

ENCLOSURE 3

McGUIRE 75% POWER LEVEL STEAM GENERATOR

TUBE WEAR ESTIMATES

APRIL 29, 1982

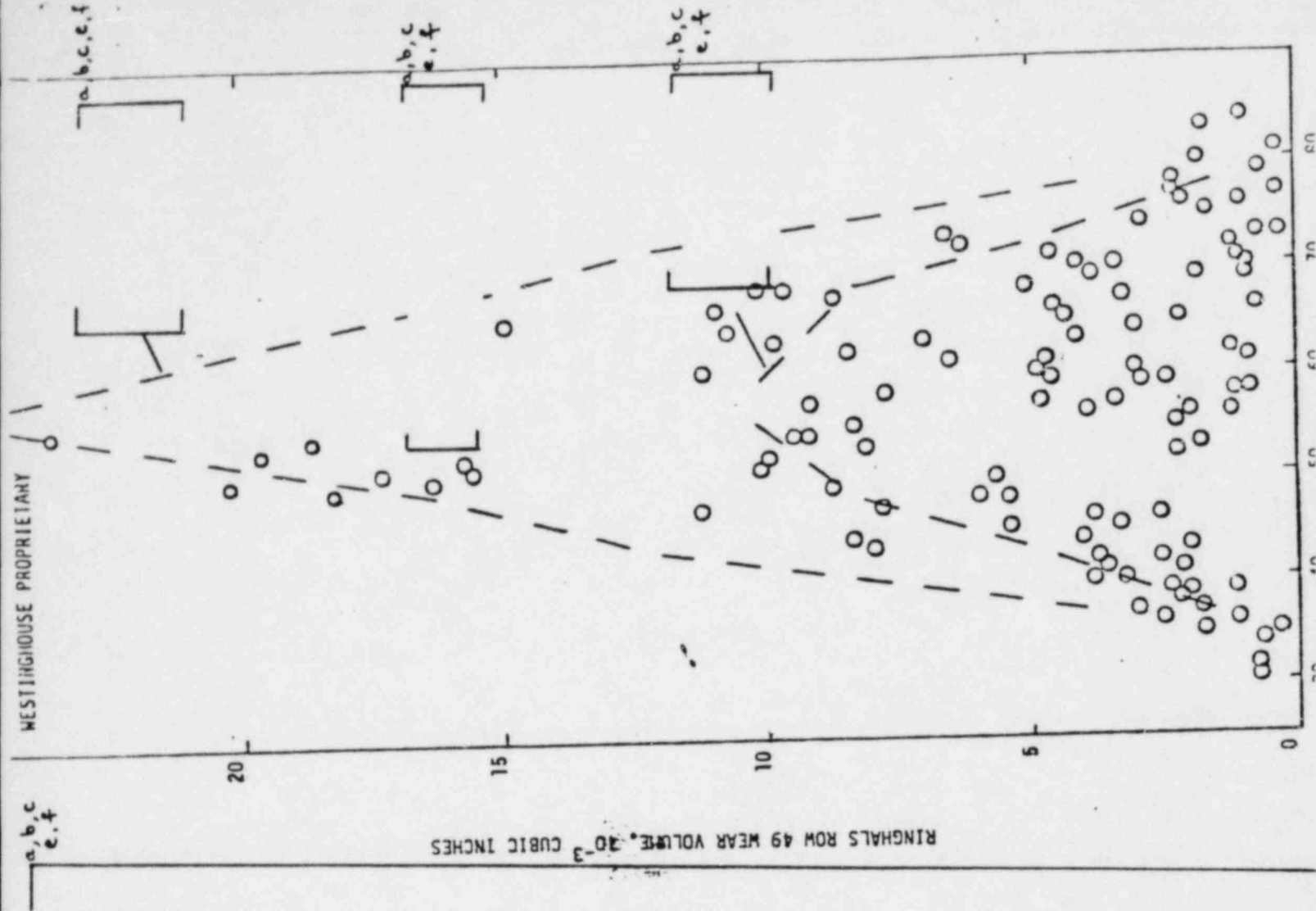
8205050313 820430
PDR ADOCK 05000369
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WESTINGHOUSE PROPRIETARY

WEAR EVALUATION

- WEAR INITIATION ASSUMPTION
 - MOTION
 - IMPACT
- MOTION CORRELATION
 - FIELD ACCELEROMETER DATA
 - TEST TUBE VELOCITY LEVEL
- D2/D3 COMPARISON
 - TEST FLOW PROFILES
 - TEST TUBE RESPONSE
- WEAR CORRELATION
 - WEAR DISTRIBUTION
 - TUBE MOTION
- WEAR DEPTH
 - TUBE WEAR DISTRIBUTION
 - VOLUME-DEPTH EVALUATION
 - ROW WEAR DISTRIBUTION
- WEAR LEVELS
 - WEAR ASSESSMENT
 - WEAR UPPER BOUND

TUBE MOTION - VELOCITY CORRELATION



WESTINGHOUSE PROPRIETARY

MODEL D3 VELOCITY DISTRIBUTION
REPRESENTATION

RMS TUBE GAP VELOCITY, FPS

b,c,e

TUBE COLUMN NUMBER

WESTINGHOUSE PROPRIETARY

MODEL D2 VELOCITY DISTRIBUTION
REPRESENTATION

RMS TUBE GAP VELOCITY, FPS

b,c,e

TUBE COLUMN NUMBER

4/82

WESTINGHOUSE PROPRIETARY

MODEL D2

.417 MODEL

Row 49

STRAIN GAGE OUTPUT, RMS MV

b,c,e

COLUMN NUMBER

WESTINGHOUSE PROPRIETARY

MODEL D2

.417 MODEL

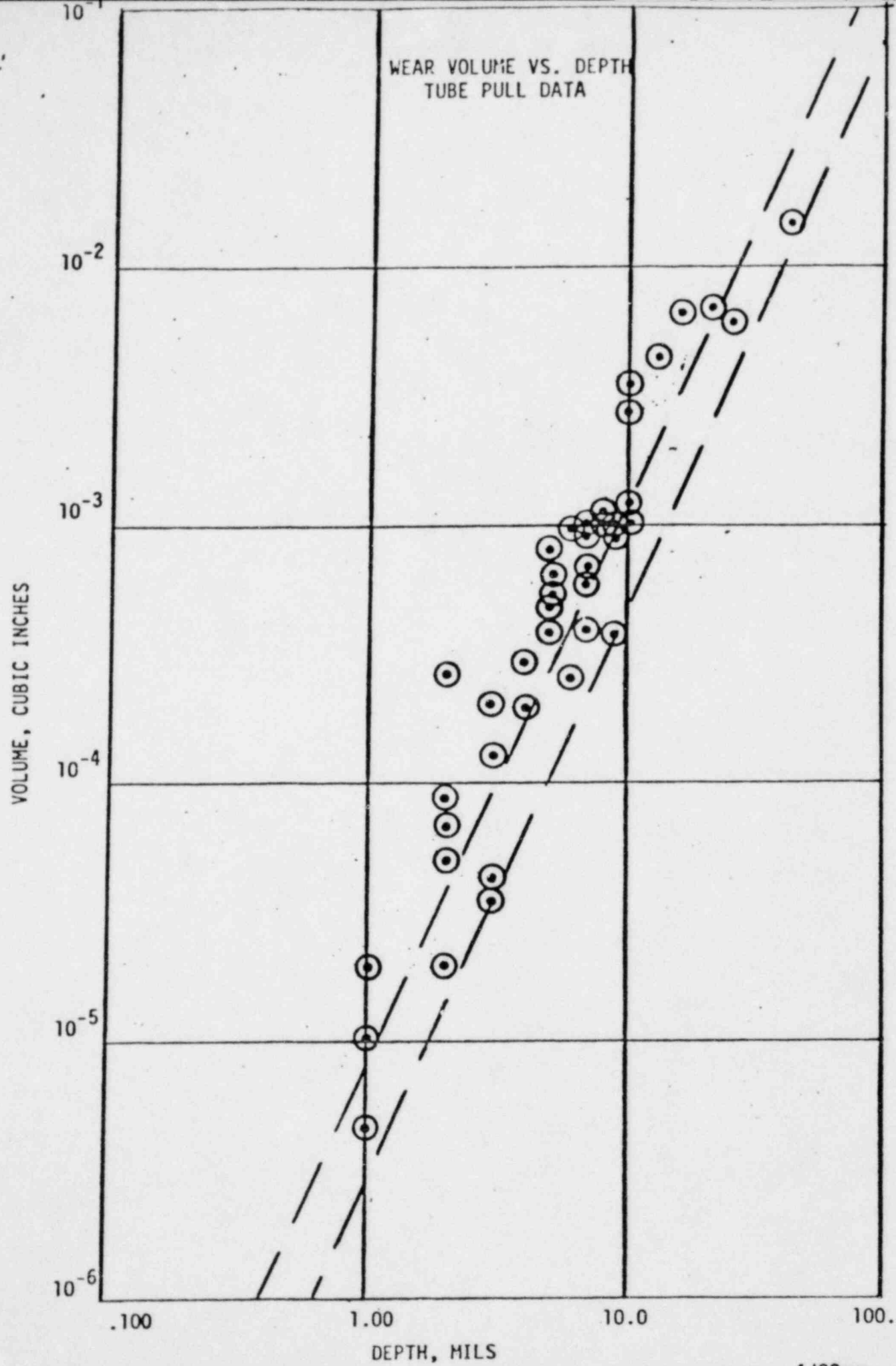
b,c,c

STRAIN GAGE OUTPUT, RMS MV

POWER LEVEL

WESTINGHOUSE PROPRIETARY
INDIVIDUAL PLATE WEAR
RINGHALS 3 ELT DATA

a, b, c, e



WESTINGHOUSE PROPRIETARY

TUBE WEAR EVALUATION

75% POWER

720 HOURS

% WALL REDUCTION

NUMBER OF TUBES

[

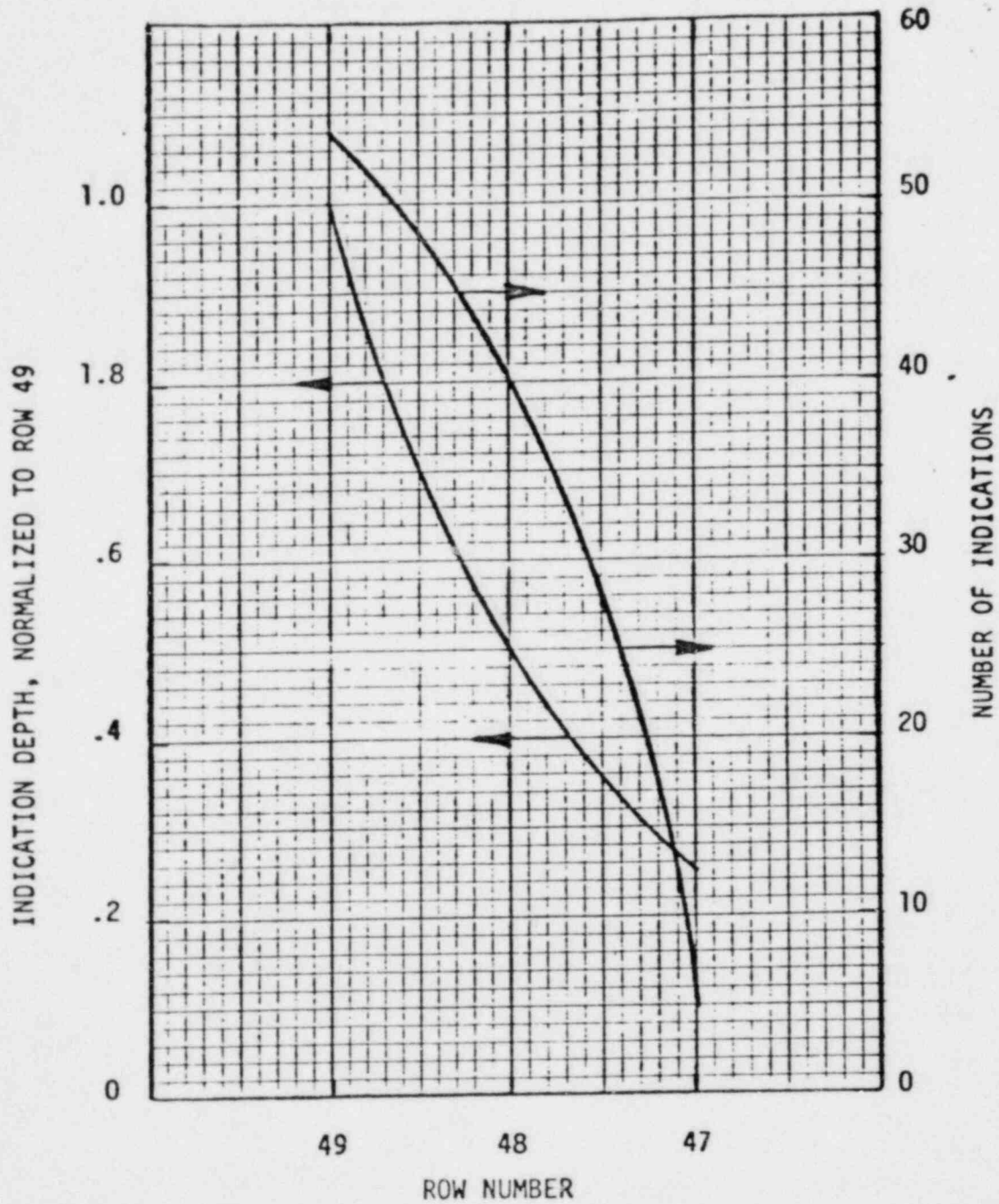
] ^{b, c}

REFERENCE WALL REDUCTION INFORMATION

40% = TUBE PLUGGING LIMIT

[^{a, b, c}] = STRUCTURAL LIMIT

INDICATION DISTRIBUTION MODEL



WESTINGHOUSE PROPRIETARY

UPPER BOUND WEAR EVALUATION

75% POWER

720 HOURS

% WALL REDUCTION

[

NUMBER OF TUBES

] b,c

UPPER BOUND BASED ON:

- WEAR CORRELATION UMBRELLA
- VOLUME DEPTH CORRELATION UPPER LIMIT
- CONSERVATIVE TUBE WEAR DISTRIBUTION

WESTINGHOUSE PROPRIETARY

<u>CONDITION</u>	<u>ALLOWABLE WALL REDUCTION</u>
FLB/SLB	[] ^{a, b, c}
LOCA	
NORMAL PLANT CONDITIONS*	

*BASED UPON SECTION III NORMAL CONDITION STRESS LIMITS