

Log # TXX-96510
File # 10119
Ref. # NRCB 96-01

November 14, 1996

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
SUPPLEMENTAL RESPONSE TO NRC BULLETIN NO. 96-01:
CONTROL ROD INSERTION PROBLEMS

REF: TU Electric letter logged TXX-96096 from
C. L. Terry to the NRC dated April 8, 1996.

Gentlemen:

TU Electric responded to NRC Bulletin 96-01 via Reference 1. Requested Action (3) from the bulletin required that TU Electric measure and evaluate at each outage of sufficient duration during calendar year 1996 (end of cycle, maintenance, etc.) the control rod drop times and rod recoil data for all control rods, and if appropriate plant conditions exist where the vessel head is removed, measure and evaluate drag forces for all rodded fuel assemblies.

Requested Action (4) from the bulletin required that for each reactor trip during calendar year 1996, TU Electric verify that all control rods promptly fully inserted (bottomed) and obtain other available information to assess the operability and any performance trend of the rods.

TU Electric obtained rod drop times, rod recoil data, and drag force data at the end of cycle for Unit 1, Cycle 5 during the fifth refueling outage for Unit 1. The results have been included in Attachment 1. During the rod drop time testing, each Rod Control Cluster Assembly (RCCA) exhibited a minimum of two recoils and no significant outliers were noted in the drag force data.

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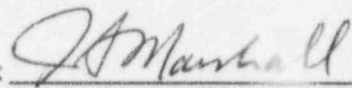
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TXX-96510
Page 2 of 2

If you have any questions regarding the attached information, please contact Mr. J. D. Seawright at (817) 897-0140.

Sincerely,

C. L. Terry

By: 
J. S. Marshall
Generic Licensing Manager

JDS/grp
Attachment

c - Mr. L. J. Callan, Region IV
Mr. T. J. Polich, NRR
Mr. J. I. Tapia, Region IV
Resident Inspector, CPSES

Comanche Peak - Unit 1, Cycle 05

Rod Bank	Core Loc	Assm ID	Fuel Type	Startup BOC		11-Apr-96		10/5/1996 (EOC)	
				Burnup (MWD/MTU)	Time (sec)	Burnup (MWD/MTU)	Time (sec)	Burnup (MWD/MTU)	Time (sec)
CBA	H-06	F63	Siemens "PCA" Zirc-4	22780	1.45	37356	1.49	44970	1.51
CBA	H-10	F81	Siemens "PCA" Zirc-4	23180	1.46	37699	1.49	45307	1.51
CBA	F-08	F53	Siemens "PCA" Zirc-4	23030	1.43	37645	1.48	45236	1.45
CBA	K-08	F11	Siemens "PCA" Zirc-4	22803	1.48	37357	1.46	44921	1.49
CBB	F-02	F75	Siemens "PCA" Zirc-4	16316	1.49	30013	1.51	36900	1.52
CBB	B-10	F65	Siemens "PCA" Zirc-4	16620	1.45	30300	1.47	37118	1.49
CBB	K-14	F04	Siemens "PCA" Zirc-4	16830	1.46	30554	1.47	37481	1.48
CBB	P-06	F40	Siemens "PCA" Zirc-4	16435	1.44	30184	1.45	37090	1.44
CBB	B-06	F39	Siemens "PCA" Zirc-4	16169	1.43	29974	1.48	36949	1.43
CBB	F-14	F58	Siemens "PCA" Zirc-4	16387	1.45	30332	1.46	37332	1.46
CBB	P-10	F61	Siemens "PCA" Zirc-4	16970	1.46	30571	1.45	37416	1.46
CBB	K-02	F37	Siemens "PCA" Zirc-4	16656	1.46	30563	1.47	37585	1.47
CBC	H-02	F20	Siemens "PCA" Zirc-4	20665	1.46	34055	1.47	40814	1.47
CBC	B-08	F34	Siemens "PCA" Zirc-4	21081	1.44	34378	1.46	41154	1.46
CBC	H-14	F01	Siemens "PCA" Zirc-4	20916	1.47	34084	1.47	40811	1.47
CBC	P-08	F48	Siemens "PCA" Zirc-4	20810	1.45	33949	1.45	40632	1.45
CBC	F-06	F13	Siemens "PCA" Zirc-4	20842	1.41	35651	1.47	43523	1.48
CBC	F-10	F73	Siemens "PCA" Zirc-4	21092	1.43	35954	1.47	43844	1.48
CBC	K-10	F24	Siemens "PCA" Zirc-4	20963	1.46	35834	1.50	43769	1.46
CBC	K-06	F16	Siemens "PCA" Zirc-4	20758	1.45	35595	1.46	43487	1.48
CBD	D-04	F27	Siemens "PCA" Zirc-4	19016	1.46	33606	1.45	41117	1.46
CBD	M-12	F55	Siemens "PCA" Zirc-4	19269	1.46	33966	1.45	41499	1.48
CBD	D-12	F02	Siemens "PCA" Zirc-4	19225	1.45	33950	1.45	41534	1.46
CBD	M-04	F82	Siemens "PCA" Zirc-4	19273	1.49	33815	1.52	41302	1.47
CBD	H-08	C53	Westinghouse "Standard" Zirc-4	16107	1.46	29521	1.50	36453	1.50
SBA	D-02	F46	Siemens "PCA" Zirc-4	23425	1.46	31448	1.47	35864	1.49
SBA	B-12	F30	Siemens "PCA" Zirc-4	23198	1.47	31160	1.47	35489	1.46
SBA	M-14	F60	Siemens "PCA" Zirc-4	23144	1.46	31201	1.47	35588	1.45
SBA	P-04	F50	Siemens "PCA" Zirc-4	23108	1.47	31251	1.46	35719	1.45
SBA	B-04	F87	Siemens "PCA" Zirc-4	23431	1.44	31509	1.47	35910	1.46
SBA	D-14	F68	Siemens "PCA" Zirc-4	23359	1.47	31444	1.48	35884	1.48
SBA	P-12	F08	Siemens "PCA" Zirc-4	23691	1.48	31733	1.48	36111	1.48
SBA	M-02	F71	Siemens "PCA" Zirc-4	23450	1.46	31450	1.46	35770	1.47
SBB	G-03	F36	Siemens "PCA" Zirc-4	20281	1.45	34688	1.47	42215	1.47
SBB	C-09	F41	Siemens "PCA" Zirc-4	20012	1.43	34462	1.48	41988	1.48
SBB	J-13	F86	Siemens "PCA" Zirc-4	20203	1.44	34568	1.46	42108	1.46
SBB	N-07	F18	Siemens "PCA" Zirc-4	19974	1.45	34308	1.47	41813	1.46
SBB	C-07	F28	Siemens "PCA" Zirc-4	19959	1.47	34388	1.47	41909	1.47
SBB	G-13	F66	Siemens "PCA" Zirc-4	20099	1.48	34485	1.48	42008	1.49
SBB	N-09	F33	Siemens "PCA" Zirc-4	20211	1.45	34458	1.45	41896	1.46
SBB	J-03	F67	Siemens "PCA" Zirc-4	20145	1.43	34589	1.45	42124	1.47
SBC	E-03	F14	Siemens "PCA" Zirc-4	13121	1.46	28298	1.45	36082	1.48
SBC	C-11	F69	Siemens "PCA" Zirc-4	12775	1.45	28248	1.44	36126	1.47
SBC	L-13	F74	Siemens "PCA" Zirc-4	13069	1.45	28541	1.45	36438	1.46
SBC	N-05	F54	Siemens "PCA" Zirc-4	13106	1.45	28329	1.46	36116	1.46
SBD	C-05	F72	Siemens "PCA" Zirc-4	13223	1.43	28657	1.45	36543	1.48
SBD	E-13	F57	Siemens "PCA" Zirc-4	13402	1.46	28779	1.47	36621	1.46
SBD	N-11	F15	Siemens "PCA" Zirc-4	12979	1.44	28403	1.45	36165	1.45
SBD	L-03	F79	Siemens "PCA" Zirc-4	13073	1.44	28392	1.46	36231	1.47
SBE	H-04	F10	Siemens "PCA" Zirc-4	22759	1.45	37159	1.48	44703	1.48
SBE	D-08	F23	Siemens "PCA" Zirc-4	22916	1.45	37377	1.45	44936	1.45
SBE	H-12	F42	Siemens "PCA" Zirc-4	23042	1.47	37316	1.48	44822	1.48
SBE	M-08	F12	Siemens "PCA" Zirc-4	22931	1.47	37242	1.44	44742	1.45

Average Rod Drop Time: 1.45

Standard Deviation: 0.016

1.47

0.017

1.47

0.018

Comanche Peak - Unit 1, Cycle 05
 1RF05 Control Rod Drive Shaft UNLATCH
 10/5/1996 (EOC)

RCCA Latch
 Drag Force (lbs)

<u>Rod Bank</u>	<u>Core Location</u>	<u>Assembly ID</u>	<u>Fuel Type</u>	<u>Dashpot Region</u>	<u>Out of Dashpot Region</u>
CBA	H-06	F63	Siemens "PCA" Zirc-4	33	35
CBA	H-10	F81	Siemens "PCA" Zirc-4	25	25
CBA	F-08	F53	Siemens "PCA" Zirc-4	0	5
CBA	K-08	F11	Siemens "PCA" Zirc-4	10	15
CBB	F-02	F75	Siemens "PCA" Zirc-4	15	20
CBB	B-10	F65	Siemens "PCA" Zirc-4	5	10
CBB	K-14	F04	Siemens "PCA" Zirc-4	30	20
CBB	P-06	F40	Siemens "PCA" Zirc-4	10	5
CBB	B-06	F39	Siemens "PCA" Zirc-4	12	18
CBB	F-14	F58	Siemens "PCA" Zirc-4	10	10
CBB	P-10	F61	Siemens "PCA" Zirc-4	5	10
CBB	K-02	F37	Siemens "PCA" Zirc-4	10	10
CBC	H-02	F20	Siemens "PCA" Zirc-4	10	10
CBC	B-08	F34	Siemens "PCA" Zirc-4	10	15
CBC	H-14	F01	Siemens "PCA" Zirc-4	5	10
CBC	P-08	F48	Siemens "PCA" Zirc-4	5	5
CBC	F-06	F13	Siemens "PCA" Zirc-4	25	30
CBC	F-10	F73	Siemens "PCA" Zirc-4	10	15
CBC	K-10	F24	Siemens "PCA" Zirc-4	20	20
CBC	K-06	F16	Siemens "PCA" Zirc-4	30	35
CBD	D-04	F27	Siemens "PCA" Zirc-4	15	20
CBD	M-12	F55	Siemens "PCA" Zirc-4	30	20
CBD	D-12	F02	Siemens "PCA" Zirc-4	20	25
CBD	M-04	F82	Siemens "PCA" Zirc-4	25	15
CBD	H-08	C53	Westinghouse "Standard" Zirc-4	35	25
SBA	D-02	F46	Siemens "PCA" Zirc-4	5	10
SBA	B-12	F30	Siemens "PCA" Zirc-4	5	11
SBA	M-14	F60	Siemens "PCA" Zirc-4	5	5
SBA	P-04	F50	Siemens "PCA" Zirc-4	10	5
SBA	B-04	F87	Siemens "PCA" Zirc-4	9	14
SBA	D-14	F68	Siemens "PCA" Zirc-4	10	15
SBA	P-12	F08	Siemens "PCA" Zirc-4	10	10
SBA	M-02	F71	Siemens "PCA" Zirc-4	10	10
SBB	G-03	F36	Siemens "PCA" Zirc-4	20	20
SBB	C-09	F41	Siemens "PCA" Zirc-4	5	10
SBB	J-13	F86	Siemens "PCA" Zirc-4	15	15
SBB	N-07	F18	Siemens "PCA" Zirc-4	20	15
SBB	C-07	F28	Siemens "PCA" Zirc-4	7	12
SBB	G-13	F66	Siemens "PCA" Zirc-4	10	15
SBB	N-09	F33	Siemens "PCA" Zirc-4	10	10
SBB	J-03	F67	Siemens "PCA" Zirc-4	15	15
SBC	E-03	F14	Siemens "PCA" Zirc-4	15	20
SBC	C-11	F69	Siemens "PCA" Zirc-4	8	13
SBC	L-13	F74	Siemens "PCA" Zirc-4	15	20
SBC	N-05	F54	Siemens "PCA" Zirc-4	25	20
SBD	C-05	F72	Siemens "PCA" Zirc-4	15	17
SBD	E-13	F57	Siemens "PCA" Zirc-4	15	20
SBD	N-11	F15	Siemens "PCA" Zirc-4	25	20
SBD	L-03	F79	Siemens "PCA" Zirc-4	20	15
SBE	H-04	F10	Siemens "PCA" Zirc-4	25	25
SBE	D-08	F23	Siemens "PCA" Zirc-4	10	15
SBE	H-12	F42	Siemens "PCA" Zirc-4	15	20
SBE	M-08	F12	Siemens "PCA" Zirc-4	20	20