

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8605050067 DOC. DATE: 86/04/30 NOTARIZED: NO DOCKET #  
 FACIL: 50-388 Susquehanna Steam Electric Station, Unit 2, Pennsylv 05000388  
 AUTH. NAME AUTHOR AFFILIATION  
 KEISER, H. W. Pennsylvania Power & Light Co.  
 RECIP. NAME RECIPIENT AFFILIATION  
 ADENSAM, E. PWR Project Directorate 3

SUBJECT: Forwards proposed test plan for facility startup, designed to demonstrate stable reactor operation w/Exxon 9X9 fuel. Submittal meets commitment to provide plan by 860501.

DISTRIBUTION CODE: A047D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5  
 TITLE: OR Submittal: Inservice Inspection/Testing

NOTES: 1cy NMSS/FCAF/PM. LPDR 2cys Transcripts. 05000388

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	BWR EB	1 1	BWR PD3 PD 01	5 5
	CAMPAGNONE	1 1		
INTERNAL:	ACRS 16	10 10	ADM/LFMB	1 0
	ELD/HDS4	1 0	NRR BWR ADTS	1 1
	NRR BWR EB	1 1	NRR PWR-A ADTS	1 1
	NRR PWR-A EB	1 1	NRR PWR-B ADTS	1 1
	NRR PWR-B EB	1 1	NRR/DSRQ/EIB	1 1
	NRR/TAMB	1 1	<u>REG FILE</u> 04	1 1
	RGN1	1 1		
EXTERNAL:	24X	1 1	LPDR 03	2 2
	NRC PDR 02	1 1	NSIC 05	1 1
NOTES:		3 3		

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ADMISSION NBR 88000007 DOC NUMBER: 8804230 NOTARIFIED: NO  
 TITLE: 50-388 Supplement 8 Electric Station Unit 5 Pennington  
 AUTHOR AFFILIATION  
 RECIPIENT AFFILIATION  
 RECIPIENT NAME  
 PWR Product Directorate 8

SUBJECT: Proposed proposed test plan for facility startup designed to  
 demonstrate viable reactor operation within 90X limit  
 Submitted with commitment to provide plan by 8/20/81.

TITLE: OR Submission: Innovative Inspection Testing  
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NOTICE: The following are LTR Segs Transcripts. 880000088

EXTERNAL: BOX	REG PDR	08	1	1	LTR	NSIC	08	2	1	5	1
INTERNAL: ACP	BRR LB		1	1							
BRR LB											
INTERNAL: ACP	ELVIDEA		1	1							
INTERNAL: ACP	BRR BWR FB		1	1							
INTERNAL: ACP	BRR PWR-A FB		1	1							
INTERNAL: ACP	BRR PWR-B FB		1	1							
INTERNAL: ACP	BRR ADTS		1	1							
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TOTAL

50-388



Pennsylvania Power & Light Company

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Harold W. Keiser  
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APR 30 1986

Director of Nuclear Reactor Regulation  
Attention: Ms. E. Adensam, Project Director  
BWR Project Directorate No. 3  
Division of BWR Licensing  
U.S. Nuclear Regulatory Commission  
Washington DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION  
UNIT 2 CYCLE 2 STABILITY TEST PROGRAM  
PLA-2637 FILE R41-2

Dear Ms. Adensam:

Attached please find our proposed test plan for Susquehanna SES Unit 2 Cycle 2 startup which is designed to demonstrate stable reactor operation with Exxon 9x9 fuel. This submittal meets our commitment to provide this plan to you by May 1, 1986.

Any questions on this document should be directed to Mr. R. Sgarro at (215) 770-7855.

Very truly yours,

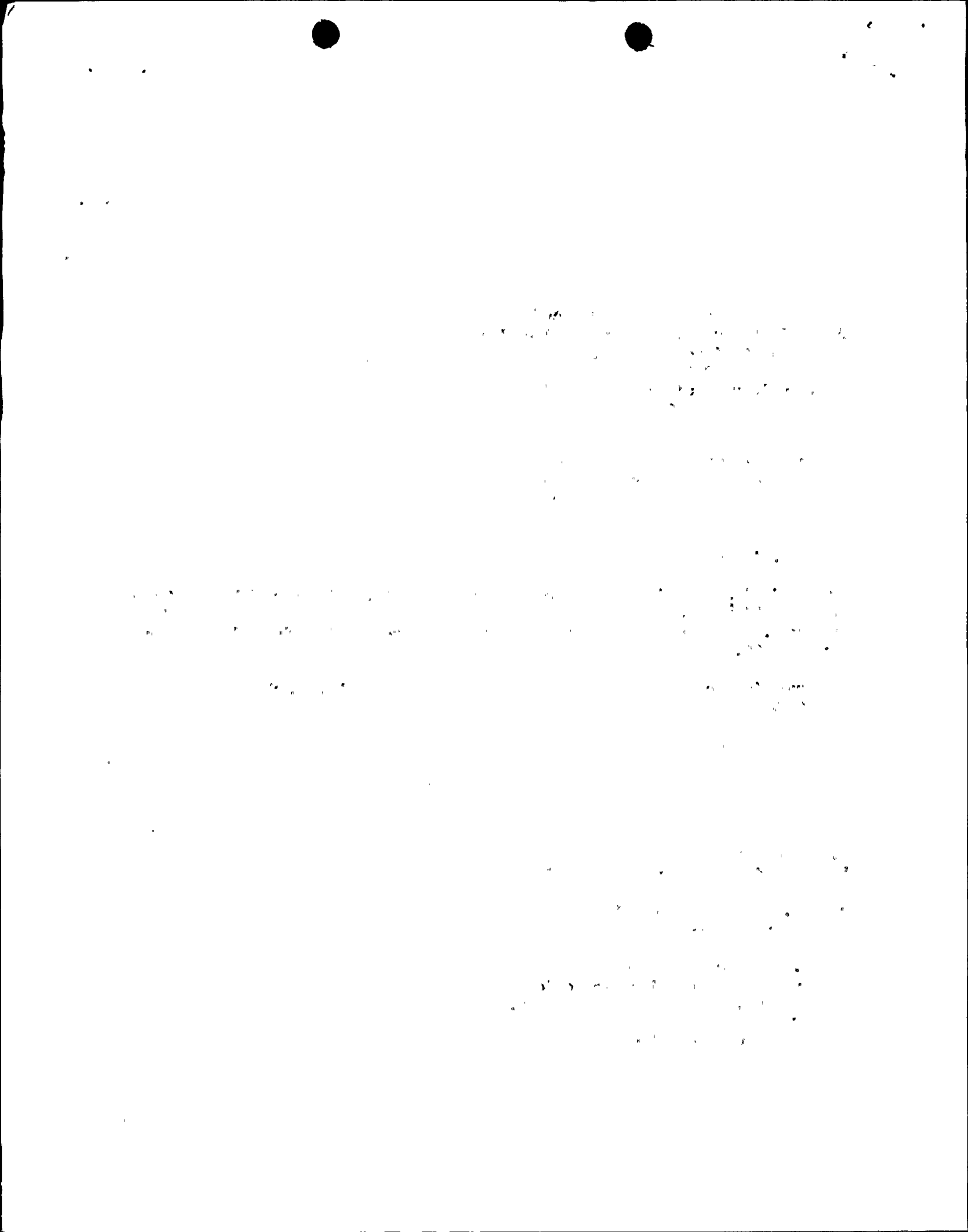
H. W. Keiser  
Vice President - Nuclear Operations

cc: M. J. Campagnone USNRC  
R. H. Jacobs USNRC

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PDR ADDCK 05000388  
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## PROPOSED STABILITY TEST FOR SUSQUEHANNA UNIT 2

### SUMMARY

The purpose of this test is to demonstrate that the insertion of the Exxon Nuclear Company (ENC) 9x9 fuel array does not adversely affect the stability of the Susquehanna Unit 2 reactor plant. The test is to be run during a normal startup. No special test maneuvering will be done; special rod movements or imposed pressure variations are not necessary. Test data will be taken from existing instrumentation and data ports. A noise analysis to determine variations from the previous operating cycle will be performed and compared to the baseline 8x8 noise level specified on Susquehanna Unit 2 Technical Specifications. The data will be used in a post test analysis to determine the core decay ratios.

### TEST EQUIPMENT

No special test equipment is required for this test. All data are recorded on the GETARS system.

### PROCESSED SIGNALS

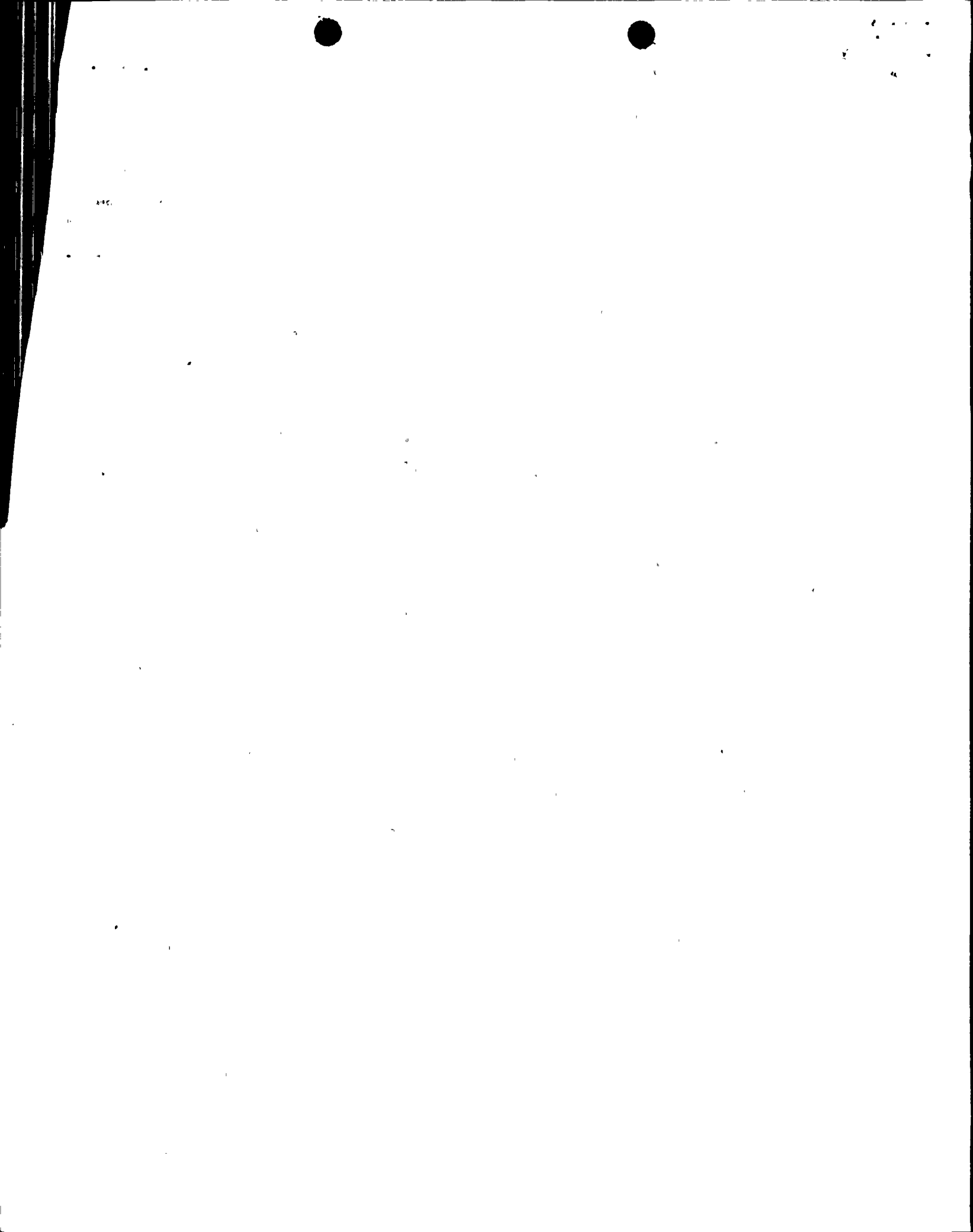
Signals processed will include LPRMs, APRM, total core flow, and reactor pressure. The reactor pressure signal shall be the narrow range pressure recorder. Signals to be recorded on the GETARS equipment are shown in Table 1. The signals will include two APRMs, eight LPRMS, reactor vessel pressure, total core flow, and an internal clock. LPRM levels are shown in the attached table.

POWERPLEX CMSS must be operable during the test. The OPS\$ and WRA\$ file sets for a core monitoring calculation prior to the commencement of the test (not to exceed two hours) should be saved. Also, the GAF\$-file (located under S2>Monitor) and the DAY\$-file should be saved for the duration of the stability test.

### DATA ACQUISITION

The data shall be taken during reactor startup. Figure 1 shows the "detect and suppress" area of operation in Susquehanna Unit 2. Establishing base line equilibrium reactor conditions at <50% rated flow and within 5% rated power of 100% rod line prior to the test will minimize any perturbation on the reactor core during the test.

Data will be obtained at two test points on the power versus flow map. The first point to measure is the highest power to flow ratio attained during the normal startup. The second stability test point to measure is a 10% flow increase over the first point. No special rod motion or pressure perturbation will be made during the recording of the data.



### ACTION REQUIREMENTS

The reactor noise shall be monitored throughout the test by PP&L plant staff. If, at any time, the noise levels exceeds three times the previous cycle's 8x8 fuel type detect and suppress base line noise level as specified in the Susquehanna Unit 2 Technical Specifications, the operating staff shall take the action specified by the appropriate plant operating procedures and Technical Specifications.

### POST TEST ANALYSIS

The data collected during the startup stability test will be used as input to post test stability analyses by ENC. The analysis is performed after the test so the analyses can be performed for the actual configuration tested (exposures, core loading, rod positions, power/flow points, etc.). Predicted decay ratio results will be made available approximately three months after the data is received by ENC.

### SUMMARY OF RESPONSIBILITY

- PP&L will be responsible for hookup and operation of GETARS system.
- ENC will be responsible for post test analysis.

Table 1 Proposed Monitored Variables for  
Susquehanna Unit 2 Stability Test

<u>Magnetic Tape Channel Recorder</u>	<u>Signal</u>	<u>Level</u>
1	APRM	
2	APRM	
3	LPRM	A
4	LPRM	A
5	LPRM	D
6	LPRM	B
7	LPRM	B
8	LPRM	B
9	LPRM	C
10	LPRM	C
11	Reactor Vessel Pressure	
12	Total Core Flow	
13	Internal Clock	



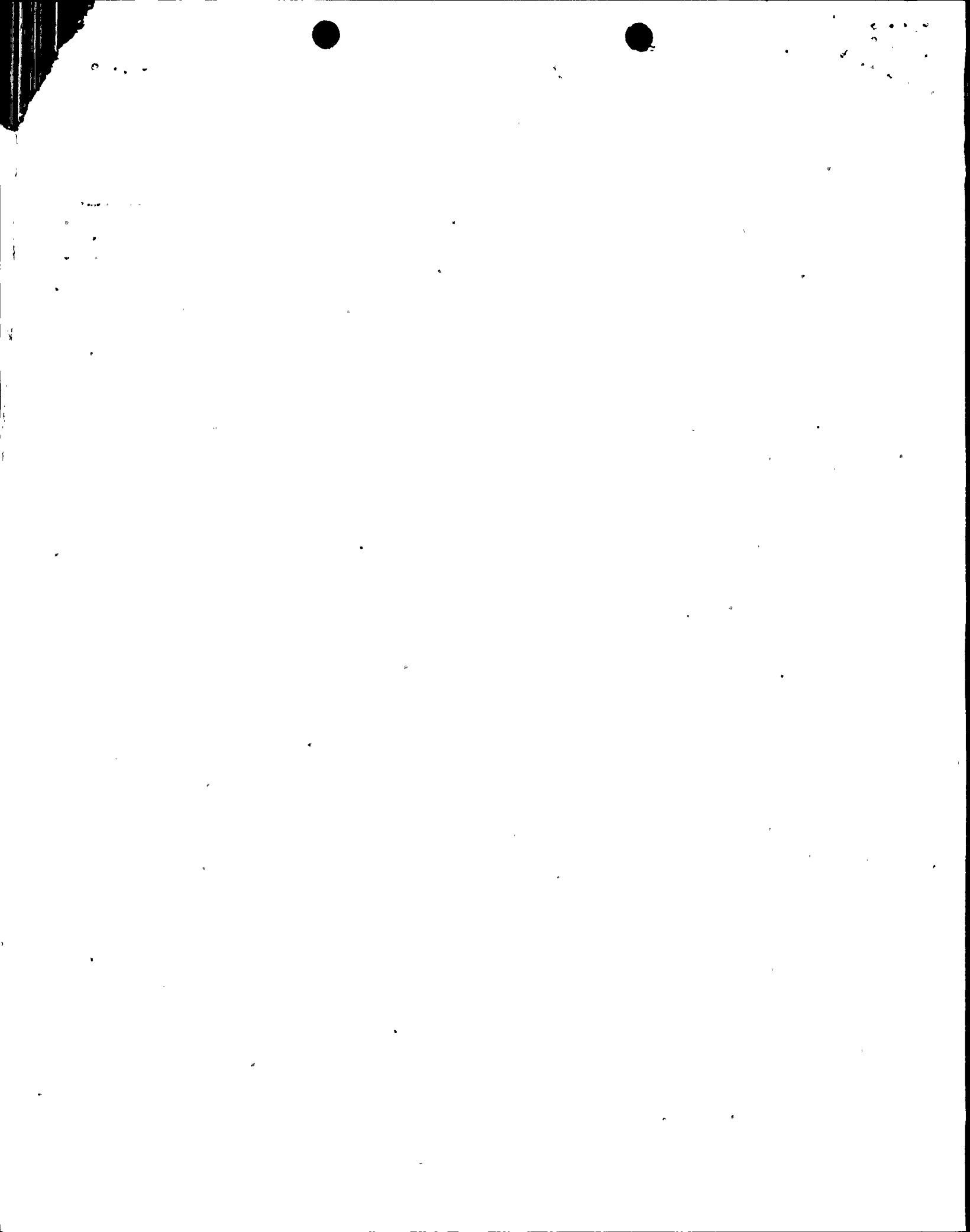
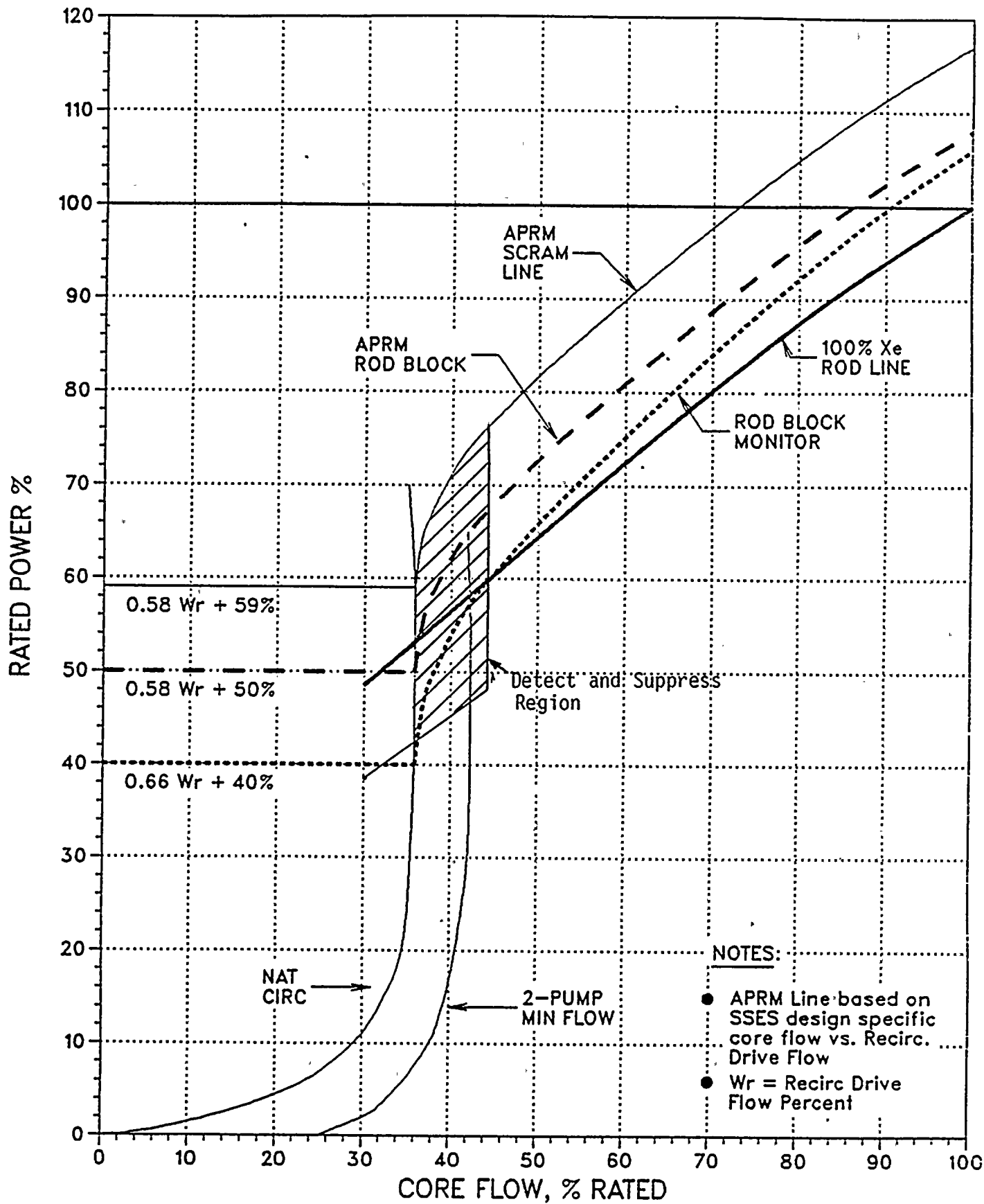


FIGURE 1

# CORE POWER vs CORE FLOW



- NOTES:**
- APRM Line based on SSES design specific core flow vs. Recirc. Drive Flow
  - $W_r$  = Recirc Drive Flow Percent

