

November 13, 1996

Donald F. Schnell
Senior Vice President
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U.S. Nuclear Regulatory Commission
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Washington, D.C. 20555

Gentlemen:

ULNRC- 3489

DOCKET NUMBER 50-483
CALLAWAY PLANT
NRC BULLETIN 96-01

- References:
- 1) ULNRC-3360, dated April 4, 1996
 - 2) NRC Letter dated September 4, 1996
 - 3) ULNRC-3447 dated September 20, 1996
 - 4) ULNRC-3454 dated September 27, 1996
 - 5) ULNRC-3455 dated September 30, 1996
 - 6) NRC Letter dated October 7, 1996
 - 7) ULNRC-3472 dated October 15, 1996

The referenced letters provided Union Electric's response and NRC's evaluation with respect to Bulletin 96-01, "Control Rod Insertion Problems" for Callaway Plant. Reference 7 provided the rod drop times that were obtained at the end of cycle (EOC) 8.

References 4, 6 and 7 defined the scope of drag testing for EOC 8, totaling 23 assemblies. The Attachment to this letter provides the drag test data obtained. This testing was performed in the reactor vessel with the upper internals in place. Maximum values for the dashpot and guide thimble regions are provided. It should be noted that, based upon Westinghouse experience, the testing method used (in vessel testing with drive shafts/internals in place) provides results that are biased to the high side.

Based on an evaluation by Westinghouse, these readings are consistent with the data base for those plants which have not experienced insertion anomalies. The highest drag recorded was the center fuel assembly (H78) which also reached the highest burnup of approximately 48,100 MWD/MTU. The maximum drag for this


TEST

assembly was 78 pounds in the dashpot and 42 pounds in the guide thimbles. Although the thimble drag is above the guidelines of Westinghouse Specification F-5.1, "Instructions, Precautions and Limitations for Handling Rod Cluster Control Assemblies and Core Component Assemblies", there is no concern for an insertion anomaly. This is supported by data which shows that for plants which exceeded only one of the guidelines, control rods have inserted normally in all cases. Furthermore, the rod drop time to turnaround for assembly H78 measured at EOC 8 was 2.3 seconds, well below Technical Specification limits. Assembly H78 is a discharge assembly and will not be used in any future cycles. All other fuel assemblies were well within both F-5.1 guidelines and are consistent with previous observations of irradiated fuel assemblies at similar burnups.

Based upon a review of the drag test data and rod drop times, there are no indications of concern for an insertion anomaly at Callaway.

If you have any questions or concerns, please contact us.

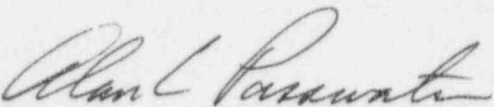
Very truly yours,


for Donald F. Schnell

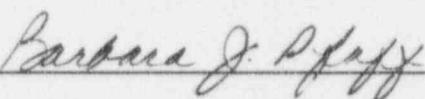
DES/plr

STATE OF MISSOURI)
) S S
CITY OF ST. LOUIS)

Alan C. Passwater, of lawful age, being first duly sworn upon oath says that he is Manager, Licensing and Fuels (Nuclear) for Union Electric Company; that he has read the foregoing document and knows the content thereof; that he has executed the same for and on behalf of said company with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By 
Alan C. Passwater
Manager, Licensing and Fuels
Nuclear

SUBSCRIBED and sworn to before me this thirtieth day
of November, 1996.



BARBARA J. PFAFF
NOTARY PUBLIC—STATE OF MISSOURI
MY COMMISSION EXPIRES APRIL 22, 1997
ST. LOUIS COUNTY

**CALLAWAY PLANT
CYCLE 8 EOC DRAG TEST RESULTS**

CORE LOCATION	ASSY ID	PEAK DRAG-IN DASHPOT (in lbs force)	PEAK DRAG-OUT OF DASHPOT (in lbs force)
P4	J44	16	12
P12	J30	18	8
N9	K92	22	16
N7	K94	28	10
M2	J29	16	6
M4	J12	60	10
M12	J55	52	10
M14	J15	16	10
K6	K78	48	18
J13	K81	14	10
J3	K83	38	12
H8	H78	78	42
G13	K93	14	24
G3	K86	18	22
F6	K79	50	32
D2	J32	24	28
D4	J19	32	16
D12	J20	16	16
D14	J14	46	36
C9	K85	26	18
C7	K96	46	30
B4	J40	20	10
B12	J52	24	12

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