

TWX NR 066  
WSA003  
PP RUEPXG  
DE RUPWS 3 0351717  
ZNR UUUUU  
R 041648Z  
FM R H ENGELKEN USAEC BERKELEY CALIF  
TO LESTER KORNBLITH JR USAEC WASHDC  
AEC  
BT

UNCLAS. RE HUMBOLDT FLOW ANOMALY.  
AS AGREED IN OUR TELECON OF FEBRUARY 2 IN WHICH YOU STATED THAT DRL CONCURRED WITH OUR INTERPRETATION OF THE REPORTING REQUIREMENTS OF SECTION 3.C. OF LICENSE DPR-7, I ADVISED J. CARROLL ON FEBRUARY 2 THAT AN IMMEDIATE REPORT DESCRIBING THE ABNORMALITY AND ITS SAFETY IMPLICATIONS IS REQUIRED. FOLLOWING CONSULTATION WITH PG&E MANAGEMENT CARROLL ADVISED ME ON FEBRUARY 3 IT HAD BEEN DECIDED THAT THE CURRENT PROBLEM DOES NOT FALL WITHIN THE IMMEDIATE REPORTING REQUIREMENTS BECAUSE IT DOES NOT INVOLVE SERIOUS SAFETY CONSIDERATIONS. IN VIEW OF THIS PG&E FEELS THAT A DESCRIPTION OF THIS PROBLEM IN THEIR SEMIANNUAL

PAGE TWO RUPWS 3 UNCLAS  
OPERATIONS REPORT WILL SATISFY THE REQUIREMENTS OF THE LICENSE. I DISAGREED WITH THIS POSITION AND STATED SO DO EMPHATICALLY. THE ENSUING DISCUSSION WAS PARTIALLY PHILOSOPHICAL AND CONCERNED WITH THE DEGREE OF REGULATION NECESSARY TO ACHIEVE DESIRED OBJECTIVES. HOWEVER, MUCH OF THE DISCUSSION WAS DEVOTED TO TECHNICAL CONSIDERATIONS. SOME OF THE REASONS FOR MY POSITION ARE THE FOLLOWING:  
1. ASSUMPTIONS (REPEAT) ASSUMPTIONS CONCERNING THE REASONS FOR THE LOSS OF FLOW HAVE NOT BEEN SUBSTANTIATED BY INSPECTION OF THE CORE.  
2. THE LICENSEE HAS VOLUNTARILY ESTABLISHED A POWER LIMIT ALMOST 50 PERCENT BELOW THE LICENSED POWER LIMIT. THIS LIMIT HAS NOT OFFICIALLY BEEN RECOGNIZED OR EVALUATED BY THE AEC.  
3. SINCE THE REASONS FOR THE LOSS OF FLOW ARE STILL SUBJECT TO SOME DOUBT, IT SHOULD CONSERVATIVELY BE ASSUMED THAT THE FLOW TO SOME FUEL ELEMENTS MAY HAVE BEEN REDUCED TO A GREATER DEGREE THAN HAS BEEN ASSUMED. IN VIEW OF THIS, WE QUESTION THE ABILITY OF THE LICENSEE TO DEMONSTRATE THAT THE REACTOR PRESENTLY MEETS THE TECHNICAL SPECIFICATIONS OR THAT CERTAIN OF ITS PARAMETERS DO NOT SIGNIFICANTLY DIFFER FROM THOSE ANALYZED BY DRL IN THEIR HAZARDS ANALYSIS FOR THE INCREASE IN POWER TO 240 MEGAWATTS. FOR EXAMPLE, THE DRL HAZARDS ANALYSIS ISSUED ON APRIL 20, 1965 IN CONNECTION WITH THE POWER INCREASE

8602270505 851212  
PDR FOIA  
FIREST085-665 PDR

PAGE THREE RUPWS 3 UNCLAS  
TO 240 MEGAWATTS INDICATED THAT THE FOLLOWING CONSIDERATIONS WERE OF SIGNIFICANCE IN AUTHORIZING THE AMENDMENT.  
(A) THERMAL AND HYDRAULIC CHARACTERISTICS OF THE PLANT WERE DETERMINED DURING TESTS BETWEEN 165 AND 230 MEGAWATTS FOR THE FLOW CONDITIONS WHICH EXISTED AT THAT TIME. NOT FOR PRESENT CONDITIONS.  
AND WAS MEASURED DURING HIGH POWER TESTS TO BE 12.8 MILLION LBS PER HOUR. THE MINIMUM BURNOUT RATIO AT THE OVERPOWER CONDITION WAS DETERMINED ON THE BASIS OF THESE DATA.  
(C) MAXIMUM CALCULATED FUEL TEMPERATURES AT THE PROPOSED OPERATING CONDITIONS WERE BASED ON THE FLOW CONDITIONS WHICH EXISTED AT THAT TIME.  
(D) VOID FRACTIONS IN THE RANGE FROM 0.19 TO 0.30 WERE USED IN ANALYZING THE FUEL DAMAGE EXPECTED TO OCCUR DURING TRANSIENT POWER INCREASES DUE TO VOIDS COLLAPSING IN THE EVENT OF A LOSS OF FEED WATER HEATING ACCIDENT. IT IS NOT CLEAR THAT THE ASSUMPTIONS USED IN THIS ANALYSIS ARE STILL VALID.  
IN ADDITION IT IS ALSO NOTEWORTHY THAT THE PRESENCE OF FOREIGN MATTER IN THE PRIMARY SYSTEM OF G-E REACTORS HAS ON A NUMBER OF OCCASIONS RESULTED IN ABNORMAL CONTROL ROD PERFORMANCE. THE PRESENCE OF LARGE

PAGE FOUR RUPWS 3 UNCLAS  
AMOUNTS OF SCALE IN THE REACTOR SHOULD PROBABLY ALSO BE CONSIDERED IN  
EVALUATING THE SAFETY OF THE HUMBOLDT PROBLEM.  
IN VIEW OF THE ABOVE CONSIDERATIONS AND OF OUR PREVIOUSLY STATED  
POSITION IN THIS MATTER I STRONGLY URGE THAT PG&E BE REQUESTED IN  
WRITING TO PRESENT THEIR VIEWS TO THE COMMISSION AT THE EARLIEST  
POSSIBLE TIME. REF CO:V:RHE 268  
BT

N  
END EAP ACK PLS  
ACKD LER

U.S. ATOMIC ENERGY COMMISSION  
REGULATORY  
MAIL SECTION

1966 FEB 4 PM 2 54

RECEIVED