

添付資料 - 5

Operational Statistics during Trial Operation

Trouble Record during Trial Operation (from January 1985 to May 1985)

Date 1985	Blend Ratio	Max MW	Operation			Imp. Coal MT	Dom. Coal MT	HO KI	LO KI	Total moisture %	Coal Analysis (A.R.)						S Btu/lb				
			MWH	HR Hr	Ave MW						Feeder Trips	Mill Trips	SM %	IM(AD) %	VM %	FC %		ASH %			
1-20	ROM 100%	164 - 207	12,205	69.9	174.5	144	10	0	108.5	408.4											
1-23																					
1-24	ROM/AC	191 - 315	37,669	130.7	288.2	240	20	5,196	107.9	387.7	20.95	15.85	8.67	12.28	28.13	35.07	8,297	0.45			
1-30	2 : 1																				
2-6	ROM/AC	293-302	13,851.3	46.2	300	127	13	3,030.5	45.5	213.5											
2-9	1 : 1																				
2-14	ROM/SSC/AC	292-320	22,220	73.4	302.6	67	9	2,226	40.6	522.6	21.48	11.53	7.63	13.85	32.15	34.84	8,671	0.51			
2-18	0.2 : 3 : 1							386.2 SSC 6,757.4													
2-22	2/22, 23, 27-3/2 SSC/AC	157-336	53,200	188.4	282.3	9	22	1,465.6	133.9	911.9	24.05	9.56	7.23	16.62	34.52	32.14	8,274	0.57			
3-6	2/24-26, 3/2-6 SSC 100%																				
3-11	SSC 100%	179-303	33,175	132.0	255.4	11	13	16,579.3	54	479.3	25.75	10.18	9.62	15.13	33.64	30.43	8,023	0.59			
3-18																					
3-19	SSC/AC	203-301	16,663	68.8	242.3	7	10	2,764.8	8.0	42.2											
3-22	1.9 : 1																				
3-26	ROM/AC	268-305	52,796	188.9	279.5	117	14	7,292.1	42.5	94.9	13.56	15.18	6.12	7.44	23.76	47.50	10,681	0.35			
4-3	1 : 1.7																				
4-30	SSC/CC	185-299	82,928	333.1	249	3	6	23,553.9	99.4	178.9	17.78	13.0	8.98	8.8	27.89	41.33	9,623	0.54			
5-14	1.8 : 1																				
5-15	SSC/CC	256-292	41,613	168	248	0	0	10,789	9	0											
5-22	1.5 : 1																				
5-23	SSC/CC	258-262	41,002	165.2	248.2	0	1	11,599	9.6	0											
5-30	1.9 : 1																				

Date 1985	Ash Analysis										Ash Fusion Temp.			Slagging Potential	Remarks
											IDT °C	Oxidizing H °C	Flow °C		
	SiO ₂ %	Al ₂ O ₃ %	Fe ₂ O ₃ %	TiO ₂ %	CeO %	MgO %	Nb ₂ O %	K ₂ O %							
															1/18-1/20 unit tripped due to clogging of silos C & D
1-20															Plentiful large and fused masses of fly ash with clay accumulated at the four Econ hoppers bottom
1-23															
1-24															Plentiful large and fused masses of fly ash with clay accumulated at the four Econ hoppers bottom
1-30	49.20	25.04	5.16	1.42	6.06	2.91	1.35	1.60	1.243	1.360	1,437				
2-6															2/1-2/5 S/D to make repairs of leaking sampling valve at boiler drum
2-8															Plentiful large and fused masses of fly ash with clay accumulated at the four Econ hoppers bottom
															2/8-2/11 scheduled S/D for maintenance and unclogging of 4 Economizer hoppers 2/11-2/13 S/D caused by the vibration and repair of the RH pipe
2-14															Since the SSC was fired in the boiler starting Feb. 14, the major problem shifted from coal clogging to high temperature severe fouling in the convection pass. There is marked reduction of feeder and mill trips caused by clogging of silo with the firing of the SSC.
2-18	41.70	21.60	4.85	1.80	8.84	5.79	4.16	1.33	1,198	1,287	1,379				2/18-2/21 S/D caused by low furnace pressure resulting from severe fouling.
2-22															The AC run out of stock
3-6	39.88	20.29	4.47	1.61	8.60	7.18	5.49	1.63	1,178	1,275	1,373				
															3/6-3/11 S/D due to heavy accumulation of fouling deposits at the HRA and primary SR upper bank
3-11															Severe slagging and fouling are confirmed as due to the high Na ₂ O of the ash slagging and fouling are reduced to manageable levels if the load is lowered to 75%.
3-18	43.88	23.54	5.38	1.23	6.68	5.48	5.43	1.81	1,190	1,210	1,380				Slagging and fouling tendencies to develop MCR load are still classified as high.
3-19															
3-22															3/22-3/25 S/D in order to remove the fouling deposits at the HRA
3-26															Feeder and Mill trips occurred frequently, no coal on belt, clogging of the silo, crusher screen and chute, because SS is used again.
4-3	48.38	25.28	5.52	1.83	7.55	2.33	0.82	1.09	1,264	1,351	1,425				No problem of slagging and fouling.
															4/3-4/8 economic S/D. ROM continued to be fired in the boiler up to April 22. About 56,000 MT of Canadian Steaming Coal was unloaded on April 22 - 27.
4-30															The average maximum load has been maintained at about 2,600 MW in order to minimize slagging and fouling. Feeder and mill trips have been reduced to almost nil.
5-14	44.85	24.32	5.61	1.67	7.77	3.99	3.42	1.28	1,230	1,262	1,392				
5-15															The same as the above.
5-22															
5-23															The same as the above.
5-30															

添付資料 - 6

Combustion Test Data

Combustion Test Data (2)

Date	Coal blend ratio (S/A)	B.E.T.	300 MM			225 MM			200 MM						
			60/40		70/30	55/45		60/40	70/30	55/45		60/40	70/30		
			7/25	8/6	8/11	8/8	7/22	7/25	7/26	8/15	7/22	7/25	7/26	8/8	
Time	T/H		7/21	7/25	8/11	8/8	7/22	7/26	8/15	7/22	7/26	8/8	7/25	7/26	8/8
A Mill coal feeder flow	°C	11,1984	21:00	16:30	11:30	18:30	01:30	09:00	11:30	04:00	10:45	11:00	08:30	08:30	09:00
A Mill inlet air temp.	°C	36.7	51.15	43.72	47.98	49.84	37.18	42.26	33.82	44.00	43.70	34.37	33.01	33.01	32.46
A Mill air coal outlet temp.	°C	196.2	274	212	278	307	202	271	271	222	302	248	262	262	227
A Mill diff. draft	mmAq	527.8	69	68	75	77	69	69	69	69	71	75	71	71	75
A Mill primary air flow	%	86.0	540	535	570	600	510	540	480	430	530	420	450	450	400
A Mill hot air damper open	%		103.9	98.3	102.2	103.2	91.5	94.6	93.9	84.4	101.6	83.4	93.6	86.8	
A Mill cold air damper open	%		24	20	26	44	21	26	21	24	40	28	24	35	25
A Mill capacity damper open	%		84	54	67	69	57	34	46	43	47	36	35	36	
A Mill motor amp.	A	86	90	85	85	62	80	70	70	79	70	50	75	50	
B Mill coal feeder flow	T/H	36.0	49.93	47.30	49.77	49.77	38.34	42.30	43.63	34.13	43.22	38.33	33.23	35.96	
B Mill inlet air temp.	°C	174.6	260	251	286	283	219	273	284	225	282	264	208	246	
B Mill air coal outlet temp.	°C	78.9	69	70	75	76	71	67	69	70	67	75	70	75	
B Mill differential draft	mmAq	500.0	395	590	630	600	550	600	600	500	600	560	480	520	
B Mill primary air flow	T/H	86.7	102.4	102	104.9	106	96.4	102.7	98.6	90.0	105.0	101	97.5	98.7	
B Mill hot air damper open	%		32	27	38	39	29	26	2	27	97	37	27	33	
B Mill cold air damper open	%	40	24	12	10	14	14	2	2	15	2	10	15	12	
B Mill capacity damper open	%		87	70	76	77	61	53	58	53	47	60	50	55	
B Mill motor amp.	A	90	90	85	85	82	85	80	75	80	75	80	80	60	
C Mill coal feeder flow	T/H	37.1	51.02	46.96	45.71	49.82	36.05	42.34	45.58	32.16	43.46	39.59	34.21	32.22	
C Mill inlet air temp.	°C	174.2	42	264	268	290	32	272	270	32	269	266	225	257	
C Mill air coal outlet temp.	°C	80.0	70	70	75	75	69	65	67	70	65	71	70	74	
C Mill differential draft	mmAq	507.4	600	570	580	620	465	580	600	430	580	420	500	440	
C Mill primary air flow	T/H	82.5	102.2	106.1	98.6	114.3	90.7	96.8	111.7	92.1	101.4	97.6	97.6	93.2	
C Mill hot air damper open	%		43	32	40	100	43	97	97	43	97	100	35	100	
C Mill cold air damper open	%	62	29	20	15	29	2	2	2	5	2	2	30	17	
C Mill capacity damper open	%		63	100	48	62	33	47	45	30	47	33	50	55	
C Mill motor amp.	A	92	83	85	85	84	84	65	75	78	70	60	75	60	
D Mill inlet air temp.	°C														
D Mill air coal outlet temp.	°C														
D Mill differential draft	mmAq														
D Mill primary air flow	T/H														
D Mill hot air damper open	%														
D Mill cold air damper open	%														
D Mill capacity damper open	%														
D Mill motor amp.	A														
A Mill hot air damper open	%		24	20	26	44	21	26	26	21	42	28	24	35	25
A Mill cold air damper open	%		80	12	17	79	79	12	12	8	12	18	79	15	21
A Mill capacity damper open	%		84	43	67	69	57	46	46	43	47	36	35	36	
A Mill Classifier vane open	%		32	27	38	39	29	26	26	27	97	37	27	25	33
B Mill hot air damper open	%		24	12	10	14	14	2	2	2	2	10	15	17	12
B Mill cold air damper open	%		87	70	76	77	61	53	58	53	47	60	50	55	
B Mill capacity damper open	%		84	43	67	69	57	46	46	43	47	36	35	36	
B Mill Classifier vane open	%		32	27	38	39	29	26	26	27	97	37	27	25	33
C Mill hot air damper open	%		24	20	26	44	21	26	26	21	42	28	24	35	25
C Mill cold air damper open	%		80	12	17	79	79	12	12	8	12	18	79	15	21
C Mill capacity damper open	%		84	43	67	69	57	46	46	43	47	36	35	36	
C Mill Classifier vane open	%		32	27	38	39	29	26	26	27	97	37	27	25	33
D Mill hot air damper open	%		24	20	26	44	21	26	26	21	42	28	24	35	25
D Mill cold air damper open	%		80	12	17	79	79	12	12	8	12	18	79	15	21
D Mill capacity damper open	%		84	43	67	69	57	46	46	43	47	36	35	36	
D Mill Classifier vane open	%		32	27	38	39	29	26	26	27	97	37	27	25	33

Combustion Test Data (3)

Coal blend ratio (S/A)	300 MW				225 MW				200 MW							
	60/40		70/30		55/45		60/40		70/30		55/45		60/40		70/30	
	7/25 16:30	8/6 16:30	8/11 11:30	8/8 18:30	7/22 01:30	7/25 10:30	7/26 09:00	7/26 10:45	7/26 14:30	8/15 11:30	7/22 04:00	7/25 08:30	7/26 11:68	8/8 09:00		
Date	7/21 21:00	7/25 16:30	8/11 11:30	8/8 18:30	7/22 01:30	7/25 10:30	7/26 09:00	7/26 10:45	7/26 14:30	8/15 11:30	7/22 04:00	7/25 08:30	7/26 11:68	8/8 09:00		
JICA Analysis																
Proximate Analysis of Calorific Value																
Moisture	6.92	7.70	8.79	9.37	6.92	7.70	11.68	11.68	11.68	11.68	6.92	7.70	6.92	9.37		
Ash Dry Basis	16.9	15.1	14.7	14.2	16.9	15.1	15.1	15.1	15.1	15.1	16.9	15.1	16.9	14.2		
Volatile Matter Dry Basis	37.1	37.7	39.3	39.3	37.1	37.7	42.8	42.8	42.8	42.8	37.1	37.7	37.1	39.3		
Fixed Carbon Dry Basis	46.0	47.2	46.0	46.5	46.0	47.2	42.1	42.1	42.1	42.1	46.0	47.2	46.0	46.5		
Calorific Value Air Dried Basis	5810	5840	5840	5850	5810	5840	5150	5150	5150	5150	5810	5840	5810	5850		
Ultimate Analysis																
Carbon Dry Basis	63.81	65.52	63.84	64.13	63.81	65.52	60.43	60.43	60.43	60.43	63.81	65.52	63.81	64.13		
Hydrogen Dry Basis	4.26	4.33	4.37	4.38	4.26	4.33	4.26	4.26	4.26	4.26	4.26	4.33	4.26	4.38		
Nitrogen Dry Basis	1.37	1.29	1.24	1.24	1.37	1.29	1.02	1.02	1.02	1.02	1.37	1.29	1.37	1.24		
Sulphur Dry Basis	0.73	0.67	0.74	0.85	0.73	0.67	0.96	0.96	0.96	0.96	0.73	0.67	0.73	0.85		
Analysis of Ash Dry Basis, Ash Free																
SiO ₂	67.2	64.8	61.1	59.0	67.2	64.8	48.7	48.7	48.7	48.7	67.2	64.8	67.2	59.0		
Fe ₂ O ₃	4.02	3.48	3.95	4.26	4.02	3.48	4.92	4.92	4.92	4.92	4.02	3.48	4.02	4.26		
Al ₂ O ₃	15.97	17.11	18.43	18.88	15.97	17.11	24.37	24.37	24.37	24.37	15.97	17.11	15.97	18.88		
CeO	2.04	2.60	3.16	3.47	2.04	2.60	4.46	4.46	4.46	4.46	2.04	2.60	2.04	3.47		
MgO	1.90	2.45	3.06	3.33	1.90	2.45	4.46	4.46	4.46	4.46	1.90	2.45	1.90	3.33		
TiO ₂	0.80	0.86	0.89	0.92	0.80	0.86	1.00	1.00	1.00	1.00	0.80	0.86	0.80	0.92		
Na ₂ O	0.96	1.08	1.35	1.48	0.96	1.08	1.63	1.63	1.63	1.63	0.96	1.08	0.96	1.48		
K ₂ O	0.82	0.84	0.86	1.10	0.82	0.84	1.34	1.34	1.34	1.34	0.82	0.84	0.82	1.10		
SO ₂	2.61	3.02	3.27	3.36	2.61	3.02	4.39	4.39	4.39	4.39	2.61	3.02	2.61	3.36		
Ash Fusion Temperature	1200	1200	1180	1190	1200	1200	1230	1230	1230	1230	1200	1200	1200	1190		
Initial Deformation	1390	1340	1310	1380	1390	1340	1390	1390	1390	1390	1390	1340	1390	1280		
Hemispherical Fluid	1430	1390	1350	1320	1430	1390	1330	1330	1330	1330	1430	1390	1430	1320		
NPC Analysis																
Fineness of Pulverized Coal																
A Mill 200 sieve passing	79.38	81.79	82.99	78.72	84.36	83.72	77.54	77.54	77.54	77.54	84.36	83.72	80.58	82.39		
100 sieve passing	94.69	95.72	96.41	94.44	97.14	96.45	95.17	95.17	95.17	95.17	97.14	96.45	95.49	96.75		
50 sieve passing	98.73	99.39	99.36	98.75	99.44	99.72	98.65	98.65	98.65	98.65	99.44	99.50	98.74	98.62		
B Mill 200 sieve passing	81.01	81.07	80.53	79.05	84.36	83.72	77.54	77.54	77.54	77.54	84.36	83.72	80.58	82.39		
100 sieve passing	95.76	95.95	95.38	94.68	97.14	96.45	95.17	95.17	95.17	95.17	97.14	96.45	95.49	96.75		
50 sieve passing	98.00	99.28	99.25	98.99	99.44	99.72	98.65	98.65	98.65	98.65	99.44	99.50	98.74	98.62		
C Mill 200 sieve passing	78.44	76.80	76.74	72.98	84.36	83.72	77.54	77.54	77.54	77.54	84.36	83.72	80.58	82.39		
100 sieve passing	93.86	94.13	94.13	91.65	97.14	96.45	95.17	95.17	95.17	95.17	97.14	96.45	95.49	96.75		
50 sieve passing	98.80	98.94	98.77	97.95	99.44	99.72	98.65	98.65	98.65	98.65	99.44	99.50	98.74	98.62		
Unburned Carbon (Dry Basis)																
Economizer Ash Hoppers																
1	3.02	2.92	2.75	3.72	2.08	3.86	2.11	2.11	2.11	2.11	2.60	4.46	4.09	2.72		
2	5.04	5.04	5.04	5.04	4.18	5.22	2.52	2.52	2.52	2.52	4.09	4.34	5.58	4.09		
3	5.73	2.96	3.30	4.44	4.18	5.22	2.52	2.52	2.52	2.52	4.09	4.34	5.58	4.09		
4	3.94	2.96	3.30	4.44	4.18	5.22	2.52	2.52	2.52	2.52	4.09	4.34	5.58	4.09		
EP Hoppers																
1A	3.02	2.92	2.75	3.72	2.08	3.86	2.11	2.11	2.11	2.11	2.60	4.46	4.09	2.72		
2A	5.04	5.04	5.04	5.04	4.18	5.22	2.52	2.52	2.52	2.52	4.09	4.34	5.58	4.09		
1B	5.73	2.96	3.30	4.44	4.18	5.22	2.52	2.52	2.52	2.52	4.09	4.34	5.58	4.09		
2B	3.94	2.96	3.30	4.44	4.18	5.22	2.52	2.52	2.52	2.52	4.09	4.34	5.58	4.09		

Combustion Test Data (4)

Date Time	Coal blend ratio (S/A)	300 MW				225 MW				200 MW			
		55/45		70/30		55/45		70/30		55/45		70/30	
		7/21 21:00	7/25 16:30	8/6 16:30	8/11 11:30	8/8 18:30	7/22 01:30	7/25 10:30	8/8 11:00	7/26 09:00	7/22 04:00	7/25 08:30	8/8 09:00
A Mill	Diff. Press mmAq °C	600	560	540	570	600	520	420	530	470	420	410	
A Mill	Pri. Air Temp. mmAq °C	260	285	215	280	305	210	245	275	200	260	225	
B Mill	Diff. Press mmAq °C	600	640	590	630	620	530	550	600	510	480	530	
B Mill	Pri. Air Temp. mmAq °C	250	280	250	285	285	220	265	275	250	205	245	
C Mill	Diff. Press mmAq °C	600	610	550	570	620	460	520	560	430	490	430	
C Mill	Pri. Air Temp. mmAq °C	230	260	255	275	295	200	276	265	200	250	260	
D Mill	Diff. Press mmAq °C	105	110	98	104	106	94	91	104	90	92	88	
D Mill	Pri. Air Temp. T/H	105	110	100	100	104	94	89	100	90	92	88	
A Mill	PA Damper (Set) T/H	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.1	
A Mill	PA Damper (Bias) T/H	80	45	55	73	71	50	34	45	45	30	34	
A Mill	PA Damper (Output) T/H	48	48	41	48	50	37	34	42	33	32	32	
A Mill	Fdr Demand T/H	0	0	0	0	-13	0	0	0	0	0	0	
A Mill	Fdr Demand (Bias) %	85	80	73	81	85	60	57	75	55	55	54	
A Mill	Fdr Demand (Output) °C	74	74	74	79	80	74	79	75	74	75	79	
A Mill	Coal/Air Temp. (Set) °C	74	74	74	79	80	74	79	74	74	75	79	
A Mill	Coal/Air Temp. (Output) %	50	60	45	54	68	50	52	62	45	55	52	
B Mill	PA Damper (Set) T/H	104	115	102	106	112	94	101	114	90	100	99	
B Mill	PA Damper (Bias) T/H	103	115	110	104	112	92	100	113	102	96	99	
B Mill	PA Damper (Output) %	1.1	1.3	1.25	1.1	1.25	1.1	1.25	1.25	1.1	1.3	1.25	
B Mill	Fdr Demand (Output) T/H	95	75	100	81	80	75	61	55	60	55	57	
B Mill	Fdr Demand (Bias) %	48	50	47	49.5	50	37	38	44	43	34	36	
B Mill	Fdr Demand (Output) °C	0	0	0	0	-3	0	0	0	0	0	0	
B Mill	Fdr Demand (Output) °C	85	90	83	88	89	65	68	70	60	55	63	
B Mill	Coal/Air Temp. (Set) %	72	72	73	79	79	72	79	67	72	72	79	
B Mill	Coal/Air Temp. (Output) %	72	72	74	79	79	72	79	74	72	72	79	
C Mill	PA Damper (Set) T/H	104	110	115	104	117	90	101	100	88	95	98	
C Mill	PA Damper (Bias) T/H	104	110	110	100	114	90	101	100	88	95	95	
C Mill	PA Damper (Output) %	1.1	1.3	1.25	1.1	1.3	1.1	1.25	1.3	1.1	1.3	1.25	
C Mill	Fdr Demand (Output) T/H	60	100	52	48	62	30	32	50	30	50	24	
C Mill	Fdr Demand (Bias) %	47	50	47	45	50	35	39	42	30	32	32	
C Mill	Fdr Demand (Output) °C	0	0	0	0	0	0	0	0	0	0	0	
C Mill	Fdr Demand (Output) °C	85	90	83	82	88	70	72	80	60	60	61	
C Mill	Coal/Air Temp. (Set) °C	74	74	74	79	80	74	75	69	74	74	79	
C Mill	Coal/Air Temp. (Output) °C	74	74	74	79	80	74	80	74	74	72	80	
C Mill	Coal/Air Temp. (Output) %	50	65	60	64	100	50	100	100	50	60	100	
D Mill	PA Damper (Set) T/H	104	110	115	104	117	90	101	100	88	95	98	
D Mill	PA Damper (Bias) T/H	104	110	110	100	114	90	101	100	88	95	95	
D Mill	PA Damper (Output) %	1.1	1.3	1.25	1.1	1.3	1.1	1.25	1.3	1.1	1.3	1.25	
D Mill	Fdr Demand (Output) T/H	60	100	52	48	62	30	32	50	30	50	24	
D Mill	Fdr Demand (Bias) %	47	50	47	45	50	35	39	42	30	32	32	
D Mill	Fdr Demand (Output) °C	0	0	0	0	0	0	0	0	0	0	0	
D Mill	Fdr Demand (Output) °C	85	90	83	82	88	70	72	80	60	60	61	
D Mill	Coal/Air Temp. (Set) °C	74	74	74	79	80	74	75	69	74	74	79	
D Mill	Coal/Air Temp. (Output) °C	74	74	74	79	80	74	80	74	74	72	80	
D Mill	Coal/Air Temp. (Output) %	50	65	60	64	100	50	100	100	50	60	100	

Combustion Test Data (5)

Date Time	Coal blend ratio (S/A)	300 WH			225 PM			200 PM						
		60/40		70/30	55/45		60/40	70/30	100/0		55/45	60/40	70/30	
		WB Adjust	O ₂ Adjust	8/11 11:30 1,140 1,140	8/8 18:30 1,200 1,200	7/22 01:30 880 880	7/25 10:30 890	8/8 11:00 890	7/26 09:00 960 1,000	7/26 14:30 1,020 1,020	8/15 04:00 800 800	7/22 08:00 800 800	7/25 08:30 750 750	8/8 09:00 790 790
A-PDF	Inlet (Set)	7/21 21:00 1,170 1,170	8/6 16:30 1,100 1,100	8/11 11:30 1,140 1,140	8/8 18:30 1,200 1,200	7/22 01:30 880 880	7/25 10:30 890	8/8 11:00 890	7/26 09:00 960 1,000	7/26 14:30 1,020 1,020	8/15 04:00 800 800	7/22 08:00 800 800	7/25 08:30 750 750	8/8 09:00 790 790
A-IDF	Inlet (Output)	60	70	71	65	40	40	52	40	45	35	35	47	47
	Inlet (Bias)	-40	-20	-15	-15	-40	-15	-15	-20	-30	-20	-20	-20	-15
B-PDF	Inlet (Set)	70	72	74	70	60	60	59	60	60	55	55	55	56
	Inlet (Output)	50	45	47	47	45	45	47	45	45	50	50	50	47
B-IDF	Inlet (Bias)	50	65	67	64	45	45	50	50	45	40	40	30	42
	Inlet (Output)	75	80	77	76	65	65	70	70	65	65	65	65	62
Pri. Air	Inlet Damp (Set)	160	165	160	154	155	155	155	150	148	150	150	150	153
	Inlet Damp (Bias)	160	165	160	160	155	155	155	150	148	150	150	150	153
Pri. Air	Inlet Damp (A output)	-5	-6	-3	-1	-5	-5	-2	-5	-6	-5	-5	-5	0
	Inlet Damp (B output)	85	100	96	97	80	80	78	100	100	70	70	70	79
Pri. Air	Inlet Damp (Set)	90	93	93	92	80	80	80	100	95	70	70	80	76
	Inlet Damp (Bias)	840	820	880	850	640	640	640	640	650	600	600	620	600
Feed Water	Flow (Output)	90	85	89	87	70	70	66	70	75	60	60	65	65
LF Fur	Steam Temp. (Set)	400	415	410	410	390	390	395	390	390	380	380	390	400
	Steam Temp. (Output)	400	375	405	380	410	410	410	410	410	420	410	410	380
LF Finish	Inlet Temp. (Set)	75	100	98	100	100	100	97	75	95	50	50	100	50
	Inlet Temp. (Output)	420	440	440	435	420	420	425	420	440	420	420	420	425
RT Fur	Inlet Temp. (Set)	400	410	415	420	420	420	425	420	440	420	420	430	400
	Inlet Temp. (Output)	91	100	73	100	80	80	85	75	70	70	70	100	100
RT Finish	Steam Temp. (Set)	400	420	415	435	390	390	395	400	400	390	390	380	395
	Steam Temp. (Output)	420	385	390	420	400	400	410	400	410	410	410	410	410
RT Inlet	Steam Temp. (Set)	55	100	98	100	100	100	95	75	100	50	50	100	69
	Steam Temp. (Output)	540	540	540	540	540	540	540	540	540	540	540	540	550
RT Outlet	Steam Temp. (Set)	540	540	540	540	540	540	540	540	540	540	540	540	540
	Steam Temp. (Output)	430	440	435	440	420	420	420	420	430	410	410	420	425
RT Inlet	Steam Temp. (Set)	85	100	72	100	50	50	64	45	55	25	25	100	100
	Steam Temp. (Output)	540	540	540	540	540	540	540	540	540	540	540	540	540
RT Outlet	Steam Temp. (Set)	540	550	540	540	540	540	540	540	540	540	540	540	540
	Steam Temp. (Output)	540	540	540	540	540	540	540	540	540	540	540	540	540
RT Outlet	Temp. (Output)	70	35	40	38	70	70	62	65	55	75	75	50	61
SH Pass	Damp (Output)	0	0	-10	-10	0	0	-10	0	0	-10	0	0	0
SH Pass	Temp. (Output)	60	85	78	80	55	55	56	55	65	45	45	65	58
RH Spray	(Output)	20	0	0	0	0	0	0	0	0	0	0	0	0
O ₂ A/B	Total Fuel Flow	2.5	3.4	3.4	3.2	3.2	3.2	3.1	2.6	3.0	3.2	3.2	3.0	3.0
	Total Air Flow	76	74	77	81	6.0	6.0	60	68	69	54	54	54	54
Total	Main Steam Flow	66	70	74	72	50	50	54	50	54	44	44	45	50
	Spray Flow	850	860	890	900	640	640	630	640	640	560	560	590	590
	T/H	75	90	88	94	62	62	62	55	62	45	45	40	60

Combustion Test Data (6)

Date Time	Coal blend ratio (S/A)	B.E.T.	300 MM				225 MM				200 MM							
			55/45		70/30		55/45		60/40		70/30		60/40		55/45		70/30	
			7/31	7/25	8/6	8/11	8/8	7/26	7/22	7/25	7/26	7/26	7/26	7/26	7/22	7/25	7/26	7/26
1 °C	Div. Wall out tube metal temp.		459.7	462.5	477.5	469.5	476.8	476.8	482.4	447.4	441.0	433.6	442.4	447.4	458.6	458.6	458.6	
2 °C	Div. Wall out tube metal temp.		499.9	494.5	501.6	497.7	502.4	481.6	478.6	481.6	470.6	467.0	478.6	481.6	481.6	481.6	481.6	
3 °C	Div. Wall out tube metal temp.		481.6	471.4	486.1	482.0	488.1	458.8	455.8	459.1	453.0	459.6	458.8	458.8	469.9	469.9	469.9	
4 °C	Div. Wall out tube metal temp.		467.5	466.5	481.5	473.5	471.4	448.2	442.1	448.2	442.2	446.1	442.1	448.2	462.6	462.6	462.6	
5 °C	Div. Wall out tube metal temp.		475.5	465.1	486.6	482.4	484.0	460.6	463.9	467.6	461.5	460.6	463.9	467.6	458.3	458.3	458.3	
6 °C	Div. Wall out tube metal temp.		456.5	462.3	471.5	471.1	464.3	451.0	440.7	451.0	443.1	447.6	440.7	451.0	479.0	479.0	479.0	
7 °C	Div. Wall out tube metal temp.		462.4	468.4	476.7	473.0	469.8	470.0	455.7	470.0	458.4	462.0	455.7	470.0	475.7	475.7	475.7	
8 °C	Div. Wall out tube metal temp.		491.3	490.4	498.3	500.7	499.0	485.3	485.3	490.9	481.6	493.0	485.3	490.9	498.0	498.0	498.0	
9 °C	Div. Wall out tube metal temp.		542.6	550.9	551.1	546.2	543.1	532.4	535.9	541.5	531.4	532.4	535.9	541.5	540.9	540.9	540.9	
10 °C	Final SH tube metal temp.		518.0	524.0	524.3	523.6	521.3	512.4	516.7	519.7	510.3	512.4	516.7	519.7	517.5	517.5	517.5	
11 °C	Final SH tube metal temp.		568.4	568.3	574.1	563.5	565.9	543.2	543.0	553.7	544.0	543.2	543.0	553.7	558.3	558.3	558.3	
12 °C	Final SH tube metal temp.		545.0	544.1	547.3	541.5	539.1	525.5	530.6	533.1	526.0	525.5	530.6	533.1	547.3	547.3	547.3	
13 °C	Final SH tube metal temp.		480.9	476.4	492.7	481.0	479.5	447.2	446.1	447.2	442.2	435.1	446.1	447.2	461.9	461.9	461.9	
14 °C	Final SH tube metal temp.		533.5	530.8	531.1	529.0	534.9	527.2	534.8	527.2	528.5	530.5	534.8	527.2	540.2	540.2	540.2	
15 °C	Final SH tube metal temp.		518.7	513.9	520.6	516.4	520.1	518.9	518.9	512.9	514.5	518.7	518.9	512.9	523.4	523.4	523.4	
16 °C	Final SH tube metal temp.		520.3	511.3	520.3	515.9	519.6	515.7	516.3	515.7	517.8	515.7	516.3	515.7	515.6	515.6	515.6	
17 °C	Final SH tube metal temp.		538.9	543.4	541.7	535.8	534.7	524.8	522.4	527.9	526.0	524.8	522.4	527.9	525.9	525.9	525.9	
18 °C	Final SH tube metal temp.		518.0	518.0	520.0	518.0	513.4	510.0	510.0	509.9	509.9	510.0	510.0	509.9	506.1	506.1	506.1	
19 °C	Final SH tube metal temp.		576.2	578.5	572.8	564.8	570.7	551.3	551.8	557.8	553.7	551.3	551.8	557.8	560.7	560.7	560.7	
20 °C	Final SH tube metal temp.		556.2	554.8	557.5	550.2	557.3	554.4	554.9	548.9	546.9	554.4	554.9	548.9	551.1	551.1	551.1	
	Final SH tube metal temp.		533.7	529.7	534.3	526.1	531.7	536.3	534.2	528.7	527.9	536.3	534.2	528.7	527.7	527.7	527.7	
1 °C	RH out tube metal temp.		489.6	492.9	493.0	484.1	479.9	499.0	501.2	509.5	492.5	499.0	501.2	509.5	494.8	494.8	494.8	
2 °C	RH out tube metal temp.		473.9	463.2	461.3	459.7	462.2	489.8	481.2	489.8	473.8	479.5	481.2	489.8	476.8	476.8	476.8	
3 °C	RH out tube metal temp.		576.9	563.2	563.3	560.9	562.2	567.3	567.8	582.7	563.4	567.3	567.8	582.7	577.0	577.0	577.0	
4 °C	RH out tube metal temp.		551.5	567.0	574.2	550.5	562.2	550.4	550.4	563.7	541.8	546.4	550.4	563.7	555.8	555.8	555.8	
5 °C	RH out tube metal temp.		557.6	568.6	573.2	549.1	560.1	549.4	543.6	528.7	542.0	549.4	543.6	528.7	553.0	553.0	553.0	
6 °C	RH out tube metal temp.		512.8	529.9	531.9	513.4	524.7	516.1	515.0	528.7	502.9	516.1	515.0	528.7	510.1	510.1	510.1	
7 °C	RH out tube metal temp.		498.5	486.1	488.1	487.0	493.0	492.0	486.4	480.1	480.1	492.0	486.4	480.1	486.4	486.4	486.4	
8 °C	RH out tube metal temp.		465.1	472.2	473.3	468.6	476.1	489.2	498.8	492.6	479.4	489.2	498.8	492.6	478.7	478.7	478.7	
9 °C	RH out tube metal temp.		453.7	474.8	483.8	460.4	472.8	508.6	499.2	508.8	505.7	508.6	499.2	508.8	501.2	501.2	501.2	
10 °C	RH out tube metal temp.		470.1	500.8	501.2	499.1	481.5	490.6	488.2	489.3	490.6	490.6	488.2	491.1	486.2	486.2	486.2	
11 °C	RH out tube metal temp.		454.4	482.1	482.9	481.5	460.1	471.6	468.7	471.9	475.6	471.6	468.7	471.9	472.8	472.8	472.8	
12 °C	RH out tube metal temp.		496.2	521.5	510.4	518.4	513.2	519.4	508.6	510.9	514.8	519.4	508.6	510.9	518.8	518.8	518.8	
13 °C	RH out tube metal temp.		522.4	557.1	543.4	541.3	529.6	511.5	515.5	529.6	524.0	511.5	515.5	529.6	530.2	530.2	530.2	
14 °C	RH out tube metal temp.		583.9	617.3	594.9	598.2	588.0	564.1	575.2	589.2	590.2	564.1	575.2	589.2	595.3	595.3	595.3	
15 °C	RH out tube metal temp.		576.6	607.7	586.1	585.8	575.8	570.1	567.5	578.9	577.7	570.1	567.5	578.9	584.9	584.9	584.9	
16 °C	RH out tube metal temp.		539.1	579.2	562.2	560.8	540.8	535.1	540.0	550.8	548.4	535.1	540.0	550.8	552.8	552.8	552.8	
17 °C	RH out tube metal temp.		503.9	529.7	519.7	526.8	519.0	523.4	515.7	520.3	521.9	523.4	515.7	520.3	527.2	527.2	527.2	

Combustion test date (7)

Date Time FURNACE TEMPERATURE 3F Left near S/B C-1 3F Right near S/B C-3 3F Mezz. Rear Left near S/B F-2 3F Mezz. Rear Left near S/B F-5 4F Mezz. Front Right near S/B D-2 4F Mezz. Left Rear near S/B D-7 5F Left Rear near S/B C-3 5F Right Rear near S/B C-2 7F Mezz. Front Right 2nd Port 7F Mezz. Front Center Port 7F Mezz. Front Left 2nd Port 8F Left near S/B 6-L 8F Right near S/B 6-R 8F Rear Left 2nd Port 9F Left near S/B 4-L 9F Right near S/B 4-R 9F Front Left 2nd Port 9F Front Center Port 9F Front Right 2nd Port	B.E.T.	300 MM				225 MM				200 MM							
		55/45		70/30		55/45		60/40		70/30		55/45		60/40		70/30	
		WB Adjust	O ₂ Adjust	WB Adjust	O ₂ Adjust	WB Adjust	O ₂ Adjust	WB Adjust	O ₂ Adjust	WB Adjust	O ₂ Adjust	WB Adjust	O ₂ Adjust	WB Adjust	O ₂ Adjust	WB Adjust	O ₂ Adjust
		7/21 21:00 20:30 1,265 1,240 1,420 1,395 1,530 1,540 1,510 1,510 1,380 1,300 1,310 1,150 1,115 1,040 960 980 1,000 955	8/6 16:30 16:30 1,270 1,230 1,340 1,350 1,460 1,420 1,410 1,460 1,460 1,305 1,280 1,280 1,250 1,140 1,140 1,130 1,010 1,010 1,025 1,010 1,035 1,000 1,025	8/11 11:30 11:30	8/8 18:30 18:00	7/22 01:30 01:00 1,215 1,220 1,320 1,310 1,435 1,420 1,410 1,410 1,465 1,240 1,240 1,245 1,190 1,135 1,100 980 1,015 955 970 1,010 990	7/25 10:00 10:00 1,240 1,225 1,325 1,340 1,410 1,400 1,425 1,230 1,220 1,180 1,090 1,095 960 945 975 960 950 940 980 985 950 980 940 935	7/26 09:00 09:30 1,275 1,285 1,290 1,300 1,370 1,330 1,330 1,370 1,215 1,215 1,200 1,175 1,060 1,075 920 975 980 950 950 950 940 985 970 950	8/8 11:00 10:30	7/26 10:45	7/22 04:00 03:30 1,210 1,215 1,310 1,295 1,400 1,380 1,380 1,390 1,390 1,390 1,200 1,210 1,200 1,190 1,060 1,070 900 960 940 955 945 955	7/25 08:30 08:00 1,200 1,190 1,315 1,310 1,400 1,390 1,365 1,385 1,215 1,200 1,200 1,150 1,055 1,085 920 930 900 960 925 900	8/8 09:00 08:30 1,220 1,220 1,220 1,220 1,310 1,400 1,400 1,400 1,390 1,215 1,215 1,215 1,150 1,055 1,085 900 990 995 960 950 950 960 925 900				
A-1 Air resistor open		4.8	5.0	5.0	4.9	4.8	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.8	4.7	4.9	
A-2 Air resistor open		4.8	4.8	4.8	4.8	4.6	4.8	4.8	4.8	4.6	4.8	4.8	4.6	4.8	4.6	4.8	
A-3 Air resistor open		4	4.0	4.0	4.0	4.2	4.0	4.0	4.0	4	4.0	4	4.5	4	4.5	4.8	
A-4 Air resistor open		3.2	3.8	3.9	3.8	3.7	3.6	3.6	3.8	3.2	3.7	3.6	3.6	3.2	3.6	3.8	
B-1 Air resistor open		4.2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	4.2	5.0	5.0	5.0	4.2	5.0	5.0	
B-2 Air resistor open		4.8	4.5	4.5	4.5	4.8	4.5	4.5	4.5	4.8	4.5	4.5	4.5	4.8	4.5	4.5	
B-3 Air resistor open		5	4.7	4.3	4.6	5	4.8	4.9	4.6	5	4.8	4.8	5	5	4.6	4.6	
B-4 Air resistor open		5	5.0	5.0	4.6	5.0	5.0	5.0	4.6	5.0	5.0	5.0	5.0	5	5.0	4.6	
C-1 Air resistor open		5	4.9	4.9	5.0	4.9	5	4.9	5.0	5	5.0	5.0	5	5	4.8	5.0	
C-2 Air resistor open		5.4	5.0	5.1	4.9	5.4	5.0	5.0	5.1	5.4	5.0	5.0	5.0	5.4	5.0	4.9	
C-3 Air resistor open		4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4	4.0	4.0	4.0	4	4.0	5.1	
C-4 Air resistor open		0	1.4	2.5	1.2	0	0	0	1.2	0	0.0	0.0	0	0	0	4.0	
D-1 Air resistor open		0.2	2.5	0.5	2.5	0.2	0.5	0.2	0.5	0.2	0.2	0.2	0.2	0.2	0.2	1.2	
D-2 Air resistor open		0.5	2.2	0.5	2.2	0.5	2.2	0.5	2.2	0.5	0.5	0.5	0.5	0.5	0.5	2.5	
D-3 Air resistor open		3.2	2.9	1.0	2.9	3.2	2.9	1.0	2.9	3.2	2.9	1.0	1.0	3.2	2.9	2.2	
D-4 Air resistor open		50	25	25	25	50	25	25	25	50	25	25	25	50	25	2.9	
Airport damper open (Right)		50	25	25	25	50	25	25	25	50	25	25	25	50	25	12.5	
Airport damper open (Left)		50	25	25	25	50	25	25	25	50	25	25	25	50	25	12.5	

Combustion Test of Calaca Unit I Boiler

(I-1)

Item	Unit	Measuring Point	Recording						B.E.T.	ANN High	ANN Low
			A-2	A-1	A-1	A-0	A-0	A-0			
Test Number			A-2	A-1	A-1	A-0	A-0				
Date			7/21	7/21	7/22	7/22	7/22	7/22			
Time			21:00	21:30	01:30	02:00	04:00	04:30			
Coal blend ratio	(S/A)		55/45	55/45	55/45	55/45	55/45	55/45			
Generator load	MW	DL Q20W10	298.7	303.6	224.6	223.3	201.8	200.5	300		
Main steam flow	T/H	DL G21H10	927	917	710	711	644	637	913.3		
Feed water flow	T/H	DL E15F10	818	841	671	649	593	584	881.5		
SH spray flow	T/H	DL E55F10	89	88.4	45.4	56.8	50.5	53.7	56.4		
Drum level	mm	DL E20L10	-14.9	-2.1	-13.9	2.8	4.6	4.8	-11.7	-203	
Drum pressure	kg/cm ²	DL E20P10	180.4	179.9	177.4	175.9	175.1	174.3	187.2	200	
Turbine inlet steam press.	kg/cm ²	DL G21P10	166.8	166.3	169.8	168.5	169.3	168.5		171	
Final SH outlet temperature	°C	DL E60T10	547.7	541.4	536.1	538.0	537.4	540.5	542.5		
RH outlet temperature	°C	DL E74T10	532.5	560	538.5	537.5	538.5	539.7	541.6		
Eco. inlet feedwater temp.	°C	DL E10T10A	276.3	276.8	258.4	257.9	251.7	251.3			
A Hot primary air flow	T/H	DL A42F10	113	117	111	103	99	105			
B Hot primary air flow	T/H	DL A46F10	129	128	106	118	108	105			
A Tempering air flow	T/H	DL A42F20	47	52	57	56	56	57			
B Tempering air flow	T/H	DL A46F20	55	48	56	52	51	52			
A Secondary air flow	T/H	DL A52F10	377	371	240	236	209	210			
B Secondary air flow	T/H	DL A52F10	423	434	263	256	235	229			
Total air flow	T/H	DL A60G10	1,145	1,156	834	831	753	757			
Boiler exit gas O ₂	(A) %	DL A80C10	2.35	2.55	3.05	3.15	3.17	3.09	-	5.88 2.94	
Boiler exit gas O ₂	(B) %	DL A80C20	-	-	-	-	-	-	3.22	5.88 2.94	
Total fuel flow	T/H	DL B10G10A	152.38	150.58	111.08	111.06	99.70	99.84	110.4		
A FDF discharge draft	mmAq	DL A12F10	143.1	135.3	29	31.4	19.3	18.0	233.7		
B FDF discharge draft	mmAq	DL A16F10	143.4	138.3	28.7	31.4	16.8	14.5	231.1		
Wind box draft	mmAq	DL A70F10	43.1	37.8	-4.4	-2.3	-8.2	-9.4	114.3		
Furnace draft	mmAq	DL A80F10	-13.7	-14.6	-12.6	-10.7	-11.5	-9.5	-20.3		

Item	Unit	Measuring Point	Recording						ANN High	ANN Low
			A-2	A-1	A-1	A-0	A-0	A-0		
Test Number			A-2	A-1	A-1	A-0	A-0			
Date			7/21	7/21	7/22	7/22	7/22	7/22		
Time			21:00	21:30	01:30	02:00	04:00	04:30		
A Lower Eco outlet draft	mmAq	DL E10F10	-95.9	-101.0	-63	-61.4	-58.2	-57.6	-94	
B Lower Eco outlet draft	mmAq	DL E10F20	-95.8	-100.1	-63.5	-60.2	-57.5	-57.7	-96.5	
A AH gas side diff. press.	mmAq	DL A53D10	142.3	137.2	82.6	84.4	74	74	119.4	
B AH gas side diff. press.	mmAq	DL A57D10	132.8	133.4	78.8	78.6	70.6	68.3	114.3	
Primary air press.	mmAq	DL A40F10	1,608	1,603	1,543	1,534	1,522	1,510	1,496.2	
A IDF inlet draft	mmAq	DL A22F10	-323.4	-323.8	-197	-191.7	-173.2	-173.4	-297.2	
B IDF inlet draft	mmAq	DL A26F10	-321.0	-323.0	-194.3	-189.0	-171.1	-171.2	-294.6	
A AH inlet air temp.	°C	DL A52T10	33.9	33.8	35.2	35.4	35.6	35.8	35.1	
B AH inlet air temp.	°C	DL A56T10	32.2	32.3	34.1	34.5	34.3	34.7	33.9	
A AH outlet air temp.	°C	DL A52T20	336.8	337.4	305.5	303.8	296.8	298	338.3	
B AH outlet air temp.	°C	DL A56T20	328.3	328.7	305.0	304.4	300.5	302.4	337.4	
A AH inlet gas temp.	°C	DL A53T10	369.3	369.9	323.9	324.9	317.4	319.2	365.4	
B AH inlet gas temp.	°C	DL A57T10	362.0	361.3	324.5	325.9	320.1	322.7	367.9	
A AH outlet gas temp.	°C	DL A53T20	146.5	146.5	139.2	136.6	132.0	133	147.4	
B AH outlet gas temp.	°C	DL A57T20	149.3	149.0	144.9	142.8	140.8	141.9	150.3	
A Precip outlet gas temp.	°C	DL C10T10	141.7	141.6	136.7	133.4	128.6	128.4	143.6	
B Precip outlet gas temp.	°C	DL C10T20	141.6	140.9	140.8	138.3	136.4	136.5	144.4	
A IDF motor amp.	A	CR indicator	242	242	220	220	215	215	236	
B IDF motor amp.	A	CR indicator	240	240	210	210	210	210	230	
A FDF motor amp.	A	CR indicator	80	78	70	70	70	70	85	
B FDF motor amp.	A	CR indicator	83	85	70	70	70	70	86	
A Pri. air fan motor amp.	A	CR indicator	240	240	230	225	220	220	183	
B Pri. air fan motor amp.	A	CR indicator	240	240	220	220	210	210	196	
A IDF inlet vane open	%	CR controller	70	70	65	60	55	55	70	
B IDF inlet vane open	%	CR controller	75	75	65	65	60	60	73	
A FDF inlet vane open	%	CR controller	60	60	45	45	35	35	74	
B FDF inlet vane open	%	CR controller	65	65	45	45	40	40	70	
SH pass damper open	%	CR controller	75	65	55	55	40	45	74	
RH pass damper open	%	CR controller	50	60	65	65	75	75	75	
Pri. air capacity damper open	%	CR controller	95	95	75	75	75	75	75	
O ₂ analysis by Orsat (A)	%									
O ₂ analysis by Orsat (B)	%									

Item	Unit	Measuring Point	Recording						B.E.T.		ANN
			A-2	A-2	A-1	A-1	A-0	A-0	High	Low	
Test Number			7/21	7/21	7/22	7/22	7/22	7/22	A-0		
Date			21:00	21:30	01:30	02:00	04:00	04:30			
Time											
A Mill coal fineness	%										
A Mill coal feeder flow	T/H	DL B11F10	51.15	51.17	37.18	36.79	33.78	33.16	36.7		
A Mill inlet air temp.	°C	DL B13T10	274	292	202	209	222	213	196.2		
A Mill air coal outlet temp.	°C	DL B13T20	69	70	68	69	69	69	77.9		
A Mill diff. draft	mmAq	CR indicator	540	545	510	510	430	450	527.8		
A Mill primary air flow	T/H	DL B13F10	103.9	102.8	91.5	92.2	84.4	91.3	86.0	31.3	
A Mill hot air damper open	%	local	24	26	21	24	24	24	24		
A Mill cold air damper open	%	local	80	80	79	79	79	79	78		
A Mill capacity damper open	%	local	84	89	57	54	43	40	40		
A Mill motor amp.	A	CR indicator	90	89	80	80	79	78	86		
A Mill classifier open	%								60		
B Mill coal fineness	%										
B Mill coal feeder flow	T/H	DL B21F10	49.93	49.91	38.34	37.65	34.13	33.89	36.0		
B Mill inlet air temp.	°C	DL B23T10	260	254	233	235	225	227	174.6		
B Mill air coal outlet temp.	°C	DL B23T20	69	69	69	69	70	70	78.9		
B Mill differential draft	mmAq	CR indicator	595	600	550	545	500	505	500.0		
B Mill primary air flow	T/H	DL B23F10	102.4	102.8	96.4	94.6	90.0	90.2	86.7	31.3	
B Mill hot air damper open	%	local	32	30	29	30	27	28	28		
B Mill cold air damper open	%	local	24	24	14	14	15	15	40		
B Mill capacity damper open	%	local	87	90	61	55	53	53	53		
B Mill motor amp.	A	CR indicator	90	90	84	85	80	80	90		
B Mill classifier open	%								60		

Item	Unit	Measuring Point	Recording						B.E.T.		ANN High	ANN Low
			A-2	A-1	A-1	A-1	A-0	A-0				
Test Number												
Date			7/21	7/21	7/22	7/22	7/22	7/22	7/22			
Time			21:00	21:30	01:30	02:00	04:00	04:30				
C Mill coal fineness	%											
C Mill coal feeder flow	T/H	DL B31F10	51.02	50.85	36.05	35.92	32.16	31.92	37.1			
C Mill inlet air temp.	°C	DL B33T10	42	42	32	33	32	30	174.2			
C Mill air coal outlet temp.	°C	DL B33T20	70	70	69	70	70	70	80.0			
C Mill differential draft	mmAq	CR indicator	600	595	465	465	430	430	507.4			
C Mill primary air flow	T/H	DL B33F10	102.2	103.1	90.7	87.2	92.1	84.8	82.5	31.3		
C Mill hot air damper open	%	local	43	43	43	44	43	42				
C Mill cold air damper open	%	local	29	29	29	26	30	30	62			
C Mill capacity damper open	%	local	63	64	33	35	30	30				
C Mill motor amp.	A	CR indicator	83	84	84	80	78	79	92			
C Mill classifier open	%								60			
D Mill coal fineness	%											
D Mill coal feeder flow	T/H	DL B41F10										
D Mill inlet air temp.	°C	DL B43T10										
D Mill air coal outlet temp.	°C	DL B43T20										
D Mill differential draft	mmAq	CR indicator										
D Mill primary air flow	T/H	DL B43F10								31.3		
D Mill hot air damper open	%	local										
D Mill cold air damper open	%	local										
D Mill capacity damper open	%	local										
D Mill motor amp.	A	CR indicator										
D Mill classifier open	%											

Item	Unit	Measuring Point	Recording				B.E.T.	ANN High	ANN Low
			A-2	A-1	A-1	A-0			
Test Number			A-2	A-1	A-1	A-0	A-0	A-0	
Date			7/21	7/22	7/22	7/22	7/22	7/22	
Time			21:00	01:30	02:00	04:00	04:30	04:30	
A Mill hot air damper open	%	local	24	24	21	24	24	24	
A Mill cold air damper open	%	local	80	80	79	79	79	78	
A Mill capacity damper open	%	local	84	89	57	54	43	40	
A Mill classifier vane open	%	local							
B Mill hot air damper open	%	local	32	30	29	30	27	28	
B Mill cold air damper open	%	local	24	24	14	14	15	15	
B Mill capacity damper open	%	local	87	90	61	55	53	53	
B Mill classifier vane open	%	local							
C Mill hot air damper open	%	local	43	43	43	44	43	42	
C Mill cold air damper open	%	local	29	29	29	26	30	30	
C Mill capacity damper open	%	local	63	64	33	35	30	30	
C Mill classifier vane open	%	local							
D Mill hot air damper open	%	local							
D Mill cold air damper open	%	local							
D Mill capacity damper open	%	local							
D Mill classifier vane open	%	local							

BOILER METAL TEMPERATURE

(III-1)

Test Number	Item	Unit	Measuring Point	Recording				B.E.T.		ANN High	ANN Low
				A-2	A-1	A-1	A-0	A-0	A-0		
Date				7/21	7/21	7/22	7/22	7/22	7/22	7/22	
Time				21:00	21:30	01:30	02:00	04:00	04:30	04:30	
Div. wall out tube metal temp.	1	°C	DL E51T10	459.7	450.8	433.6	434.9	416.5	422.5	538	
Div. wall out tube metal temp.	2	°C	DL E51T11	499.9	489.1	467.0	469.4	456.8	462.5	538	
Div. wall out tube metal temp.	3	°C	DL E51T12	543.7	533.2	519.6	521.5	513.8	518.8	538	
Div. wall out tube metal temp.	4	°C	DL E51T13	481.6	475.7	444.4	446.9	431.1	435.2	538	
Div. wall out tube metal temp.	5	°C	DL E51T14	467.5	461.1	446.1	447.8	427.8	434.5	538	
Div. wall out tube metal temp.	6	°C	DL E51T15	475.5	467.8	460.6	462.3	452.2	458.0	538	
Div. wall out tube metal temp.	7	°C	DL E51T16	456.5	450.9	451.2	453.8	436.7	443.1	538	
Div. wall out tube metal temp.	8	°C	DL E51T17	469.2	457.0	462.0	464.4	459.8	463.6	538	
Div. wall out tube metal temp.	9	°C	DL E51T18	462.4	450.9	462.2	464.9	447.1	454.7	538	
Div. wall out tube metal temp.	10	°C	DL E51T19	491.3	479.1	493.0	496.1	490.5	496.7	538	
Final SH tube metal temp.	1	°C	DL E61T10	542.6	534.9	532.4	531.5	525.7	533.3	602	
Final SH tube metal temp.	2	°C	DL E61T11	518.0	507.3	512.4	511.8	506.2	512.4	602	
Final SH tube metal temp.	3	°C	DL E61T12	568.4	560.7	543.2	541.8	536.0	542.6	602	
Final SH tube metal temp.	4	°C	DL E61T13	545.0	534.9	523.5	522.4	515.6	522.7	602	
Final SH tube metal temp.	5	°C	DL E61T14	557.2	550.4	525.3	525.4	518.0	524.1	602	
Final SH tube metal temp.	6	°C	DL E61T15	480.9	474.2	435.1	441.8	419.0	425.5	602	
Final SH tube metal temp.	7	°C	DL E61T16	533.5	524.8	530.5	528.2	519.6	525.5	602	
Final SH tube metal temp.	8	°C	DL E61T17	518.7	508.4	518.7	515.8	508.8	514.3	602	
Final SH tube metal temp.	9	°C	DL E61T18	520.1	512.4	523.0	523.8	525.7	525.8	602	
Final SH tube metal temp.	10	°C	DL E61T19	520.3	510.8	515.7	516.7	517.5	518.5	602	
Final SH tube metal temp.	11	°C	DL E61T20	538.9	530.5	524.8	526.1	532.3	531.4	602	
Final SH tube metal temp.	12	°C	DL E61T21	518.7	509.3	510.0	509.7	515.1	513.1	602	
Final SH tube metal temp.	13	°C	DL E61T22	576.2	569.6	551.3	555.9	555.9	558.8	602	
Final SH tube metal temp.	14	°C	DL E61T23	546.8	538.4	534.0	534.5	536.5	537.5	602	
Final SH tube metal temp.	15	°C	DL E61T24	556.2	550.9	554.4	558.5	552.9	555.1	602	
Final SH tube metal temp.	16	°C	DL E61T25	533.7	526.7	536.3	536.9	534.1	535.1	602	

Test Number	Item	Unit	Measuring Point	Recording					ANN High	ANN Low
				A-2	A-1	A-1	A-0	A-0		
Date				7/21	7/21	7/22	7/22	7/22	7/22	
Time				21:00	21:30	01:30	02:00	04:00	04:30	
	RH out tube metal temp.	1 °C	DL E71T10	489.6	511.7	499.0	500.8	501.5	503.2	599
	RH out tube metal temp.	2 °C	DL E71T11	473.9	493.9	479.5	481.1	482.7	484.5	599
	RH out tube metal temp.	3 °C	DL E71T12	576.9	604.4	567.3	565.3	554.0	556.5	599
	RH out tube metal temp.	4 °C	DL E71T13	560.9	586.8	546.4	545.1	536.5	538.9	599
	RH out tube metal temp.	5 °C	DL E71T14	551.5	587.3	550.1	549.5	528.7	532.3	599
	RH out tube metal temp.	6 °C	DL E71T15	557.6	590.6	549.4	550.0	530.8	534.2	599
	RH out tube metal temp.	7 °C	DL E71T16	512.8	545.7	516.1	512.5	492.8	496.7	599
	RH out tube metal temp.	8 °C	DL E71T17	498.5	523.9	492.0	490.5	477.6	476.0	599
	RH out tube metal temp.	9 °C	DL E71T18	466.1	492.0	513.3	518.1	514.4	513.1	599
	RH out tube metal temp.	10 °C	DL E71T19	453.7	477.4	489.2	494.7	490.1	488.5	599
	RH out tube metal temp.	11 °C	DL E71T20	452.3	473.9	522.5	521.7	545.4	542.4	599
	RH out tube metal temp.	12 °C	DL E71T21	438.1	459.6	508.6	508.3	532.5	529.5	599
	RH out tube metal temp.	13 °C	DL E71T22	470.1	491.3	490.6	490.9	532.7	529.7	599
	RH out tube metal temp.	14 °C	DL E71T23	454.4	474.6	471.6	471.2	513.3	510.3	599
	RH out tube metal temp.	15 °C	DL E71T24	496.2	521.3	519.4	521.7	533.4	533.7	599
	RH out tube metal temp.	16 °C	DL E71T25	522.4	545.0	511.5	517.2	541.6	541.9	599
	RH out tube metal temp.	17 °C	DL E71T26	583.9	609.4	584.1	590.7	608.4	608.4	599
	RH out tube metal temp.	18 °C	DL E71T27	576.6	599.0	570.1	575.6	592.1	593.1	599
	RH out tube metal temp.	19 °C	DL E71T28	539.1	564.7	535.1	540.7	564.4	564.7	599
	RH out tube metal temp.	20 °C	DL E71T29	503.9	529.0	523.4	527.1	540.2	540.3	599

FURNACE TEMPERATURE

(IV-1)

Test Number	Item	Unit	Measuring Point	Recording			ANN High	ANN Low
				A-2	A-1	A-0		
Date				7/21	7/22	7/22		
Time				20:30	01:00	03:30		
3F	Left near S/B C-3	°C	local	1,265	1,215	1,210		
3F	Right near S/B C-1	°C	local	1,240	1,220	1,215		
3F	Mezz. Rear Right near S/B F-2	°C	local	1,420	1,320	1,310		
3F	Mezz. Rear Left near S/B F-5	°C	local	1,395	1,310	1,295		
4F	Mezz. Right Rear near S/B D-2	°C	local	1,530	1,450	1,400		
4F	Mezz. Left Rear near S/B D-7	°C	local	1,540	1,345	1,380		
5F	Left Rear near S/B C-3	°C	local	1,510	1,410	1,380		
5F	Right Rear near S/B C-2	°C	local	1,510	1,430	1,390		
7F	Mezz. Front Right 2nd Port	°C	local	1,380	1,230	1,200		
7F	Mezz. Front Center Port	°C	local	1,300	1,220	1,210		
7F	Mezz. Front Left 2nd Port	°C	local	1,310	1,190	1,190		
8F	Left near S/B 6-L	°C	local	1,150	1,090	1,060		
8F	Right near S/B 6-R	°C	local	1,115	1,100	1,070		
9F	Left near S/B 4-L	°C	local	1,040	980	960		
9F	Right near S/B 4-R	°C	local	960	1,015	940		
9F	Front Left 2nd Port	°C	local	980	955	955		
9F	Front Center Port	°C	local	1,000	970	945		
9F	Front Right 2nd Port	°C	local	955	1,010	955		

Item	Unit	Measuring Point	Recording				B.E.T.		ANN	
			A-2	A-1	A-1	A-0	A-0	A-0	High	Low
Test Number										
Date			7/21	7/21	7/22	7/22	7/22	7/22	7/22	
Time			21:00	21:30	01:30	02:00	04:00	04:30	04:30	
A-1 Air resistor open		local	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
A-2 Air resistor open		local	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
A-3 Air resistor open		local	4	4	4	4	4	4	4	
A-4 Air resistor open		local	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
B-1 Air resistor open		local	4.2	4.2	4.2	4.2	4.2	4.2	4.2	
B-2 Air resistor open		local	4.8	4.8	4.8	4.8	4.8	4.8	4.8	
B-3 Air resistor open		local	5	5	5	5	5	5	5	
B-4 Air resistor open		local	5	5	5	5	5	5	5	
C-1 Air resistor open		local	5	5	5	5	5	5	5	
C-2 Air resistor open		local	5	5	5	5	5	5	5	
C-3 Air resistor open		local	5.4	5.4	5.4	5.4	5.4	5.4	5.4	
C-4 Air resistor open		local	4	4	4	4	4	4	4	
D-1 Air resistor open		local	0	0	0	0	0	0	0	
D-2 Air resistor open		local	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
D-3 Air resistor open		local	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
D-4 Air resistor open		local	3.2	3.2	3.2	3.2	3.2	3.2	3.2	
Airport damper open (Right)		local	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Airport damper open (Left)		local	4.5	4.5	4.5	4.5	4.5	4.5	4.5	

Item	Unit	Measuring Point	Recording					B.E.T.		ANN	
			A-2	A-1	A-1	A-2	A-1	A-0	A-0	High	Low
Test Number			A-2	A-1	A-1	A-2	A-1	A-0	A-0		
Date			7/21	7/21	7/22	7/22	7/22	7/22	7/22		
Time			21:00	21:30	01:30	02:00	04:00	04:30	04:30		
Burner Barrel A-1	°C	DL B60T10	293.1	294.0	264.8	263.5	254.2	256.1	400		
Burner Barrel A-1	°C	DL B60T11	199.5	200.0	174.0	171.7	165.4	165.5	400		
Burner Barrel A-1	°C	DL B60T12	285.3	285.9	256.3	254.6	247.1	249.3	400		
Burner Barrel A-1	°C	DL B60T13	274.5	275.4	248.2	247.3	238.9	241.5	400		
Burner Barrel A-2	°C	DL B60T20	301.0	302.1	269.8	268.2	261.3	262.4	400		
Burner Barrel A-2	°C	DL B60T21	233.6	233.6	200.2	198.7	192.3	192.0	400		
Burner Barrel A-2	°C	DL B60T22	253.8	255.1	227.9	227.0	222.1	223.3	400		
Burner Barrel A-2	°C	DL B60T23	276.6	278.0	243.8	242.7	234.8	236.0	400		
Burner Barrel A-3	°C	DL B60T30	257.5	258.3	232.3	231.8	225.7	227.9	400		
Burner Barrel A-3	°C	DL B60T31	223.8	224.1	195.9	194.8	188.6	188.8	400		
Burner Barrel A-3	°C	DL B60T32	284.9	285.6	258.6	258.0	251.6	254.0	400		
Burner Barrel A-3	°C	DL B60T33	291.9	292.7	267.7	267.4	261.7	264.3	400		
Burner Barrel A-4	°C	DL B60T40	297.4	298.7	270.7	270.5	266.4	268.7	400		
Burner Barrel A-4	°C	DL B60T41	165.6	165.9	150.7	149.3	146.1	145.7	400		
Burner Barrel A-4	°C	DL B60T42	286.8	288.1	262.8	262.4	257.6	259.8	400		
Burner Barrel A-4	°C	DL B60T43	300.6	301.6	278.4	277.8	273.1	274.8	400		
Burner Barrel B-1	°C	DL B61T10	245.2	246.5	211.5	210.3	203.2	203.4	400		
Burner Barrel B-1	°C	DL B61T11	263.7	264.5	226.3	224.8	217.0	217.6	400		
Burner Barrel B-1	°C	DL B61T12	294.1	295.6	261.5	260.0	253.1	253.9	400		
Burner Barrel B-1	°C	DL B61T13	271.4	272.5	242.4	241.2	234.8	235.1	400		
Burner Barrel B-2	°C	DL B61T20	265.3	266.4	232.7	230.0	222.5	222.7	400		
Burner Barrel B-2	°C	DL B61T21	230.3	231.1	197.3	195.1	188.3	188.6	400		
Burner Barrel B-2	°C	DL B61T22	295.1	296.4	262.4	260.9	254.3	255.1	400		
Burner Barrel B-2	°C	DL B61T23	266.4	267.9	233.4	232.1	225.2	225.5	400		
Burner Barrel B-3	°C	DL B61T30	264.3	265.2	242.0	241.3	236.7	237.3	400		
Burner Barrel B-3	°C	DL B61T31	210.1	211.1	186.3	185.1	179.9	180.3	400		
Burner Barrel B-3	°C	DL B61T32	287.6	288.0	266.8	266.1	262.4	263.3	400		
Burner Barrel B-3	°C	DL B61T33	267.5	268.7	244.6	243.8	238.9	238.9	400		
Burner Barrel B-4	°C	DL B61T40	260.2	260.7	231.6	231.0	226.5	226.8	400		
Burner Barrel B-4	°C	DL B61T41	254.2	255.4	224.0	223.3	217.4	218.1	400		
Burner Barrel B-4	°C	DL B61T42	277.7	278.5	254.7	254.1	250.6	251.6	400		
Burner Barrel B-4	°C	DL B61T43	277.5	278.0	248.9	248.1	244.0	244.8	400		

Item	Unit	Measuring Point	Recording					B.E.T.	ANN High	ANN Low
			A-2	A-2	A-1	A-1	A-0			
Test Number										
Date			7/21	7/21	7/22	7/22	7/22			
Time			21:00	21:30	01:30	02:00	04:00	04:30		
Burner Barrel C-1	°C	DL B62T10	269.9	271.5	237.9	236.9	230.3	231.3	400	
Burner Barrel C-1	°C	DL B62T11	267.6	269.1	231.1	229.9	221.9	222.5	400	
Burner Barrel C-1	°C	DL B62T12	278.2	279.5	241.5	240.3	232.6	233.5	400	
Burner Barrel C-1	°C	DL B62T13	268.1	269.8	233.1	232.0	224.9	226.0	400	
Burner Barrel C-2	°C	DL B62T20	293.7	298.9	262.9	261.5	253.7	254.5	400	
Burner Barrel C-2	°C	DL B62T21	243.0	244.1	208.4	207.0	200.2	200.5	400	
Burner Barrel C-2	°C	DL B62T22	283.8	285.0	248.0	247.0	239.3	240.0	400	
Burner Barrel C-2	°C	DL B62T23	323.8	325.2	290.2	288.7	281.5	282.4	400	
Burner Barrel C-3	°C	DL B62T30	46.4	46.9	35.4	33.6	39.0	37.3	400	
Burner Barrel C-3	°C	DL B62T31	54.5	55.6	48.9	47.9	50.4	48.6	400	
Burner Barrel C-3	°C	DL B62T32	309.8	310.6	281.2	280.5	274.1	275.5	400	
Burner Barrel C-3	°C	DL B62T33	257.9	258.5	230.3	229.6	224.4	225.4	400	
Burner Barrel C-4	°C	DL B62T40	273.1	274.3	242.7	242.5	236.3	237.8	400	
Burner Barrel C-4	°C	DL B62T41	270.5	272.0	240.3	239.7	233.5	234.8	400	
Burner Barrel C-4	°C	DL B62T42	281.1	282.3	250.8	250.2	244.0	245.3	400	
Burner Barrel C-4	°C	DL B62T43	295.7	296.8	264.6	264.4	258.2	259.9	400	
Burner Barrel D-1	°C	DL B63T10	351.0	352.1	326.0	325.1	321.7	323.8	400	
Burner Barrel D-1	°C	DL B63T11	319.7	320.5	288.7	286.3	278.6	279.2	400	
Burner Barrel D-1	°C	DL B63T12	356.2	356.7	333.5	332.8	330.2	332.9	400	
Burner Barrel D-1	°C	DL B63T13	367.1	367.7	345.3	344.8	342.2	344.9	400	
Burner Barrel D-2	°C	DL B63T20	361.7	362.3	340.7	340.1	338.6	340.6	400	
Burner Barrel D-2	°C	DL B63T21	307.5	308.2	278.6	275.4	265.5	265.7	400	
Burner Barrel D-2	°C	DL B63T22	381.4	380.6	368.5	365.8	367.9	372.4	400	
Burner Barrel D-2	°C	DL B63T23	362.5	362.5	337.5	336.4	333.0	334.4	400	
Burner Barrel D-3	°C	DL B63T30	-	-	-	-	-	-	400	
Burner Barrel D-3	°C	DL B63T31	303.8	304.4	275.4	272.6	263.7	264.0	400	
Burner Barrel D-3	°C	DL B63T32	338.0	339.0	320.0	319.5	316.7	318.0	400	
Burner Barrel D-3	°C	DL B63T33	366.9	366.9	353.5	353.0	352.5	354.0	400	
Burner Barrel D-4	°C	DL B63T40	347.9	347.7	329.0	328.7	327.6	329.2	400	
Burner Barrel D-4	°C	DL B63T41	305.9	306.8	285.2	283.7	278.0	278.8	400	
Burner Barrel D-4	°C	DL B63T42	362.6	361.9	351.3	351.4	353.1	355.6	400	
Burner Barrel D-4	°C	DL B63T43	347.0	347.1	326.0	325.6	323.9	325.6	400	

Combustion Test of Calaca Unit I Boiler

(I-1)

Item	Unit	Measuring Point	Recording						B.E.T.		ANN High	ANN Low		
			B-0 7/25	B-0 7/25	B-1 7/25	B-1 7/25	B-1 7/25	B-3 7/25	270MW 7/25	290MW 7/25			High	Low
Test Number														
Date														
Time			08:30	09:00	10:00	10:30	13:45	14:15	15:15					
Coal blend ratio	(S/A)		60/40	60/40	60/40	60/40	60/40	60/40	60/40	60/40				
Generator load	MW	DL Q20W10	196	201.7	220.3	224.8	274.3	285.5	287.4	300				
Main steam flow	T/H	DL G21H10	601	637	715	715	844	882	938	913.3				
Feed water flow	T/H	DL E15F10	590	597	657	656	793	833	848	881.5				
SH spray flow	T/H	DL E55F10	39.9	42.4	53.3	56.8	76.4	70.2	88.9	56.4				
Drum level	mm	DL E20L10	23.6	19.6	-7.6	8.8	10.1	17.6	20.6	-11.7	127	-203		
Drum pressure	kg/cm ²	DL E20P10	173.4	176.3	175.1	177.4	177.7	183.7	178.9	187.2	200			
Turbine inlet steam press.	kg/cm ²	DL G21P10	167.4	170.2	167.5	169.9	165.4	171.1	165.6	171				
Final SH outlet temperature	°C	DL E60T10	536.1	539.5	538.0	539.2	545.8	534.9	539.9	542.5				
RH outlet temperature	°C	DL E74T10	531.9	530.7	527.5	534.1	535.7	524.7	536.3	541.6				
Eco. inlet feedwater temp.	°C	DL E10T10A	249.2	251.6	257.8	258.7	268.5	272.4	274					
A Hot primary air flow	T/H	DL A42F10	116	110	113	108	124	126	122					
B Hot primary air flow	T/H	DL A46F10	122	118	115	111	126	122	136					
A Tempering air flow	T/H	DL A42F20	47	50	51	52	39	43	34					
B Tempering air flow	T/H	DL A46F20	44	49	45	52	37	43	41					
A Secondary air flow	T/H	DL A52F10	209	211	223	229	322	342	380					
B Secondary air flow	T/H	DL A52F10	229	237	255	262	376	381	416					
Total air flow	T/H	DL A60G10	767	768	803	816	1,015	1,054	1,134					
Boiler exit gas O ₂	%	DL A80C10	3.23	2.74	2.22	2.30	1.71	2.37	2.56	-	5.88	2.94		
Boiler exit gas O ₂	%	DL A80C20	-	-	-	-	-	-	-	3.22	5.88	2.94		
Total fuel flow	T/H	DL B10G10A	98.81	100.49	108.02	107.76	133.59	134.66	142.37	110.4				
A FDF discharge draft	mmAq	DL A12F10	12.7	12.1	25.8	23.9	109.5	119	149.2	233.7				
B FDF discharge draft	mmAq	DL A16F10	9.7	10.2	26.3	23.9	109.6	115.9	152.4	231.1				
Wind box draft	mmAq	DL A70F10	-13.9	-12.8	-5.3	-8.5	38.5	42.8	59.7	114.3				
Furnace draft	mmAq	DL A80F10	-10.9	-10.7	-8.4	-10.4	-4.2	-8.8	-7.6	-20.3				

A 6 19

Combustion Test of Calaca Unit I Boiler

(I-1)

Item	Unit	Measuring Point	B-4	B-4	Recording	B.E.T. High	ANN Low
Test Number			B-4	B-4			
Date			7/25	7/25			
Time			16:30	17:00			
Coal blend ratio	(S/A)						
Generator load	MW	DL Q20W10	300	299.3		300	
Main steam flow	T/H	DL G21H10	944	933		913.3	
Feed water flow	T/H	DL E15F10	850	838		881.5	
SH spray flow	T/H	DL E55F10	91.4	90.5		56.4	
Drum level	mm	DL E20L10	27.3	20.6		-11.7	127 -203
Drum pressure	kg/cm ²	DL E20P10	176.7	175.2		187.2	200
Main steam pressure	kg/cm ²	CRT	-	-			
Turbine inlet steam press.	kg/cm ²	DL G21P10	162.8	161.4			171
Final SH outlet temperature	°C	DL E60T10	546.7	547		542.5	
Main steam temperature	°C	CRT	-	-			
RH outlet temperature	°C	DL E74T10	546.9	539.4		541.6	
Eco. inlet feedwater temp.	°C	DL E10T10A	276	276.5			
A Hot primary air flow	T/H	DL A42F10	137	135			
B Hot primary air flow	T/H	DL A46F10	140	141			
A Tempering air flow	T/H	DL A42F20	22	26			
B Tempering air flow	T/H	DL A46F20	35	37			
A Secondary air flow	T/H	DL A52F10	397	410			
B Secondary air flow	T/H	DL A52F10	446	438			
Total air flow	T/H	DL A60G10	1,177	1,180			
Boiler exit gas O ₂	%	DL A80C10	2.26	2.55		-	5.88 2.94
Boiler exit gas O ₂	%	DL A80C20	-	-		3.22	5.88 2.94
Total fuel flow	T/H	DL E10G10A	149.48	150.86		110.4	
A FDF discharge draft	mmAq	DL A12F10	166.3	164.8		233.7	
B FDF discharge draft	mmAq	DL A16F10	166	165.4		231.1	
Wind box draft	mmAq	DL A70F10	64.3	57.1		114.3	
Furnace draft	mmAq	DL A80F10	-7.1	-10.6		-20.3	

A-620

Item	Unit	Measuring Point	Recording						B.E.T.		ANN		
			B-0	B-0	B-1	B-1	B-1	B-3	High	Low	High	Low	
Test Number			B-0	B-0	B-1	B-1	270MW	B-3	290MW				
Date			7/25	7/25	7/25	7/25	7/25	7/25	7/25				
Time			08:30	09:00	10:00	10:30	13:45	14:15	15:15				
A Lower Eco outlet draft	mmAq	DL E10F10	-59	-58.2	-60.3	-64.9	-75.4	-73.7	-80.2	-94			
B Lower Eco outlet draft	mmAq	DL E10F20	-58.3	-57.4	-59.1	-64.3	-73.8	-72.4	-78.7	-96.5			
A AH gas side diff. press.	mmAq	DL A53D10	71.6	70.3	81.1	84.9	111.0	124.8	136.3	119.4			
B AH gas side diff. press.	mmAq	DL A57D10	68.5	66.9	73.7	78.6	107.5	119.9	128.9	114.3			
Primary air press.	mmAq	DL A40F10	1,521	1,527	1,544	1,558	1,575	1,598	1,589	1,496.2			
A IDF inlet draft	mmAq	DL A22F10	-173.2	-171.4	-184.2	-195.1	-259.6	-274.5	-300.6	-297.2			
B IDF inlet draft	mmAq	DL A26F10	-171.5	-168.9	-181.4	-192.9	-257.3	-272.6	-297.4	-294.6			
A AH inlet air temp.	°C	DL A52T10	36.7	37.4	37.3	37.3	35.9	34.4	34.6	35.1			
B AH inlet air temp.	°C	DL A56T10	36.7	37.3	36.9	36.8	36.1	34.5	34.1	33.9			
A AH outlet air temp.	°C	DL A52T20	298.7	299.9	310.5	311.4	331.7	333.4	329.4	338.3			
B AH outlet air temp.	°C	DL A56T20	294.4	296.4	305.8	306.1	327.7	329.5	326.6	337.4			
A AH inlet gas temp.	°C	DL A53T10	319.9	322.9	334.7	335.8	363.4	365.0	362.7	365.4			
B AH inlet gas temp.	°C	DL A57T10	316.3	318.3	329.6	330.1	360.7	362.3	361	367.9			
A AH outlet gas temp.	°C	DL A53T20	132.3	132.7	137.1	138.8	143.3	143.3	140.5	147.4			
B AH outlet gas temp.	°C	DL A57T20	138.6	139.3	142.6	144.2	148.9	148.8	146.1	150.3			
A Precip outlet gas temp.	°C	DL C10T10	128.5	128.1	130.3	132.6	137.2	138.4	136.5	143.6			
B Precip outlet gas temp.	°C	DL C10T20	133.7	133.6	135.0	137.0	139.9	141.1	138.8	144.4			
A IDF motor amp.	A	CR indicator	210	210	210	210	230	230	240	236			
B IDF motor amp.	A	CR indicator	210	200	210	210	220	225	237.5	230			
A FDF motor amp.	A	CR indicator	70	70	70	70	77.5	77.5	80	85			
B FDF motor amp.	A	CR indicator	70	68	70	70	75	77.5	82.5	86			
A Pri. air fan motor amp.	A	CR indicator	225	220	220	220	220	220	235	183			
B Pri. air fan motor amp.	A	CR indicator	225	210	220	220	225	230	235	196			
A IDF inlet vane open	%	CR controller	55	55	57.5	57.5	65	65	70	70			
B IDF inlet vane open	%	CR controller	60	60	62.5	62.5	70	70	65	73			
A FDF inlet vane open	%	CR controller	40	40	45	45	60	60	62.5	74			
B FDF inlet vane open	%	CR controller	37.5	40	42.5	45	57.5	57.5	65	70			
SH pass damper open	%	CR controller	55	55	60	62.5	62.5	70	75	74			
RH pass damper open	%	CR controller	65	62.5	57.5	55	57.5	50	45	75			
Pri. air capacity damper open	%	CR controller	72.5	72.5	80	75	82.5	77.5	95				
O ₂ analysis by Orsat	%	(A)											
O ₂ analysis by Orsat	%	(B)											

Test Number	Item	Unit	Measuring Point	Recording		ANN High	ANN Low
				B-4	B-4		
	Date			7/25	7/25		
	Time			16:30	17:00		
A Lower Eco outlet draft		mmAq	DL E10F10	-92.4	-97.7	-94	
B Lower Eco outlet draft		mmAq	DL E10F20	-91.6	-95.9	-96.5	
A AH gas side diff. press.		mmAq	DL A53D10	145.1	139.4	119.4	
B AH gas side diff. press.		mmAq	DL A57D10	139.7	134.1	114.3	
Primary air press.		mmAq	DL A40P10	1,564	1,554	1,496.2	
A IDF inlet draft		mmAq	DL A22F10	-325.5	-328.8	-297.2	
B IDF inlet draft		mmAq	DL A26F10	324.1	-326.6	-294.6	
A AH inlet air temp.		°C	DL A52T10	34.5	34.5	35.1	
B AH inlet air temp.		°C	DL A56T10	34.2	34.3	33.9	
A AH outlet air temp.		°C	DL A52T20	327.8	325.2	338.3	
B AH outlet air temp.		°C	DL A56T20	321.9	318.5	337.4	
A AH inlet gas temp.		°C	DL A53T10	361.2	359.6	365.4	
B AH inlet gas temp.		°C	DL A57T10	354.1	352.6	367.9	
A AH outlet gas temp.		°C	DL A53T20	139.8	138.5	147.4	
B AH outlet gas temp.		°C	DL A57T20	144.7	142.6	150.3	
A Precip outlet gas temp.		°C	DL C10T10	135.9	134.5	143.6	
B Precip outlet gas temp.		°C	DL C10T20	137.4	135.6	144.4	
A IDF motor amp.		A	CR indicator	245	250	236	
B IDF motor amp.		A	CR indicator	240	240	230	
A FDF motor amp.		A	CR indicator	82.5	82.5	85	
B FDF motor amp.		A	CR indicator	82.5	82.5	86	
A Pri. air fan motor amp.		A	CR indicator	220	235	183	
B Pri. air fan motor amp.		A	CR indicator	220	235	196	
A IDF inlet vane open		%	CR controller	70	70	70	
B IDF inlet vane open		%	CR controller	75	75	73	
A FDF inlet vane open		%	CR controller	67.5	67.5	74	
B FDF inlet vane open		%	CR controller	65	65	70	
SH pass damper open		%	CR controller	45	50	74	
RH pass damper open		%	CR controller	75	70	75	
Pri. air capacity damper open		%	CR controller	95	95		
O ₂ analysis by Orsat		%	(A)				
O ₂ analysis by Orsat		%	(B)				

Item	Unit	Measuring Point	Recording						ANN High	ANN Low
			B-0	B-1	B-1	B-1	B-3	B-3		
Test Number			B-0	B-1	B-1	270MW	B-3	290MW		
Date			7/25	7/25	7/25	7/25	7/25	7/25		
Time			08:30	09:00	10:00	10:30	13:45	14:15	15:15	
A Mill coal fineness	%									
A Mill coal feeder flow	T/H	DL B11F10	33.01	33.23	34.30	34.30	44.07	45.67	46.71	36.7
A Mill inlet air temp.	°C	DL B13T10	262	248	246	236	277	281	285	196.2
A Mill air coal outlet temp.	°C	DL B13T20	71	69	68	69	69	70	69	77.9
A Mill diff. draft	mmAq	CR indicator	450	440	450	450	530	530	550	527.8
A Mill primary air flow	T/H	DL B13F10	93.6	94	90.9	94.6	102.1	103.4	106.7	86.0
A Mill hot air damper open	%	local	35	32	28	26	32	32	34	31.3
A Mill cold air damper open	%	local	15	18	17	22	18	16	17	
A Mill capacity damper open	%	local	35	33	33	34	38	39	42	
A Mill motor amp.	A	CR indicator	75	75	79	80	85	85	85	86
A Mill classifier open	%									60
B Mill coal fineness	%									
B Mill coal feeder flow	T/H	DL B21F10	33.23	33.19	35.55	35.00	45.10	44.55	47.55	36.0
B Mill inlet air temp.	°C	DL B23T10	208	208	216	219	262	269	284	174.6
B Mill air coal outlet temp.	°C	DL B23T20	70	71	70	71	71	70	71	78.9
B Mill differential draft	mmAq	CR indicator	480	480	500	510	590	600	620	500.0
B Mill primary air flow	T/H	DL B23F10	97.5	96	102.1	98.6	109.7	108.3	110	86.7
B Mill hot air damper open	%	local	25	24	26	26	32	33	37	31.3
B Mill cold air damper open	%	local	17	17	17	18	12	12	11	40
B Mill capacity damper open	%	local	50	50	52	50	58	59	63	
B Mill motor amp.	A	CR indicator	80	80	82	80	86	88	87	90
B Mill classifier open	%									60

Test Number	Item	Unit	Measuring Point	Recording		ANN High	ANN Low
				B-4	B-4		
Date				7/25	7/25		
Time				16:30	17:00		
A Mill coal fineness	%						
A Mill coal feeder flow	T/H	DL B11F10	47.98	48.01		36.7	
A Mill inlet air temp.	°C	DL B13T10	294	292		196.2	
A Mill air coal outlet temp.	°C	DL B13T20	70	70		77.9	
A Mill diff. draft	mmAq	CR indicator	550	560		527.8	
A Mill primary air flow	T/H	DL B13F10	109.6	108.7		86.0	31.3
A Mill hot air damper open	%	local	38	39			
A Mill cold air damper open	%	local	12	12			
A Mill capacity damper open	%	local	43	43			
A Mill motor amp.	A	CR indicator	85	85		86	
A Mill classifier open	%					60	
B Mill coal fineness	%						
B Mill coal feeder flow	T/H	DL B21F10	49.01	48		36.0	
B Mill inlet air temp.	°C	DL B23T10	274	267		174.6	
B Mill air coal outlet temp.	°C	DL B23T20	71	70		78.9	
B Mill differential draft	mmAq	CR indicator	620	620		500.0	
B Mill primary air flow	T/H	DL B23F10	113.4	112.4		86.7	31.3
B Mill hot air damper open	%	local	34	36			
B Mill cold air damper open	%	local	12	11		40	
B Mill capacity damper open	%	local	70	72			
B Mill motor amp.	A	CR indicator	90	88		90	
B Mill classifier open	%					60	

Item	Unit	Measuring Point	Recording						B.E.T.		ANN High	ANN Low
			B-0	B-0	B-1	B-1	B-1	B-3	290MW	High		
Test Number			B-0	B-0	B-1	B-1	B-1	B-3	290MW			
Date			7/25	7/25	7/25	7/25	7/25	7/25	7/25			
Time			08:30	09:00	10:00	10:30	13:45	14:15	15:15			
C Mill coal fineness	%											
C Mill coal feeder flow	T/H	DL B31F10	34.21	34.21	37.89	37.80	45.78	42.69	48.05	37.1		
C Mill inlet air temp.	°C	DL B33T10	225	228	235	231	246	247	251	174.2		
C Mill air coal outlet temp.	°C	DL B33T20	70	70	70	70	70	70	70	80.0		
C Mill differential draft	mmHg	CR indicator	500	500	500	520	570	560	580	507.4		
C Mill primary air flow	T/H	DL B33F10	97.6	95.9	99	99.3	106.1	105.2	107.5	82.5	31.3	
C Mill hot air damper open	%	local	35	35	34	32	34	32	34			
C Mill cold air damper open	%	local	17	17	20	20	18	20	18	62		
C Mill capacity damper open	%	local	50	50	57	62	58	82	100			
C Mill motor amp.	A	CR indicator	75	75	80	80	85	83	85	92		
C Mill classifier open	%									60		
D Mill coal fineness	%											
D Mill coal feeder flow	T/H	DL B41F10										
D Mill inlet air temp.	°C	DL B43T10										
D Mill air coal outlet temp.	°C	DL B43T20										
D Mill differential draft	mmHg	CR indicator										
D Mill primary air flow	T/H	DL B43F10									31.3	
D Mill hot air damper open	%	local										
D Mill cold air damper open	%	local										
D Mill capacity damper open	%	local										
D Mill motor amp.	A	CR indicator										
D Mill classifier open	%											

Item	Unit	Measuring Point	Recording		B.E.T.	ANN	
			B-4	B-4		High	Low
Test Number			B-4	B-4			
Date			7/25	7/25			
Time			16:30	17:00			
C Mill coal fineness	%						
C Mill coal feeder flow	T/H	DL B31F10	52.01	53.00	37.1		
C Mill inlet air temp.	°C	DL B33T10	264	266	174.2		
C Mill air coal outlet temp.	°C	DL B33T20	70	70	80.0		
C Mill differential draft	mmAq	CR indicator	620	630	507.4		
C Mill primary air flow	T/H	DL B33F10	108	105	82.5		31.3
C Mill hot air damper open	%	local	54	54			
C Mill cold air damper open	%	local	12	10	62		
C Mill capacity damper open	%	local	100	100			
C Mill motor amp.	A	CR indicator	95	92	92		
C Mill classifier open	%				60		
D Mill coal fineness	%						
D Mill coal feeder flow	T/H	DL B41F10			-		
D Mill inlet air temp.	°C	DL B43T10			-		
D Mill air coal outlet temp.	°C	DL B43T20			-		
D Mill differential draft	mmAq	CR indicator			-		
D Mill primary air flow	T/H	DL B43F10			-		31.3
D Mill hot air damper open	%	local			-		
D Mill cold air damper open	%	local			-		
D Mill capacity damper open	%	local			-		
D Mill motor amp.	A	CR indicator			-		
D Mill classifier open	%				-		

Item	Unit	Measuring Point	Recording												ANN High	ANN Low		
			B.E.T.				B-1				B-2						B-3	
Test Number			B-0	B-0	B-1	B-1	B-1	B-1	B-1	B-2	B-2	B-2	B-2	B-3	B-3	B-3	B-3	290MW
Date			7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25
Time			08:30	09:00	10:00	10:30	10:30	10:30	10:30	13:45	13:45	13:45	14:15	14:15	14:15	15:15	15:15	15:15
A Mill hot air damper open	%	local	35	32	28	26	26	26	26	32	32	32	32	32	32	34	34	
A Mill cold air damper open	%	local	15	18	17	22	22	22	22	18	18	18	16	16	17	17	17	
A Mill capacity damper open	%	local	35	33	33	34	34	34	34	38	38	38	39	39	42	42	42	
A Mill classifier vane open	%	local																
B Mill hot air damper open	%	local	25	24	26	26	26	26	26	32	32	32	33	33	37	37	37	
B Mill cold air damper open	%	local	17	17	17	18	18	18	18	12	12	12	12	12	11	11	11	
B Mill capacity damper open	%	local	50	50	52	50	50	50	50	58	58	58	59	59	63	63	63	
B Mill classifier vane open	%	local																
C Mill hot air damper open	%	local	35	35	34	32	32	32	32	34	34	34	32	32	34	34	34	
C Mill cold air damper open	%	local	17	17	20	20	20	20	20	18	18	18	20	20	18	18	18	
C Mill capacity damper open	%	local	50	50	57	62	62	62	62	73	73	73	82	82	100	100	100	
C Mill classifier vane open	%	local																
D Mill hot air damper open	%	local																
D Mill cold air damper open	%	local																
D Mill capacity damper open	%	local																
D Mill classifier vane open	%	local																

Item	Unit	Measuring Point	Recording	B.E.T. High	ANN High	ANN Low
Test Number		B-4	B-4			
Date		7/25	7/25			
Time		16:30	17:00			
A Mill hot air damper open	%	local	38	39		
A Mill cold air damper open	%	local	12	12		
A Mill capacity damper open	%	local	43	43		
A Mill classifier vane open	%	local				
B Mill hot air damper open	%	local	34	36		
B Mill cold air damper open	%	local	12	11		
B Mill capacity damper open	%	local	70	72		
B Mill classifier vane open	%	local				
C Mill hot air damper open	%	local	54	54		
C Mill cold air damper open	%	local	12	10		
C Mill capacity damper open	%	local	100	100		
C Mill classifier vane open	%	local				
D Mill hot air damper open	%	local				
D Mill cold air damper open	%	local				
D Mill capacity damper open	%	local				
D Mill classifier vane open	%	local				

BOILER METAL TEMPERATURE

(III-1)

Item	Unit	Measuring Point	Recording						B.E.T.		ANN
			B-0	B-1	B-1	B-1	B-3	B-3	High	Low	
Div. wall out tube metal temp.	1	°C DL E51T10	434.8	430.0	440.0	442.4	462.7	448.4	462.5	538	
Div. wall out tube metal temp.	2	°C DL E51T11	466.8	462.7	475.1	478.6	504.4	474.9	490.9	538	
Div. wall out tube metal temp.	3	°C DL E51T12	522.0	520.5	524.3	524.6	546.4	531.0	531.1	538	
Div. wall out tube metal temp.	4	°C DL E51T13	442.2	440.6	451.1	455.8	478.4	451.4	468.6	538	
Div. wall out tube metal temp.	5	°C DL E51T14	434.4	432.9	438.9	442.1	454.0	442.2	461.8	538	
Div. wall out tube metal temp.	6	°C DL E51T15	452.7	454.7	462.8	463.9	469.9	449.5	464.4	538	
Div. wall out tube metal temp.	7	°C DL E51T16	436.5	437.5	438.1	440.2	446.1	439.1	459.9	538	
Div. wall out tube metal temp.	8	°C DL E51T17	450.6	457.2	455.5	455.7	463.5	449.2	464.6	538	
Div. wall out tube metal temp.	9	°C DL E51T18	446.9	447.7	443.5	447.9	449.7	446.4	467.0	538	
Div. wall out tube metal temp.	10	°C DL E51T19	475.5	480.3	481.1	485.3	491.2	473.4	489.5	538	
Final SH tube metal temp.	1	°C DL E61T10	537.2	535.2	536.0	535.9	551.3	537.9	543.9	602	
Final SH tube metal temp.	2	°C DL E61T11	515.6	514.8	516.3	516.7	527.8	517.3	519.5	602	
Final SH tube metal temp.	3	°C DL E61T12	545.9	541.0	543.0	543.0	559.7	554.8	559.4	602	
Final SH tube metal temp.	4	°C DL E61T13	532.5	530.0	531.3	530.6	547.0	537.9	539.2	602	
Final SH tube metal temp.	5	°C DL E61T14	528.5	527.0	530.4	533.6	554.3	540.5	545.3	602	
Final SH tube metal temp.	6	°C DL E61T15	434.4	433.3	441.0	446.1	461.7	452.8	472.8	602	
Final SH tube metal temp.	7	°C DL E61T16	530.9	529.8	533.2	534.8	534.4	517.3	523.0	602	
Final SH tube metal temp.	8	°C DL E61T17	518.0	515.0	518.4	518.9	523.1	507.7	509.4	602	
Final SH tube metal temp.	9	°C DL E61T18	521.7	523.2	521.2	521.5	515.2	502.8	507.3	602	
Final SH tube metal temp.	10	°C DL E61T19	514.0	515.9	515.6	516.3	516.6	503.5	506.9	602	
Final SH tube metal temp.	11	°C DL E61T20	523.8	527.0	524.5	522.4	535.3	522.5	531.5	602	
Final SH tube metal temp.	12	°C DL E61T21	508.7	511.1	508.7	507.0	516.9	507.1	511.4	602	
Final SH tube metal temp.	13	°C DL E61T22	549.8	554.1	550.2	551.8	564.5	559.4	571.9	602	
Final SH tube metal temp.	14	°C DL E61T23	530.3	534.1	530.0	530.0	539.4	535.2	541.7	602	
Final SH tube metal temp.	15	°C DL E61T24	550.9	555.0	554.4	554.9	550.4	538.5	547.1	602	
Final SH tube metal temp.	16	°C DL E61T25	532.2	536.5	534.5	534.2	530.3	520.0	525.2	602	

Test Number
 Date 7/25 7/25 7/25 7/25 7/25 7/25
 Time 08:30 09:00 10:00 10:30 13:45 14:15 15:15

BOILER METAL TEMPERATURE

(III-1)

Test Number	Item	Unit	Measuring Point	B-4		Recording	ANN	
				7/25	B-4		High	Low
				7/25	7/25			
Date				16:30	17:00			
Time								
	Div. wall out tube metal temp. 1	°C	DL E51T10	462.5	462.5		538	
	Div. wall out tube metal temp. 2	°C	DL E51T11	494.9	495.8		538	
	Div. wall out tube metal temp. 3	°C	DL E51T12	535.0	535.7		538	
	Div. wall out tube metal temp. 4	°C	DL E51T13	471.4	472.8		538	
	Div. wall out tube metal temp. 5	°C	DL E51T14	466.5	468.8		538	
	Div. wall out tube metal temp. 6	°C	DL E51T15	465.1	466.9		538	
	Div. wall out tube metal temp. 7	°C	DL E51T16	462.3	466.9		538	
	Div. wall out tube metal temp. 8	°C	DL E51T17	465.6	470.0		538	
	Div. wall out tube metal temp. 9	°C	DL E51T18	468.4	472.3		538	
	Div. wall out tube metal temp. 10	°C	DL E51T19	490.4	495.3		538	
	Final SH tube metal temp. 1	°C	DL E61T10	550.9	550.7		602	
	Final SH tube metal temp. 2	°C	DL E61T11	524.0	524.6		602	
	Final SH tube metal temp. 3	°C	DL E61T12	568.3	569.2		602	
	Final SH tube metal temp. 4	°C	DL E61T13	544.1	544.1		602	
	Final SH tube metal temp. 5	°C	DL E61T14	550.2	550.9		602	
	Final SH tube metal temp. 6	°C	DL E61T15	476.4	478.2		602	
	Final SH tube metal temp. 7	°C	DL E61T16	530.8	530.0		602	
	Final SH tube metal temp. 8	°C	DL E61T17	513.9	515.5		602	
	Final SH tube metal temp. 9	°C	DL E61T18	512.2	511.5		602	
	Final SH tube metal temp. 10	°C	DL E61T19	511.3	509.6		602	
	Final SH tube metal temp. 11	°C	DL E61T20	543.4	545.3		602	
	Final SH tube metal temp. 12	°C	DL E61T21	518.0	519.6		602	
	Final SH tube metal temp. 13	°C	DL E61T22	578.5	580.6		602	
	Final SH tube metal temp. 14	°C	DL E61T23	545.9	547.2		602	
	Final SH tube metal temp. 15	°C	DL E61T24	554.8	555.5		602	
	Final SH tube metal temp. 16	°C	DL E61T25	529.7	530.8		602	

Item	Unit	Measuring Point	Recording												ANN		
			B-0				B-1				B-3				High	Low	
Test Number			7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	B.E.T.
Date			08:30 09:00 10:00 10:30 13:45 14:15 15:15														
Time																	
RH out tube metal temp.	1	°C	DL E71T10	504.7	503.4	500.2	501.2	508.2	498.2	510.2							599
RH out tube metal temp.	2	°C	DL E71T11	485.7	484.6	481.0	481.2	487.8	479.2	491.2							599
RH out tube metal temp.	3	°C	DL E71T12	566.7	565.1	565.2	567.8	581.2	567.4	584.9							599
RH out tube metal temp.	4	°C	DL E71T13	548.1	547.0	548.3	550.4	562.2	550.9	563.9							599
RH out tube metal temp.	5	°C	DL E71T14	529.8	531.8	535.9	543.8	551.1	533.1	551.3							599
RH out tube metal temp.	6	°C	DL E71T15	529.6	531.8	535.9	543.6	553.7	534.0	549.6							599
RH out tube metal temp.	7	°C	DL E71T16	498.4	496.1	502.6	515.0	522.5	499.3	515.2							599
RH out tube metal temp.	8	°C	DL E71T17	476.1	470.3	480.8	489.9	496.7	486.0	497.6							599
RH out tube metal temp.	9	°C	DL E71T18	517.4	513.3	519.5	521.5	480.5	470.2	474.8							599
RH out tube metal temp.	10	°C	DL E71T19	494.0	489.3	496.7	498.8	459.9	455.7	458.8							599
RH out tube metal temp.	11	°C	DL E71T20	516.0	520.3	505.6	499.2	474.0	461.8	469.9							599
RH out tube metal temp.	12	°C	DL E71T21	502.4	505.8	490.9	484.7	456.1	447.7	454.1							599
RH out tube metal temp.	13	°C	DL E71T22	499.1	501.8	491.6	488.2	507.0	475.4	493.8							599
RH out tube metal temp.	14	°C	DL E71T23	480.8	483.0	472.3	468.7	485.9	459.2	474.6							599
RH out tube metal temp.	15	°C	DL E71T24	513.2	514.0	508.5	508.6	504.7	493.0	506.5							599
RH out tube metal temp.	16	°C	DL E71T25	513.4	516.8	517.4	519.9	535.4	511.3	540.0							599
RH out tube metal temp.	17	°C	DL E71T26	579.3	581.8	572.0	575.2	579.1	563.4	588.6							599
RH out tube metal temp.	18	°C	DL E71T27	567.4	570.7	562.9	567.5	574.6	557.0	582.7							599
RH out tube metal temp.	19	°C	DL E71T28	535.7	538.6	537.5	540.0	556.1	528.7	559.5							599
RH out tube metal temp.	20	°C	DL E71T29	519.7	520.3	515.0	515.7	511.0	501.7	514.7							599

Test Number	Date	Time	Item	Unit	Measuring Point		Recording	B.E.T.		ANN	
					B-4	B-4		High	Low		
						7/25	7/25				
						16:30	17:00				
			RH out tube metal temp.	°C	DL E71T10	511.2	495.2			599	
			RH out tube metal temp.	°C	DL E71T11	492.9	483.7			599	
			RH out tube metal temp.	°C	DL E71T12	603.2	594.0			599	
			RH out tube metal temp.	°C	DL E71T13	583.4	577.3			599	
			RH out tube metal temp.	°C	DL E71T14	567.0	556.2			599	
			RH out tube metal temp.	°C	DL E71T15	568.6	560.1			599	
			RH out tube metal temp.	°C	DL E71T16	529.9	517.7			599	
			RH out tube metal temp.	°C	DL E71T17	515.4	504.6			599	
			RH out tube metal temp.	°C	DL E71T18	486.1	472.0			599	
			RH out tube metal temp.	°C	DL E71T19	472.2	458.1			599	
			RH out tube metal temp.	°C	DL E71T20	474.8	462.8			599	
			RH out tube metal temp.	°C	DL E71T21	464.7	452.0			599	
			RH out tube metal temp.	°C	DL E71T22	500.8	493.1			599	
			RH out tube metal temp.	°C	DL E71T23	482.1	473.6			599	
			RH out tube metal temp.	°C	DL E71T24	521.5	514.9			599	
			RH out tube metal temp.	°C	DL E71T25	557.1	549.6			599	
			RH out tube metal temp.	°C	DL E71T26	617.3	611.4			599	
			RH out tube metal temp.	°C	DL E71T27	607.7	603.2			599	
			RH out tube metal temp.	°C	DL E71T28	579.2	572.1			599	
			RH out tube metal temp.	°C	DL E71T29	529.7	522.9			599	

FURNACE TEMPERATURE

(IV-1)

Item	Unit	Measuring Point	Recording			ANN High	ANN Low
			B-0	B-1	B-4		
Test Number			B-0	B-1	B-4		
Date			7/25	7/25	7/25		
Time			08:00	10:00	16:00		
3F Left near S/B C-3	°C	local	1,200	1,240	1,260		
3F Right near S/B C-1	°C	local	1,190	1,225	1,280		
3F Mezz. Rear Right near S/B F-2	°C	local	1,315	1,325	1,365		
3F Mezz. Rear Left near S/B F-5	°C	local	1,310	1,340	1,350		
4F Mezz. Right Rear near S/B D-2	°C	local	1,400	1,410	1,460		
4F Mezz. Left Rear near S/B D-7	°C	local	1,390	1,410	1,460		
5F Left Rear near S/B C-3	°C	local	1,365	1,400	1,440		
5F Right Rear near S/B C-2	°C	local	1,385	1,425	1,460		
7F Mezz. Front Right 2nd Port	°C	local	1,215	1,240	1,305		
7F Mezz. Front Center Port	°C	local	1,200	1,220	1,280		
7F Mezz. Front Left 2nd Port	°C	local	1,150	1,180	1,370		
8F Left near S/B 6-L	°C	local	1,055	1,090	1,160		
8F Right near S/B 6-R	°C	local	1,035	1,095	1,130		
8F Rear Left 2nd Port	°C	local	900	960	1,010		
9F Left near S/B 4-L	°C	local	920	945	1,010		
9F Right near S/B 4-R	°C	local	930	975	1,010		
9F Front Left 2nd Port	°C	local	900	960	1,035		
9F Front Center Port	°C	local	925	930	1,000		
9F Front Right 2nd Port	°C	local	900	935	1,025		

Item	Unit	Measuring Point	Recording				ANN High	ANN Low
			B-0	B-1	B-1	B-3		
Test Number			B-0	B-1	B-1	270MW	B-3	290MW
Date			7/25	7/25	7/25	7/25	7/25	7/25
Time			08:30	09:00	10:00	10:30	13:45	14:15 15:15
A-1 Air resistor open		local	4.7	4.8	4.9	4.8	4.8	4.8
A-2 Air resistor open		local	4.6	4.7	4.6	4.6	4.6	4.6
A-3 Air resistor open		local	4.3	4.2	4.1	4.2	4.2	4.2
A-4 Air resistor open		local	3.6	3.7	3.8	3.7	3.7	3.7
B-1 Air resistor open		local	5.0	5.0	5.0	5.0	5.0	5.0
B-2 Air resistor open		local	4.5	4.5	4.5	4.5	4.5	4.5
B-3 Air resistor open		local	4.6	4.8	4.9	4.8	4.8	4.8
B-4 Air resistor open		local	5.0	5.0	5.0	5.0	5.0	5.0
C-1 Air resistor open		local	4.8	4.9	4.9	4.8	4.8	4.8
C-2 Air resistor open		local	4.9	4.9	4.9	4.9	4.9	4.9
C-3 Air resistor open		local	5.0	5.0	5.0	5.0	5.0	5.0
C-4 Air resistor open		local	4.0	4.0	4.0	4.0	4.0	4.0
D-1 Air resistor open		local						
D-2 Air resistor open		local						
D-3 Air resistor open		local						
D-4 Air resistor open		local						
Airport damper open (Right)		local	5.2	5.2	5.2	5.2	5.2	5.2
Airport damper open (Left)		local	5.0	5.0	5.0	5.0	5.0	5.0

Test Number	Item	Unit	Measuring Point	Recording		ANN High	ANN Low
				B.E.T.	Point		
				B-4	B-4		
Date				7/25	7/25		
Time				16:30	17:00		
A-1	Air resistor open		local	4.8	4.8		
A-2	Air resistor open		local	4.6	4.6		
A-3	Air resistor open		local	4.2	4.2		
A-4	Air resistor open		local	3.7	3.7		
B-1	Air resistor open		local	5.0	5.0		
B-2	Air resistor open		local	4.5	4.5		
B-3	Air resistor open		local	4.8	4.8		
B-4	Air resistor open		local	5.0	5.0		
C-1	Air resistor open		local	4.8	4.8		
C-2	Air resistor open		local	4.9	4.9		
C-3	Air resistor open		local	5.0	5.0		
C-4	Air resistor open		local	4.0	4.0		
D-1	Air resistor open		local				
D-2	Air resistor open		local				
D-3	Air resistor open		local				
D-4	Air resistor open		local				
	Airport damper open (Right)		local	5.2	5.2		
	Airport damper open (Left)		local	5.0	5.0		

Item	Unit	Measuring Point	Recording								B.E.T.		ANN	
			B-0	B-0	B-1	B-1	B-1	B-1	B-3	B-3	High	Low	High	Low
Test Number			B-0	B-0	B-1	B-1	B-1	B-1	B-3	B-3	290MW			
Date			7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25			
Time			08:30	09:00	10:00	10:30	13:45	14:15	15:15					
Burner Barrel A-1	°C	DL B60T10	258.4	256.9	263.6	265.5	286.7	288.6	288.9	400				
Burner Barrel A-1	°C	DL B60T11	168.5	167.0	171.4	172.7	193.2	196.6	197.9	400				
Burner Barrel A-1	°C	DL B60T12	251.8	249.8	255.9	258.1	278.3	280.6	280.9	400				
Burner Barrel A-1	°C	DL B60T13	242.8	241.4	247.5	249.8	268.2	270.8	271.2	400				
Burner Barrel A-2	°C	DL B60T20	265.0	264.1	270.3	271.7	293.6	295.3	295.2	400				
Burner Barrel A-2	°C	DL B60T21	194.2	193.8	200.4	202.4	224.2	226.9	226.7	400				
Burner Barrel A-2	°C	DL B60T22	227.8	226.3	229.4	230.5	247.8	249.3	250.0	400				
Burner Barrel A-2	°C	DL B60T23	241.3	240.1	245.9	247.6	269.6	272.0	272.7	400				
Burner Barrel A-3	°C	DL B60T30	227.5	226.1	230.1	231.7	252.8	255.8	258.1	400				
Burner Barrel A-3	°C	DL B60T31	186.5	185.5	192.9	194.0	217.3	222.1	223.5	400				
Burner Barrel A-3	°C	DL B60T32	255.8	254.5	258.3	259.6	280.1	282.1	283.4	400				
Burner Barrel A-3	°C	DL B60T33	261.7	261.8	266.3	267.5	287.1	289.6	290.9	400				
Burner Barrel A-4	°C	DL B60T40	267.6	267.0	271.6	272.8	297.0	296.9	296.8	400				
Burner Barrel A-4	°C	DL B60T41	149.8	148.3	150.3	150.8	165.1	166.9	167.9	400				
Burner Barrel A-4	°C	DL B60T42	218.5	258.5	263.1	264.2	286.4	286.7	286.9	400				
Burner Barrel A-4	°C	DL B60T43	273.3	273.6	278.7	279.9	299.2	299.1	298.9	400				
Burner Barrel B-1	°C	DL B61T10	199.9	199.8	209.1	211.1	235.5	239.3	240.4	400				
Burner Barrel B-1	°C	DL B61T11	219.6	219.7	228.2	230.0	255.2	257.7	257.9	400				
Burner Barrel B-1	°C	DL B61T12	253.1	253.4	262.9	265.1	286.2	289.5	289.5	400				
Burner Barrel B-1	°C	DL B61T13	233.2	233.5	242.4	244.7	265.5	268.2	267.8	400				
Burner Barrel B-2	°C	DL B61T20	224.9	225.2	234.7	236.9	264.4	265.9	266.3	400				
Burner Barrel B-2	°C	DL B61T21	189.3	189.1	197.1	198.3	223.3	225.8	226.1	400				
Burner Barrel B-2	°C	DL B61T22	257.0	257.1	265.9	268.1	290.8	292.5	292.3	400				
Burner Barrel B-2	°C	DL B61T23	230.5	230.7	239.8	242.1	266.1	267.6	267.5	400				
Burner Barrel B-3	°C	DL B61T30	232.7	232.8	239.3	241.0	262.5	271.5	272.0	400				
Burner Barrel B-3	°C	DL B61T31	178.5	178.6	184.4	185.8	207.0	210.1	210.7	400				
Burner Barrel B-3	°C	DL B61T32	258.2	258.2	264.7	266.3	287.5	292.9	292.6	400				
Burner Barrel B-3	°C	DL B61T33	233.1	233.7	241.8	243.8	266.4	272.0	272.4	400				
Burner Barrel B-4	°C	DL B61T40	220.7	221.3	229.9	231.7	256.6	260.5	261.8	400				
Burner Barrel B-4	°C	DL B61T41	214.7	215.1	223.9	224.7	249.7	252.2	253.4	400				
Burner Barrel B-4	°C	DL B61T42	245.6	246.6	254.8	256.3	275.0	280.4	281.1	400				
Burner Barrel B-4	°C	DL B61T43	238.6	239.0	246.6	247.8	272.3	281.0	283.3	400				

Item	Unit	Measuring Point	Recording		ANN High	ANN Low
			B.E.T.	Point		
Test Number			B-4	B-4		
Date			7/25	7/25		
Time			16:30	17:00		
Burner Barrel A-1	°C	DL B60T10	289.8	287.6	400	400
Burner Barrel A-1	°C	DL B60T11	198.6	197.5	400	400
Burner Barrel A-1	°C	DL B60T12	281.2	279.1	400	400
Burner Barrel A-1	°C	DL B60T13	271.5	269.7	400	400
Burner Barrel A-2	°C	DL B60T20	295.1	292.9	400	400
Burner Barrel A-2	°C	DL B60T21	228.2	226.4	400	400
Burner Barrel A-2	°C	DL B60T22	250.1	248.4	400	400
Burner Barrel A-2	°C	DL B60T23	273.0	270.9	400	400
Burner Barrel A-3	°C	DL B60T30	257.1	255.1	400	400
Burner Barrel A-3	°C	DL B60T31	221.8	220.0	400	400
Burner Barrel A-3	°C	DL B60T32	281.7	279.2	400	400
Burner Barrel A-3	°C	DL B60T33	289.1	286.8	400	400
Burner Barrel A-4	°C	DL B60T40	293.6	291.1	400	400
Burner Barrel A-4	°C	DL B60T41	167.8	166.4	400	400
Burner Barrel A-4	°C	DL B60T42	284.1	281.7	400	400
Burner Barrel A-4	°C	DL B60T43	296.5	293.9	400	400
Burner Barrel B-1	°C	DL B61T10	241.4	240.5	400	400
Burner Barrel B-1	°C	DL B61T11	258.3	256.9	400	400
Burner Barrel B-1	°C	DL B61T12	288.6	286.8	400	400
Burner Barrel B-1	°C	DL B61T13	267.6	266.3	400	400
Burner Barrel B-2	°C	DL B61T20	267.1	265.7	400	400
Burner Barrel B-2	°C	DL B61T21	226.8	225.3	400	400
Burner Barrel B-2	°C	DL B61T22	291.9	290.0	400	400
Burner Barrel B-2	°C	DL B61T23	268.3	267.2	400	400
Burner Barrel B-3	°C	DL B61T30	269.3	267.0	400	400
Burner Barrel B-3	°C	DL B61T31	209.7	208.3	400	400
Burner Barrel B-3	°C	DL B61T32	288.4	286.2	400	400
Burner Barrel B-3	°C	DL B61T33	270.1	267.7	400	400
Burner Barrel B-4	°C	DL B61T40	259.6	258.2	400	400
Burner Barrel B-4	°C	DL B61T41	251.0	249.4	400	400
Burner Barrel B-4	°C	DL B61T42	277.7	275.9	400	400
Burner Barrel B-4	°C	DL B61T43	287.6	279.7	400	400

Test Number	Item	Unit	Measuring Point	Recording										B.E.T.		ANN	ANN
				B-0	B-0	B-1	B-1	B-1	B-1	B-1	B-1	B-1	B-1	B-1	B-1	B-1	B-1
				7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25	7/25		
				08:30	09:00	10:00	10:30	13:45	14:15	15:15							
Burner Barrel C-1	DL B62T10	°C		229.4	230.1	238.8	240.8	265.3	268.5	267.4							
Burner Barrel C-1	DL B62T11	°C		223.0	223.0	232.2	233.8	259.2	262.2	261.8							
Burner Barrel C-1	DL B62T12	°C		230.4	230.9	240.8	242.8	269.3	272.3	271.3							
Burner Barrel C-1	DL B62T13	°C		222.3	223.4	232.9	234.6	261.0	264.1	263.1							
Burner Barrel C-2	DL B62T20	°C		252.6	254.1	263.7	264.7	290.2	291.7	291.1							
Burner Barrel C-2	DL B62T21	°C		200.9	200.8	208.8	210.7	234.6	236.7	237.2							
Burner Barrel C-2	DL B62T22	°C		236.8	238.4	247.9	249.2	275.7	277.8	277.2							
Burner Barrel C-2	DL B62T23	°C		283.8	285.1	294.8	296.6	317.2	317.5	315.6							
Burner Barrel C-3	DL B62T30	°C		43.9	43.0	43.9	44.0	46.0	48.3	47.8							
Burner Barrel C-3	DL B62T31	°C		52.9	53.2	52.7	54.3	58.1	60.5	58.1							
Burner Barrel C-3	DL B62T32	°C		269.0	269.9	279.4	280.6	305.8	306.3	305.3							
Burner Barrel C-3	DL B62T33	°C		218.9	220.0	227.2	228.0	251.6	252.9	252.8							
Burner Barrel C-4	DL B62T40	°C		229.4	230.7	239.4	241.1	269.3	269.6	270.1							
Burner Barrel C-4	DL B62T41	°C		229.4	230.0	238.4	240.0	266.4	267.4	268.7							
Burner Barrel C-4	DL B62T42	°C		238.2	239.2	248.5	249.9	277.1	277.8	277.7							
Burner Barrel C-4	DL B62T43	°C		252.1	253.7	263.0	264.5	291.9	291.6	291.4							
Burner Barrel D-1	DL B63T10	°C		314.7	318.5	330.7	334.5	353.8	352.1	347.8							
Burner Barrel D-1	DL B63T11	°C		281.2	281.0	289.6	292.0	314.1	315.4	313.5							
Burner Barrel D-1	DL B63T12	°C		309.6	334.9	347.3	351.8	359.1	356.6	352.8							
Burner Barrel D-1	DL B63T13	°C		331.4	336.9	350.1	354.4	371.1	367.8	363.2							
Burner Barrel D-2	DL B63T20	°C		327.2	332.3	344.8	349.3	366.7	363.3	359.4							
Burner Barrel D-2	DL B63T21	°C		264.3	262.9	271.2	273.6	301.4	304.4	303.4							
Burner Barrel D-2	DL B63T22	°C		357.0	363.8	376.2	380.8	387.5	381.5	375.4							
Burner Barrel D-2	DL B63T23	°C		326.6	330.2	342.7	346.1	364.8	361.3	356.9							
Burner Barrel D-3	DL B63T30	°C		-	-	-	-	-	-	-							
Burner Barrel D-3	DL B63T31	°C		262.9	261.5	270.0	272.2	299.5	301.8	300.6							
Burner Barrel D-3	DL B63T32	°C		310.5	313.9	324.1	326.8	341.6	339.8	336.0							
Burner Barrel D-3	DL B63T33	°C		341.1	346.5	358.9	362.3	376.1	369.5	364.2							
Burner Barrel D-4	DL B63T40	°C		321.0	325.3	336.8	339.2	356.5	362.2	347.9							
Burner Barrel D-4	DL B63T41	°C		274.8	275.4	284.1	285.9	308.9	307.9	303.6							
Burner Barrel D-4	DL B63T42	°C		345.4	352.0	365.3	367.6	379.8	372.8	367.1							
Burner Barrel D-4	DL B63T43	°C		316.7	320.7	333.1	335.4	356.3	352.2	348.3							

Item	Unit	Measuring Point	Recording		ANN	
			B-4	B-4	High	Low
Test Number			B-4	B-4	ANN	ANN
Date			7/25	7/25		
Time			16:30	17:00		
Burner Barrel C-1	°C	DL B62T10	267.5	265.7	400	400
Burner Barrel C-1	°C	DL B62T11	261.7	259.9	400	400
Burner Barrel C-1	°C	DL B62T12	271.4	269.4	400	400
Burner Barrel C-1	°C	DL B62T13	263.3	261.5	400	400
Burner Barrel C-2	°C	DL B62T20	291.0	288.7	400	400
Burner Barrel C-2	°C	DL B62T21	237.1	235.2	400	400
Burner Barrel C-2	°C	DL B62T22	277.1	274.5	400	400
Burner Barrel C-2	°C	DL B62T23	314.8	313.0	400	400
Burner Barrel C-3	°C	DL B62T30	51.1	48.7	400	400
Burner Barrel C-3	°C	DL B62T31	62.4	59.7	400	400
Burner Barrel C-3	°C	DL B62T32	302.1	299.5	400	400
Burner Barrel C-3	°C	DL B62T33	251.9	249.1	400	400
Burner Barrel C-4	°C	DL B62T40	267.7	265.4	400	400
Burner Barrel C-4	°C	DL B62T41	265.3	263.3	400	400
Burner Barrel C-4	°C	DL B62T42	274.9	272.6	400	400
Burner Barrel C-4	°C	DL B62T43	288.4	286.2	400	400
Burner Barrel D-1	°C	DL B63T10	347.1	345.3	400	400
Burner Barrel D-1	°C	DL B63T11	313.2	311.1	400	400
Burner Barrel D-1	°C	DL B63T12	351.0	349.3	400	400
Burner Barrel D-1	°C	DL B63T13	362.3	360.4	400	400
Burner Barrel D-2	°C	DL B63T20	358.2	356.2	400	400
Burner Barrel D-2	°C	DL B63T21	303.0	300.6	400	400
Burner Barrel D-2	°C	DL B63T22	378.5	373.0	400	400
Burner Barrel D-2	°C	DL B63T23	355.2	353.0	400	400
Burner Barrel D-3	°C	DL B63T30	-	-	400	400
Burner Barrel D-3	°C	DL B63T31	299.5	296.8	400	400
Burner Barrel D-3	°C	DL B63T32	331.4	329.0	400	400
Burner Barrel D-3	°C	DL B63T33	359.9	358.3	400	400
Burner Barrel D-4	°C	DL B63T40	341.9	340.0	400	400
Burner Barrel D-4	°C	DL B63T41	299.7	297.1	400	400
Burner Barrel D-4	°C	DL B63T42	361.6	359.6	400	400
Burner Barrel D-4	°C	DL B63T43	342.6	340.8	400	400

Combustion Test of Calaca Unit I Boiler

(I-1)

Item	Unit	Measuring Point	Recording			ANN High	ANN Low
			D-0	D-1	D-2		
Test Number							
Date			7/26	7/26	7/26		
Time			09:00	10:45	11:45	14:30	
Coal blend ratio (S/A)							
Generator load	MW	DL Q20W10	221.2	220	216.8	223	300
Main steam flow	T/H	DL G21H10	705	687	716	694	913.3
Feed water flow	T/H	DL E15F10	647	619	639	628	881.5
SH spray flow	T/H	DL E55F10	55.3	66.2	61.2	65.6	56.4
Drum level	mm	DL E20L10	20.1	26.6	20.6	24.1	-11.7 127 -203
Drum pressure	kg/cm ²	DL E20P10	174.4	172.9	171.7	174.8	187.2 200
Main steam pressure	kg/cm ²	CRT	-	-	-	-	
Turbine inlet steam press.	kg/cm ²	DL G21P10	166.9	165.5	164.3	167.5	171
Final SH outlet temperature	°C	DL E60T10	539.2	544.2	539.5	540.8	542.5
Main steam temperature	°C	CRT	-	-	-	-	
RH outlet temperature	°C	DL E74T10	532.2	537.8	528.8	536	541.6
Eco. inlet feedwater temp.	°C	DL E10T10A	258.1	257.6	257.3	257.6	
A Hot primary air flow	T/H	DL A42F10	151	154	154	148	
B Hot primary air flow	T/H	DL A46F10	153	164	163	159	
A Tempering air flow	T/H	DL A42F20	0	0	0	0	
B Tempering air flow	T/H	DL A46F20	27	21	23	32	
A Secondary air flow	T/H	DL A52F10	232	238	252	242	
B Secondary air flow	T/H	DL A52F10	256	260	285	272	
Total air flow	T/H	DL A60G10	819	837	885	854	
Boiler exit gas O ₂ (A)	%	DL A80C10	2.77	3.27	3.91	3.07	- 5.88 2.94
Boiler exit gas O ₂ (B)	%	DL A80C20	-	-	-	-	3.22 5.88 2.94
Total fuel flow	T/H	DL B10G10A	127.06	130.33	129.72	128.44	110.4
A FDF discharge draft	mmAq	DL A12F10	33.5	33.3	38.5	49.6	233.7
B FDF discharge draft	mmAq	DL A16F10	30.8	32.0	36.7	46.7	231.1
Wind box draft	mmAq	DL A70F10	0.9	-0.9	-3.7	11.1	114.3
Furnace draft	mmAq	DL A80F10	-6.3	-8.5	-14.3	-7.1	-20.3

Item	Unit	Measuring Point	Recording			ANN High	ANN Low
			D-0	D-1	D-2		
Test Number							
Date			7/26	7/26	7/26		
Time			09:00	10:45	11:45	14:30	
A Lower Eco outlet draft	mmAq	DL E10F10	-59.6	-65.8	-73.3	-59.2	-94
B Lower Eco outlet draft	mmAq	DL E10F20	-57.6	-64.2	-72.5	-59	-96.5
A AH gas side diff. press.	mmAq	DL A53D10	91.6	88.9	93.1	97.7	119.4
B AH gas side diff. press.	mmAq	DL A57D10	82.6	85.7	90.1	90.1	114.3
Primary air press.	mmAq	DL A40P10	1,501	1,498	1,490	1,495	1,496.2
A IDF inlet draft	mmAq	DL A22F10	-199.5	-209.6	-226.7	-212.6	-297.2
B IDF inlet draft	mmAq	DL A26F10	-196.2	-206.5	-224.0	-209.3	-294.6
A AH inlet air temp.	°C	DL A52T10	36.2	36.4	36.6	36.5	35.1
B AH inlet air temp.	°C	DL A56T10	36.4	36.4	36.7	36.8	33.9
A AH outlet air temp.	°C	DL A52T20	304.6	310.1	313.0	313.9	338.3
B AH outlet air temp.	°C	DL A56T20	300.7	307.6	311.4	311.6	337.4
A AH inlet gas temp.	°C	DL A53T10	331.4	339.2	341.3	342.7	365.4
B AH inlet gas temp.	°C	DL A57T10	326.1	336.2	339.3	339.9	367.9
A AH outlet gas temp.	°C	DL A53T20	131.3	132.3	135.1	134.3	147.4
B AH outlet gas temp.	°C	DL A57T20	138.1	129.6	142.6	141.6	150.3
A Precip outlet gas temp.	°C	DL C10T10	126.8	128.4	130.1	130.2	143.6
B Precip outlet gas temp.	°C	DL C10T20	132.4	133.9	135.2	135.7	144.4
A IDF motor amp.	A	CR indicator	217.5	220	220	220	236
B IDF motor amp.	A	CR indicator	217.5	217.5	220	217.5	230
A FDF motor amp.	A	CR indicator	70	72.5	72.5	72.5	85
B FDF motor amp.	A	CR indicator	70	70	72.5	72.5	86
A Pri. air fan motor amp.	A	CR indicator	240	240	240	237.5	183
B Pri. air fan motor amp.	A	CR indicator	237.5	240	240	237.5	196
A IDF inlet vane open	%	CR controller	57.5	60	60	60	70
B IDF inlet vane open	%	CR controller	65	65	67.5	65	73
A FDF inlet vane open	%	CR controller	45	45	50	50	74
B FDF inlet vane open	%	CR controller	45	45	50	47.5	70
SH pass damper open	%	CR controller	55	70	65	65	74
RH pass damper open	%	CR controller	62.5	47.5	52.5	55	75
Pri. air capacity damper open	%	CR controller	95	95	95	95	95
O ₂ analysis by Orsat (A)	%						
O ₂ analysis by Orsat (B)	%						

Item	Unit	Measuring Point	Recording			B.E.T.	ANN High	ANN Low
			D-0	D-1	D-2			
Test Number								
Date			7/26	7/26	7/26			
Time			09:00	10:45	11:45	14:30		
A Mill coal fineness								
A Mill coal feeder flow	%	T/H DL B11F10	42.26	43.70	43.74	42.63	36.7	
A Mill inlet air temp.	°C	DL B13T10	271	302	300	271	196.2	
A Mill air coal outlet temp.	°C	DL B13T20	69	71	70	69	77.9	
A Mill diff. draft	mmAq	CR indicator	540	530	540	540	527.8	
A Mill primary air flow	T/H	DL B13F10	94.2	101.6	102.8	101.8	86.0	31.3
A Mill hot air damper open	%	local	42	97	64	40		
A Mill cold air damper open	%	local	12	2	8	12		
A Mill capacity damper open	%	local	46	47	54	65		
A Mill motor amp.	A	CR indicator	70	70	70	70	86	
A Mill classifier open	%						60	
B Mill coal fineness								
B Mill coal feeder flow	%	T/H DL B21F10	42.30	43.22	43.11	42.82	36.0	
B Mill inlet air temp.	°C	DL B23T10	273	282	287	288	174.6	
B Mill air coal outlet temp.	°C	DL B23T20	67	67	69	70	78.9	
B Mill differential draft	mmAq	CR indicator	600	600	600	600	500.0	
B Mill primary air flow	T/H	DL B23F10	102.7	105.0	104.0	102.0	86.7	31.3
B Mill hot air damper open	%	local	97	97	97	97		
B Mill cold air damper open	%	local	2	2	2	2	40	
B Mill capacity damper open	%	local	53	47	58	58		
B Mill motor amp.	A	CR indicator	65	75	72.5	72.5	90	
B Mill classifier open	%						60	

Item	Unit	Measuring Point	Recording						ANN High	ANN Low
			D-0	D-1	D-2	D-3	B.E.T.			
Test Number			D-0	D-1	D-2	D-3				
Date			7/26	7/26	7/26	7/26				
Time			09:00	10:45	11:45	14:30				
C Mill coal fineness	%									
C Mill coal feeder flow	T/H	DL B31F10	42.34	43.46	43.42	43.02	37.1			
C Mill inlet air temp.	°C	DL B33T10	263	269	273	272	174.2			
C Mill air coal outlet temp.	°C	DL B33T20	65	65	66	66	80.0			
C Mill differential draft	mmAq	CR indicator	580	580	580	580	507.4			
C Mill primary air flow	T/H	DL B33F10	96.8	101.4	103.1	98.1	82.5	31.3		
C Mill hot air damper open	%	local	97	97	97	97				
C Mill cold air damper open	%	local	2	2	2	2	62			
C Mill capacity damper open	%	local	47	47	48	48				
C Mill motor amp.	A	CR indicator	65	70	75	75	92			
C Mill classifier open	%						60			
D Mill coal fineness	%									
D Mill coal feeder flow	T/H	DL B41F10								
D Mill inlet air temp.	°C	DL B43T10								
D Mill air coal outlet temp.	°C	DL B43T20								
D Mill differential draft	mmAq	CR indicator								
D Mill primary air flow	T/H	DL B43F10						31.3		
D Mill hot air damper open	%	local								
D Mill cold air damper open	%	local								
D Mill capacity damper open	%	local								
D Mill motor amp.	A	CR indicator								
D Mill classifier open	%									

Item	Unit	Measuring Point	Recording				B.E.T.	ANN High	ANN Low
			D-0	D-1	D-2	D-3			
Test Number									
Date			7/26	7/26	7/26	7/26			
Time			09:00	10:45	11:45	14:30			
A Mill hot air damper open	%	local	42	97	64	40			
A Mill cold air damper open	%	local	12	2	8	12			
A Mill capacity damper open	%	local	46	47	54	65			
A Mill classifier vane open	%	local							
B Mill hot air damper open	%	local	97	97	97	97			
B Mill cold air damper open	%	local	2	2	2	2			
B Mill capacity damper open	%	local	53	47	58	58			
B Mill classifier vane open	%	local							
C Mill hot air damper open	%	local	97	97	97	97			
C Mill cold air damper open	%	local	2	2	2	2			
C Mill capacity damper open	%	local	47	47	48	48			
C Mill classifier vane open	%	local							
D Mill hot air damper open	%	local							
D Mill cold air damper open	%	local							
D Mill capacity damper open	%	local							
D Mill classifier vane open	%	local							

A-644

BOILER METAL TEMPERATURE

(III-1)

Item	Unit	Measuring Point	Recording			ANN High	ANN Low
			D-0	D-1	D-2		
Test Number							
Date			7/26	7/26	7/26		
Time			09:00	10:45	11:45	14:30	
Div. wall out tube metal temp. 1	°C	DL E51T10	441.0	458.6	452.6	455.5	538
Div. wall out tube metal temp. 2	°C	DL E51T11	470.6	487.7	494.0	484.1	538
Div. wall out tube metal temp. 3	°C	DL E51T12	523.7	535.4	526.8	529.9	538
Div. wall out tube metal temp. 4	°C	DL E51T13	450.4	469.9	465.8	465.1	538
Div. wall out tube metal temp. 5	°C	DL E51T14	442.2	462.6	453.3	458.3	538
Div. wall out tube metal temp. 6	°C	DL E51T15	461.5	479.0	472.5	479.6	538
Div. wall out tube metal temp. 7	°C	DL E51T16	443.1	463.1	458.0	457.6	538
Div. wall out tube metal temp. 8	°C	DL E51T17	458.4	475.7	468.6	471.9	538
Div. wall out tube metal temp. 9	°C	DL E51T18	452.8	471.5	470.0	463.0	538
Div. wall out tube metal temp. 10	°C	DL E51T19	481.6	498.0	496.2	488.5	538
Final SH tube metal temp. 1	°C	DL E61T10	531.4	540.9	535.6	535.2	602
Final SH tube metal temp. 2	°C	DL E61T11	510.3	517.5	515.0	515.7	602
Final SH tube metal temp. 3	°C	DL E61T12	544.0	558.3	552.3	547.4	602
Final SH tube metal temp. 4	°C	DL E61T13	526.0	534.6	531.7	528.9	602
Final SH tube metal temp. 5	°C	DL E61T14	533.5	547.0	535.4	589.2	602
Final SH tube metal temp. 6	°C	DL E61T15	442.2	461.9	449.0	455.4	602
Final SH tube metal temp. 7	°C	DL E61T16	528.5	540.2	531.6	533.3	602
Final SH tube metal temp. 8	°C	DL E61T17	514.5	523.4	518.3	519.7	602
Final SH tube metal temp. 9	°C	DL E61T18	523.6	523.1	525.5	527.2	602
Final SH tube metal temp. 10	°C	DL E61T19	517.8	515.6	521.8	519.5	602
Final SH tube metal temp. 11	°C	DL E61T20	526.0	525.9	525.8	527.9	602
Final SH tube metal temp. 12	°C	DL E61T21	509.9	506.1	509.7	507.1	602
Final SH tube metal temp. 13	°C	DL E61T22	553.7	560.7	551.9	555.0	602
Final SH tube metal temp. 14	°C	DL E61T23	530.1	532.1	531.0	529.2	602
Final SH tube metal temp. 15	°C	DL E61T24	546.9	551.1	543.0	549.6	602
Final SH tube metal temp. 16	°C	DL E61T25	527.9	527.7	525.6	526.1	602

Item	Unit	Measuring Point	Recording			B.E.T.	ANN High	ANN Low
			D-0	D-1	D-2			
Test Number								
Date			7/26	7/26	7/26	7/26		
Time			09:00	10:45	11:45	14:30		
RH out tube metal temp.	°C	DL E71T10	492.5	494.8	489.8	493.1	599	
RH out tube metal temp.	°C	DL E71T11	473.8	476.8	472.6	474.8	599	
RH out tube metal temp.	°C	DL E71T12	563.4	577.0	556.8	558.7	599	
RH out tube metal temp.	°C	DL E71T13	541.8	555.8	537.4	539.7	599	
RH out tube metal temp.	°C	DL E71T14	546.0	555.8	529.6	555.2	599	
RH out tube metal temp.	°C	DL E71T15	542.0	553.0	527.7	550.7	599	
RH out tube metal temp.	°C	DL E71T16	502.9	510.1	499.8	509.0	599	
RH out tube metal temp.	°C	DL E71T17	480.1	486.4	473.6	484.1	599	
RH out tube metal temp.	°C	DL E71T18	505.4	503.5	506.0	512.5	599	
RH out tube metal temp.	°C	DL E71T19	479.4	478.7	485.3	488.8	599	
RH out tube metal temp.	°C	DL E71T20	505.7	501.2	509.5	516.3	599	
RH out tube metal temp.	°C	DL E71T21	490.0	486.2	499.4	505.3	599	
RH out tube metal temp.	°C	DL E71T22	494.9	491.1	495.2	498.7	599	
RH out tube metal temp.	°C	DL E71T23	475.6	472.8	478.7	481.8	599	
RH out tube metal temp.	°C	DL E71T24	514.8	518.8	509.7	517.0	599	
RH out tube metal temp.	°C	DL E71T25	524.0	530.2	525.2	524.0	599	
RH out tube metal temp.	°C	DL E71T26	590.2	595.8	587.1	586.2	599	
RH out tube metal temp.	°C	DL E71T27	577.7	584.9	576.1	575.2	599	
RH out tube metal temp.	°C	DL E71T28	548.4	552.8	546.7	544.4	599	
RH out tube metal temp.	°C	DL E71T29	521.9	527.2	519.5	525.9	599	

FURNACE TEMPERATURE

(IV-1)

Item	Unit	Measuring Point	Recording		ANN High	ANN Low
			D-0	D-5		
Test Number						
Date			7/26	7/26		
Time			09:30	14:45		
3F Left near S/B C-3	°C	Local	1,275	1,205		
3F Right near S/B C-1	°C	Local	1,285	1,215		
3F Mezz. Rear Right near S/B F-2	°C	Local	1,290	1,280		
3F Mezz. Rear Left near S/B F-5	°C	Local	1,300	1,320		
4F Mezz. Right Rear near S/B D-2	°C	Local	1,370	1,370		
4F Mezz. Left Rear near S/B D-7	°C	Local	1,330	1,355		
5F Left Rear near S/B C-3	°C	Local	1,330	1,320		
5F Right Rear near S/B C-2	°C	Local	1,370	1,345		
7F Mezz. Front Right 2nd Port	°C	Local	1,215	1,180		
7F Mezz. Front Center Port	°C	Local	1,200	1,235		
7F Mezz. Front Left 2nd Port	°C	Local	1,175	1,210		
8F Left near S/B 6-L	°C	Local	1,050	1,075		
8F Right near S/B 6-R	°C	Local	1,075	1,060		
8F Rear Left 2nd Port	°C	Local	920	920		
9F Left near S/B 4-L	°C	Local	975	980		
9F Right near S/B 4-R	°C	Local	980	1,010		
9F Front Left 2nd Port	°C	Local	950	960		
9F Front Center Port	°C	Local	945	960		
9F Front Right 2nd Port	°C	Local	970	980		

Item	Unit	Measuring Point	Recording			B.E.T. High	ANN Low
			D-0	D-1	D-2		
Test Number			D-0	D-1	D-2	D-3	
Date			7/26	7/26	7/26	7/26	
Time			09:00	10:45	11:45	14:30	
A-1 Air resistor open		local	4.9	4.9	4.9	4.9	
A-2 Air resistor open		local	4.8	4.8	4.8	4.8	
A-3 Air resistor open		local	4.0	4.0	4.0	4.0	
A-4 Air resistor open		local	3.6	3.6	3.6	4.6	
B-1 Air resistor open		local	5.0	5.0	5.0	5.0	
B-2 Air resistor open		local	4.5	4.5	4.5	4.5	
B-3 Air resistor open		local	4.8	4.8	4.8	4.8	
B-4 Air resistor open		local	5.0	5.0	5.0	5.0	
C-1 Air resistor open		local	5.0	5.0	5.0	5.0	
C-2 Air resistor open		local	5.0	5.0	5.0	5.0	
C-3 Air resistor open		local	5.0	5.0	5.0	5.0	
C-4 Air resistor open		local	4.0	4.0	4.0	4.0	
D-1 Air resistor open		local	0.0	0.0	0.0	0.0	
D-2 Air resistor open		local	0.5	0.5	0.5	0.5	
D-3 Air resistor open		local	1.0	1.0	1.0	1.0	
D-4 Air resistor open		local	1.0	1.0	1.0	1.0	
Airport damper open (Right)		local	4.5	4.5	4.5	2.5	
Airport damper open (Left)		local	5.5	5.5	5.5	2.5	

Item	Unit	Measuring Point	Recording			ANN High	ANN Low
			D-0	D-1	D-2		
Test Number			7/26	7/26	7/26	7/26	
Date			09:00	10:45	11:45	14:30	
Time							
Burner Barrel A-1	°C	DL B60T10	260.0	268.7	270.3	273.6	400
Burner Barrel A-1	°C	DL B60T11	172.4	176.6	179.2	180.3	400
Burner Barrel A-1	°C	DL B60T12	251.5	260.8	262.8	265.5	400
Burner Barrel A-1	°C	DL B60T13	242.9	252.9	254.9	257.5	400
Burner Barrel A-2	°C	DL B60T20	265.2	274.8	276.7	278.7	400
Burner Barrel A-2	°C	DL B60T21	196.0	200.4	204.2	203.5	400
Burner Barrel A-2	°C	DL B60T22	224.2	233.0	234.2	236.4	400
Burner Barrel A-2	°C	DL B60T23	239.8	249.4	251.3	253.8	400
Burner Barrel A-3	°C	DL B60T30	227.0	238.6	242.1	240.9	400
Burner Barrel A-3	°C	DL B60T31	192.3	198.4	202.5	202.4	400
Burner Barrel A-3	°C	DL B60T32	255.1	266.9	270.1	270.0	400
Burner Barrel A-3	°C	DL B60T33	263.7	274.8	277.5	277.1	400
Burner Barrel A-4	°C	DL B60T40	266.9	277.4	279.5	281.2	400
Burner Barrel A-4	°C	DL B60T41	150.7	154.3	155.7	156.7	400
Burner Barrel A-4	°C	DL B60T42	258.6	267.9	270.5	272.3	400
Burner Barrel A-4	°C	DL B60T43	274.5	282.5	283.4	285.6	400
Burner Barrel B-1	°C	DL B61T10	206.6	210.8	215.3	218.9	400
Burner Barrel B-1	°C	DL B61T11	222.8	227.7	232.3	233.5	400
Burner Barrel B-1	°C	DL B61T12	258.9	264.5	269.0	271.7	400
Burner Barrel B-1	°C	DL B61T13	237.3	242.0	246.6	249.2	400
Burner Barrel B-2	°C	DL B61T20	243.3	246.9	250.2	252.5	400
Burner Barrel B-2	°C	DL B61T21	193.3	197.7	202.7	204.3	400
Burner Barrel B-2	°C	DL B61T22	270.3	274.8	277.3	279.5	400
Burner Barrel B-2	°C	DL B61T23	243.3	246.9	249.9	252.6	400
Burner Barrel B-3	°C	DL B61T30	245.6	250.0	253.4	256.2	400
Burner Barrel B-3	°C	DL B61T31	180.5	185.2	190.0	191.6	400
Burner Barrel B-3	°C	DL B61T32	268.2	273.4	276.1	278.5	400
Burner Barrel B-3	°C	DL B61T33	242.6	246.8	250.2	253.4	400
Burner Barrel B-4	°C	DL B61T40	228.6	234.1	239.1	242.2	400
Burner Barrel B-4	°C	DL B61T41	218.2	224.1	229.8	230.2	400
Burner Barrel B-4	°C	DL B61T42	251.5	258.1	262.3	264.8	400
Burner Barrel B-4	°C	DL B61T43	251.6	256.2	260.1	262.3	400

Item	Unit	Measuring Point	Recording			B.E.T.	ANN High	ANN Low
			D-0	D-1	D-2			
Test Number								
Date			7/26	7/26	7/26	7/26		
Time			09:00	10:45	11:45	14:30		
Burner Barrel C-1	°C	DL B62T10	232.1	237.6	241.0	243.2	400	
Burner Barrel C-1	°C	DL B62T11	226.9	232.0	236.3	236.3	400	
Burner Barrel C-1	°C	DL B62T12	234.3	239.4	243.8	246.2	400	
Burner Barrel C-1	°C	DL B62T13	224.7	230.3	234.1	236.1	400	
Burner Barrel C-2	°C	DL B62T20	260.2	266.5	267.9	270.1	400	
Burner Barrel C-2	°C	DL B62T21	203.8	207.7	211.3	209.8	400	
Burner Barrel C-2	°C	DL B62T22	242.5	248.9	251.3	255.1	400	
Burner Barrel C-2	°C	DL B62T23	287.5	293.2	294.7	291.1	400	
Burner Barrel C-3	°C	DL B62T30	41.7	43.2	43.4	43.4	400	
Burner Barrel C-3	°C	DL B62T31	51.1	51.2	51.9	53.2	400	
Burner Barrel C-3	°C	DL B62T32	279.4	284.4	286.1	289.1	400	
Burner Barrel C-3	°C	DL B62T33	226.8	229.3	230.3	232.4	400	
Burner Barrel C-4	°C	DL B62T40	233.9	240.5	245.0	247.0	400	
Burner Barrel C-4	°C	DL B62T41	233.7	239.9	244.5	244.7	400	
Burner Barrel C-4	°C	DL B62T42	242.9	249.2	253.6	255.6	400	
Burner Barrel C-4	°C	DL B62T43	257.6	264.4	268.4	270.1	400	
Burner Barrel D-1	°C	DL B63T10	322.1	328.6	325.5	333.4	400	
Burner Barrel D-1	°C	DL B63T11	285.5	290.3	293.1	293.3	400	
Burner Barrel D-1	°C	DL B63T12	327.7	335.9	332.7	336.9	400	
Burner Barrel D-1	°C	DL B63T13	337.6	345.4	341.5	348.3	400	
Burner Barrel D-2	°C	DL B63T20	332.4	340.2	336.3	342.9	400	
Burner Barrel D-2	°C	DL B63T21	271.0	275.7	279.4	281.3	400	
Burner Barrel D-2	°C	DL B63T22	348.2	350.0	360.3	358.8	400	
Burner Barrel D-2	°C	DL B63T23	330.9	338.3	337.2	341.9	400	
Burner Barrel D-3	°C	DL B63T30	-	-	-	-	400	
Burner Barrel D-3	°C	DL B63T31	268.2	273.2	276.9	277.8	400	
Burner Barrel D-3	°C	DL B63T32	310.3	317.9	319.0	318.7	400	
Burner Barrel D-3	°C	DL B63T33	340.6	349.8	347.9	350.9	400	
Burner Barrel D-4	°C	DL B63T40	324.7	334.0	334.6	337.3	400	
Burner Barrel D-4	°C	DL B63T41	278.3	284.4	287.5	289.1	400	
Burner Barrel D-4	°C	DL B63T42	348.8	359.8	357.5	361.5	400	
Burner Barrel D-4	°C	DL B63T43	324.1	332.3	331.8	340.6	400	

Combustion Test of Calaca Unit I Boiler

(I-1)

Item	Unit	Measuring Point	Recording				B.E.T.	ANN High	ANN Low
			E-1	E-2	E-3(a)	E-4(a)			
Test Number			8/6	8/6	8/6	8/6			
Date			08:30	11:30	14:30	16:30			
Time									
Coal blend ratio	(S/A)								
Generator load	MW	DL Q20W10	226.4	300.5	299.3	290.0	300		
Main steam flow	T/H	DL G21H10	733	893	940	910	913.3		
Feed water flow	T/H	DL E15F10	662	806	836	820	881.5		
SH spray flow	T/H	DL E55F10	63.0	87.1	90.0	88.2	56.4		
Drum level	mm	DL E20L10	-1.6	11.1	7.8	8.8	-11.7	127 -203	
Drum pressure	kg/cm ²	DL E20P10	175.1	176.8	181.8	177.2	187.2	200	
Turbine inlet steam press.	kg/cm ²	DL G21P10	167.2	163.5	168.4	163.7		171	
Final SH outlet temperature	°C	DL E60T10	535.8	558.6	548.9	547.7	542.5		
RH outlet temperature	°C	DL E74T10	526.3	559.4	548.1	549.1	541.6		
Eco. inlet feedwater temp.	°C	DL E10T10A	258.9	274.6	275.3	274.3			
A Hot primary air flow	T/H	DL A42F10	84	128	98	101			
B Hot primary air flow	T/H	DL A46F10	89	121	110	111			
A Tempering air flow	T/H	DL A42F20	66	44	62	57			
B Tempering air flow	T/H	DL A46F20	64	39	58	55			
A Secondary air flow	T/H	DL A52F10	271	406	416	406			
B Secondary air flow	T/H	DL A52F10	300	453	445	453			
Total air flow	T/H	DL A60G10	873	1,191	1,189	1,183			
Boiler exit gas O ₂	%	DL A80C10	3.27	2.75	2.97	3.42		5.88 2.94	
Boiler exit gas O ₂	%	DL A80C20	-1.74	-1.74	-1.74	-1.74	3.22	5.88 2.94	
Total fuel flow	T/H	DL B10G10A	99.59	145.64	138.84	137.09	110.4		
A FDF discharge draft	mmAq	DL A12F10	49.6	171.6	174.5	182.4	233.7		
B FDF discharge draft	mmAq	DL A16F10	50.3	171.0	173.5	183.2	231.1		
Wind box draft	mmAq	DL A70F10	3.4	60.2	61.9	70.7	114.3		
Furnace draft	mmAq	DL A80F10	-12.0	-7.4	-10.6	-7.9	-20.3		

Test Number	Item	Unit	Measuring Point				Recording				ANN High	ANN Low
			E-1	E-2	E-3(a)	E-4(a)	B.E.T.	High	Low			
Date			8/6	8/6	8/6	8/6						
Time			08:30	11:30	14:30	16:30						
A Lower Eco outlet draft	DL E10F10	mmAq	-66.2	-90.9	-97.1	-98.3						-94
B Lower Eco outlet draft	DL E10F20	mmAq	-65.8	-89.0	-92.9	-95.7						-96.5
A AH gas side diff. press.	DL A53D10	mmAq	87.1	159.6	145.4	154.0						119.4
B AH gas side diff. press.	DL A57D10	mmAq	91.1	135.5	130.6	144.6						114.3
Primary air press.	DL A40P10	mmAq	1,551	1,594	1,615	1,657						1,496.2
A IDF inlet draft	DL A22F10	mmAq	-211.8	-327.1	-329.0	-340.7						-297.2
B IDF inlet draft	DL A26F10	mmAq	-209.8	-325.1	-327.3	-338.2						-294.6
A AH inlet air temp.	DL A52T10	°C	36.9	36.2	37.3	33.3						35.1
B AH inlet air temp.	DL A56T10	°C	37.3	36.6	37.8	33.4						33.9
A AH outlet air temp.	DL A52T20	°C	315.6	334.1	333.7	335.7						338.3
B AH outlet air temp.	DL A56T20	°C	308.9	328.1	327.9	328.9						337.4
A AH inlet gas temp.	DL A53T10	°C	340.0	369.8	368.6	371.8						365.4
B AH inlet gas temp.	DL A57T10	°C	333.6	361.9	362.7	365.2						367.9
A AH outlet gas temp.	DL A53T20	°C	143.5	143.1	145.5	143.3						147.4
B AH outlet gas temp.	DL A57T20	°C	146.2	149.0	150.9	148.5						150.3
A Precip outlet gas temp.	DL C10T10	°C	136.9	139.9	140.9	138.3						143.6
B Precip outlet gas temp.	DL C10T20	°C	137.5	141.4	141.8	140.1						144.4
A IDF motor amp.	CR indicator	A	215	247	246	250						236
B IDF motor amp.	CR indicator	A	215	245	245	250						230
A FDF motor amp.	CR indicator	A	73	84	85	85						85
B FDF motor amp.	CR indicator	A	72.5	83	82.5	83						86
A Pri. air fan motor amp.	CR indicator	A	210	230	230	230						183
B Pri. air fan motor amp.	CR indicator	A	215	230	228	230						196
A IDF inlet vane open	CR controller	%	58	72.5	72	72						70
B IDF inlet vane open	CR controller	%	65	77	78	77.5						73
A FDF inlet vane open	CR controller	%	52.5	70	70	70						74
B FDF inlet vane open	CR controller	%	49	65	65	65						70
SH pass damper open	CR controller	%	66	56	75	79						74
RH pass damper open	CR controller	%	55	60	45	40						75
Pri. air capacity damper open	CR controller	%	75	96.5	97.5	97.5						
O ₂ analysis by Orsat (A)		%	3.4	4.0	4.0	4.0						
O ₂ analysis by Orsat (B)		%	3.8	3.8	4.2	4.2						

Item	Unit	Measuring Point	Recording				ANN High	ANN Low
			E-1 8/6	E-2 8/6	E-3(a) 8/6	E-4(a) 8/6		
Test Number								
Date								
Time								
A Mill coal fineness %								
A Mill coal feeder flow	T/H	DL B11F10	33.53	45.86	43.81	43.72	36.7	
A Mill inlet air temp.	°C	DL B13T10	217	265	208	212	196.2	
A Mill air coal outlet temp.	°C	DL B13T20	69	70	68	68	77.9	
A Mill diff. draft	mmAq	CR indicator	420	520	540	535	527.8	
A Mill primary air flow	T/H	DL B13F10	899	99.1	100.9	98.3	86.0	
A Mill hot air damper open	%	local	22	27	20	20	31.3	
A Mill cold air damper open	%	local	25	20	29	27		
A Mill capacity damper open	%	local	36	46	54	54		
A Mill motor amp.	A	CR indicator	80	85	85	85	86	
A Mill classifier open	%						60	
B Mill coal fineness %								
B Mill coal feeder flow	T/H	DL B21F10	33.88	49.78	47.33	47.30	36.0	
B Mill inlet air temp.	°C	DL B23T10	193	263	253	251	174.6	
B Mill air coal outlet temp.	°C	DL B23T20	70	71	70	70	78.9	
B Mill differential draft	mmAq	CR indicator	500	600	580	590	500.0	
B Mill primary air flow	T/H	DL B23F10	100.7	99.7	99.7	102	86.7	
B Mill hot air damper open	%	local	24	31	27	27	31.3	
B Mill cold air damper open	%	local	20	12	12	12	40	
B Mill capacity damper open	%	local	64	98	98	98		
B Mill motor amp.	A	CR indicator	80	92	85	85	90	
B Mill classifier open	%						60	

Item	Unit	Measuring Point	Recording				ANN High	ANN Low
			E-1	E-2	E-3(a)	E-4(a)		
Test Number			8/6	8/6	8/6	8/6		
Date			08:30	11:30	14:30	16:30		
Time								
C Mill coal fineness	%							
C Mill coal feeder flow	T/H	DL B31F10	32.16	49.97	47.74	46.96	37.1	
C Mill inlet air temp.	°C	DL B33T10	188	266	245	249	174.2	
C Mill air coal outlet temp.	°C	DL B33T20	69	69	70	69	80.0	
C Mill differential draft	mmAq	CR indicator	430	580	570	570	507.4	
C Mill primary air flow	T/H	DL B33F10	91.7	109.6	106.8	106.1	82.5	
C Mill hot air damper open	%	local	24	39	27	32		
C Mill cold air damper open	%	local	29	15	22	20	62	
C Mill capacity damper open	%	local	28	57	55	52		
C Mill motor amp.	A	CR indicator	82	90	92	85	92	
C Mill classifier open	%						60	
D Mill coal fineness	%							
D Mill coal feeder flow	T/H	DL B41F10						
D Mill inlet air temp.	°C	DL B43T10						
D Mill air coal outlet temp.	°C	DL B43T20						
D Mill differential draft	mmAq	CR indicator						
D Mill primary air flow	T/H	DL B43F10					31.3	
D Mill hot air damper open	%	local						
D Mill cold air damper open	%	local						
D Mill capacity damper open	%	local						
D Mill motor amp.	A	CR indicator						
D Mill classifier open	%							

Item	Unit	Measuring Point	Recording				B.E.T.		ANN	ANN
			E-1	E-2	E-3(a)	E-4(a)	High	Low	High	Low
Test Number			E-1	E-2	E-3(a)	E-4(a)				
Date			8/6	8/6	8/6	8/6				
Time			08:30	11:30	14:30	16:30				
A Mill hot air damper open	%	local	22	27	20	20				
A Mill cold air damper open	%	local	25	12	29	27				
A Mill capacity damper open	%	local	36	46	54	54				
A Mill classifier vane open	%	local								
B Mill hot air damper open	%	local	24	31	27	27				
B Mill cold air damper open	%	local	20	12	12	12				
B Mill capacity damper open	%	local	64	98	98	98				
B Mill classifier vane open	%	local								
C Mill hot air damper open	%	local	24	39	27	32				
C Mill cold air damper open	%	local	29	15	22	20				
C Mill capacity damper open	%	local	28	57	55	52				
C Mill classifier vane open	%	local								
D Mill hot air damper open	%	local*								
D Mill cold air damper open	%	local*								
D Mill capacity damper open	%	local*								
D Mill classifier vane open	%	local*								

* D - NOT IN SERVICE

BOILER METAL TEMPERATURE

(III-1)

Item	Unit	Measuring Point	Recording				B.E.T. High	ANN Low
			E-1	E-2	E-3(a)	E-4(a)		
Test Number			8/6	8/6	8/6	8/6		
Date			08:30	11:30	14:30	16:30		
Time								
Div. wall out tube metal temp. 1	°C	DL E51T10	460.0	477.8	477.7	477.5	538	
Div. wall out tube metal temp. 2	°C	DL E51T11	484.0	505.5	504.4	501.6	538	
Div. wall out tube metal temp. 3	°C	DL E51T12	523.0	553.4	541.3	540.3	538	
Div. wall out tube metal temp. 4	°C	DL E51T13	465.0	485.5	486.4	486.1	538	
Div. wall out tube metal temp. 5	°C	DL E51T14	456.5	471.9	480.0	481.5	538	
Div. wall out tube metal temp. 6	°C	DL E51T15	473.9	485.9	483.1	486.6	538	
Div. wall out tube metal temp. 7	°C	DL E51T16	451.6	468.3	474.2	471.6	538	
Div. wall out tube metal temp. 8	°C	DL E51T17	465.0	482.2	483.1	486.1	538	
Div. wall out tube metal temp. 9	°C	DL E51T18	457.9	472.6	477.2	476.7	538	
Div. wall out tube metal temp. 10	°C	DL E51T19	484.9	500.5	499.7	498.3	538	
Final SH tube metal temp. 1	°C	DL E61T10	541.9	555.6	551.6	551.1	602	
Final SH tube metal temp. 2	°C	DL E61T11	520.3	535.0	530.7	524.3	602	
Final SH tube metal temp. 3	°C	DL E61T12	548.2	589.9	576.5	574.1	602	
Final SH tube metal temp. 4	°C	DL E61T13	533.9	562.4	550.9	547.3	602	
Final SH tube metal temp. 5	°C	DL E61T14	530.0	567.8	553.7	554.4	602	
Final SH tube metal temp. 6	°C	DL E61T15	462.6	481.5	488.7	492.7	602	
Final SH tube metal temp. 7	°C	DL E61T16	530.7	539.6	533.3	531.1	602	
Final SH tube metal temp. 8	°C	DL E61T17	516.1	526.0	521.5	520.6	602	
Final SH tube metal temp. 9	°C	DL E61T18	516.6	533.6	521.1	519.4	602	
Final SH tube metal temp. 10	°C	DL E61T19	513.3	529.8	520.1	520.3	602	
Final SH tube metal temp. 11	°C	DL E61T20	520.8	553.0	546.9	541.7	602	
Final SH tube metal temp. 12	°C	DL E61T21	505.0	527.1	520.7	520.0	602	
Final SH tube metal temp. 13	°C	DL E61T22	548.1	586.0	575.6	572.8	602	
Final SH tube metal temp. 14	°C	DL E61T23	524.7	553.4	545.1	544.8	602	
Final SH tube metal temp. 15	°C	DL E61T24	546.3	559.2	554.0	557.5	602	
Final SH tube metal temp. 16	°C	DL E61T25	526.1	536.9	530.8	534.3	602	