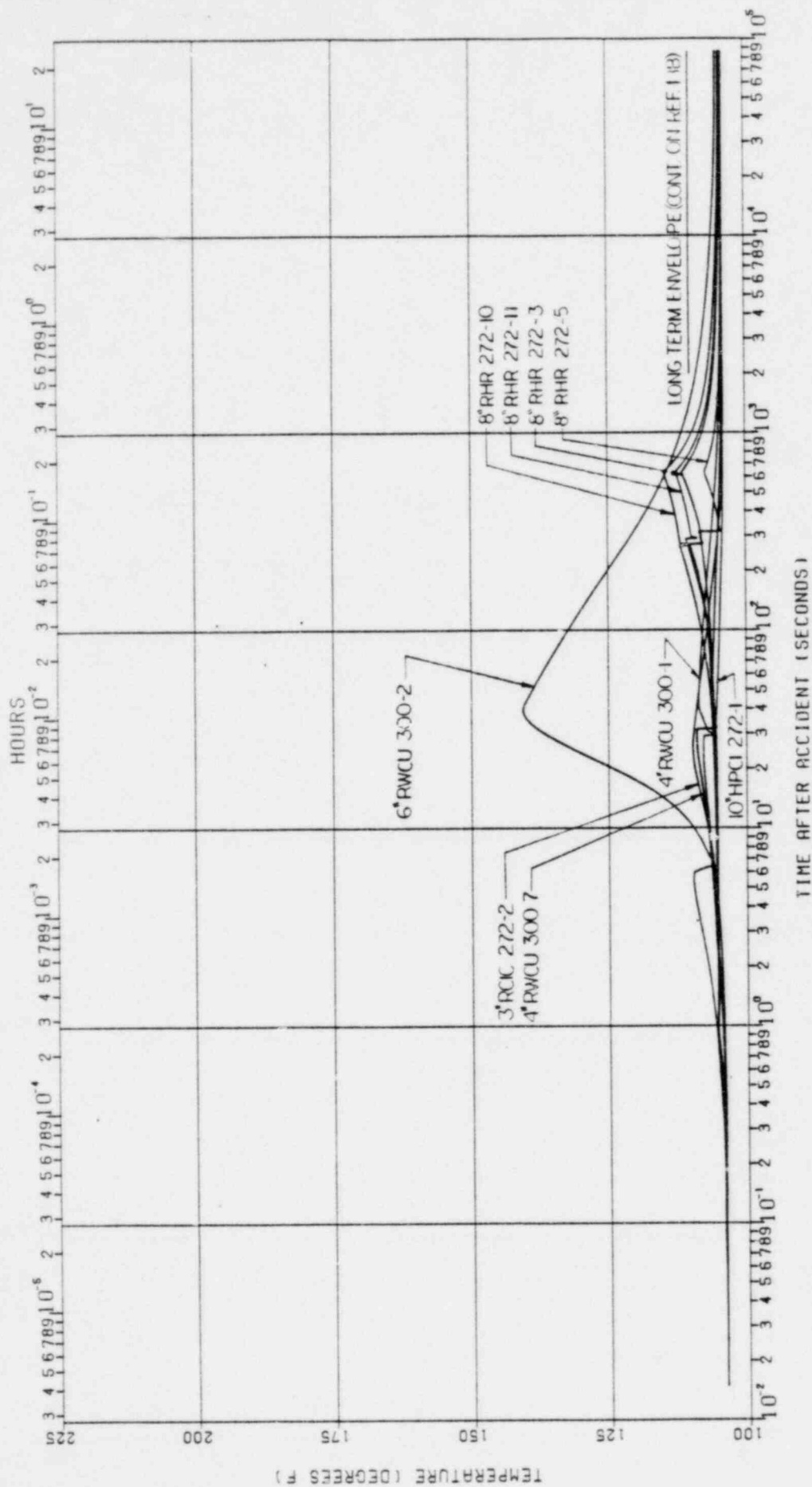


TEMPERATURE TRANSIENTS IN NODE 244-7  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



TEMPERATURE TRANSIENTS IN NODE 244-8  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF LE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT





POST LOCA & POST HELB  
LONG TERM

POST LOCA

POST HELB

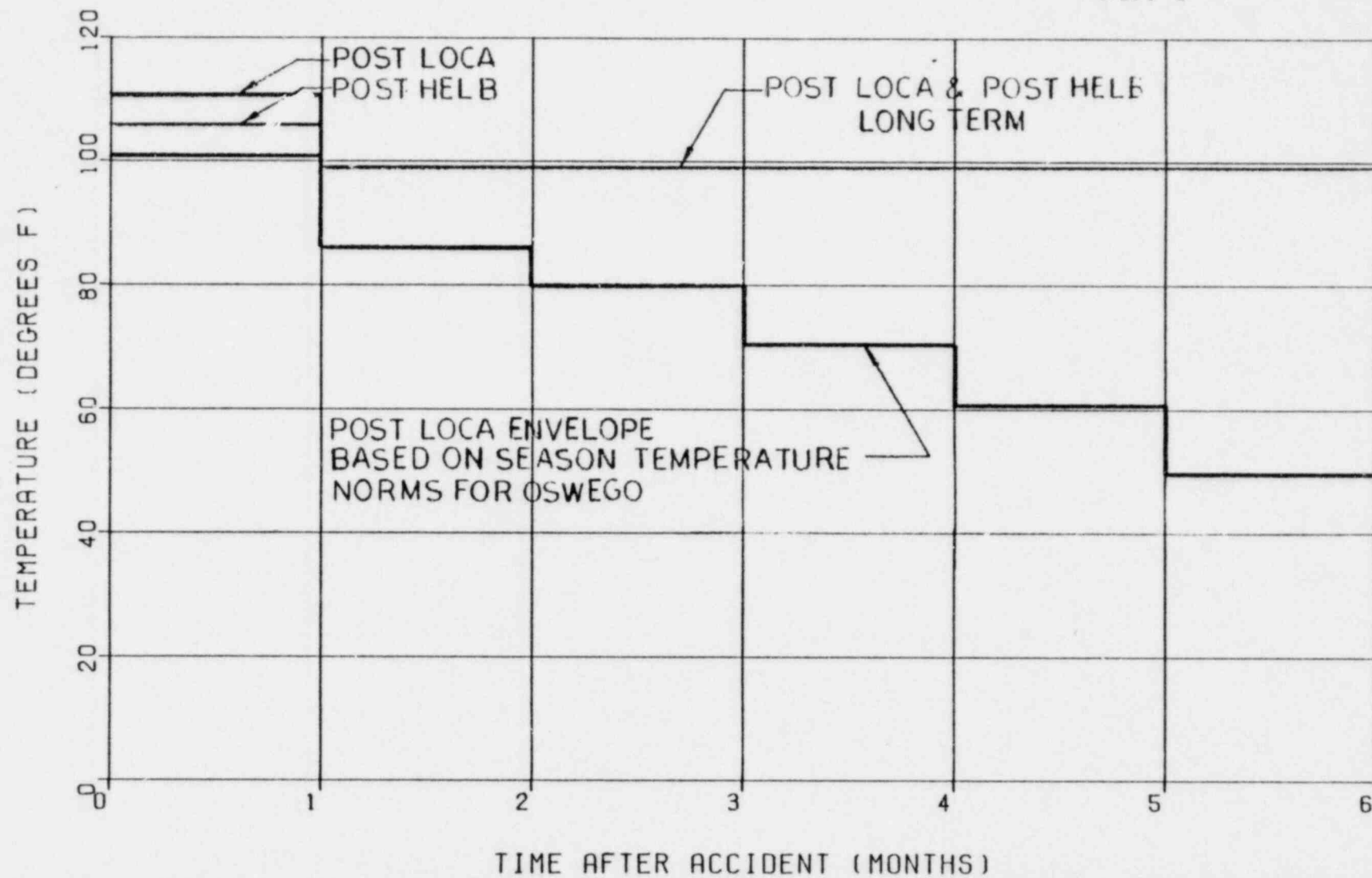
POST LOCA ENVELOPE  
BASED ON SEASON TEMPERATURE  
NORMS FOR OSWEGO

TEMPERATURE (DEGREES F)

TIME AFTER ACCIDENT (MONTHS)

TEMPERATURE TRANSIENTS IN NODES 344-344  
POST LOCA & POST HELB LONG TERM ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

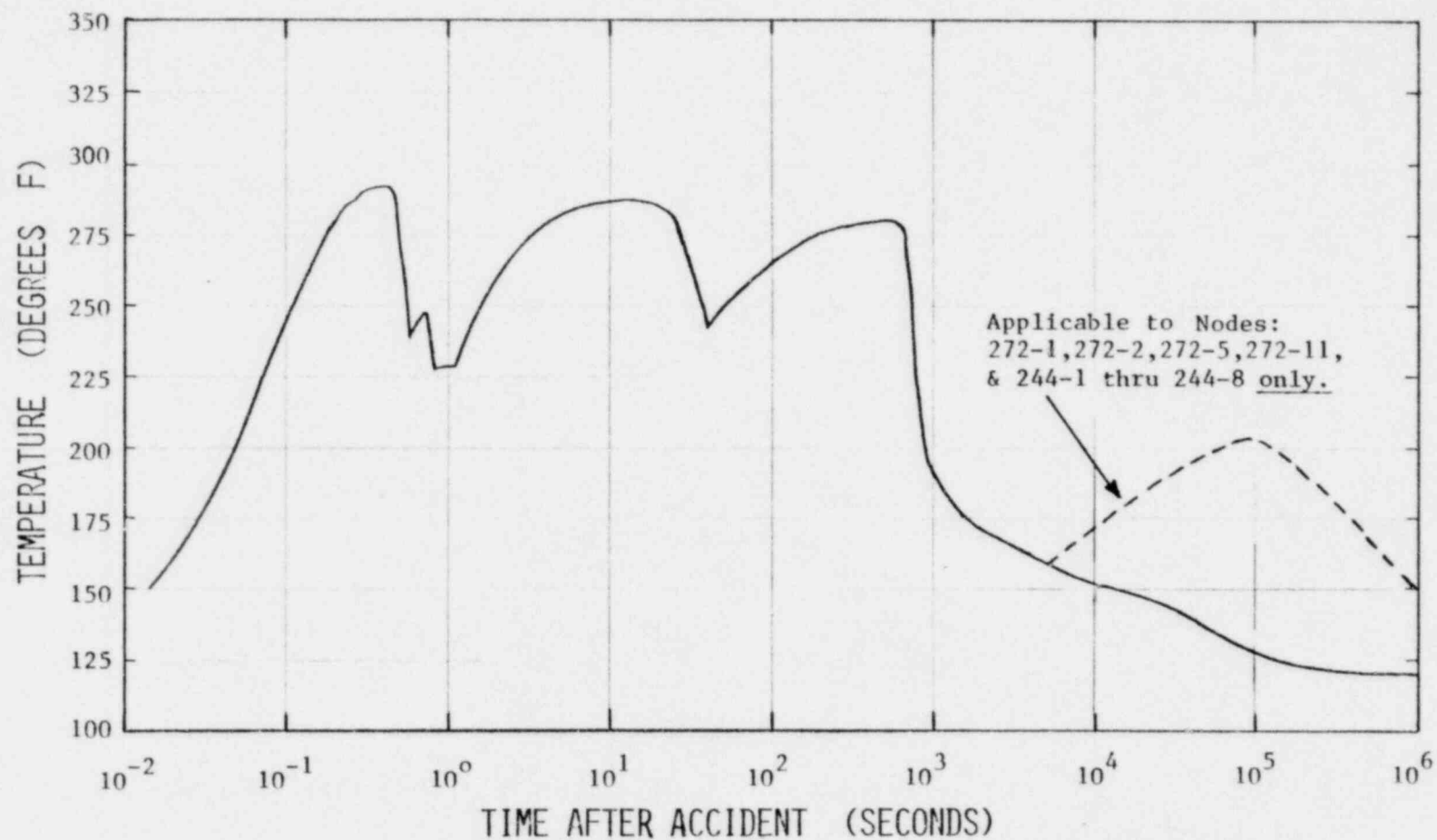
REV. 3



TEMPERATURE TRANSIENT OF REACTOR BLDG  
POST LOCA & POST HELB LONG TERM ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

REF. 1BC

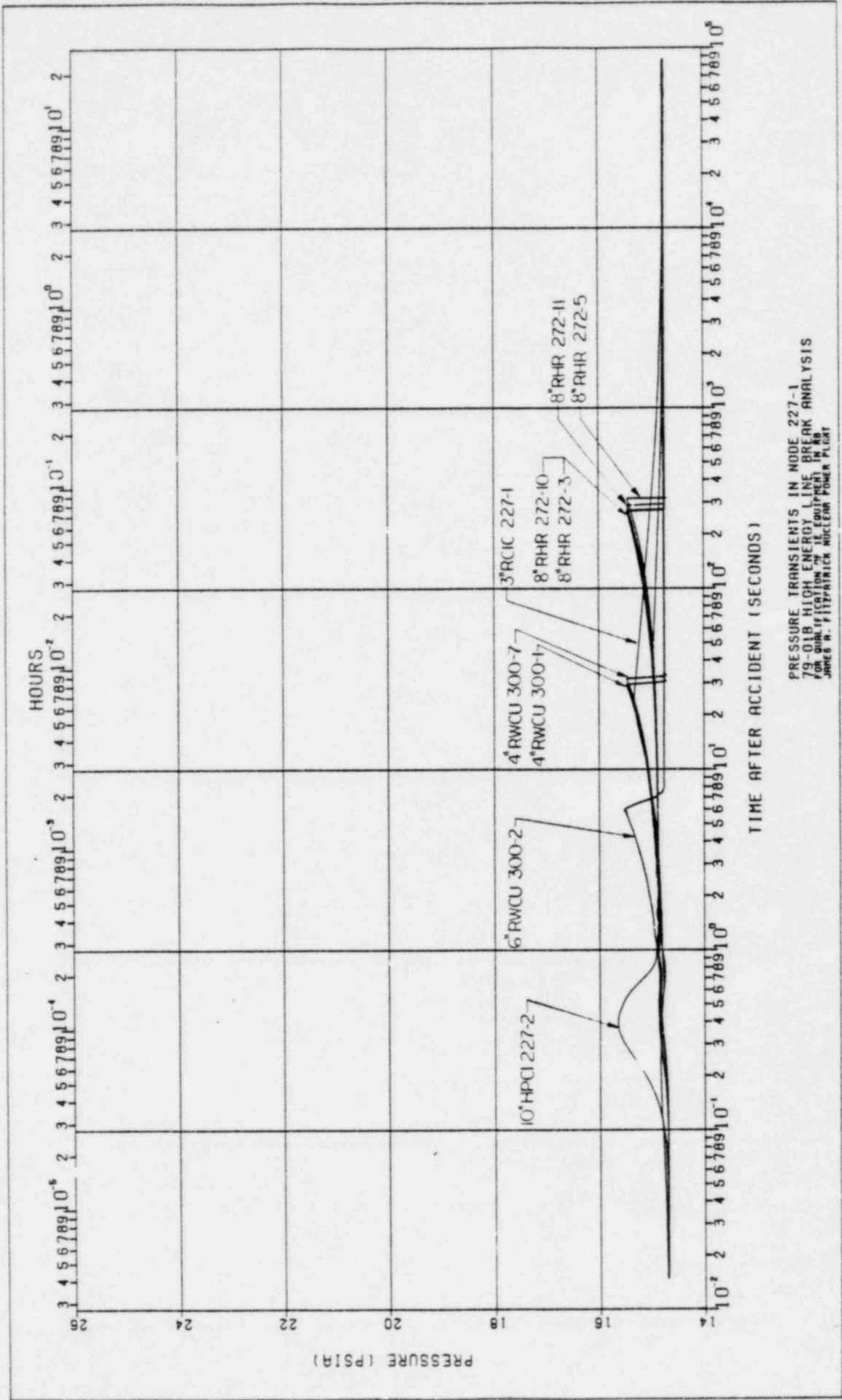
REV. 4

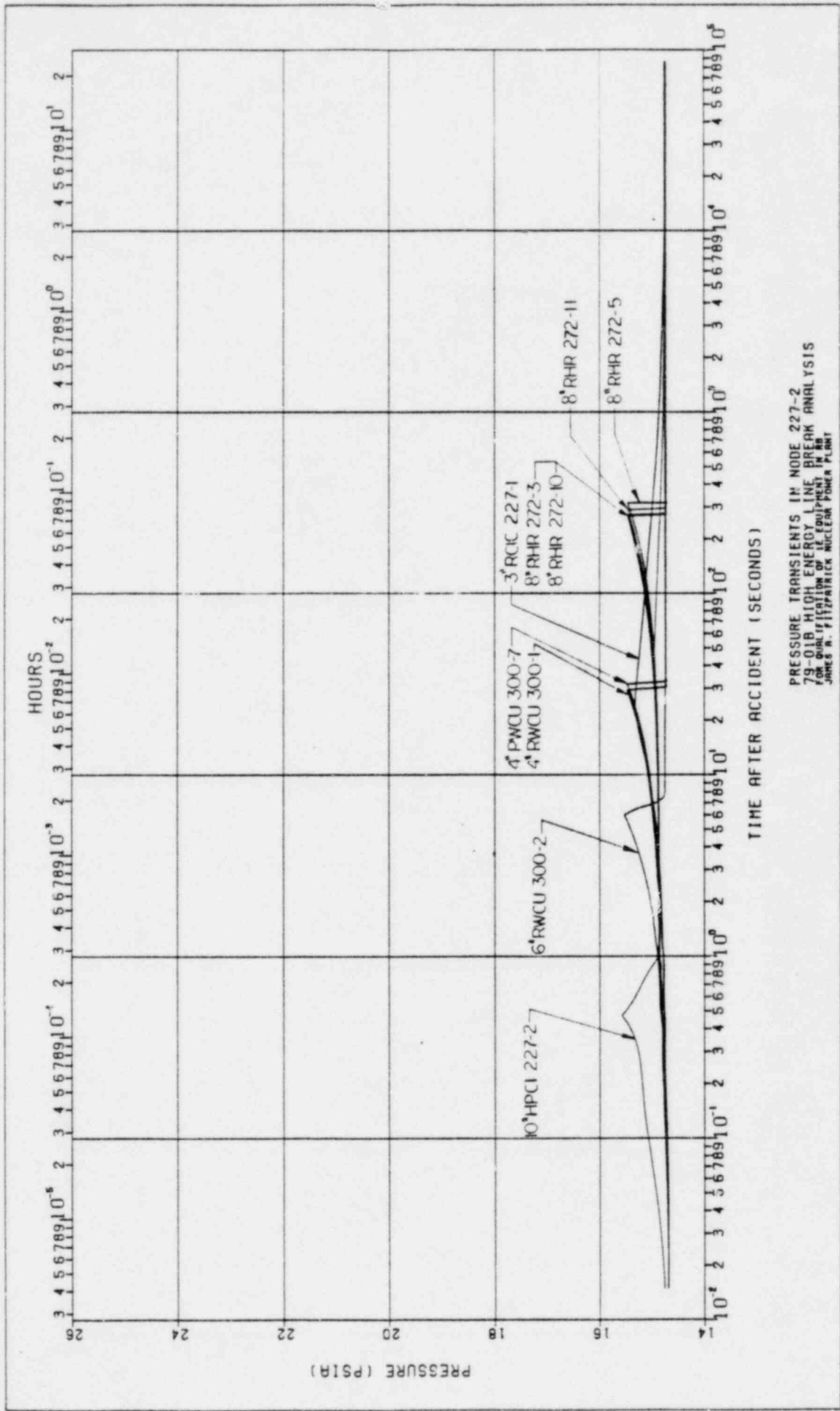


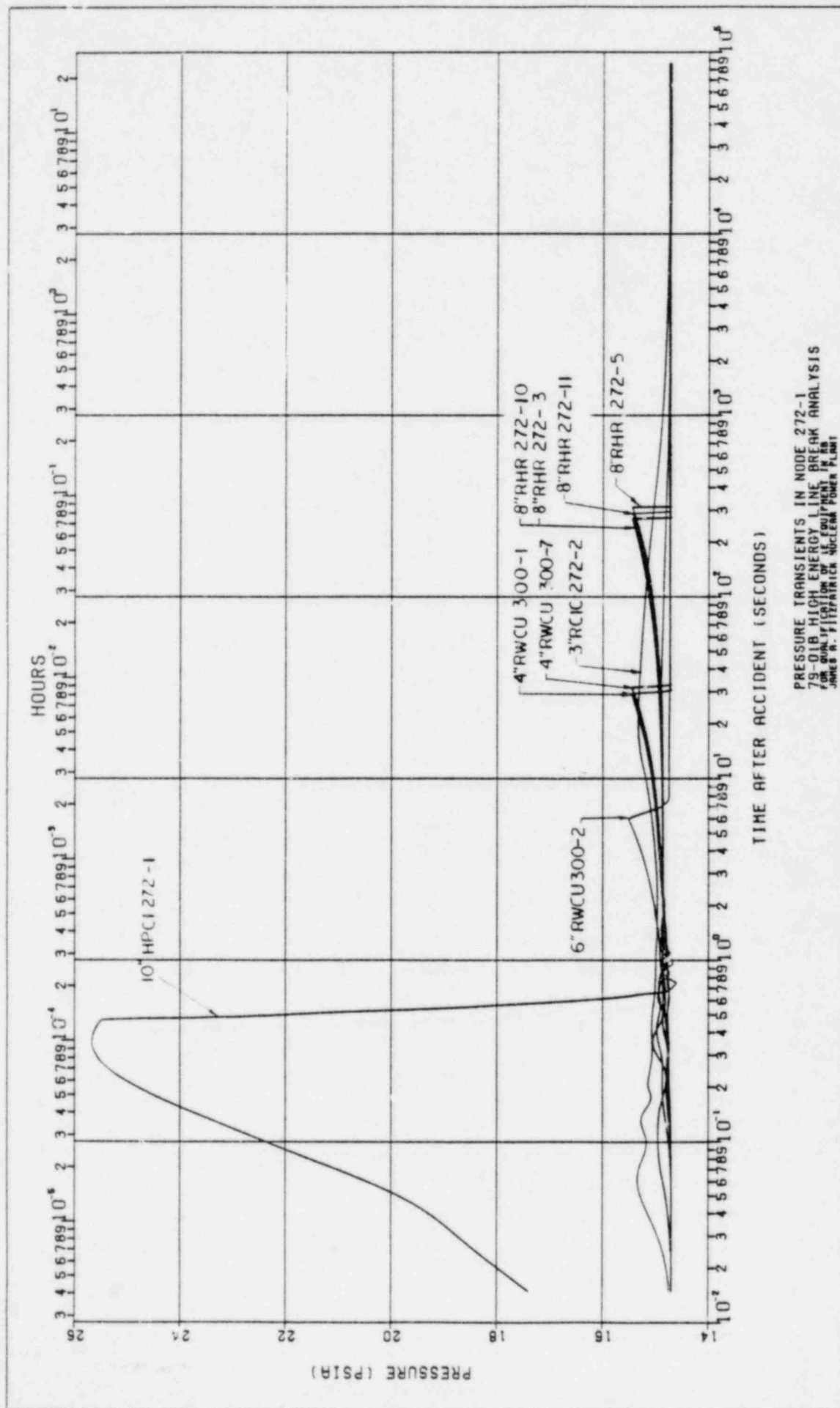
ENVELOPING TEMPERATURE TRANSIENTS OF REACTOR BUILDING  
POST LOCA & POST HELB  
(Envelopes curves 1A thru 1BC)  
FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

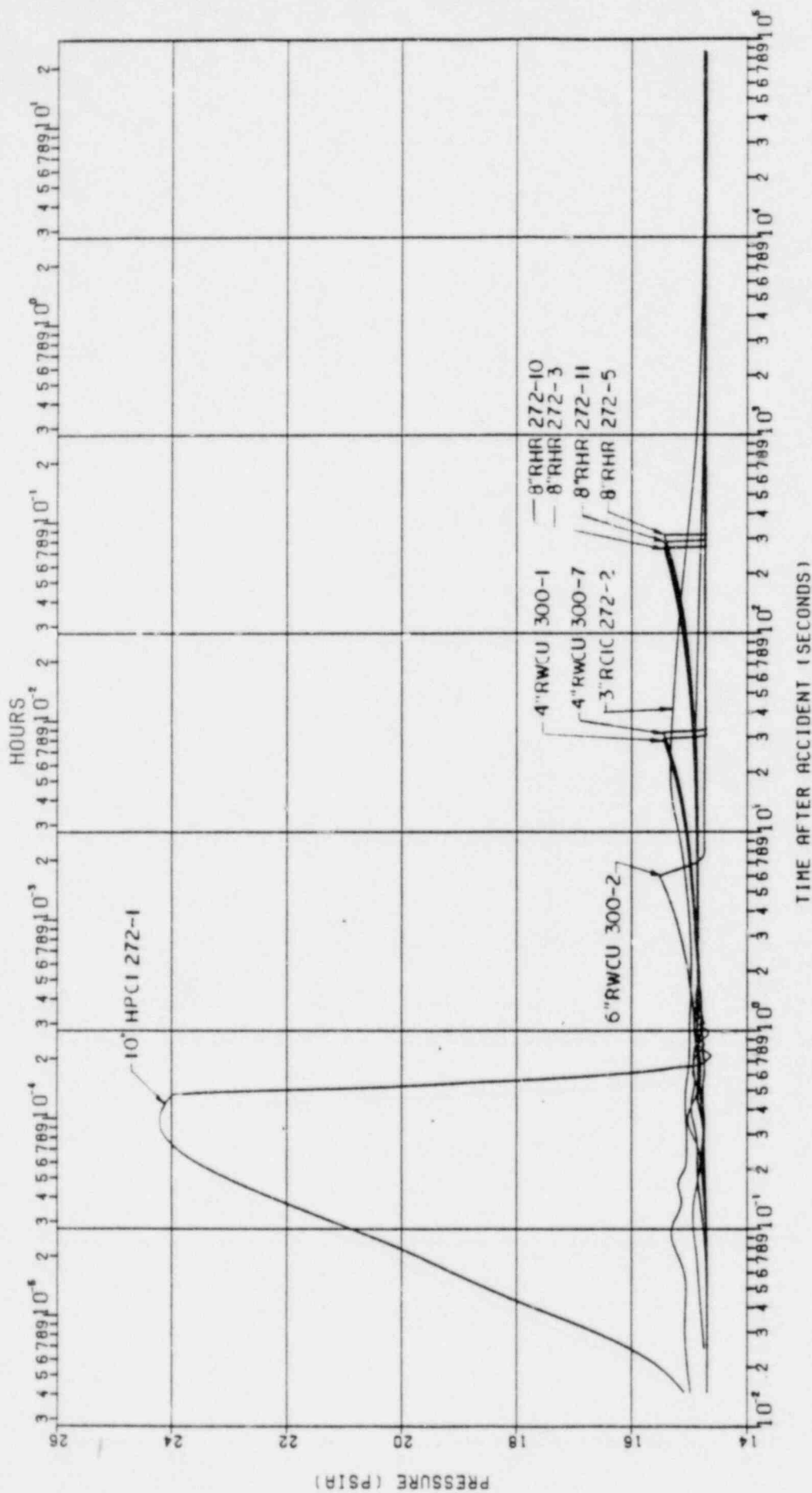
REF. 1BD



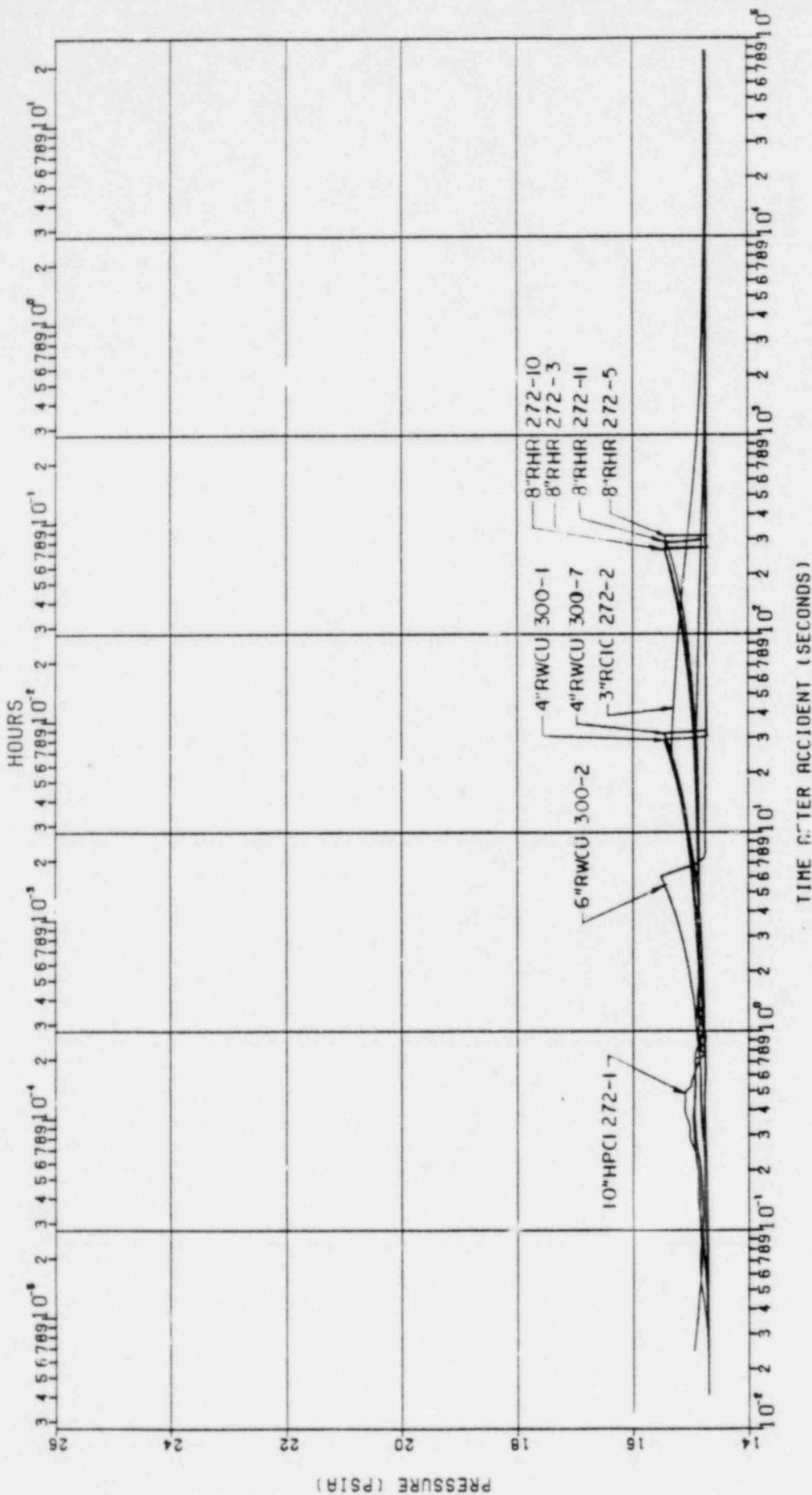




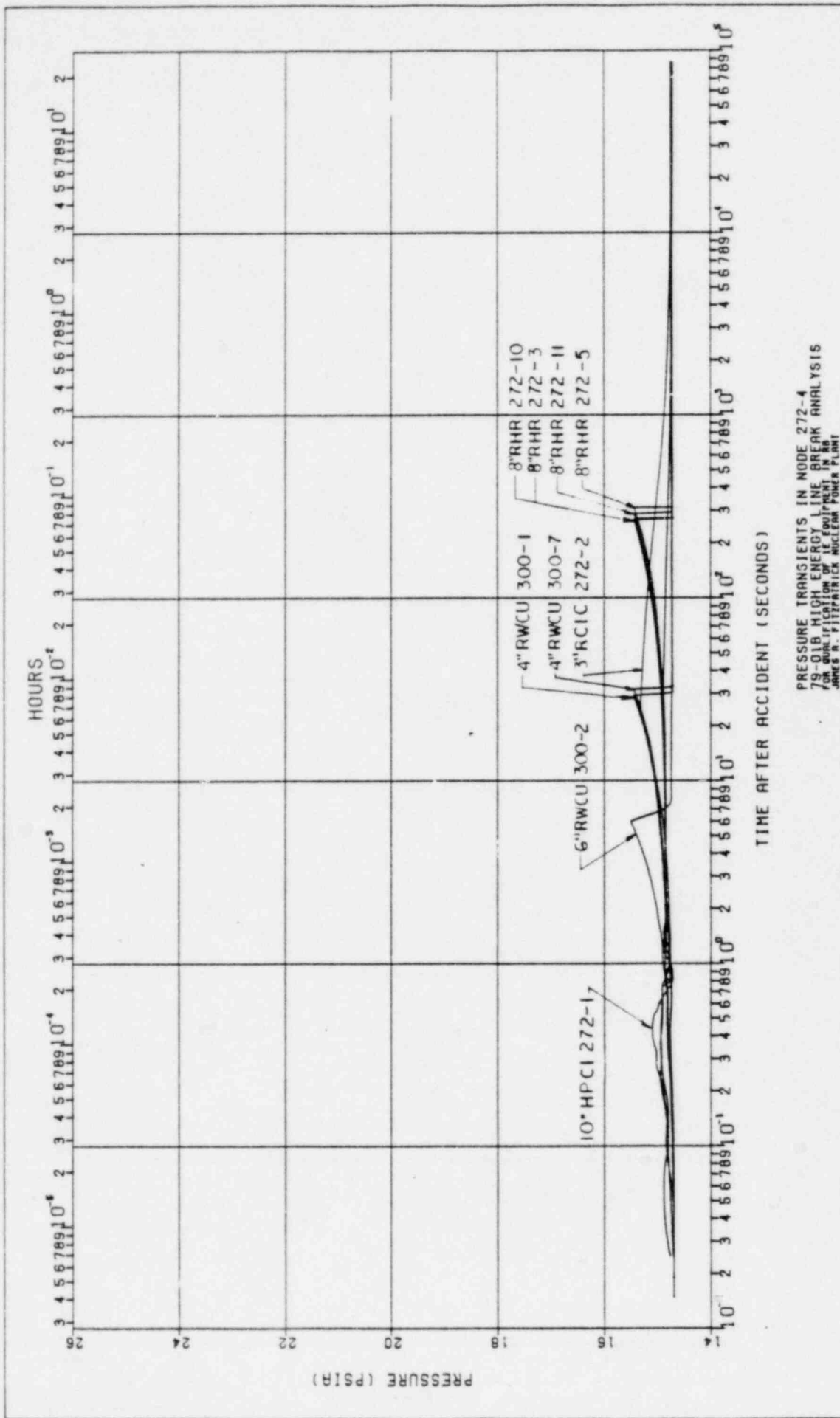




PRESSURE TRANSIENTS IN NODE 272-2  
 79-018 HIGH ENERGY LINE BREAK ANALYSIS  
 FOR QUALIFICATION OF TELEFLOW<sup>TM</sup> 14.08  
 JAMES A. FLEPPATER NUCLEAR POWER PLANT

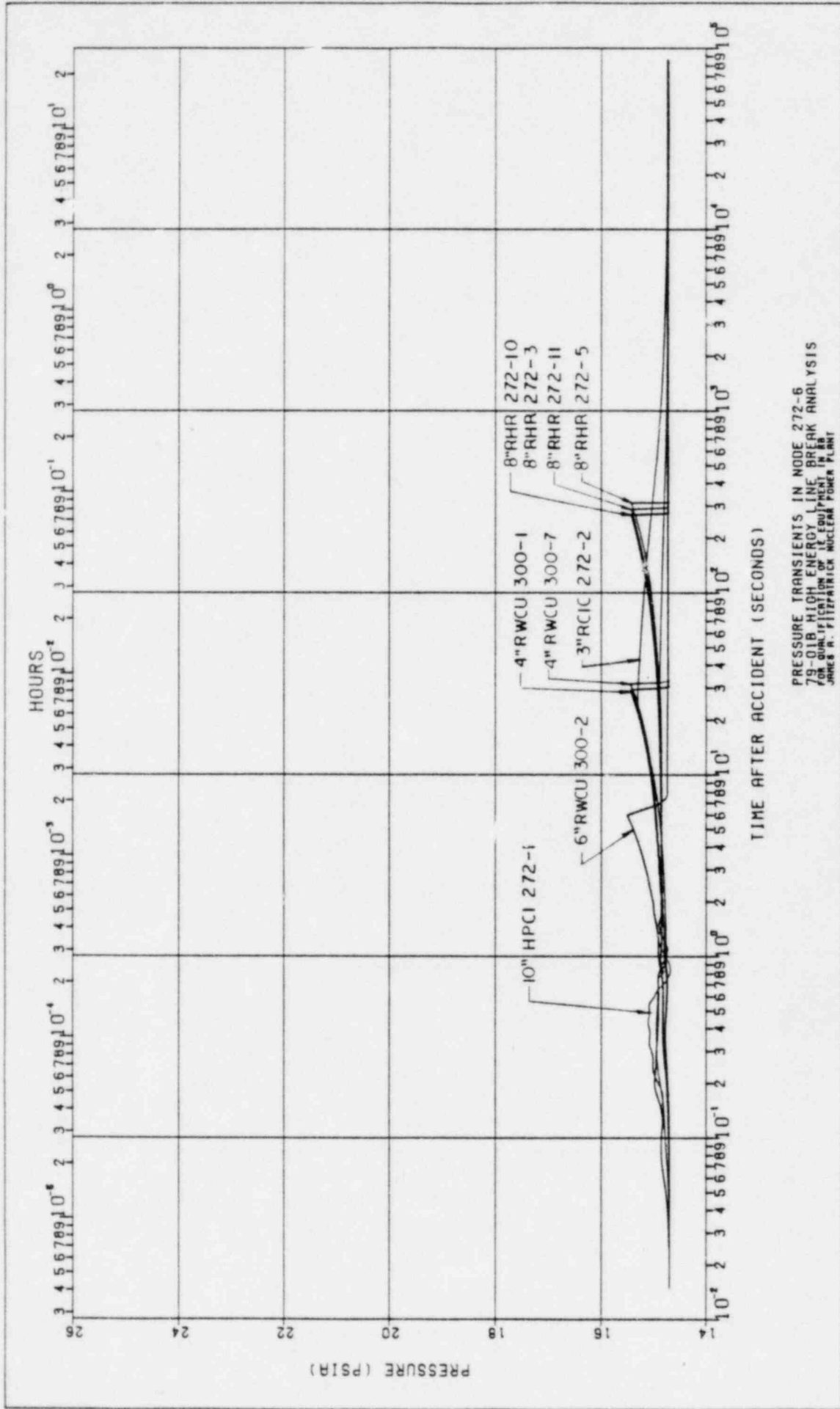


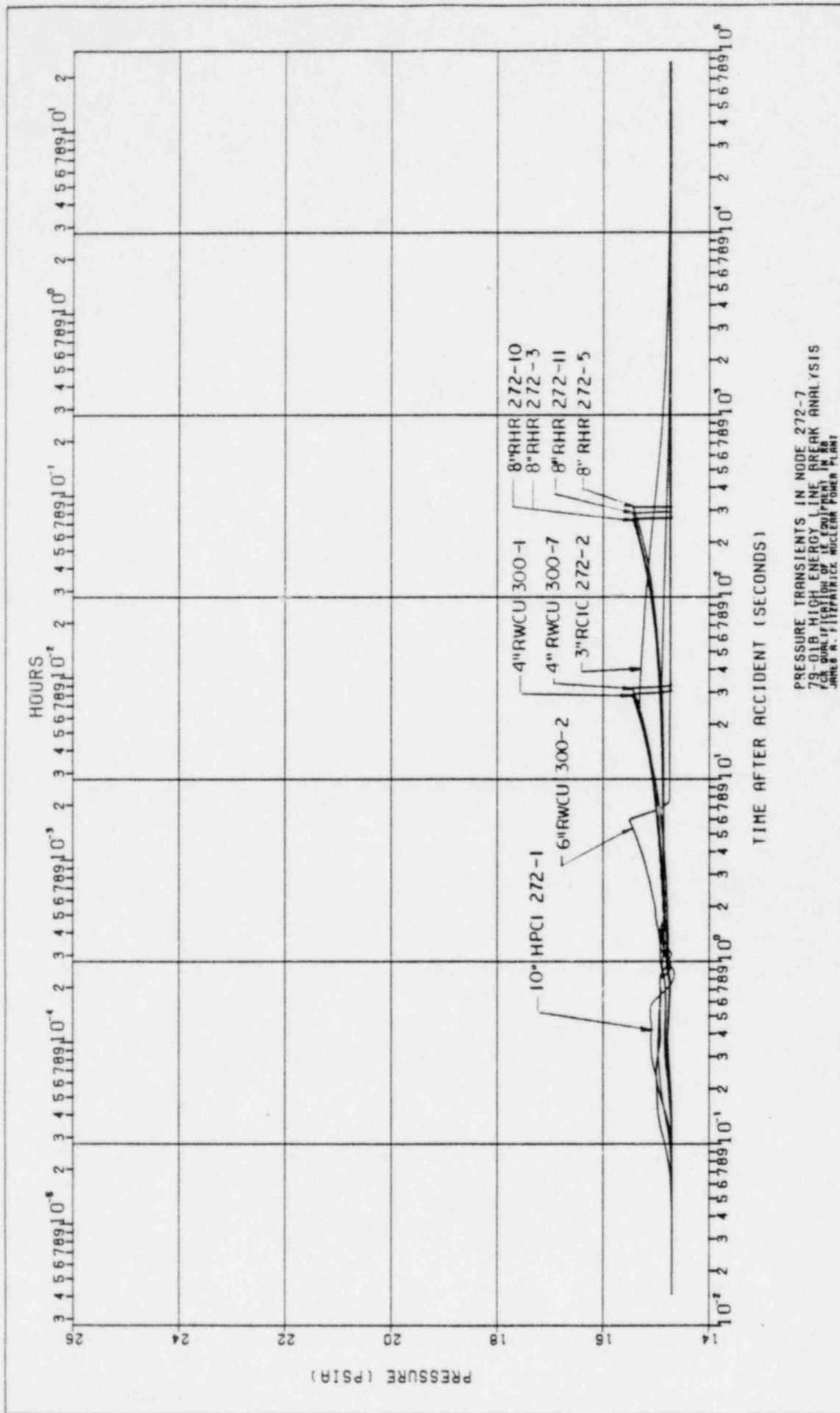
PRESSURE TRANSIENTS IN NODE 272-3  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF THE EQUIPMENT IN AS  
JAMES A. FLETCHER NUCLEAR POWER PLANT



REF. 2G

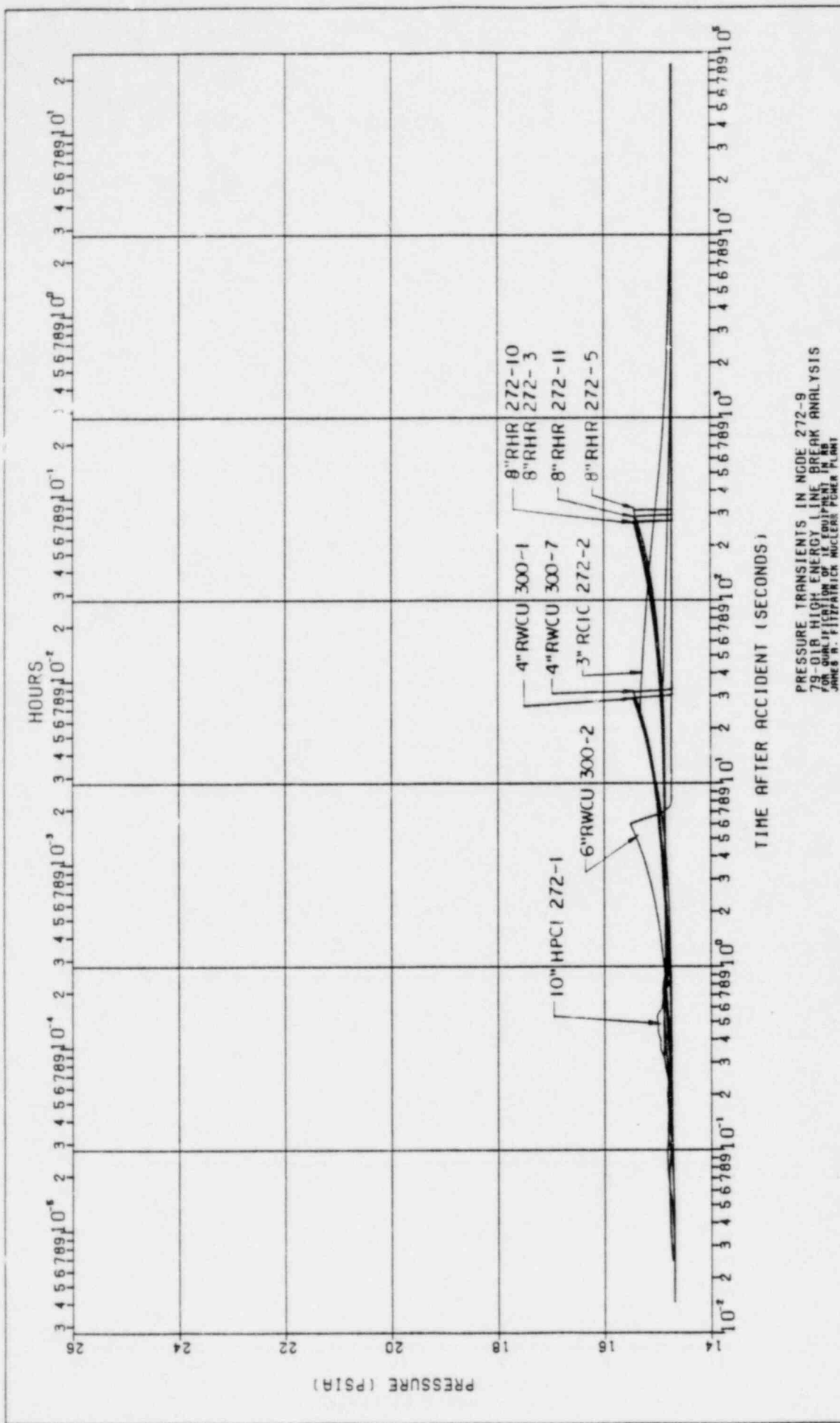


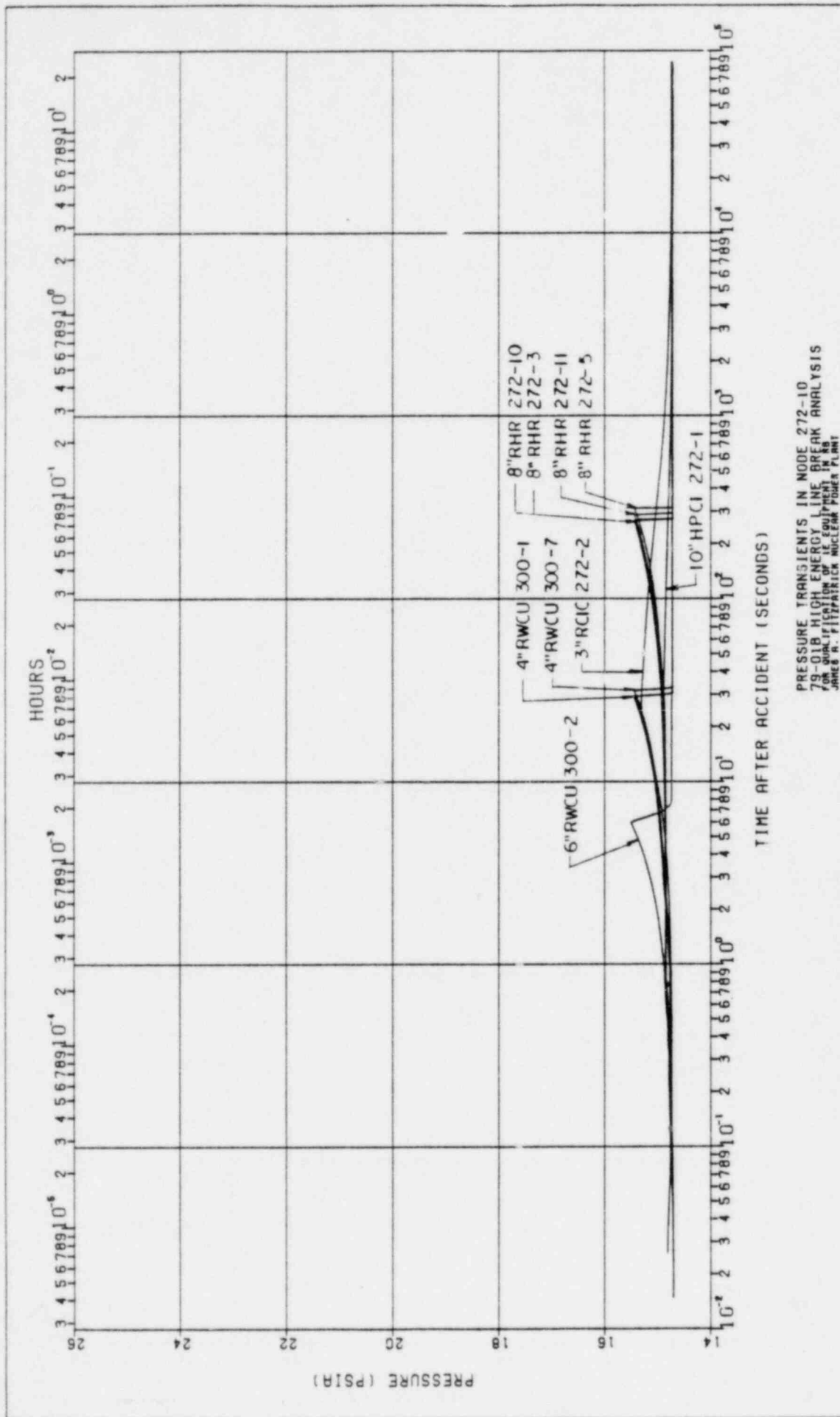




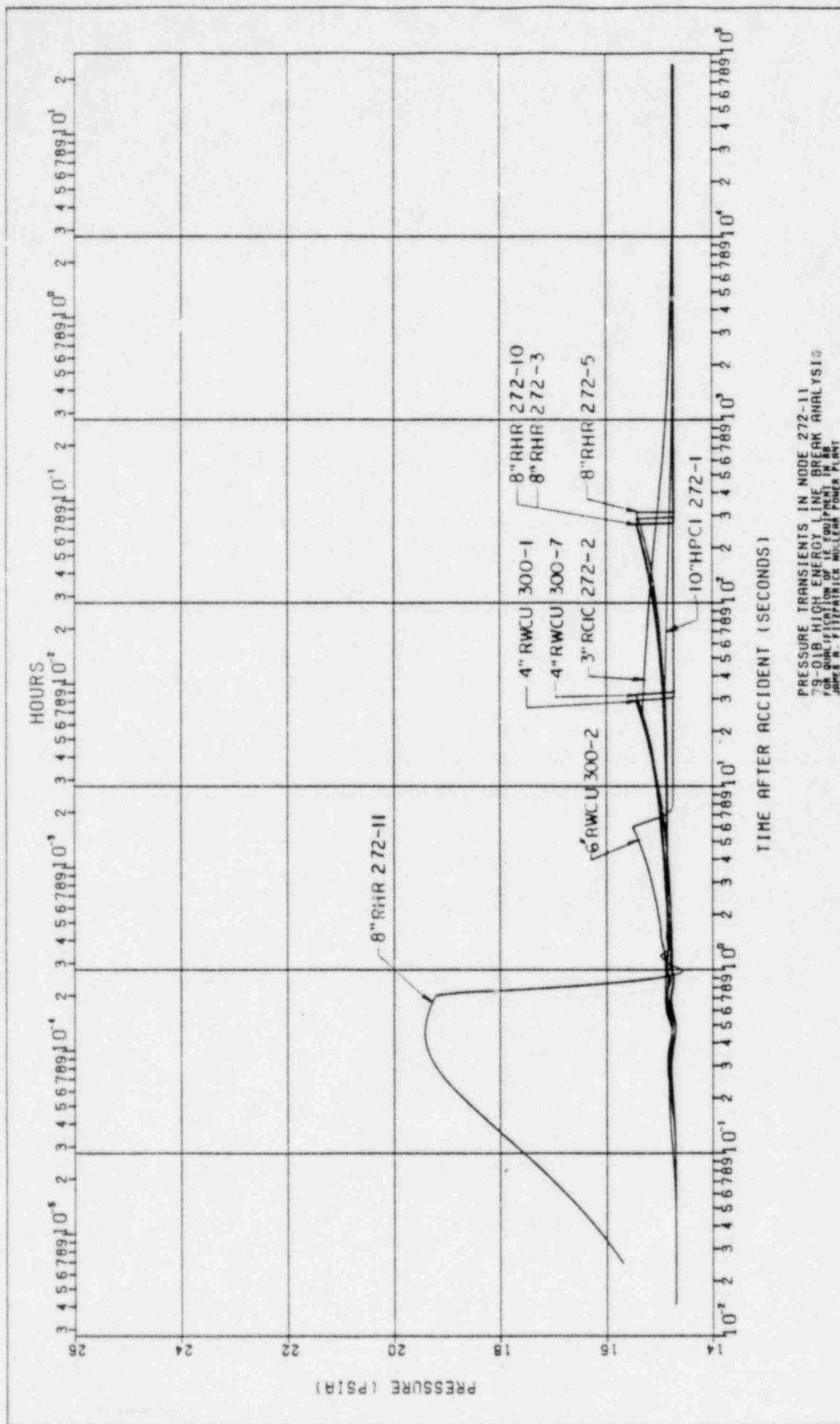
PRESSURE TRANSIENTS IN NODE 272-7  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF 1E20 PLANT IN 80  
JAMES A. HERRINGTON NUCLEAR POWER PLANT

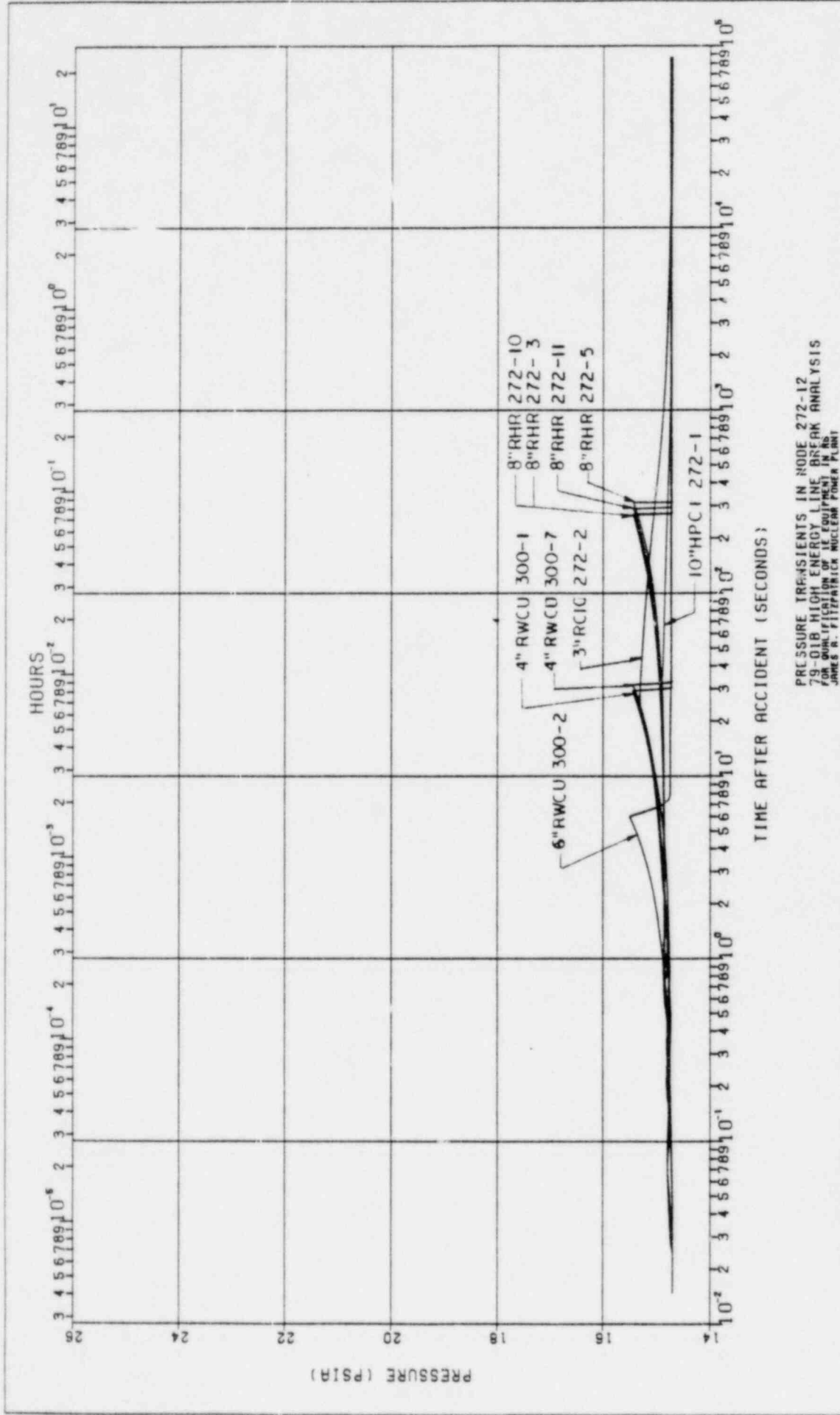
PRESSURE TRANSIENTS IN NCDE 272-8  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES R. FITZPATRICK NUCLEAR POWER PLANT



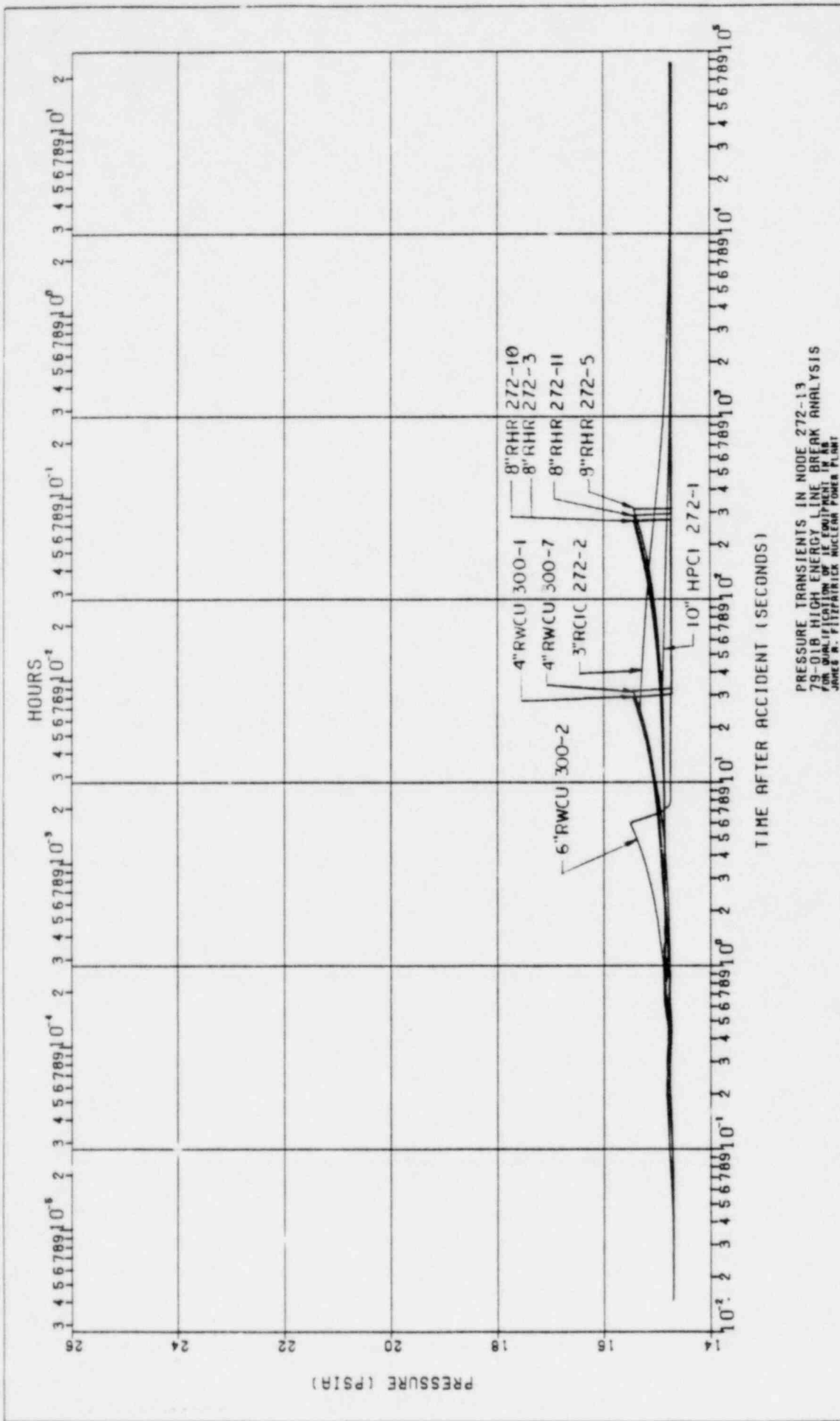


PRESSURE TRANSIENTS IN NODE 272-10  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF LEEDS NUCLEAR  
JAMES H. FLIPPAERT NUCLEAR POWER PLANT

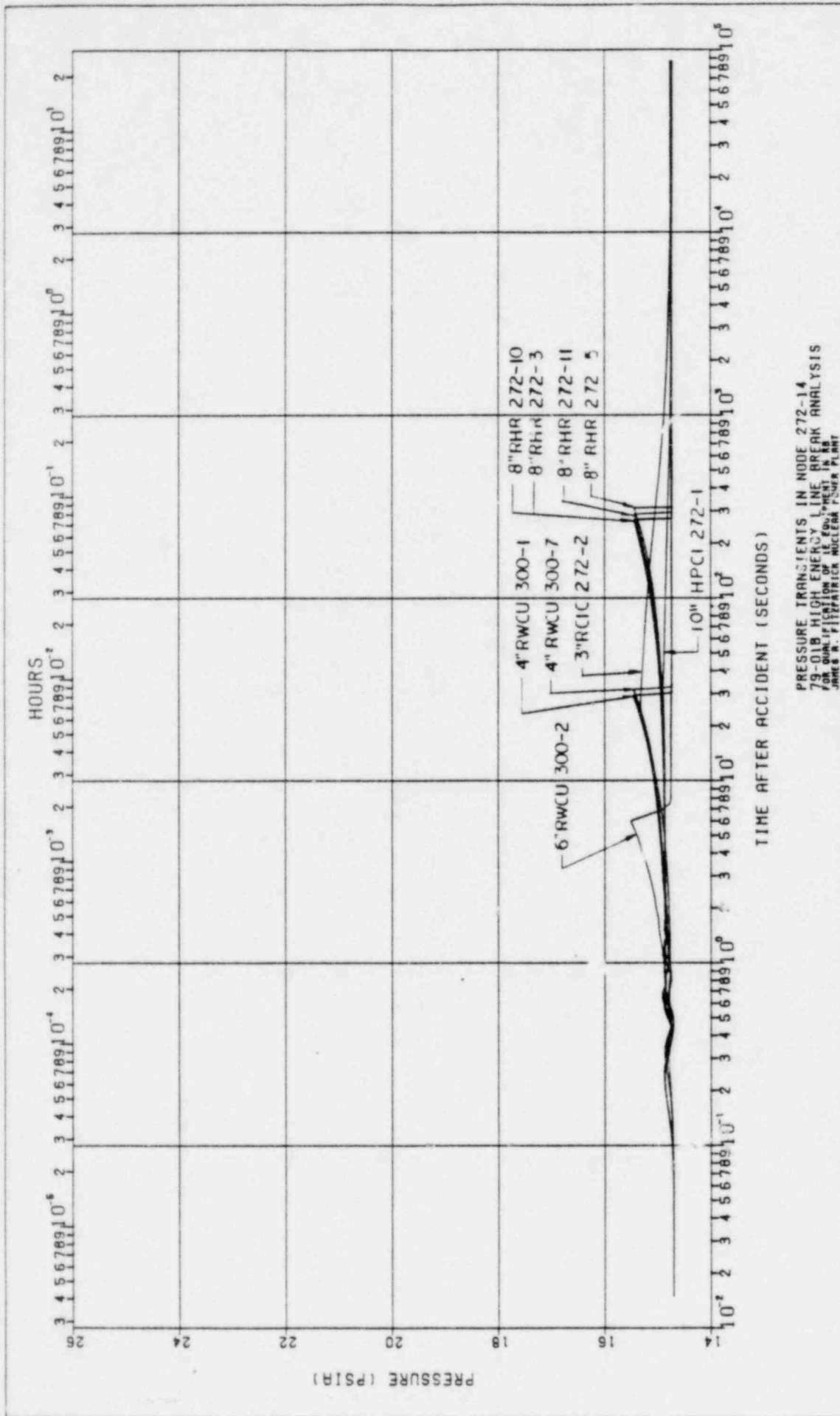




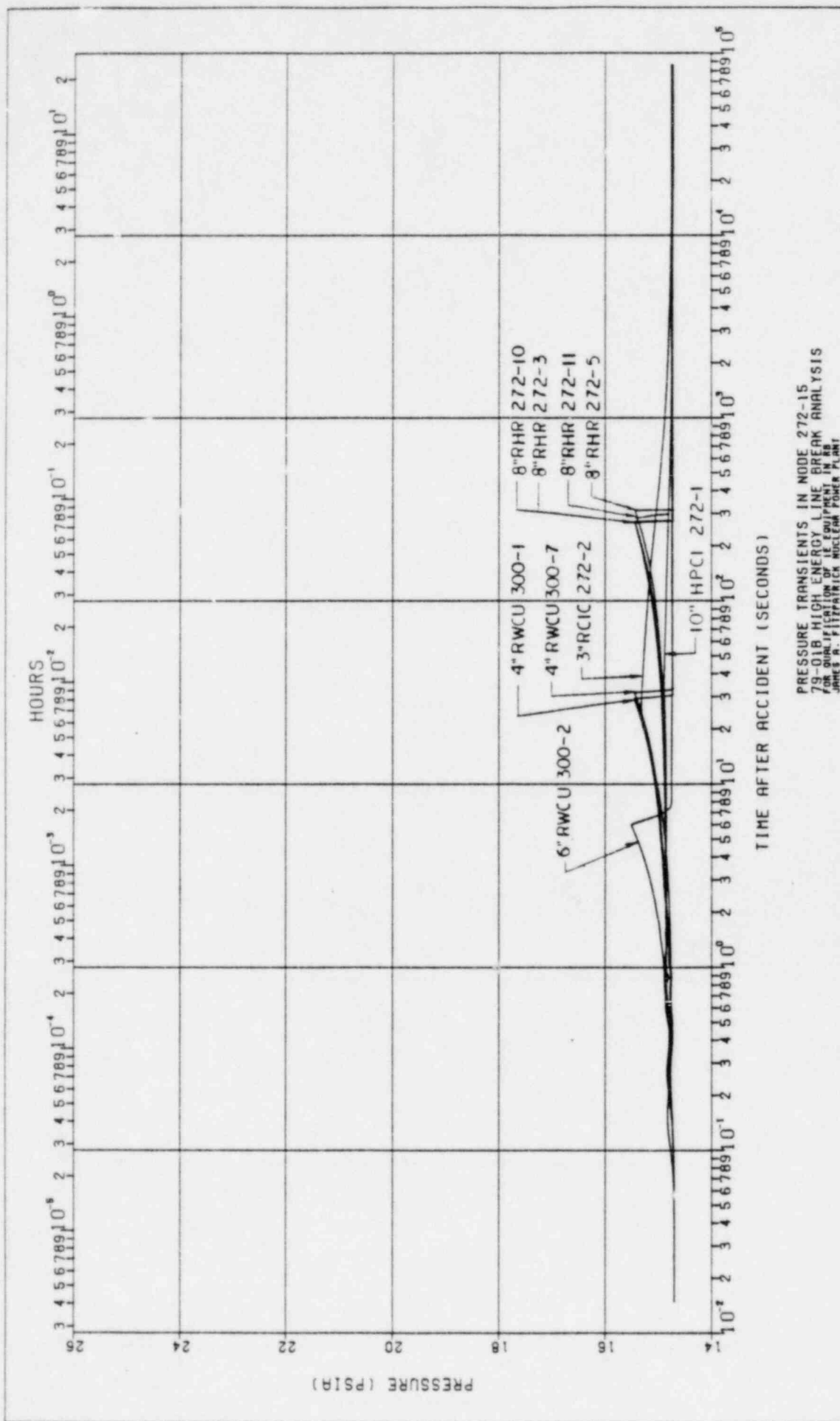


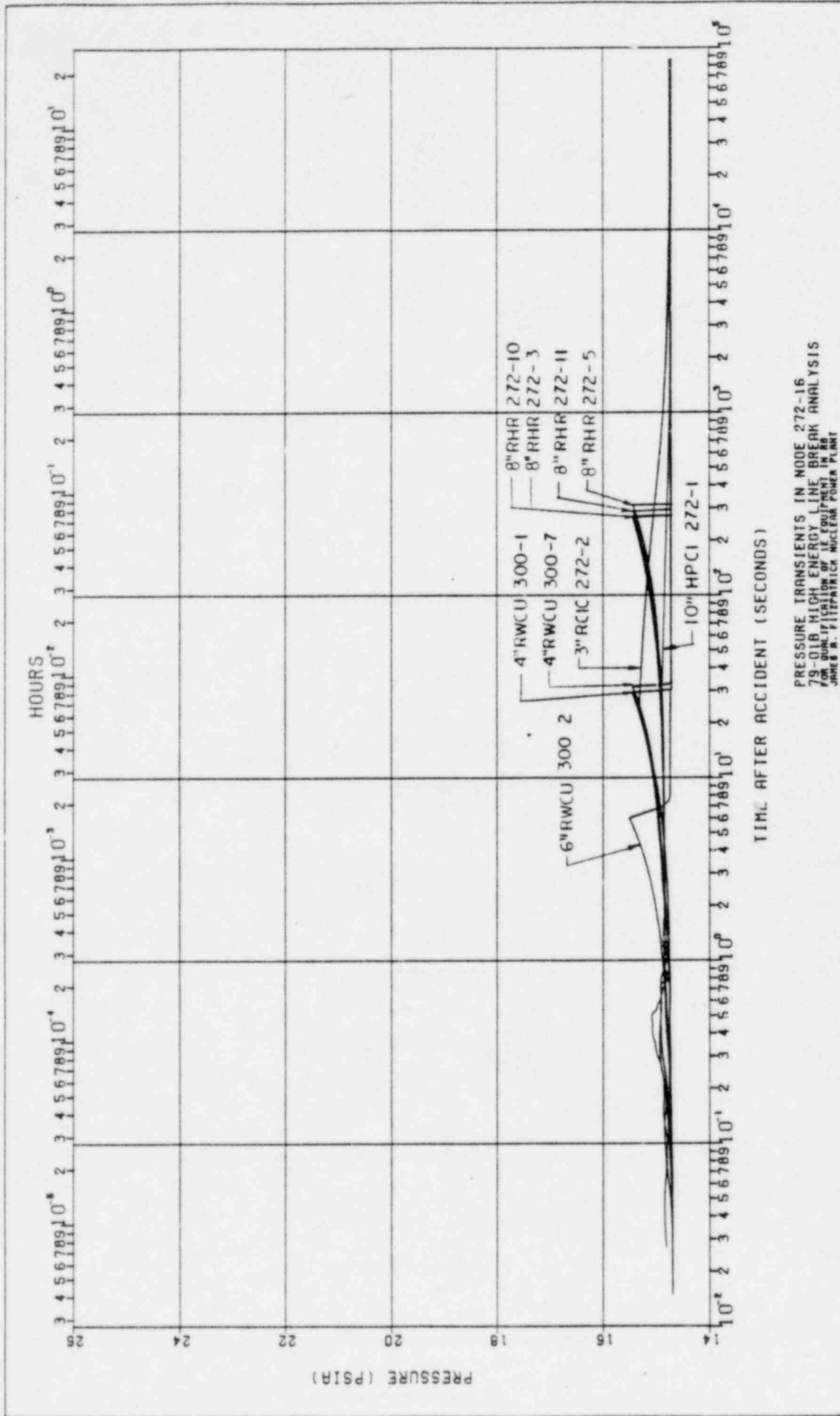


PRESSURE TRANSIENTS IN NODE 272-13  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF EQUIPMENT IN AS  
JAMES R. FITZPATRICK NUCLEAR POWER PLANT

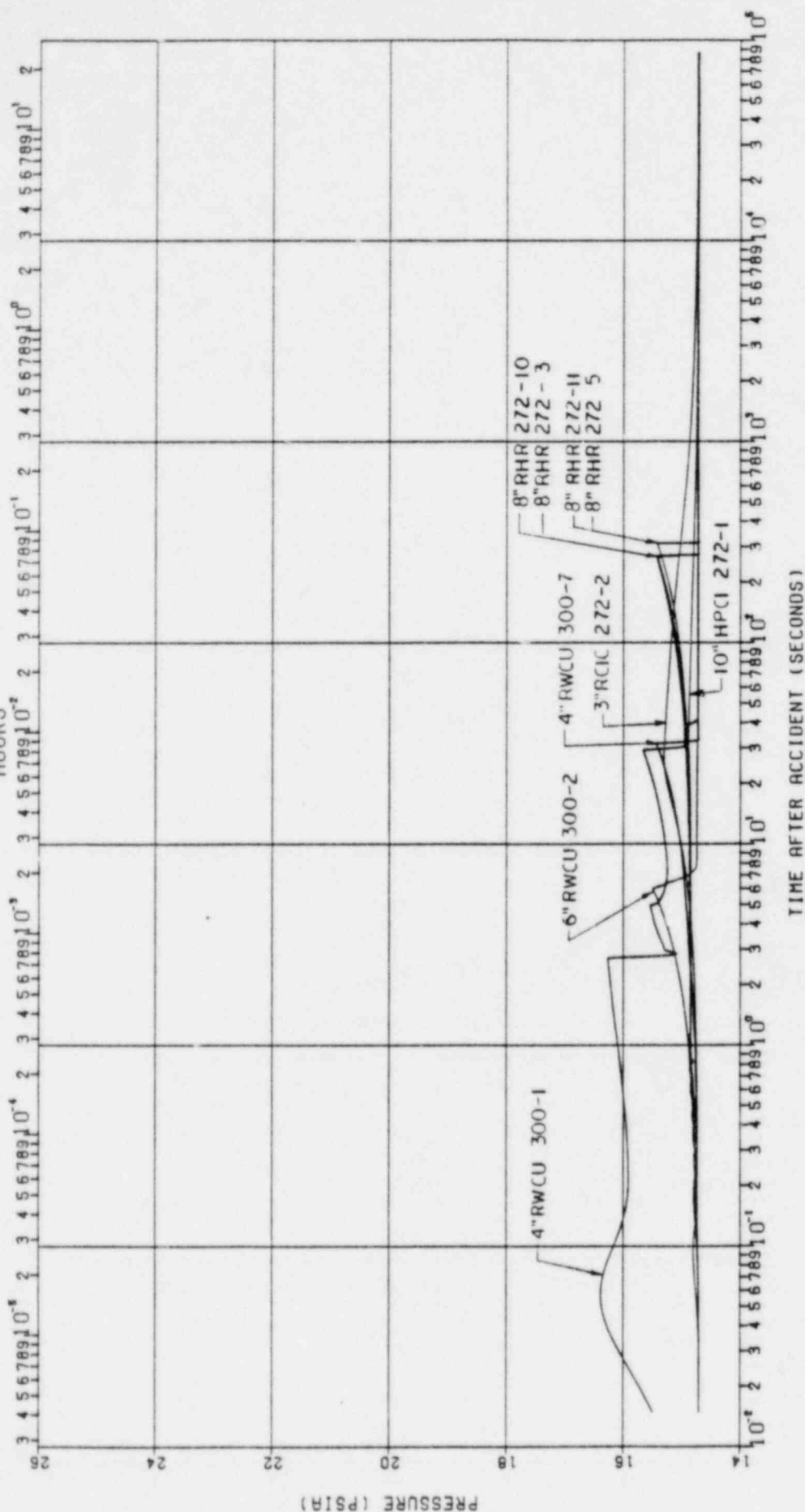


PRESSURE TRANSIENTS IN NODE 272-14  
79-OLD HIGH ENERGY LINE BREAK ANALYSIS  
FOR ONE PIPE BREAK AT  
JAMES H. FLEETWICK NUCLEAR POWER PLANT

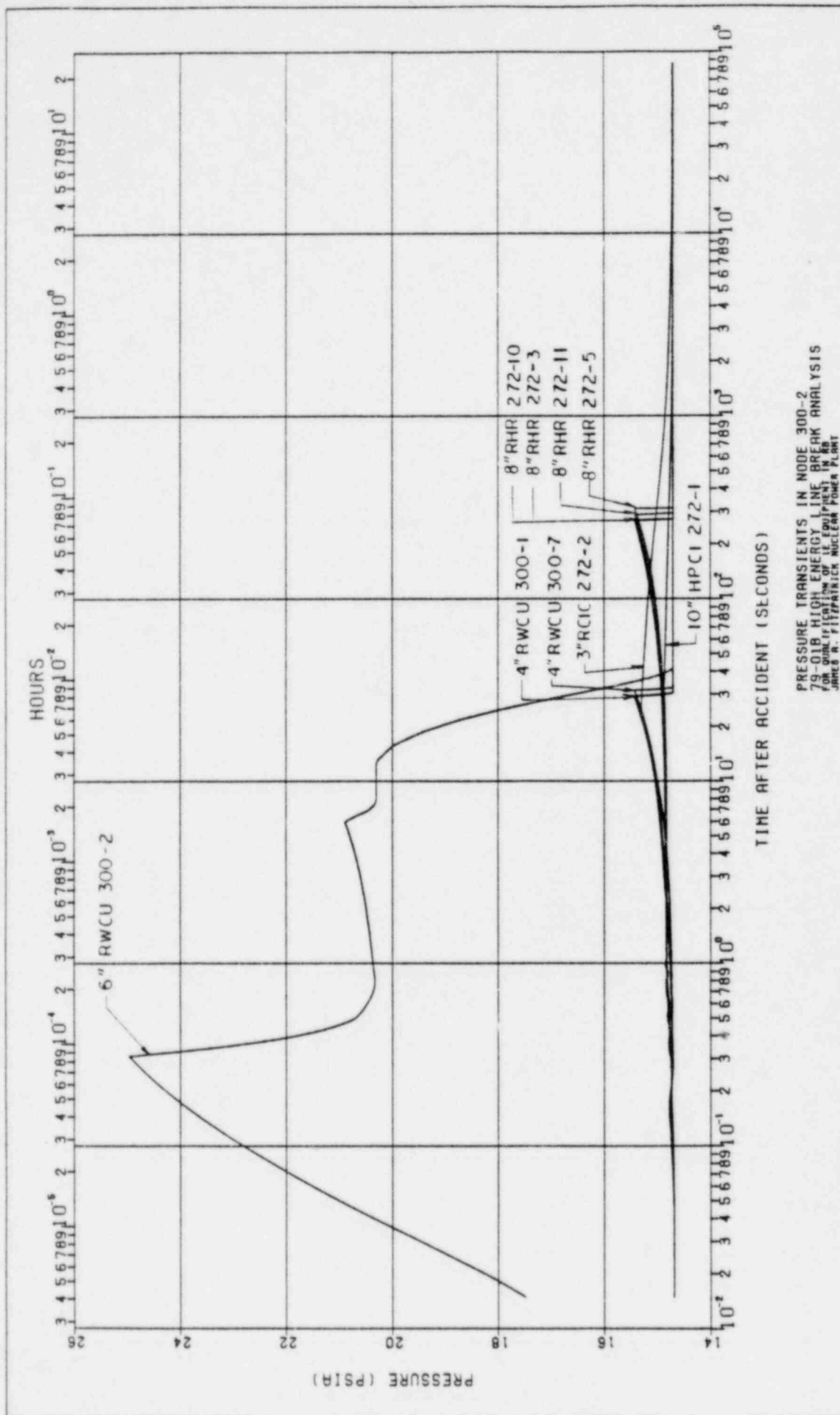




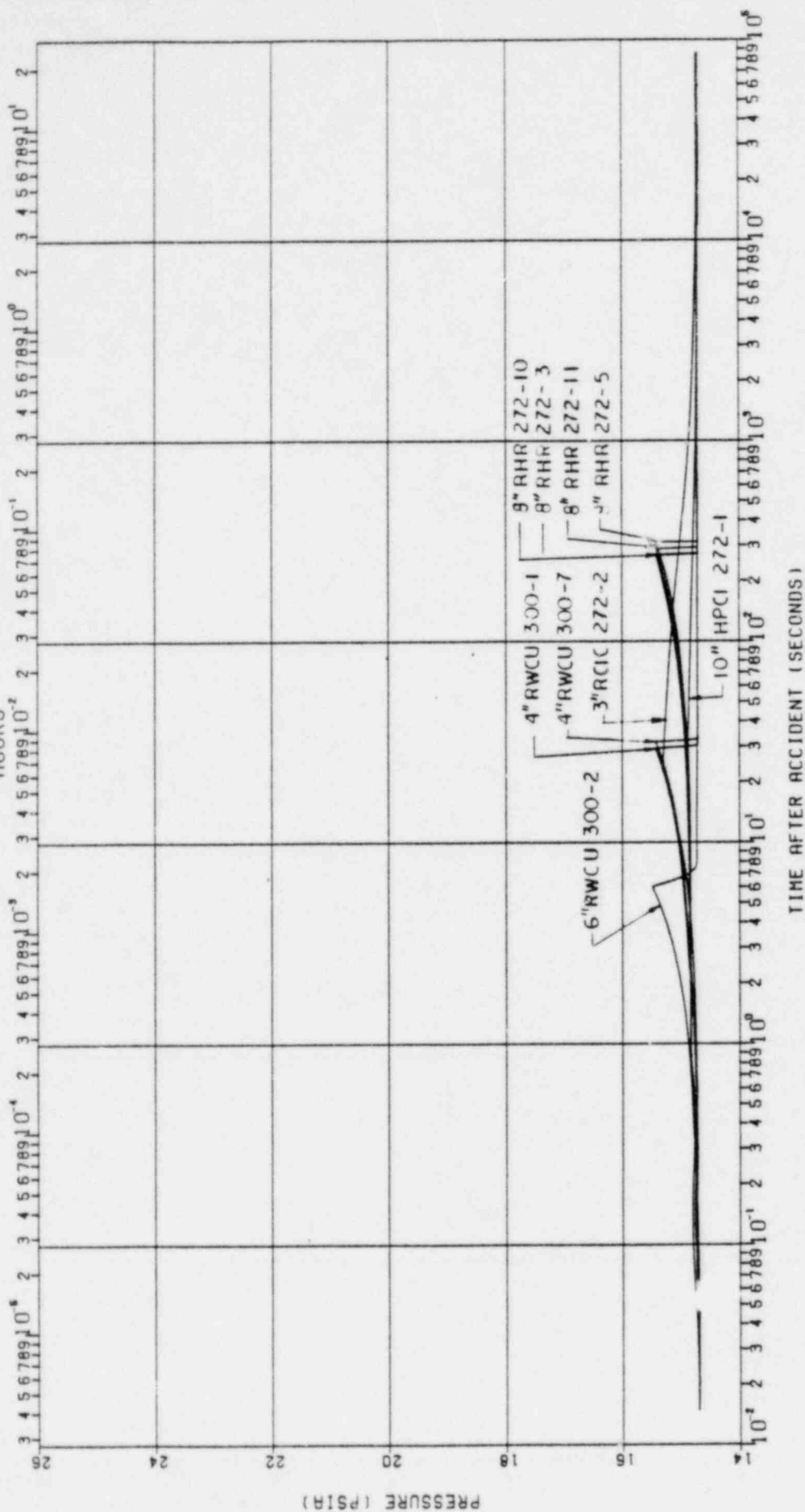
HOURS



PRESSURE TRANSIENTS IN MODE 300-1  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN AS  
JAMES H. FITZPATRICK NUCLEAR POWER PLANT

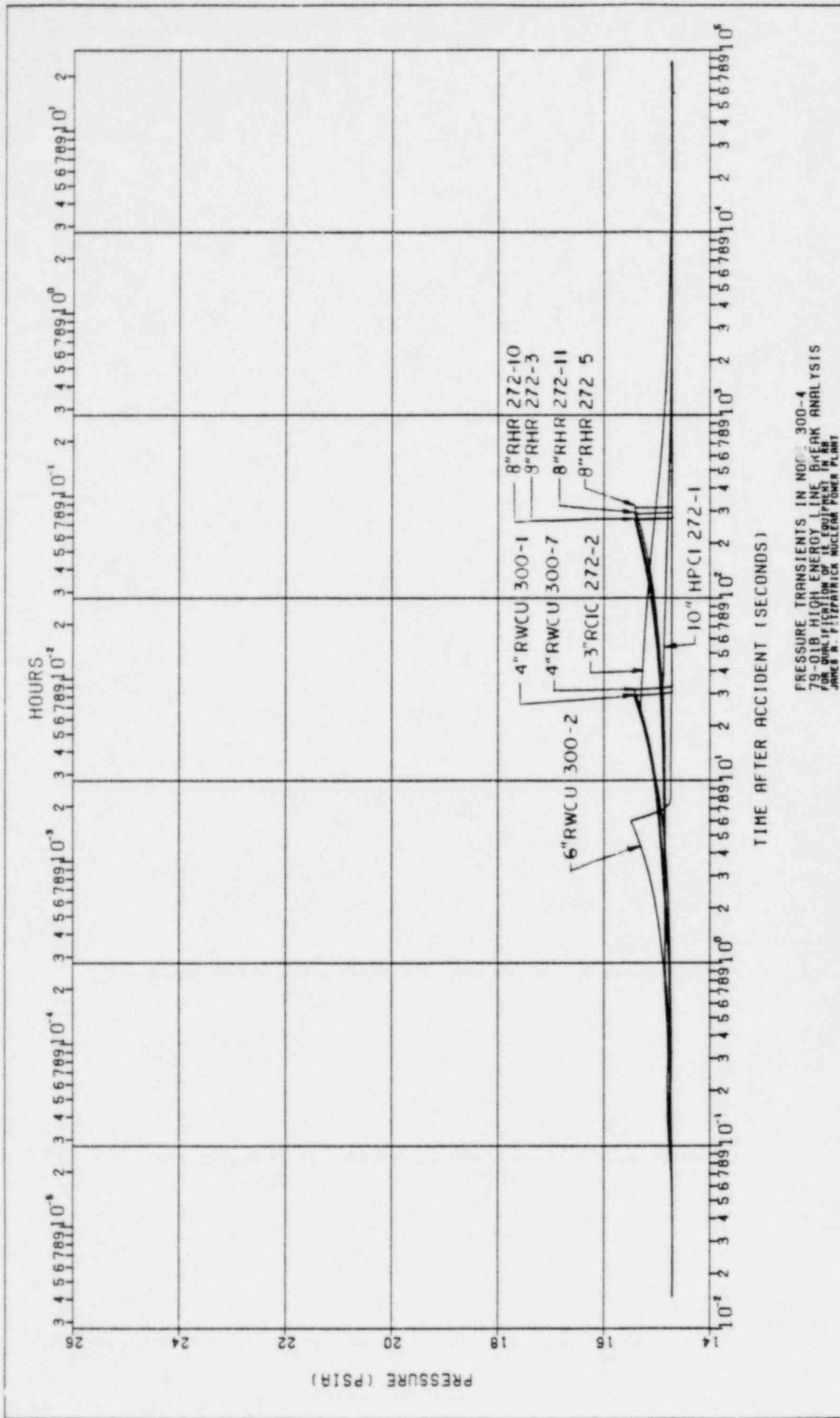


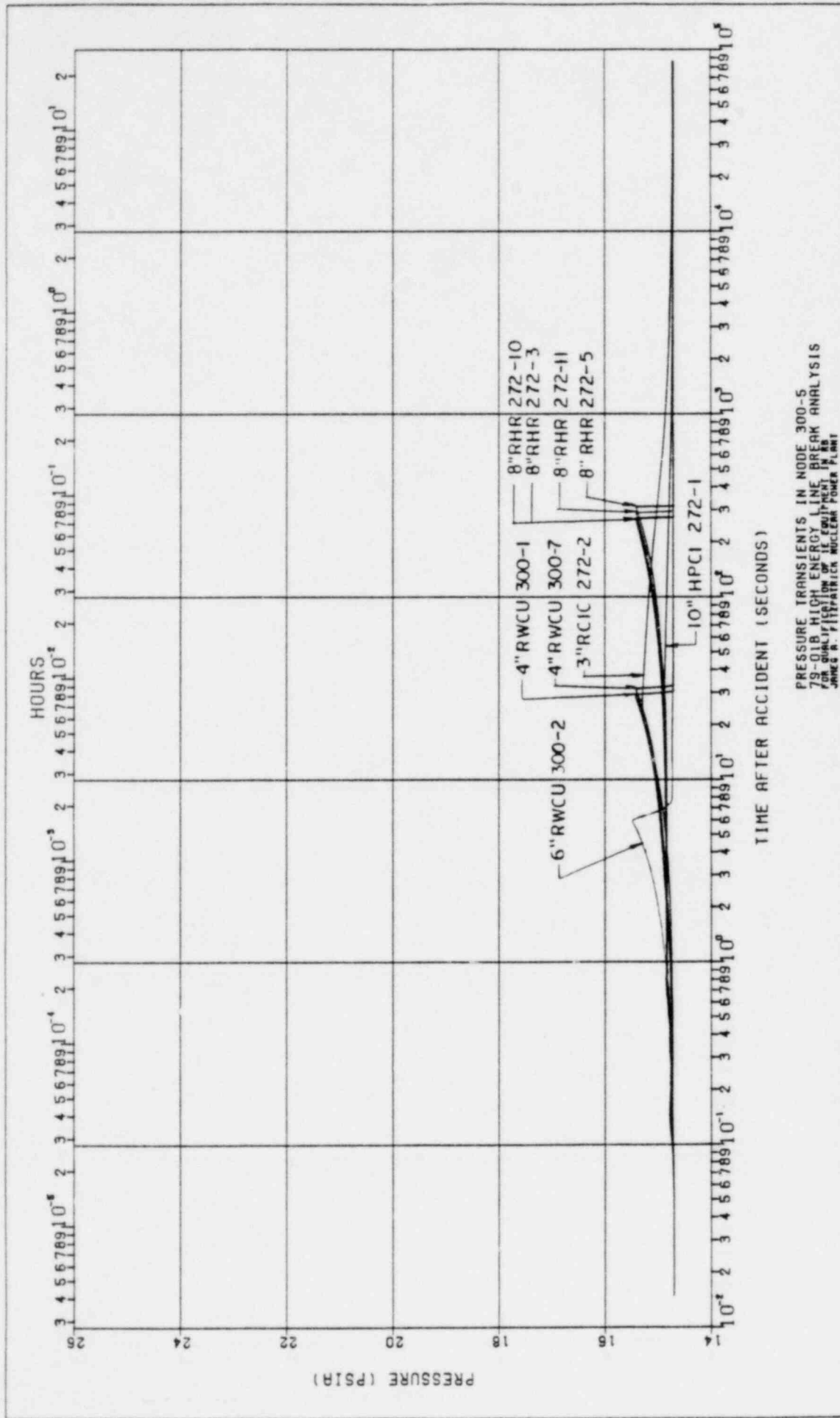
HOURS

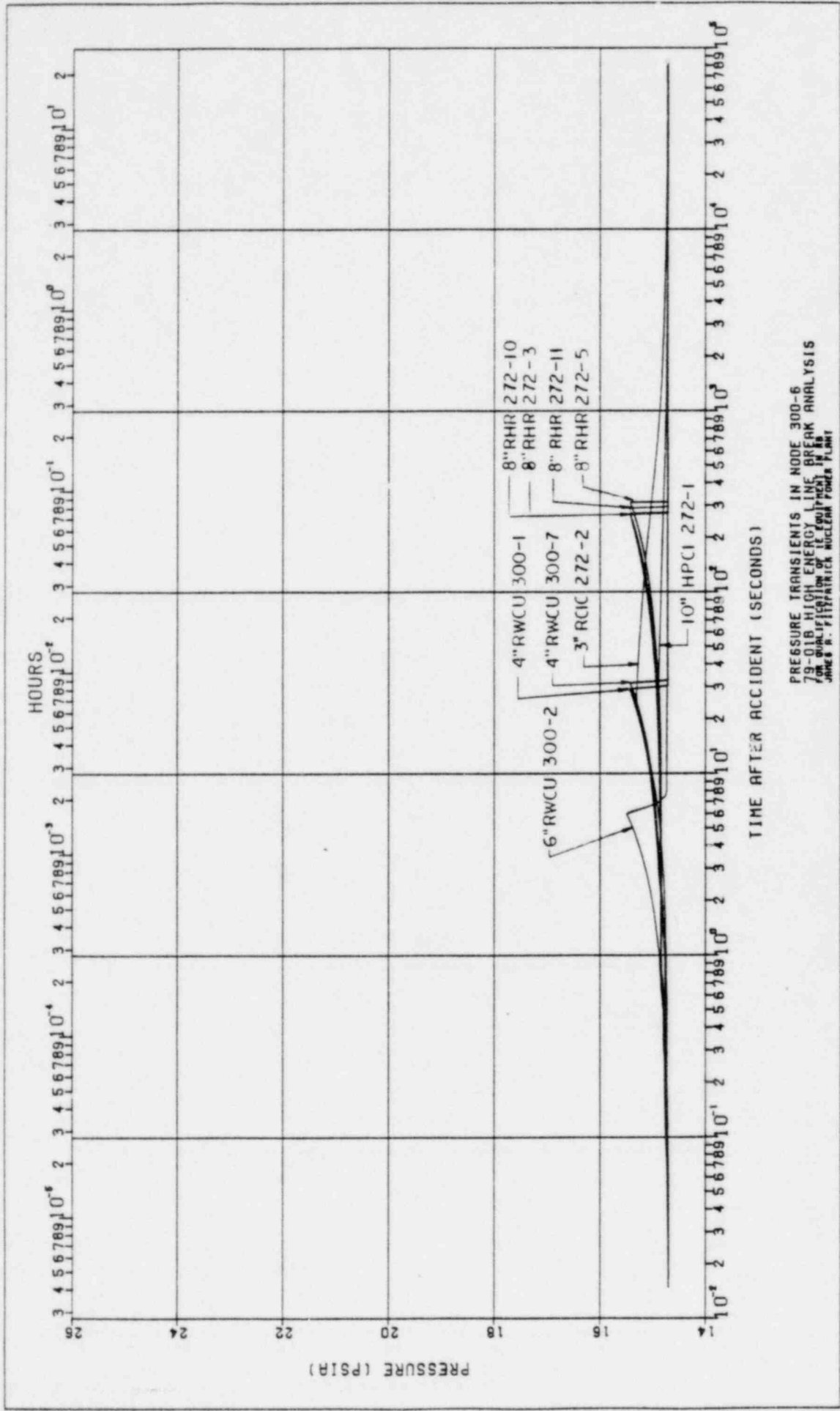


PRESSURE TRANSIENTS IN NODE 300-3  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN NB  
JAMES R. FITZPATRICK NUCLEAR POWER PLANT

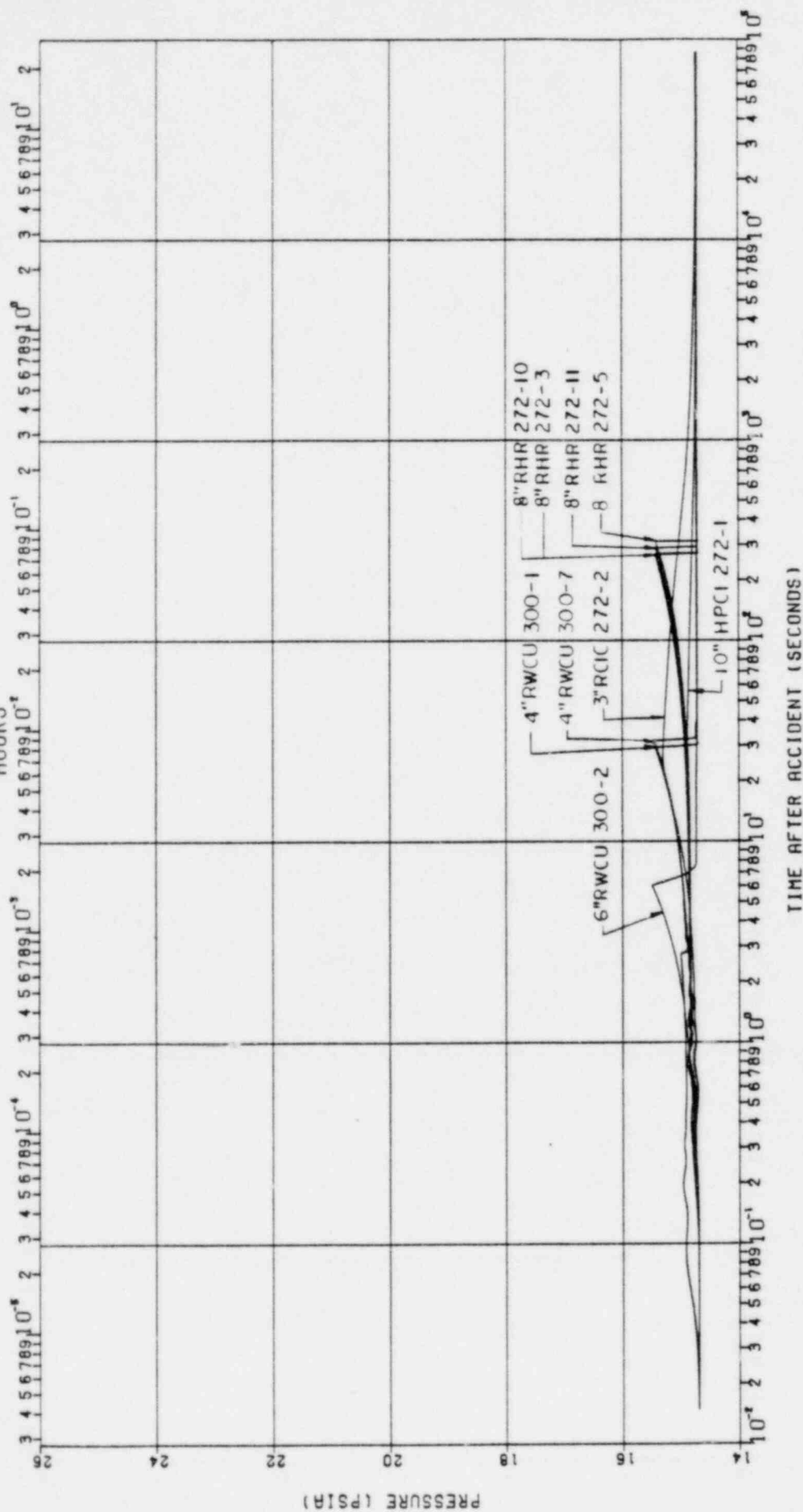




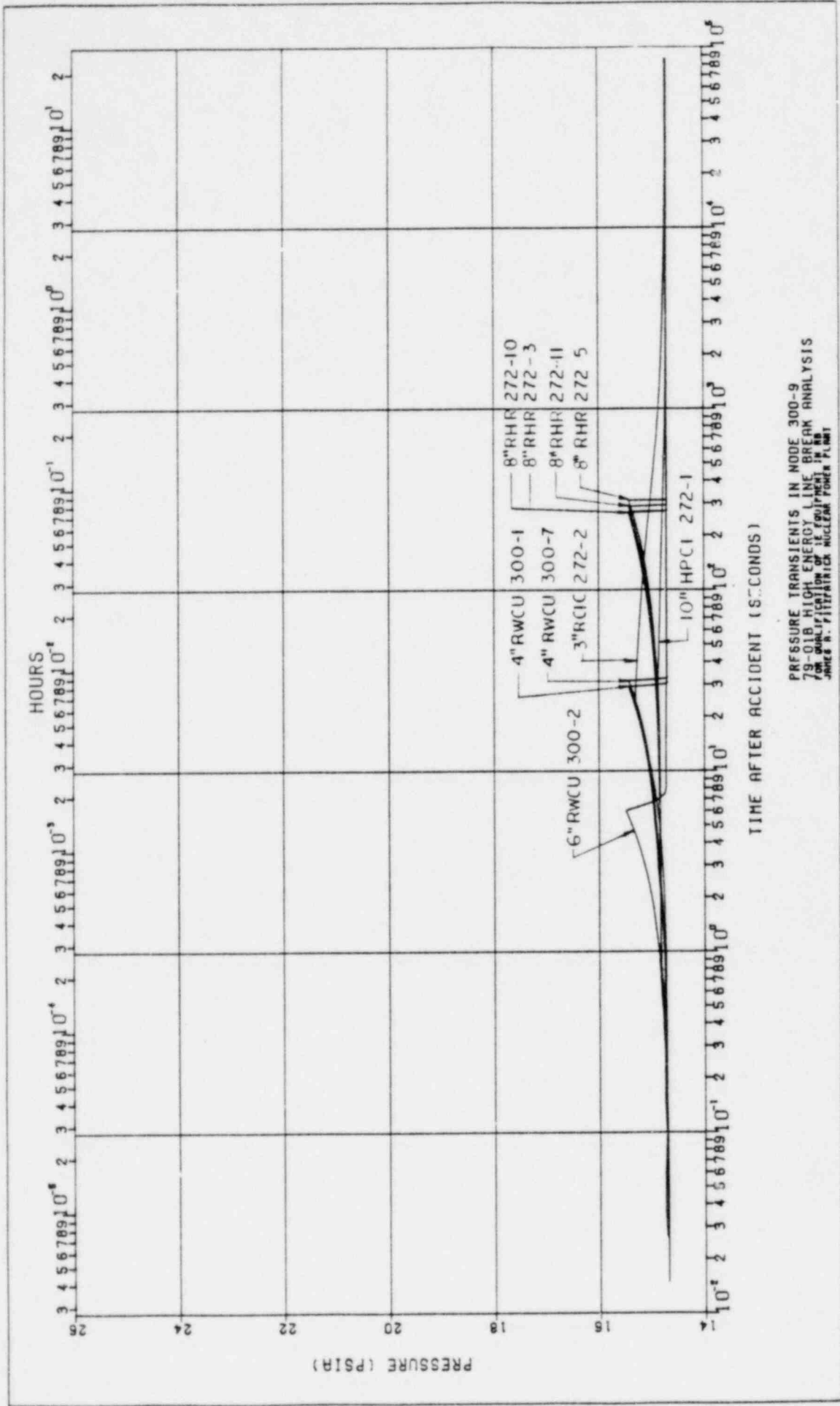




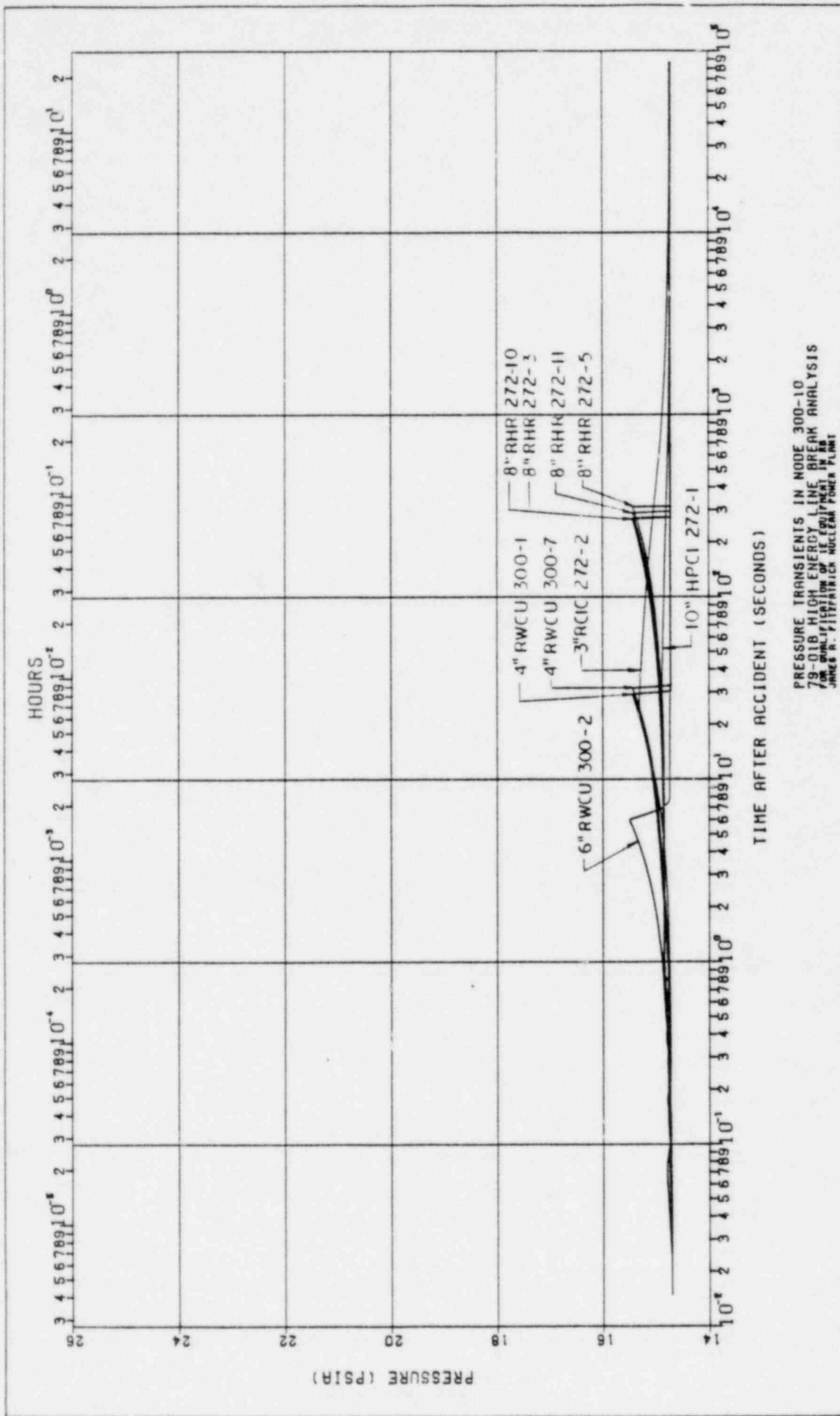
REF. 2AA



PRESSURE TRANSIENTS IN MODE 300-B  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN AB  
JAMES R. FITZPATRICK NUCLEAR POWER PLANT

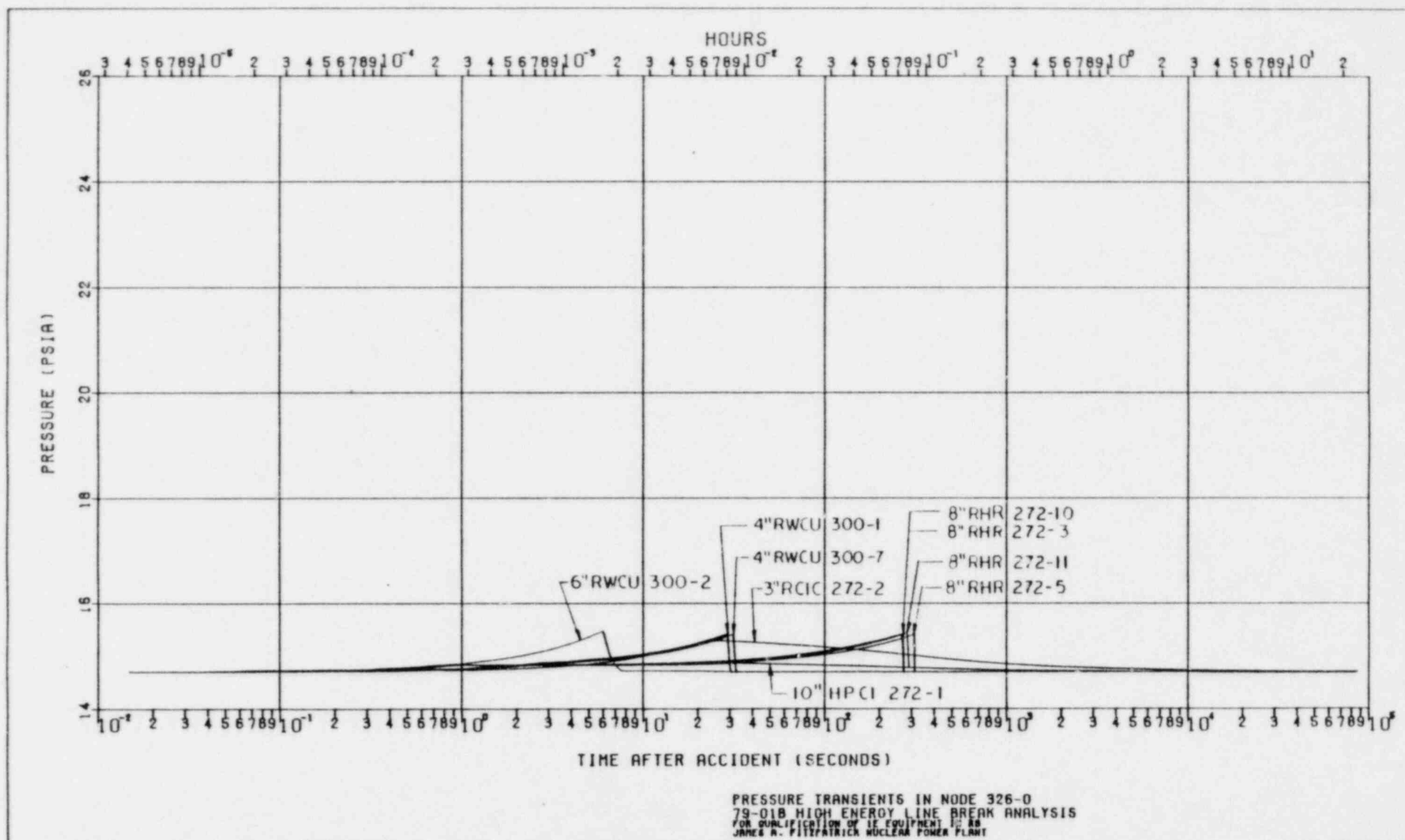


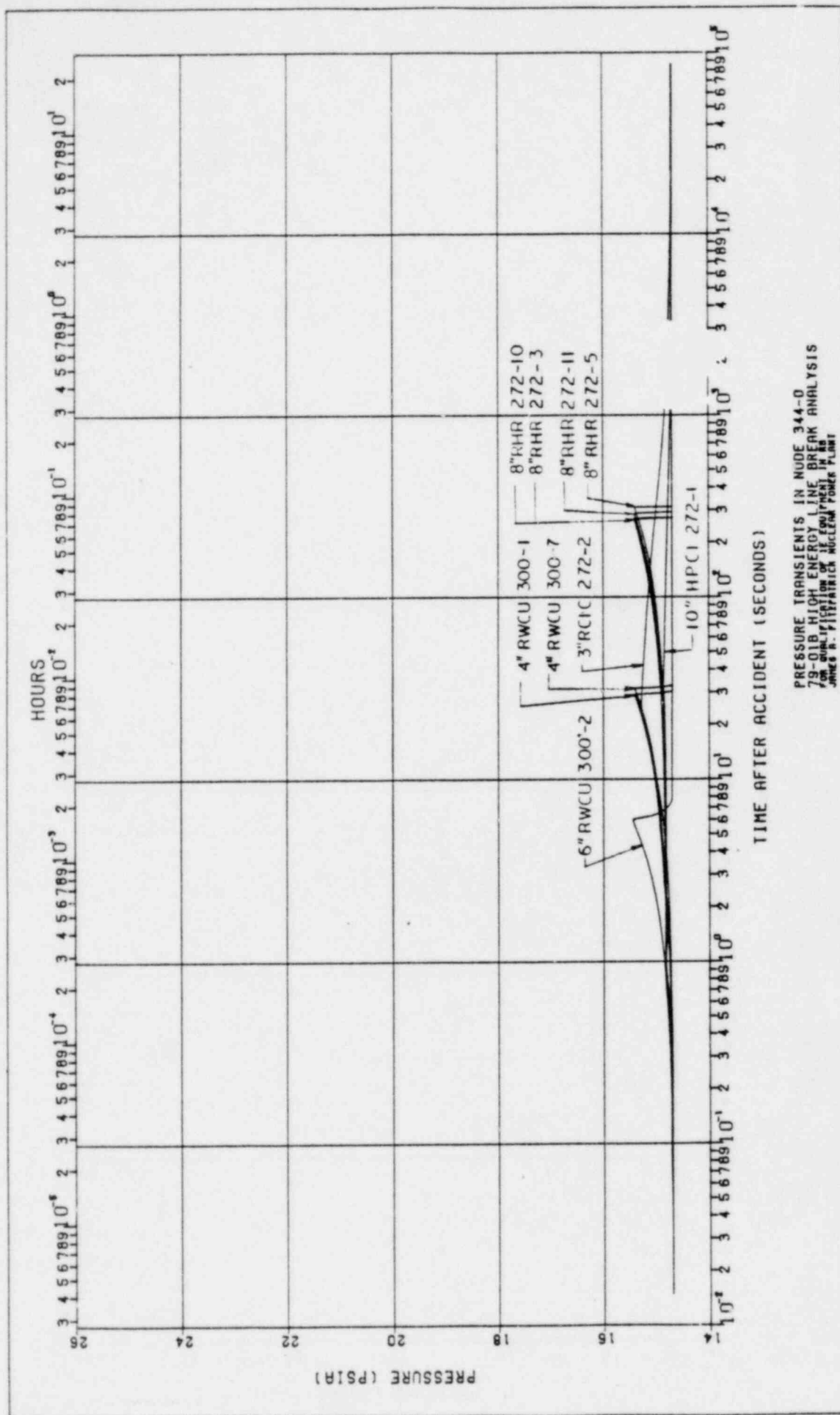
PRESSURE TRANSIENTS IN NODE 300-9  
79-01B HIGH-ENERGY LINE BREAK ANALYSIS  
FOR THE 1000 MW FUEL-ROCKET NUCLEAR POWER PLANT

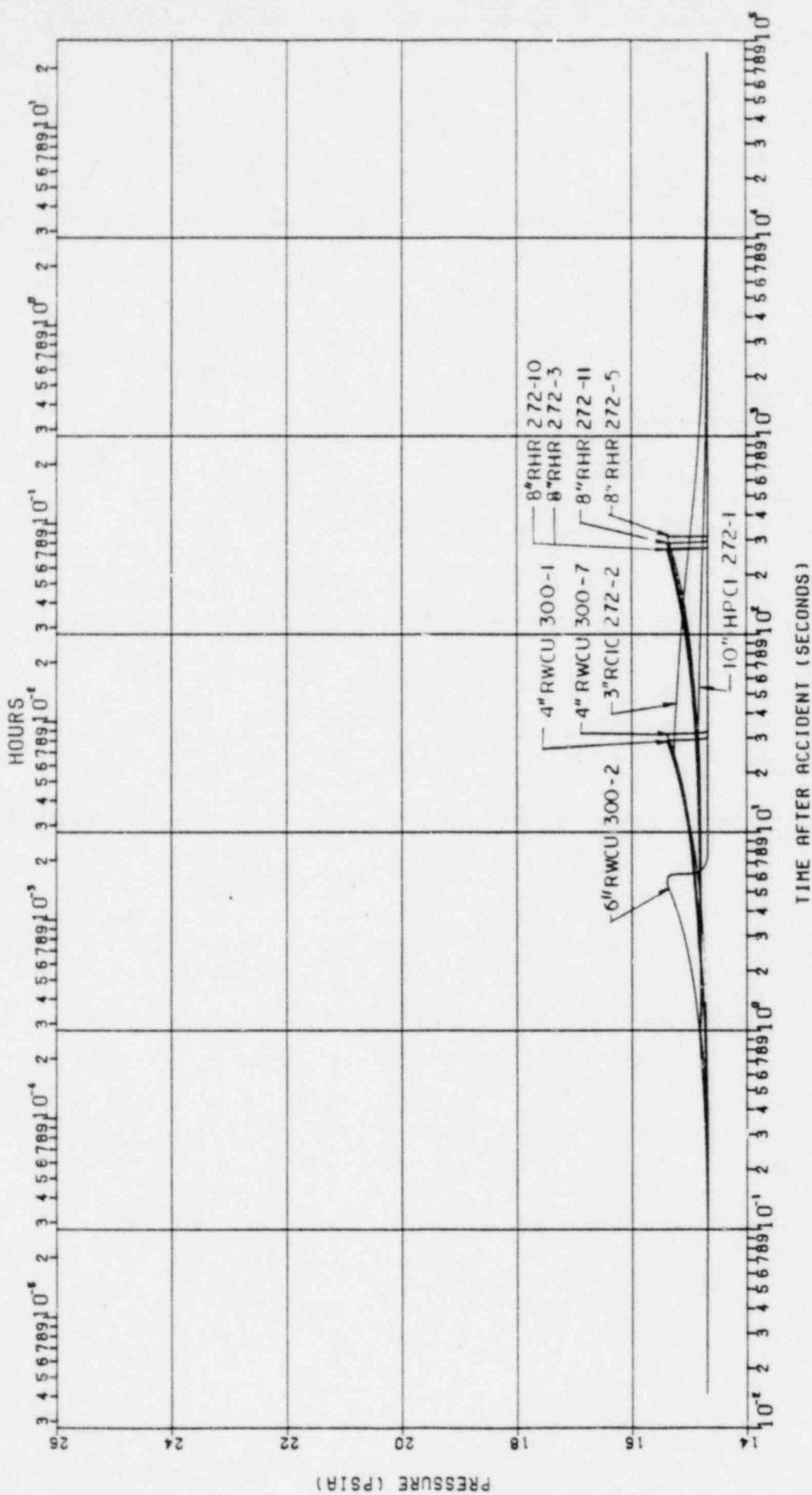


PRESSURE TRANSIENTS IN NODE 300-10  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF LE EQUIPMENT IN RB  
JAMES H. FITZPATRICK NUCLEAR POWER PLANT

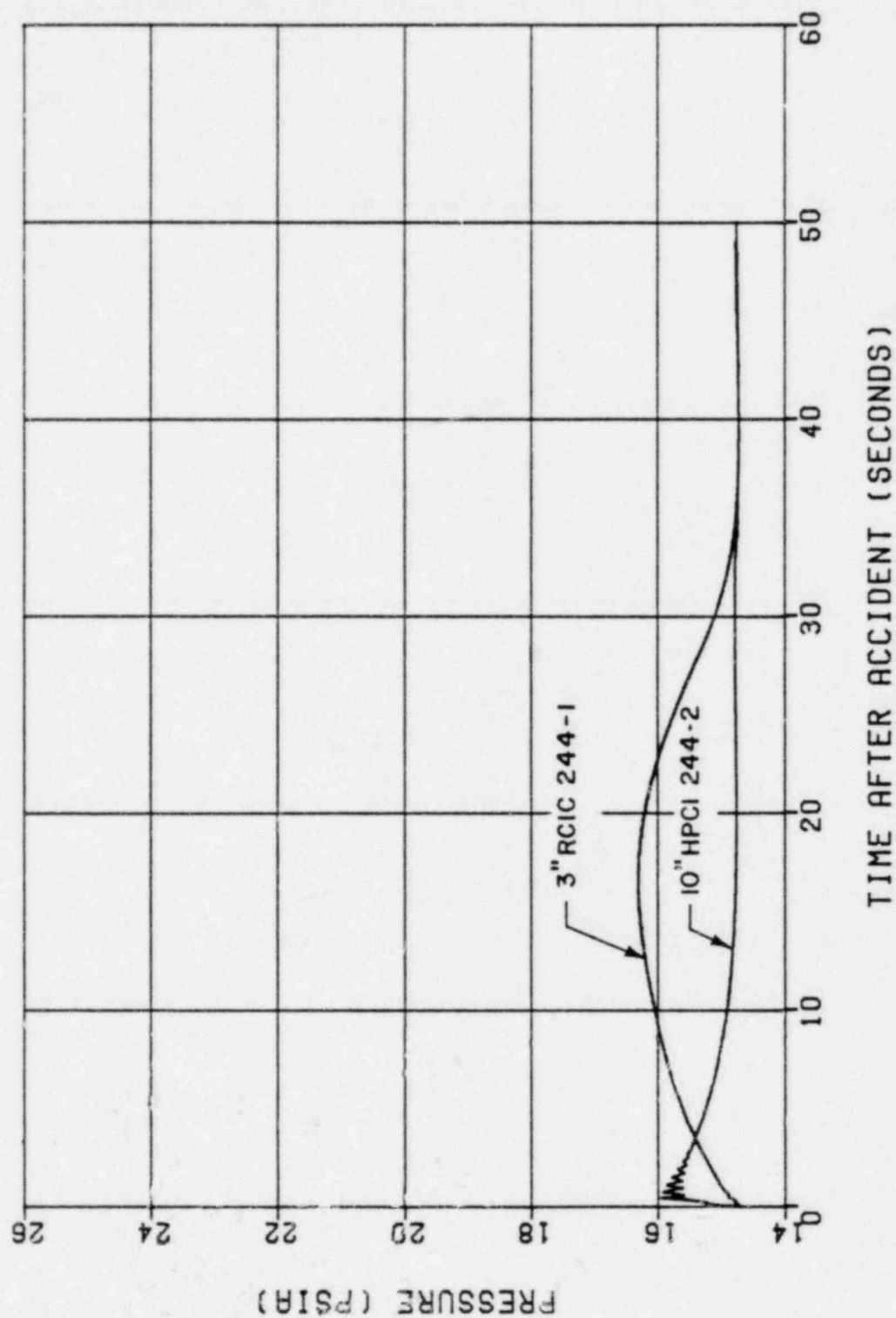






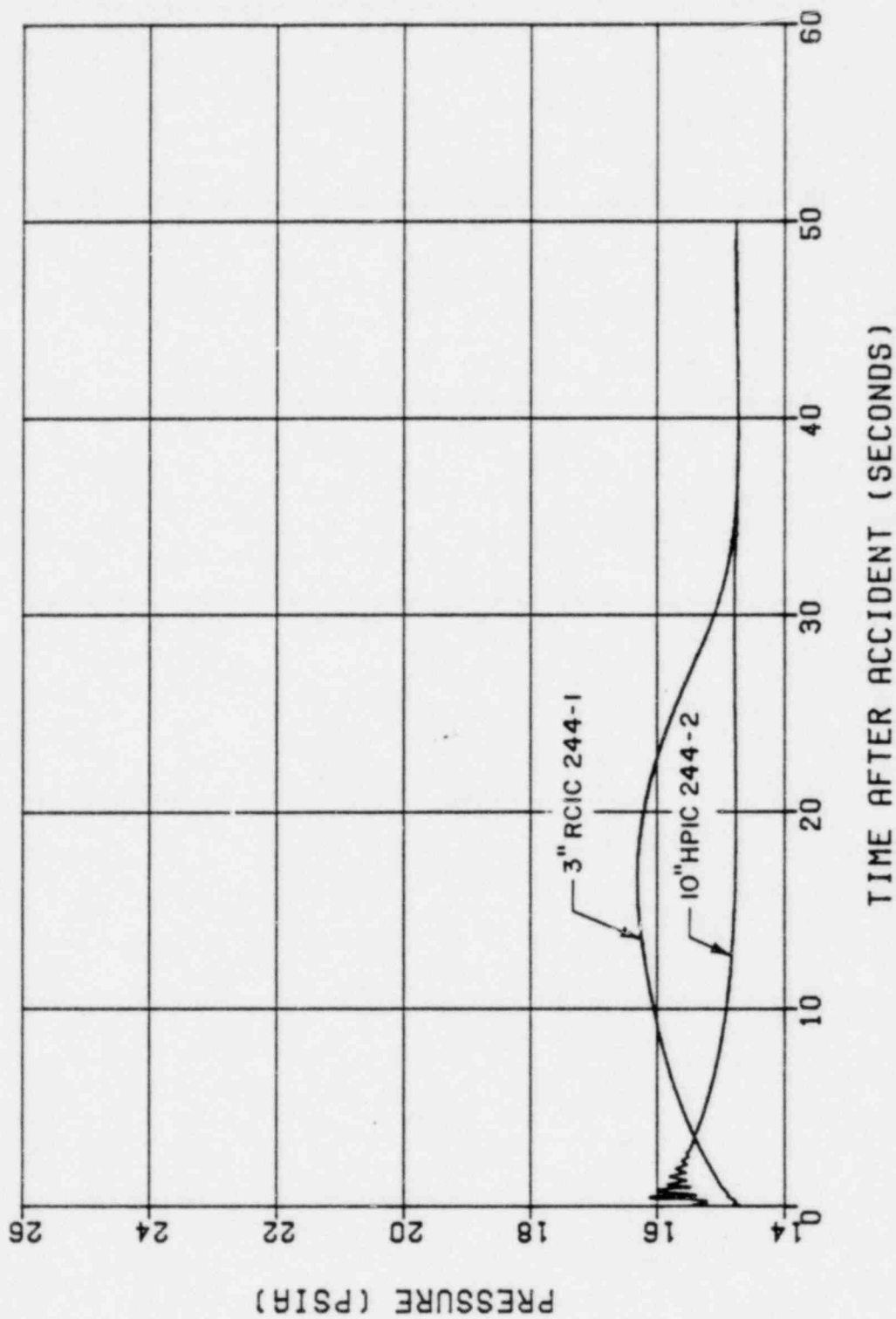


PRESSURE TRANSIENTS IN NODE 369-0  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF EQUIPMENT IN AS  
JANES W. FLEETMASTER NUCLEAR POWER PLANT



PRESSURE TRANSIENTS IN NODE 227-3  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

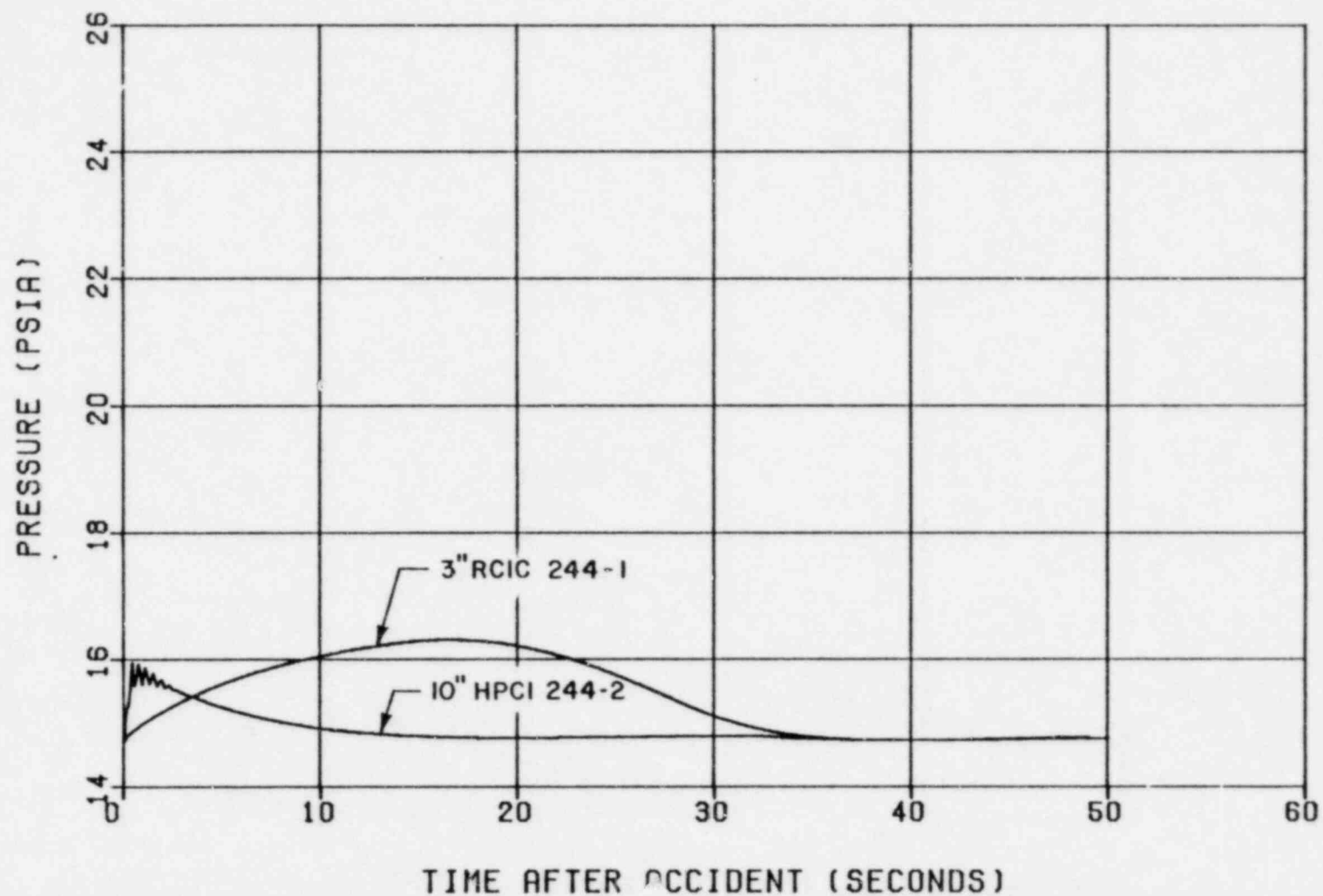
Rev. 3



PRESSURE TRANSIENTS IN NODE 227-4  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Ref. 2AJ

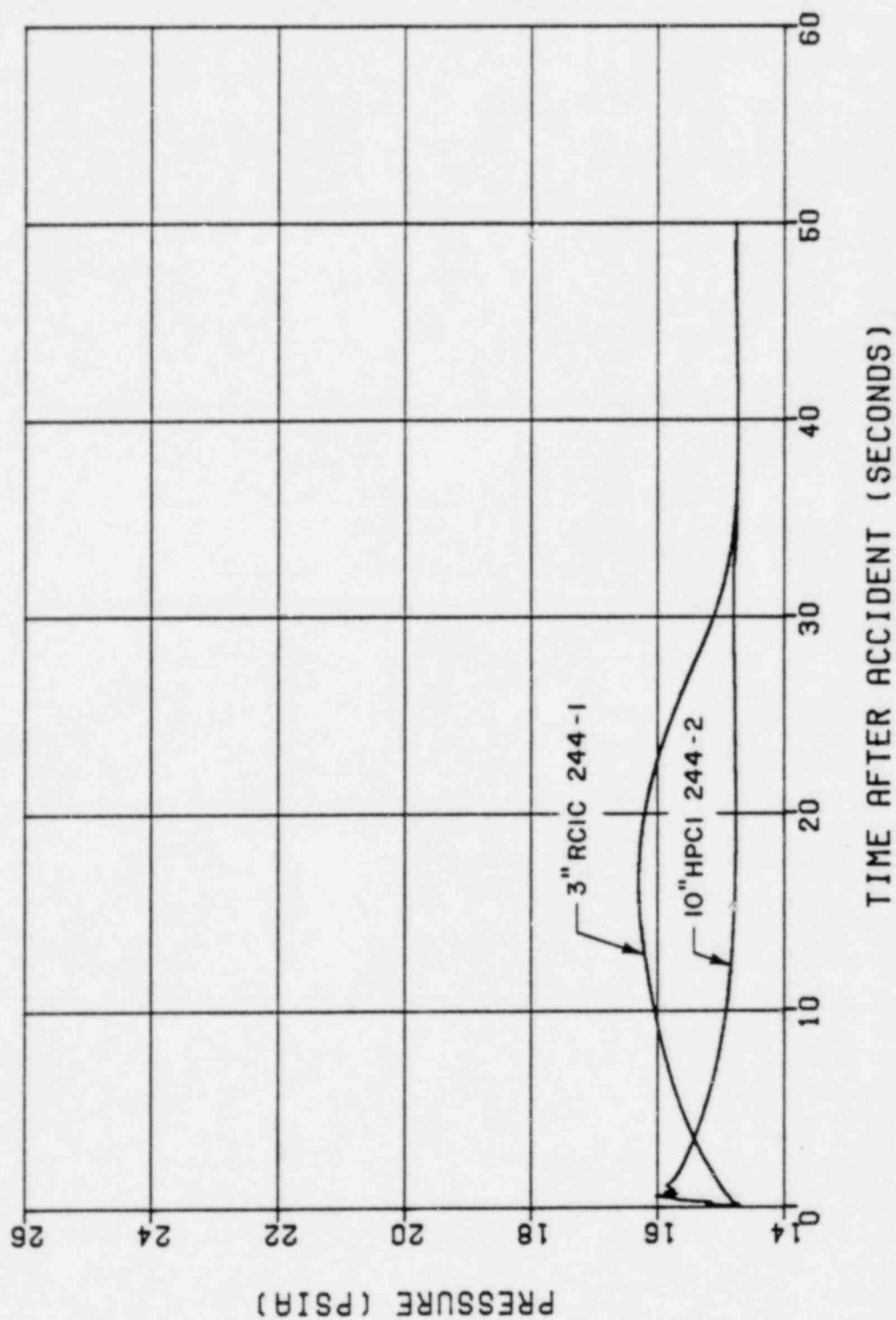
Rev. 3



PRESSURE TRANSIENTS IN NODE 227-5  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Ref. 2AK

Rev. 3

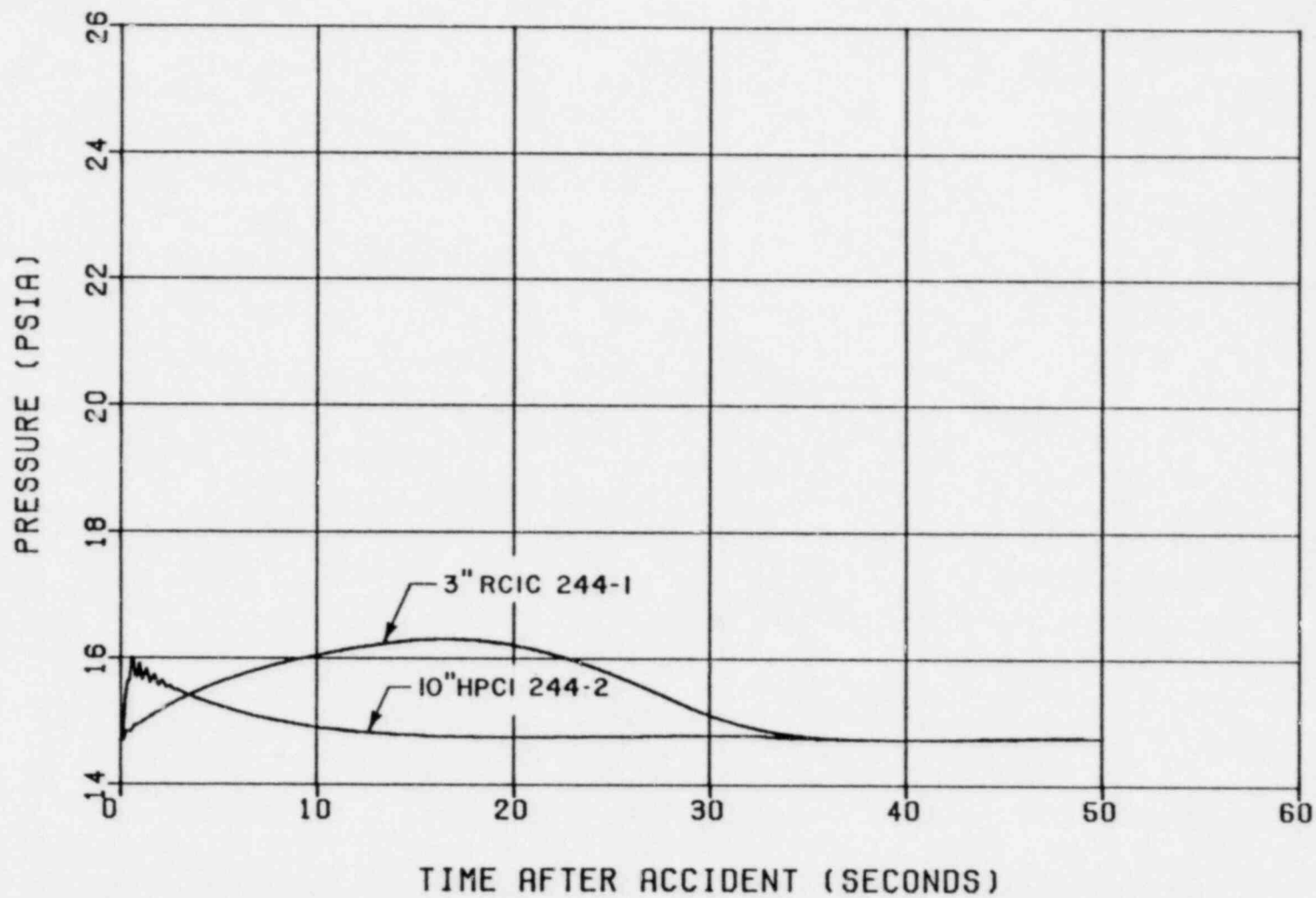


PRESSURE TRANSIENTS IN NODE 227-6  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Ref. 2AL



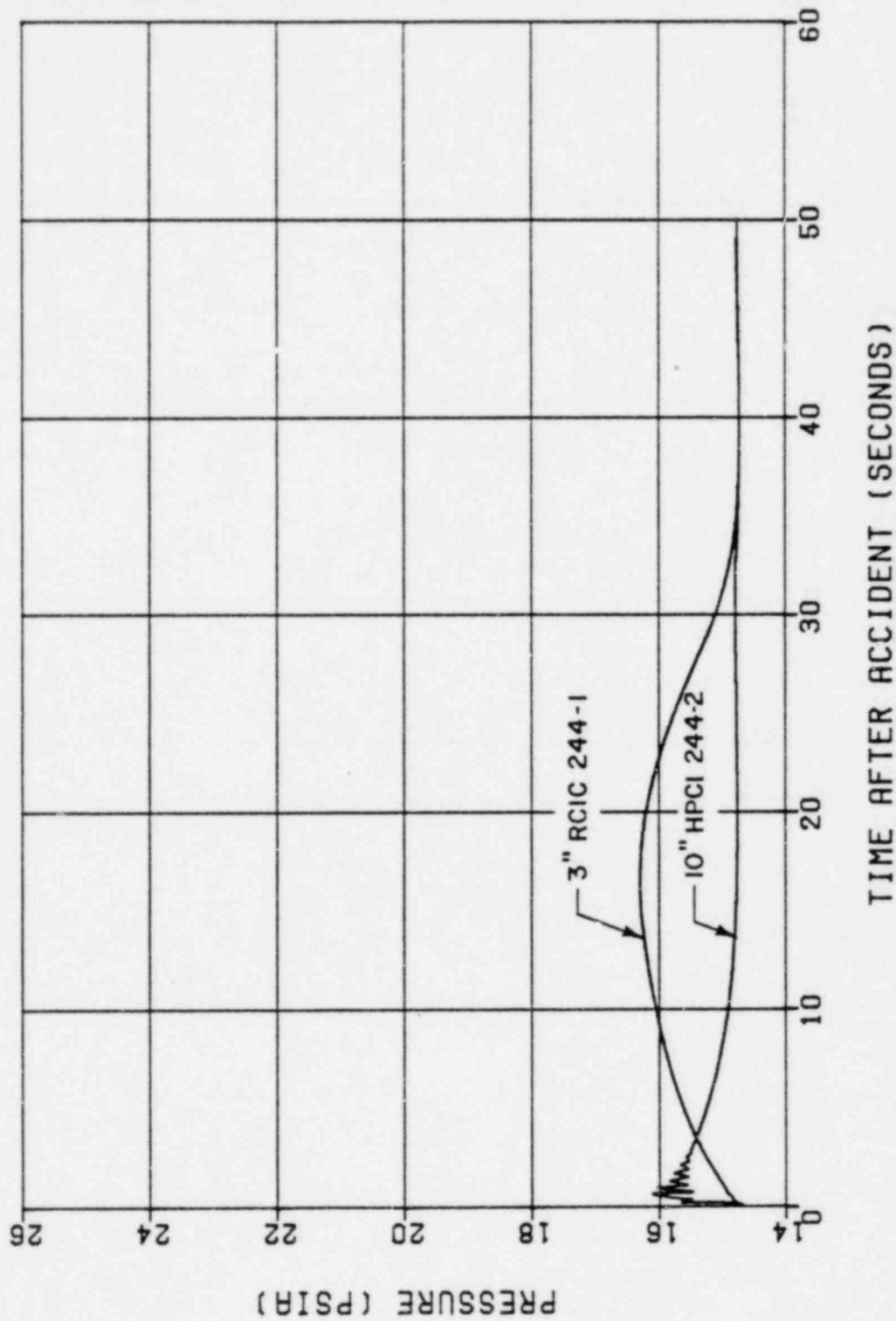
Rev. 3



PRESSURE TRANSIENTS IN NODE 227-7  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RD  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Ref. 2AM

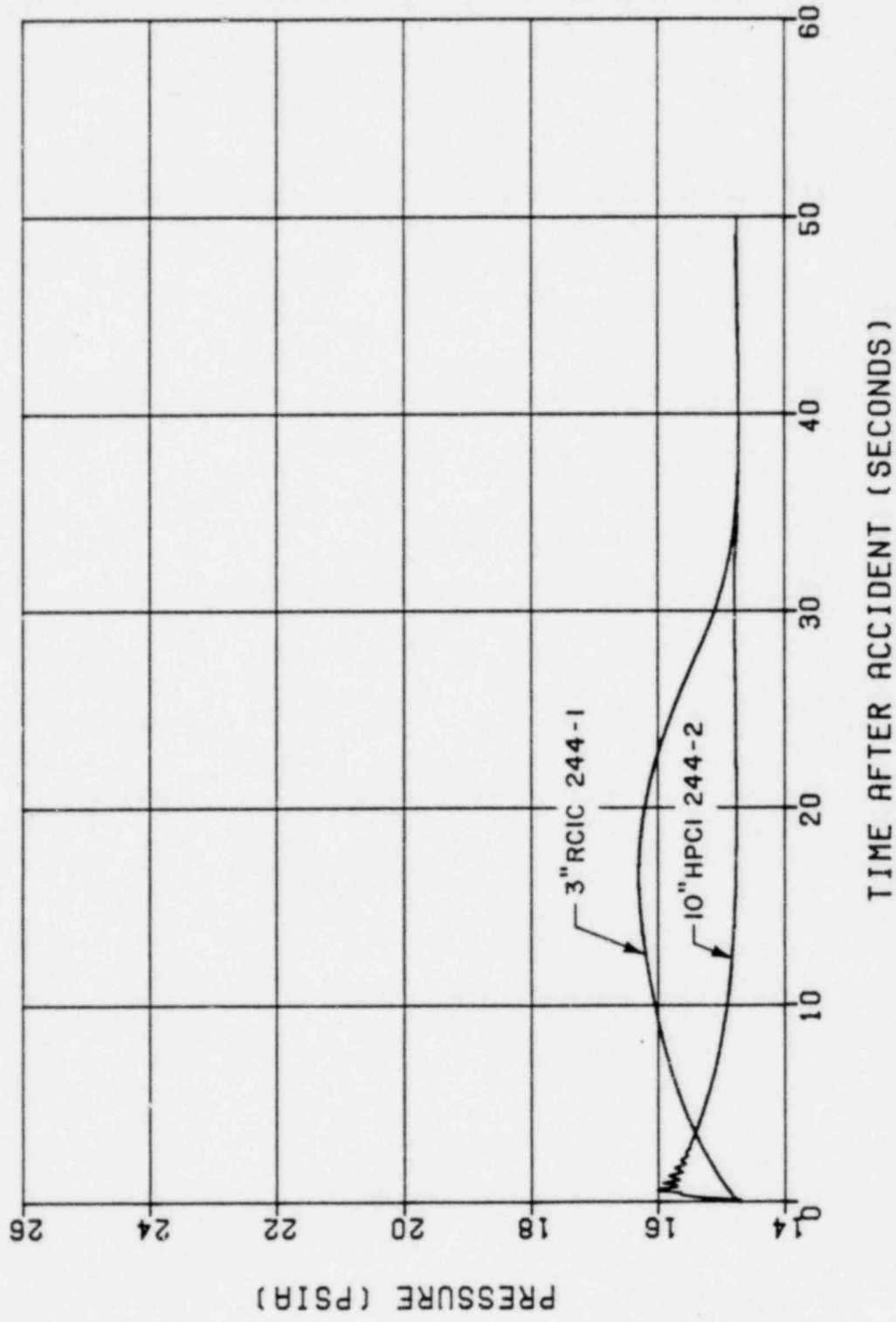
Rev. 3



PRESSURE TRANSIENTS IN NODE 227-8  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES R. FITZPATRICK NUCLEAR POWER PLANT

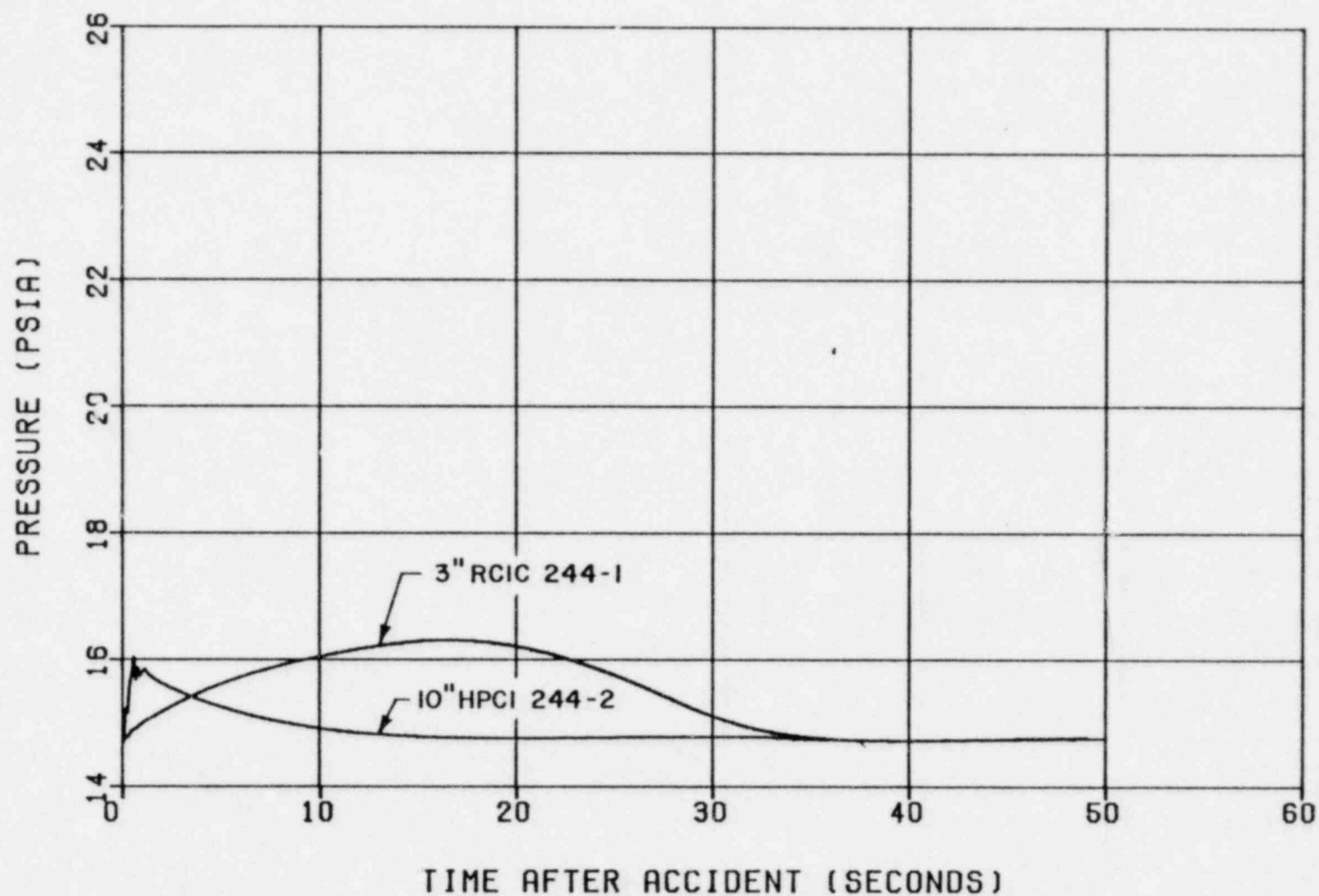
Ref. 2AN

Rev. 3

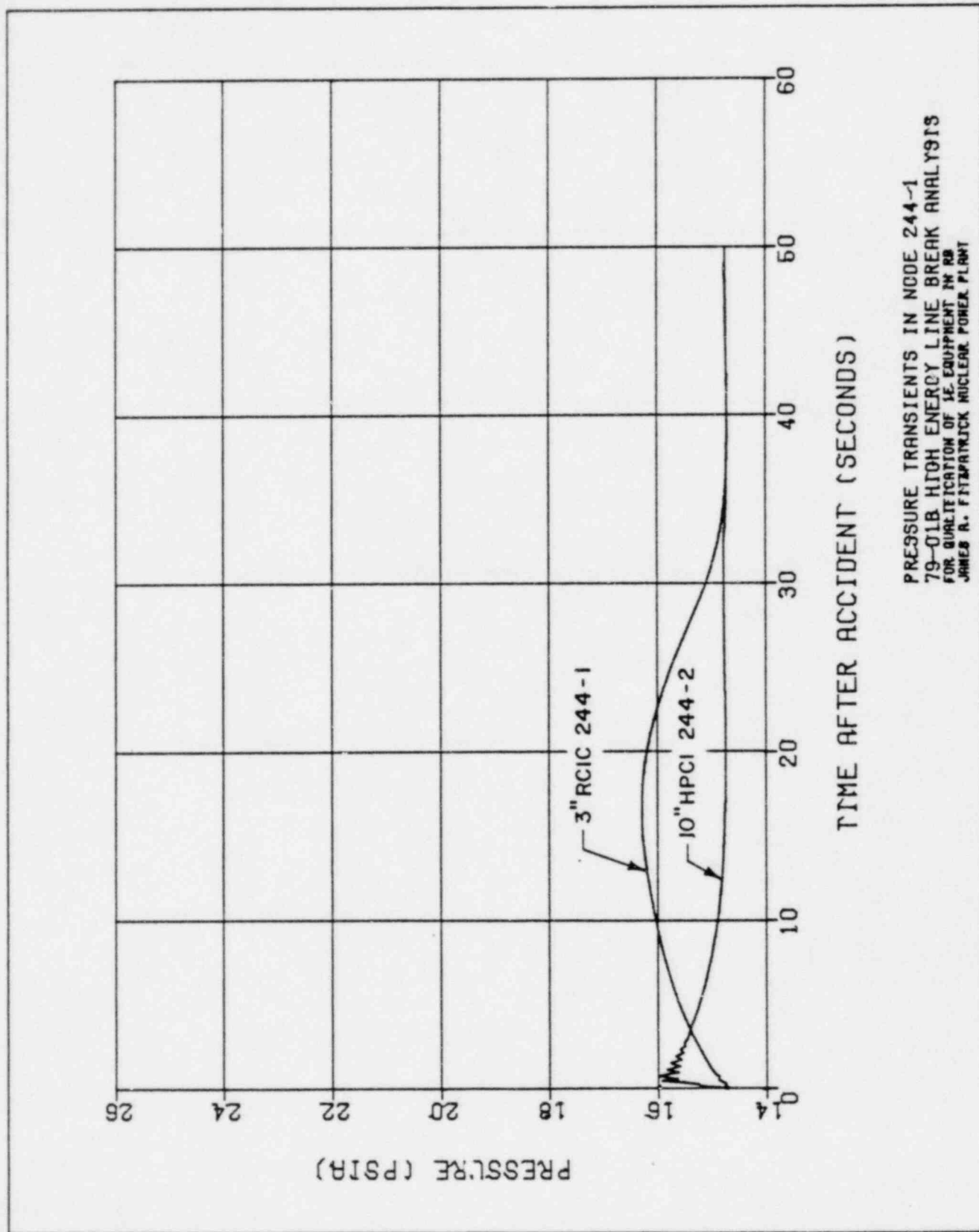


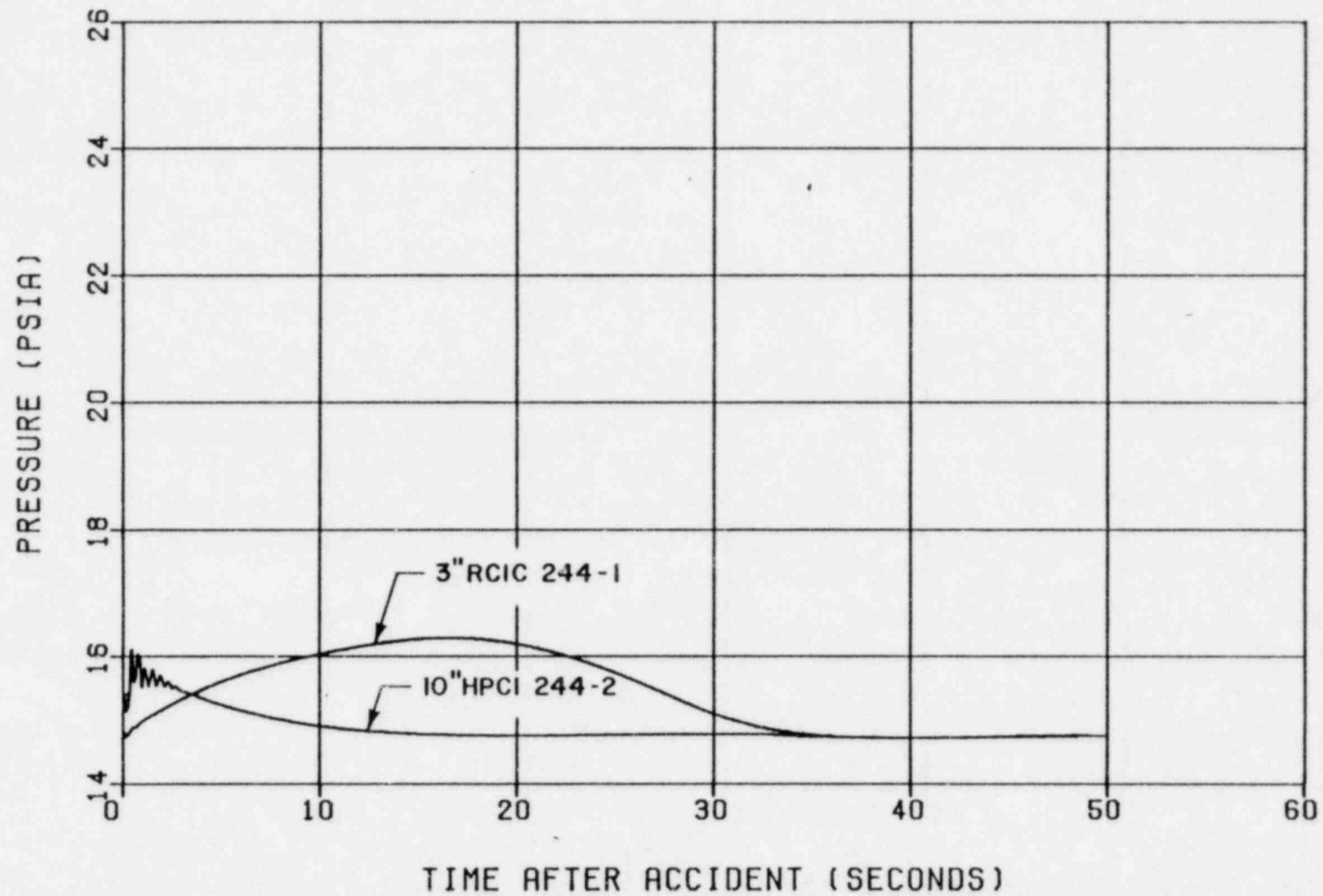
PRESSURE TRANSIENTS IN NODE 227-9  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Ref. 2AP

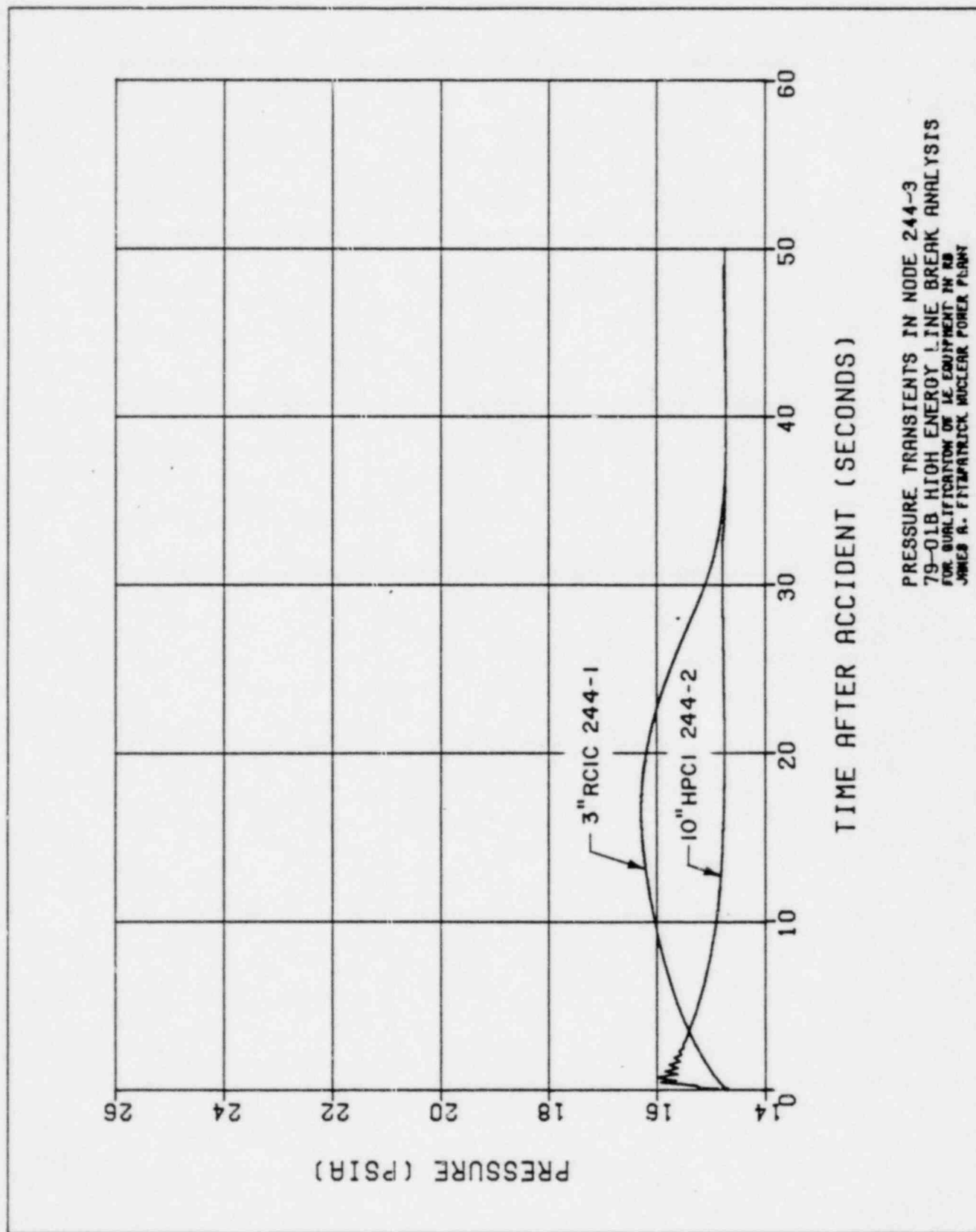


PRESSURE TRANSIENTS IN NODE 227-10  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



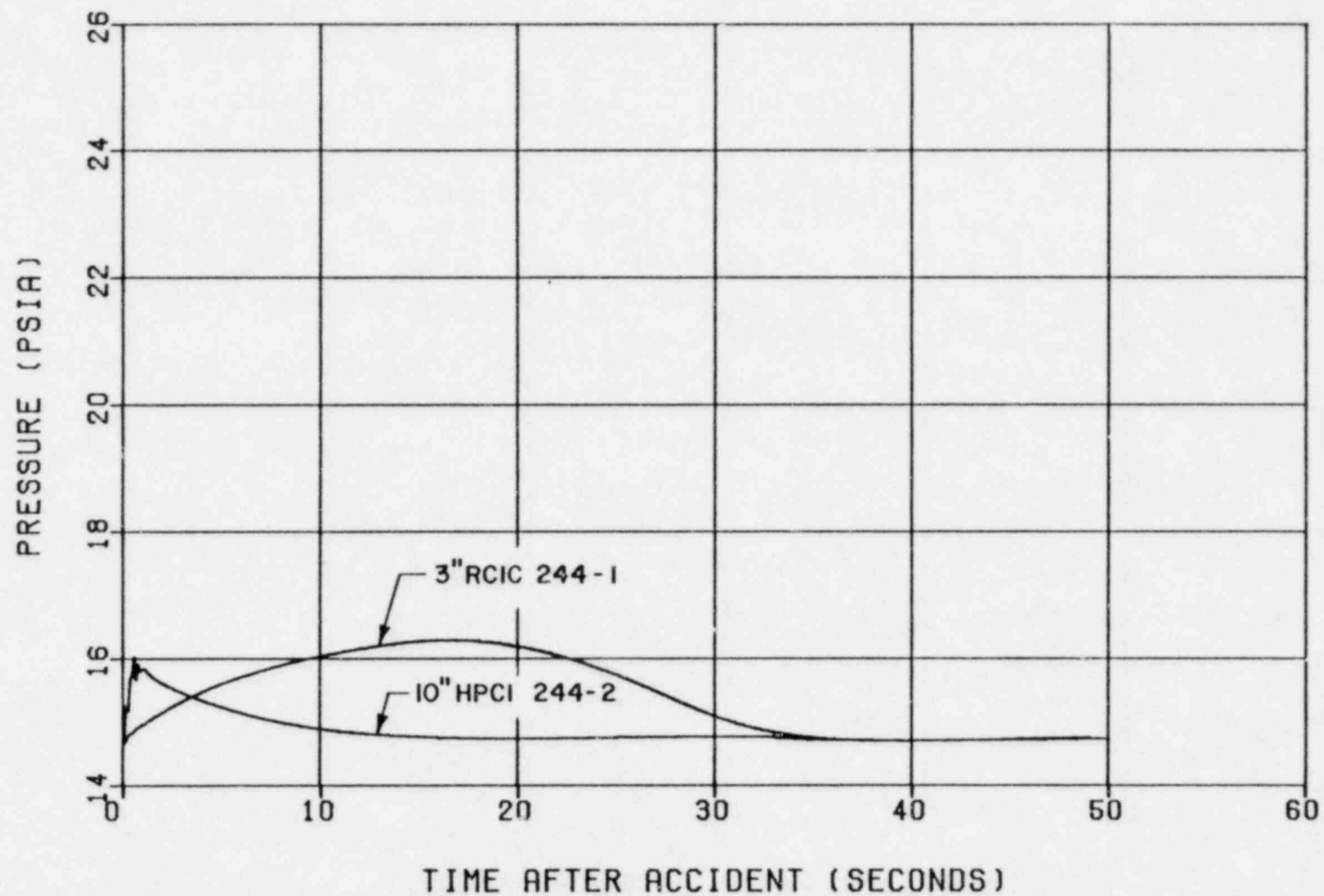


PRESSURE TRANSIENTS IN NODE 244-2  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT



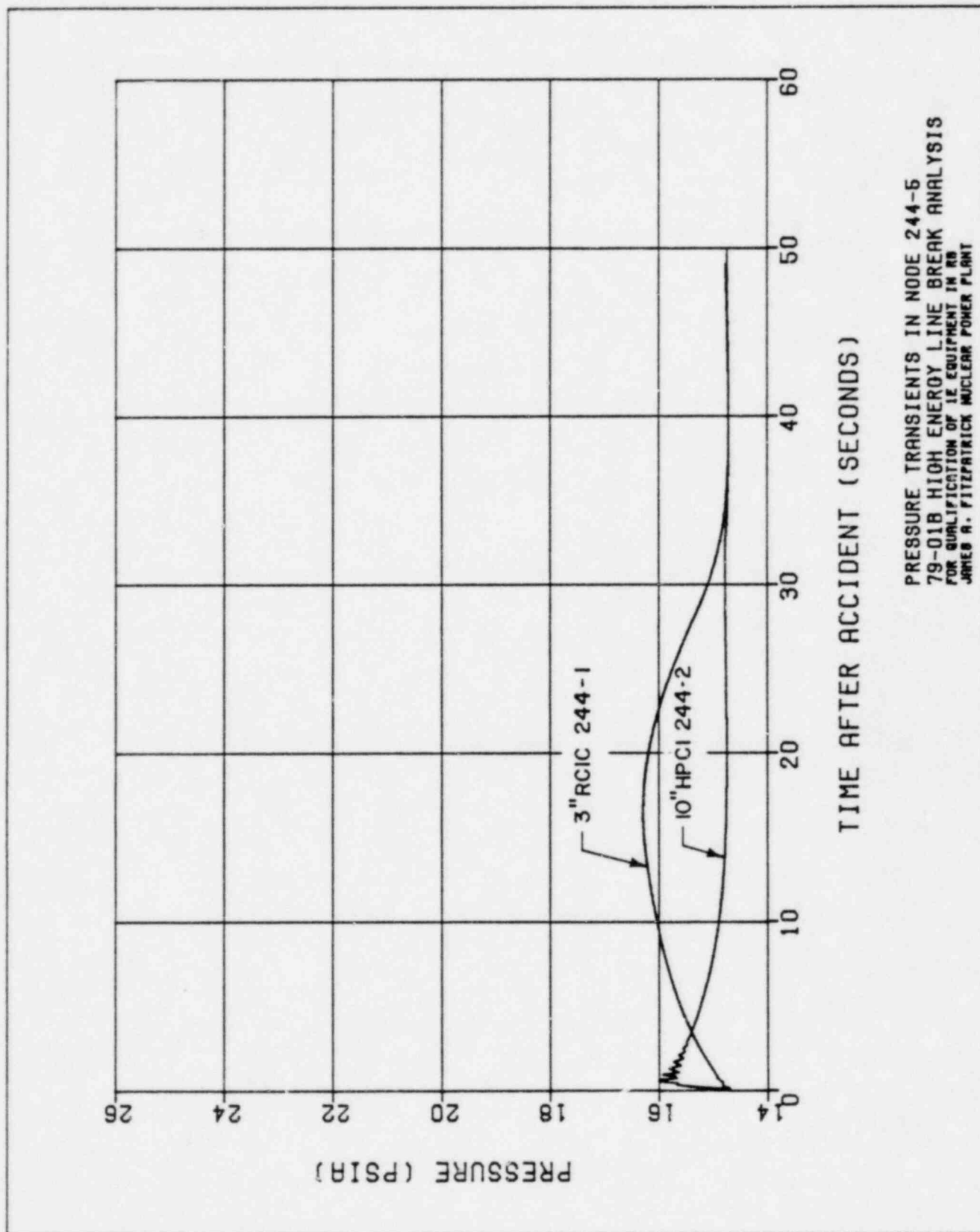
PRESSURE TRANSIENTS IN NODE 244-3  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF LE EQUIPMENT IN RB  
JAMES A. FITZPATRICK, NUCLEAR POWER PLANT



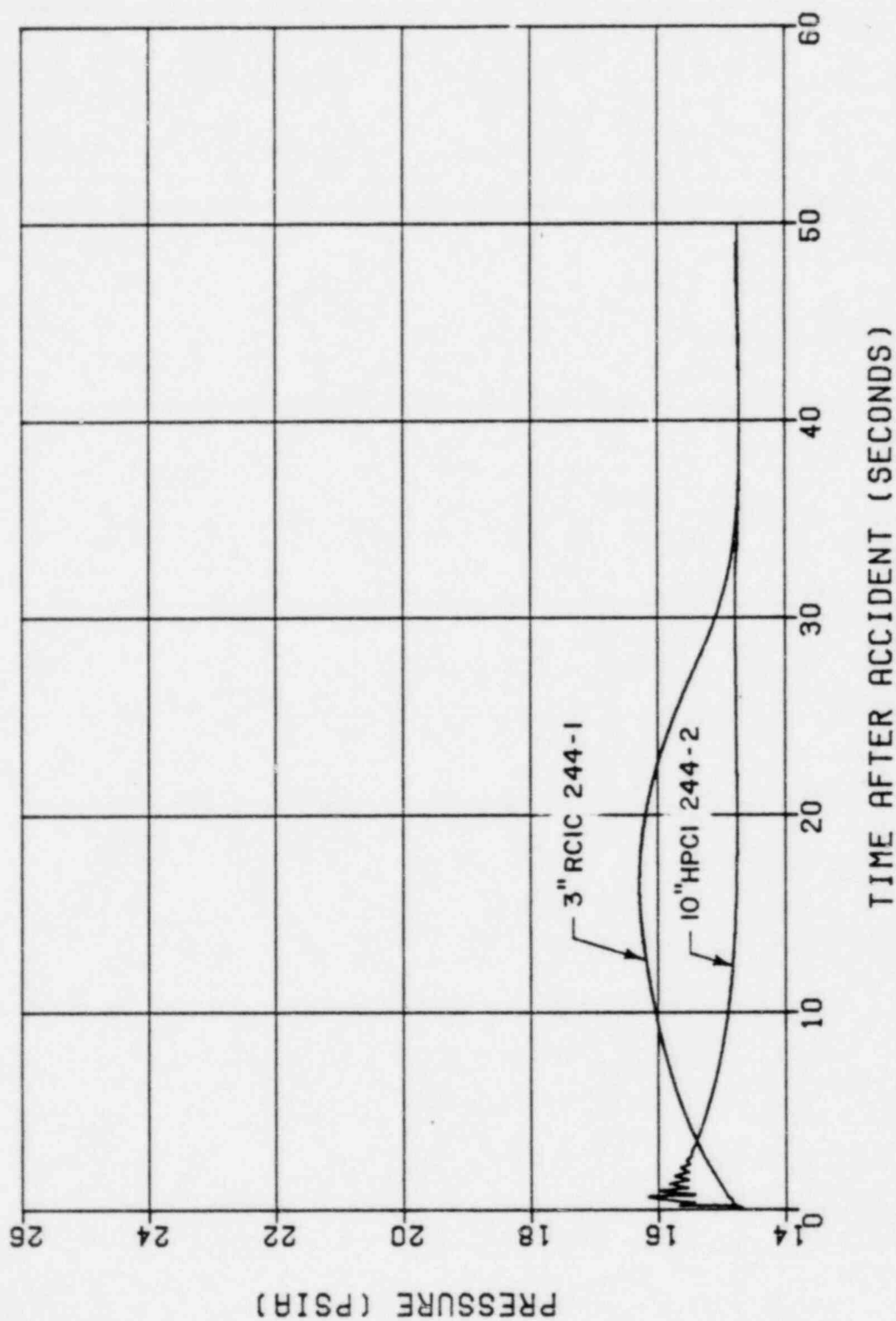


PRESSURE TRANSIENTS IN NODE 244-4  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF IE EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Ref. 2AU



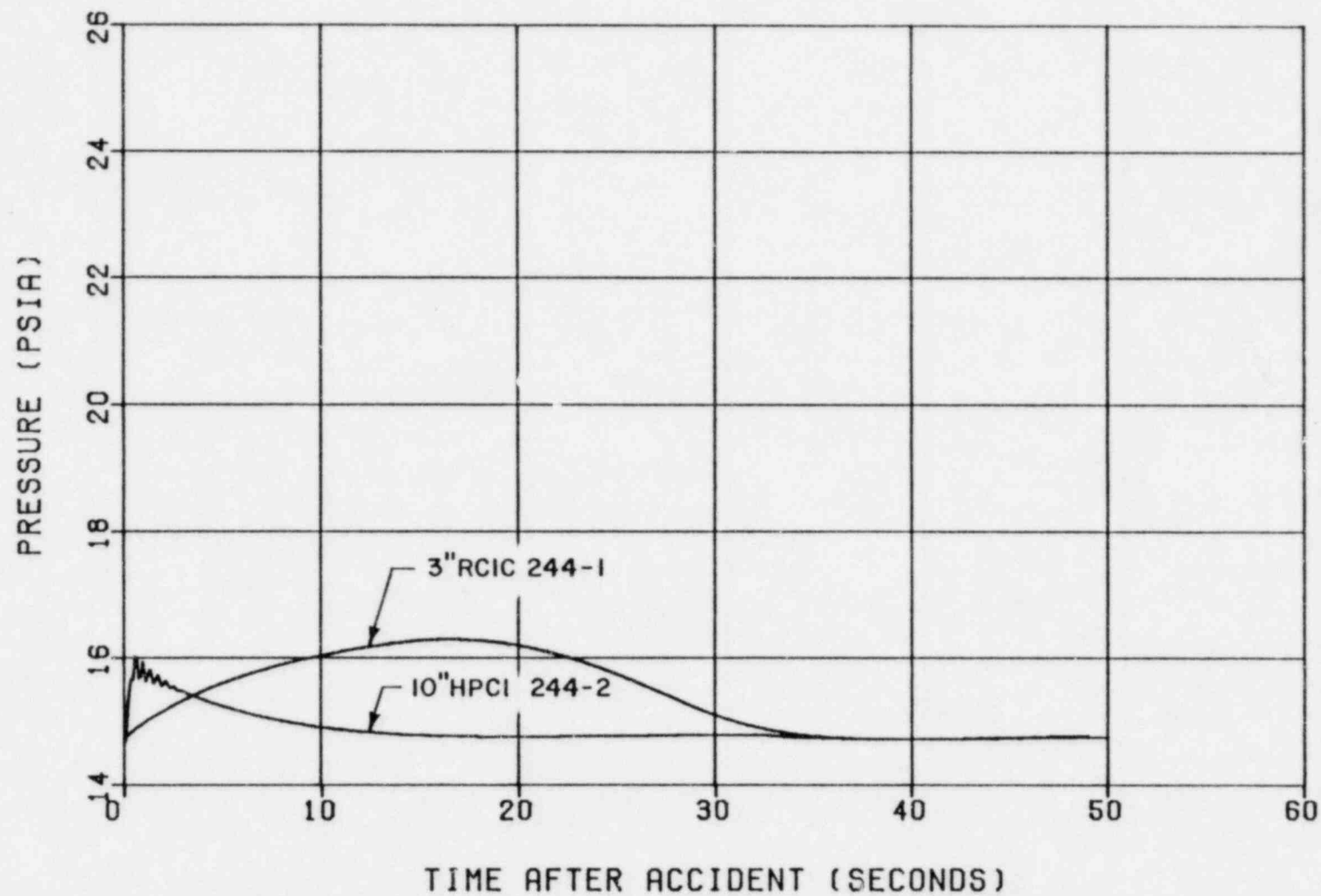
Rev. 3



PRESSURE TRANSIENTS IN NODE 244-6  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Ref. 2Aw

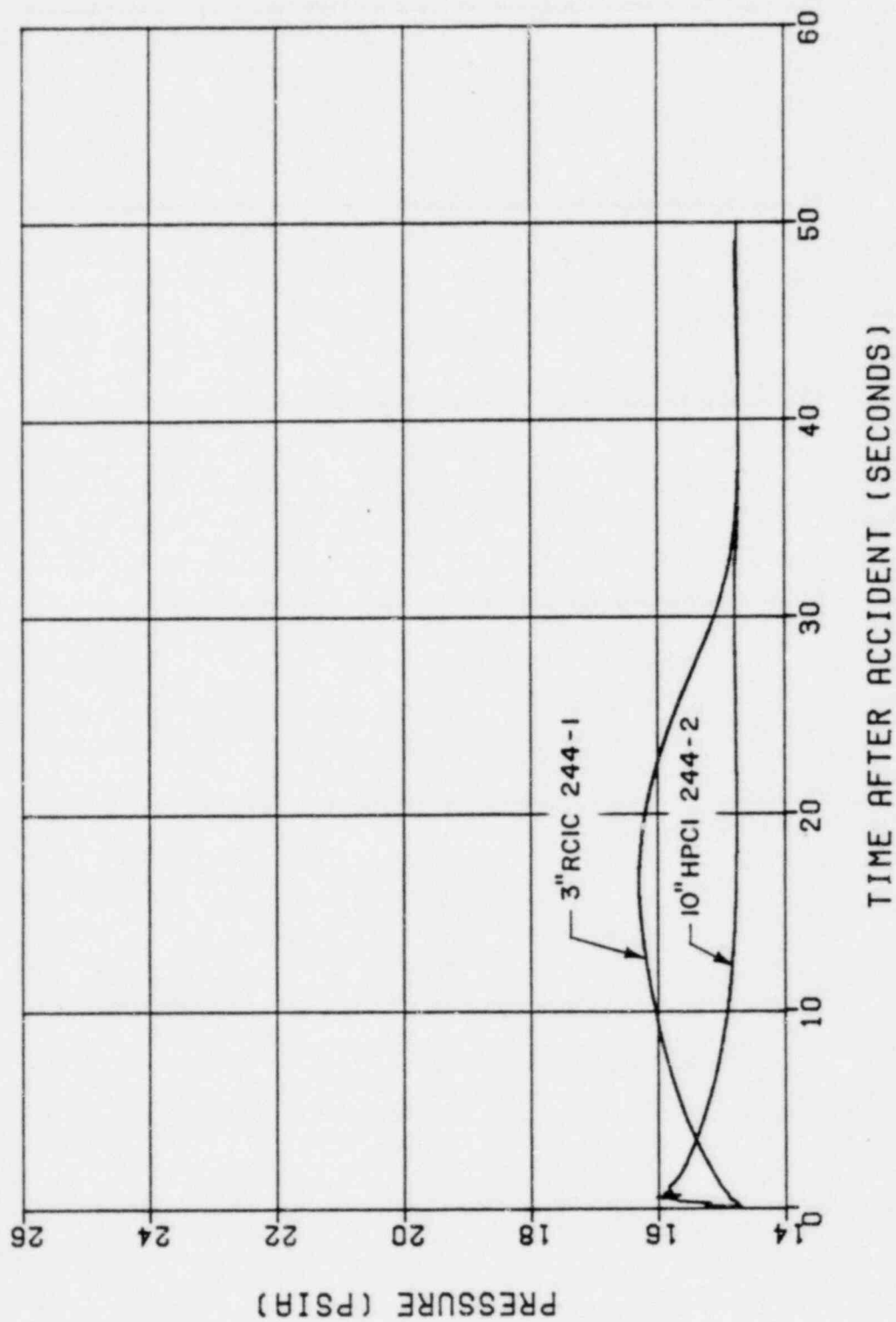
Rev. 3



PRESSURE TRANSIENTS IN NODE 244-7  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

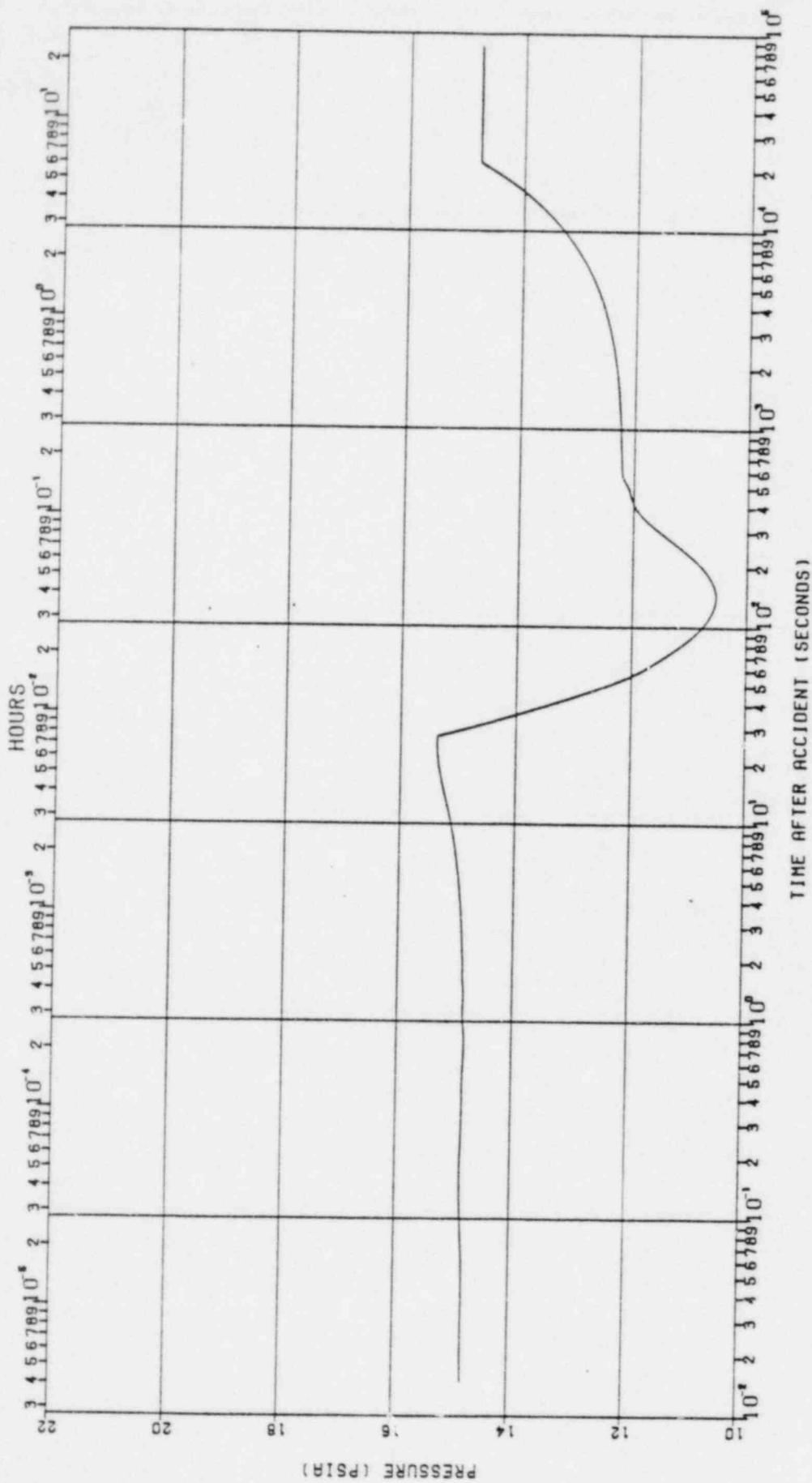
Ref. 2AX

Rev. 3

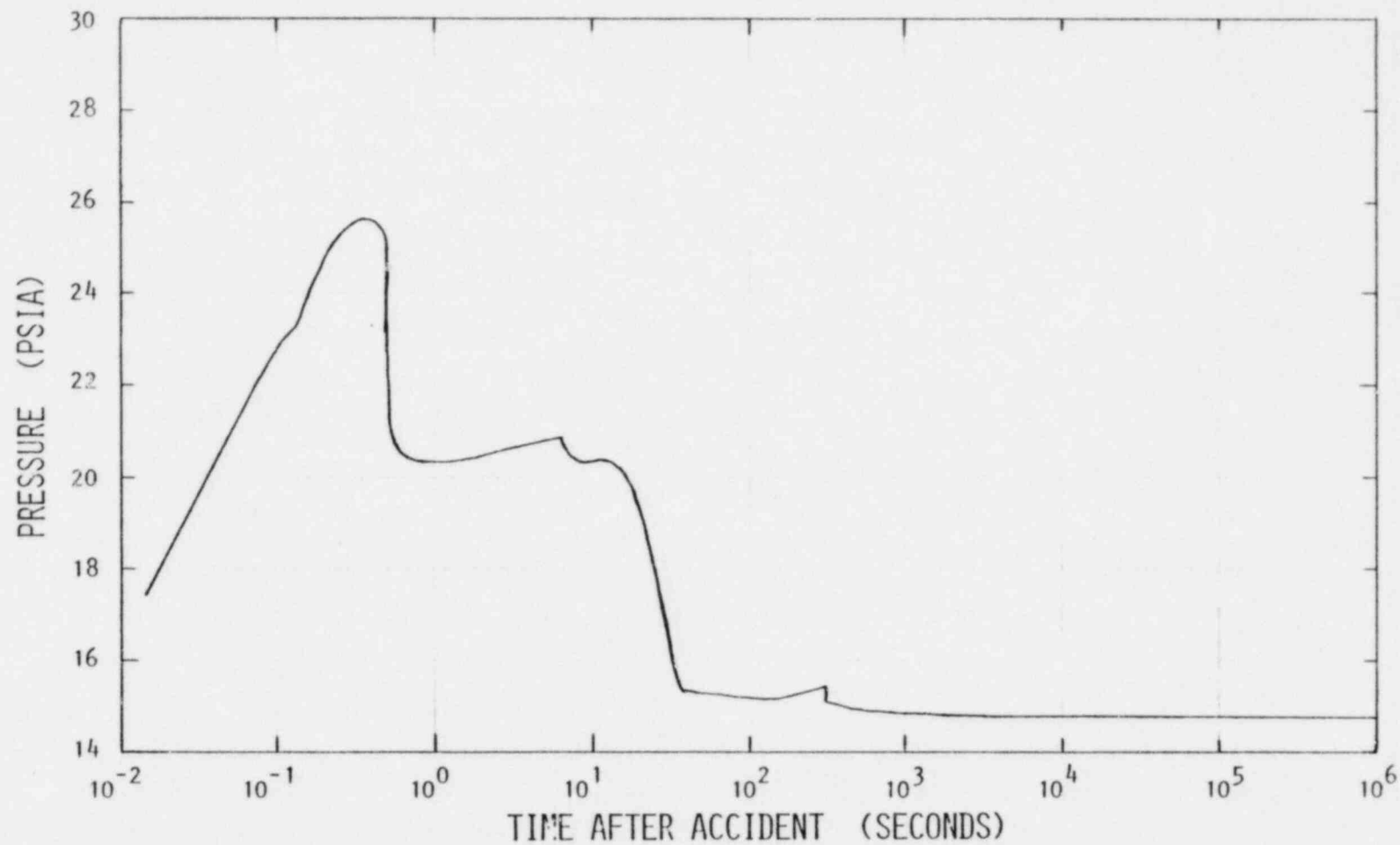


PRESSURE TRANSIENTS IN NODE 244-8  
79-01B HIGH ENERGY LINE BREAK ANALYSIS  
FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

Ref. 2AY



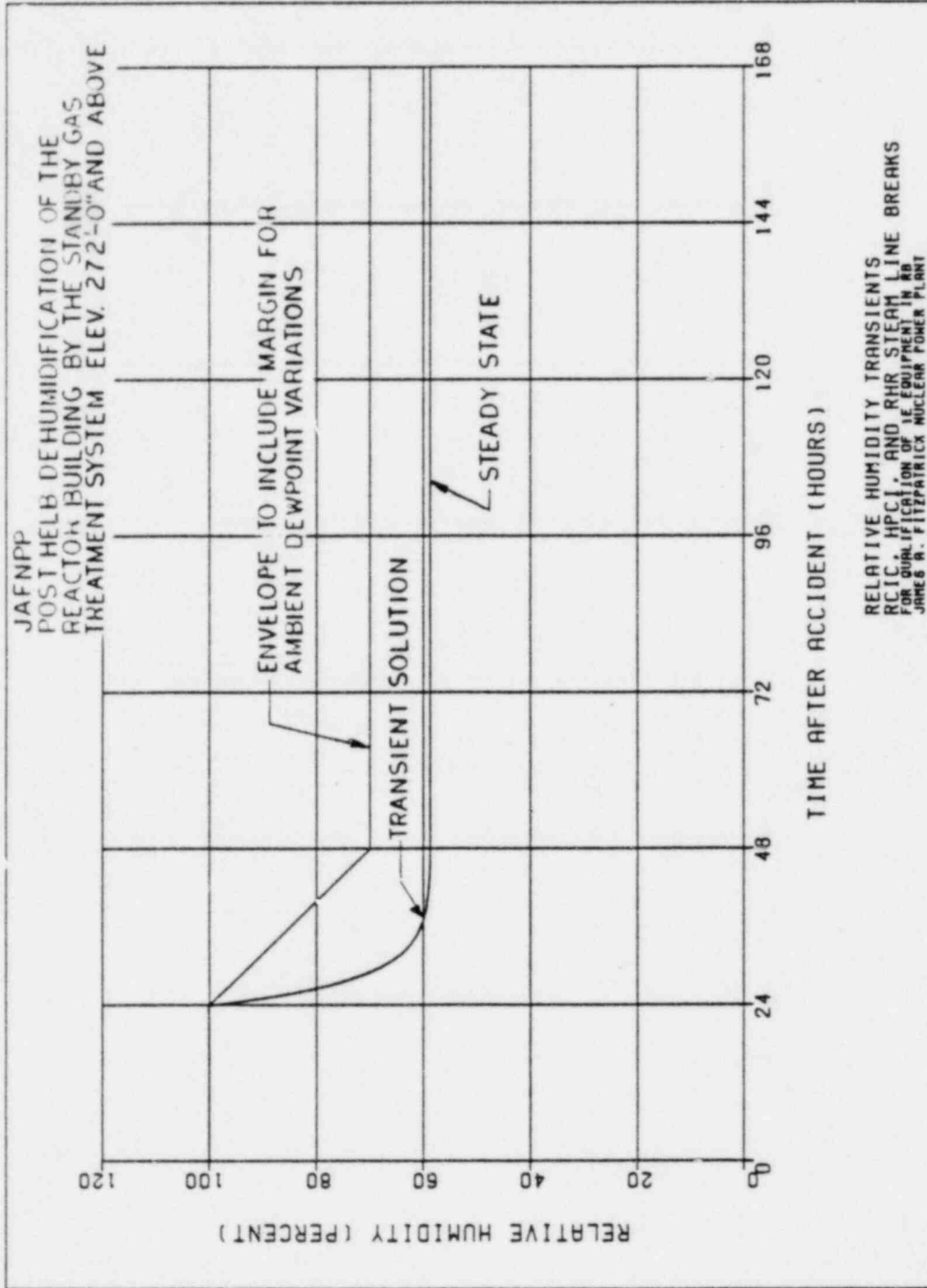
PRES-TRANSIENTS IN RCIC FIRE ENCLOSURE  
79-018 HIGH ENERGY LINE BREAK ANALYSIS  
FOR ANALYSIS OF EQUIPMENT IN  
JAMES H. FLETCHER NUCLEAR POWER PLANT



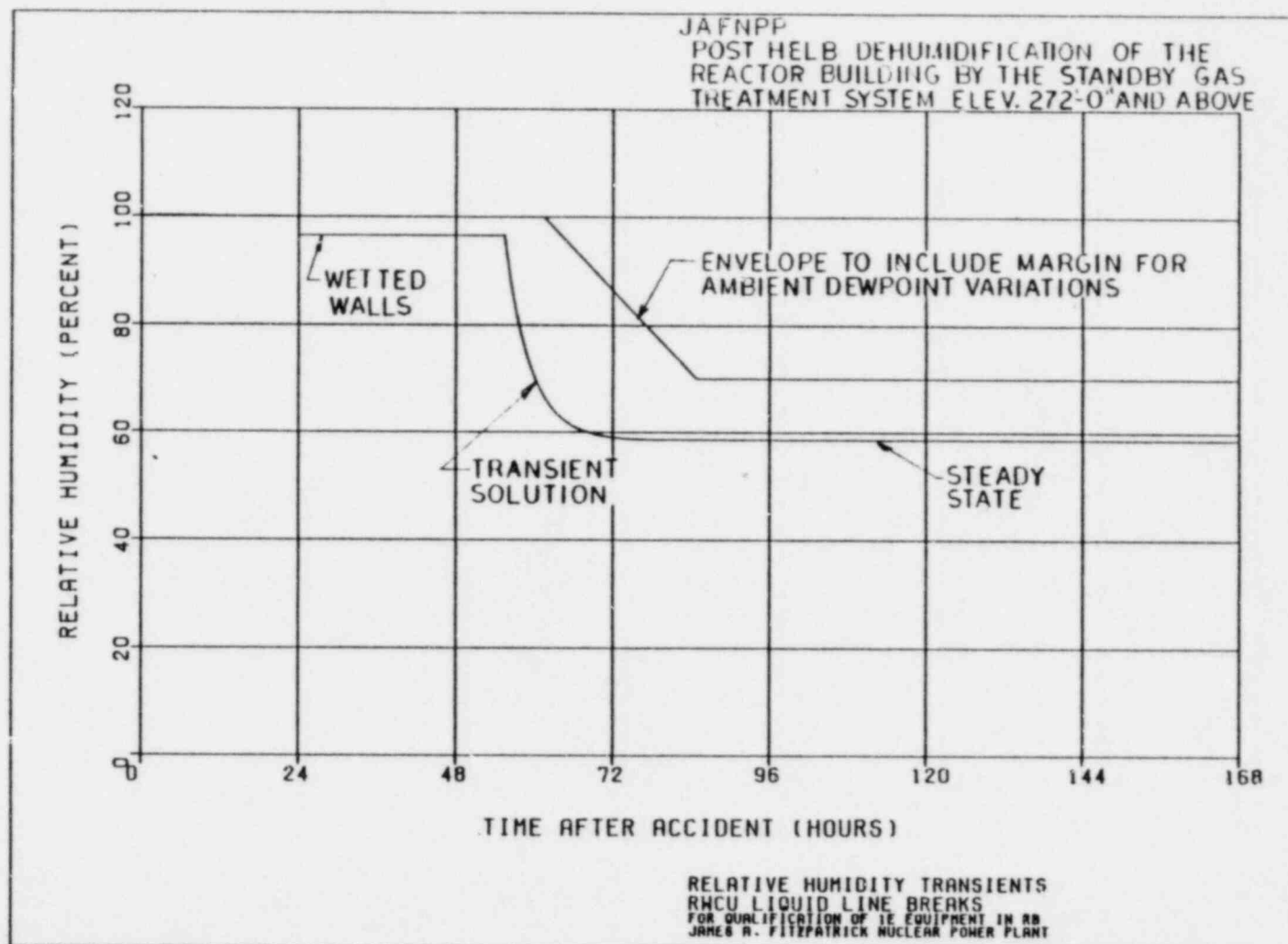
ENVELOPING PRESSURE TRANSIENTS OF REACTOR BUILDING  
POST LOCA & POST HELB

(Envelopes curves 2A thru 2AZ)

FOR QUALIFICATION OF 1E EQUIPMENT IN RB  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT







IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-80-28  
NUREG 0737, Section 11.E.4.1.2  
SECTION 9  
PG 70 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> PCACS  PLANT ID NO: 27MOV-122 27MOV-123  COMPONENT: Valve Operator (Order #3C1052A)  MANUFACTURER: Limitorque  MODEL NO.: SMB-1  FUNCTION: Isolation Valve  ACCURACY- SPEC N/A DEMON  SERVICE: Primary Containment Isolation & Cont. Purging  LOCATION: Reactor Building 27MOV-122 - 326' (6W) 27MOV-123 - 272' (7W)	OPERATING TIME	180 days	>180 days	101	222,143	Simultaneous	None	
		NORMAL	ACCIDENT Peak					
	TEMPERATURE °F	40-104	110	250	44,18C	222,143	Simultaneous	None
	PRESSURE PSIA	14.7	15.0	25	44	222,143	Simultaneous	None
	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	222,143	Simultaneous	None
	DEMINERALIZED WATER SPRAY			Not	Applicable			
		T. I. D.	ACCIDENT					
	RADIATION Rads	8.2x10 <sup>4</sup>	6.4x10 <sup>4</sup>	1.0x10 <sup>7</sup>	3	222,143	Sequential	None
	AGING	40 years		>40 years	164	222,143	Sequential	None
	FLOOD LEVEL ELEV. 227'-6"	SUBMERGENCE			Not	Applicable		
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO  Installed Feb., 1982 PASNY P.O. #81-1390  Valve Serial No's 27MOV-122 #286560 27MOV-123 #286561	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Required after a containment LOCA for containment isolation and containment purging. 3. Qualify to the LOCA environment as experienced in the component Reactor Bldg. locations.						
	AGING PROGRAM INPUT							

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE






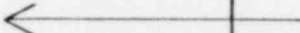
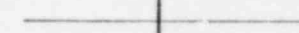







T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
1.8x10<sup>4</sup>

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-81-03  
NUREG 0737, Section 11.K.3.13.B

SECTION 14  
PG. 57 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> RCIC  <b>PLANT ID NO:</b> 13TS-1  <b>COMPONENT:</b> Trip Solenoid  <b>MANUFACTURER</b> Trombetta (Terry Turbine)  <b>MODEL NO:</b> G206  <b>FUNCTION</b> Turbine Control  <b>ACCURACY- SPEC</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> RCIC Turbine Trip Solenoid  <b>LOCATION:</b> Reactor Building West Crescent, RCIC Turb. El. 233'	OPERATING TIME	24 hours		>24 hours	101	203	Simultaneous None		
		NORMAL	ACCIDENT Peak						
	TEMPERATURE °F	40-104	110	212	44,104	203	Simultaneous None		
	PRESSURE PSIA	14.7	15.0	16.7	44,104	203	Simultaneous None		
	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	203	Simultaneous None		
	DEMINERALIZED WATER SPRAY			Not	Applicable				
		T. I. D.	ACCIDENT						
	RADIATION Rads	1.2x10 <sup>6</sup>	1.1x10 <sup>6</sup>	1.0x10 <sup>7</sup>	3	203	Sequential None		
	AGING	40 years		40 years	164	203	Sequential None		
	SUBMERGENCE			Not	Applicable				
<b>ABOVE FLOOD LEVEL</b> <b>(YES)</b> <b>NO</b>  Installed Feb., 1982 PASNY P.O. #81-3397	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.							
	AGING PROGRAM INPUT								

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE











T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
7x10<sup>4</sup>

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-81-03  
NUREG 0737, Section II.K.3.13.B

SECTION 14  
PG 58 OF     

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> RCIC  <b>PLANT ID NO</b> 13A-K49  <b>COMPONENT</b> DC Contactor  <b>MANUFACTURER</b> General Electric  <b>MODEL NO:</b> 1C2800-1607 (Size 1)  <b>FUNCTION</b> Relay  <b>ACCURACY- SPEC</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. El. 300'/286'	<b>OPERATING TIME</b>	180 days			101		*		
		<b>NORMAL</b>	<b>ACCIDENT Peak</b>						
	<b>TEMPERATURE °F</b>	40-120	A		44,170,171		*		
	<b>PRESSURE PSIA</b>	14.7	N/A		44,170,171		*		
	<b>RELATIVE HUMIDITY %</b>	10-60	N/A		44,170,171		*		
	<b>DEMINERALIZED WATER SPRAY</b>	← Not			Applicable	→			
		<b>T. I. D.</b>	<b>ACCIDENT</b>						
	<b>RADIATION Rads</b>	700	N/A		3		*		
	<b>AGING</b>	40 years			164		*		
	<b>SUBMERGENCE</b>	← Not			Applicable	→			
<b>FLOOD LEVEL ELEV</b> N/A  <b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES <input type="radio"/> NO  Installed Feb., 1982 PASNY P.O. #82-2814	<b>ENVIRONMENT SPECIFICATION BASIS</b>	1. Mild environment							
	<b>AGING PROGRAM INPUT</b>								

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

1. This component will be qualified under an existing qualification program which is testing Motor Control Centers for a harsh environment.
2. At the time of purchase, no existing qualified DC contactor could be identified. Therefore, a component which is already used in other Class 1E applications was selected for interim use. This component is considered the "best available" at the time of installation.

Schedule: MCC testing presently scheduled for completion by December, 1982 or verify existing information is adequate for the mild environment in which this device is located.

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-81-05  
NUREG 0737, Section II.K.3.22.B

SECTION 14  
PG 59 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> RCIC  PLANT ID NO: LS-076A,B LS-077A,B  <b>COMPONENT</b> Level Switch  <b>MANUFACTURER</b> Magnetrol  <b>MODEL NO:</b> BCS-751-EP/VPX-SIMD40C  <b>FUNCTION</b> Suction Valve Control  <b>ACCURACY- SPEC</b> 1"±.19" <b>                  DEMON.</b> (Level Diff)  <b>SERVICE:</b> Storage Tank Level Switchover to Torus  <b>LOCATION:</b> Condensate Tank Pit El. 262'	OPERATING TIME	24 hours		24 hours	101	216	Simultaneous None
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A	N/A	*	216	Simultaneous None
	PRESSURE PSIA	14.7	N/A	N/A	*	216	Simultaneous None
	RELATIVE HUMIDITY %	40-90	N/A	N/A	*	216	Simultaneous None
	DEMINERALIZED WATER SPRAY	←		Not	Applicable		→
		T. I. D.	ACCIDENT				
	RADIATION Rads	7x10 <sup>4</sup>	N/A	1.0x10 <sup>7</sup>	3	216	Sequential None
	AGING	40 years		40 years	164	216	Sequential None
	FLOOD LEVEL ELEV. N/A	←		Not	Applicable		→
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES <input type="radio"/> NO  Installed Feb., 1982 PASNY P.O. #81-4801	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
	AGING PROGRAM INPUT						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE



















IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

SYSTEM COMPONENT EVALUATION  
WORK SHEET

TMI Mod. No. F1-81-05  
NUREG 0737, Section II.K.3.22.B

SECTION 14  
PG. 60 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION			QUALIFICATION
SYSTEM RCIC	OPERATING TIME	24 hours		>24 hours	101	208	N/A	None
PLANT ID NO: 13PNS-055A,B		NORMAL	ACCIDENT Peak					
COMPONENT: Position Switch	TEMPERATURE OF	40-120	N/A	N/A	*	208	Simultaneous	None
MANUFACTURER NAMCO	PRESSURE PSIA	14.7	N/A	N/A	*	208	Simultaneous	None
MODEL NO.: EA740-80100 (with Conax Conduit Seal Assembly)	RELATIVE HUMIDITY %	40-90	N/A	N/A	*	208	Simultaneous	None
FUNCTION Suction Valve Position	DEMINEALIZED WATER SPRAY			Not	Applicable			
ACCURACY - SPEC N/A DEMON.		T. I. D.	ACCIDENT					
SERVICE: Storage Tank Level Switchover to Torus	RADIATION Rads	7x10 <sup>4</sup>	N/A	1.0x10 <sup>6</sup>	3	208	Sequential	None
LOCATION: Condensate Tank Pit E1. 262'	AGING	40 years		40 years	164	208	Sequential	None
FLOOD LEVEL ELEV N/A	SUBMERGENCE			Not	Applicable			
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment						
Installed Feb., 1982 PASNY P.O. #81-4316	AGING PROGRAM INPUT							

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

TID (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-80-16  
NUREG 0737, Section 11.F.1.3 & 11.E.4.2.7

SECTION 15  
PG 13 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Primary Containment System  <b>PLANT ID NO</b> X-100D  <b>COMPONENT</b> Electrical Penetration  <b>MANUFACTURER</b> Conax  <b>MODEL NO.:</b> 7251-20000-01  <b>FUNCTION</b> Primary Containment Electrical Penetration  <b>ACCURACY- SPEC. DEMON.</b> N/A  <b>SERVICE:</b> Instrumentation Feed-thru  <b>LOCATION:</b> Drywell El. 290'	<b>OPERATING TIME</b>	> 180 days	> 180 days	101	214	Simultaneous	None	
		NORMAL	ACCIDENT Peak					
	<b>TEMPERATURE °F</b>	135-150	308	340	44, 57	214	Simultaneous	None
	<b>PRESSURE PSIA</b>	14.2-16.7	59.7	90	44, 58	214	Simultaneous	None
	<b>RELATIVE HUMIDITY %</b>	40-90	100	100	44, 57, 58	214	Simultaneous	None
	<b>DEMINERALIZED WATER SPRAY</b>	Yes		Yes	106	214	Simultaneous	None
		T. I. D.	ACCIDENT					
	<b>RADIATION Rads</b>	1.09x10 <sup>8</sup>	1.0x10 <sup>8</sup>	1.8x10 <sup>8</sup>	3	214	Sequential	None
	<b>AGING</b>	40 years		40 years	164	214	Sequential	None
<b>FLOOD LEVEL ELEV.</b> 258'-6"	<b>SUBMERGENCE</b>	← Not		Applicable →				
<b>ABOVE FLOOD LEVEL</b> YES NO  Installed Feb., 1982 PASNY P.O. #80-	<b>ENVIRONMENT SPECIFICATION BASIS</b>	1. Harsh accident environment. 2. Equipment required post-LOCA for communication of electrical instrument signals from containment sensors.						
	<b>AGING PROGRAM INPUT</b>							

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
8.5x10<sup>6</sup>











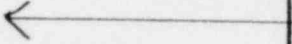
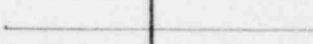
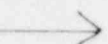


IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-80-16  
NUREG 0737, Section II.F.1.3 & II.E.4.2.7

SECTION 16  
PG 10 OF 10

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM Generic	OPERATING TIME	180 days		>180 days	101	223	Simultaneous None
PLANT ID NO: N/A		NORMAL	ACCIDENT Peak				
COMPONENT Coaxial Cable	TEMPERATURE of	135-150	308	340	44,57	223	Simultaneous None
MANUFACTURER Rockbestos	PRESSURE PSIA	14.2x16.7	59.7	118.7	44,58	223	Simultaneous None
MODEL NO: RSS-6-104-1981	RELATIVE HUMIDITY %	40-90	100	100	44,57,58	223	Simultaneous None
FUNCTION Instrument Cable	DEMINERALIZED WATER SPRAY	yes		yes	106	223	Simultaneous None
ACCURACY - SPEC N/A DEMON		T. I. D.	ACCIDENT				
SERVICE Various Signal	RADIATION Rads	1.09x10 <sup>8</sup>	1.0x10 <sup>8</sup>	2.0x10 <sup>8</sup>	3	223	Sequential None
LOCATION Drywell	AGING	40 years		>40 years	164	223	Sequential None
FLOOD LEVEL ELEV 258'-6"	SUBMERGENCE			Not	Applicable		
ABOVE FLOOD LEVEL <input checked="" type="checkbox"/> YES NO	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Equipment required to provide display instrumentation signal for high containment radiation. Also provides a primary containment isolation signal. 3. Equipment required for post-accident monitoring.					
Installed Feb., 1982	AGING PROGRAM INPUT						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
8.5x10<sup>6</sup>

IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-80-16  
NUREG 0737, Section 11.F.1.3 & 11.E.4.2.7  
SECTION 16  
PG 11 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM Generic	OPERATING TIME	180 days		>180 days	101	218	Simultaneous Analysis None
PLANT ID NO: N/A  COMPONENT Switchboard Wire  MANUFACTURER Champlain (General Atomic)  MODEL NO: AWH 3271vw-1 125°C, 600V  FUNCTION Control Wiring  ACCURACY- SPEC N/A DEMON.  SERVICE Various  LOCATION: Control Room/Relay Room Admin Bldg. Et. 300'/286'		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A	385	44,170,171	218	Simultaneous None
	PRESSURE PSIA	14.7	N/A	127.7	44,170,171	218	Simultaneous None
	RELATIVE HUMIDITY %	10-60	N/A	100	44,170,171	218	Simultaneous None
	DEMINERALIZED WATER SPRAY	←		Not	Applicable		→
		T.I.D.	ACCIDENT				
	RADIATION Rads	700	N/A	2.0x10 <sup>8</sup>	3	218	Sequential None
	AGING	40 years		40 years	164	218	Sequential None
FLOOD LEVEL ELEV N/A	SUBMERGENCE	←		Not	Applicable		→
ABOVE FLOOD LEVEL <input checked="" type="checkbox"/> YES NO   Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-80-01  
NUREG 0737, Section 11.D.3.1

SECTION 16  
PG. 12 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION			QUALIFICATION
SYSTEM: Nuclear Boiler	OPERATING TIME	24 Hours		180 days	101	165	Simultaneous	None
PLANT ID NO: Generic		NORMAL	ACCIDENT PEAK					
COMPONENT: Instrument Cable	TEMPERATURE °F	40-104	292	340	44,180	165	Simultaneous	None
MANUFACTURER: Eaton	PRESSURE PSIA	14.7	25.7	119.7	44,28A	165	Simultaneous	None
MODEL NO: 1952-68310	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	165	Simultaneous	None
FUNCTION: Instrument Signal	DEMINERALIZED WATER SPRAY	← NOT			APPLICABLE			→
ACCURACY- SPEC DEMON. N/A		T. I. D.	ACCIDENT					
SERVICE: Relief Valve Position Indication	RADIATION RADS	$6.9 \times 10^6$	$6.8 \times 10^6$	$2.0 \times 10^8$	3	165	Sequential	None
LOCATION: Reactor Bldg - Generic	AGING	40 Years		>40 years	164	165	Sequential	None
FLOOD LEVEL ELEV. 227'-6"	SUBMERGENCE	← NOT			APPLICABLE			→
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES NO	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.						
Installed Dec., 1980 PASNY P.O. #79-17089	AGING PROGRAM INPUT							

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE


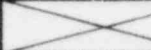










T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
 $7 \times 10^4$

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-80-01  
NUREG 0737, Section 11.D.3.1

SECTION 16  
PG 13 OF     

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM: Nuclear Boiler	OPERATING TIME	24 Hours		80 days	101	165	Simultaneous None
PLANT ID NO: Generic		NORMAL	ACCIDENT PEAK				
COMPONENT: Instrument Cable	TEMPERATURE OF	135-150	308	340	44,57	165	Simultaneous None
MANUFACTURER: Eaton	PRESSURE PSIA	14.2-16.7	59.7	119.7	44, 58	165	Simultaneous None
MODEL NO: 1952-68310	RELATIVE HUMIDITY %	40-90	100	100	44,57,58	165	Simultaneous None
FUNCTION: Instrument Signal	DEMINERALIZED WATER SPRAY	Yes		yes	106	165	Simultaneous None
ACCURACY- SPEC. N/A DEMON.		T. I. D.	ACCIDENT				
SERVICE: Relief Valve Position Indication	RADIATION RADS	1.09x10 <sup>8</sup>	1.0x10 <sup>8</sup> (six months)	2.0x10 <sup>8</sup>	3	165	Sequential None
LOCATION: Drywell	AGING	40 Years		>40 years	164	165	Sequential None
FLOOD LEVEL ELEV 258'-6"	SUBMERGENCE			NOT	APPLICABLE		
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES NO	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.					
Installed Dec., 1980 PASNY P.O. #79-17089	AGING PROGRAM INPUT						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE)=40 YR. NORMAL + ACCIDENTAL DOSE  
8.5x10<sup>6</sup>

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-81-47  
NUREG 0661

SECTION 16  
PG 14 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION			
SYSTEM Generic	OPERATING TIME	180 days	>180 days	101	201	Simultaneous	None	
PLANT ID NO: N/A		NORMAL	ACCIDENT Peak					
COMPONENT Instrument Cable	TEMPERATURE of	40-104	292	385	44,180	201	Simultaneous	None
MANUFACTURER Anaconda	PRESSURE PSIA	14.7	25.7	80.7	44,28A	201	Simultaneous	None
MODEL NO.: FR EP	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	201	Simultaneous	None
FUNCTION Instrument Cable	DEMINERALIZED WATER SPRAY			Not	Applicable			
ACCURACY- SPEC. N/A DEMON.		T. I. D.	ACCIDENT					
SERVICE: Various	RADIATION Rads	6.87x10 <sup>6</sup>	6.8x10 <sup>6</sup>	2.0x10 <sup>8</sup>	3	201	Sequential	None
LOCATION: Reactor Bldg-Generic	AGING	40 years		>40 years	164	201	Sequential	None
FLOOD LEVEL ELEV 227'-6"	SUBMERGENCE			Not	Applicable			
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES <input type="radio"/> NO	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Qualified for generic Reactor Bldg. enveloping environments for LOCA/HELB.						
Install Dec., 1982	AGING PROGRAM INPUT							

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
7x10<sup>4</sup>



IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-81-47  
NUREG 0661

SECTION 16  
PG. 15 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Instrument Cable  <b>MANUFACTURER</b> Belden  <b>MODEL NO:</b> C/N 83348  <b>FUNCTION</b> Panel Instrument Cable  <b>ACCURACY- SPEC.</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Control Room Admin. Bldg. El. 300'	OPERATING TIME	180 days		N/A	101	N/A	N/A
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A	N/A	44,170,171	209	Simultaneous None
	PRESSURE PSIA	14.7	N/A	N/A	44,170,171	209	Simultaneous None
	RELATIVE HUMIDITY %	10-60	N/A	N/A	44,170,171	209	Simultaneous None
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→		
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A	1.7x10 <sup>4</sup>	3	209	Sequential None
	AGING	40 years		>40 years	164	209	Sequential None
	FLOOD LEVEL ELEV. N/A	SUBMERGENCE		← Not	Applicable	→	
<b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES <input type="radio"/> NO  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE)=40 YR. NORMAL + ACCIDENTAL DOSE

E BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-Generic  
NUREG 0737

SECTION 16  
PG. 16 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Switchboard Wire  <b>MANUFACTURER</b> Rockbestos  <b>MODEL NO.:</b> Firewall SIS  <b>FUNCTION</b> Control Wiring  <b>ACCURACY- SPEC</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. El.300'/286'	OPERATING TIME	180 days		>180 days	101	205	Simultaneous None
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A	346	44,170,171	205	Simultaneous None
	PRESSURE PSIA	14.7	N/A	127.7	44,170,171	205	Simultaneous None
	RELATIVE HUMIDITY %	10-60	N/A	100	44,167	205	Simultaneous None
	DEMINERALIZED WATER SPRAY	← Not			Applicable	→	
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A	$2.0 \times 10^8$	3	205	Sequential None
	AGING	40 years		>40 years	164	205	Sequential None
	FLOOD LEVEL ELEV. N/A	←			Not	Applicable	→
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
	AGING PROGRAM INPUT						

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-Generic  
NUREG 0737

SECTION 16  
PG 17 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Generic  <b>PLANT ID NO</b> N/A  <b>COMPONENT:</b> Cable  <b>MANUFACTURER</b> Rockbestos  <b>MODEL NO:</b> Firewall III  <b>FUNCTION</b> Control Cable  <b>ACCURACY - SPEC</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Reactor Bldg-Generic	<b>OPERATING TIME</b>	180 days		>180 days	101	205	Simultaneous None
		NORMAL	ACCIDENT Peak				
	<b>TEMPERATURE OF</b>	40-104	292	346	44,18D	205	Simultaneous None
	<b>PRESSURE PSIA</b>	14.7	25.7	127.7	44,2BA	205	Simultaneous None
	<b>RELATIVE HUMIDITY %</b>	20-90	90-100	100	44,167	205	Simultaneous None
	<b>DEMINERALIZED WATER SPRAY</b>	←		Not	Applicable		→
		T. I. D.	ACCIDENT				
	<b>RADIATION Rads</b>	$6.87 \times 10^6$	$6.8 \times 10^6$	$2.0 \times 10^8$	3	205	Sequential None
	<b>AGING</b>	40 years		40 years	164	205	Sequential None
	<b>FLOOD LEVEL ELEV.</b> 227'-6"	<b>SUBMERGENCE</b>	←		Not	Applicable	
<b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES <input type="radio"/> NO  Installed Feb., 1982	<b>ENVIRONMENT SPECIFICATION BASIS</b>	1. Harsh accident environment					
	<b>AGING PROGRAM INPUT</b>						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

TID (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

$7 \times 10^4$



IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-Generic  
NUREG 0737

SECTION 16  
PG. 18 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION	
<b>SYSTEM:</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Cable  <b>MANUFACTURER:</b> Boston Insulated Wire  <b>MODEL NO:</b> 14538-H-006 (XLPE)  <b>FUNCTION:</b> Signal Cable  <b>ACCURACY- SPEC:</b> N/A <b>DEMON:</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Reactor Bldg.-Generic	OPERATING TIME	180 days		>180 days	101	212	Simultaneous None
		NORMAL	ACCIDENT Peak				
	TEMPERATURE of	40-104	292	300	44,18D	212	Simultaneous None
	PRESSURE PSIA	14.7	25.7	64.7	44,28A	212	Simultaneous None
	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	212	Simultaneous None
	DEMINERALIZED WATER SPRAY	←		Not	Applicable		→
		T. I. D.	ACCIDENT				
	RADIATION Rads	$6.87 \times 10^6$	$6.8 \times 10^6$	$1.0 \times 10^8$	3	212	Sequential None
	AGING	40 years		>40 years	164	212	Sequential None
	SUBMERGENCE	←		Not	Applicable		→
<b>FLOOD LEVEL ELEV:</b> 227'-6"  <b>ABOVE FLOOD LEVEL</b> YES NO  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.					
	AGING PROGRAM INPUT						

Rev. 0








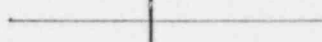






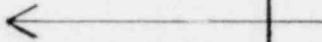

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
 $7 \times 10^4$

IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-81-03  
NUREG 0737, Section II.K.3.13.B  
SECTION 16  
PG 19 OF     

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION			QUALIFICATION
<b>SYSTEM:</b> RCIC  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Cable  <b>MANUFACTURER:</b> General Electric  <b>MODEL NO:</b> B.Vulkene Flame Resistant Control Cable 1000V  <b>FUNCTION:</b> Control Cable 2/C #8AWG  <b>ACCURACY- SPEC:</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> RCIC Turbine Trip  <b>LOCATION:</b> Reactor Building - Generic	OPERATING TIME	24 hours		110 Days	101	219	Simultaneous	None
		NORMAL	ACCIDENT Peak					
	TEMPERTURE of	40-104	292	346	44,18D	219	Simultaneous	None
	PRESSURE PSIA	14.7	25.7	127.7	44,2BA	219	Simultaneous	None
	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	219	Simultaneous	None
	DEMINERALIZED WATER SPRAY			Not	Applicable			
		T. I. D.	ACCIDENT					
	RADIATION Rads	1.17x10 <sup>6</sup>	1.1x10 <sup>6</sup>	2.2x10 <sup>8</sup>	3	219	Sequential	None
	AGING	40 years		>40 years	164	219	Sequential	None
FLOOD LEVEL ELEV. 227'-6"	SUBMERGENCE			Not	Applicable			
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES <input type="radio"/> NO   Install Dec., 1982 PASNY P.O. SW88C-120	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.						
	AGING PROGRAM INPUT							

IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-Generic  
NUREG 0737

SECTION 20  
PG 8 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Fuse Block  <b>MANUFACTURER:</b> Buchanan  <b>MODEL NO:</b> NQ0361006  <b>FUNCTION:</b> Circuit Protection  <b>ACCURACY- SPEC:</b> N/A <b>DEMON:</b>  <b>SERVICE:</b> Control Systems  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. E1.300'/286'	OPERATING TIME	180 days		N/A	101	N/A	N/A		
		NORMAL	ACCIDENT Peak						
	TEMPERTURE °F	40-120	N/A	346	44,170,171	210	Simultaneous		
	PRESSURE PSIA	14.7	N/A	127.7	44,170,171	210	Simultaneous		
	RELATIVE HUMIDITY %	10-60	N/A	100	44,170,171	210	Simultaneous		
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→				
		T. I. D.	ACCIDENT						
	RADIATION Rads	700	N/A	$2.0 \times 10^8$	3	210	Sequential		
	AGING	40 years		>40 years	164	210	Sequential		
	SUBMERGENCE	← Not		Applicable	→				
<b>ABOVE FLOOD LEVEL</b> YES NO  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment							
	AGING PROGRAM INPUT								

Rev. 0

NOTES \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE)=40 YR. NORMAL + ACCIDENTAL DOSE

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-Generic  
NUREG 0737  
SECTION 20  
PG 9 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM: Generic	OPERATING TIME	180 days		N/A	101	N/A	N/A
PLANT ID NO: N/A		NORMAL	ACCIDENT Peak				
COMPONENT: Terminal Block	TEMPERATURE OF	40-120	N/A	346	44,170,171	210	Simultaneous None
MANUFACTURER: Buchanan	PRESSURE PSIA	14.7	N/A	127.7	44,170,171	210	Simultaneous None
MODEL NO: NQB112, NQB106, NQ511082	RELATIVE HUMIDITY %	10-60	N/A	100	44,170,171	210	Simultaneous None
FUNCTION: Wire Splice	DEMINERALIZED WATER SPRAY	← Not		Applicable	→		
ACCURACY- SPEC. N/A DEMON.		T. I. D.	ACCIDENT				
SERVICE: Control Systems	RADIATION Rads	700	N/A	$2.0 \times 10^8$	3	210	Sequential None
LOCATION: Control Room/Relay Room Admin Bldg. El. 300'/286'	AGING	40 years		40 years	164	210	Sequential None
FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
Installed Feb., 1982	AGING PROGRAM INPUT						

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
JACKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-Generic  
NUREG 0737

SECTION 20  
PG. 10 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Terminal Block (In NEMA 4 Enclosure)  <b>MANUFACTURER:</b> Buchanan  <b>MODEL NO.:</b> NQB112, NQB106, NQ511082  <b>FUNCTION:</b> Wire Splice  <b>ACCURACY- SPEC:</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Control Systems  <b>LOCATION:</b> Reactor Bldg.-Generic	OPERATING TIME	180 days		>180 days	101	211	Simultaneous None		
		NORMAL	ACCIDENT Peak						
	TEMPERATURE °F	40-104	292	346	44,1BD	211	Simultaneous None		
	PRESSURE PSIA	14.7	25.7	127.7	44,2BA	211	Simultaneous None		
	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	211	Simultaneous None		
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→				
		T. I. D.	ACCIDENT						
	RADIATION Rads	6.87x10 <sup>6</sup>	6.8x10 <sup>6</sup>	2.0x10 <sup>8</sup>	3	211	Sequential None		
	AGING	40 years		>40 years	164	211	Sequential None		
	SUBMERGENCE	← Not		Applicable	→				
<b>FLOOD LEVEL ELEV.</b> 227'-6"  <b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES <input type="radio"/> NO  <b>Installed Feb., 1982</b>	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.							
	AGING PROGRAM INPUT								

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE)=40YR. NORMAL + ACCIDENTAL DOSE  
7x10<sup>4</sup>



IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-Generic  
NUREG 0737

SECTION 21  
PG 5 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT</b> Circuit Breaker (Molded Case)  <b>MANUFACTURER</b> General Electric  <b>MODEL NO:</b> TEB111015  <b>FUNCTION</b> Circuit Isolation and Protection  <b>ACCURACY- SPEC.</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. El.300'/286'	OPERATING TIME	180 days			101		*		
		NORMAL	ACCIDENT Peak						
	TEMPERATURE of	40-120	N/A		44,170,171		*		
	PRESSURE PSIA	14.7	N/A		44,170,171		*		
	RELATIVE HUMIDITY %	10-60	N/A		44,170,171		*		
	DEMINERALIZED WATER SPRAY	← Not			Applicable	→			
		T. I. D.	ACCIDENT						
	RADIATION Rads	700	N/A		3		*		
	AGING	40 years			164		*		
	SUBMERGENCE	← Not			Applicable	→			
<b>FLOOD LEVEL ELEV</b> N/A  <b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES <input type="radio"/> NO  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment							
	AGING PROGRAM INPUT								

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

Section 21, Page 5

Component - Molded Case Circuit Breaker

1. This component will be qualified under an existing qualification program which is testing motor control centers for a harsh environment.
2. The Authority is presently evaluating qualification information on similar circuit breakers from the same manufacturer.
3. This item is installed into an existing power distribution panel. The design of the distribution panel necessitates the use of a breaker consistent with the panel design. Identical breakers in the panel are already employed in a Class 1E application.
4. At the time of purchase, no qualified circuit breaker meeting the installation requirements was available. This item was considered the "best available" at time of installation considering its location in a mild environment.

Schedule: Complete MCC testing by December 1982.



IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-Generic  
NUREG 0737

SECTION 21  
PG 6 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Circuit Breaker (Molded Case)  <b>MANUFACTURER:</b> General Electric  <b>MODEL NO.:</b> THQB1120  <b>FUNCTION:</b> Circuit Isolation and Protection  <b>ACCURACY- SPEC. DEMON.</b> N/A  <b>SERVICE:</b> Various  <b>LOCATION:</b> Reactor Bldg.-Generic for El. 272' & 300'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE OF	40-104	110		44, 18C		*
	PRESSURE PSIA	14.7	15.0		44		*
	RELATIVE HUMIDITY %	20-90	90-100		44		*
	DEMINERALIZED WATER SPRAY			Not	Applicable		
		T. I. D.	ACCIDENT				
	RADIATION Rads	$3.4 \times 10^5$	$3.3 \times 10^5$		3		*
	AGING	40 years			164		*
	SUBMERGENCE			Not	Applicable		
<b>FLOOD LEVEL ELEV</b> 227'-6"  <b>ABOVE FLOOD LEVEL</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> <div style="margin-left: 100px;">NO</div>  Install Dec., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment 2. Qualification provided for post-LOCA environments in the Reactor Bldg. on elevations 272 ft. and 300 ft.					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

TID (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
 $7 \times 10^4$

Component - Molded Case Circuit Breaker

Installation Incomplete

1. This breaker will be installed in existing 120 VAC power distribution panels. The design of the distribution panel necessitates the use of a breaker consistent with the panel design. Installation schedule completion by December 1982.
2. At the time of purchase, no qualified breaker meeting the installation requirements was available.
3. Also investigating system design to determine if power source can be relocated to a distribution panel in a mild environment area.

Schedule: Qualification issue or redesign by December 1982.

Section 26 - High Range Noble Gas Effluent Monitors  
NUREG 0737, Item 11.F.1.1

1. NUREG 0578 and later clarifying letters stated the design requirements for a high range noble effluent gas monitoring system. These documents stated that this system was not required to be qualified.
2. In an attempt to implement the TMI Action Plan in the accelerated schedule required by the Commission, the Authority investigated various monitoring systems based on numerous technical aspects and most importantly schedule constraints. The JAF system, which was selected was procured from the General Electric Company, consists of Victoreen radiation monitoring equipment and Leeds and Northrup recorders. This equipment has not undergone qualification testing.

It was at a later date upon the issuance of NUREG 0737 that the equipment qualification requirement was stated.

3. The Authority is investigating two possible methods of meeting the later qualification requirements:
  - 1) Conduct a qualification program on the components of the existing system (possibly joining other utilities who also have their equipment),
  - or
  - 2) Replace the equipment with a new system if suitably qualified equipment is available.
4. A review of the design specifications of the Victoreen and Leeds & Northrup equipment, confirms that the equipment is being used in the manner and environment for which it was originally designed. This provides justification for its interim use until its qualification can be confirmed.

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JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

SYSTEM COMPONENT EVALUATION  
WORK SHEET

TMI Mod. No. FI-80-14  
NUREG 0737, Section 11.F.1.1  
SECTION 26  
PG. 1 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Process Radiation Monitoring <b>PLANT ID NO:</b> 17RE-053A,B <b>COMPONENT:</b> Radiation Detector <b>MANUFACTURER</b> Victoreen (General Electric) <b>MODEL NO.:</b> 847A-2 <b>FUNCTION</b> HI Range Effluent Monitor <b>ACCURACY -</b> SPEC +100%; -10% DEMON. (System) <b>SERVICE:</b> Post Accident Monitoring of Stack Effluent Gases <b>LOCATION:</b> Stack El. 282'-6"	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-100	40-100		*		*
	PRESSURE PSIA	14.7	14.7		*		*
	RELATIVE HUMIDITY %	40-90	40-90		*		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	3.5x10 <sup>3</sup>	3.0x10 <sup>1</sup>		3		*
	AGING	40 years			164		*
FLOOD LEVEL ELEV. N/A	SUBMERGENCE	← Not		Applicable →			
ABOVE FLOOD LEVEL <b>(YES)</b> NO	ENVIRONMENT SPECIFICATION BASIS	1. Equipment required for post-accident monitoring of stack effluents. 2. Equipment located in stack, so does not experience external accident (LOCA) environments.					
Installed Feb., 1982 PASNY P.O. #80-17553	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

$$\text{T.I.D. (TOTAL INTEGRATED DOSE)} = 40 \text{ YR. NORMAL} + \text{ACCIDENTAL DOSE}$$

IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-80-14  
NUREG 0737, Section II.F.1.1

SECTION 26  
PG 2 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Process Radiation Monitoring  <b>PLANT ID NO:</b> 17RT-053A,B  <b>COMPONENT</b> Preamplifier  <b>MANUFACTURER</b> Victoreen (General Electric)  <b>MODEL NO:</b> 847A-1  <b>FUNCTION</b> Hi Range Effluent Monitor  <b>ACCURACY - SPEC</b> +100%; -10% <b>DEMON.</b> (System)  <b>SERVICE</b> Post Accident Monitoring of Stack Effluent Gases <b>LOCATION:</b> Stack El. 282'-6"	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-100	40-100		*		*
	PRESSURE PSIA	14.7	14.7		*		*
	RELATIVE HUMIDITY %	40-90	40-90		*		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	3.56x10 <sup>3</sup>	3.0x10 <sup>1</sup>		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not		Applicable →		
<b>ABOVE FLOOD LEVEL</b> (YES) <b>NO</b>  Installed Feb., 1982 PASNY P.O. #80-17553	ENVIRONMENT SPECIFICATION BASIS	1. Equipment required for post-accident monitoring of stack effluents. 2. Equipment located in stack, so does not experience external accident (LOCA) environments.					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
3.5x10<sup>3</sup>

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

SECTION 26  
PG 3 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Process Radiation Monitoring <b>PLANT ID NO:</b> 17RE-434A,B <b>COMPONENT</b> Radiation Detector <b>MANUFACTURER</b> Victoreen (General Electric) <b>MODEL NO:</b> 847A-2 <b>FUNCTION</b> Hi Range Effluent Monitor <b>ACCURACY- SPEC.</b> +100%; -10% <b>DEMON.</b> (System) <b>SERVICE:</b> Post Accident Monitoring of Turbine Building Effluent Gases <b>LOCATION:</b> HG Set Room El. 300'-0" (8Y)	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE OF	40-104	N/A		168		*
	PRESSURE PSIA	14.7	N/A		168		*
	RELATIVE HUMIDITY %	20-90	N/A		168		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	765	65		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV. N/A	SUBMERGENCE	← Not		Applicable →		
<b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES <input type="radio"/> NO  Installed Feb., 1982 PASNY P.O. #80-17553	ENVIRONMENT SPECIFICATION BASIS	1. Equipment required for post-accident monitoring of Turbine Building Ventilation. 2. Equipment located remote from the area being monitored. Post LOCA-there will be a slight increase in radiation levels.					
	AGING PROGRAM INPUT						



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SYSTEM COMPONENT EVALUATION  
WORK SHEET

TMI Mod. No. F1-80-14  
NUREG 0737, Section II.F.1.1

SECTION 26  
PG 4 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Process Radiation Monitoring <b>PLANT ID NO:</b> 17RT-434A,B <b>COMPONENT:</b> Preamplifier <b>MANUFACTURER</b> Victoreen (General Electric) <b>MODEL NO:</b> 847A-1 <b>FUNCTION</b> Hi Range Effluent Monitor <b>ACCURACY- SPEC</b> +100%; -10% <b>DEMON.</b> (System) <b>SERVICE:</b> Post Accident Monitoring of Turbine Building Effluent Gases <b>LOCATION:</b> HG Set Room EL.300'-0" (8Y)	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-104	N/A		168		*
	PRESSURE PSIA	14.7	N/A		168		*
	RELATIVE HUMIDITY %	20-90	N/A		168		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	765	65		3		*
	AGING	40 years			164		*
FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not		Applicable →			
<b>ABOVE FLOOD LEVEL</b> <b>(YES)</b> <b>NO</b>	ENVIRONMENT SPECIFICATION BASIS	1. Equipment required for post-accident monitoring of Turbine Building Ventilation. 2. Equipment located remote from the area being monitored. Post LOCA-there will be a slight increase in radiation levels.					
Installed Feb., 1982 PASNY P.O. #80-17553	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

$$\text{T.I.D. (TOTAL INTEGRATED DOSE)} = 40 \text{ YR. NORMAL} + \text{ACCIDENTAL DOSE}$$



SECTION 26  
PG 5 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION		
<b>SYSTEM</b> Process Radiation Monitoring <b>PLANT ID NO:</b> 17RE-463A,B <b>COMPONENT</b> Radiation Detector <b>MANUFACTURER</b> Victoreen (General Electric) <b>MODEL NO:</b> 847A-2 <b>FUNCTION</b> Hi Range Effluent Monitor <b>ACCURACY - SPEC</b> +100%; -10% <b>DEMON.</b> (System) <b>SERVICE:</b> Post Accident Monitoring of Radwaste Building Effluent Gases <b>LOCATION:</b> Turbine Building El. 300'-0" (23Z)	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-100	N/A		44,169		*
	PRESSURE PSIA	14.7	N/A		44,169		*
	RELATIVE HUMIDITY %	20-90	N/A		44,169		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	.75x10 <sup>3</sup>	1.0x10 <sup>3</sup>		3		*
	AGING	40 years			164		*
<b>FLOOD LEVEL ELEV</b> N/A  <b>ABOVE FLOOD LEVEL</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> <b>NO</b>  Installed Feb., 1982 PASNY P.O. #80-17553	SUBMERGENCE	← Not		Applicable →			
	ENVIRONMENT SPECIFICATION BASIS	1. Equipment required for post-accident monitoring of the Radwaste Bldg. ventilation exhaust. 2. Equipment located remote from the area being monitored. Post LOCA-there will be no significant change in ambient conditions.					
	AGING PROGRAM INPUT						

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
1750

THE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

SYSTEM COMPONENT EVALUATION  
WORK SHEET

TMI Mod. No. F1-80-14  
NUREG 0737, Section II.F.1.1

SECTION 26  
PG. 6 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM:</b> Process Radiation Monitoring <b>PLANT ID NO:</b> 17RT-463A,B <b>COMPONENT:</b> Preamplifier <b>MANUFACTURER:</b> Victoreen (General Electric) <b>MODEL NO.:</b> 874A-1 <b>FUNCTION:</b> Hi Range Effluent Monitor <b>ACCURACY - SPEC:</b> +100%; -10% <b>DEMON. (System)</b> <b>SERVICE:</b> Post Accident Monitoring of Radwaste Building Effluent Gases <b>LOCATION:</b> Turbine Building El. 300'-0" (23Z)	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-100	N/A		44,169		*
	PRESSURE PSIA	14.7	N/A		44,169		*
	RELATIVE HUMIDITY %	20-90	N/A		44,169		*
	DEMINEALIZED WATER SPRAY	← - Not			Applicable	→	
		T. I. D.	ACCIDENT				
	RADIATION Rads	.75x10 <sup>3</sup>	1.0x10 <sup>3</sup>		3		*
	AGING	40 years			164		*
<b>FLOOD LEVEL ELEV.</b> N/A  <b>ABOVE FLOOD LEVEL</b> <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO   Installed Fe., 1982 PASNY P.O. #80-17553	SUBMERGENCE	← - Not			Applicable	→	
	ENVIRONMENT SPECIFICATION BASIS	1. Equipment required for post-accident monitoring of the Radwaste Bldg. ventilation exhaust. 2. Equipment located remote from the area being monitored. Post LOCA-there will be no significant change in ambient conditions.					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

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# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-80-14  
NUREG 0737, Section II.F.1.1

SECTION 26  
PG 7 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION	
<b>SYSTEM:</b> Process Radiation Monitoring  <b>PLANT ID NO:</b> 17RR-053A,B 17RR-434A,B 17RR-463A,B <b>COMPONENT:</b> Strip Recorder  <b>MANUFACTURER:</b> Leeds & Northrup (General Electric)  <b>MODEL NO:</b> Speedomax Mark III Serial #C81-36883-1-i  <b>FUNCTION:</b> Hi Range Effluent Recorder  <b>ACCURACY- SPEC.</b> +100%; -10% <b>DEMON.</b> (System)  <b>SERVICE:</b> Post Accident Recording of effluent gases Display Instrumentation <b>LOCATION:</b> Control Room Admin. Bldg. El. 300'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE of	40-120	N/A		44,170		*
	PRESSURE PSIA	14.7	N/A		44,170		*
	RELATIVE HUMIDITY %	10-60	N/A		44,170		*
	DEMINERALIZED WATER SPRAY	← Not Applicable →					
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
	SUBMERGENCE	← Not Applicable →					
<b>FLOOD LEVEL ELEV.</b> N/A  <b>ABOVE FLOOD LEVEL</b> <input checked="" type="checkbox"/> YES NO  Installed Fe., 1982 PASNY P.O. #80-17553	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of Stack, Turbine Bldg. and Radwaste Bldg. effluent gases					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

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# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-80-14  
NUREG 0737, Section 11.F.1.1

SECTION 26  
PG 8 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Process Radiation Monitoring  <b>PLANT ID NO:</b> 17RM-053A,B 17RM-434A,B 17RM-463A,B  <b>COMPONENT</b> Readout Module  <b>MANUFACTURER</b> Victoreen (General Electric)  <b>MODEL NO:</b> 846-2  <b>FUNCTION</b> Hi Range Effluent Monitor  <b>ACCURACY- SPEC.</b> +100%; -10% <b>DEMON.</b> (System)  <b>SERVICE:</b> Post Accident Monitoring of effluent gases  <b>LOCATION:</b> Control Room Admin. Bldg. El. 300'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERTURE of	40-120	N/A		44,170		*
	PRESSURE PSIA	14.7	N/A		44,170		*
	RELATIVE HUMIDITY %	10-60	N/A		44,170		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
FLOOD LEVEL ELEV. N/A	SUBMERGENCE	← Not		Applicable →			
<b>ABOVE FLOOD LEVEL</b> (YES) NO  Installed Feb., 1982 PASNY P.O. #80-17553	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of Stack, Turbine Bldg. and Radwaste Bldg. effluent gases					
	AGING PROGRAM INPUT						

Section 27 - Containment and Reactor Pressure/Level Monitoring System  
NUREG 0737, Sections 11.F.1.4 and 11.F.1.5

1. The instrumentation package for this item was procured from the General Electric Company and is described on the attached sheets.
2. The status of the qualification documentation for this equipment is as follows:
  - a. Foxboro (power supplies, summer, recorder, signal conditioner, and distribution module) - All of this equipment is installed in a mild environment. Qualification testing is complete and the Authority expects to have the test documentation by July 15, 1982.
  - b. Barton (pressure transmitters) - This equipment is in the final stages of qualification testing. Qualification test parameters exceed the JAF accident environments. Based on the present schedule for completion of the test program, it is expected that the Authority will receive the test documentation by August 15, 1982.
3. At the time of procurement, the equipment which was obtained and installed was the "best available" and is considered acceptable in the interim pending confirmation of qualification.

IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
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# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-80-15  
NUREG 0737, Section II.F.1.4&II.F.1.5  
SECTION 27  
PG. 1 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Cont. & Reactor Press/ Level Accident Monitoring  PLANT ID NO: (see below)  <b>COMPONENT</b> Pressure-Level Transmitter  <b>MANUFACTURER</b> ITT Barton (General Electric)  <b>MODEL NO:</b> 763  <b>FUNCTION</b> Press/Level Monitor  <b>ACCURACY- SPEC</b> ±0.5% <b>DEMON.</b>  <b>SERVICE:</b> Accident Monitoring Display Instrumentation  <b>LOCATION:</b> Reactor Building (as shown below)	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-104	220		44, 1A, 1W		*
	PRESSURE PSIA	14.7	15.5		44, 2A, 2W		*
	RELATIVE HUMIDITY %	20-90	90-100		44, 167		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	6.87x10 <sup>6</sup>	6.8x10 <sup>6</sup>		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV 227'-6"	SUBMERGENCE	← Not		Applicable →		
ABOVE FLOOD LEVEL <b>(YES)</b> <b>NO</b>  Installed Feb., 1982 PASNY P.O. #80-19148	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Post accident environmental conditions based on a worst case Primary Containment LOCA as experienced in the Reactor Bldg. or a Reactor Bldg. HELB for the equipment locations. 3. Equipment provides sensor signal to display instrumentation located in the Control Room.					
23LT-203A1, B1-----344' (5.5W) 27PT-115A1, A2, B1, B2-344' (5.5W) 06PT-61A, 61B-----300' (3R), (5.5W) 23LT-203A2, B2 - 227' (4.5A), (4.5D)	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
7x10<sup>4</sup>



IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-80-15  
NUREG 0737, Section II.F.1.4 & II.F.1.5

SECTION 27  
PG 2 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM:</b> Cont. & Reactor Press/ Level Accident Monitoring  <b>PLANT ID NO:</b> 23LT-202A,B  <b>COMPONENT:</b> Pressure-Level Transmitter  <b>MANUFACTURER:</b> ITT Barton (General Electric)  <b>MODEL NO:</b> 764  <b>FUNCTION:</b> Press/Level Monitor  <b>ACCURACY- SPEC.</b> +0.5% <b>DEMON.</b>  <b>SERVICE:</b> Accident Monitoring Display Instrumentation  <b>LOCATION:</b> Reactor Building El. 227' (4.5A), (4.5D)	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-104	220		44, 1A		*
	PRESSURE PSIA	14.7	15.5		44, 2A		*
	RELATIVE HUMIDITY %	20-90	90-100		44, 167		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	6.87x10 <sup>6</sup>	6.8x10 <sup>6</sup>		3		*
	AGING	40 years			164		*
	<b>FLOOD LEVEL ELEV.</b> 227'-6"  <b>ABOVE FLOOD LEVEL</b> (YES) NO  Installed Feb., 1982 PASNY P.O. #80-19148	SUBMERGENCE	← Not		Applicable →		
ENVIRONMENT SPECIFICATION BASIS		1. Harsh accident environment. 2. Post accident environmental conditions based on worst case Containment LOCA, or Reactor Bldg. HELB for the equipment locations. 3. Equipment provides sensor signal to display instrumentation located in the Control Room					
AGING PROGRAM INPUT							

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
7x10<sup>4</sup>



E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod., No. FI-80-15  
NUREG 0737, Section II.F.1.4 & II.F.1.5

SECTION 27  
PG. 3 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM: Containment & Reactor Press/Level Accident Monitoring  PLANT ID NO: (see below)  COMPONENT: Recorder  MANUFACTURER: Foxboro (General Electric)  MODEL NO.: 226S  FUNCTION: Press/Level Recording  ACCURACY— SPEC DEMON. ±0.5%  SERVICE: Accident Monitoring Display Instrumentation  LOCATION: Control Room Admin. Bldg. E1 300 <sup>1</sup>	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A		44,170		*
	PRESSURE PSIA	14.7	N/A		44,170		*
	RELATIVE HUMIDITY %	10-60	N/A		44,170		*
	DEMINERALIZED WATER SPRAY	←		Not	Applicable	→	
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
FLOOD LEVEL ELEV N/A	SUBMERGENCE	←		Not	Applicable	→	
ABOVE FLOOD LEVEL <input checked="" type="checkbox"/> YES NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of containment level and pressure, and reactor pressure.					
Installed Feb., 1982 PASNY P.O. #80-19148  27PR-115A1,B1,A2,B2 23LR-202A,202B,203A,203B	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

$$T.I.D. \text{ (TOTAL INTEGRATED DOSE)} = 40 \text{ YR. NORMAL} + \text{ACCIDENTAL DOSE}$$

E BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-80-15  
NUREG 0737, Section II.F.1.4 & II.F.1.5

SECTION 27  
PG. 4 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION	
<b>SYSTEM</b> Containment & Reactor Press/Level Accident Monitoring  <b>PLANT ID NO:</b> (see below)  <b>COMPONENT</b> Signal Conditioner  <b>MANUFACTURER</b> Foxboro (General Electric)  <b>MODEL NO:</b> N-2A1-12V  <b>FUNCTION</b> Pressure/Level Monitoring  <b>ACCURACY - SPEC</b> ±0.5%  <b>SERVICE</b> Accident Monitoring  <b>LOCATION:</b> Relay Room Admin. Bldg. El. 286'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A		44,171		*
	PRESSURE PSIA	14.7	N/A		44,171		*
	RELATIVE HUMIDITY %	10-60	N/A		44,171		*
	DEMINERALIZED WATER SPRAY	← Not			Applicable		→
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
	SUBMERGENCE	← Not			Applicable		→
<b>FLOOD LEVEL ELEV.</b> N/A  <b>ABOVE FLOOD LEVEL</b> YES NO  Installed Feb, 1982 PASNY P.O. #80-19148  23SCM-202A, 202B, 203A, 203B 27SCM-115A, 115B 06SCM-61A, 61B	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of containment level and pressure, and reactor pressure					
	AGING PROGRAM INPUT						

IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMF No. No. F1-80-15  
NUREG 0737, Section II.F.1.4 & II.F.1.5

SECTION 27  
PG 5 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM:</b> Containment & Reactor Press/Level Accident Monitoring PLANT ID NO: (see below)  <b>COMPONENT:</b> Signal Distribution Module  <b>MANUFACTURER:</b> Foxboro (General Electric)  <b>MODEL NO.:</b> N-2AX+D10  <b>FUNCTION:</b> Pressure/Level Monitoring  <b>ACCURACY - SPEC. DEMON.:</b> ±0.5%  <b>SERVICE:</b> Accident Monitoring  <b>LOCATION:</b> Relay Room Admin Bldg. E1.286	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A		44,171		*
	PRESSURE PSIA	14.7	N/A		44,171		*
	RELATIVE HUMIDITY %	10-60	N/A		44,171		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable →			
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not		Applicable →		
ABOVE FLOOD LEVEL <b>(YES)</b> NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of containment level and pressure, and reactor pressure.					
Installed Feb., 1982 PASHY P.O. #80-19148  23SDM-203A,B 23SDM-115A,B 06SDM-61A,B	AGING PROGRAM INPUT						

IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. E1-80-15  
NUREG 0737, Section 11.F.1.4 & 11.F.1.5  
SECTION 27  
PG 6 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION	
<b>SYSTEM</b> Containment & Reactor Press/Level Accident Monitoring <b>PLANT ID NO</b> 23SUM-203A,B  <b>COMPONENT</b> Summer Module  <b>MANUFACTURER</b> Foxboro (General Electric)  <b>MODEL NO:</b> N-2AP-SUM  <b>FUNCTION</b> Pressure/Level Monitoring  <b>ACCURACY- SPEC.</b> ±0.5% <b>DEMON.</b>  <b>SERVICE:</b> Accident Monitoring  <b>LOCATION:</b> Relay Room Admin. Bldg. E1.286 <sup>+</sup>	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE of	40-120	N/A		44,171		*
	PRESSURE PSIA	14.7	N/A		44,171		*
	RELATIVE HUMIDITY %	10-60	N/A		44,171		*
	DEMINERALIZED WATER SPRAY	← Not			Applicable →		
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
	SUBMERGENCE	← Not			Applicable →		
<b>FLOOD LEVEL ELEV</b> N/A  <b>ABOVE FLOOD LEVEL</b> <input checked="" type="checkbox"/> YES NO  Installed Feb., 1982 PASNY P.O. #80-19148	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of containment level and pressure, and reactor pressure.					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

SYSTEM COMPONENT EVALUATION  
WORK SHEET

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Containment & Reactor Press/Level Accident Monitoring <b>PLANT ID NO:</b> 23PDM-200A,B  <b>COMPONENT</b> Power Distribution Module  <b>MANUFACTURER</b> Foxboro (General Electric)  <b>MODEL NO:</b> N-2ANU+DP10  <b>FUNCTION</b> Pressure/Level Monitoring  <b>ACCURACY- SPEC. DEMON.</b> ±0.5%  <b>SERVICE:</b> Accident Monitoring  <b>LOCATION:</b> Relay Room Admin. Bldg. E1.286'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A		44,171		*
	PRESSURE PSIA	14.7	N/A		44,171		*
	RELATIVE HUMIDITY %	10-60	N/A		44,171		*
	DEMINERALIZED WATER SPRAY	← Not Applicable →					
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not Applicable →				
<b>ABOVE FLOOD LEVEL</b> YES NO   Installed Feb., 1982 PASNY P.O. #80-19148	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of containment level and pressure, and reactor pressure.					
	AGING PROGRAM INPUT						

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-80-15  
NUREG 0737, Section 11.F.1.4 & 11.F.1.5

SECTION 27  
PG. 8 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Containment & Reactor Press/Level Accident Monitoring <b>PLANT ID NO</b> 23E/S-200A,B  <b>COMPONENT</b> Multinest Power Supply  <b>MANUFACTURER</b> Foxboro (General Electric)  <b>MODEL NO:</b> N-2ARPS-A6 ST.D  <b>FUNCTION</b> Pressure/Level Monitoring  <b>ACCURACY- SPEC</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Accident Monitoring  <b>LOCATION:</b> Relay Room Admin. Bldg. E1.286'	<b>OPERATING TIME</b>	180 days			101		*
		NORMAL	ACCIDENT Peak				
	<b>TEMPERATURE °F</b>	40-120	N/A		44,171		*
	<b>PRESSURE PSIA</b>	14.7	N/A		44,171		*
	<b>RELATIVE HUMIDITY %</b>	10-60	N/A		44,171		*
	<b>DEMINERALIZED WATER SPRAY</b>	← Not		Applicable	→		
		T. I. D.	ACCIDENT				
	<b>RADIATION Rads</b>	700	N/A		3		*
	<b>AGING</b>	40 years			164		*
	<b>FLOOD LEVEL ELEV.</b> N/A	<b>SUBMERGENCE</b>	← Not		Applicable	→	
<b>ABOVE FLOOD LEVEL</b> YES NO  Installed Feb., 1982 PASNY P.O. #80-19148	<b>ENVIRONMENT SPECIFICATION BASIS</b>	1. Mild Environment 2. Equipment required for post-accident monitoring of containment level and pressure, and reactor pressure.					
	<b>AGING PROGRAM INPUT</b>						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE



Section 28 - Primary Containment High Range Radiation Monitoring System  
NUREG 0737, Sections 11.F.1.3 and 11.E.4.2.7

1. The qualification test reports for the General Atomics equipment listed on the following sheets are presently in final review by the Authority. This review is expected to be completed by June 30, 1982.
2. A preliminary assessment of these reports has confirmed that the JAFNPP accident environmental parameters have been enveloped by the testing performed.



E BULLETIN 79-01P  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-80-16  
NUREG 0737, Section 11.F.1.3 & 11.E.4.2.7

SECTION 28  
PG 1 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Primary Containment Atmos. Sampling  <b>PLANT ID NO</b> 27RE-104A,B  <b>COMPONENT</b> Radiation Detector Element  <b>MANUFACTURER</b> General Atomics  <b>MODEL NO.:</b> RD-23  <b>FUNCTION</b> Monitoring Containment Radiation  <b>ACCURACY- SPEC</b> ±3% DEMON.  <b>SERVICE:</b> Display Instrumentation & P.C. Isolation Signal  <b>LOCATION:</b> Drywell El.290'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	135-150	308		44,57		*
	PRESSURE PSIA	14.2-16.7	59.7		44,58		*
	RELATIVE HUMIDITY %	40-90	100		44,57,58		*
	DEMINERALIZED WATER SPRAY	yes			106		*
		T. I. D.	ACCIDENT				
	RADIATION Rads	1.09x10 <sup>8</sup>	1.0x10 <sup>8</sup>		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV. 258'-6"	SUBMERGENCE	← Not		Applicable	→	
<b>ABOVE FLOOD LEVEL</b> (YES) NO   Installed Feb., 1982 PASNY P.O. #80-17552	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Equipment required to provide display instrumentation signal for high containment radiation. Also provides a primary containment isolation signal. 3. Equipment required for post-accident monitoring.					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40YR. NORMAL + ACCIDENTAL DOSE

8.5x10<sup>6</sup>

IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-80-16  
NUREG 0737, Section II.F.1.3 & II.E.4.2.7

SECTION 28  
PG 2 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM:</b> Primary Containment Atmos. Sampling  <b>PLANT ID NO:</b> 27RM-104A,8  <b>COMPONENT:</b> Radiation Readout Module and Power Supply  <b>MANUFACTURER:</b> General Atomics  <b>MODEL NO.:</b> RP-2C /RP-23  <b>FUNCTION:</b> Containment Radiation  <b>ACCURACY- SPEC. +3% DEMON.</b>  <b>SERVICE:</b> Display Instrumentation  <b>LOCATION:</b> Control Room Admin. Bldg. El.300'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A		44,170		*
	PRESSURE PSIA	14.7	N/A		44,170		*
	RELATIVE HUMIDITY %	10-60	N/A		44,170		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→		
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not		Applicable	→	
ABOVE FLOOD LEVEL <b>YES</b> NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of primary containment radiation.					
Installed Feb., 1982 PASNY P.O. #80-17552	AGING PROGRAM INPUT						

Section 29 - Post-Accident Sampling System  
NUREG-0737, Section 11.B.3.2











1. The majority of equipment associated with this system is not required to be environmentally qualified. Per Regulatory Guide 1.97, Rev. 2, components of a "high commercial grade" should be utilized. A listing of the "high commercial grade" equipment to be utilized is listed on Sheet 3.
2. Sheets 1 and 2 are components associated with an alternate power supply for the post-accident sampling system that interfaces with Class 1E electrical buses in the plant.

E BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
JACKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-80-19  
NUREG 0737, Section 11.B.3.2

SECTION 29  
PG 1 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION		
SYSTEM Post Accident Sampling	OPERATING TIME	180 days	>180 days	101	204	N/A	(see notes 2 & 3)
PLANT ID NO: -		NORMAL	ACCIDENT Peak				
COMPONENT Transfer Switch	TEMPERATURE °F	40-120	N/A	N/A	44,171	204	Simultaneous None
MANUFACTURER Electroswitch	PRESSURE PSIA	14.7	N/A	N/A	44,171	204	Simultaneous None
MODEL NO: 2401C	RELATIVE HUMIDITY %	10-60	N/A	N/A	44,171	204	Simultaneous None
FUNCTION Electrical Power Transfer Switch	DEMINEALIZED WATER SPRAY	← Not		Applicable	→		
ACCURACY- SPEC. DEMON. N/A		T. I. D.	ACCIDENT				
SERVICE: Power Supply to Sample System	RADIATION Rads	700	N/A	1.0x10 <sup>4</sup>	3	204	Sequential None
LOCATION: Relay Room Admin. Bldg. E1.286	AGING	40 years		(see notes 2&3)	164	204	(see notes 2&3)
FLOOD LEVEL ELEV. N/A	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL <input checked="" type="checkbox"/> YES NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Test Specimen demonstrated less than 40 years of life. 3. Electroswitch Corporation has begun a new test program which will qualify 24 series switches for 40 years. Test program expected to be completed by the end of year 1982.					
Install Dec., 1982 PASNY P.O. #81-6131	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-80-19  
NUREG 0737, Section II.B.3.2  
SECTION 29  
PG. 2 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM: Post Accident Sampling	OPERATING TIME	180 days		>180 days	101	204	N/A (see notes 1&2)
PLANT ID NO: -		NORMAL	ACCIDENT Peak				
COMPONENT: Transfer Switch	TEMPERATURE °F	40-104	N/A	N/A	168	204	Simultaneous None
MANUFACTURER: Electroswitch	PRESSURE PSIA	14.7	N/A	N/A	168	204	Simultaneous None
MODEL NO.: 2402C	RELATIVE HUMIDITY %	20-90	N/A	N/A	168	204	Simultaneous None
FUNCTION: Electrical Power Transfer Switch	DEMINEALIZED WATER SPRAY	← Not		Applicable	→		
ACCURACY- SPEC N/A DEMON.		T. I. D.	ACCIDENT				
SERVICE: Power Supply to Sample System	RADIATION Rads	765	65	$1.0 \times 10^4$	3	204	Sequential None
LOCATION: MG Set Room E1.300'-0"	AGING	40 years		(see notes 1&2)	164	204	(see notes 1&2) *
FLOOD LEVEL ELEV. N/A	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL (YES) NO	ENVIRONMENT SPECIFICATION BASIS	1. Test specimen demonstrated less than 40 years of life. 2. Electroswitch Corporation has begun a new test program which will qualify 24 series switches for 40 years. Test program expected to be completed by the end of year 1982.					
Install Dec., 1982 PASNY P.O. #81-6131	AGING PROGRAM INPUT						

List of High Grade Commercial Components

<u>No.</u>	<u>Component</u>	<u>Manufacturer/Model No.</u>	<u>Location</u>	<u>Comment</u>
1.	GE BWR Post Acc. Sample Station	GE/Spec. C5474-SPI Rev. 1	MG Set Room 300'	
2.	Indicating Lights	GE/ET16	Relay RM SIP Panel	See Sh. 32, pg. 1
3.	Terminal Block Terminal Block	GE/EB25A12W GE/EB25A06W	Relay RM SIP Panel MG Set Room 300'	See Ref. 202 ↓
4.	Control Switch Control Switch	GE/CR2940-US203E GE/CR2940-UA202B	Relay RM SIP Panel Relay RM SIP Panel	See Ref. 206 ↓
5.	Circuit Breaker Circuit Breaker	GE/THQB1120 GE/THQB1130	Relay RM SIP Panel RB 272' (3Y)	See Sh. 21, pg. 6 ↓
6.	Relay Relay Relay Relay	GE/CR2810A14AT2 GE/CR2810A14DH2 GE/CR2810A14AK2 Agastat/7012AF	Relay RM SIP Panel Relay RM SIP Panel MG Set Room 300' MG Set Room 300'	
7.	Solenoid Valves Solenoid Valves Solenoid Valves Solenoid Valves Solenoid Valves Solenoid Valves	Target Rock/81JJ-001 Target Rock/81JJ-005 Target Rock/81JJ-002 Target Rock/81JJ-006 Target Rock/81JJ-003 Target Rock/81JJ-004	RB Generic RB Generic RB Generic RB Generic RB Generic RB Generic	See Sh. 30, pg. 1 ↓
8.	Exhaust Fan	LAU Ind./HPR10	MG Set Room 300'	
9.	Flow Switch	Drying Sys/955R	MG Set Room 300'	
10.	Alarm	Malory Sonalert/SC110D	MG Set Room 300'	



# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-80-20  
NUREG 0737, Section 11.F.1.6  
SECTION 30  
PG 1 OF     

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Containment Atmospheric Sampling  <b>PLANT ID NO:</b> (see below)  <b>COMPONENT</b> Solenoid Valve  <b>MANUFACTURER</b> Target Rock  <b>MODEL NO:</b> 81JJ-004  <b>FUNCTION</b> H <sub>2</sub> Sample  <b>ACCURACY- SPEC. DEMON.</b> N/A  <b>SERVICE:</b> Primary Containment Isolation Valve  <b>LOCATION:</b> Reactor Building (as shown below)	OPERATING TIME	180 days	>180	101	225	Simultaneous	None	
		NORMAL	ACCIDENT Peak					
	TEMPERATURE °F	40-104	110	385	44,148,166	225	Simultaneous	None
	PRESSURE PSIA	14.7	15.0	77.7	44	225	Simultaneous	None
	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	225	Simultaneous	None
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→			
		T. I. D.	ACCIDENT					
	RADIATION Rads	6.87x10 <sup>6</sup>	6.8x10 <sup>6</sup>	2.27x10 <sup>7</sup>	3	225	Sequential	None
	AGING	40 years		>40	164	225	Sequential	None
	FLOOD LEVEL ELEV 227'-6"	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL <b>(YES)</b> NO Install Dec., 1982 PASNY P.O. #80-22067 2750V-120E1,120E2,119F1,119F2,122E1,122E2 - E1.326' (5R) 2750V-123E1,E2 - E1.300' (5R) 6650V-210A,B - E1.300' (2T,6R) 2750V-120F1,120F2,122F1,122F2,123F1,123F2 - E1.272' (3W) 2750V-119E1,119E2,124E1,124E2,124F1,124F2 - E1.227' (5P)	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Required to operate post-LOCA/MSLB occurring in primary containment, but located in Reactor Building. 3. Accident environment is long term post-LOCA for Reactor Building. 4. The Ethylene-Prophylene gasket and the polyamide-imide disc in the subject valve will be replaced during the next outage with the silicone rubber gaskets and discs as used in the test specimen in order to extend qualified lifetime.						
	AGING PROGRAM INPUT							



IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-80-20  
NUREG 0737, Section II.F.1.6

SECTION 30  
PG. 2 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Containment Atmospheric Sampling <b>PLANT ID NO:</b> 23HAZ-102A,B <b>COMPONENT</b> H <sub>2</sub> Analyzer Panel <b>MANUFACTURER</b> Consip <b>MODEL NO:</b> KIII <b>FUNCTION</b> Gas Analyzing <b>ACCURACY- SPEC. DEMON.</b> +4% <b>SERVICE:</b> Primary Containment H <sub>2</sub> Monitoring <b>LOCATION:</b> Reactor Building El. 300' (2T), (6R)	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE OF	40-104	110		44,1BB		*
	PRESSURE PSIA	14.7	15.0		44		*
	RELATIVE HUMIDITY %	20-90	90-100		44,167		*
	DEMINERALIZED WATER SPRAY	← Not Applicable →					
		T. I. D.	ACCIDENT				
	RADIATION Rads	2.2x10 <sup>5</sup>	2.0x10 <sup>5</sup>		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV. 227'-6"	SUBMERGENCE	← Not Applicable →				
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Required to operate post-LOCA/MSLB occuring in primary containment, but located in Reactor Building. 3. Accident environment is long term post-LOCA for Reactor Building.					
Install Dec., 1982 PASNY P.O. #80-19794	AGING PROGRAM INPUT						

1. The Authority is presently reviewing the qualification test reports for the Comsip KIII hydrogen analyzer and is refining the aging analysis. The review of this report will be finalized by July 15, 1982.
2. This equipment will be installed by December, 1982.

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-80-20  
NUREG 0737, Section II.F.1.6

SECTION 30  
PG. 3 OF     

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Containment Atmospheric Sampling  <b>PLANT ID NO</b> 27HAX-102A,B  <b>COMPONENT</b> H <sub>2</sub> Analyzer Panel (Remote Indicator)  <b>MANUFACTURER</b> Consip  <b>MODEL NO.:</b> KIII  <b>FUNCTION</b> Primary Containment H <sub>2</sub> Monitoring  <b>ACCURACY- SPEC.</b> +2% <b>DEMON.</b>  <b>SERVICE:</b> Display Instrumentation  <b>LOCATION:</b> Control Room Admin. Bldg. E1.300'	OPERATING TIME	180 days			105		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-120	N/A		44,170		*
	PRESSURE PSIA	14.7	N/A		44,170		*
	RELATIVE HUMIDITY %	10-60	N/A		44,170		*
	DEMINERALIZED WATER SPRAY	← Not Applicable →					
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV. N/A	SUBMERGENCE	← Not Applicable →				
<b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES <b>NO</b>	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. Equipment required for post-accident monitoring of containment H <sub>2</sub> concentration.					
Install Dec., 1982 PASNY P.O. #80-19794	AGING PROGRAM INPUT						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

1. The Authority is presently reviewing the qualification test reports for the Comsip KIII hydrogen analyzer and is refining the aging analysis. The review of this report will be finalized by July 15, 1982.
2. This equipment will be installed by December, 1982.

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-80-20  
NUREG 0737, Section II.F.1.6

SECTION 30  
PG 4 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Containment Atmospheric Sampling  <b>PLANT ID NO:</b> N/A  <b>COMPONENT</b> Heat Trace Control Station  <b>MANUFACTURER</b> Thermon  <b>MODEL NO.:</b> - (unknown at this time)  <b>FUNCTION</b> Heat trace control  <b>ACCURACY- SPEC.</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> H <sub>2</sub> Gas Sample Line Heat Tracing  <b>LOCATION:</b> Reactor Building El. 300'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-104	110		44,188		*
	PRESSURE PSIA	14.7	15.0		44		*
	RELATIVE HUMIDITY %	20-90	90-100		44,167		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→		
		T. I. D.	ACCIDENT				
	RADIATION Rads	2.2x10 <sup>5</sup>	2.0x10 <sup>5</sup>		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV. 227'-6"	SUBMERGENCE	← Not		Applicable	→	
<b>ABOVE FLOOD LEVEL</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> <b>NO</b>   Install Dec., 1982 PASNY P.O. #81-4994	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environments 2. Equipment required for post-accident monitoring of containment H <sub>2</sub> concentrations.					
	AGING PROGRAM INPUT						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
1.8x10<sup>4</sup>

1. The qualification program for the heat trace system for the hydrogen monitoring system is in progress at Southwest Research Laboratories. This program is expected to be completed in the same time frame as final system installation presently scheduled for December, 1982.

# SYSTEM COMPONENT EVALUATION WORK SHEET

TNI Mod. No. F1-80-20  
NUREG 0737, Section 11.F.1.6

SECTION 30  
PG 5 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Containment Atmospheric Sampling  <b>PLANT ID NO:</b> N/A  <b>COMPONENT</b> RTD  <b>MANUFACTURER</b> Thermo Sensor  <b>MODEL NO.:</b> Platinum RTD  <b>FUNCTION</b> Heat Trace Temp. Control  <b>ACCURACY-</b> SPEC. +10% DEMON. (System)  <b>SERVICE:</b> H <sub>2</sub> Gas Sampling Heat Tracing  <b>LOCATION:</b> Reactor Bldg. Generic	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-104	110		44,188		*
	PRESSURE PSIA	14.7	15.0		44		*
	RELATIVE HUMIDITY %	20-90	90-100		44,167		*
	DEMINERALIZED WATER SPRAY			Not	Applicable		
		T. I. D.	ACCIDENT				
	RADIATION Rads	6.87x10 <sup>6</sup>	6.8x10 <sup>6</sup>		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV. 227'-6"	SUBMERGENCE			Not	Applicable	
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO   Install Dec., 1982 PASNY P.O. #81-4994	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.					
	AGING PROGRAM INPUT						



Section 30, Pages 4, 5, 6

1. The qualification program for the heat trace system for the hydrogen monitoring system is in progress at Southwest Research Laboratories. This program is expected to be completed in the same time frame as final system installation presently scheduled for December, 1982.

E BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-30-20  
NUREG 0737, Section 11.F.1.6

SECTION 30  
PG 6 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Containment Atmospheric Sampling <b>PLANT ID NO</b> N/A <b>COMPONENT</b> Heat Trace Cable <b>MANUFACTURER</b> Thermon <b>MODEL NO:</b> SSK-Mineral Insul. <b>FUNCTION</b> Heat tracing <b>ACCURACY- SPEC.</b> N/A <b>DEMON.</b> <b>SERVICE:</b> H <sub>2</sub> Gas Sample Heat Tracing <b>LOCATION:</b> Reactor Building Generic	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	40-104	110		44,188		*
	PRESSURE PSIA	14.7	15.0		44		*
	RELATIVE HUMIDITY %	20-90	90-100		44,167		*
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→		
		T. I. D.	ACCIDENT				
	RADIATION Rads	6.87x10 <sup>6</sup>	6.8x10 <sup>6</sup>		3		*
	AGING	40 years			164		*
FLOOD LEVEL ELEV. 227'-6"	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Equipment required for post-accident monitoring of containment H <sub>2</sub> concentrations.					
	AGING PROGRAM INPUT						
Install Dec., 1982 PASNY P.O. #81-4994							

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
7x10<sup>4</sup>

1. The qualification program for the heat trace system for the hydrogen monitoring system is in progress at Southwest Research Laboratories. This program is expected to be completed in the same time frame as final system installation presently scheduled for December, 1982.

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

SYSTEM COMPONENT EVALUATION  
WORK SHEET

TMI Mod. No. F1-81-47  
NUREG 0661

SECTION 31  
PG 1 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM:</b> Primary Containment and Leak Rate <b>PLANT ID NO:</b> 16-1RTD-131 thru 146 <b>COMPONENT:</b> RTD Assembly with Seal Assembly <b>MANUFACTURER:</b> Conax <b>MODEL NO.:</b> 2323-9550-01 with PL-18-B6-V <b>FUNCTION:</b> Temperature Monitoring <b>ACCURACY - SPEC:</b> $\pm 1^{\circ}$ Fahrenheit <b>DEMON.</b> <b>SERVICE:</b> Torus Temp. Monitoring <b>LOCATION:</b> Torus Room El. 234'	OPERATING TIME	180 days		>180 days	101	213	Simultaneous None
		NORMAL	ACCIDENT Peak				
	TEMPERATURE $^{\circ}$ F	40-104	204	432	1AH+1AQ	213	Simultaneous None
	PRESSURE PSIA	14.7	16.3	71.7	2AH+2AQ	213	Simultaneous None
	RELATIVE HUMIDITY %	20-90	90-100	100	"	213	Simultaneous None
	DEMINERALIZED WATER SPRAY	← Not			Applicable	→	
		T. I. D.	ACCIDENT				
	RADIATION Rads	$1.0 \times 10^7$	$1.0 \times 10^7$	$2.0 \times 10^8$	3	213	Sequential None
	AGING	40 years		>40 years	164	213	Sequential None
FLOOD LEVEL ELEV 227'-6"	SUBMERGENCE	← Not			Applicable	→	
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.					
Installed Feb., 1982 PASNY Change Order #5 to Teledyne Agreement	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

$$T.I.D. \text{ (TOTAL INTEGRATED DOSE)} = 40 \text{ YR. NORMAL} + \text{ACCIDENTAL DOSE}$$

E BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. F1-81-47  
NUREG 0661

SECTION 31  
PG. 2 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Primary Containment and Leak Rate  <b>PLANT ID NO:</b> 161TH-131  <b>COMPONENT</b> Datalogger  <b>MANUFACTURER</b> Acurex  <b>MODEL NO:</b> Autodata Ten/5  <b>FUNCTION</b> Data Logging and Averaging Calculation  <b>ACCURACY-</b> SPEC. $\pm 0.5\%$ DEMON.  <b>SERVICE:</b> Torus Temperature Monitoring  <b>LOCATION:</b> Control Room Admin. Bldg. El. 300'	OPERATING TIME	180 days			101		*		
		NORMAL	ACCIDENT Peak						
	TEMPERATURE °F	40-120	N/A		44,170		*		
	PRESSURE PSIA	14.7	N/A		44,170		*		
	RELATIVE HUMIDITY %	10-60	N/A		44,170		*		
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→				
		T. I. D.	ACCIDENT						
	RADIATION Rads	700	N/A		3		*		
	AGING	40 years			164		*		
	SUBMERGENCE	← Not		Applicable	→				
<b>FLOOD LEVEL ELEV</b> N/A  <b>ABOVE FLOOD LEVEL</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> <span style="margin-left: 100px;">NO</span>  Installed Feb., 1982 PASNY P.O. #80-	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment							
	AGING PROGRAM INPUT								

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

1. There was no requirement in NUREG 0661 that this equipment be Class 1E qualified. Further review by the Authority is required in order to establish the qualification requirement for this equipment based on its function during a post-accident situation.

Section 32 - Indicating Lights and Meters

1. The two General Electric items listed on the attached sheets are presently undergoing review by the Authority. In June, 1982 the Authority will conduct a technical audit of General Electric's qualification records to confirm qualification for the mild environments in which these items are located.
2. At time of procurement, these components were determined to be the "best available" and are presently used in other Class 1E mild environment applications at JAFNPP. Utilization of these components are on an interim basis.
3. The application and environment in which these components are installed are in accordance with component's design specifications.



IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-Generic  
NUREG 0737

SECTION 32  
PG 1 OF 1

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM Generic	OPERATING TIME	180 days			101		*
PLANT ID NO: N/A		NORMAL	ACCIDENT Peak				
COMPONENT Indicating Light	TEMPERATURE OF	40-120	N/A		44,170,171		*
MANUFACTURER General Electric	PRESSURE P.P.A	14.7	N/A		44,170,171		*
MODEL NO: ET 16	RELATIVE HUMIDITY %	10-60	N/A		44,170,171		*
FUNCTION Indication	DEMINERALIZED WATER SPRAY	← Not		Applicable	→		
ACCURACY- SPEC N/A DEMON		T. I. D.	ACCIDENT				
SERVICE: Display Indication	RADIATION Rads	700	N/A		3		*
LOCATION: Control Room/Relay Room Admin Bldg. El. 300'/286'	AGING	40 years			164		*
FLOOD LEVEL ELEV. N/A	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
Installed Feb., 1982	AGING PROGRAM INPUT						

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-Generic  
NUREG 0737 & 0661

SECTION 32  
PG. 2 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Generic  <b>PLANT ID NO</b> N/A  <b>COMPONENT</b> Vertical Indicating Meter  <b>MANUFACTURER</b> General Electric  <b>MODEL NO:</b> 180  <b>FUNCTION</b> Press/Level and Temperature indication  <b>ACCURACY- SPEC</b> ±2% <b>DEMON.</b>  <b>SERVICE</b> Display Instrumentation  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. El. 300'/286'	OPERATING TIME	180 days		101			*	
		NORMAL	ACCIDENT Peak					
	TEMPERATURE OF	40-120	N/A		44,170,171			*
	PRESSURE PSIA	14.7	N/A		44,170,171			*
	RELATIVE HUMIDITY %	10-60	N/A		44,170,171			*
	DEMINERALIZED WATER SPRAY	← Not		Applicable	→			
		T. I. D.	ACCIDENT					
	RADIATION Rads	700	N/A		3			*
	AGING	40 years		164				*
	FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL <b>(YES)</b> NO  Installed Feb., 1982 PASNY P.O. #80-19148	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment						
	AGING PROGRAM INPUT							

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-Generi  
NUREG 0737

SECTION 33  
PG 1 OF
















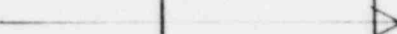
EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM Generic	OPERATING TIME	180 days		N/A	101	N/A	N/A
PLANT ID NO: N/A		NORMAL	ACCIDENT Peak				
COMPONENT Control Relay	TEMPERATURE of	40-120	N/A	N/A	44,170,171	207	Simultaneous
MANUFACTURER General Electric	PRESSURE PSIA	14.7	N/A	N/A	44,170,171	207	Simultaneous
MODEL NO: CR120B	RELATIVE HUMIDITY %	10-60	N/A	N/A	44,170,171	207	Simultaneous
FUNCTION Control Logic	DEMINERALIZED WATER SPRAY	← Not		Applicable	→		
ACCURACY- SPEC. N/A DEMON.		T. I. D.	ACCIDENT				
SERVICE: Control Systems	RADIATION Rads	700	N/A	1.0x10 <sup>6</sup>	3	207	Sequential
LOCATION: Control Room/Relay Room Admin Bldg. E1.300'/286'	AGING	40 years		40 years	164	207	Sequential
FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
Installed Feb., 1982	AGING PROGRAM INPUT						

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-Generic  
NUREG 0737

SECTION 33  
PG 2 OF     

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION	QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Generic  <b>PLANT ID NO</b> N/A  <b>COMPONENT</b> Control Relay  <b>MANUFACTURER</b> General Electric  <b>MODEL NO.:</b> 12HFA151A2F  <b>FUNCTION</b> Control Relay  <b>ACCURACY- SPEC.</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Control Systems  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. E1.300'/286'	OPERATING TIME	180 days		101			*	
		NORMAL	ACCIDENT Peak					
	TEMPERATURE of	40-120	N/A		44,170,171			*
	PRESSURE PSIA	14.7	N/A		44,170,171			*
	RELATIVE HUMIDITY %	10-60	N/A		44,170,171			*
	DEMINERALIZED WATER SPRAY			Not	Applicable			
		T. I. D.	ACCIDENT					
	RADIATION Rads	700	N/A		3			*
	AGING	40 years			164			*
	FLOOD LEVEL ELEV. N/A	SUBMERGENCE			Not	Applicable		
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES <input type="radio"/> NO   Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment						
	AGING PROGRAM INPUT							






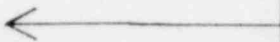







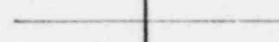
Section 33, Pages 2, 3, 4

1. Three General Electric relays listed on the indicated sheets are presently undergoing review by the Authority. In June 1982, the Authority will conduct a technical audit of General Electric's qualification records to confirm qualification for the mild environments in which these components are installed.
2. At time of procurement, the components were determined to be the "best available" and are presently used in other Class 1E mild environment applications at JAFNPP.
3. The application and environment in which these components are installed are in accordance with the component's design specifications.

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod No. FI-Generic  
NUREG 0737  
SECTION 33  
PG. 3 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM:</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Control Relay  <b>MANUFACTURER:</b> General Electric  <b>MODEL NO.:</b> CR2811A218L  <b>FUNCTION:</b> Control Logic  <b>ACCURACY- SPEC</b> N/A <b>                  DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. El.300'/285'	OPERATING TIME	180 days			101		*
		NORMAL	ACCIDENT Peak				
	TEMPERATURE OF	40-120	N/A		44,170,171		*
	PRESSURE PSIA	14.7	N/A		44,170,171		*
	RELATIVE HUMIDITY %	10-60	N/A		44,170,171		*
	DEMINERALIZED WATER SPRAY			Not	Applicable		
		T. I. D.	ACCIDENT				
	RADIATION Rads	700	N/A		3		*
	AGING	40 years			164		*
	FLOOD LEVEL ELEV. N/A	SUBMERGENCE			Not	Applicable	
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES <input type="radio"/> NO   Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
	AGING PROGRAM INPUT						

Section 33, Pages 2, 3, 4

1. Three General Electric relays listed on the indicated sheets are presently undergoing review by the Authority. In June 1982, the Authority will conduct a technical audit of General Electric's qualification records to confirm qualification for the mild environments in which these components are installed.
2. At time of procurement, the components were determined to be the "best available" and are presently used in other Class 1E mild environment applications at JAFNPP.
3. The application and environment in which these components are installed are in accordance with the component's design specifications.





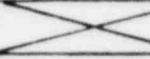
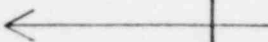










IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-Generic  
NUREG 0737

SECTION 33  
PG 4 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Trip Relay  <b>MANUFACTURER</b> General Electric  <b>MODEL NO:</b> 12HGA111J  <b>FUNCTION</b> Control Relay  <b>ACCURACY- SPEC</b> N/A <b>          DEMON</b>  <b>SERVICE</b> Various  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. El.300'/286'	OPERATING TIME	180 days			101		*		
		NORMAL	ACCIDENT Peak						
	TEMPERATURE °F	40-120	N/A		44,170,171		*		
	PRESSURE PSIA	14.7	N/A		44,170,171		*		
	RELATIVE HUMIDITY %	10-60	N/A		44,170,171		*		
	DEMINERALIZED WATER SPRAY			Not	Applicable				
		T. I. D.	ACCIDENT						
	RADIATION Rads	700	N/A		3		*		
	AGING	40 years			164		*		
	SUBMERGENCE			Not	Applicable				
<b>ABOVE FLOOD LEVEL</b> <b>(YES)</b> <b>                          NO</b>  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment							
	AGING PROGRAM INPUT								

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D (TOTAL INTEGRATED DOSE)=40YR. NORMAL + ACCIDENTAL DOSE

Section 33, Pages 2, 3, 4







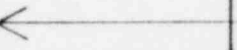
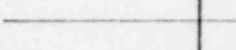






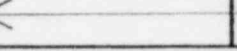
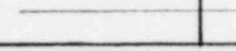
1. Three General Electric relays listed on the indicated sheets are presently undergoing review by the Authority. In June 1982, the Authority will conduct a technical audit of General Electric's qualification records to confirm qualification for the mild environments in which these components are installed.
2. At time of procurement, the components were determined to be the "best available" and are presently used in other Class 1E mild environment applications at JAFNPP.
3. The application and environment in which these components are installed are in accordance with the component's design specifications.

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. F1-Generic  
NUREG 0737

SECTION 33  
PG. 5 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS			
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION				
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT</b> Control Relay  <b>MANUFACTURER</b> Struthers Dunn  <b>MODEL NO:</b> See below  <b>FUNCTION</b> Control Logic  <b>ACCURACY- SPEC</b> N/A <b>DEMON</b>  <b>SERVICE:</b> Control Systems  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. E1.300'/286'	OPERATING TIME	180 days		See Note 2	101	See Note 3	See Note 2	None		
		NORMAL	ACCIDENT Peak							
	TEMPERTURE °F	40-120	N/A	222.8	44,170,171	223	Simultaneous	None		
	PRESSURE PSIA	14.7	N/A	14.7	44,170,171	223	Simultaneous	None		
	RELATIVE HUMIDITY %	10-60	N/A	98	44,170,171	223	Simultaneous	None		
	DEMINERALIZED WATER SPRAY			Not	Applicable					
		T. I. D.	ACCIDENT							
	RADIATION Rads	700	N/A	$1.7 \times 10^4$	3	223	Sequential	None		
	AGING	40 years		>40 years	164	223	Sequential	None		
	FLOOD LEVEL ELEV N/A			Not	Applicable					
<b>ABOVE FLOOD LEVEL</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> <b>NO</b>  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment 2. The entry for the qualification values/methods are pending successful completion of the IEEE 323-74. Test program in progress, see appendix 1 of Ref. 223. 3. Reference 223 is adequate justification for continued use until successful completion of the IEEE 323-74.								
Model No's: 219XDX167NE 219BDX104NE 219FXX114NE 219XXF103NE 219XDX166NE	AGING PROGRAM INPUT									

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-Generic  
NUREG 0737

SECTION 34  
PG 1 OF











EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM Generic	OPERATING TIME	180 days		N/A	101	206	N/A
PLANT ID NO: N/A		NORMAL	ACCIDENT Peak				
COMPONENT: Control Switch	TEMPERATURE of	40-120	N/A	N/A	44,170,171	206	Simultaneous
MANUFACTURER General Electric	PRESSURE PSIA	14.7	N/A	N/A	44,170,171	206	Simultaneous
MODEL NO: CR2940-YS203E	RELATIVE HUMIDITY %	10-60	N/A	N/A	44,170,171	206	Simultaneous
FUNCTION Control Logic	DEMINERALIZED WATER SPRAY	← Not		Applicable	→		
ACCURACY - SPEC N/A DEMON.		T. I. D.	ACCIDENT				
SERVICE Various	RADIATION Rads	700	N/A	$1.0 \times 10^6$	3	206	Sequential
LOCATION: Control Room/Relay Room Admin Bldg. El. 300'/286'	AGING	40 years		>40 years	164	206	Sequential
FLOOD LEVEL ELEV N/A	SUBMERGENCE	← Not		Applicable	→		
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment					
Installed Feb., 1982	AGING PROGRAM INPUT						

IE BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-Generic  
NUREG 0737

SECTION 34  
PG. 2 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Keylock Switch  <b>MANUFACTURER</b> General Electric  <b>MODEL NO.:</b> CR2940-UN200D  <b>FUNCTION</b> Control Logic  <b>ACCURACY- SPEC</b> N/A <b>          DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Control Room/Relay Room Admin Bldg. E1.300'/286'	OPERATING TIME	180 days		N/A	101	206	N/A		
		NORMAL	ACCIDENT Peak						
	TEMPERATURE °F	40-120	N/A	N/A	44,170,171	206	Simultaneous		
	PRESSURE PSIA	14.7	N/A	N/A	44,170,171	106	Simultaneous		
	RELATIVE HUMIDITY %	10-60	N/A	N/A	44,170,171	206	Simultaneous		
	DEMINERALIZED WATER SPRAY	← Not			Applicable	→			
		T. I. D.	ACCIDENT						
	RADIATION Rads	700	N/A	$1.0 \times 10^6$	3	206	Sequential		
	AGING	40 year		>40 years	164	206	Sequential		
	SUBMERGENCE	← Not			Applicable	→			
<b>FLOOD LEVEL ELEV.</b> N/A  <b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES NO  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Mild Environment							
	AGING PROGRAM INPUT								

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE)=40YR. NORMAL + ACCIDENTAL DOSE

THE BULLETIN 79-01B

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

## SYSTEM COMPONENT EVALUATION

TNI Mod. No. F1-Generic

NUREG 0737 &amp; 0661

SECTION 35PG 1 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION			QUALIFICATION
SYSTEM Generic  PLANT ID NO N/A  COMPONENT: Insulating Sleeve  MANUFACTURER Raychem  MODEL NO.: WCSF  FUNCTION Wire Splice Insulation  ACCURACY- SPEC N/A DEMON.  SERVICE: Various  LOCATION: Primary Containment, Reactor Bldg & Turbine Bldg	OPERATING TIME	180 days		>180 days	101	200,217	Simultaneous	None
		NORMAL	ACCIDENT Peak					
	TEMPERATURE °F	135-150	308	400	44,57	200,217	Simultaneous	None
	PRESSURE PSIA	14.2-16.7	59.7	247	44,58	200,217	Simultaneous	None
	RELATIVE HUMIDITY %	40-90	100	100	44,57,58	200,217	Simultaneous	None
	DEMINERALIZED WATER SPRAY	Yes		Yes	106	200,217	Simultaneous	None
		T. I. D.	ACCIDENT					
	RADIATION Rads	1.09x10 <sup>8</sup>	1.0x10 <sup>8</sup>	2.0x10 <sup>8</sup>	3	200,217	Sequential	None
	AGING	40 years		>40 years	164	200,217	Sequential	None
FLOOD LEVEL ELEV 258'-6"	SUBMERGENCE			Not	Applicable			
ABOVE FLOOD LEVEL <div>YES NO</div>	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment						
Installed Feb., 1982	AGING PROGRAM INPUT							

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
 $8.5 \times 10^6$












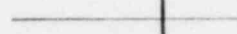


IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-Generic  
NUREG 0737

SECTION 35  
PG 2 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM:</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Connector  <b>MANUFACTURER:</b> Thomas & Betts  <b>MODEL NO.:</b> Tefzel  <b>FUNCTION:</b> Wire Connector  <b>ACCURACY - SPEC:</b> N/A <b>DEMON:</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Primary Containment, Reactor Building, Turbine Building	OPERATING TIME	180 days		>180 days	101	215	Simultaneous None
		NORMAL	ACCIDENT Peak				
	TEMPERATURE °F	135-150	308	340	44,57	215	Simultaneous None
	PRESSURE PSIA	14.2x16.7	59.7	119.7	44,58	215	Simultaneous None
	RELATIVE HUMIDITY %	40-90	100	100	44,57,58	215	Simultaneous None
	DEMINERALIZED WATER SPRAY	yes		yes	106	215	Simultaneous None
		T. I. D.	ACCIDENT				
	RADIATION Rads	1.09x10 <sup>8</sup>	1.0x10 <sup>8</sup>	2.0x10 <sup>8</sup>	3	215	Sequential None
	AGING	40 years		40 years	164	215	Sequential None
	FLOOD LEVEL ELEV 227'-6"	SUBMERGENCE			Not	Applicable	
ABOVE FLOOD LEVEL <input checked="" type="radio"/> YES <input type="radio"/> NO   Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment					
	AGING PROGRAM INPUT						

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
8.5x10<sup>6</sup>









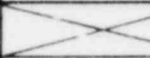







IE BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI Mod. No. FI-Generic  
NUREG 0737 & 0661

SECTION 35  
PG 3 OF     












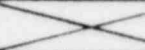


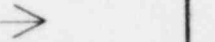
EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS		
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION			
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Insulating End Cap  <b>MANUFACTURER</b> Raychem  <b>MODEL NO.:</b> 101A011 thru 094-52  <b>FUNCTION</b> Wire Splice Insulation  <b>ACCURACY- SPEC.</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Reactor Building & Turbine Bldg. Generic	OPERATING TIME	180 days		>180 days	101	158,159	Simultaneous None		
		NORMAL	ACCIDENT Peak						
	TEMPERATURE OF	40-104	292	340	44,180	158,159	Simultaneous None		
	PRESSURE PSIA	14.7	25.7	66	44,2BA	158,159	Simultaneous None		
	RELATIVE HUMIDITY %	20-90	90-100	100	44,167	158,159	Simultaneous None		
	DEMINERALIZED WATER SPRAY			Not	Applicable				
		T. I. D.	ACCIDENT						
	RADIATION Rads	6.87x10 <sup>6</sup>	6.8x10 <sup>6</sup>	2.0x10 <sup>8</sup>	3	158,159	Sequential None		
	AGING	40 years		>40 years	164	158,159	Sequential None		
	SUBMERGENCE			Not	Applicable				
<b>ABOVE FLOOD LEVEL</b> <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> <span style="margin-left: 100px;">NO</span>  Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment. 2. Additional testing will proceed. Power Authority review will begin following receipt of Test Report. Completion estimated by August, 1982.							
	AGING PROGRAM INPUT								

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TH1 Mod. No. FI-Generic  
NUREG 0737 & 0661

SECTION 35  
PG. 4 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS	
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION			QUALIFICATION
<b>SYSTEM</b> Generic  <b>PLANT ID NO:</b> N/A  <b>COMPONENT:</b> Insulating End Cap with WCSF Outer Sleeve  <b>MANUFACTURER:</b> Raychem  <b>MODEL NO:</b> 101A011 thru 094-52 with WCSF Sleeve  <b>FUNCTION:</b> Wire Splice Insulation  <b>ACCURACY- SPEC.</b> N/A <b>DEMON.</b>  <b>SERVICE:</b> Various  <b>LOCATION:</b> Primary Containment	OPERATING TIME	180 days		>180 days	101	220	Simultaneous	None
		NORMAL	ACCIDENT Peak					
	TEMPERATURE OF	135-150	308	390	44,57	220	Simultaneous	None
	PRESSURE PSIA	14.2-16.7	59.7	80.7	44,58	220	Simultaneous	None
	RELATIVE HUMIDITY %	40-90	100	100	44,57,58	220	Simultaneous	None
	DEMINERALIZED WATER SPRAY	yes		yes	106	220	Simultaneous	None
		T. I. D.	ACCIDENT					
	RADIATION Rads	1.09x10 <sup>8</sup>	1.0x10 <sup>8</sup>	2.0x10 <sup>8</sup>	3	220	Sequential	None
	AGING	40 years		>40 years	164	220	Sequential	None
	FLOOD LEVEL ELEV. 258'-6"	SUBMERGENCE			Not	Applicable		
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO   Installed Feb., 1982	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment						
	AGING PROGRAM INPUT							

Rev. 0

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE)=40YR. NORMAL + ACCIDENTAL DOSE  
8.5x10<sup>6</sup>

Section 36 - Safety Relief Valve Position Monitoring System  
NUREG 0737, Section II.D.3

1. The Babcock and Wilcox Valve Monitoring System is presently undergoing qualification testing administered by a multi-utility task group and the Babcock and Wilcox Power Generation Group. Preliminary scoping environmental tests were completed in 1981. The present test schedule shows test completion and qualification report to be issued in October, 1982.

E BULLETIN 79-018  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

THI 1. No. F1-80-01  
NUREG 0737, Section 11.D.3.1

SECTION 36  
PG. 1 OF

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM</b> Nuclear Boiler  <b>PLANT ID NO:</b> 02VMC-071A+L  <b>COMPONENT</b> Signal Conditioning Amplifier and Alarm Module  <b>MANUFACTURER</b> Unholtz-Dickie (Babcock & Wilcox)  <b>MODEL NO.:</b> P22MHA-1 and MA  <b>FUNCTION</b> Data Acquisition Instrument  <b>ACCURACY- SPEC.</b> +2% <b>DEMON.</b> (Full Scale) <b>SERVICE:</b> Relief Valve Position Indication  <b>LOCATION:</b> Relay Room Admin. Bldg. El. 286'	OPERATING TIME	24 Hours			101		X
		NORMAL	ACCIDENT PEAK				
	TEMPERATURE OF	40-120	N/A		44.171		X
	PRESSURE PSIA	14.7	N/A		44.171		X
	RELATIVE HUMIDITY %	10-60	N/A		44.171		X
	DEMINERALIZED WATER SPRAY			NOT	APPLICABLE		
		T. I. D.	ACCIDENT				
	RADIATION RADS	700	N/A		3		X
	AGING	40 years			164		X
	FLOOD LEVEL ELEV N/A	SUBMERGENCE			NOT	APPLICABLE	
ABOVE FLOOD LEVEL <b>(YES)</b> NO	ENVIRONMENT SPECIFICATION BASIS	1. Mild environment.					
Installed Dec., 1980 PASNY P.O. #79-17083	AGING PROGRAM INPUT						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE

E BULLETIN 79-01B  
JAMES A FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO.50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

TMI Mod. No. FI-80-01  
NUREG 0737, Section 11.0.3.1

SECTION 36  
PG. 2 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION	QUALIFICATION	
<b>SYSTEM</b> Nuclear Boiler  <b>PLANT ID NO:</b> 02VMY-071A+L 02VMY-071A1+L1  <b>COMPONENT:</b> Remote Charge Preamplifier  <b>MANUFACTURER</b> Unholtz-Dickie (Babcock & Wilcox)  <b>MODEL NO.:</b> 22CA-2TR  <b>FUNCTION</b> Impedance Converters  <b>ACCURACY- SPEC.</b> +2% <b>DEMON.</b> —  <b>SERVICE:</b> Relief Valve Position Indicator  <b>LOCATION:</b> Drywell 295'	OPERATING TIME	24 Hours			101		*
		NORMAL	ACCIDENT PEAK				
	TEMPERATURE °F	135-150	308		44, 57		*
	PRESSURE PSIA	14.2-16.7	59.7		44, 58		*
	RELATIVE HUMIDITY %	40-90	100		44, 57, 58		*
	DEMINERALIZED WATER SPRAY	Yes			106		*
		T. I. D.	ACCIDENT				
	RADIATION RADS	$1.09 \times 10^8$	$1.0 \times 10^8$ (six months)		3		*
	AGING	40 Years			164		*
	FLOOD LEVEL ELEV 258'-6"	←		NOT	APPLICABLE		→
<b>ABOVE FLOOD LEVEL</b> <input checked="" type="radio"/> YES NO   Installed Dec., 1980 PASNY P.O. #79-17083	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.					
	AGING PROGRAM INPUT						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40 YR. NORMAL + ACCIDENTAL DOSE  
 $8.5 \times 10^6$

SECTION 36  
PG 3 OF     

EQUIPMENT DESCRIPTION	ENVIRONMENT			+DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
SYSTEM Nuclear Boiler	OPERATING TIME	24 Hours			101		*
PLANT ID NO: Generic		NORMAL	ACCIDENT PEAK				
COMPONENT: Coaxial Signal Cable (Hardline)	TEMPERATURE °F	135-150	308		44, 57		*
MANUFACTURER Unholtz-Dickie (Babcock & Wilcox)	PRESSURE PSIA	14.2-16.7	59.7		44, 58		*
MODEL NO: 22CA-2TR	RELATIVE HUMIDITY %	40-90	100		44, 57, 58		*
FUNCTION Accelerometer Signal Output Cable	DEMINERALIZED WATER SPRAY	Yes			106		*
ACCURACY - SPEC DEMON. N/A		T. I. D.	ACCIDENT				
SERVICE: Relief Valve Position Indicator	RADIATION RADS	$1.09 \times 10^8$	$1.0 \times 10^8$ (six months)		3		*
LOCATION: Drywell	AGING	40 Years			164		*
FLOOD LEVEL ELEV 258'-6"	SUBMERGENCE	←		NOT	APPLICABLE		→
ABOVE FLOOD LEVEL <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">YES</span> NO	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.					
Installed Dec., 1980 PASNY P.O. #79-17083	AGING PROGRAM INPUT						

$$T.I.D. (TOTAL INTEGRATED DOSE) = 40 \text{ YR. NORMAL} + \text{ACCIDENTAL DOSE}$$



IE BULLETIN 79-01B  
JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
DOCKET NO. 50-333

# SYSTEM COMPONENT EVALUATION WORK SHEET

SECTION 36  
PG. 4 OF       

EQUIPMENT DESCRIPTION	ENVIRONMENT			+ DOCUMENTATION REFERENCE		QUALIFICATION METHOD	OUTSTANDING ITEMS
	PARAMETER	SPECIFICATION		QUALIFICATION	SPECIFICATION		
<b>SYSTEM:</b> Nuclear Boiler  <b>PLANT ID NO:</b> 02VME-071A+L 02VME-071A1+L1  <b>COMPONENT:</b> Accelerometer  <b>MANUFACTURER:</b> Endevco (B&W)  <b>MODEL NO.:</b> 2273AM20  <b>FUNCTION:</b> Acoustic Valve Monitor  <b>ACCURACY- SPEC:</b> 12mv/g <b>DEMON.</b>  <b>SERVICE:</b> Relief Valve Position Indication  <b>LOCATION:</b> Drywell	OPERATING TIME	24 Hours			101		*
		NORMAL	ACCIDENT PEAK				
	TEMPERATURE °F	135-150	308		44, 57		*
	PRESSURE PSIA	14.2-16.7	59.7		44, 58		*
	RELATIVE HUMIDITY %	40-90	100		44, 57, 58		*
	DEMINERALIZED WATER SPRAY	Yes			106		*
		T. I. D.	ACCIDENT				
	RADIATION RADS	1.09x10 <sup>8</sup>	1.0x10 <sup>8</sup> (six months)		3		*
	AGING	40 Years			164		*
	FLOOD LEVEL ELEV. 258'-6"	SUBMERGENCE	← NOT		APPLICABLE	→	
ABOVE FLOOD LEVEL <b>(YES)</b> <b>NO</b>   Installed Dec., 1980 PASNY P.O. #79-17083	ENVIRONMENT SPECIFICATION BASIS	1. Harsh accident environment.					
	AGING PROGRAM INPUT						

NOTES: \* OUTSTANDING  
+ SEE REFERENCE SECTION  
N/A NOT APPLICABLE

T.I.D. (TOTAL INTEGRATED DOSE) = 40YR. NORMAL + ACCIDENTAL DOSE  
8.5x10<sup>6</sup>