

NIAGARA MOHAWK POWER CORPORATION

NINE MILE POINT UNIT 1

CORE OPERATING LIMITS REPORT

Document No.: COLR1

Revision: 01¹, Cycle 10

	<u>Name</u>	<u>Title</u>	<u>Date</u>
Prepared by:	<u>C. W. Lepine</u> C. W. Lepine	<u>Fuel Engineer</u>	<u>3/2/90</u>
Reviewed by:	<u>P. E. Netusil</u> P. E. Netusil	<u>Lead Fuel Engineer</u>	<u>3/2/90</u>
Approved by:	<u>[Signature]</u>	<u>Manager, Licensing</u>	<u>3/6/90</u>
Approved by:	<u>[Signature]</u>	<u>Manager, Fuel & Plant Productivity</u>	<u>3/6/90</u>
Approved by:	<u>[Signature]</u>	<u>Supervisor, Reactor Analysis</u>	<u>3/6/90</u>
SORC Chairman Approval:	<u>[Signature]</u>		<u>3/20/90</u>

THIS NMPC CONTROLLED DOCUMENT PROVIDES CYCLE SPECIFIC CORE OPERATING LIMITS FOR USE IN CONJUNCTION WITH THE NINE MILE POINT UNIT 1 TECHNICAL SPECIFICATIONS.

6135W

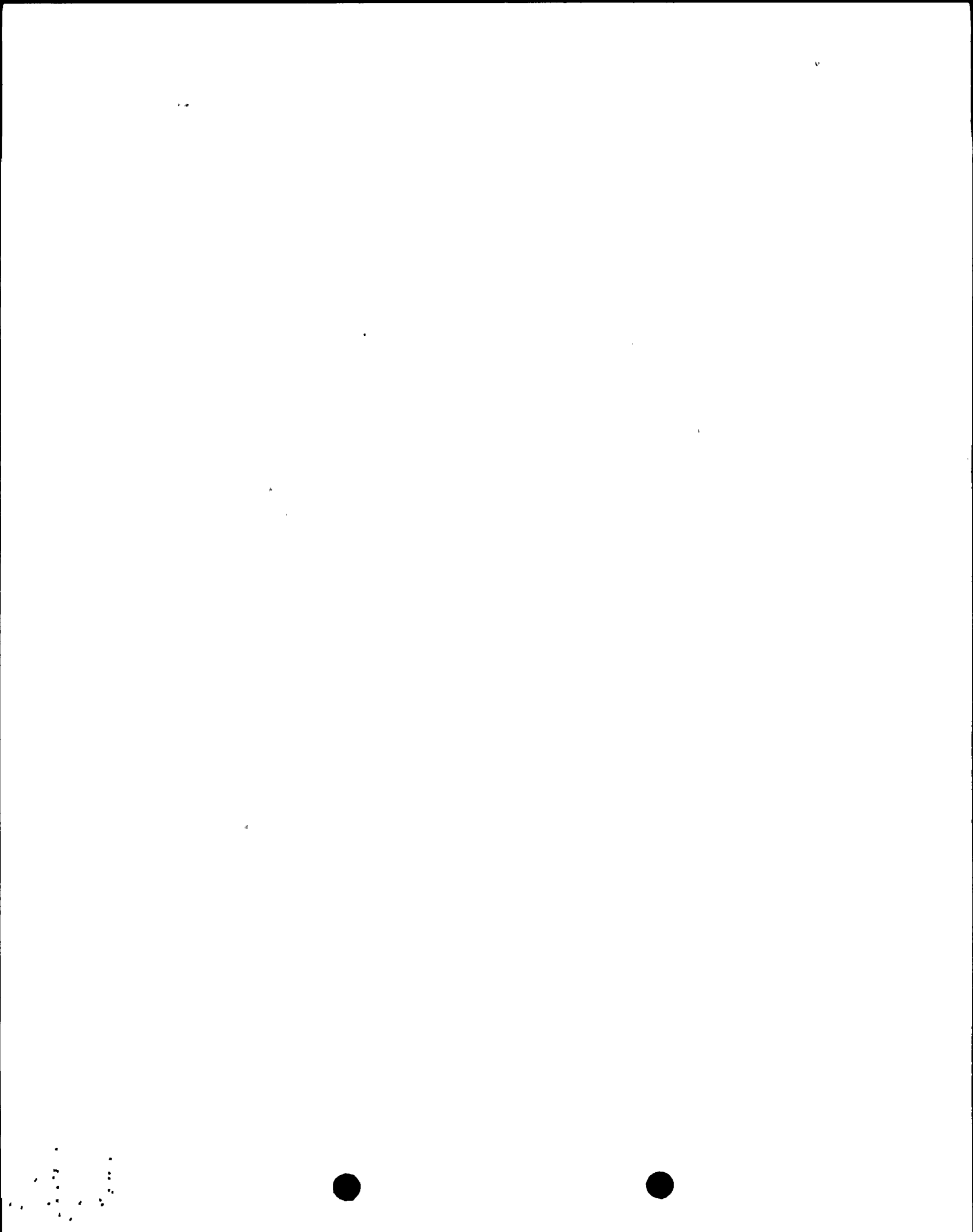
9004270207 900423
PDR. ADDCK. 05000220
P PNU



NIME MILE POINT UNIT 1
CORE OPERATING LIMITS REPORT

TABLE OF CONTENTS

	<u>Page</u>
1.0 Average Planer Linear Heat Generation Rate	1
1.1 Limits for Technical Specification 3.1.7.a	
1.2 Limits for Technical Specification 3.1.7.e	
2.0 Minimum Critical Power Ratio	2
3.1 Limits for Technical Specification 3.1.7.c	
3.2 Limits for Technical Specification 3.1.7.e	
3.0 Source Documents	4



NINE MILE POINT UNIT 1 LIMITING CONDITION FOR OPERATION

1.0 Average Planar Linear Heat Generation Rate (APLHGR)

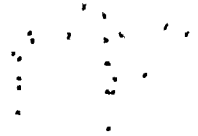
1.1 Limits for Technical Specification 3.1.7.a

During power operation, the APLHGR for each type of fuel as a function of average planar exposure shall not exceed .85 of the limiting value shown in Figures a, b, c and d.

1.2 Limits for Technical Specification 3.1.7.e

During partial loop operation with four recirculation loops in operation and the remaining loop isolated or unisolated, the APLHGR as a function of average planar exposure shall not exceed .85 of 98 percent of the limiting values shown in Figures a and b and shall not exceed .85 of 99 percent of the limiting values shown in Figures c and d.

During partial loop operation with three recirculation loops in operation and the two remaining loops isolated or unisolated, the APLHGR as a function of average planar exposure shall not exceed .85 of 96 percent of the limiting values shown in Figures a and b and shall not exceed .85 of 99 percent of the limiting values shown in Figures c and d.



12

NINE MILE POINT UNIT 1 LIMITING CONDITION FOR OPERATION

2.0 Minimum Critical Power Ratio (MCPR)

2.1 Limits for Technical Specification 3.1.7.c

During power operation, the MCPR for all fuel at rated power and flow shall be as shown in Table 1.

Fore core flows other than rated the MCPR limit shall be the limit identified in Table 1 times K_f where K_f is as shown in Figure e.

2.2 Limits for Technical Specification 3.1.7.e

During 3 loop operation, the CPR limit shall be increased by 0.01.



TABLE 1

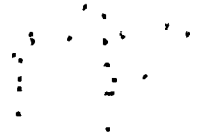
NINE MILE POINT UNIT 1: CYCLE 10 LIMITING CONDITION FOR OPERATION MCPR

Core Average Incremental Exposure

Limiting MCPR

BOC to EOC

≥ 1.445



/

.

2

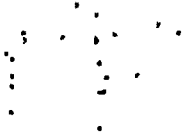
.

NINE MILE POINT UNIT 1 LIMITING CONDITION FOR OPERATION

3.0 Source Documents

The Core Operating Limits contained in this Report were obtained from the following documents:

<u>APLHGR LIMITS (Section 1)</u>	<u>REFERENCE</u>
Figure a, b, c, and d are corresponding four and three loop multipliers	NEDC-31446P-2, April 1989 Nine Mile Point Unit One SAFER/CORECOOL/GESTR-LOCA Loss of Coolant Accident Analysis
.85 Multiplier	EAS-14-0390, March 1990, Nine Mile Point Unit 1 SAFER/CORECOOL/GESTR-LOCA Loss of Coolant Accident Analysis Evaluation of MAPLHGR with Core Spray Through One Sparger
<u>MCPR LIMIT (Section 2)</u>	
Table 1 Figure E	NEDE-31470P-A, March 1988* NEDE-24011-P-A-9, September 1988
.01 3 loop adder	Safety Evaluation by the Office of Nuclear Reactor Regulation Supporting Amendment No. 39 to NMP1 Technical Specifications
	* increased by a .04 allowance for the potential effects of channel bow



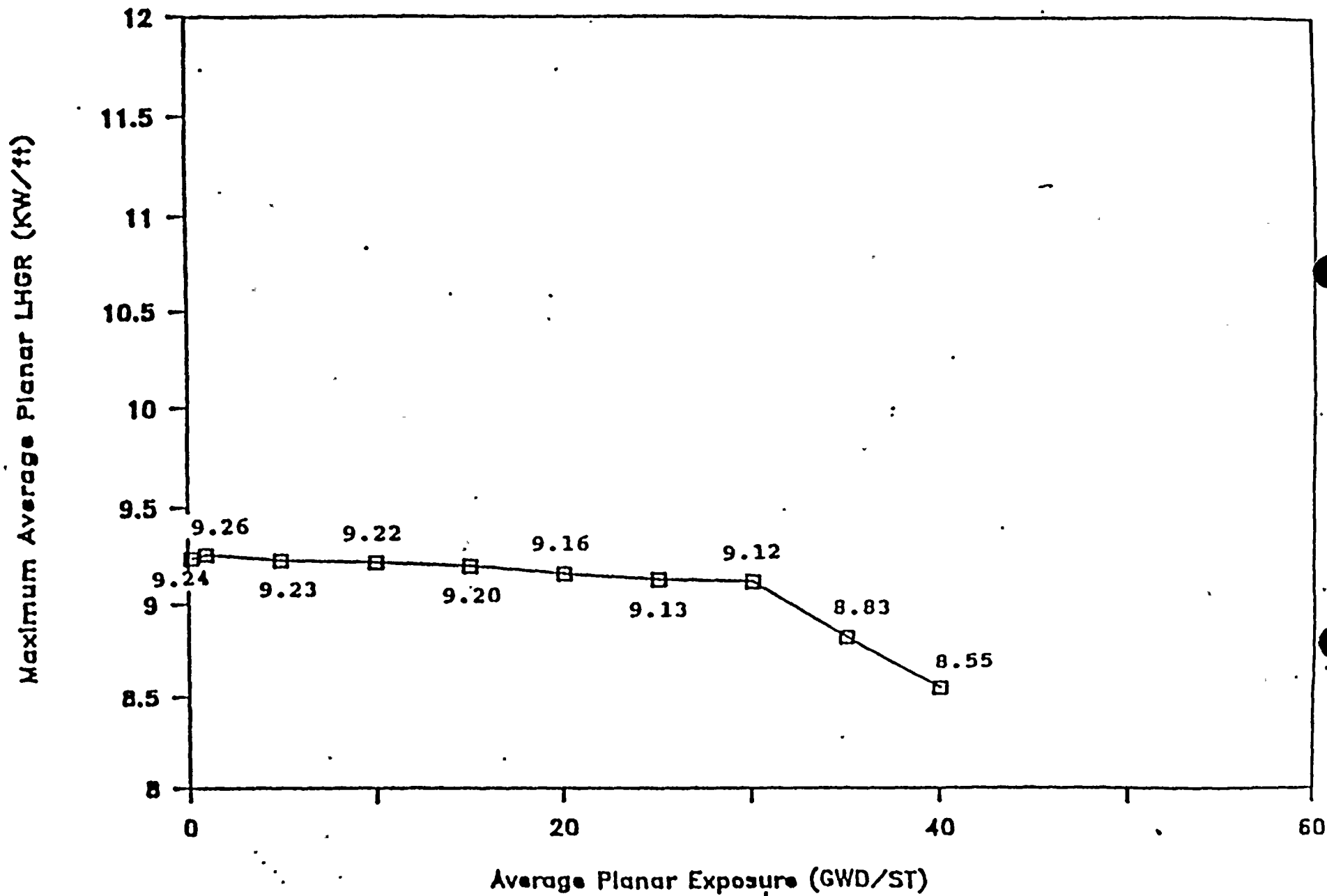


Figure A
NMP-1 MAP LHGR Limits (CFR 8000277)



11

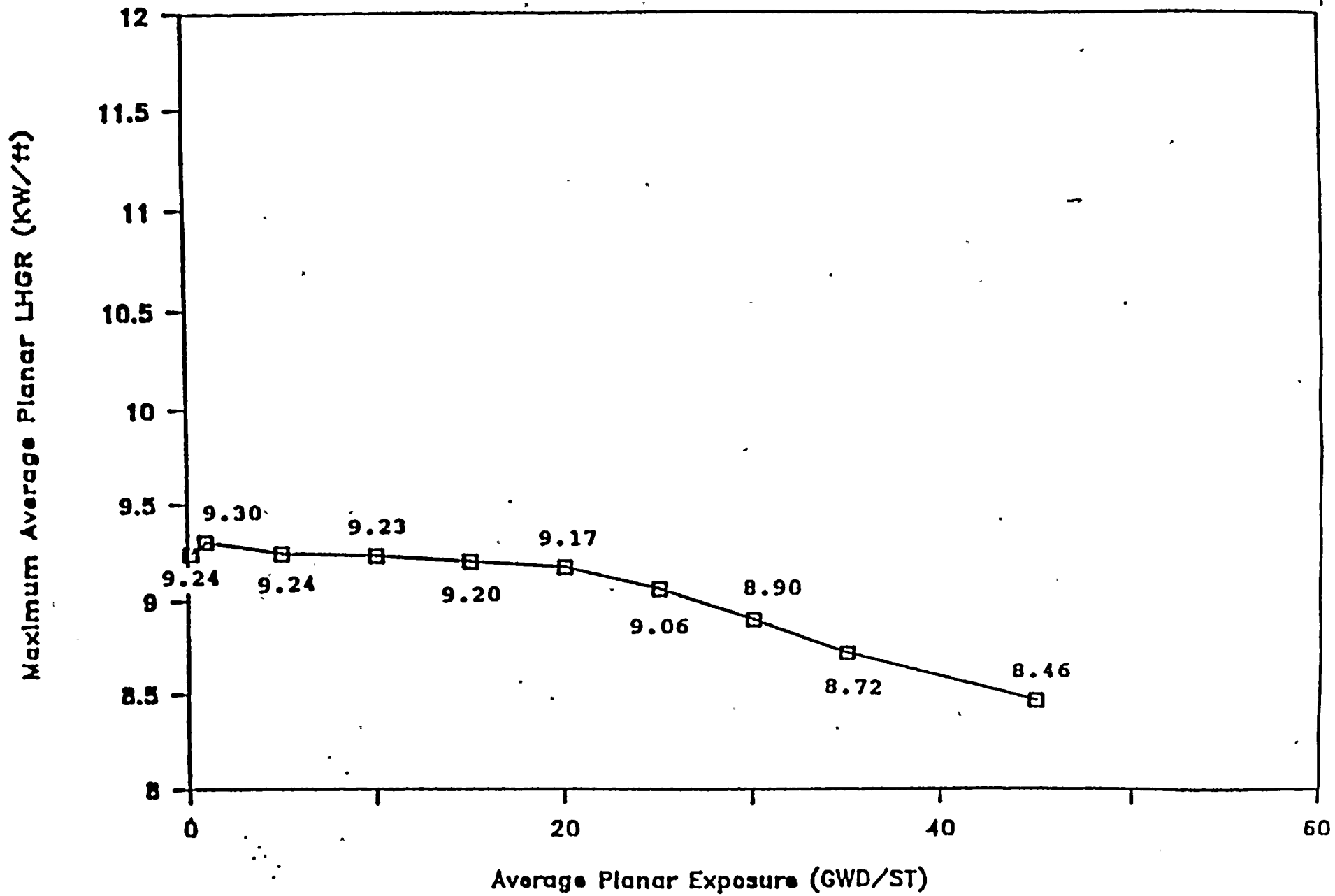


Figure B
NMP-1 MAPLHGR Limits (GE P8DNB277)



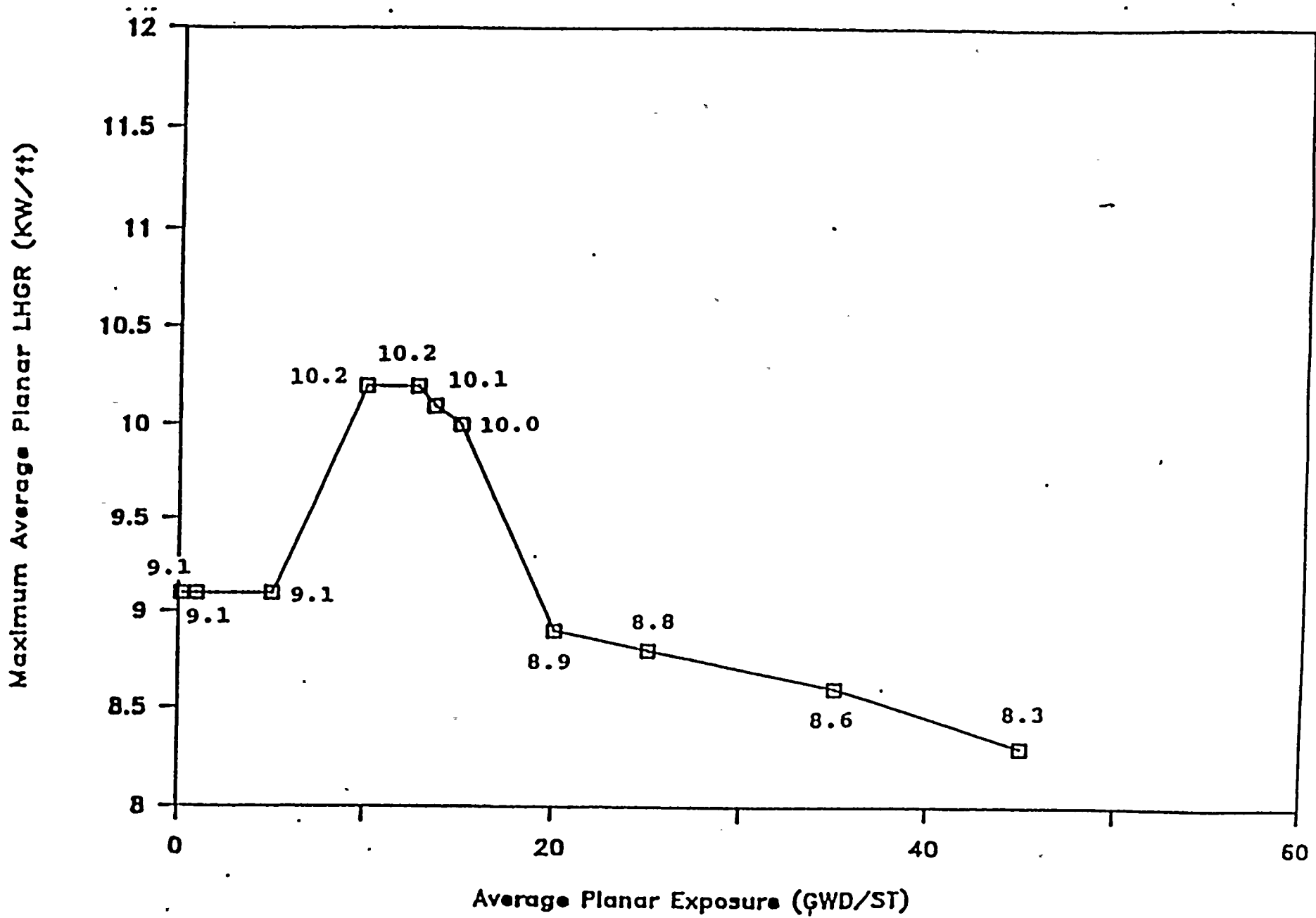


Figure C
NMP-1 MAP LHGR Limits (GE7 P8DRB299)



11/11/11

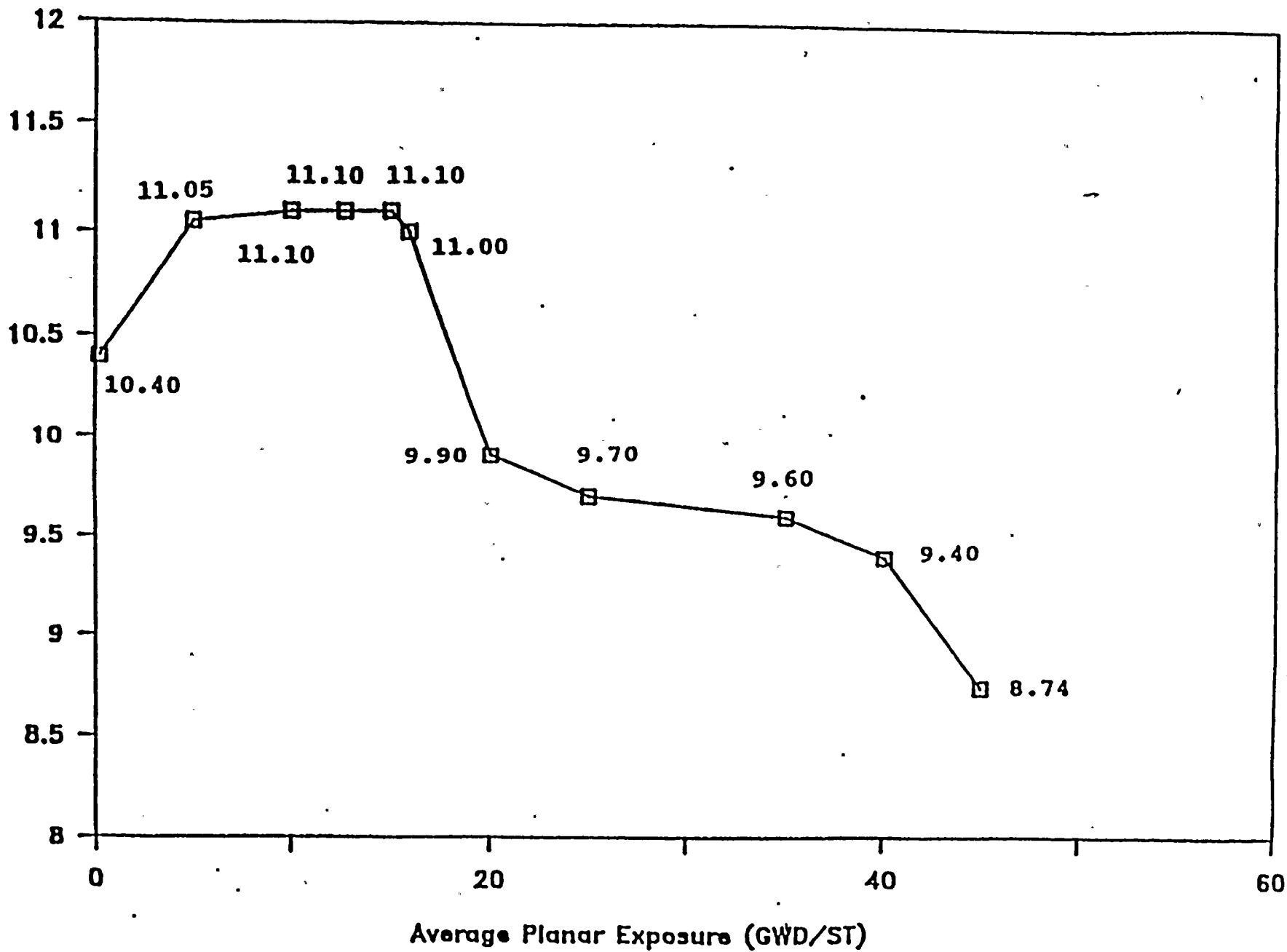


Figure D

