SENDER: Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.
Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.
1. ☐ Show to whom delivered, date, and addressee's address. *(Extra charge)* 2. ☐ Restricted Delivery *(Extra charge)*

3. Article Addressed to:	4. Article Number
Mr. David S. Beachler Westinghouse RESD 2400 Ardmore Blvd. Pittsburg, PA 15221	P 938 762 800
	Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail ☐ Return Receipt for Merchandise
	Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature — Address X Paul Johnson	8. Addressee's Address *(ONLY if requested and fee paid)*
6. Signature — Agent X	
7. Date of Delivery 1-5-90	

PS Form **3811**, Mar. 1988 * U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

P 938 762 800

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to Mr. David S. Beachler, Westing-	
Street and No. 2400 Ardmore Blvd. house RESI	
P.O., State and ZIP Code Pittsburgh, PA 15221	
Postage	$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	$
Postmark or Date Mailed: 1-5-90 Permit: AC 05-145061,-152196 PSD-FL-129	

PS Form 3800, June 1985

TABLE 1

AVERAGE DAILY MATERIAL WEIGHTS - JULY 1989
BAY RESOURCE MANAGEMENT CENTER

DAILY READINGS '89																	
		275.00	276.00	277.00	278.00	279.00	280.00	281.00	282.00	283.00	284.00	285.00	286.00	287.00	288.00	289.00	290.00	**291.00**
ACTUAL DATE TAKEN		01-Jul	02-Jul	03-Jul	04-Jul	05-Jul	06-Jul	07-Jul	08-Jul	09-Jul	10-Jul	11-Jul	12-Jul	13-Jul	14-Jul	15-Jul	16-Jul	**17-Jul**
		1	2	3	4	5	6	7	8	9	10		12		14		16	
TONS BURNED MSW UNIT 1		175.10	158.40	166.40	167.70	198.60	191.20	182.40	180.00	67.60	93.40	155.30	128.40	149.90	182.20	155.20	134.10	**43.90**
TONS BURNED MSW UNIT 2		284.70	258.10	190.70	358.40	310.20	258.20	197.40	335.30	309.70	267.20	285.61	289.30	269.10	265.50	233.90	0.00	**12.95**
TOTAL TONS		459.80	416.50	357.10	526.10	508.80	449.40	379.80	515.30	377.30	360.60	440.91	417.70	419.00	447.70	389.10	134.10	**56.85**
M.S.W. RECEIVED	(TONS)	262.08	87.40	546.05	324.17	438.40	444.17	462.61	330.44	76.63	507.07	447.23	349.56	386.73	447.34	250.78	37.90	**535.44**
TRASH RECEIVED	(TONS)	57.32	35.15	191.84	93.17	138.82	191.33	193.36	47.76	23.43	167.93	108.75	130.61	210.14	129.63	61.93	7.86	**192.93**
M.S.W. / TRASH REJECTED	(TONS)	0.00	0.00	20.03	0.00	0.00	22.10	0.00	0.00	0.00	8.87	22.46	0.00	0.00	16.35	0.00	0.00	**34.30**
TOTAL MSW / TRASH RECEIVED	(TONS)	319.40	122.55	717.86	417.34	577.22	613.40	655.97	378.20	100.06	666.13	533.52	480.17	596.87	560.62	312.71	45.76	**694.07**
WOOD CHIPS RECEIVED	(TONS)	0.00	0.00	0.00	0.00	24.80	25.55	51.59	0.00	0.00	0.00	0.00	0.00	105.50	114.03	86.45	0.00	**68.54**
TOTAL RECEIVED	(TONS)	319.40	122.55	717.86	417.34	602.02	638.95	707.56	378.20	100.06	666.13	533.52	480.17	702.37	674.65	399.16	45.76	**762.61**

DAILY READINGS '89																	
		292.00	293.00	294.00	295.00	296.00	297.00	298.00	299.00	300.00	301.00	302.00	303.00	304.00	305.00		
ACTUAL DATE TAKEN		18-Jul	19-Jul	20-Jul	21-Jul	22-Jul	23-Jul	24-Jul	25-Jul	26-Jul	27-Jul	28-Jul	29-Jul	30-Jul	31-Jul	TOTAL	**AVERAGE**
		18		20		22		24		26		28		30	31.00		
TONS BURNED MSW UNIT 1		0.00	0.00	2.50	87.60	201.20	193.70	198.90	215.40	232.00	232.50	193.30	116.70	173.10	144.20	4520.90	**145.84**
TONS BURNED MSW UNIT 2		0.00	0.00	0.00	273.00	108.99	296.00	285.85	285.00	292.00	308.50	297.30	423.30	299.60	304.20	7299.91	**235.48**
TOTAL TONS		0.00	0.00	2.50	360.60	310.19	489.70	484.75	500.40	524.00	541.00	490.60	540.00	472.70	448.40	11820.81	**381.32**
M.S.W. RECEIVED	(TONS)	522.04	334.60	378.00	461.76	301.43	62.20	558.98	541.62	361.44	352.75	449.11	101.94	269.45	464.63	11093.95	**357.87**
TRASH RECEIVED	(TONS)	166.66	174.01	217.84	106.88	62.74	6.74	205.17	180.43	141.96	229.80	124.13	9.50	57.25	175.34	3840.41	**123.88**
M.S.W. / TRASH REJECTED	(TONS)	8.88	0.00	0.00	10.07	17.60	0.00	27.71	0.00	12.53	0.00	0.00	0.00	0.00	17.47	218.37	**7.04**
TOTAL MSW / TRASH RECEIVED	(TONS)	679.82	508.61	595.84	558.57	346.57	68.94	736.44	722.05	490.87	582.55	573.24	111.44	326.70	622.50	14715.99	**474.71**
WOOD CHIPS RECEIVED	(TONS)	184.31	91.68	78.46	196.90	25.99	0.00	119.44	0.00	25.56	22.18	21.03	0.00	0.00	20.91	1262.92	**40.74**
TOTAL RECEIVED	(TONS)	864.13	600.29	674.30	755.47	372.56	68.94	855.88	722.05	516.43	604.73	594.27	111.44	326.70	643.41	15978.91	**515.45**

TABLE 2

AVERAGE DAILY MATERIAL WEIGHTS - AUGUST 1989
BAY RESOURCE MANAGEMENT CENTER

DAILY READINGS '89																	
		306.00	307.00	308.00	309.00	310.00	311.00	312.00	313.00	314.00	315.00	316.00	317.00	318.00	319.00	320.00	321.00	322.00
ACTUAL DATE TAKEN		01-Aug	02-Aug	03-Aug	04-Aug	05-Aug	06-Aug	07-Aug	08-Aug	09-Aug	10-Aug	11-Aug	12-Aug	13-Aug	14-Aug	15-Aug	16-Aug	17-Aug
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
TONS BURNED MSW UNIT 1		151.00	160.70	136.60	174.90	157.90	153.70	139.70	158.10	153.10	148.90	209.50	160.60	134.80	0.00	243.20	262.00	65.70
TONS BURNED MSW UNIT 2		284.40	288.00	273.20	275.50	240.20	326.90	138.80	37.00	281.90	281.90	282.30	283.90	215.89	262.71	305.75	252.15	312.50
TOTAL TONS		435.40	448.70	409.80	450.40	398.10	480.60	278.50	195.10	435.00	430.80	491.80	444.50	350.69	262.71	548.95	514.15	378.20
M.S.W. RECEIVED	(TONS)	476.71	293.59	340.54	415.84	254.36	92.87	453.56	503.68	345.96	367.69	465.78	216.78	80.03	500.63	524.88	342.85	290.59
TRASH RECEIVED	(TONS)	122.77	156.42	176.46	139.71	44.43	8.64	177.03	128.66	133.83	219.20	159.97	57.74	13.95	168.04	136.39	176.19	204.03
M.S.W. / TRASH REJECTED	(TONS)	11.48	0.00	0.00	0.00	6.74	0.00	34.06	15.90	21.64	0.00	24.26	0.00	0.00	16.92	23.31	0.00	0.00
TOTAL MSW / TRASH RECEIVED	(TONS)	588.00	450.01	517.00	555.55	292.05	101.51	596.53	616.64	458.15	586.89	601.49	274.52	93.98	651.75	637.96	519.04	494.62
WOOD CHIPS RECEIVED	(TONS)	0.00	0.00	46.71	88.14	0.00	12.59	62.32	150.93	97.06	35.37	143.69	0.00	0.00	79.29	154.46	118.21	203.76
TOTAL RECEIVED	(TONS)	588.00	450.01	563.71	643.69	292.05	114.10	658.85	767.57	555.21	622.26	745.18	274.52	93.98	731.04	792.42	637.25	698.38

DAILY READINGS '89																	
		323.00	324.00	325.00	326.00	327.00	328.00	329.00	330.00	331.00	332.00	333.00	334.00	335.00	336.00		
ACTUAL DATE TAKEN		18-Aug	19-Aug	20-Aug	21-Aug	22-Aug	23-Aug	24-Aug	25-Aug	26-Aug	27-Aug	28-Aug	29-Aug	30-Aug	31-Aug	TOTAL	AVERAGE
		18	19	20	21	22	23	24	25	26	27	28	29	30	31		
TONS BURNED MSW UNIT 1		135.30	154.30	156.50	160.60	139.20	156.30	171.90	120.40	155.10	147.70	139.70	147.50	157.80	163.30	4716.00	152.13
TONS BURNED MSW UNIT 2		230.90	240.50	277.00	303.85	311.95	310.65	276.40	281.50	262.20	208.50	258.50	291.83	0.00	354.75	7951.53	256.50
TOTAL TONS		366.20	394.80	433.50	464.45	451.15	466.95	448.30	401.90	417.30	356.20	398.20	439.33	157.80	518.05	12667.53	408.63
M.S.W. RECEIVED	(TONS)	444.47	236.23	69.89	455.94	459.78	296.08	287.47	392.28	194.12	76.13	448.80	387.43	263.87	282.34	10261.17	331.01
TRASH RECEIVED	(TONS)	123.34	68.40	9.34	175.82	141.25	143.90	199.74	108.84	42.74	7.89	162.78	122.32	175.64	169.53	3875.19	125.01
M.S.W. / TRASH REJECTED	(TONS)	28.48	0.00	0.00	30.28	11.37	23.00	0.00	6.07	0.00	17.97	22.96	6.07	0.00	0.00	300.51	9.69
TOTAL MSW / TRASH RECEIVED	(TONS)	539.33	304.63	79.23	601.48	589.66	416.98	487.21	495.05	236.86	66.05	588.62	503.68	439.51	451.87	13835.85	446.32
WOOD CHIPS RECEIVED	(TONS)	23.62	126.03	0.00	74.21	50.13	142.52	189.25	208.48	21.59	0.00	177.98	157.40	135.00	93.58	2592.32	83.62
TOTAL RECEIVED	(TONS)	562.95	430.66	79.23	675.69	639.79	559.50	676.46	703.53	258.45	66.05	766.60	661.08	574.51	545.45	16428.17	529.94

TABLE 3

AVERAGE DAILY MATERIAL WEIGHTS - SEPTEMBER 1989
BAY RESOURCE MANAGEMENT CENTER

DAILY READINGS '89																	
		337.00	338.00	339.00	340.00	341.00	342.00	343.00	344.00	345.00	346.00	347.00	348.00	349.00	350.00	351.00	352.00	353.00
ACTUAL DATE TAKEN		01-Sep	02-Sep	03-Sep	04-Sep	05-Sep	06-Sep	07-Sep	08-Sep	09-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	16-Sep	17-Sep
		1	2	3	4	5	6	7	8	9	10		12		14		16	
TONS BURNED MSW UNIT 1		168.50	338.80	164.50	177.60	72.80	200.00	182.10	197.90	191.30	164.10	144.20	133.80	131.80	128.60	133.10	221.90	199.40
TONS BURNED MSW UNIT 2		157.90	DOC	298.60	300.60	270.00	267.30	301.04	273.60	281.70	DOC	150.87	281.75	54.66	102.42	325.70	293.80	281.50
TOTAL TONS		326.40	338.80	463.10	478.20	342.80	467.30	483.14	471.50	473.00	164.10	295.07	415.55	186.46	231.02	458.80	515.70	480.90
M.S.W. RECEIVED	(TONS)	414.09	214.18	50.06	311.89	482.36	343.68	401.54	421.13	195.24	55.96	336.24	304.78	228.78	216.20	282.80	171.48	54.25
TRASH RECEIVED	(TONS)	95.41	43.41	8.81	97.92	108.14	121.92	197.03	119.11	84.08	20.87	148.81	143.45	118.60	113.25	99.60	51.04	6.40
M.S.W. / TRASH REJECTED	(TONS)	6.91	11.58	12.18	0.00	11.66	7.57	0.00	21.09	0.00	5.00	0.00	0.00	22.90	0.00	5.47	0.00	12.81
TOTAL MSW / TRASH RECEIVED	(TONS)	502.59	246.01	46.69	409.81	578.84	458.03	598.57	519.15	279.32	71.83	485.05	448.23	324.48	329.45	376.93	222.52	47.84
WOOD CHIPS RECEIVED	(TONS)	290.04	51.38	0.00	28.64	89.22	164.11	236.37	92.46	124.04	109.79	150.91	159.25	134.73	86.83	216.20	231.21	0.00
TOTAL RECEIVED	(TONS)	792.63	297.39	46.69	438.45	668.06	622.14	834.94	611.61	403.36	181.62	635.96	607.48	459.21	416.28	593.13	453.73	47.84

DAILY READINGS '89																
		354.00	355.00	356.00	357.00	358.00	359.00	360.00	361.00	362.00	363.00	364.00	365.00	366.00		
ACTUAL DATE TAKEN		18-Sep	19-Sep	20-Sep	21-Sep	22-Sep	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep	TOTAL	AVERAGE
		18		20		22		24		26		28		30		
TONS BURNED MSW UNIT 1		210.50	189.00	190.50	180.30	160.50	153.60	178.50	172.90	206.00	190.10	182.50	195.70	184.90	5345.40	178.18
TONS BURNED MSW UNIT 2		225.40	275.25	266.20	249.40	249.80	270.20	186.60	10.70	0.00	230.20	265.80	257.10	246.30	6374.39	212.48
TOTAL TONS		435.90	464.25	456.70	429.70	410.30	423.80	365.10	183.60	206.00	420.30	448.30	452.80	431.20	11719.79	390.66
M.S.W. RECEIVED	(TONS)	449.97	393.96	251.20	323.01	365.78	166.06	59.31	414.44	446.53	292.18	354.75	338.67	233.37	8573.89	285.80
TRASH RECEIVED	(TONS)	162.43	168.56	144.75	174.16	124.94	46.57	23.70	146.61	153.18	119.14	133.09	121.59	38.97	3135.54	104.52
M.S.W. / TRASH REJECTED	(TONS)	4.94	0.00	0.00	17.05	0.00	12.19	13.09	19.85	0.00	20.05	0.00	14.90	4.71	223.95	7.47
TOTAL MSW / TRASH RECEIVED	(TONS)	607.46	562.52	395.95	480.12	490.72	200.44	69.92	541.20	599.71	391.27	487.84	445.36	267.63	11485.48	382.85
WOOD CHIPS RECEIVED	(TONS)	64.35	140.15	154.74	105.82	252.25	66.02	0.00	181.86	187.24	169.57	48.75	0.00	0.00	3535.93	117.86
TOTAL RECEIVED	(TONS)	671.81	702.67	550.69	585.94	742.97	266.46	69.92	723.06	786.95	560.84	536.59	445.36	267.63	15021.41	500.71

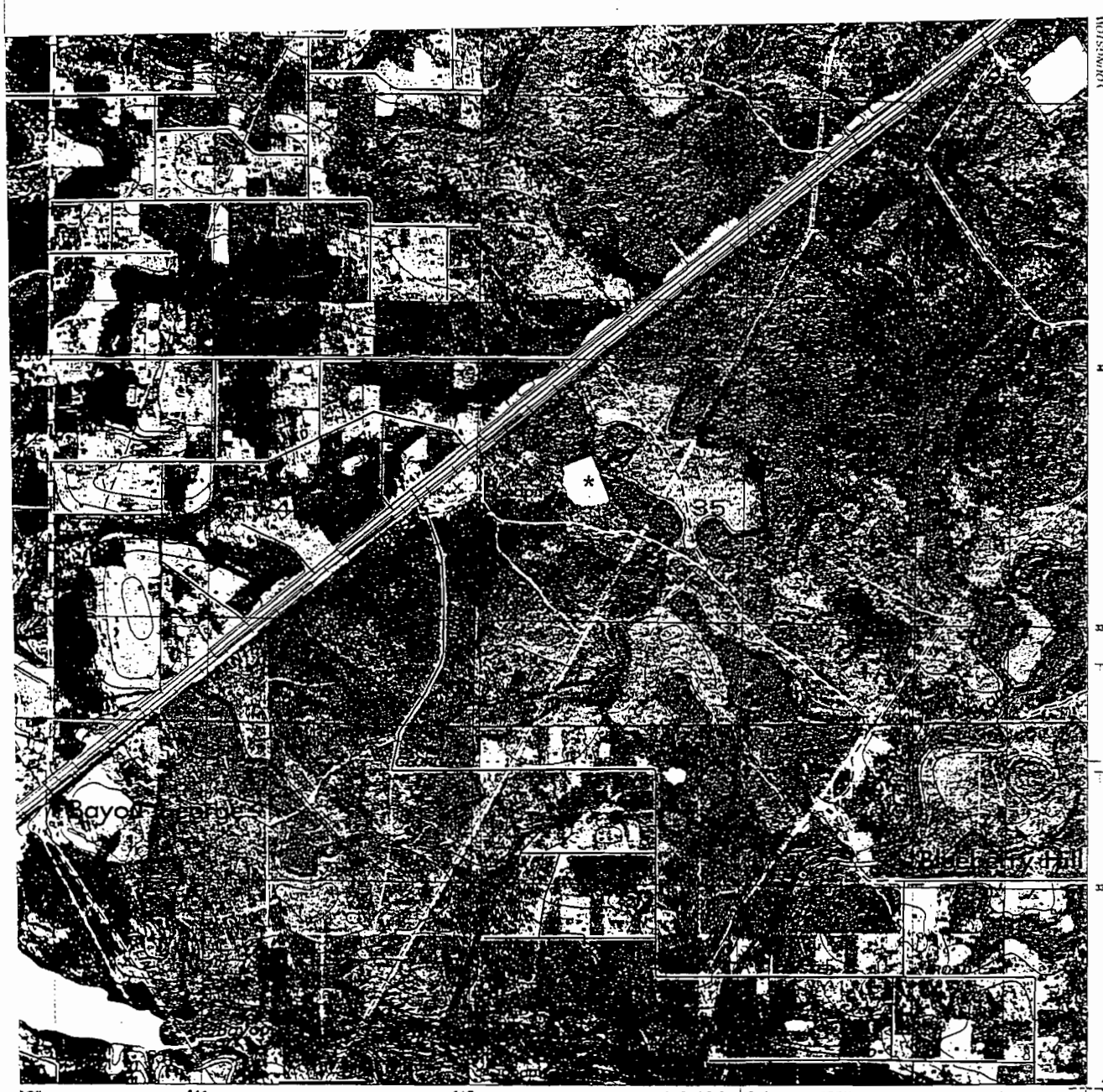
TABLE 4

AVERAGE MONTHLY MATERIAL WEIGHTS - 10/88 - 9/89
BAY RESOURCE MANAGEMENT CENTER

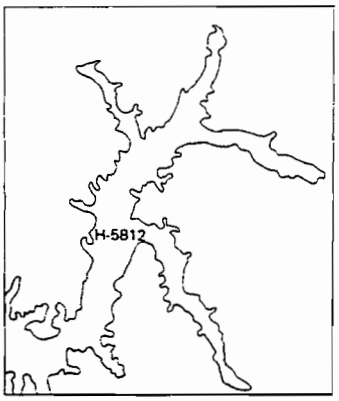
MONTHLY (1989) OPERATIONAL DATA	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	YTD TOTAL	MONTHLY AVERAGE	DAILY AVERAGE	HOURLY AVERAGE
WOOD RECEIVED TONS	2,817.41	7,268.84	5,572.35	5,822.04	2,808.43	4,176.58	815.26	3,488.27	1,043.27	1,262.92	2,592.32	3,535.93	41,203.62	4,578.18	150.38	
MSW RECEIVED TONS	7,394.14	7,231.39	6,761.42	8,046.25	7,075.30	9,542.06	8,969.48	10,375.53	11,082.53	11,093.95	10,261.17	8,573.89	106,407.11	11,823.01	388.35	
TRASH RECEIVED TONS	3,192.87	3,188.16	2,665.45	3,182.51	2,986.85	4,085.71	3,768.43	3,917.92	4,160.91	3,840.41	3,875.19	3,135.54	41,999.95	4,666.66	153.28	
WHITE GOODS TONS	252.24	220.87	188.73	228.44	258.48	224.17	325.60	298.57	227.93	218.37	300.51	223.95	2,966.16	329.80	10.83	
%WHITE GOODS	2.38%	2.12%	2.00%	2.03%	2.57%	1.64%	2.56%	2.09%	1.50%	1.46%	2.13%	1.91%	0.00% 2.00%	2.00%	2.00%	
TOTAL FUEL RECEIVED	13,152.18	17,467.52	14,810.49	16,822.36	12,612.10	17,560.18	13,227.57	17,482.85	16,058.78	15,973.91	16,428.17	15,021.41	186,642.52	20,738.06	681.18	
TONS BURNED - UNIT#1	5,919.20	9,382.80	4,423.00	5,601.90	4,045.50	2,916.70	6,145.50	5,027.60	5,004.20	4,520.90	4,716.00	5,345.40	63,048.70	7,005.41	230.10	
TONS BURNED - UNIT#2	3,754.50	5,193.50	5,507.40	5,827.70	2,203.90	4,061.20	5,992.30	0.00	1,753.42	7,299.91	7,951.53	6,374.39	55,919.75	6,213.31	204.09	
TOTAL BURNED	9,673.70	14,576.30	9,930.40	11,429.60	6,249.40	6,977.90	12,137.80	5,027.60	6,757.62	11,820.81	12,667.53	11,719.79	118,968.45	13,218.72	434.19	
TOTAL ASH TONS	4,833.86	4,247.14	4,623.97	4,928.23	4,295.50	5,597.52	5,976.70	5,396.93	5,063.16	5,424.32	5,165.35	4,766.64	60,319.32	6,702.15	220.14	
ASH/TON (TRUCK SCALE)	0.37	0.24	0.31	0.29	0.34	0.32	0.45	0.31	0.32	0.34	0.31		0.32			
ASH/TON (INCLINE SCALE)	0.50	0.29	0.47	0.43	0.69	0.80	0.49	1.07	0.75	0.46	0.41	0.41	0.51			
GROSS GENERATION MWH	7,595.54	7,700.82	7,886.10	8,340.64	6,290.94	8,041.85	7,841.18	8,084.12	6,569.64	6,856.75	7,447.77	7,173.55	89,828.90	9,980.99	327.84	13.66
GROSS KW/TON (TRUCK SCALE)	577.51	440.87	532.47	495.81	498.30	457.44	592.79	462.40	409.10	429.11	453.35	477.56	481.29			
GROSS KW/TON (INCLINE SCALE)	785.17	528.31	794.14	729.74	1,006.65	1,152.47	646.01	1,607.95	972.18	580.06	587.94	612.09	755.06			
NET GENERATION MWH	6,864.65	6,945.32	7,114.93	7,545.44	5,592.72	7,258.02	7,083.28	7,262.62	5,805.00	6,110.25	6,629.07	6,392.15	80,603.45	8,955.94	294.17	12.26
NET KW/TON (TRUCK SCALE)	521.94	397.61	480.40	448.54	443.44	412.85	535.49	415.41	361.48	382.39	403.52	425.54	431.86			
NET KW/TON (INCLINE SCALE)	709.62	476.49	716.48	660.17	894.92	1,040.14	583.57	1,444.55	859.03	516.91	523.31	545.42	677.52			
AVAILABLITY UNIT #1	91.38%	93.61%	77.82%	92.44%	77.87%	96.37%	98.82%	91.40%	92.99%	90.99%	96.51%	98.06%	90.34%			
AVAILABLITY UNIT #2	83.35%	91.39%	76.75%	96.44%	75.29%	93.51%	90.56%	96.77%	74.31%	82.66%	88.20%	84.86%	86.58%			
TOTAL PLANT AVAILABILITY	87.37%	92.50%	77.28%	94.44%	76.58%	94.94%	94.69%	94.09%	83.65%	86.83%	92.35%	91.46%	88.46%			
CAPACITY FACTOR:																
GROSS CAPACITY FACTOR (11.5mw)	88.77%	93.01%	92.17%	97.48%	78.60%	93.99%	94.70%	94.48%	79.34%	80.14%	87.05%	86.64%	88.93%			
NET CAPACITY FACTOR (10.3mw)	89.58%	93.65%	92.85%	98.46%	78.01%	94.71%	95.51%	94.77%	78.28%	79.73%	86.51%	86.19%	89.09%			
THROUGHPUT RECEIVED (510 tons)	83.19%	114.17%	93.68%	106.40%	85.27%	111.20%	86.45%	110.58%	104.96%	101.07%	103.91%	98.18%	99.99%			
THROUGHPUT BURNED (510 tons)	61.19%	95.27%	62.81%	72.29%	42.25%	44.14%	79.33%	31.80%	44.17%	74.77%	80.12%	76.60%	63.74%			
RAINFALL												5.08	5.08			

ATTACHMENT 1

Best Available Copy



NATIONAL OCEAN SURVEY
HYDROGRAPHIC SURVEY INDEX



ROAD CLASSIFICATION

Primary highway, hard surface

Light-duty road, hard or improved surface

Secondary highway, hard surface

Unimproved road

Trails

Interstate Route U. S. Route State Route

County Route

CONTOURS AND ELEVATIONS IN METERS

BAYHEAD, FLA.

30085-C5-TB-024

1982

DMA 3844 I SE - SERIES V8470

*approximate site location

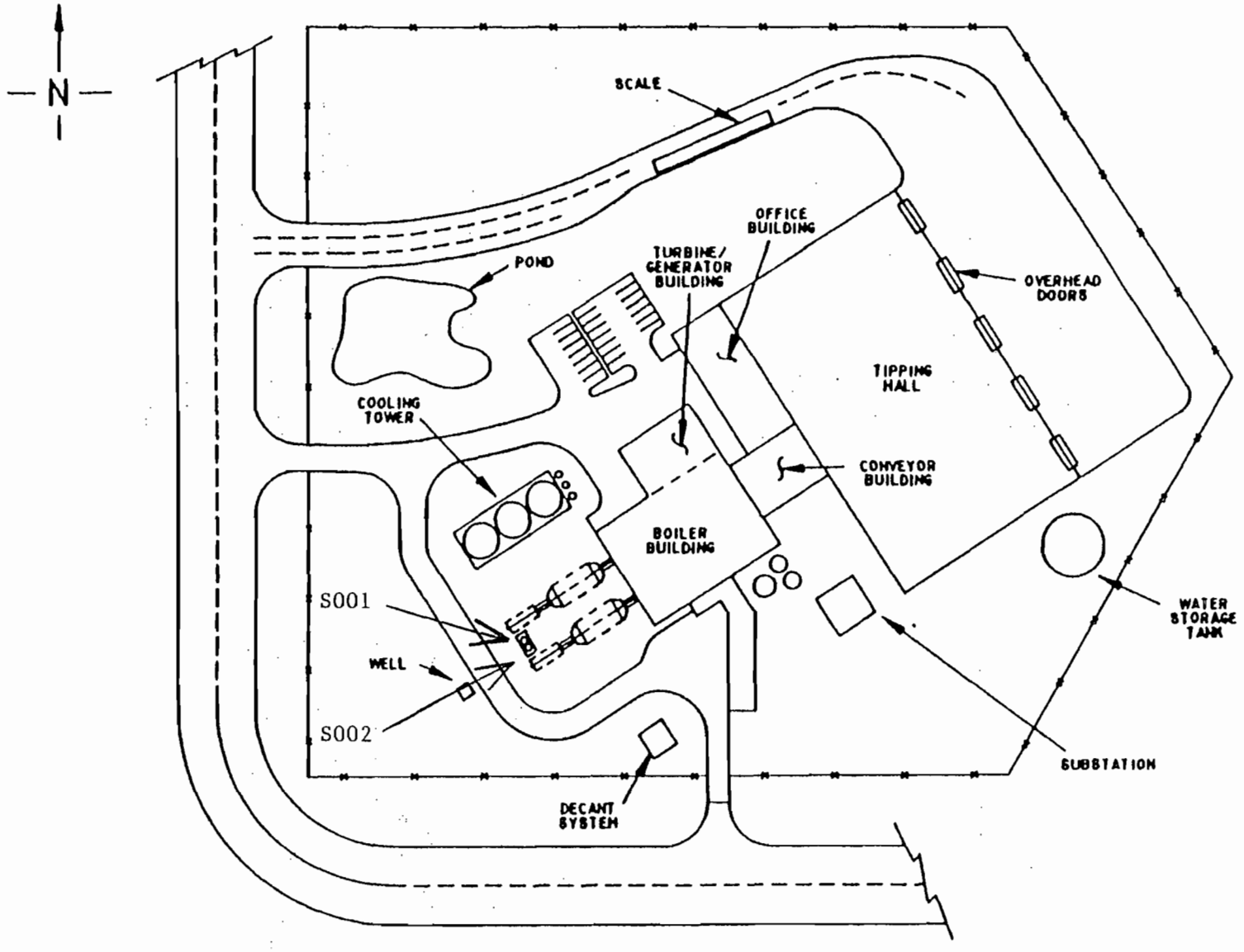
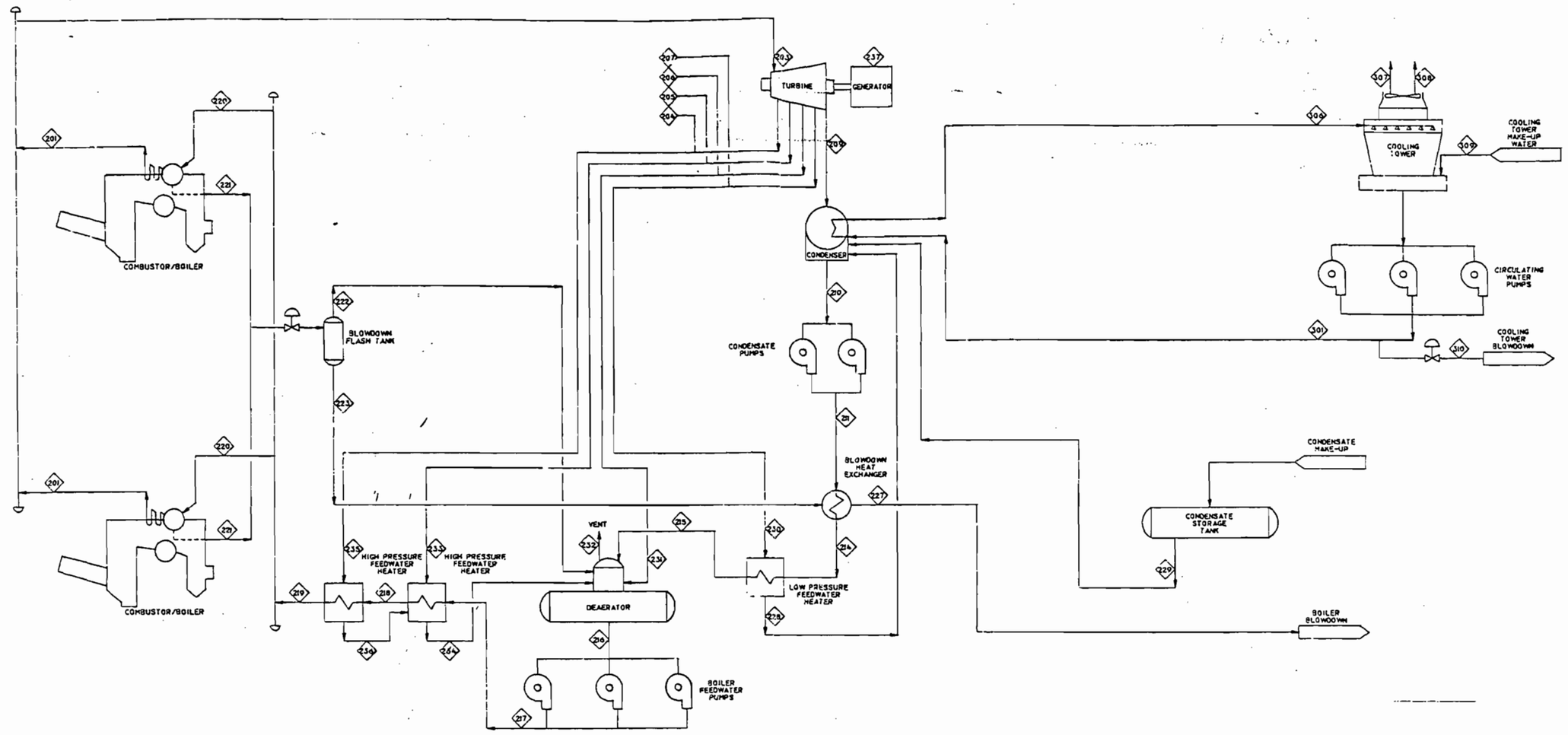


Figure 1-3 Simplified Site Plan for the Westinghouse-Bay Resource Management Center



FLOW NUMBER	201	◇	203	204	205	206	207	◇	209	210	28	◇	◇	214	215	216
MEDIUM	STEAM		STEAM (1)	STEAM	STEAM	STEAM	STEAM		STEAM	CONDENSATE	CONDENSATE			CONDENSATE	CONDENSATE	CONDENSATE
FLOW FROM	SUPERHTR OUTLET		MAIN STM HEADER	1ST TURBINE EXTR	2ND TURBINE EXTR	3RD TURBINE EXTR	4TH TURBINE EXTR		TURBINE EXHAUST	HOTWELL	CONDENSATE PUMP			BLOWDOWN HX	FEEDWATER HTR 1	DEAERATOR
FLOW TO	MAIN STEAM HEADER		TURBINE THROTTLE	EXTRCTION PIPING	EXTRCTION PIPING	EXTRCTION PIPING	EXTRCTION PIPING		CONDENSER	CONDENSATE PUMP	BLOWDOWN HX			FEEDWATER HTR 1	DEAERATOR	BOILER FEED PUMPS
MASS FLOW (#/HR)	78,252		136,504	14,887	12,480	11,344	6,339		111,454	119,004	119,004			119,004	119,004	158,069
TEMPERATURE (F)	752		750	686	487	260	169		108.7	108.7	108.9			110.2	162.1	256.7
PRESSURE (PSIA)	640		614.7	407.6	145.9	35.3	5.9		1.23	1.23	100			90	90	33.5
ENTHALPY (BTU/#)	1379.6		1379.6	1351.9	1267.2	1166.6	1059.6		994.4	76.7	77.1			78.4	130.1	225.4
REMARKS			(1)&(2) 8" STEAM ASSUMED OFF						2.5" HgA	2.5" HgA						

FLOW NUMBER	217	218	219	220	221	222	223	◇	◇	◇	227	228	229	230	231	232
MEDIUM	FEEDWATER	FEEDWATER	FEEDWATER	FEEDWATER	CONTINUOUS BLOWDN	STEAM	WATER				WATER	WATER	WATER	STEAM	STEAM	STEAM
FLOW FROM	BOILER FEED PUMPS	FEEDWATER HTR 3	FEEDWATER HTR 4	FEEDWATER HEADER	BOILER DRUM	FLASH TANK	FLASH TANK				BLOWDOWN HX	FEEDWATER HTR 1	MAKEUP TANK	EXTRACTION PIPING	EXTRACTION PIPING	DEAERATOR
FLOW TO	FEEDWATER HTR 3	FEEDWATER HTR 4	FEEDWATER HEADER	BOILER DRUM	FLASH TANK	DEAER. OR	BLOWDOWN HX				DRAIN TANK	HOTWELL	HOTWELL	FEEDWATER HTR 1	DEAERATOR	ATMOSPHERE
MASS FLOW (#/HR)	158,069	158,069	159,769	79,034	783	433	1132				1132	6,339	1211	6,339	11,344	79
TEMPERATURE (F)	256.6	347.2	436.4	436.4	499.8	259.3	259.3				120.7	122	60	167	257	256.7
PRESSURE (PSIA)	800	790	780	780	679.7	35	35				33	5.0		5.0	33.5	33.5
ENTHALPY (BTU/#)	228.9	318.8	415.1	415.1	487.7	1167.1	228				88.7	89.9	28	1059.6	1166.6	1166.3
REMARKS					1% BLOWDOWN									MTR SAT=167.1°F		

FLOW NUMBER	233	234	235	236	237	◇	◇	◇	◇	◇
MEDIUM	STEAM	CONDENSATE DRN	STEAM	CONDENSATE DRN	GENERATOR OUTPUT					
FLOW FROM	EXTRACTION PIPING	FEEDWATER HTR 3	EXTRACTION PIPING	FEEDWATER HTR 4						
FLOW TO	FEEDWATER HTR 3	DEAERATOR	FEEDWATER HTR 4	FEEDWATER HTR 3						
MASS FLOW (#/HR)	12,480	27,367	14,887	14,887						
TEMPERATURE (F)	485	208.0	678	357.2						
PRESSURE (PSIA)	138.0	138.0	387.2	387.2						
ENTHALPY (BTU/#)	1267.2	237.5	1356.9	329.4						
REMARKS	HTR T SAT=352.2°F		HTR T SAT=441.4°F		13,800 kWe					

FLOW NUMBER	301	◇	◇	◇	◇	306	307	308	309	310
MEDIUM	WATER					WATER	WATER VAPOR	WATER	WATER	WATER
FLOW FROM	CIRC WATER PUMPS					CONDENSER	COOLING TOWER	COOLING TOWER	MAKEUP WATER SYS	PUMP DISCHARGE
FLOW TO	CONDENSER					COOLING TOWER	ATMOSPHERE	ATMOSPHERE	COOLING TOWER	WASTE HTR SYS
MASS FLOW (#/HR)	9,058,604					9,058,604	102,362	725	103,559	20,472
FLOW (GPM)	18,183					18,228			247	41
TEMPERATURE (F)	91					102.3			60	91
PRESSURE (PSIA)										
ENTHALPY (BTU/#)	59					70.3			28	59
REMARKS							EVAPORATION	DRIFT		6 CYC OF CONC

(1) PLANT 100% STEAM FLOW = 136.096 LB/HR
(2) PLANT 100% THERMAL LOAD = 133.52 X 10^6 BTU/HR ABSORBED

REVISIONS
ZONE | DESCRIPTION

BAY COUNTY, FLORIDA
RESOURCE RECOVERY FACILITY
Westinghouse Electric Corporation
Resource Energy Systems Division
Pittsburgh, Pennsylvania

DATE A.C.STEPHEY 3-16-87

STEAM CYCLE PROCESS FLOW DIAGRAM
2 UNITS IN OPERATION
115% PLANT STEAM FLOW
113% PLANT THERMAL LOAD

DWG NO. 1887E24 REV 0
SCALE N-KEY 1 SH 1

FLOW NUMBER	101		102			103	104	105	106	107			108	109	110	111	112	113	114
MEDIUM	MSW STORAGE		COMBUSTION AIR TIPPING FLOOR FD FAN			COMBUST. AIR AIR HEATER DUCTING	COMBUST. AIR DUCTING OVERFIRE FAN	COMBUST. AIR DUCTING COMBUSTOR/GRATE	ASH GRATE ASH QUENCH	FLUE GAS AIR HEATER ESP			FLUE GAS ESP ID FAN	FLUE GAS STACK AMBIENT	FLY ASH ESP CONVEYOR	RESIDUE ASH QUENCH LANDFILL	WATER PIPING ASH QUENCH	FUEL OIL PIPING BURNER	FUEL OIL PIPING BURNER
FLOW FROM	COMBUSTOR																		
FLOW TO																			
		WT %		WT %	VOL %						WT %	VOL %							
	C	25.10	N_2	75.86	77.39					N_2	65.53	65.70	3.0 gr/dscf part. (3)			SOLIDS	4754		
	H	3.70	O_2	22.85	20.56					CO_2	10.17	10.32	150 ppm_{dv} SO_2 (4)			H_2O	2037		
	O	21.70	H_2O	1.28	2.05					H_2O	11.67	18.19	500 ppm_{dv} HCl (4)					USED FOR START UP/ SHUT DOWN ONLY	USED FOR START UP/ SHUT DOWN ONLY
	S	0.20								O_2	6.57	5.77							
	N	0.60								SO_2	0.07	0.05							
	H_2O	27.00																	
	INERT	21.70																	
MASS FLOW (LB/HR)	21,928		107,561			107,561	0	107,561	4128	124,730			124,730	249,460	626	6,772	2,037	0	0
VOLUME FLOW (ACFM)			24,084			41,362	0	41,362		46,460			45,919	90,217					
(1) VOLUME FLOW (SCFM)			23,993			23,993	0	23,993		28,547			28,547	57,034					
MOLAR FLOW (LB MOLES/HR)			3,736			3,736	0	3,736		4,441			4,441	8,882				0	0
TEMPERATURE (F)	70		70			450	450	450	700	400			390	375			70	70	70
(2) PRESSURE (IN.H_2O G)			0			0	0	0		0			0	0					
ENTHALPY (BTU/LB)	HHV=4500 BTU/LB																	* 2 FUEL OIL HHV=18,200 BTU/LB	
REMARKS	263J TPD		50 %XS AIR				0%	100%	CP= 2 BTU/LB - F	TY.= 28J						30% MOISTURE	4.1 GPM	* 2 FUEL OIL HHV=130,000 BTU/GAL	

FLOW NUMBER	301	302	303
MEDIUM	FEEDWATER	STEAM (5)	BLOWDOWN
FLOW FROM	FEEDWATER HEATER	SUPERHEATER OUTLET	BOILER DRUM
FLOW TO	BOILER DRUM	MAIN STEAM HEADER	FLASH TANK
MASS FLOW (LB/HR)	68,729	68,048	680
VOLUME FLOW (GPM)	162.0		1.7
TEMPERATURE (F)	422.3	750	499.8
PRESSURE (PSIA)	779.7	614.7	679.7
ENTHALPY (BTU/LB)	399.4	1379.6	487.7
REMARKS	67.7% BOILER EFF.	66.76 X 10^6 BTU/HR ABSORBED (6)	1 % BLOWDOWN

(1) STANDARD TEMPERATURE=68°F
STANDARD PRESSURE=1 ATMOSPHERE
(2) AMBIENT PRESSURE=760mm Hg
(3) AT 12% CO_2
(4) AT 12% CO_2
(5) PLANT 100% STEAM FLOW=134,096 LB/HR
(6) PLANT 100% THERMAL LOAD=133.52 X 10^6 BTU/HR ABSORBED

NOTE:
SEE SHEET 1 FOR FLOW DIAGRAM

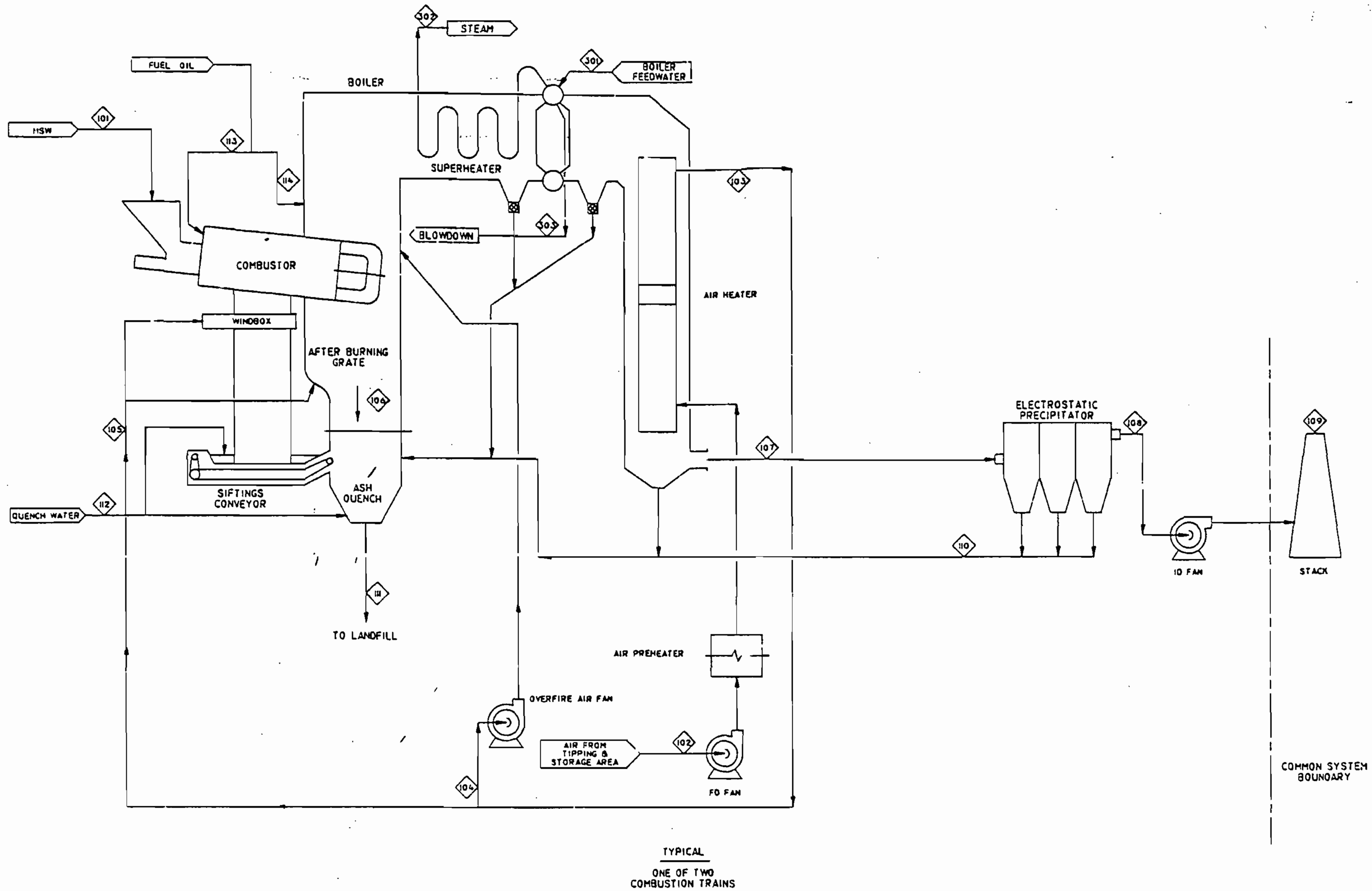
REVISIONS		
ZONE	DESCRIPTION	
	ADDED THIS SHEET	1
	JAS 5/15/68 4-15-68	

Westinghouse Electric Corporation
Resource Energy Systems Division
Pittsburgh, Pennsylvania

DWG NO 1887E15 REV 1
DRAWN LCSTEFFET DATE 4-15-68 SCALE NONE SHEET 2

1887E15 2 1 3406-MK-502

ATTACHMENT 3
Sheet 4 of 5



NOTE:
SEE SHEET 2 FOR MASS FLOW CHART

BAY COUNTY, FLORIDA
RESOURCE RECOVERY FACILITY

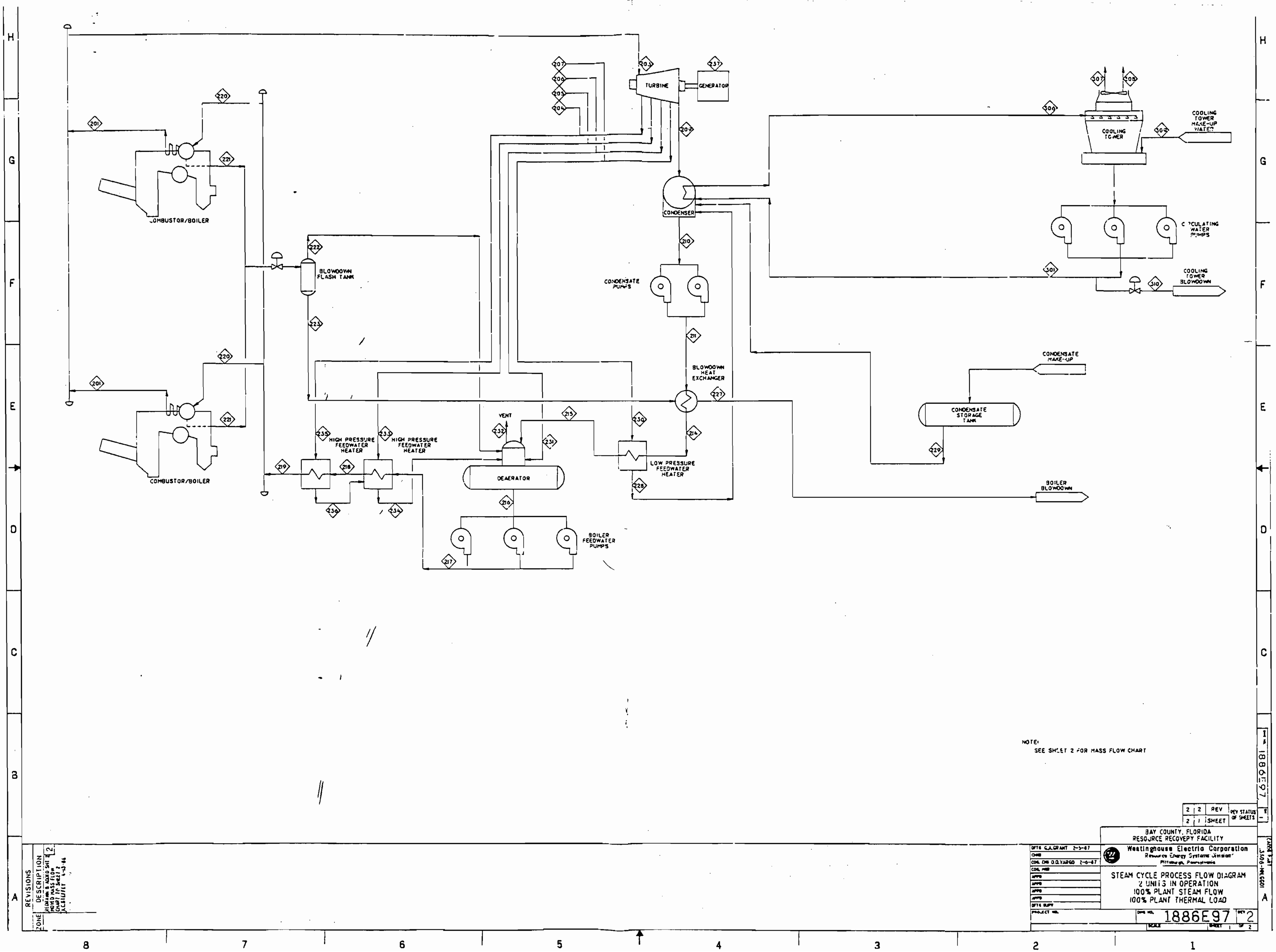
Westinghouse Electric Corporation
Resource Energy Systems Division
Pittsburgh, Pennsylvania

GAS CYCLE PROCESS FLOW DIAGRAM
2 UNITS IN OPERATION
100% PLANT STEAM FLOW
100% PLANT THERMAL LOAD

DFTG A.C.STEFFEY 2-25-87
CHKD
COR. DW D.VARGO 3-16-87

DWG NO. 1887E15 REV 1
SCALE NONE SHEET 1 OF 2

ATTACHMENT 3
Sheet 3 of 5



ATTACHMENT 3
Sheet 1 of 5

FLOW NUMBER	201		203	204	205	205	207	
MEDIUM	STEAM		STEAM (1)	STEAM	STEAM	STEAM	STEAM	
FLOW FROM	SUPERHTR OUTLET		MAIN STM HEADER	1ST TURBINE EXTR	2ND TURBINE EXTR	3RD TURBINE EXTR	4TH TURBINE EXTR	
FLOW TO	MAIN STEAM HEADER		TURBINE THROTTLE	EXTRCTION PIPING	EXTRCTION PIPING	EXTRCTION PIPING	EXTRCTION PIPING	
MASS FLOW (#/HR)	65,048		136,096	12,385	10,302	9,894	5,038	
TEMPERATURE (F)	752		750	650	462	253.7	163.8	
PRESSURE (PSIA)	640		614.7	351.4	126.4	31.8	5.2	
ENTHALPY (BTU/#)	1379.5		1379.6	1338.9	1256.7	1160.5	1053.7	
REMARKS			133.52 X 10^6 BTU/HR ABSORBED (2)					

FLOW NUMBER	209	210	211			214	215	216
MEDIUM	STEAM	CONDENSATE	CONDENSATE			CONDENSATE	CONDENSATE	CONDENSATE
FLOW FROM	TURBINE EXHAUST	HOTWELL	CONDENSATE PUMP			BLOWDOWN HX	FEEDWATER HTR 1	DEAERATOR
FLOW TO	CONDENSER	CONDENSATE PUMP	BLOWDOWN HX			FEEDWATER HTR 1	DEAERATOR	BOILER FEED PUMPS
MASS FLOW (#/HR)	98,478	104,563	104,563			104,563	104,563	137,457
TEMPERATURE (F)	108.7	108.7	108.9			110.2	156.7	250.7
PRESSURE (PSIA)	1.23	1.23	100			90	80	30.2
ENTHALPY (BTU/#)	993.6	76.7	77.1			78.4	124.8	219.3
REMARKS	2.5" HgA	2.5" HgA						

FLOW NUMBER	217	218	219	220	221	222	223	
MEDIUM	FEEDWATER	FEEDWATER	FEEDWATER	FEEDWATER	CONTINUOUS BLOWDN	STEAM	WATER	
FLOW FROM	BOILER FEED PUMPS	FEEDWATER HTR 3	FEEDWATER HTR 4	FEEDWATER HEADER	BOILER DRUM	FLASH TANK	FLASH TANK	
FLOW TO	FEEDWATER HTR 3	FEEDWATER HTR 4	FEEDWATER HEADER	BOILER DRUM	FLASH TANK	DEAERATOR	BLOWDOWN HX	
MASS FLOW (#/HR)	137,457	137,457	137,457	68,728	[illegible]	393	978	
TEMPERATURE (F)	252.5	336.3	422.3	422.3	499.8	254	254	
PRESSURE (PSIA)	800	790	780	780	679.7	32	32	
ENTHALPY (BTU/#)	222.8	307.4	399.4	399.4	487.7	1165.4	222.7	
REMARKS					1% BLOWDOWN			

FLOW NUMBER			227	228	229	230	231	232
MEDIUM			WATER	WATER	WATER	STEAM	STEAM	STEAM
FLOW FROM			BLOWDOWN HX	FEEDWATER HTR 1	MAKEUP TANK	EXTRACTION PIPING	EXTRACTION PIPING	DEAERATOR
FLOW TO			DRAIN TANK	HOTWELL	HOTWELL	FEEDWATER HTR 1	DEAERATOR	ATMOSPHERE
MASS FLOW (#/HR)			978	5,038	1047	5,038	9,894	69
TEMPERATURE (F)			120.9	122.2	60	161.6	250.7	250.7
PRESSURE (PSIA)			32	4.93		4.93	30.2	30.2
ENTHALPY (BTU/#)			18.9	90.1	28	1053.7	1160.5	1164.2
REMARKS						HTR T SAT=161.7°F		

FLOW NUMBER	233	234	235	236	237					
MEDIUM	STEAM	CONDENSATE DRN	STEAM	CONDENSATE DRN	GENERATOR OUTPUT					
FLOW FROM	EXTRACTION PIPING	FEEDWATER HTR 3	EXTRACTION PIPING	FEEDWATER HTR 4						
FLOW TO	FEEDWATER HTR 3	DEAERATOR	FEEDWATER HTR 4	FEEDWATER HTR 3						
MASS FLOW (#/HR)	10,302	22,686	12,385	12,385						
TEMPERATURE (F)	460	262.5	646	346.3						
PRESSURE (PSIA)	120.1	120.1	333.9	333.9						
ENTHALPY (BTU/#)	1256.7	231.3	1338.9	317.8						
REMARKS	HTR T SAT=341.3°F		HTR T SAT=427.3°F		12,259 KWe					

FLOW NUMBER	301					306	307	308	309	310
MEDIUM	WATER					WATER	WATER VAPOR	WATER	WATER	WATER
FLOW FROM	CIRC WATER PUMPS					CONDENSER	COOLING TOWER	COOLING TOWER	MAKEUP WATER SYS	PUMP DISCHARGE
FLOW TO	CONDENSER					COOLING TOWER	ATMOSPHERE	ATMOSPHERE	COOLING TOWER	WASTE WTR SYS
MASS FLOW (#/HR)	7,996,448					7,996,448	90,360	640	109,072	18,072
FLOW (GPM)	16,051					16,091			218	36
TEMPERATURE (F)	91					102.3			60	91
PRESSURE (PSIA)										
ENTHALPY (BTU/#)	59					70.3			28	59
REMARKS							EVAPORATION	DRIFT		6 CYC OF CONC

(1) PLANT 100% STEAM FLOW = 136,096 LB/HR
(2) PLANT 100% THERMAL LOAD = 133.52 X 10^6 BTU/HR ABSORBED

NOTE:
SEE SHEET 1 FOR FLOW DIAGRAM

REVISIONS		
ZONE	DESCRIPTION	
	ADDED THIS SHEET A.C.STEFFEY 4-13-88	2

Westinghouse Electric Corporation
Resource Energy Systems Division
Pittsburgh, Pennsylvania

DWG NO 1886E97 REV 2
DRAWN A.C.STEFFEY DATE 4-13-88 SCALE NONE SHEET 2

CADDS PART .3A06-NN.G601

1886E97 2

ATTACHMENT 4

D. Facility Supplement Information

4. Precautions to Prevent Emissions of Unconfined Particulate Matter

The following areas have been identified as potential source of fugitive particulate emissions along with the precautions used to prevent these emissions.

1. Emissions from Paved and Unpaved Roads

At the Bay Resource Management Center site, there are only approximately 0.112 miles of paved roads and 0.08 miles of unpaved roads that are used by trucks delivering MSW, trucks removing ash, passenger vehicles and other plant equipment. To minimize potential emissions from the paved roadways, the facility utilizes a road sweeper to clean these areas twice per month. The unpaved areas are used infrequently in order that vehicles can travel from the tipping floor to the rear of the facility without exiting plant property

2. Residue Handling

The residual material remaining after the solid waste is combusted is loaded via conveyor into trucks and then hauled to the landfill. The residue (ash) is handled wet in order to minimize emissions. All ash is combined inside the boiler building and goes to the quench tank where it is submerged in water. A drag conveyor lifts the material from the quench tank up an incline to allow standing water to drain. The material in then discharged into a roll-off container that is loaded on a truck. The roll-off containers are covered before the trucks exit the site.

ATTACHMENT 5

D. Facility Supplement Information

5. Fugitive Emissions Identification

The following potential fugitive emission sources have been identified at the Facility:

AREA	POLLUTANT
Ash/Residue Handling	Particulate Matter
MSW Handling - Tipping Floor	Particulate Matter
MSW Handling - Conveyor Room	Particulate Matter
Paved/Unpaved Roads	Particulate Matter
Cooling Tower	Particulate Matter
Fuel Oil Storage Tanks	VOC

The fugitive emission sources are listed here for completeness purposes. They are also listed on Attachment 6 - List of Insignificant Sources.

ATTACHMENT 6

LIST OF INSIGNIFICANT SOURCES			
ITEM	**SOURCE**	**UNIT TYPE**	**RATIONALE FOR EXEMPTION**
1	All Sources listed in 62-210.200(3)		Exempted by Rule 62-213.400 and 62-210.300(3)
2	Plant grounds maintenance Lawn maintenance equipment/activities	Small engine emissions; fertilizers, etc.	EPA Listed
3	Maintenance/repair activities	Cleaning, painting, welding, coating, applications; hand tools/equipment meter repair/on-line tools/equipment/meter repair on-line/off-line cleaning of equipment. Abrasive cleaning indoors.	Presumptive Exemption
4	Main steam pressure relief valves; steam from boiler operations. Steam leaks Steam releases; turbine vents Safety devices	Valves T/G Trips Steam PRV	Steam exempt; not a pollutant.
5	Office Activities	Vacuum Cleaning Refrigerators Office Supplies/Equipment	EPA Listed
6	Chemical Storage Tanks	Sulfuric Acid (2) 1500 gallons Propane (1) 125 gallons Sodium Hypochlorite (55-gal drums) Sodium Hydroxide (1) 1500 gallons 1 acid/1 caustic day tanks (250 gal ea) Performax 412 (1) 1000 gallons	EPA Listed
7	Testing & Monitoring Equipment	CEMs, stack sampling calibration gases, oxygen detector.	EPA Listed
8	Internal Combustion Engines which drive compressors, generators, water pumps, or other auxiliary equipment.	Fire/Safety Diesel Pump	Exempt by 62-210.300(3)(t) if diesel and operated <400 hrs/yr, otherwise presumptively exempt at time of application. Operates less than 400 hours per year. (987 hrs since plant startup).
9	HVAC Equipment	Cooling/heating	Exempt by 62-213.400 and 62-210.300(3).

LIST OF INSIGNIFICANT SOURCES			
ITEM	**SOURCE**	**UNIT TYPE**	**RATIONALE FOR EXEMPTION**
10	Vents/Exhausts	Boiler Feed Pump Relief Valve Blowdown Flash tank Vent Feedwater Heater Vent Boiler Blowdown Tank Vent Gland Seal Vent Steam Dump Steam Drum Vent Dearator Vents Battery Room Exhaust Fans (2) Boiler Building Exhaust Fans (6) Maintenance Building Exhaust Generator Venting - Turbine Trip Sewer vents/exhausts Drain vents Turbine Roof Exhausts (2)	Water/Steam - Not a pollutant
11	Air compressors/Instrument air		EPA Listed
12	Waste accumulation for Safety Kleen Disposal	Accumulation in 10 gallon containers that are closed.	Extremely small quantities (less than 100 gal/yr).
13	Lab vents/lab operations		Exempt by 62-210.300(3)(o)
14	Mobile sources - FEL, fork lifts		EPA Listed
15	Containers, reservoirs, tanks for oils wax, grease (non-solvents)	Lube oil reservoirs Gearbox vents Packing seals	No Emissions
16	Transportation/conveying and handling of waste and ash		Emission estimated to be negligible.
17	Fuel oil storage tanks	4000 gal 1000 gal 250 gal	Diesel storage-very low vapor pressure.
18	Cooling Tower		Emissions less than significant level
19	Road Emissions		Emissions estimated at less than 1 ton per year

ATTACHMENT 7

8: List of Equipment / Activities Regulated under Title VI :

The following equipment has been identified as being regulated under Title VI:

AIR-1 Control Room Air Conditioner manufactured by Liebert, model number UH114AUA10.

AIR-2 Control Room Backup Air Conditioner manufactured by Marvair, model number WHP57HPA.

AIR-3 Back Stairwell Air Conditioner manufactured by Lennox, model number HS18-653.

SLF-1 Chem Lab Air Conditioner manufactured by Miller / Nortek, model number MSC-30E-C3.

HPR-1 Office Building Heat Pump manufactured by Lennox, model number CHP1113535.

HPR-2 MCC Room Air Conditioner, Unit 2, manufactured by Trane, model number BTA180D400.

HPR-3 MCC Room Air Conditioner, Unit 3, manufactured by Trane, model number BWV180B400.

ATTACHMENT 8

14. Compliance Report and Plan:

I hereby certify that the facility and the emission units described in this application are in compliance with the applicable requirements as listed.

Richard S. Brookins Jr.
Industrial Hygiene, Safety, and
Environmental Coordinator

Date 6/6/96

ATTACHMENT 9

15: Compliance Certification:

I, the undersigned, am the Responsible Official as defined in Chapter 62-210.200 F.A.C., of the Title V source for which this report is being submitted. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made and data contained in this report are true, accurate, and complete.

James M. Leddy
Plant Manager

Date: 6/7/96

ATTACHMENT 10

3: Detailed Description of Control Equipment

Electrostatic Precipitator Description

Electrostatic precipitators (ESPs) are used to remove particulate matter from the flue gas before it exits the stack. The ESPs, manufactured by Environmental Elements Corporation (EEC), are arranged into three mechanical fields, each with its own electrical field and ash removal hopper. The fly ash handling system, designed and supplied by Macawber, interfaces with the ESP's ash removal hopper and includes an inflatable seal to prevent fly ash re-entrainment from occurring during the fly ash system's "blow" cycle. The ESP specific design information includes:

Fields:	3 (identical in size)
Discharge Electrodes:	Rigid Frame
Plate Dimensions:	24 ft high by 9 ft long
Collection Plate Area:	19,710 ft^2
Specific Collection Area:	350 ft^2/1000 acfm
Design Gas Flow Rate:	56,000 acfm @ 400 ^{o}F
Gas Velocity Thru ESP:	4 ft/sec
Gas Retention Time:	9.7 sec
T-R Sets	3 per ESP rated at 23.5 KVA (55 kv, 300 mA)
Corona Density:	300 watt/1000 acfm; 0.94 watt/ft^2
Pressure Drop:	1 inch H_2O
Design Pressure:	+ or - 15 inch H_2O

ATTACHMENT 11

4: Description of Stack Sampling Facilities:

Each incinerator train exhaust through a 53-inch inside diameter stack measuring 125 feet in height. The two stacks are housed in a common flue, which has a testing platform located approximately 60 feet from the stack base. Two 3.5-inch diameter sampling ports are installed on each stack approximately five feet above the testing platform.

COUNTY ENERGY SYSTEMS, INC. — COMBUSTOR/BOILER START-UP PROCEDURE — PROCEDURE NO SU-11

REV 1

APPROVED D.J. McKeand

ISSUE DATE 5/4/92

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PROCEDURE OBJECTIVE: TO PROVIDE A UNIFORM METHOD OF STARTING O'CONNOR ROTARY COMBUSTOR/DELTAK BOILER FROM COLD TO ON LINE CONDITION IN A CONTROLLED AND SYSTEMATIC MANNER.

DATE: ___/___/___ CO: _____ SHIFT: ___

RELIEVING CO: _____ SHIFT: ___

BOILER NO. ___ TIME OF RELIEF: _____

STEP NO.	DESCRIPTION	TIME	INITIALS
1	CLEAR SAFETY TAGS AND LOCKS.		
2	COMPLETE THE FOLLOWING PROCEDURE FORMS AND ATTACH: A. DCS/CONTROL ROOM PRE START-UP CHECKLIST (SU-11A) B. BOILER VALVE LINEUP CHECKLIST (SU-11B) C. BOILER PRE START-UP INSPECTION CHECKLIST (SU-11C)		
3	START ASH SYSTEM IN ACCORDANCE WITH PROCEDURE NO.9. HAVE THE OUTSIDE OPERATOR VERIFY PROPER OPERATION.		
4	START ELECTROSTATIC PRECIPITATOR IN ACCORDANCE WITH WITH PROCEDURE NO.13		
5	ADJUST STEAM DRUM WATER LEVEL TO 0.0 INWC. HAVE THE OUTSIDE OPERATOR VERIFY LEVEL AT THE DRUM SIGHT GLASS.		
6	VERIFY THE BOILER WATER CHEMISTRY IS IN SPEC. FOR START-UP AND START CHEM. FEED PUMP.		
7	START COMBUSTOR CIRCULATION PUMP. HAVE THE OUTSIDE OPERATOR VERIFY PROPER OPERATION.		
8	START THE RAM/COMBUSTOR HYDRAULIC PUMP SYSTEM.		
9	START ID FAN: A. CLOSE ID FAN INLET DAMPER. B. SET THE ID FAN SPEED DEMAND TO 0%. C. START ID FAN. D. HAVE THE OUTSIDE OPERATOR VERIFY PROPER OPERATION.		
10	IN THE MANUAL MODE, SET THE ID FAN SPEED AND THE SUCTION DAMPER TO 40%. NOTE: THIS IS DONE TO PREVENT OVERLOADING THE ID FAN MOTOR WHEN FLOWING COLD GAS THROUGH THE BOILER WITH THE FEED CHUTE OPEN.		
11	TEST THE RAM/COMBUSTOR HYDRAULIC SYSTEM AND HAVE THE OUTSIDE OPERATOR VERIFY PROPER OPERATION: A. CYCLE THE RESISTANCE DOOR AND CLOSE AFTER TESTING. B. CYCLE THE RAMS. C. ROTATE THE COMBUSTOR AND SET THE ROTATION SPEED TO APPROXIMATELY TWO (2) RPH.		

COUNTY ENERGY SYSTEMS, INC.	COMBUSTOR/BOILER START-UP PROCEDURE	PROCEDURE NO SU-11
REV 1		
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STEP NO.	DESCRIPTION	TIME	INITIALS
12	START THE FD FAN: A. CLOSE FD FAN INLET DAMPER. B. SET THE FD FAN SPEED DEMAND TO 0%. C. START FD FAN. D. HAVE THE OUTSIDE OPERATOR VERIFY PROPER OPERATION.		
13	START FUEL OIL SYSTEM IN ACCORDANCE WITH PROCEDURE NO.6		
14	LINEUP ATOMIZING SYSTEM FOR FUEL OIL BURNERS (steam is preferred but if it is not available, use compressed air).		
15	SET THE FURNACE PRESSURE CONTROLLER SETPOINT TO -0.45 INWC AND PLACE THE ID FAN SUCTION DAMPER IN THE AUTOMATIC MODE.		
16	SET THE ID FAN SPEED CONTROLLER SETPOINT TO 70% AND PLACE THE CONTROLLER IN THE AUTOMATIC MODE		
17	INCREASE FD FAN SPEED AND DAMPER POSITION FOR AN AIR FLOW OF 850 MSCFH		
18	START COMBUSTOR IGNITION BURNER AND SET AT 50%		
19	START FURNACE LOAD BURNER AND ADJUST AS NECESSARY TO MAINTAIN THE HEAT-UP RATE NOT GREATER THAN 100 F deg/hr. NOTE: PUT THE COMBUSTOR OUTLET WATER TEMPERATURE ON THE TREND SO THAT A PRINTOUT CAN BE MADE EACH HOUR UNTIL THE START-UP IS COMPLETE.		
20	STOP THE FD FAN.		
21	STOP THE COMBUSTOR IGNITION BURNER.		
22	MAINTAIN THE STEAM DRUM WATER LEVEL DURING HEAT-UP WITH THE BLOWDOWN VALVE AS THE LEVEL RISES. (Limits -2.0 to +2.0)		
23	WHEN THE BOILER PRESSURE REACHES 15 PSIG, CLOSE THE STEAM DRUM VENT VALVES.		
24	PLACE SUPERHEAT STEAM TEMPERATURE CONTROLLER IN THE AUTOMATIC MODE AND ADJUST THE SETPOINT TO 750 degrees F.		
25	WHEN THE COMBUSTOR OUTLET WATER TEMPERATURE REACHES 400 degrees F, IF THERE IS NOT A BOILER FEED PUMP RUNNING AT THIS TIME, START ONE OF THE ELECTRIC DRIVEN PUMPS IN ACCORDANCE WITH PROCEDURE NO.5a.		
26	OPEN SEAL WATER SUPPLY TO COMBUSTOR ROTARY JOINT.		
27	HAVE THE LOADER OPERATOR BEGIN FEEDING MSW TO THE CONVEYER SYSTEM UNTIL IT IS TO THE TOP OF THE INCLINE CONVEYER		

COUNTY ENERGY SYSTEMS, INC.	COMBUSTOR/BOILER START-UP PROCEDURE	PROCEDURE NO SU-11
REV 1		
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STEP NO.	DESCRIPTION	TIME	INITIALS
28	WHEN THE FLUE GAS TEMPERATURE AT THE EXIT OF THE PRECIPITATOR REACHES 350 degrees F, FILL THE CHARGING CHUTE WITH FUEL TO THE NORMAL OPERATING LEVEL AND PUT THE CONVEYER CONTROLS IN THE AUTOMATIC MODE.		
29	START THE RAMS AND RUN THEM IN AUTOMATIC IN THE SERIES MODE AT A MANUAL SPEED OF 60 % UNTIL THERE IS SUFFICIENT FUEL IN THE COMBUSTOR TO START A FIRE.		
30	START THE FD FAN: A. CLOSE FD FAN INLET DAMPER. B. SET THE FD FAN SPEED DEMAND TO 0%. C. START FD FAN. D. HAVE THE OUTSIDE OPERATOR VERIFY PROPER OPERATION.		
31	INCREASE FD FAN SPEED AND DAMPER POSITION FOR AN AIR FLOW OF 850 MSCFH		
32	START COMBUSTOR IGNITION BURNER AND SET AT 50% TO IGNITE THE MSW.		
33	PUT COMBUSTION AIR PRESSURE CONTROLLER IN THE AUTOMATIC MODE AND ADJUST THE SETPOINT TO 15 INWC.		
34	PUT THE FD FAN SPEED CONTROLLER IN THE AUTOMATIC MODE AND ADJUST THE SETPOINT TO 80%.		
35	WHEN THE MSW FIRE IS ESTABLISHED AND THE EMISSIONS ARE WITHIN PERMIT LIMITS STOP THE COMBUSTOR BURNER AND LOAD BURNER.		
36	INCREASE FUEL FEED RATE WITH RAM SPEED, ADJUST COMBUSTOR SPEED AND ADJUST COMBUSTION AIR FLOW AND DISTRIBUTION AS NECESSARY TO BRING THE UNIT ON LINE.		
37	WHEN THE STEAM DRUM WATER LEVEL BEGINS TO DECREASE AND REQUIRES WATER, HAVE THE OUTSIDE OPERATOR LINEUP THE FEEDWATER REGULATOR AND FEED STOP VALVE AT THE ECONOMIZER INLET FOR AUTOMATIC OPERATION. ADD FEEDWATER AS NECESSARY TO MAINTAIN A SATISFACTORY WATER LEVEL.		
38	PUT THE STEAM DRUM LEVEL CONTROLLER IN THE AUTOMATIC MODE AND ADJUST THE SETPOINT TO 0.0 INWC.		
39	PUT THE ID FAN SPEED CONTROLLER IN THE AUTOMATIC MODE AND ADJUST THE SETPOINT TO 70%.		
40	WHEN THE STEAM FLOW IS GREATER THAN 20,000 LB/HR CLOSE THE SUPERHEATER VENT VALVE.		
41	PUT THE COMBUSTOR ZONE AIR FLOW CONTROLLERS IN THE AUTOMATIC MODE AND ADJUST THE SETPOINTS AS NECESSARY TO STABILIZE THE COMBUSTION.		
42	MANUALLY ADJUST THE RAM SPEED AND COMBUSTOR SPEED AS NECESSARY TO STABILIZE THE COMBUSTION AND ESTABLISH A GOOD FUEL BED WITH A STEAM FLOW AT ABOUT 68,000 LB/HR.		

COUNTY ENERGY SYSTEMS, INC. | COMBUSTOR/BOILER START-UP PROCEDURE | PROCEDURE NO SU-11

REV 1

STEP NO.	DESCRIPTION	TIME	INITIALS
43	PUT THE STEAM FLOW CONTROLLER IN THE AUTOMATIC AND ADJUST THE SETPOINT TO 68,000 LB/HR.		
44	PUT THE COMBUSTOR ZONE TWO (2) AIR FLOW CONTROLLERS IN THE CASCADE MODE.		
45	PUT THE OXYGEN CONTROLLER IN THE AUTOMATIC AND ADJUST THE SETPOINT TO 5% O2.		
46	PUT THE RAM SPEED CONTROLLER IN THE AUTOMATIC MODE.		
47	HAVE THE OUTSIDE OPERATOR VERIFY PROPER BOILER WATER CHEMISTRY AND PLACE THE CONTINUOUS BLOWDOWN IN SERVICE.		
48	BOILER IS ON LINE AT FULL POWER AND STABLE.		

BELOW IS FOR USE IN RECORDING STEPS NOT PERFORMED OR PERFORMED OUT OF SEQUENCE.

STEP NO.	REASON	SHIFT SUPERVISOR

COMPLETION: _____ _____

CONTROL OPERATOR SHIFT SUPERVISOR

Y COUNTY ENERGY SYSTEMS, INC. | BOILER SHUT DOWN PROCEDURE | PROCEDURE NO SD-11

REV 0 | ISSUE DATE 6/4/92

APPROVED D.J. McKemp

PROCEDURE OBJECTIVE: TO PROVIDE FOR A SAFE AND ORDERLY SHUT DOWN OF THE O'CONNOR ROTARY COMBUSTOR/DELTAK BOILER.

DATE: ___/___/___ CO: _____ SHIFT: ___

RELIEVING CO: _____ SHIFT: ___

BOILER NO. ___ TIME OF RELIEF: _____

STEP NO.	DESCRIPTION	TIME	INITIALS
1	NOTIFY THE ENTIRE OPERATING SHIFT THAT THE BOILER IS BEING TAKEN OFF LINE.		
2	NOTIFY GULF POWER THAT A BOILER IS BEING TAKEN OFF THE LINE, THE REASON WHY AND THE NEW SCHEDULED POWER PRODUCTION.		
3	NOTIFY MANAGEMENT THAT THE BOILER IS BEING TAKEN OFF THE LINE.		
4	STOP FEEDING FUEL TO THE CONVEYOR SYSTEM SUPPLYING THE UNIT BEING TAKEN OFF THE LINE.		
5	WHEN ALL THE FUEL ON THE CONVEYOR HAS BEEN FED INTO THE FEED CHUTE, PUT THE FEED CHUTE LEVEL IN THE MANUAL MODE AND STOP THE FUEL FEED CONVEYOR SYSTEM.		
6	WHEN ALL OF THE FUEL HAS BEEN FED INTO THE COMBUSTOR AND THE FEED CHUTE IS EMPTY, STOP THE RAM FEED SYSTEM.		
7	PUT ALL THE COMBUSTOR AIR FLOW CONTROLLERS IN THE AUTOMATIC MODE AND DECREASE THE AIR FLOW AS THE FUEL BURNS OUT.		
8	STOP THE OVERFIRE AIR FAN: A. CLOSE THE FAN INLET DAMPER B. STOP THE OVERFIRE AIR FAN		
9	WHEN THE STEAM FLOW DECREASES TO 20,000 LB/HR, OPEN THE SUPERHEATER VENT.		
10	WHEN ALL OF THE FUEL IN THE COMBUSTOR IS BURNED OUT: A. PUT THE COMBUSTION AIR PRESSURE CONTROLLER IN THE MANUAL MODE B. PUT THE FD FAN SPEED CONTROLLER IN THE MANUAL MODE C. SET THE FAN SPEED TO 0% DEMAND D. CLOSE THE FAN INLET DAMPER E. STOP THE FD FAN NOTE: THE COOL DOWN OF THE BOILER SHOULD NOT BE AT A RATE GREATER THAN 100 F degrees/hr.		
11	WITH THE COMBUSTOR SPEED CONTROLLER STILL IN AUTOMATIC INCREASE THE SETPOINT TO 10 RPH UNTIL ALL THE ASH IS OUT OF THE COMBUSTOR THEN REDUCE THE SETPOINT TO 2 RPH AND CONTINUE TO ROTATE THE COMBUSTOR UNTIL THE COMBUSTOR OUTLET WATER COOLS TO 250 degrees F.		
12	CLOSE THE CONTINUOUS BLOWDOWN VALVE.		

...Y COUNTY ENERGY SYSTEMS, INC.	BOILER SHUT DOWN PROCEDURE	PROCEDURE NO SD-11
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STEP NO.	DESCRIPTION	TIME	INITIALS
13	PUT ALL THE COMBUSTOR ZONE AIR FLOW CONTROLLERS IN THE MANUAL MODE AND CLOSE ALL THE ZONE DAMPERS.		
14	WHEN THE BOILER PRESSURE REACHES 15 PSIG OPEN THE STEAM DRUM VENT.		
15	DE-ENERGIZE FIELD ONE (1) AND TWO (2) OF THE ELECTROSTATIC PRECIPITATOR. LEAVE FIELD THREE ENERGIZED TO PREVENT DUST FROM DISCHARGING FROM THE STACK ONLY DE-ENERGIZE FIELD THREE (3) FOR MAINTENANCE/SAFETY REQUIREMENTS.		
16	SHUTDOWN THE FOLLOWING SYSTEMS ONLY FOR MAINTENANCE OR SAFETY REQUIREMENTS: FLY ASH SYSTEM (MACAWBER) ROTARY VALVES (1-1 & 1-2 UNIT #1) OR (2-1 & 2-2 UNIT #2) THIS IS TO PREVENT CLOGGING FROM THE CONDENSING OF MOISTURE WHEN THE SYSTEMS COOL DOWN		
17	WHEN THE COMBUSTOR OUTLET WATER COOLS TO 250 degrees F. STOP THE ROTATION OF THE COMBUSTOR.		
18	CLOSE SEAL WATER SUPPLY TO COMBUSTOR ROTARY JOINT.		
19	OPEN THE RESISTANCE DOOR AND INSTALL THE SAFETY PIN.		
20	STOP THE RAM/COMBUSTOR HYDRAULIC PUMP SYSTEM.		
21	STOP COMBUSTOR CIRCULATION PUMP.		
22	CLOSE FEEDWATER STOP VALVE AT STEAM DRUM.		
23	STOP THE SIFTINGS CONVEYOR.		
24	STOP THE ID FAN: A. PUT THE ID FAN SPEED CONTROLLER IN THE MANUAL MODE B. SET THE FAN SPEED TO 0% DEMAND C. STOP THE ID FAN D. PUT FURNACE PRESSURE CONTROLLER IN THE MANUAL MODE E. SET THE FAN INLET DAMPER TO 50% OPEN		
25	STOP THE RAPPING SEQUENCE ON THE PRECIPITATOR AND DE-ENERGIZE THE REMAINING FIELD.		

BELOW IS FOR USE IN RECORDING STEPS NOT PERFORMED OR PERFORMED OUT OF SEQUENCE.

STEP NO. REASON SHIFT SUPERVISOR

_____

_____

COMPLETION: _____ _____

CONTROL OPERATOR SHIFT SUPERVISOR