

CFM = 100000			Elec Load = 116			# of People = 331			Kathabar System										Original System				Modified Original System			Modified Original System With Cooling Tower HTX					
OA Statistics			Bldg Statistics			Kathabar System										Original System				Modified Original System			Modified Original System With Cooling Tower HTX								
T_OA (F)	HRS	GR_OA (gr/lb)	T_supply (F)	gr_supply (gr/lb)	T_LiCl Return (F)	T_LiCl Supply (F)	T_Exit Conditioner (F)	Kathabar OA Sens (Ton-hrs)	Kathabar OA Lat (Ton-hrs)	Chiller (Ton-hrs)	Kathabar Preheat (Ton-hrs)	Regenerator Heat (Ton-hrs)	Steam for Humidification (Tons-hrs)	Additional Steam (Ton-hrs)	Kathabar Cost (\$)	Chiller (Ton-hrs)	Reheat Energy (Ton-hrs)	Steam Heating (Ton-hrs)	Original Cost (\$)	Mod-Orig Chiller (Ton-hrs)	Mod-Orig Steam (Ton-hrs)	Mod-Orig Cost (\$)	T_Exit CT Coil (F)	Mod-CT HTX Cool (Ton-hrs)	Mod-CT HTX Heat (Ton-hrs)	Mod-CT Chiller (Ton-hrs)	Mod-CT Steam (Ton-hrs)	Mod-CT Cost (\$)			
97.00	3.00	111.30	53.04	57.00	95.80	85.00	87.00	270.00	923.06	916.82	0.00	1,276.63	0.00	0.00	176.93	2,443.10	163.18	0.00	76.36	2,109.89	0.00	48.75	68.00	783.00	0.00	1,326.89	0	30.66			
95.00	5.00	107.70	53.07	57.00	93.80	83.00	85.00	450.00	1,436.44	1,436.98	0.00	1,994.68	0.00	0.00	276.55	3,879.83	273.02	0.00	122.96	3,323.42	0.00	76.79	68.00	1,215.00	0.00	2,108.42	0	48.72			
93.00	3.00	117.70	53.09	57.00	91.80	81.00	83.00	270.00	1,031.86	807.55	0.00	1,436.49	0.00	0.00	193.91	2,443.90	164.45	0.00	76.53	2,109.42	0.00	48.74	68.00	675.00	0.00	1,434.42	0	33.14			
91.00	14.00	112.80	53.11	57.00	89.80	79.00	81.00	1,260.00	4,426.63	3,513.60	0.00	6,188.45	0.00	0.00	836.18	10,764.13	770.40	0.00	342.71	9,200.23	0.00	212.59	68.00	2,898.00	0.00	6,302.23	0	145.62			
89.00	21.00	101.80	53.14	57.00	87.80	77.00	79.00	1,890.00	5,330.95	4,887.95	0.00	7,489.38	0.00	0.00	1,026.65	14,459.20	1,160.05	0.00	475.63	12,108.89	0.00	279.80	68.00	3,969.00	0.00	8,139.89	0	188.09			
87.00	45.00	88.40	53.16	57.00	85.80	75.00	77.00	4,050.00	8,006.46	9,654.63	0.00	11,306.79	0.00	0.00	1,602.51	26,757.00	2,495.37	0.00	922.70	21,711.08	0.00	501.67	68.00	7,695.00	0.00	14,016.08	0	323.86			
85.00	88.00	88.70	53.18	57.00	83.80	73.00	75.00	7,920.00	15,806.67	17,277.49	0.00	22,404.28	0.00	0.00	3,132.55	50,890.40	4,898.51	0.00	1,773.53	41,004.16	0.00	947.47	68.00	13,464.00	0.00	27,540.16	0	636.36			
83.00	110.00	90.40	53.21	57.00	81.80	71.00	73.00	9,900.00	20,818.00	19,593.52	0.00	29,611.39	0.00	0.00	4,065.33	62,692.67	6,146.48	0.00	2,198.49	50,311.52	0.00	1,162.53	68.00	14,850.00	0.00	35,461.52	0	819.4			
81.00	149.00	90.40	53.23	57.00	79.80	69.00	71.00	13,410.00	28,198.93	23,826.69	0.00	40,259.73	0.00	0.00	5,462.24	82,238.07	8,357.31	0.00	2,919.84	65,435.63	0.00	1,512.00	68.00	17,433.00	0.00	48,002.63	0	1109.18			
79.00	163.00	88.80	53.26	57.00	77.80	68.00	69.93	13,311.67	29,370.63	24,455.19	0.00	42,060.83	0.00	0.00	5,696.50	85,553.27	9,177.15	0.00	3,096.46	67,137.49	0.00	1,551.32	68.00	16,137.00	0.00	51,000.49	0	1178.45			
77.00	109.00	88.40	53.28	57.00	75.80	68.00	69.78	7,085.00	19,393.42	16,185.01	0.00	27,829.97	0.00	0.00	3,769.24	55,001.40	6,159.99	0.00	2,022.42	42,663.42	0.00	985.81	68.00	8,829.00	0.00	33,834.42	0	781.8			
75.00	209.00	85.90	53.30	57.00	73.80	68.00	69.63	10,101.67	34,224.71	30,710.62	0.00	49,226.25	0.00	0.00	6,715.22	98,738.57	11,855.71	0.00	3,727.91	75,037.00	0.00	1,733.85	68.00	13,167.00	0.00	61,870.00	0	1429.61			
73.00	347.00	84.60	53.33	57.00	71.80	68.00	69.48	10,988.33	54,266.61	50,452.15	0.00	78,222.42	0.00	0.00	10,708.92	155,132.13	19,757.51	0.00	5,995.00	115,707.09	0.00	2,673.60	68.00	15,615.00	0.00	100,092.09	0	2312.79			
71.00	292.00	80.90	53.35	57.00	69.80	68.00	69.33	4,380.00	39,543.01	42,004.12	0.00	57,138.57	0.00	0.00	7,941.48	119,165.20	16,687.88	0.00	4,789.43	85,927.13	0.00	1,985.49	68.00	7,884.00	0.00	78,043.13	0	1803.32			
69.00	330.00	81.90	53.37	57.00	0.00	0.00	69.00	0.00	46,559.01	46,410.39	0.00	67,417.35	0.00	0.00	9,297.31	130,603.00	18,929.61	0.00	5,327.21	92,969.40	0.00	2,148.21	68.00	2,970.00	0.00	89,999.40	0	2079.58			
67.00	307.00	77.40	53.40	57.00	0.00	0.00	67.00	0.00	35,485.49	37,584.58	0.00	51,604.29	0.00	0.00	7,164.18	108,145.87	17,675.42	0.00	4,655.29	73,070.07	0.00	1,688.40	67.00	0.00	0.00	73,070.07	0	1688.4			
65.00	368.00	74.60	53.42	57.00	0.00	0.00	65.00	0.00	36,697.42	38,350.44	0.00	53,587.12	0.00	0.00	7,423.78	117,171.20	21,265.56	0.00	5,301.83	75,047.86	0.00	1,734.10	65.00	0.00	0.00	75,047.86	0	1734.1			
63.00	346.00	70.10	53.44	57.00	0.00	0.00	63.00	0.00	25,680.55	29,756.33	0.00	37,662.49	0.00	0.00	5,282.39	95,115.40	20,067.67	0.00	4,646.05	55,436.89	0.00	1,280.96	63.00	0.00	0.00	55,436.89	0	1280.96			
61.00	328.00	63.70	53.47	57.00	0.00	0.00	61.00	0.00	12,449.10	22,234.72	0.00	18,340.98	0.00	0.00	2,751.37	72,367.73	19,093.28	0.00	4,001.56	34,683.82	0.00	801.43	61.00	0.00	0.00	34,683.82	0	801.43			
59.00	159.00	60.60	53.49	57.00	0.00	0.00	59.00	0.00	3,241.68	7,882.68	0.00	4,795.99	0.00	0.00	767.25	29,425.60	9,289.32	0.00	1,813.22	11,124.35	0.00	257.05	59.00	0.00	0.00	11,124.35	0	257.05			
57.00	273.00	54.50	53.52	54.50	0.00	0.00	57.00	0.00	0.00	8,562.48	0.00	0.00	0.00	0.00	197.85	36,172.50	16,007.52	0.00	2,788.74	8,562.48	0.00	197.85	57.00	0.00	0.00	8,562.48	0	197.85			
55.00	409.00	49.10	53.54	49.10	0.00	0.00	55.00	0.00	0.00	5,379.25	0.00	0.00	0.00	0.00	124.30	34,315.10	24,068.75	0.00	3,729.29	5,379.25	0.00	124.30	55.00	0.00	0.00	5,379.25	0	124.3			
53.00	256.00	44.10	53.56	44.10	0.00	0.00	53.00	0.00	0.00	0.00	0.00	0.00	0.00	8,668.16	1,057.52	13,824.00	15,119.36	0.00	2,163.99	0.00	1,295.36	158.03	53.00	0.00	0.00	0.00	6501.8	793.22			
51.00	246.00	39.80	53.71	39.80	0.00	0.00	51.00	0.00	0.00	0.00	0.00	0.00	0.00	13,093.02	1,597.35	8,856.00	14,864.22	0.00	2,018.07	0.00	6,008.22	733.00	51.00	0.00	0.00	0.00	8893.6	1085.02			
49.00	206.00	36.30	53.74	36.30	0.00	0.00	49.00	0.00	0.00	0.00	0.00	0.00	0.00	14,715.78	1,795.33	3,708.00	12,490.98	0.00	1,609.58	0.00	8,782.98	1,071.52	49.00	0.00	0.00	0.00	9098.46	1110.01			
47.00	271.00	35.70	53.76	35.70	48.20	48.68	46.68	0.00	0.00	0.00	1,083.11	0.00	0.00	23,124.86	2,821.23	0.00	16,489.82	0.00	2,011.76	0.00	16,489.82	2,011.76	48.68	0.00	4,096.56	0.00	12393.26	1511.98			
45.00	248.00	31.40	53.78	34.00	46.20	48.25	46.25	0.00	0.00	0.00	4,240.52	0.00	57.04	22,112.54	2,704.69	0.00	15,142.94	4,464.00	2,392.05	0.00	19,606.94	2,392.05	48.25	0.00	7,258.16	0.00	12348.78	1506.55			
43.00	247.00	29.50	53.81	34.00	44.20	48.25	46.25	0.00	0.00	0.00	8,340.08	0.00	98.51	22,034.09	2,700.18	0.00	15,134.29	8,892.00	2,931.21	0.00	24,026.29	2,931.21	48.25	0.00	11,674.89	0.00	12351.4	1506.87			
41.00	165.00	26.60	53.83	34.00	42.20	48.25	46.25	0.00	0.00	0.00	8,321.31	0.00	108.44	14,711.51	1,808.03	0.00	10,144.96	8,910.00	2,324.71	0.00	19,054.96	2,324.71	48.25	0.00	10,769.02	0.00	8285.95	1010.89			
39.00	303.00	26.00	53.86	34.00	40.20	48.25	46.25	0.00	0.00	0.00	20,330.95	0.00	215.71	27,063.40	3,328.05	0.00	18,694.13	21,816.00	4,942.24	0.00	40,510.13	4,942.24	48.25	0.00	25,229.83	0.00	15280.3	1864.2			
37.00	477.00	24.60	53.88	34.00	38.20	48.25	46.25	0.00	0.00	0.00	39,956.15	0.00	399.83	42,645.71	5,251.56	0.00	29,530.59	42,930.00	8,840.19	0.00	72,460.59	8,840.19	48.25	0.00	48,304.25	0.00	24156.34	2947.07			
35.00	352.00	21.90	53.90	34.00	37.45	48.25	46.25	0.00	0.00	0.00	31,680.00	0.00	380.65	35,425.21	4,368.31	0.00	21,866.66	38,016.00	7,305.68	0.00	59,882.66	7,305.68	48.25	0.00	41,981.90	0.00	17900.76	2183.89			
33.00	298.00	19.90	53.93	34.00	37.45	48.25	46.25	0.00	0.00	0.00	26,820.00	0.00	376.33	35,363.82	4,360.30	0.00	18,575.35	37,548.00	6,847.05	0.00	56,123.35	6,847.05	48.25	0.00	38,223.50	0.00	17899.85	2183.78			
31.00	258.00	17.90	53.95	34.00	37.45	48.25	46.25	0.00	0.00	0.00	23,220.00	0.00	372.84	35,268.72	4,348.27	0.00	16,136.76	37,152.00	6,501.23	0.00	53,288.76	6,501.23	48.25	0.00	33,092.83	0.00	20195.93	2463.9			
29.00	192.00	15.20	53.97	34.00	37.45	48.25	46.25	0.00	0.00	0.00	17,280.00	0.00	324.73	29,695.96	3,662.52	0.00	12,049.49	31,104.00	5,264.73	0.00	43,153.49	5,264.73	48.25	0.00	24,627.22	0.00	18526.27	2260.21			
27.00	158.00	14.20	54.00	34.00	37.45	48.25	46.25	0.00	0.00	0.00	14,220.00	0.00	282.02	27,300.03	3,365.01	0.00	9,949.25	28,440.00	4,683.49	0.00	38,389.25	4,683.49	48.25	0.00	20,266.15	0.00	18123.1	2211.02			
25.00	178.00	12.30	54.02	34.00	37.45	48.25	46.25	0.00	0.00	0.00	16,020.00	0.00	348.97	33,966.25	4,186.46	0.00	11,246.42	35,244.00	5,671.83	0.00											