



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

February 7, 1991

Docket No. 50-289

LICENSEE: GPU Nuclear Corporation
FACILITY: Three Mile Island Unit 1 (TMI-1)
SUBJECT: SUMMARY OF JANUARY 18, 1991 MEETING WITH GPU NUCLEAR ON
CURRENT LICENSING ISSUES AND LEAD TEST ASSEMBLIES

The NRC staff met with representatives of GPU Nuclear Corporation (GPUN) at the NRC Headquarters Building in Rockville, Maryland on January 18, 1991 to discuss the status and future actions of all active licensing issues and inspection open items. GPU Nuclear's plan to install four Lead Test Assemblies (LTAs) fabricated by Westinghouse was also discussed. Enclosure 1 is a list of attendees at the meeting. Enclosure 2 is a listing of the activities discussed during the meeting. Enclosure 3 is the handout provided by GPU Nuclear regarding the LTAs.

The licensing activities as listed on Enclosure 2 provided the basis for the discussions. Changes to future actions and dates on the list were specifically discussed. There are 31 identified active licensing actions, including six issues for which submittals have not yet been made by the NRC. Following issuance of NRC Inspection Report No. 50-289/90-20, only 12 inspection open items remain. The oldest of these is less than two years old.

NRR is preparing to issue a generic letter to resolve remaining concerns on Generic Letter No. 83-28, Items 4.2.3 and 4.2.4 (Preventive Maintenance of Reactor Trip Breakers). A target date for issuance of this letter has not yet been established by the NRC.

The safety evaluation to approve the seismic qualification generic implementation plan in response to Generic Letter No. 87-02 is expected to be issued by March 31, 1991. This action will allow licensees to start making preparations for the required plant/system walkdowns.

All licensing actions identified by the licensee to be needed for the 9R refueling outage (scheduled to start in October 1991) are being actively worked on by the staff.

The Electrical Distribution System Functional Inspection (EDSFI) was completed on December 21, 1990 and the inspection report should be issued within the next several weeks. A number of new inspection open items was identified by the inspection and will be added to the inspection open item list upon issuance of the inspection report.

GPU Nuclear plans to install four special fuel assemblies (LTAs) in the Cycle 9 core reload. The objective of this test is to qualify Westinghouse Electric Corporation as an alternate fuel supplier for TMI-1. Presently, Babcock and

Wilcox (B&W) supplies all TMI-1 fuel. Details of this test are given in Enclosure 3. Although the staff has no significant concerns with this test, and has no disagreement with the test being performed under the authority of 10 CFR 50.59, the staff made the following recommendations:

- GPU Nuclear should quantify the DNB ratios in the LTAs and compare them to the B&W fuel assemblies to ensure the LTAs are not limiting.
- GPU Nuclear should assess the differences between the Westinghouse acceptance criteria and the TMI-1 licensing basis.
- A lead time of several years would be required for the staff to approve a full core load using Westinghouse fuel.

The next monthly meeting is tentatively scheduled for February 15, 1991 at the TMI site.

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Ronald W. Hernan, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
As stated

cc w/enclosures:
See next page

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Mr. T. G. Broughton
GPU Nuclear Corporation

Three Mile Island Nuclear Station,
Unit No. 1

cc:

Michael Ross
O&M Director, TMI-1
GPU Nuclear Corporation
Post Office Box 480
Middletown, Pennsylvania 17057

Francis I. Young
Senior Resident Inspector (TMI-1)
U.S.N.R.C.
Post Office Box 311
Middletown, Pennsylvania 17057

Michael Laggart
Manager, Licensing
GPU Nuclear Corporation
100 Interpace Parkway
Parsippany, New Jersey 07054

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, Pennsylvania 19406

C. W. Smyth
TMI-1 Licensing Manager
GPU Nuclear Corporation
Post Office Box 480
Middletown, Pennsylvania 17057

Robert B. Borsum
Babcock & Wilcox
Nuclear Power Generation Division
Suite 525
1700 Rockville Pike
Rockville, Maryland 20852

Ernest L. Blake, Jr., Esq.
Shaw, Pittman, Potts & Trowbridge
2300 N Street, N.W.
Washington, D.C. 20037

Governor's Office of State Planning
and Development
ATTN: Coordinator, Pennsylvania
State Clearinghouse
Post Office Box 1323
Harrisburg, Pennsylvania 17120

Sally S. Klein, Chairperson
Dauphin County Commissioner
Dauphin County Courthouse
Front and Market Streets
Harrisburg, Pennsylvania 17120

Thomas M. Gerusky, Director
Bureau of Radiation Protection
Pennsylvania Department of
Environmental Resources
Post Office Box 2063
Harrisburg, Pennsylvania 17120

Kenneth E. Witmer, Chairman
Board of Supervisors
of Londonderry Township
25 Roslyn Road
Elizabethtown, PA 17022

ENCLOSURE 1

MEETING WITH GPUN

JANUARY 18, 1991

Name

Affiliation

Ron Hernan	NRC/NRR
F. Young	SRI-TMI/NRC
Randy Tropasso	GPUN, Lead Nuclear Engineer
Robert Jones	NRC/SRXB
Howard Richings	NRC/SRXB
David J. Distel	GPUN Licensing
Courtney W. Smyth	GPUN - TMI-1 Licensing Mgr.
John D. Luoma	GPUN - TMI Fuel Projects
Joe McCarthy	GPUN - TMI Fuel Projects
R. E. Rogan	GPUN - TMI Licensing Director



Memorandum

Subject *GPUN/NRC TMI-1 LICENSING ACTIVITIES*

Date *January 16, 1991*

From *C. W. Smyth - Manager TMI-1 Licensing*

Location *TMI-1 Lic / OSF
C311-91-1014*

To *Distribution:*

A discussion with the NRC of Licensing Activities involving correspondence submittals to the NRC and inspection open items occurred on December 13, 1990. The attached listings update the status of activities and open items based on the meeting results and status changes as of the date of the listings.

*C. W. Smyth
Extension 8551*

*CWS:emw
Attachment*

DISTRIBUTION:

<i>G. R. Bond</i>	<i>- Director Systems Engineering</i>
<i>T. G. Broughton</i>	<i>- Director TMI-1</i>
<i>J. J. Byrne</i>	<i>- Manager TMI-2 Licensing</i>
<i>J. J. Colitz</i>	<i>- Engineering Projects Director TMI-1</i>
<i>R. Cook</i>	<i>- TMI-1 NOB - Commonwealth of PA</i>
<i>P. F. Czaya</i>	<i>- Licensing Engineer, PPY</i>
<i>J. J. Curry</i>	<i>- Manager, Nuclear Safety TMI-1</i>
<i>J. J. DeVine</i>	<i>- Director, Technical Functions</i>
<i>D. J. Distel</i>	<i>- Licensing Engineer, PPY</i>
<i>D. N. Fultonberg</i>	<i>- Manager, TMI-1 Long Range Planning</i>
<i>G. M. Gurican</i>	<i>- Licensing Engineer</i>
<i>D. V. Hassler</i>	<i>- Licensing Engineer, TMI-1</i>
<i>R. W. Hernan</i>	<i>- NRC TMI-1 Project Manager</i>
<i>W. G. Heysek</i>	<i>- Licensing Engineer, TMI-1</i>
<i>H. D. Hukill</i>	<i>- Director TMI-1</i>
<i>M. R. Knight</i>	<i>- Licensing Engineer, TMI-1</i>
<i>J. R. Knubel</i>	<i>- Licensing & Regulatory Affairs Director</i>
<i>M. W. Laggart</i>	<i>- Manager Corporate Licensing</i>
<i>Y. Nagai</i>	<i>- Licensing Engineer, PPY</i>
<i>M. A. Nelson</i>	<i>- Manager, Nuclear Safety</i>
<i>E. J. Pagan</i>	<i>- Licensing Engineer, PPY</i>
<i>R. E. Rogan</i>	<i>- TMI Licensing Director</i>
<i>M. J. Ross</i>	<i>- Director Operations & Maintenance TMI-1</i>
<i>W. Ruland</i>	<i>- Chief, Reactor Projects Section 4B, King of Prussia</i>
<i>R. P. Shaw</i>	<i>- Rad Controls Director TMI-1</i>
<i>H. B. Shipman</i>	<i>- Plant Operations Director TMI-1</i>
<i>G. R. Skillman</i>	<i>- Plant Engineering Director TMI-1</i>
<i>D. G. Slear</i>	<i>- Director, Engineering & Design</i>
<i>R. D. Wells</i>	<i>- Licensing Engineer, TMI-1</i>
<i>F. Young</i>	<i>- NRC TMI-1 Resident Inspector</i>

GPUN/NRC LICENSING ACTIVITIES
INVOLVING CORRESPONDENCE SUBMITTALS
TO THE NRC

Generic Multi-Plant Actions

Plant Specific Actions

Tech Spec Change Requests

NOTE: Schedule and Dates are provided for discussion purposes only and do not necessarily represent commitments.

REVIEWS WITH NRC: September 25, 1985

Revised November 7, 1985	Revised September 21, 1988
Revised December 17, 1985	Revised October 31, 1988
Revised January 17, 1986	Revised December 19, 1988
Revised February 18, 1986	Revised February 14, 1989
Revised March 26, 1986	Revised March 17, 1989
Revised April 23, 1986	Revised April 10, 1989
Revised May 22, 1986	Revised May 12, 1989
Revised July 16, 1986	Revised June 14, 1989
Revised August 27, 1986	Revised August 14, 1989
Revised September 16, 1986	Revised September 25, 1989
Revised October 22, 1986	Revised October 31, 1989
Revised December 8, 1986	Revised December 11, 1989
Revised February 5, 1987	Revised January 23, 1990
Revised March 11, 1987	Revised February 22, 1990
Revised April 14, 1987	Revised March 16, 1990
Revised May 21, 1987	Revised May 3, 1990
Revised June 10, 1987	Revised June 7, 1990
Revised July 8, 1987	Revised July 19, 1990
Revised September 3, 1987	Revised September 13, 1990
Revised October 9, 1987	Revised October 29, 1990
Revised November 25, 1987	Revised December 13, 1990
Revised December 16, 1987	Revised January 16, 1991
Revised January 19, 1988	
Revised February 23, 1988	
Revised March 28, 1988	
Revised April 14, 1988	
Revised May 23, 1988	
Revised July 7, 1988	
Revised August 15, 1988	

ENGINEER KEY

Parsippany (201) 316-XXX

DJD = Dave Distel (x7955)
GMG = Greg Gurican (x7972)
EJP = Ed Pagan (x7538)
PFC = Paul Czaya (x7975)
YN = Yosh Nagai (x7974)

TMI (717) 948-XXX

MRK = Bob Knight (x8554)
CWS = Courtney Smyth (x8551)
DVH = Dennis Hassler (x8833)
WGH = Bill Heysek (x8191)
RDW = Russ Wells (x8693)

ACRONYM KEY

LAI = Licensing Action Item Number
TAC = Technical Assignment Control Number
TBD = To Be Determined
MPA = Multiplant Activity Number (SIMS No.)
SIMS = Safety Issue Management System Number

PRIORITY A: Safety Implication or May Limit Plant Operation
PRIORITY B: Desirable to Resolve Regulatory Issue or GPUN High Priority
 B1 = Top 1/3 priority
 B2 = Second 1/3 priority
 B3 = Last 1/3 priority
PRIORITY C: Administrative Closeout of Issue

LRP = Long Range Plan
[LRP Cat A/B/C] = LRP Integrated Schedule Category (Based on 10/04/89
 ABC List)

Category A: Regulatory MANDATED
Category B: Regulatory COMMITMENTS
Category C: Other Major PROJECTS

January 16, 1991

GPUN/NRC LICENSING ACTIVITIES LIST

CATEGORY	ITEM	ENGR	LAI	GPUN ACTION / STATUS	MRC ACTION / STATUS	Next Action by	TAC No.	PRIOR
GENERIC MULTI-PLANT 10CFR50.63	Station Blackout	EJP MKK	89-9083 89-9091	GPUN TO INSTALL MODIFICATIONS FOR SBO DIESEL GENERATOR DURING 9R.	MRC TO DETERMINE THE NEED FOR TECH SPEC REQUIREMENTS PER NRC LETTER 12/18/89 (C311-89-3288) BY TARGET DATE TBD	GPUN/NRC	68615	B3 LRP CAT A (9R)
GENERIC MULTI-PLANT 10CFR50.75 / .33	Decommissioning Financial Plan	EJP	None	GPUN SUBMITTED FINANCIAL PLAN AND EXEMPTION REQUEST ON 7/26/90 (C311-90-2082).	MRC TO ISSUE SER ON EXEMPTION REQUEST AND PLAN ACCEPTABILITY BY TARGET DATE TBD	MRC		C
GENERIC MULTI-PLANT Appendix B	Fire Protection	DJD WGN	89-9262	GPUN TO RESOLVE THE NEED FOR TECH SPEC CHANGES FOR THE REMOTE SHUTDOWN SYSTEM PER MRC SER DATED 10/19/89 (C311-89-3246). TSCR DUE 12/91. ISSUE TO BE RESOLVED BASED ON REVISED STS.	MRC TO ISSUE INSPECTION REPORT (R. HERNAN PREPARING) ON ASSOCIATED CIRCUITS, FIRE EFFECTS ON AIR LINES AND MULTIPLE HIGH IMPEDANCE FAULTS. TARGET DATE 12/90. MRC TO ISSUE LICENSE AMENDMENT FOR REMOTE SHUTDOWN SYSTEM IF NEEDED TARGET DATE TBD	GPUN/NRC	64951	B3
GENERIC MULTI-PLANT GL 83-28	SALEM/ATWS (4.2.3, 4.2.4) Preventative Maintenance	CVS	None	NONE	MRC TO ISSUE SER FOR PREVENTATIVE MAINT LIFE TEST & REPLACEMENT RX TRIP BREAKERS BY TARGET DATE 1/91.	MRC	53945 SIMS 75 (B-89)	B3
GENERIC MULTI-PLANT GL 85-06	ATWS Rule 10CFR50.62	GMG CVS	None	GPUN FORWARDED FINAL DESIGN PLAN 10/4/89 (C311-89-2058). GPUN TO INSTALL MODIFICATIONS IN 9R. GPUN SUBMITTED MINOR DESIGN CHANGE DESCRIPTION ON 12/19/90 (C311-90-2146).	MRC FORWARDED SER ON DESIGN PLAN 12/7/89 (C311-89-3274). MRC WILL INSPECT MODIFICATIONS FOLLOWING 9R. THE NEED FOR TECH SPEC CHANGES WILL BE DETERMINED FOLLOWING GENERIC TECH SPEC IMPROVEMENT EFFORT TARGET DATE 2/91 (ISSUE OF RSTS).	GPUN/NRC	59151 SIMS A20	B3
GENERIC MULTI-PLANT GL 87-02	SQUG (USI A-46)	YH	88-9249	GPUN SUBMITTED RESPONSES TO SER 7/19/88 (C311-88-3186) BY LETTERS DATED 10/16/88 (C311-88-2134) & 3/7/89 (C311-89-3079). GPUN RESPONDED TO MRC QUESTIONS ON THE INTEGRATED SCHEDULE BY LETTER DATED 1/26/90 (C311-90-2009). GPUN TO COMPLETE WALKDOWNS DURING 10R AND SUBMIT RESULTS TO THE MRC BY WITHIN 9 MO FOLLOWING 10R.	MRC WILL ISSUE SUPPLEMENT TO THEIR SER TO RESOLVE THE PREVIOUS OPEN ITEMS BY TBD. SER EXPECTED TO BE ISSUED 1ST QRT 1991.	GPUN/NRC	69486	C LRP CAT B (10R)
GENERIC MULTI-PLANT GL 87-06	Pressure Isolation Valves	MRK	None	GPUN SUBMITTED LIST OF PIV'S AND TESTS WE DO IN LETTER 6/12/87 (5211-87-2115).	MRC REVIEW GPUN SUBMITTAL AND CLOSEOUT ISSUE BY TBD. (M TO CLOSE)	MRC		C

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CATEGORY	ITEM	ENGR	LAI	GPUN ACTION / STATUS	NRC ACTION / STATUS	Next Action by	TAC No.	PRIOR
GENERIC MULTI-PLANT GL 88-20	Individual Plant Evaluations (IPE)	DJD	89-9250	GPUN TO SUBMIT IPE BY 6/93 PER TMI-1 INTEGRATED SCHEDULE. GPU SUBMITTED BASIS FOR 6 MONTH DEFERRAL BY LETTER DATED 9/29/90 (C311-90-2119).	NRC TO REVIEW IPE BY ___ TBD ___.	GPUN		B3
GENERIC MULTI-PLANT GL 89-04	Inservice Testing (IST)	MRK	89-9087 89-9088	GPUN WILL SUBMIT IST CLARIFICATION AND RELIEF REQUESTS SUBMITTED ON _____ BY C311-90-_____.	REVIEW AND APPROVE GPUN RELIEF REQUESTS BY ___ TBD ___.	MRC	N/A	C
GENERIC MULTI-PLANT GL 89-10	Motor Operated Valves (MOV's)	DVM	89-9148	GPUN SUBMITTED A SCHEDULE FOR MOVATS TESTING BY LETTER DATED 12/28/89 (C311-89-2117). GPUN TO DESCRIBE TESTING PROGRAM BY 09R (CURRENT TARGET DATE 12/90). GPUN WILL COMPLETE PROGRAM BY 11R.	NRC REGION I TO REVIEW PROGRAM DESCRIPTION IN A FUTURE INSPECTION ___ TBD ___. TEMPORARY INSPECTION INSTRUCTIONS TO BE ISSUED.	GPUN	75728	C
GENERIC MULTI-PLANT GL 89-19	OTSG HI Level Isolation (USI A-47)	MRK	None	GPUN RESPONDED TO GL 89-19 BY LETTER DATED 3/12/90 (C311-90-2031). NOTE: AWO & OCONEE SUBMITTED TECH SPEC COVERING THE HIGH LEVEL TRIP.	NRC TO REVIEW GPUN RESPONSE BY 1/91.	MRC	75009	C
GENERIC MULTI-PLANT GL 90-06	PORV and Block Valve	MRK	90-9182	GPUN TO SUBMIT RESPONSE BY 12/24/90.	NRC TO REVIEW GPUN RESPONSE BY ___ TBD ___.	GPUN	77387	C
GENERIC MULTI-PLANT IEB 88-08 Supp 1 & 2	Thermal Stress in RCS Piping	MRK	None	GPUN SUBMITTED LETTER ON RESULTS OF STRESS REVIEW 10/21/88 (C311-88-2145). GPUN SUBMITTED COMPLETE RESPONSE LETTER 8/24/89 (C311-89-2097).	NRC TO REVIEW GPUN RESPONSE BY TARGET DATE 12/90. PER IR 89-01, NRC REGION I TO REVIEW RESULTS OF BR ULTRASONIC TESTS BY TARGET DATE ___ TBD ___. SKIP YOUNG TO FOLLOW-UP.	MRC	69698	C
GENERIC MULTI-PLANT IEB 88-11	PZR Surge Line Stress	MRK GMG	89-9030 89-9028	GPUN SUBMITTED RESPONSE 1/1/90 (C311-89-2141). GPUN WILL UPDATE FATIGUE ANALYSIS AND SUBMIT RESULTS BY 1/91. GPUN TO SUBMIT UPDATED BWOOG FATIGUE ANALYSIS BY 1/4/91. BWOOG SUBMITTED TOPICAL REPORT ON THIS ISSUE TO NRC ON 12/31/90 (OG-813). GPUN REQUESTED TO EXTEND THE DUE DATE FOR PLANT SPECIFIC ANALYSIS BY 60 DAYS PER LETTER DATED 12/21/90 (C311-90-2151). GPUN RESPONSE TO BE SUBMITTED BY 3/4/91.	NRC TO REVIEW GPUN JCO BY ___ TBD ___. NRC SER AND OPEN ISSUES (TAC NO. 72174) ON B&WOG BOUNDING ANALYSIS DATED 8/9/90 (C311-90-3178).	GPUN	72174	C
GENERIC MULTI-PLANT	Loss of Fill Oil in Rosemount	WGH	None	GPUN SUBMITTED RESPONSE LETTER 7/15/90 (C311-90-2096). ADDENDUM SUBMITTED ON	NRC TO REIVEW GPUN RESPONSE LETTER TARGET DATE 2/91.	MRC	76623	C

CATEGORY	ITEM	ENGR	LAI	GPUN ACTION / STATUS	NRC ACTION / STATUS	Next Action by	TAC No.	PRIOR
IEB 90-01	Transmitters			8/20/90 (C311-90-2110).				
GENERIC MULTI-PLANT R.G. 1.97	Accident Monitoring Instrumentation	YN MRK	None	B&WOG RESPONDED TO THE NRC AMENDMENT SER WHICH REQUESTED JUSTIFICATION ON CONTAINMENT ISOLATION VALVE POSITION & RCITS ON 5/1/89. GPUN SUBMITTED JUSTIFICATION ON OTSG PRESSURE RANGE ON 6/25/90 (C311-90-2077). GPUN RESPONDED TO NRC IR 90-10 NOV ON 7/27/90 (C311-90-2104). GPUN TO INSTALL RADIATION MONITOR CABLE MODIFICATIONS DURING 9R.	NRC TO REVIEW B&WOG SUBMITTAL TARGET DATE ___ TBD ___ (LOW PRIORITY). NRC COMPLETE GENERIC REVIEW ON CFT LEVEL, PRESSURE, AND SUMP TEMPERATURE BY TARGET DATE ___ (12/90 REV TO RG 1.97) ___.	GPUN/NRC	51361	83
PLANT SPECIFIC 10CFR50.46	Report >50 Deg. F / COLR Revision	PFC		GPUN PROVIDED REPORT BY LETTER DATED 7/2/90 (C311-90-2056). A TSCR TO REVISE FIGURE 3.5-2M WILL BE NEEDED. SCHEDULE FOR THE TSCR IS 2/28/91. GPUN NOTIFICATION OF 4FT LEVEL RESULTS WILL BE SUBMITTED BY 1/31/91.	NRC ACTION NOT REQUIRED.	GPUN		C
PLANT SPECIFIC ILRT	Exemption on 10 Year Interval	MRK	90-9028	GPUN SUBMITTED EXEMPTION REQUEST BY LETTER DATED 8/30/90 (C311-90-2113). (SEE ALSO TSCR 204)	NRC TO REVIEW EXEMPTION REQUEST BY 1/91.	NRC		81 (9R)
PLANT SPECIFIC ISI	Relief on Exm of Core Flood Tank Safe Ends	MRK		GPUN TO SUBMITTED RELIEF REQUEST ON 10/26/90 (C311-90-2126). C311-90-2126.	NRC TO REVIEW GPUN RELIEF REQUEST BY 1/91.	GPUN		81 (9R)
PLANT SPECIFIC ISI - 10yr	Ten Year Program Description	MRK		GPUN TO SUBMIT PROGRAM DESCRIPTION AND RELIEF REQUEST BY 2/91.	NRC TO REVIEW PROGRAM AND RELIEF REQUESTS BY 4/19/2001.	GPUN		C
PLANT SPECIFIC IST RELIEF	Relief on System Hydro Requirements	MRK		GPUN TO SUBMIT RELIEF REQUEST FOR HYDRO TEST BY TARGET DATE 12/90. <i>JH</i>	NRC TO REVIEW RELIEF REQUESTS BY ___ TBD ___.	GPUN		83 (10R)
PLANT SPECIFIC OTSG	OTSG Sleeve Material	EJP	None	GPUN REQUESTED APPROVAL FOR USE OF ALLOY 690 FOR OTSG SLEEVES AND SLEEVE PLUGS FOR REPAIRS IN 9R BY LETTER DATED 1/9/91 (C311-90-2158).	NRC TO RESPOND TO GPUN REQUEST BY ___ 2/91 ___.	GPUN		81 (9R)
TSCR 179	Hydrogen Recombiner Surveillance	RDW	None	TSCR SUBMITTED 6/18/90 (C311-90-2030). GPUN SUBMITTED SUPPLEMENT 1 IN RESPONSE TO NRC COMMENTS ON 10/26/90 (C311-90-2130).	NRC ISSUED FEDERAL REGISTER NOTICE ON 8/22/90. NRC PROVIDED VERBAL COMMENTS TO GPUN ON 9/20/90 REQUESTING ADDITIONAL	NRC	77080	82

CATEGORY	ITEM	ENGR	LAI	GPUN ACTION / STATUS	NRC ACTION / STATUS	Next Action by	TAC No.	PRIOR
					JUSTIFICATION FOR THE PROPOSED CHANGES. NRC TO ISSUE AMENDMENT. TARGET DATE 11/90.			
TSCR 183	Main Steam Turbine Bypass	NRK	None	GPUN TO SUBMIT TSCR BY TARGET DATE 1/91.	NRC TO ISSUE AMENDMENT BY <u> </u> TBD <u> </u> .	GPUN		C
TSCR 193	EPRI OTSG Inspection Guidelines	WGH EJP	None	TSCR SUBMITTED 9/15/89 (C311-89-2087). NRC PRESENTATION MADE 11/15/89. GPUN WILL USE EXISTING TECH SPEC REQUIREMENTS FOR 9R.	NRC TO FORWARD QUESTIONS SOON. NRC TO ISSUE AMENDMENT BY <u> </u> TBD <u> </u> .	NRC	74893	B2
TSCR 194	Deletion of REMP/RETS	RDW	None	GPUN TO SUBMIT TSCR BY 1/91 2/91	NRC TO ISSUE AMENDMENT BY <u> </u> TBD <u> </u> .	GPUN		C
TSCR 195	Radiation Monitors	WGH		TSCR SUBMITTED 10/4/90, SEE LETTER C311-90-2004.	NRC TO ISSUE AMENDMENT BY TARGET DATE 3/91.	NRC	77838	C
TSCR 201	Spent Fuel Pool Rerack	DJD WGH	None	GPUN SUBMITTED TSCR BY 11/14/90 (C311-90-2120).	NRC TO REVIEW AND ISSUE AMENDMENT BY 6/91.	GPUN		B1
TSCR 202	Purge Valve Seat Replacement Schedule	RDW	None	GPUN SUBMITTED TSCR ON 9/25/90, SEE LETTER C311-90-2118.	NRC TO ISSUE AMENDMENT BY 7/91. FR NOTICE HAS BEEN ISSUED.	NRC	77737	B1 (9R)
TSCR 203	Degraded Grid Voltage	DJD	None	GPUN SUBMITTED TSCR ON 11/20/90 (C311-90-2140) TO RAISE SETPOINT TO ACCOMMODATE NEW ANALYSIS ASSUMPTIONS AND 9R LOADS. INFORMAL NRC FEEDBACK REQUESTED BY 2/91.	NRC TO ISSUE AMENDMENT BY <u> </u> TBD <u> </u> . <i>and of Feb.</i>	NRC		B2 (9R)
TSCR 204	ILRT Exemption & Clarification	NRK	90-9028	GPUN TO SUBMIT TSCR BY 1/91. (SEE ALSO PLANT SPECIFIC ITEM ILRT EXEMPTION ON TEN YEAR INTERVAL). NOTE: CLARIFY CONTAINMENT LEAKAGE TEST ACCEPTANCE CRITERIA VALUES FOUND IN T.S. 4.4.1.1. AND 4.4.1.1.6.	NRC TO REVIEW AND ISSUE AMENDMENT BY 7/91.	GPUN		B1
TSCR XXX -	RCITS (see T.S. 4.24.1)	EJP	89-9075	GPUN TO SUBMIT TSCR BY TARGET DATE MID 1991.	NRC TO ISSUE AMENDMENT BY <u> </u> TBD <u> </u> .	GPUN		C
TSCR XXX -	24 Month Refueling Interval	DJD	90-9059 TO 90-9065	GPUN TO SUBMIT TSCR BY TARGET DATE 10/91.	NRC TO ISSUE AMENDMENT BY <u> </u> TBD <u> </u> . NOTE: GENERIC LETTER ON 24 MONTH CYCLE TO BE ISSUED SOON.	GPUN		B2

NRC OPEN ITEMS LIST
(status is open or ready)

DATE OF REPORT Jan 16, 1991

OI STATUS	IR NO.	OI NO.	LIC ENG	STATUS OF PACKAGE	OI DESCRIPTION	GPUN COMMENTS
READY	86-03	86-03-05	DVH	NRR ACTION	SIMS II.E.1.2 - NRR TO REVIEW OVER-CURRENT BREAKER COORDINATION DURING APPENDIX R REVIEW FOR NON-SAFETY LOADS. ALSO SEE IR'S 86-23, 87-09	LAI 86-9154 AND 86-9155. MEMO EQ-86-820 DATED 7/17/86 G/C LETTER G/C/TMI-1CS/13956 DATED 6/11/86. TO BE CLOSED BY IR 90-20.
READY	87-06	87-06-08	DVH	NRR ACTION, ALSO TO NRC 5/10/90	SIMS II.E.1.2 - LICENSEE COMPLETE MECHANICAL/STRUCTURAL ANALYSES FOR SG EFW SYSTEM BEFORE CYCLE 06 STARTUP. SEE ALSO IR 87-09	FMEA NOW COMPLETE. NRR IS REVIEWING. TO BE CLOSED BY IR 90-20.
READY	87-06	87-06-09	DVH	NRR ACTION	SIMS II.E.1.2 - LICENSEE COMPLETE ELECTRICAL/I&C ANALYSES FOR HSPS FOR SG EFW BEFORE CYCLE 06 STARTUP. SEE ALSO IR 87-09	SEE 5211-97-2070 - FAULT AND BREAKER STUDY CASE SUBMITTED TO NRC. TO BE CLOSED BY IR 90-20.
READY	88-30	88-30-01	DVH	TO NRC 12/19/89	UNRESOLVED PENDING RESULTS OF REEVALUATE EFFLUENT CHARCOAL CARTRIDGE RESULTS. ALSO SEE 'R 88-08 & 89-17 NRC STILL HAS CONCERNS; PACKAGE READY 12/7/89.	SEE LETTER C311-89-2090 & 2064 & 2118; LAI 89-9236 & 9227. TO BE CLOSED BY IR 90-20.
READY	89-13	89-13-02	DVH	TO NRC	LICENSEE TO PROVIDE DEMONSTRATED EVIDENCE TO SUPPORT ADEQUACY OF THE PRESENT TORQUE SWITCH SETPOINTS. ALSO THIS OI WAS TO PROVIDE CALCULATIONS TO DOCUMENT ADEQUACY OF THE UNDERVOLTAGE CONDITIONS; PACKAGE IN FILE. THIS OI WAS TO BE CLOSED IN IR 90-09. IR 90-09 LEAVES THIS AS OPEN PENDING EVALUATION OF MOV TERMINAL VOLTAGE.	LAI 89-9131 WAS OPENED TO PROVIDE THE BASIS FOR THE SWITCH SETTINGS FOR THE FEW IEB 85-03 VALVES THAT WERE NOT TESTED AT FULL DP. THIS LAI CLOSED SEE GL 89-10. LAI 89-9132 ADDRESSES THE UNDERVOLTAGE CALC. SCHEDULED FOR 10/31/89; LAI IS CLOSED. TDR CONTAINS VOLTAGES FOR EACH VALVE. INSPECTOR DESIRED CALC TO BE REDONE USING ACTUAL VOLTAGES FOR EACH VALVE. GPUN DISAGREES WITH THE NRC ON THIS ISSUE. NRC SHOULD CLOSE IN CONJUNCTION WITH GL 89-10 AND THE EDSFI IR 90-81.
READY	89-24	89-24-03	RDW		DIESEL GENERATOR LUBE OIL PUMP LINE CLOGGED. REPORTED IN LER 89-02	LAI 89-9288 CLOSED PROC 1301-8.2 REV 49 ; LAI 89-9289 (DUE 12/20/90) REQUESTED FURTHER ROOT CAUSE EVALUATION AND ACTION. TO BE CLOSED BY IR 90-20.
READY	89-80	89-80-01	WRK		HUMAN FACTOR COMMENTS ON THE EP'S CONTAINED IN APPENDIX B OF THE IR	LAI 89-9182(CLOSED), 89-9183(CLOSED), 89-9184(DUE 10/91), 89-9235(CLOSED), 89-9236(CLOSED), 89-9237(CLOSED), 89-9238(CLOSED), 89-9240(CLOSED). TO BE CLOSED BY IR 90-20.
READY	89-82	89-82-01	WGH		FAILURE OF ELECTRICAL MAINTENANCE PERSONNEL TO SIGN ON TO THE TAGGING CLEARANCE CONTROL DOCUMENT DURING ELECTRICAL MODS TO THE 'A' EMERG DIESEL GENERATOR AS	VIOLATION RESPONSE SENT. LAI 90-9088 WAS UPDATED TO TRACK ACTIONS. TO BE CLOSED BY IR 90-20.

DATE OF REPORT Jan 16, 1991

MRC OPEN ITEMS LIST
(status is open or ready)

OI STATUS	IR NO.	OI NO.	LIC ENG	STATUS OF PACKAGE	DESCRIPTION	GPUM COMMENTS
OPEN	89-82	89-82-02	MGR		FAILURE TO CONTROL MAINTENANCE EQUIPMENT AND MATERIALS IN ACCORDANCE WITH PROCEDURE 1407-1.	VIOLATION RESPONSE SENT. LAI 90-9088 UPDATED TO TRACK ACTIONS. LAI DUE 11/15/90
OPEN	89-82	89-82-03	MGR		FAILURE TO MEASURE AND TEST EQUIPMENT IN ACCORDANCE WITH PROCEDURE AP-1022	VIOLATION RESPONSE SENT. LAI 90-9088 UPDATED TO TRACK ACTIONS. LAI DUE 11/15/90.
READY	90-01	90-01-01	MGR	IN GPUM FILE	USE OF REFERENCE MATERIAL WITH SPECIFIC EXAMS GIVEN BY MES. THE EXAMS WERE FOR UT QUALS. THIS IS UNRESOLVED PENDING REVISION OF THE MES CERTIFICATION PROGRAM TO BRING IT INTO COMPLIANCE WITH THE INTENT OF SNT-TC-1A	LAI 90-9058 (WAS DUE 6/1/90) NOW DUE 7/20/90. LAI CLOSED 8/1/90.
READY	90-04	90-04-02	DVH	IN GPUM FILE	THIS OI WAS TRANSFERRED FROM UNIT 2. THIS ISSUE IS ON THE DOSE ASSESSMENT CALCULATION METHODOLOGY AND THE ASSUMPTIONS USED. PREVIOUS UNIT 2 OI NUMBER WAS 88-09-03.	RADIOLOGICALS CONTROL ACTION ITEM 200707 ADDRESSED THIS SUBJECT AND WAS CLOSED VIA MEMO 9212-87-0062 DATED 5/18/87. DISPOSITION IS STILL ACCURATE.
OPEN	90-10	90-10-01	DJD		PART OF VIOLATION. 6 INCH MINIMUM FREE AIR SPACES SHALL BE MAINTAINED BETWEEN WIRING AND BETWEEN NUCLEAR SAFETY RELATED (NSR) AND NON-NSR WIRING FROM THE RACEWAY ENTRANCE TO THE TERMINATION POINTS. THE REDUNDANT 120V POWER CABLES WERE TIED TOGETHER WITHIN THE PRF CABINET	VIOLATION RESPONSE COMPLETE, SEE C311-90-2104 DATED 7/27/90.
READY	90-10	90-10-02	DJD	IN GPUM FILE	PANEL PLF CONTAINED OTSG AND LEVEL INDICATORS BUNDLED TOGETHER WITH OTHER INSTRUMENT POWER/SIGNAL CABLING. HOWEVER THE OTSG CABLE WAS WRAPPED WITH QUALIFIED INSULATING TAPE WHICH ACTS AS A FIRE BARRIER. THE CONCERN IS ELECTRO-MAGNETIC INTERFERENCE FROM THE COMMONLY WRAPPED CABLE WITH THE ANALOG SIGNAL.	MRC WILL REVIEW GPUM EVALUATION. SEE MEMO 5350-90-264 DATE 8/9/90 (IN FILE). PALINO WILL INSPECT SOON.
OPEN	90-11	90-11-01	DVH		MECHANICAL VALVE PACKING PROCEDURES DID NOT CONTAIN GUIDANCE RELATIVE TO TORQUE SWITCH SETTINGS AND HOW MAINTENANCE COULD CHANGE THE TORQUE SWITCH SETTING REQUIRED.	PROCEDURES 1410-V-13 AND 1410-V-40 WERE THE IDENTIFIED PROCEDURES. BOTH HAD PCR'S IN PROGRESS TO ADDRESS THIS ISSUE PRIOR TO THE INSPECTION. THE PCR'S HAVE SINCE BEEN CANCELED. PROCEDURE REV. TO BE ISSUED 2/91 BASED ON BIENNIAL REVIEW.
OPEN	90-15	90-15-02	MRK		VIOLATION: FAILURE TO PROVIDE A SPECIFIC CHECKLIST REQUIRED BY STEP 4.4.1 OF PM E-18, FAILURE TO ESTABLISH THE INITIAL CONDITIONS FOR TESTING THE RPS FUNCTION IN	RESPONSE TO BE PROVIDED AFTER RECEIPT OF IR 90-18.

MRC OPEN ITEMS LIST
(status is open or ready)

DATE OF REPORT Jan 16, 1991

01 STATUS IR NO. OI NO. LIC ENG STATUS OF PACKAGE

GPUM COMMENTS

STEP 8.6 OF SP 1123-4.1, AND USE OF HANDWRITTEN INSTRUCTIONS IN CONFLICT WITH STEP 6.6 OF PH E-18.

IMPROPER HEALTH PHYSICS PRACTICES WERE FOLLOWED. USE WAS MADE OF NON-REPRESENTATIVE SURVEY AND AIR SAMPLE DATA TO DETERMINE RADIATION CONTROL PRACTICES FOR THE EMERGENCY REPAIR TEAM.

LAI 90-9213 REQUESTS RESPONSE FROM RADCON TO CORRECT WEAKNESS. LAI DUE 12/15/90.

THE STAFF OF THE ENVIRONMENTAL ASSESSMENT COMMAND CENTER (EACC) DID NOT, AT ALL TIMES, CORRECTLY PROJECT DOSES DUE TO LACK OF UNDERSTANDING OF PLANT CONDITIONS AND FAILURE TO COMMUNICATE WITH THE EOP TECHNICAL SUPPORT GROUP. EACC STAFF DID NOT ADVISE THE ESD OF PROJECTED DOSE VALUES WHICH COULD INCREASE RAPIDLY AND IF SO COULD HAVE EXCEEDED THE PAG'S FOR A GENERAL EMERGENCY.

LAI 90-9212 REQUESTS RESPONSE FROM RADCON TO CORRECT WEAKNESS. LAI DUE 12/15/90.

Count: 18

GPUN Presentation to the NRC 1/18/91

TMI-1 Westinghouse Lead Test Assemblies

1. Introduction
2. LTA Design Summary
3. LTA Experience
4. Irradiation Program
5. Cycle 9 Core Design
6. Safety Evaluations
7. Summary

1. Introduction

- A. Objective: Qualify Alternative Fuel Supplier for TMI-1

- B. Compatibility: LTAs compatible with BWFC Mark B fuel assemblies, control components, core internals and plant handling equipment

- C. Meet NRC LTA Evaluation Guidelines
 - 4 Westinghouse LTAs
 - LTAs not limiting
 - Utilize NRC - approved methods

2. LTA Design Summary

A. Similarity to BWFC Mark B assembly

- 15 x 15 array
- Uranium loading/enrichment
- Reactivity (H/U)
- T/H Performance
- Materials

B. LTA Features

- Leaf-type assembly holddown springs
- Reconstitutable (upper/lower nozzles)
- Annealed guide tubes
- Zircaloy mid-grids
- Mixing - vane mid-grids
- Improved DNB Performance
- Debris-resistant fuel rod (long end caps)
- Debris-filter bottom nozzle (optional)
- High burnup capability (55 GWD/MTU)
- Selected fuel rods using ZIRLO™ cladding

2. LTA Design Summary (continued)

C. Proven Westinghouse technology / methodology

- Leaf-type holddown springs
- Fuel rod
- Spacer grids (Zircaloy, Inconel)

D. LTA / Mk-B Differences

- | | |
|-----------------------|--|
| - Top nozzle | - Leaf vs. Coil holddown springs; quick disconnect |
| - Smaller Fuel Rod OD | - Improved U utilization; slightly higher FA reactivity |
| - ZIRLO cladding | - Selected rods; improved material properties (assumes NRC SER) |
| - Uranium loading | - Smaller pellet OD |
| - Enrichment | - 3.9 vs. 4.0 wt/o U235; assure peaking margin |
| - Pressure drop | - Vaned grids; somewhat higher flow resistance; significant DNBR margin gain |

3. LTA Experience

A. Westinghouse

- Optimized Fuel Assembly
 - 17 x 17 : Salem, Beaver Valley, Farley
 - 14 x 14 : Point Beach

- VANTAGE 5 Fuel Assembly
 - 17 x 17 : McGuire with IFM grids only
 - 17 x 17 : Virgil Summer with all VANTAGE 5 features

- Competitor Cores
 - GE : James Fitzpatrick (BWR)

- Advanced Fuel Design Feature
 - Advanced Cladding : North Anna Unit I

B. BWFC

- 17 x 17 Westinghouse : McGuire 1, Cycle 5

- 17 x 17 Westinghouse : Trojan, Cycle 13

4. TMI-1 LTA Irradiation Program

A. Prototype handling tests

B. LTA Pre-characterization

C. Instrumented location

D. PIE Program

- 3 cycles of irradiation
- Visual PIEs after first cycle
- Optional PIEs after second and third cycles

5. Cycle 9 Core Design

A. Preliminary design completed

- Acceptable power peaking maintained

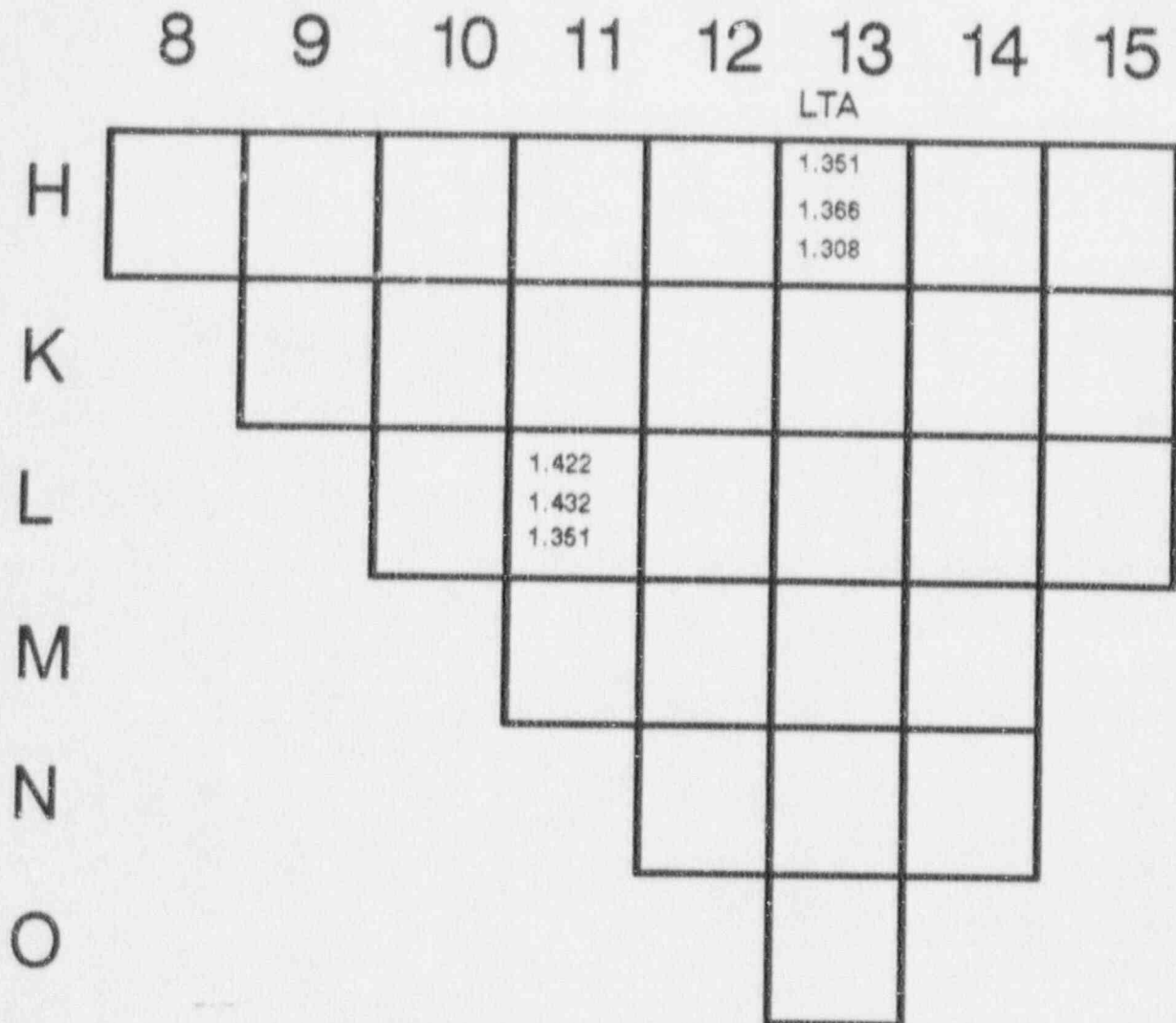
B. Expect to perform 10 CFR 50.59 reload evaluation

C. Hot Mk-B vs. LTA

D. LTA will not lead core

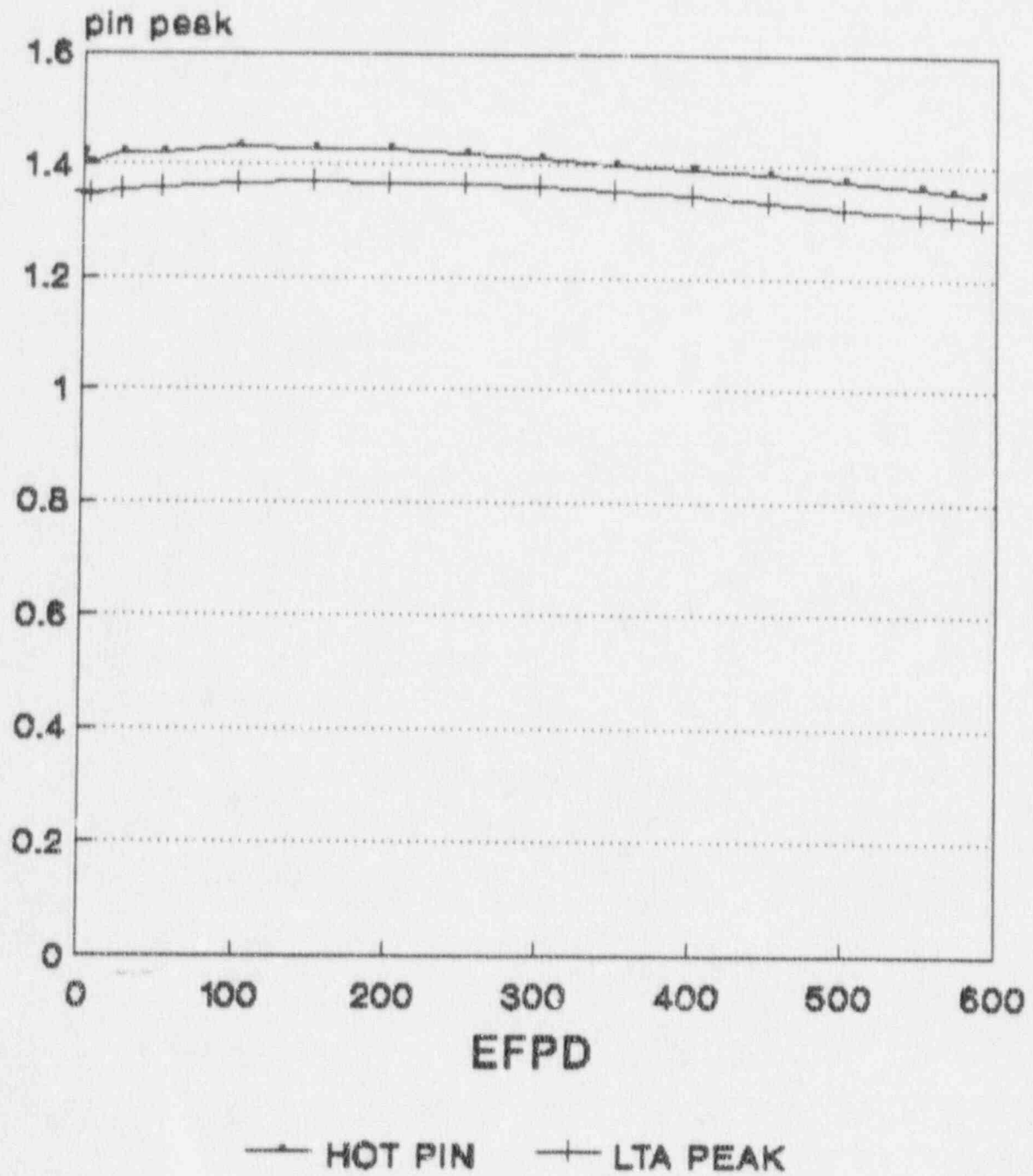
- Minimum hot pin peaking margin of 3%
- Margins to all operating/safety limits

TMI - 1 CYCLE 9 HOT PIN VS. LTA PEAK

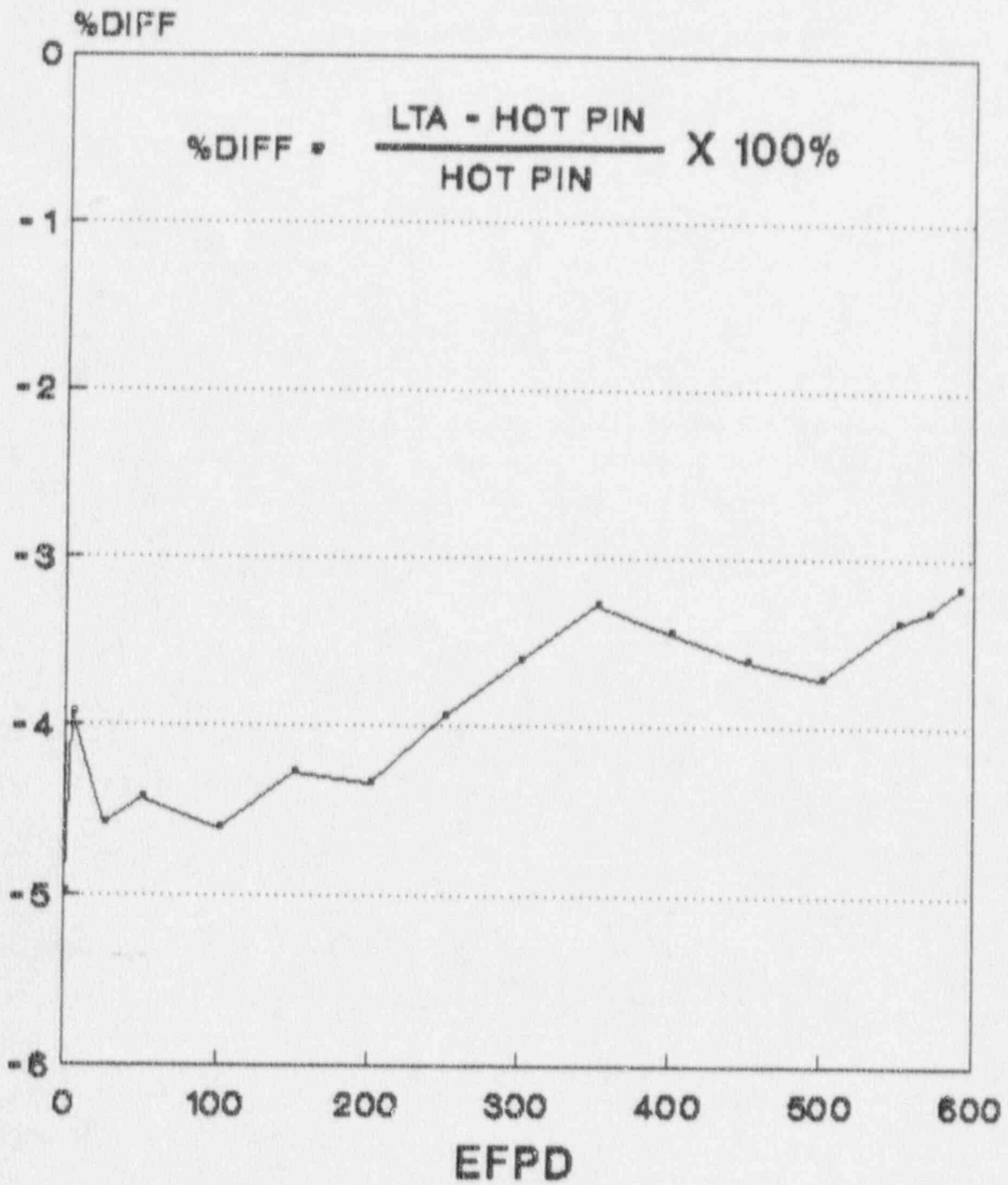


0 EFPD
100 EFPD
590 EFPD

W LTA CYCLE 9 PEAKING MARGIN



LTA VS. HOT PIN PEAKING (%DIFF)



6. Safety Evaluations

A. 10 CFR 50.59 evaluation

- No expected Tech Spec changes
- No unreviewed safety questions
- Expect all 50.59 criteria to be met based on LTA DNBR and peaking margins

B. Mechanical Design

- Fuel system/fuel rod design criteria
- Components/Prototype FA testing

C. Thermal-Hydraulic Design

- Fuel rod thermal performance
- DNB performance
- Hydraulic compatibility
 - Flow tests

D. Nuclear Design

- Compatible neutronics
- Explicit LTA model in BWFC core design

E. Safety Analyses

- FSAR Chapter 14 accidents review
- Non-LOCA / safety parameters
- LOCA / PCT margin

7. Summary

- A. LTA meets NRC demo guidelines
- B. LTA similar to and compatible with Mark B
- C. LTA and Mark B safety margins will be maintained
- D. Based on current design margins 50.59 evaluation expected