Appendix A. Results and Calculations

Spreadsheet Printouts

General Calculations

Mercury Specific Calculations and Examples

Data Tracking Logs

FOSSIL ENERGY RESEARCH CORP.

ISOKINETIC TEST DATA SUMMARY

Test Program Information				
Client	Tri-State	*Data input by*	MDM	
Plant/Unit	Craig Unit 1	*Method*	Ontario Hydro	
Sample Location	E APH Exit	*Stack Area, ft^2*	270.9	
Fuel	Coal	*Sample Train ID*	1-FERCo	
Fuel F-factor, dscf/MMBtu	9780	*Meter factor, Y_D*	1.001	
		Ref Temp, F	68	
Pre-test Information				
Test Number	1-Inlet-Hg	2-Inlet-Hg	3-Inlet-Hg	Average
Pitot Factor, C_p	0.84	0.84	0.84	-
Barometric Pressure, in Hg	24.08	24.14	24.19	-
Sample Time, min	125	125	125	-
Nozzle Diameter, in	0.187	0.188	0.187	-
Sample Train Data				
Meter Volume, acf	59.390	64.361	65.050	-
Static Pressure, iwg	-16	-16	-16	-16
ΔP, iwg	0.7526	0.7839	0.7974	0.7780
ΔH, iwg	0.71	0.79	0.81	0.77
Meter Temp, F	92.6	95.4	91.8	93.3
Stack Temp, F	249.3	254.7	244.2	249.4
Water collected, g	89.3	95.4	92.8	92.5
O_2, %	7.32	7.24	7.69	7.42
CO_2, %	12.87	13.33	11.86	12.68
Start time/stop time	0824/1038	1230/1443	0820/1044	
Sample Train Results				
Std Sample Vol, dscf	45.811	49.530	50.494	48.612
Std Sample Vol, m^3	1.297	1.403	1.430	1.377
Std Moisture Vol, dscf	4.215	4.503	4.380	-
Moisture, %	8.43%	8.33%	7.98%	8.25%
Dry Molecular Weight	30.35	30.42	30.20	-
Wet Molecular Weight	29.31	29.39	29.23	29.31
Stack Gas Velocity, ft/s	63.93	65.33	65.50	64.92
Stack Gas Flow, wacfm	1,039,040	1,061,695	1,064,583	1,055,106
Stack Gas Flow, dscfm	542,190	551,820	564,952	552,987
Isokinetic Ratio, %	96.02	100.92	101.57	-
Mercury catch, ug				
Particulate	0.08	0.08	0.08	
Oxidized	0.33	0.31	0.17	
Elemental	3.56	2.70	2.10	
Total	3.89	3.01	2.27	3.06
Mercury catch, ug/m^3				
Particulate	0.062	0.057	0.056	0.06
Oxidized	0.254	0.221	0.119	0.20
Elemental	2.744	1.925	1.469	2.05
Total	3.00	2.15	1.59	2.24
Mercury catch, lb/10^{12} Btu				
Particulate	0.058	0.053	0.054	0.055
Oxidized	0.239	0.206	0.115	0.186
Elemental	2.573	1.795	1.416	1.928
Total	2.81	2.00	1.53	2.114
Mercury, lb/hr				
Particulate	2.39E-04	2.17E-04	2.26E-04	2.27E-04
Oxidized	9.86E-04	8.40E-04	4.80E-04	7.69E-04
Elemental	1.06E-02	7.32E-03	5.93E-03	7.96E-03
Total	0.0116	0.0082	0.0064	8.73E-03

Note-shaded cells are ND, values shown are detection limits

FOSSIL ENERGY RESEARCH CORP.

ISOKINETIC TEST DATA SUMMARY

Test Program Information				
Client	Tri-State	*Data input by*	MDM	
Plant/Unit	Craig Unit 1	*Method*	Ontario Hydro	
Sample Location	Stack	*Stack Area, ft^2*	614.4	
Fuel	Coal	*Sample Train ID*	3-WCS	
Fuel F-factor, dscf/MMBtu	9780	*Meter factor, Y_D*	1.006	
		Ref Temp, F	68	
Pre-test Information				
Test Number	1-Stack	2-Stack	3-Stack	Average
Pitot Factor, C_p	0.84	0.84	0.84	-
Barometric Pressure, in Hg	23.83	23.89	23.94	-
Sample Time, min	120	120	120	-
Nozzle Diameter, in	0.225	0.225	0.225	-
Sample Train Data				
Meter Volume, acf	67.684	75.911	74.890	-
Static Pressure, iwg	-0.70	-0.70	-0.68	-0.69
ΔP, iwg	0.4910	0.4924	0.4964	0.4933
ΔH, iwg	0.80	1.00	1.00	0.93
Meter Temp, F	83.1	85.2	81.2	83.2
Stack Temp, F	147.9	147.4	135.6	143.6
Water collected, g	137.1	188.1	162.1	162.4
O_2, %	7.16	7.11	7.18	7.15
CO_2, %	13.02	13.45	12.31	12.93
Start time/stop time	0832/1148	1230/1512	0820/1126	
Sample Train Results				
Std Sample Vol, dscf	52.849	59.229	58.988	57.022
Std Sample Vol, m^3	1.497	1.677	1.670	1.615
Std Moisture Vol, dscf	6.471	8.878	7.651	-
Moisture, %	10.91%	13.04%	11.48%	11.81%
Dry Molecular Weight	30.37	30.44	30.26	-
Wet Molecular Weight	29.02	28.82	28.85	28.90
Measured Stack Gas Velocity, ft/s	47.15	47.31	46.96	47.14
Measured Stack Gas Flow, wacfm	1,738,100	1,743,825	1,730,904	1,737,609
Measured Stack Gas Flow, dscfm	1,068,895	1,050,318	1,084,528	1,067,914
Corrected Stack Gas Flow, dscfm	1,025,070	1,007,255	1,040,062	1,024,129
Isokinetic Ratio, %	91.7	104.6	100.9	-
Mercury catch, ug				
Particulate	0.013	<0.013	0.015	
Oxidized	0.15	0.14	0.12	
Elemental	2.45	2.70	2.60	
Total	2.60	2.84	2.74	2.72
Mercury catch, ug/m^3			-	
Particulate	0.007	<0.006	0.009	0.01
Oxidized	0.097	0.083	0.072	0.08
Elemental	1.637	1.610	1.557	1.60
Total	1.73	1.69	1.64	1.69
Mercury catch, lb/10^{12} Btu				
Particulate	0.006	<0.006	0.008	0.007
Oxidized	0.090	0.077	0.067	0.078
Elemental	1.517	1.487	1.445	1.483
Total	1.61	1.56	1.52	1.563
Mercury, lb/hr				
Particulate	2.56E-05	<2.24E-05	3.49E-05	2.77E-05
Oxidized	3.71E-04	3.14E-04	2.79E-04	3.22E-04
Elemental	6.27E-03	6.06E-03	6.05E-03	6.13E-03
Total	6.64E-03	6.38E-03	6.37E-03	6.46E-03

Note-shaded cells are ND; values shown are detection limits.

EMISSION CALCULATIONS

1. Sample Volume and Isokinetics

a. Sample gas volume, dscf

$V_{m\ std} = 0.03342 V_m\ [P_{bar} + (H/13.6)](T_{ref}/T_m)(Y)$

b. Water vapor volume, scf

$V_{w\ std} = 0.0472\ V_{lc}\ (T_{ref}/528°R)$

c. Moisture content, nondimensional

$B_{wo} = V_{w\ std}/(V_{m\ std} + V_{w\ std})$

d. Stack gas molecular weight, lb/lb mole

$MW_{dry} = 0.44(\%\ CO_2) + 0.32(\%\ O_2) + 0.28\ (\%\ N_2)$

$MW_{wet} = MW_{dry}\ (1 - B_{wo}) + 18\ (B_{wo})$

e. Absolute stack pressure, iwg

$Ps = P_{bar} + P_{sg}/13.6$

f. Stack velocity, ft/sec

$$V_s = 2.90\ C_p \sqrt{\Delta P Ts}\ \sqrt{\frac{29.92}{Ps} \times \frac{28.95}{MW_{wet}}}$$

g. Actual stack gas flow rate, wacfm

$Q = (V_s)(A_s)(60)$

h. Standard stack gas flow, dscfm

$Q_{sd} = Q(1 - B_{wo})\ (T_{ref}/Ts)(Ps/29.92)$

i. Percent isokinetic

$$I = \frac{17.32 \times T_s\ (V_{m\ std})}{(1 - B_{wo})\,\theta \times V_s \times Ps \times Dn^2} \times \frac{528°R}{T_{ref}}$$

2. Particulate Emissions

a. Grain loading, gr/dscf

$C = 0.01543\ (M_n/V_{m\ std})$

b. Grain loading at 12% CO_2, gr/dscf

$C_{(12\%\ CO2)} = C\ (12/\%CO_2)$

c. Mass emissions, lb/hr

$M = C \times Qsd \times (60\ min/hr)/(7000\ gr/lb)$

3. Gaseous Emissions, lb/hr

$$M = ppm \times 10^{-6} \quad \frac{MW_i\ lb/lb\ mole}{SV} \quad X\ Qsd\ X\ 60\ min/hr$$

where SV = specific molar volume of an ideal gas:

385.3 ft^3/lb mole for $T_{ref} = 528°R$

379.5 ft^3/lb mole for $T_{ref} = 520°R$

4. Emissions Rates, lb/10^6 Btu

a. Fuel factor at 68°F, dscf/10^6 Btu at 0% O_2

$$F_{68} = \frac{10^6[3.64(\%H) + 1.53(\%C) + 0.14(\%N) + 0.57(\%S) - 0.46(\%O_2, fuel)]}{HHV,\ Btu/lb}$$

b. Fuel factor at 60°F

$F_{60} = F_{68}\ (520°R/528°R)$

c. Gaseous emission factor

$$lb/10^6\ Btu_i = ppm_i \times 10^{-6} \times \frac{MW_i\ lb}{lb\ mole} \times \frac{1}{SV} \times F \times \frac{20.9}{20.9 - \%O_2}$$

d. Particulate emission factor

$$lb/10^6\ Btu = C \times \frac{1\ lb}{7000\ gr} \times F \times \frac{20.9}{20.9 - \%O_2}$$

These calculations are routinely performed on FERCo's computer.

Nomenclature:

A_s = stack area, ft^2
B_{wo} = flue gas moisture content
$C_{12\%CO2}$ = particulate grain loading, gr/dscf corrected to 12% CO_2
C = particulate grain loading, gr/dscf
C_p = pitot calibration factor, dimensionless
Dn = nozzle diameter, in.
F = fuel F factor, dscf/10^6 Btu at 0% O_2
H = orifice pressure differential, iwg
I = % isokinetics
M_n = mass of collected particulate, mg
M_i = mass of emissions species i, lb/hr
MW = molecular weight of flue gas
MW_i = molecular weight of species i:
- NO_x: 64
- CO: 28
- SO_2: 64
- HC: 16

Σ = sample time, min.

ΔP = average velocity head, iwg = $\left(\overline{\sqrt{\Delta P}}\right)^2$

P_{bar} = barometric pressure, in. Hg
Ps = stack absolute pressure, in. Hg
Psg = stack static pressure, iwg
Q = wet stack gas flow rate at actual conditions, wacfm
qsd = dry stack gas flow rate at standard conditions, dscfm
SV = specific molar volume of an ideal gas at std conditions, ft^3/lb mole
Tm = meter temperature, °R
T_{ref} = reference temperature, °R
Ts = stack temperature, °R
V_s = stack velocity, ft/sec
V_{lc} = volume of liquid collected in impingers, ml
V_m = dry meter volume uncorrected, dcf
$V_{m\ std}$ = dry meter volume at standard conditions, dscf
$V_{w\ std}$ = volume of water vapor at standard conditions, scf
Y = meter calibration coefficient

FOSSIL ENERGY RESEARCH CORP.

23342 C SOUTH POINTE, LAGUNA HILLS, CA 92653 (714) 859-4466

Date _____ Operator _____

Sampling train _____ Checked by _____

Site _____ Used for runs _____

1. C_p (for S-type pitots) = _____
2. P_b (barometric pressure at location) = _____
3. D_n (nozzle diameter inches) = _____
4. B_w (moisture in gas stream, percent) = _____
5. P_m (barometric pressure at meter, in Hg) $= \frac{\text{AVG } \Delta H}{13.6} + P_b$ = _____
6. $\Delta H@$ (pressure differential of orifice in meterbox, H_2O) = _____
7. P_s (stack pressure, in Hg) $= P_b \pm \frac{\text{stack static pressure } (H_2O)}{13.6}$ = _____
8. T_s (average stack temperature, °R) = _____ °F + 460 = _____ °R
9. T_m (average meter temperature, °R = ambient + 20°F + 460 = _____ °R
10. M_d (molecular weight of stack gas, dry, lb/lb mole)
    $= (0.44 \times \%\ CO_2) + (0.32 \times \%\ O_2) + [0.28 + \%\ N_2]$
    $= (0.44 \times$ _____ $) + (0.32 \times$ _____ $) + (0.28 +$ _____ $)$ = _____
11. M_s (molecular weight of stack gas with water vapor, lb/lb mole)
    $= [M_d \times (1\text{-}B_w)] + [18 \times B_w]$
    $= [$ _____ $\times (1 -$ _____ $)] + [18 \times$ _____ $]$ = _____
12. $K = (846.72)\ (D_n^4)\ (\Delta H@)\ (C_p^2)\ (1\text{-}B_w)^2 \left[\frac{M_d}{M_s}\right] \left[\frac{P_s}{P_m}\right] \left[\frac{T_m}{T_s}\right]$

    $K = (846.72)$ (_____)^4 (_____) (_____)^2 (_____)^2 (_____) (_____) (_____)
    $K =$ _____

$\Delta H = K\Delta P$
Correlation Chart

ΔH	ΔP

K-Factor Calculation Form

Calculations to determine mercury as lb/10^{12} Btu in fuel												
Mercury	=	Mercury	x	1.E-06	x	(1-H_2O)	/	HHV	*	1.E+12		
lb/10^{12} Btu		ppm dry						lb/Btu				
Example, Craig 1 Test 3												
1.69	=	0.021	x	1.E-06	x	0.8192	/	10,200	*	1.E+12		
lb/10^{12} Btu		ppm dry						lb/Btu				
Calculations to determine mercury as lb/hr in fuel												
Mercury	=	Mercury	x	1.E-06	x	(1-H_2O)	x	coal flow				
lb/hr		ppm dry						lb/hr as-fired				
Example, Craig 1 Test 3												
0.0072	=	0.021	x	1.E-06	x	0.8192	x	418000				
lb/hr		ppm dry						lb/hr as-fired				
Calculations to determine gas flow rates from fuel input												
Oxygen based												
Flow	=	fuel flow	x	HHV	x	Fd-factor	x	20.9/(20.9-O_2)	/	60	/	1,000,000
dscfm		lb/hr		Btu/lb		dscf/mmBtu				min/hr		
Example, Craig 1 Test 3												
1,058,659	=	418000	x	10200	x	9780	x	1.523	/	60	/	1,000,000
dscfm		lb/hr		Btu/lb		dscf/mmBtu				min/hr		
Carbon based												
Flow	=	fuel flow	x	HHV	x	Fc-factor	x	100/CO_2	/	60	/	1,000,000
dscfm		lb/hr		Btu/lb		dscf/mmBtu				min/hr		
Example, Craig 1 Test 3												
1,038,736	=	418000	x	10200	x	1800	x	8.121	/	60	/	1,000,000
dscfm		lb/hr		Btu/lb		dscf/mmBtu				min/hr		

Calculations to determine mercury as lb/10^{12} Btu in gas												
Mercury	=	Mercury	/	Sample vol	x	2.20.E-09	x	9780	*	20.9/(20.9-O_2)	*	1.E+06
lb/10^{12} Btu		ug/sample		dscf		lb/ug		f-factor		dilution		$10^{12}/10^{6}$
								dscf/10^{6} Btu		correciton		
Example, Craig 1 Test 3 Stack Total Mercury												
1.522	=	2.74	/	58.99	x	2.20.E-09	x	9780	x	1.523	*	1.E+06
lb/10^{12} Btu		ug/sample		dscf		lb/ug		f-factor		dilution		$10^{12}/10^{6}$
								dscf/10^{6} Btu		correction		
Calculations to determine mercury as lb/hr in gas												
Mercury	=	Mercury	/	Sample vol	x	2.20.E-09	x	Gas flow	x	60		
lb/hr		ug/sample		dscf		lb/ug		dscfm		min/hr		
Example, Craig 1 Test 3 Stack Total Mercury												
0.00637	=	2.74	/	58.99	x	2.20.E-09	x	1040062	x	60		
lb/hr		ug/sample		dscf		lb/ug		dscfm		min/hr		

Worksheet for bypass flow calculations				
Craig Unit 1 Mercury ICR Tests				
	Run 1	Run 2	Run 3	Average
Assumed outlet temperature	113	120	114	116
Corresponding outlet moisture	11.8	14.3	12.1	13
Inlet moisture	8.43	8.33	7.98	8.25
Inlet temperature	249	255	244	249
Stack moisture	10.91	13.04	11.48	11.81
Stack temperature	148	147	136	144
% bypass based on temperature	26%	20%	17%	21%
% bypass based on moisture	26%	21%	15%	21%

Approach

Outlet temperatures were not available. Since outlet moisture is a function of outlet temperature, and inlet and stack temeprature and moisture values are available.

The approach used is:

1. Estimate an outlet temperature. Calculate bypass using this temperature.
2. Determine the saturation moisture corresponding to this outlet temperature.
3. Calculate bypass using this moisture.
4. Compare the bypass values calculated using the temperature and moisture.
5. Repeat until the two values are within 2%.

Data Tracking Log

Test Unit	Craig 1
Test Dates	9/27-9/29/99

	By	Date
Mercury Gas Data		
Data taken	MM	9/29
Data reduced	"	"
Entered in spreadsheet	"	"
Field custody taken	"	"
Lab data received	MM	11/23
Lab data entered	MM	11/23
Results prepared/summarized	MM	11/29
Results entered in report	MM	12/1
Coal sample data		
Lab data received	MM	11/23
Lab data entered	MM	11/29
Results prepared/summarized	MM	12/29
Results entered in report	MM	12/1

Appendix B. Raw Field Data and Calibration Data Sheets

Sampling Data

Velocity Traverses

O_2 Meter Calibration

O_2 Meter Gas Certificates

Dry Gas Meter Calibration

Pitot Probe Calibration

Stack Flow Adjustment Factor

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 1 UNIT 1 TEST NO. Field Blk Hg METHOD Ontario Hydro Hg PAGE ____ OF ____

SAMPLE LOCATION Inlet TEST CONDITION ____ AMBIENT TEMPERATURE ____

OPERATOR/ASSISTANT ____ METER VOLUME START/END ____ / ____ DATE ____

PRE-TEST DATA:	*EQUIPMENT INFO:*
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	Δ H @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No. QT-30
	Filter material quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		F Wt gain
1	KCl	✓	-	607.7	=	
2	KCl	✓	-	610.3	=	
3	KCl	✓	-	713.9	=	
4	HNO_3/H_2O_2	✓	-	624.7	=	
5	$KMnO_4$	✓	-	612.3	=	
6	$KMnO_4$	✓	-	557.6	=	
7	$KMnO_4$	✓	-	697.2	=	
8	SG	✓	-	875.1	=	
					Total	

COMMENTS: Field Blank
Start 1400
End 1645

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				___/___
Stop				___/___
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft^3	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
															Impingers Loaded ✓
															Impingers Recovered ✓
															Filter Loaded ✓
															Filter Recovered ✓
															Probe Wash ✓
															TEST AVERAGES/TOTALS
															Calculated by:
															Checked by:
															Δ P, iwg
															Δ H, iwg
															Sample vol, acf
															Stack temp, F
															Meter temp, F
															Static press, iwg
															Water collected, g
															O_2, %
															Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 1 | UNIT 1 | TEST NO. 1-Inlet-Hg | METHOD Ontario Hydro-Hg | PAGE 1 OF 2
SAMPLE LOCATION Inlet | TEST CONDITION | AMBIENT TEMPERATURE
OPERATOR/ASSISTANT PA/JB | METER VOLUME START/END ~~265.9~~ 266.050 | DATE 9/28/99

PRE-TEST DATA:

Barometric Pressure, In.Hg	
Assumed Stack Pressure, iwg	-15
Assumed Moisture, %	8
Assumed Molecular Weight	29
Assumed Stack Temperature	251
Assumed Meter Temperature	95
Average ΔP	.84
Stack diameter/area	
Sample time, min/point	5
ΔH = .93 x ΔP	

O2: 21 STD/1

EQUIPMENT INFO:

Meter No.	FERC-1
Meter Yd	1.001
ΔH @	
Pitot ID, Cp	
O_2/CO_2 Method	
Teflon connecting line? (Y/N)	Y
Probe material	
Probe length	
Nozzle material	glass
Nozzle diameter, in.	.187
Filter No.	QT-027 Lot: 34370
Filter material	quartz

IMPINGER WEIGHTS: (old impinger)

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	719.4	-	619.3	=	100.1
2	KCl	604.7	-	590.3	=	14.4
3	KCl	672.9	-	670.5	=	2.4
4	HNO_3/H_2O_2	664.3	-	662.5	=	1.8
5	$KMnO_4$	594.9	-	591.0	=	3.4
6	$KMnO_4$	592.3	-	591.0	=	1.3
7	$KMnO_4$	667.1	-	667.6	=	-0.5
8	SG	742.3	-	725.9	=	16.4
				-50	Total	89.3

COMMENTS: Calibration weighted 294.8/295.0

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.002	12"	✓	PA
Post-test	0.0	✓	✓	PA

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start		1.0	253.000	95/95
Stop		1.0	259.031	95/95
Avg/total	10min	1.0	6.031	95

O_2: 1 reading per point
calibrate on air every 3rd point

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: 1 STACK	2 PROBE	3 FILTER	METER: 4 In	7 out	IMP 4 OUT	EXIT GAS TEMP 5	O_2	VAC.	STATIC PRESS. iwg
E-5	0824	266.050	.86	.79	247	166	280	90	89	70	188	7.2	5	
E-4	0829	268.8	.75	.69	259	245	282	91	89	65	179	6.8	5	
E-3	0834	271.27	.75	.69	252	250	284	92	89	62		7.0	5	
E-2	0839	273.75	.6	.55	250	259	286	93	89	61		7.5	5	
E-1	0844	275.95	.75	.69	234	261	288	93	89	61		7.5	5	
	0849	278.2												
5	0855	280.16	.80	.77	244	256	290	93	90	61		7.2	5	
4	0900	282.9	.6	.55	254	253	291	94	90	62		7.2	5	
3	0905	285.15	.6	.55	244	255	290	95	90	62		7.2	5	
2	0910	287.5	.65	.6	239	261	291	95	91	62		7.3	5	
1	0915	289.9	.75	.69	243	260	291	95	91	62		7.6	5	
	917		.54	.84										
5	922	292.97	.9	.84	252	254	291	95	91	63		7.2	5	
4	6927	295.45	.75	.69	243	257	290	96	91	63		7.1	5	
3	0932	297.7	.6	.55	251	257	291	96	91	63		7.5	5	
2	0937	299.7	.5	.47	246	262	291	95	91	64		7.8	5	
1	0942	301.6	.3	.28	234	262	292	95	91	64		8.2	5	

CHAIN OF CUSTODY INFORMATION

Impingers Loaded	AB
Impingers Recovered	AB
Filter Loaded	AB
Filter Recovered	AB
Probe Wash	PA/JB

TEST AVERAGES/TOTALS

Calculated by:	MM
Checked by:	✓MM
Δ P, iwg	.7526 ✓
Δ H, iwg	.71 ✓
Sample vol, acf	59.390
Stack temp, F	249.3 ✓
Meter temp, F	92.6 ✓
Static press, iwg	-16
Water collected, g	89.3
O_2, %	7.32 ✓
Sample time, min	125

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig 1 UNIT 1 TEST NO. 1 W METHOD _____ PAGE 2 OF 2
SAMPLE LOCATION INLET TEST CONDITION _____ AMBIENT TEMPERATURE _____
OPERATOR/ASSISTANT RA/TB METER VOLUME START/END _____ / _____ DATE 9/29

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/_____
Stop				/_____
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
05	0950	302.1	1	.93	260	260	292	95	91	65		7.2	6		Impingers Loaded
4	0955	304.95	.8	.75	264	255	292	96	91	64		7.3	5		Impingers Recovered
3	1000	307.5	.65	.6	242	254	292	96	91	64		7.2	5	-	Filter Loaded
2	1005	309.9	.6	.56	240	259	291	96	91	65		7.5	5		Filter Recovered
1	1010	312.15	.6	.56	255	261	291	96	91	66		7.9	5		Probe Wash
		314.41													
A5	1013	315.0	1.0	.93	266	254	292	96	91	66		6.5	6	-	TEST AVERAGES/TOTALS
4	1018	317.7	1.1	1.02	256	258	292	96	91	66		6.7	6		Calculated by:
3	1023	320.5	1.1	1.11	248	256	292	97	91	67		7.3	7		Checked by:
2	1028	323.6	1.1	1.02	257	260	291	97	91	66		7.7	6		Δ P, iwg
1	1033	326.75	.95	.88	248	254	292	97	91	66		7.3	6		Δ H, iwg
	1038	329.550													Sample vol, acf
															Stack temp, F
															Meter temp, F
															Static press, iwg
															Water collected, g
															O_2, %
															Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 1 UNIT 1 TEST NO. 2-Inlet-Hg METHOD OH Hg PAGE 1 OF 2
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT PA / JB METER VOLUME START/END 331.5 / 397.251 DATE 9/26/99

PRE-TEST DATA:	
Barometric Pressure, In.Hg	24.14
Assumed Stack Pressure, iwg	
Assumed Moisture, %	
Assumed Molecular Weight	
Assumed Stack Temperature	
Assumed Meter Temperature	
Average ΔP	
Stack diameter/area	
Sample time, min/point	
ΔH = 1.0 x ΔP	

EQUIPMENT INFO:	
Meter No.	
Meter Yd	
Δ H @	
Pitot ID, Cp	
O_2/CO_2 Method	
Teflon connecting line? (Y/N)	
Probe material	
Probe length	
Nozzle material	s/steel
Nozzle diameter, in.	0.188
Filter No.	QF-37
Filter material	quartz

IMPINGER WEIGHTS: (Wt (start) includes 50.0 line rinse)

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	700.8	-	594.0	=	106.8
2	KCl	607.5	-	590.8	=	16.7
3	KCl	723.6	-	719.3	=	4.3
4	HNO_3/H_2O_2	631.1	-	628.8	=	2.3
5	$KMnO_4$	591.4	-	590.4	=	1
6	$KMnO_4$	549.6	-	546.3	=	3.3
7	$KMnO_4$	704.2	-	708.2	=	-4
8	SG	878.9	-	863.9	=	15
				-50	Total	95.4

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	0.0	14	✓	PA
Post-test	0.0	10	✓	PA

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft^3	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER In	METER out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg
K 5	1230	331.5	.9	.9	251	272	270	91	90	61	6.7	6	
4	1235	333.91	.92	.92	257	261	275	92	90	61	6.9	6	
3	1240	336.73	.65	.65	249	257	280	93	91	60	7.2	5	
2	1240	339.1	.65	.65	252	257	283	94	91	60	7.2	5	
1	1250	341.4	.90	.90	251	256	286	95	91	60	7.2	5	
	1255	344.05											
D 5	1257	344.3	.95	.95	258	256	287	95	92	60	7.2	5	
4	13:02	347.13	.75	.75	260	256	289	97	92	60	7.1	5	
3	1307	349.69	.65	.65	251	250	289	97	92	61	7.1	5	
2	1312	352.01	.65	.65	250	251	289	98	93	61	7.3	5	
1	1317	354.4	.55	.55	245	253	290	98	93	61	7.9	5	
	1322	356.65											
C 5	1324	357.0	.9	.9	249	257	290	98	94	62	7.3	5	
4	1329	359.55	.7	.7	250	253	289	99	94	62	7.1	5	
3	1334	362.0	.62	.62	256	247	289	100	95	62	7.5	5	
2	1339	364.4	.5	.5	253	249	287	99	95	62	7.5	5	
1	1344	366.5	.6	.6	245	251	287	100	95	62	7.9	5	
	1349	368.93											

CHAIN OF CUSTODY INFORMATION	
Impingers Loaded	AB
Impingers Recovered	AB
Filter Loaded	AB
Filter Recovered	AB
Probe Wash	PA/JB

TEST AVERAGES/TOTALS	
Calculated by:	MM
Checked by:	✓MM
Δ P, iwg	.7839 ✓
Δ H, iwg	.79 ✓
Sample vol, acf	64.361 ✓
Stack temp, F	254.3 ✓
Meter temp, F	95.4
Static press, iwg	-16 ✓
Water collected, g	95.4
O_2, %	7.24 ✓
Sample time, min	120

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Cross UNIT 1 TEST NO. 2 METHOD _____ PAGE 2 OF 2

SAMPLE LOCATION _____ TEST CONDITION _____ AMBIENT TEMPERATURE _____

OPERATOR/ASSISTANT _____ METER VOLUME START/END _____ / _____ DATE 3/28/99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, In.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/_____
Stop				/_____
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
B5	1351	369.23	.95	.95	257	257	288	99	95	63	7.1	5		Impingers Loaded
4	1356	371.9	.9	.9	243	258	287	101	96	63	7.8	5		Impingers Recovered
3	1401	374.75	.75	.75	252	246	287	101	96	63	7.3	5		Filter Loaded
2	1406	377.3	.6	.6	266	250	287	101	96	64	7.4	5		Filter Recovered
1	1411	379.6	.6	.6	245	253	287	101	96	64	7.7	5		Probe Wash
	1416	381.89												
A5	1418	382.26	1.1	1.1	270	257	288	101	97	64	7.0	6		TEST AVERAGES/TOTALS
4	1423	385.2	1.1	1.1	256	258	287	101	97	63	6.5	6		Calculated by:
3	1428	388.3	1.2	1.2	254	247	287	103	97	61	7.1	6		Checked by:
2	1433	391.5	.98	.98	252	248	287	103	97	60	7.6	6		ΔP, iwg
1	1438	394.4	.9	.9	272	248	287	103	98	61	7.2	6		ΔH, iwg
	1443	397.251												Sample vol, acf
														Stack temp, F
														Meter temp, F
														Static press, iwg
														Water collected, g
														O_2, %
														Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 1 UNIT 1 TEST NO. 3-Inlet-Hg METHOD OH PAGE 1 OF 2
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT PA/JB METER VOLUME START/END 400.15 / 466.85 DATE 9/09/99

PRE-TEST DATA:	
Barometric Pressure, In.Hg	
Assumed Stack Pressure, iwg	
Assumed Moisture, %	
Assumed Molecular Weight	
Assumed Stack Temperature	
Assumed Meter Temperature	
Average ΔP	
Stack diameter/area	
Sample time, min/point	
ΔH = 1 x ΔP	

EQUIPMENT INFO:	
Meter No.	
Meter Yd	
Δ H @	
Pitot ID, Cp	
O_2/CO_2 Method	
Teflon connecting line? (Y/N)	
Probe material	
Probe length	
Nozzle material	glass
Nozzle diameter, in.	0.187
Filter No.	QT-34
Filter material	quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	727.6	-	617.8	=	109.8
2	KCl	609.6	-	597.6	=	12
3	KCl	679.5	-	678.9	=	0.6
4	HNO_3/H_2O_2	670.8	-	667.3	=	3.5
5	$KMnO_4$	603.2	-	602.0	=	1.2
6	$KMnO_4$	594.4	-	594.4	=	0
7	$KMnO_4$	643.8	-	643.8	=	0 ~~15.7~~
8	SG	757.9	-	742.2	=	15.7
				-50	Total	92.8

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	0.0	15"	OK	PA
Post-test	0.005	7	✓	PA

PRE-TEST METER CALIBRATION CHECK:

	Time	Δ H	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft^3	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
E 5	08:20	400.15	1.0	1.0	252	265	275	87	85	65		7.7	5		Impingers Loaded ✓ JB
4	8 25	403.02	.8	.8	234	263	279	88	86	55		7.4	5		Impingers Recovered
3	8 30	405.6	.75	.75	242	244	282	88	86	53		7.4	5		Filter Loaded ✓ JB
2	8 35	408.1	.65	.65	244	243	285	90	86	54		7.9	5		Filter Recovered
1	840	410.4	.8	.8	232	240	287	90	86	54		7.8	5		Probe Wash
	845	411.1													
D 5	858	413.8	.9	.9	248	272	289	90	87	63		7.1	5		TEST AVERAGES/TOTALS
4	903	416.6	.65	.65	247	270	288	92	88	55		7.6	5		Calculated by: MM
3	908	418.9	.6	.6	240	269	288	92	88	55		7.05	5		Checked by: ✓ MM
2	913	421.2	.55	.55	238	263	287	93	88	55		7.9	5		Δ P, iwg .7974 ✓
1	918	423.4	.55	.55	236	269	287	93	89	56		7.7	5		Δ H, iwg .81 ✓
	923	425.65													Sample vol, acf 65.05 ✓
C 5	925	426.80	1.0	1.0	234	269	288	93	89	58		7.5	5		Stack temp, F 244.2 ✓
4	930	428.85	.7	.7	235	267	287	95	90	56		7.7	5		Meter temp, F 91.8 ✓
3	935	431.75	.6	.6	243	270	286	95	90	57		7.6	5		Static press, iwg -16 ✓
2	940	433.6	.55	.55	234	267	287	94	90	58		7.8	5		Water collected, g
1	945	435.8	.55	.55	234	270	287	95	90	58		7.9	5		O_2, % 7.69
	950	437.95													Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Cr 2 Inlet UNIT _____ TEST NO. 3 METHOD _____ PAGE 2 OF 2

SAMPLE LOCATION _____ TEST CONDITION _____ AMBIENT TEMPERATURE _____

OPERATOR/ASSISTANT _____ METER VOLUME START/END _____ / _____ DATE 9/29/99

PRE-TEST DATA:	
Barometric Pressure, In.Hg	
Assumed Stack Pressure, iwg	
Assumed Moisture, %	
Assumed Molecular Weight	
Assumed Stack Temperature	
Assumed Meter Temperature	
Average ΔP	
Stack diameter/area	
Sample time, min/point	
ΔH = _____ x ΔP	

EQUIPMENT INFO:	
Meter No.	
Meter Yd	
Δ H @	
Pitot ID, Cp	
O_2/CO_2 Method	
Teflon connecting line? (Y/N)	
Probe material	
Probe length	
Nozzle material	
Nozzle diameter, in.	
Filter No.	
Filter material	

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	Δ H	Meter Reading	Meter In/Out
Start				/_
Stop				/_
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
B 5	0952	442.2	.95	.95	258	264	287	99	91	59		7.0	5		Impingers Loaded
4	957	448.4	.9	.9	258	265	287	96	91	58		7.4	5		Impingers Recovered
3	1002	443.6	.85	.85	252	265	287	97	92	59		7.7	5		Filter Loaded
2	1007	446.35	.75	.75	253	271	287	97	92	60		7.9	5		Filter Recovered
1	1012	448.9	.75	.75	247	272	287	97	92	60		8.1	5		Probe Wash
	1017	451.35													
A 5	1019	451.7	1.1	1.1	255	273	288	97	92	61		8.0	5		TEST AVERAGES/TOTALS
4	1024	454.65	1.1	1.1	256	271	288	98	93	62		7.4	6		Calculated by:
3	1029	457.77	1.2	1.2	251	264	288	99	93	63		7.9	6		Checked by:
2	1034	460.9	1.0	1.0	251	271	288	100	94	64		8.1	6		Δ P, iwg
1	1039	463.93	.97	.97	253	270	289	100	94	65		8.3	6		Δ H, iwg
	1044	466.85													Sample vol, acf
															Stack temp, F
															Meter temp, F
															Static press, iwg
															Water collected, g
															O_2, %
															Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 1 UNIT 1 TEST NO. FBC Stack-Hg METHOD Ontario Hydro Hg PAGE ____ OF ____
SAMPLE LOCATION Stack TEST CONDITION ____ AMBIENT TEMPERATURE ____
OPERATOR/ASSISTANT DW / GW METER VOLUME START/END ____ / ____ DATE ____

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	Δ H @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material glass
ΔH = _____ x ΔP	Nozzle diameter, in. .285
	Filter No. 83UP-108
	Filter material quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		F Wt gain
1	KCl	627.5	Stuck	627.5	=	
2	KCl	✓	-	627.7	=	
3	KCl	✓	-	718.3	=	
4	HNO_3/H_2O_2	✓	-	622.6	=	
5	$KMnO_4$	✓	-	715.0	=	
6	$KMnO_4$	✓	-	572.2	=	
7	$KMnO_4$	✓	-	563.6	=	
8	SG	✓	-	838.9	=	8?
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	✓			
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	Δ H	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft^3	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
1330															Impingers Loaded 25
1600															Impingers Recovered 23
							Field Blank								Filter Loaded 25
															Filter Recovered 25
															Probe Wash DW
															TEST AVERAGES/TOTALS
															Calculated by:
															Checked by:
															Δ P, iwg
															Δ H, iwg
															Sample vol, acf
															Stack temp, F
															Meter temp, F
															Static press, iwg
															Water collected, g
															O_2, %
															Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Crane UNIT Unit 1 TEST NO. 1-Stack-Hg METHOD Ontario Hydro Hg PAGE 1 OF 2
SAMPLE LOCATION Unit 1 Stack TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT DW / GW METER VOLUME START/END / DATE 9-28-99

PRE-TEST DATA:

Barometric Pressure, In.Hg	27.85
Assumed Stack Pressure, iwg	-.7
Assumed Moisture, %	20
Assumed Molecular Weight	27
Assumed Stack Temperature	145
Assumed Meter Temperature	75-85
Average ΔP	.5
Stack diameter/area	
Sample time, min/point	6/20
ΔH = _____ x ΔP	

EQUIPMENT INFO:

Meter No.	3-WCS
Meter Yd	1.006
ΔH @	1.745
Pitot ID, Cp	.84 #13
O_2/CO_2 Method	Port. O2
Teflon connecting line? (Y/N)	Y
Probe material	Glass
Probe length	11'
Nozzle material	Glass
Nozzle diameter, in.	.225
Filter No.	830P-104
Filter material	quartz

IMPINGER WEIGHTS: * Include Solbirrier

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	753.2		612.3 ~~359.15~~	=	140.9
2	KCl	617.5	-	592.1	=	25.4
3	KCl	578.0	-	~~573.1~~	=	4.9
4	HNO_3/H_2O_2	617.3	-	615.6	=	1.7
5	$KMnO_4$	706.1	-	706.1	=	0
6	$KMnO_4$	616.0	-	614.7	=	1.3
7	$KMnO_4$	674.3	-	673.9	=	0.4
8	SG	871.7	-	859.2	=	12.5
				-50	Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.01	15"	ok	RW
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F STACK	PROBE	FILTER	METER In	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
W-5	832	831.750	.62	.99	148	268	259 / 263	82	70	51		6.4	5		Impingers Loaded AB
4	838	835.5	.60	.96	148	267	257 / 258	90	71	51		6.4	5		Impingers Recovered AB
3	844	838.2	.60	.96	147	260	251 / 255	92	73	50		6.4	5		Filter Loaded AB
2	850	842.9	.53	.85	149	258	252 / 251	94	73	50		6.8	5		Filter Recovered AB
1	856	846.3	.34	.54	147	256	251 / 253	91	74	48		6.8	5		Probe Wash DW/GW
Stop	902	849.100					Leak Chk O.K.								
S-5	8924	849.320	.53	.85	147	256	251 / 254	89	74	47		7.1	5		TEST AVERAGES/TOTALS
4	930	852.8	.48	.76	149	254	264 / 255	91	75	48		7.1	5		Calculated by: MM
3	936	856.3	.45	.72	149	266	258 / 256	96	77	49		7.3	5		Checked by: ✓MM
2	942	859.7	.40	.65	149	262	259 / 257	91	77	49		7.3	5		ΔP, iwg .490 ✓
1	948	862.5	.30	.50	148	258	253 / 258	91	77	49		7.3	5		ΔH, iwg .80 ✓ 66.522
	954	865.212					Leak Chk O.K.								Sample vol, acf ~~147.684~~ 67.684 ✓
															Stack temp, F 147.9 ✓
		37.262													Meter temp, F 83.1 ✓
															Static press, iwg -0.7 ✓
															Water collected, g ~~47.1~~ 137.1
															O_2, % 7.16 ✓
															Sample time, min 120

1788 778 82.4

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Tri States UNIT Craig 1 TEST NO. 1-HG METHOD Ontario Hydro PAGE 2 OF 2
SAMPLE LOCATION Stack TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT D.W G.W. METER VOLUME START/END / DATE 9-28-99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

Base Line

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/_____
Stop				/_____
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER In	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
IY-5	1034	865.500	.64	1.00	148	257	265	265	87	75	46		7.6	5		Impingers Loaded
4	1040	869.4	.60	.97	147	265	267	268	92	77	47		7.6	5	-.70	Impingers Recovered
3	1046	873.2	.62	1.0	148	266	257	261	94	77	48		7.5	5		Filter Loaded
2	1052	876.8	.53	.86	148	258	264	262	92	77	47		7.5	5		Filter Recovered
1	1058	880.3	.35	.57	149	255	263	261	92	77	48		7.5	5		Probe Wash
	1104	883.400					Leak	✓	O.K							
																TEST AVERAGES/TOTALS
E 5	1118	883.678	.55	.90	147	259	250	264	88	77	47		7.3	5		Calculated by:
4	1124	887.1	.53	.86	148	259	263	257	92	77	47		7.3	5		Checked by:
3	1130	890.6	.56	.91	148	260	258	255	92	77	48		7.3	5		Δ P, iwg
2	1136	894.3	.42	.68	148	261	252	256	92	77	47		7.3	5		Δ H, iwg
1	1142	897.4	.30	.48	148	261	255	251	91	77	47		7.3	5		Sample vol, acf
	1148	900.260														Stack temp, F
																Meter temp, F
																Static press, iwg
																Water collected, g
																O_2, %
																Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 1 UNIT 1 TEST NO. 2-Stack-Hg METHOD Ontario Hydro PAGE 1 OF 2
SAMPLE LOCATION Stack TEST CONDITION Full load AMBIENT TEMPERATURE
OPERATOR/ASSISTANT DM/GM METER VOLUME START/END / DATE 9-28-99

PRE-TEST DATA:

Barometric Pressure, In.Hg	23.89
Assumed Stack Pressure, iwg	-.7
Assumed Moisture, %	20
Assumed Molecular Weight	27
Assumed Stack Temperature	148
Assumed Meter Temperature	85
Average ΔP	.5
Stack diameter/area	614.29
Sample time, min/point	6/20
ΔH = ~~Hot~~ x ΔP	2-1

EQUIPMENT INFO:

Meter No.	3-Wcs
Meter Yd	1.006
ΔH @	1.749
Pitot ID, Cp	.84 #17
O_2/CO_2 Method	part. 02
Teflon connecting line? (Y/N)	
Probe material	
Probe length	
Nozzle material	glass
Nozzle diameter, in.	.275
Filter No.	830P-92
Filter material	quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	~~675.4~~	-	620.2	=	155.2
2	KCl	663.7	-	606.8	=	56.9
3	KCl	670.1	-	664.9	=	5.2
4	HNO_3/H_2O_2	619.8	-	618.1	=	1.7
5	$KMnO_4$	702.1	-	700.2	=	1.9
6	$KMnO_4$	590.3	-	587.8	=	2.5
7	$KMnO_4$	710.6	-	709.7	=	0.9
8	SG	824.3	-	810.5	=	13.8
	Not SO2 bumped		-50		Total	188.1

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.01	10	Ok	RM
Post-test	.01	10	ok	RM

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F STACK	PROBE	FILTER	Line	METER In	METER out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
E 5	1230	900.900	.55	.90	148	267	255	265	83	74	48	7.0	5		Impingers Loaded ~~/~~
4	1236	905.0	.55	.90	148	266	269	262	92	75	47	7.0	5		Impingers Recovered
3	1242	908.2	.54	.88	149	265	268	268	93	75	48	7.0	5		Filter Loaded ~~/~~
2	1248	911.7	.44	.72	148	263	258	255	92	76	47	7.0	5		Filter Recovered
1	1254	915.1	.32	1.0	148	263	255	251	93	76	48	7.1	5		Probe Wash
	1300	918.800						Leak ✓		Ok					
N.5	1312	919.750	.60	1.2	148	250	251	260	92	77	48	7.1	5		TEST AVERAGES/TOTALS
4	1318	923.300	.60	1.2	149	252	253	262	94	77	47	7.1	5		Calculated by: MM
3	1324	927.6	.61	1.25	149	253	254	264	95	78	~~46~~	7.1	5		Checked by: ✓MM
2	1330	931.7	.50	1.05	149	254	258	262	95	78	49	7.1	5		ΔP, iwg .492 ✓
1	1336	935.7	.35	.75	148	260	251	262	94	78	45	7.1	5		ΔH, iwg 1.00 ✓
	1342	939.063						Leak ✓		Ok					Sample vol, acf 75.911 ✓
															Stack temp, F 147.4 ✓
															Meter temp, F 85.2 ✓
															Static press, iwg -.7 ✓
															Water collected, g 188.1 ✓
															O_2, % 7.1
															Sample time, min 120

FOSSIL ENERGY RESEARCH CORPORATION

Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY tri states Craig -1 UNIT 1 TEST NO. 2-HG METHOD Ont. Hydro PAGE 2 OF 2

SAMPLE LOCATION stack TEST CONDITION AMBIENT TEMPERATURE

OPERATOR/ASSISTANT P-W G-W METER VOLUME START/END / DATE 9-28-99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = 2:1 x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2		See	-		=	
3		page	-		=	
4		one	-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
				Total		

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/__
Stop				/__
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER (Line)		METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
W-5	1400	939.140	.60	1.24	147	258	251	260	90	77	47		7.2			Impingers Loaded
4	1406	943.530	.58	1.20	146	267	257	260	95	78	45		7.2	7		Impingers Recovered
3	1412	947.403	.59	1.22	146	265	252	260	95	79	45		7.2	7		Filter Loaded
2	1418	951.7	.55	1.15	146	263	252	260	95	79	45		7.2	7		Filter Recovered
1	1424	955.5	.35	.80	146	267	252	260	95	79	45		7.2	7		Probe Wash
	1430	959.000					Leak		V	ok						
																TEST AVERAGES/TOTALS
5	1442	959.230	.57	1.1	146	259	253	259	92	78	47		7.1	7		Calculated by:
4	1448	963.2	.55	1.1	146	258	254	257	92	78	45		7.1	7		Checked by:
3	1454	967.3	.46	.96	147	255	258	262	92	78	46		7.1	7		ΔP, iwg
2	1500	970.9	.39	.81	147	255	260	260	93	78	48		7.1	7		ΔH, iwg
1	1506	974.4	.30	.65	146	255	262	263	93	78	48					Sample vol, acf
	1512	977.468														Stack temp, F
																Meter temp, F
																Static press, iwg
																Water collected, g
																O_2, %
																Sample time, min

3-HG - Stack

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 1 | UNIT 1 | TEST NO. 3-Stack-10g | METHOD OH | PAGE 1 OF 2
SAMPLE LOCATION Stack | TEST CONDITION | AMBIENT TEMPERATURE
OPERATOR/ASSISTANT D.W G.W. | METER VOLUME START/END / | DATE 9-29-99

PRE-TEST DATA:

Barometric Pressure, In.Hg	23.87
Assumed Stack Pressure, iwg	-.7
Assumed Moisture, %	12
Assumed Molecular Weight	27
Assumed Stack Temperature	146
Assumed Meter Temperature	83
Average ΔP	.5
Stack diameter/area	314.27
Sample time, min/point	6/20
ΔH = _____ x ΔP	2.

EQUIPMENT INFO:

Meter No.	3-WCS
Meter Yd	1.006
ΔH @	1.749
Pitot ID, Cp	# 13 . 84
O_2/CO_2 Method	port. O_2
Teflon connecting line? (Y/N)	Y
Probe material	glass
Probe length	11'
Nozzle material	glass .225
Nozzle diameter, in.	0.225
Filter No.	830P-96
Filter material	quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	749.0	-	591.6	=	
2	KCl	618.9	-	586.5	=	
3	KCl	570.3	-	562.7	=	
4	HNO_3/H_2O_2	633.7	-	630.8	=	
5	$KMnO_4$	706.8	-	702.1	=	
6	$KMnO_4$	634.4	-	633.9	=	
7	$KMnO_4$	686.3	-	686.9	=	
8	SG	884.1	-	871.4	=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.01	15	ok	RW
Post-test	.008	10	ok	RW

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER		METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
5-5	820	979.673	.55	1.1	136	265	260	267	75	66	45		7.2	5		Impingers Loaded 13
4	826	984.0	.55	1.1	136	265	258	258	84	69	45		7.2	5		Impingers Recovered
3	832	987.6	.50	1.0	135	262	258	265	86	68	45		7.2	5		Filter Loaded 13
2	838	991	.45	.90	136	263	260	250	87	70	45		7.2	5		Filter Recovered
1	844	995.0	.33	.66	136	262	254	258	87	71	43		7.2	5		Probe Wash
	850	998.000														
	921															
5	~~855~~	999.100	.55	1.1	136	263	255	260	86	73	47		7.1	5		TEST AVERAGES/TOTALS
4	927	1002.8	.53	1.06	136	262	255	261	89	73	44		7.1	5		Calculated by: MM
3	933	1006.2	.53	1.06	135	264	263	262	90	74	44		7.1	5		Checked by: MM
2	~~939~~ 939	1010.3	.48	.96	135	262	269	259	91	74	44		7.1			ΔP, iwg .4964
1	945	1014.2	.30	.60	136	267	262	258	90	75	45		7.1	5		ΔH, iwg 1.00
	951	1017.200														Sample vol, acf 74.890
																Stack temp, F 135.6
																Meter temp, F 81.2
																Static press, iwg -.68
																Water collected, g 162.1
																O_2, % 7.18
																Sample time, min 120

3-Hg-stack unit 1

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY tri states Craig UNIT 1 TEST NO. 3-Hg-stack METHOD _____ PAGE 2 OF 2

SAMPLE LOCATION stack TEST CONDITION _____ AMBIENT TEMPERATURE _____

OPERATOR/ASSISTANT D-W G.W METER VOLUME START/END _____ / _____ DATE 9-25-55

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	Δ H @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP 2	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2	see		-		=	
3			-		=	
4	Page		-		=	
5			-		=	
6	62		-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	Δ H	Meter Reading	Meter In/Out
Start				/_____
Stop				/_____
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER (Line)		METER In	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
N-5	1006	017.378	.55	1.1	135	260	262	258	86	74	43		7.2	5		Impingers Loaded
4	1012	021.3	.55	1.1	135	260	263	258	92	75	44		7.2	5		Impingers Recovered
3	1018	025.4	.55	1.1	135	267	265	261	91	78	45		7.2	5	-.68	Filter Loaded
2	1024	029.3	.53	1.05	136	267	270	268	92	76	46		7.2	5		Filter Recovered
1	1030	032.9	.30	.60	136	265	273	269	91	76	45		7.2	5		Probe Wash
	1036	035.900														
E 5	1056	036.444	.54	1.2	135	263	261	252	89	78	45		7.2	5		TEST AVERAGES/TOTALS
4	1102	040.719	.50	1.1	136	261	263	250	91	75	49		7.2	5		Calculated by:
3	1108	044.730	.60	1.2	136	260	262	252	92	76	49		7.3	5		Checked by:
2	1114	048.900	.55	1.0	136	259	270	254	92	76	52		7.2	5		Δ P, iwg
1	1120	052.8	.45	.90	135	259	273	254	92	76	52		7.2	5		Δ H, iwg
	1126	056.385														Sample vol, acf
																Stack temp, F
																Meter temp, F
																Static press, iwg
																Water collected, g
																O_2, %
																Sample time, min

FOSSIL ENERGY RESEARCH CORP.

SAMPLING POINT LOCATION DATA
EPA Method 1

Plant Craig 1 Inlet Hg Tests Data by MDM

Date 9/28/99 Test Location East APH Outlet

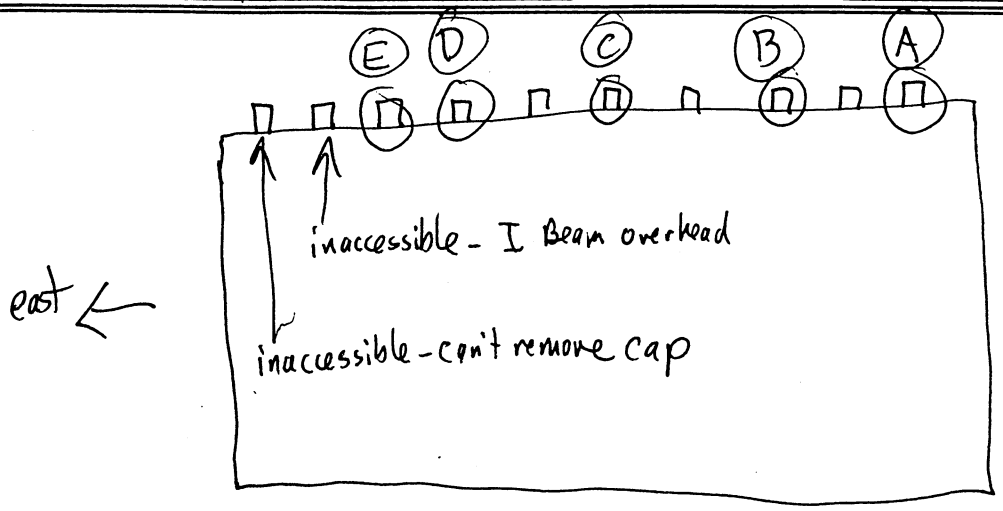


DIAGRAM OF SAMPLING LOCATION

Upstream Dist./Dia._____

Downstream Dist./Dia_____

Coupling Length_____

No. of Sampling Pts._____

Stack Dimension_____

Stack Are, ft^2_____

*Inches from wall plus coupling length

Sample Point	% of Diameter	In. from Near Wall	In. from Nozzle*

FOSSIL ENERGY RESEARCH CORP.

SAMPLING POINT LOCATION DATA
EPA Method 1

Plant Craig 1 Preliminary Velocity Traverse Data by PA / JB

Date 9/27/99 Test Location Precip Out

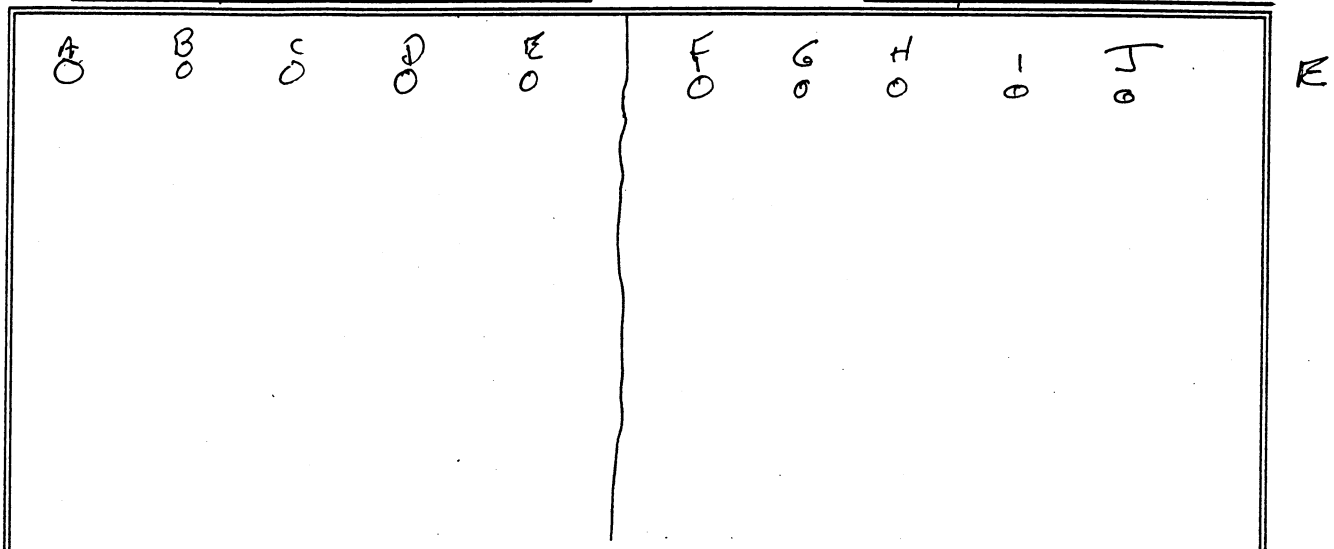


DIAGRAM OF SAMPLING LOCATION

Upstream Dist./Dia._____

Downstream Dist./Dia_____

Coupling Length_____

No. of Sampling Pts._____

Stack Dimension_____

Stack Are, ft²_____

*Inches from wall plus coupling length

Sample Point	% of Diameter	In. from Near Wall	In. from Nozzle*
1	10	9.9	27.9
2	30	29.9	47.9
3	50	49.5	67.5
4	70	69.3	87.3
5	90	89.1	107.1

Fossil Energy Research Corp.
Preliminary Velocity Traverse and Cyclonic Flow Check Data Sheet

Test No. PE 1-Hg
Client/Unit Craig 1
Location Precip Out (Inlet location)

Date 9/27/99
Data by PA/JJB
Start time
Stop time

Barometric pressure
Static pressure, iwg -15"

West

Port	Point	ΔP	Temp	Yaw Angle
B	5	.51	245	10
B	4	.6	243	10
B	3	.5	233	5
B	2	.55	227	10
B	1	.55	220	5
C	5	0.67	240	0
C	4	.61	244	0
C	3	.60	236	0
C	2	.52	230	0
C	1	.55	215	0
D	5	.65	240	0
D	4	.65	255	0
D	3	.64	255	0
D	2	.7	238	0
D	1	.68	234	0
E	5	1.0	255	0
E	4	1.1	245	0
E	3	.95	254	5
E	2	1.0	242	0
E	1	.91	250	0

12:25

East

Port	Point	ΔP	Temp	Yaw Angle
F	5	1.1	264	0
	4	1.02	254	0
	3	1.2	245	5
	2	1.05	249	0
	1	.97	262	0
G	5	.78	259	-20
	4	.91	249	-20
	3	.85	265	-20
	2	.7	247	-5
	1	.85	233	0
H	5	.85	247	0
	4	.80	255	0
	3	.6	254	0
	2	.6	242	0
	1	.65	243	5
I	5	.75	259	0
	4	.78	261	0
	3	.6	250	5
	2	.55	249	5
	1	.55	235	5

Leak check: Pre-test 0
Post-test

Manometer zero: Pre-test 0
Post-test 0

Notes/Comments

Fossil Energy Research Corp.
Preliminary Velocity Traverse and Cyclonic Flow Check Data Sheet

Test No. _____
Client/Unit _____
Location Parch 05T

Date 9/27/99
Data by PA LTB
Start time _____
Stop time _____

Barometric pressure
Static pressure, iwg -23"

Port	Point	ΔP	Temp	Yaw Angle

Port	Point	ΔP	Temp	Yaw Angle
T	5	1.1	252	0
	4	.98	260	0
	3	.88	256	5
	2	.9	240	0
	1	.87	248	0

14:00

Leak check: Pre-test _____
Post-test _____

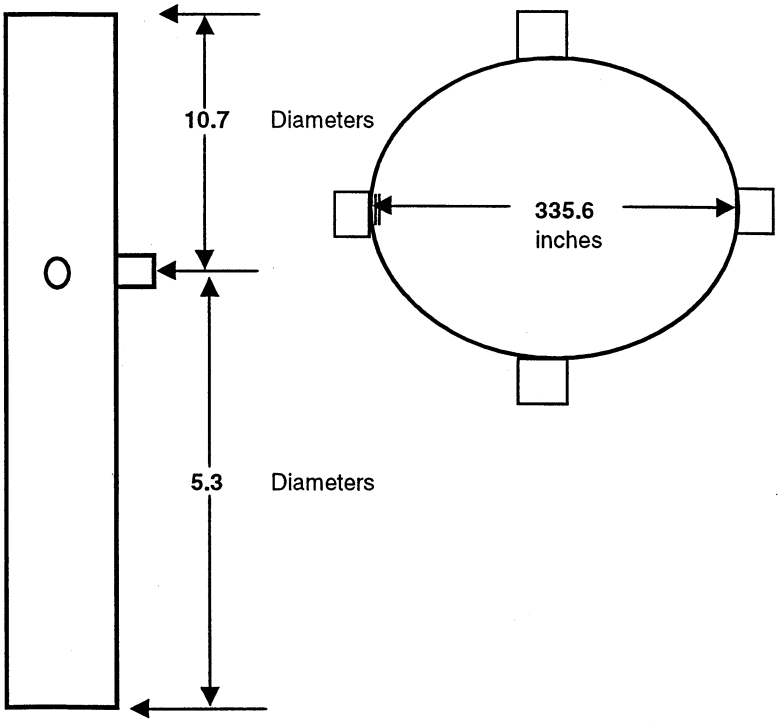
Manometer zero: Pre-test _____
Post-test _____

Notes/Comments _____

FOSSIL ENERGY RESEARCH CORP.
METHOD 1 DATA SHEET
Craig 1 20-Point Traverse

Client: Tri-State Date: 9/21/99

Sample Location: Craig 1 Stack Prepared By: Mark McDannel



Diameter (in.)	335.60
Upstream (Ft.)	146.825
Down Stream (Ft.)	300
Coupling (in.)	18
Stack Area (ft^2)	614.29

Point No.	% Dia.	Distances A	Distances B
1	2.6	8.61	26.61
2	8.2	27.41	45.41
3	14.6	49.15	67.15
4	22.6	75.89	93.89
5	34.2	114.74	132.74
6	65.8	220.86	238.86
7	77.4	259.71	277.71
8	85.4	286.45	304.45
9	91.8	308.19	326.19
10	97.4	326.99	344.99

Notes on distances:
A = distance from inside stack wall to traverse point.
B = distance from outside of sample port to probe tip.

Fossil Energy Research Corp.
Preliminary Velocity Traverse and Cyclonic Flow Check Data Sheet

Test No. Prelim Vel.
Client/Unit tri states craig I
Location stack

Date 9/28/99
Data by PW
Start time 1148
Stop time

Barometric pressure
Static pressure, iwg -.70

1148

Port	Point	ΔP	Temp	Yaw Angle
E	5	.62	146	<5°
	4	.48	145	<5°
	3	.50	145	<5°
	2	.45	145	<5°
	1	.32	145	<5°
N	5	.61	145	<5°
	4	.63	146	<5°
	3	.58	146	<5°
	2	.48	145	<5°
	1	.38	146	<5°
W	5	.59	144	<5°
	4	.60	145	<5°
	3	.56	145	<5°
	2	.51	146	<5°
	1	.38	146	<5°
S	5	.58	145	<5°
	4	.54	145	<5°
	3	.45	145	<5°
	2	.40	145	<5°
	1	.30	145	<5°
	avg	.4927	145	

Leak check: Pre-test .04
Post-test .02

Port	Point	ΔP	Temp	Yaw Angle

Manometer zero: Pre-test .04
Post-test .02

Notes/Comments

Portable Oxygen Meter Calibration Summary							
Unit	**Craig 1**	**Range, %**	25				
Zero Bottle #	**ALM12499**	**O_2 Bottle #**	**SA20651**	**O_2 Value, %**	**10.54**		
Date	*Location*	*Pre Test No.*	*Post Test No.*	*Reading*	*Diff, % O_2*	*Diff, % scale*	*Pass?*
28-Sep	Inlet	1		0.1	0.1	0.4	Y
28-Sep	Inlet	1		10.5	-0.04	-0.16	Y
28-Sep	Inlet		2	0.1	0.1	0.4	Y
28-Sep	Inlet		2	10.9	0.36	1.44	Y
28-Sep	Stack	1		0.1	0.1	0.4	Y
28-Sep	Stack	1		10.7	0.16	0.64	Y
28-Sep	Stack		2	0.1	0.1	0.4	Y
28-Sep	Stack		2	10.5	-0.04	-0.16	Y
29-Sep	Inlet	3		0.1	0.1	0.4	Y
29-Sep	Inlet	3		10.5	-0.04	-0.16	Y
29-Sep	Inlet		3	0.1	0.1	0.4	Y
29-Sep	Inlet		3	10.9	0.36	1.44	Y
29-Sep	Stack	3		0.1	0.1	0.4	Y
29-Sep	Stack	3		10.6	0.06	0.24	Y
29-Sep	Stack		3	0	0	0	Y
29-Sep	Stack		3	10.8	0.26	1.04	Y

Craig Inlet

Instructions:

1. Perform at the beginning and end of each test day.
2. Calibrate instrument on air.
3. Introduce mid range and zero cal gases. Read on lowest instrument scale possible
4. Linearity specification in ±2% of scale (±0.1% O_2 on 0-55 scale, ±0.2% on a 0-10% scale, and ±0.5% on 0-25% scale).

Mid range cal gas value 10.54 Bottle # _____

0-25% scale Zero Bottle # _____

Analyzer ID Inlet

Pre-Test No. 1-Inlet Data by MDM Date 9/28/99

Post-Test No. _____

Pre 1-Inlet

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
0	0.1	0.1	0.4	Y
10.54	10.5			Y

Analyzer ID Inlet

Pre-Test No. _____ Data by _____ Date _____

Post-Test No. 2-Inlet

Post 2-Stack

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
0	0.1			Y
10.54	10.9			Y

Analyzer ID _____

Pre-Test No. _____ Data by _____ Date _____

Post-Test No. _____

Gas Value	Reading	Difference % O_2	% of Scale	Pass?

Portable Analyzer Linearity Check

Craig Stack

Instructions:

1. Perform at the beginning and end of each test day.
2. Calibrate instrument on air.
3. Introduce mid range and zero cal gases. Read on lowest instrument scale possible
4. Linearity specification in ±2% of scale (±0.1% O_2 on 0-55 scale, ±0.2% on a 0-10% scale, and ±0.5% on 0-25% scale).

Mid range cal gas value 10.54% Bottle # SA20651

Zero Bottle #

Analyzer ID Stack

Pre-Test No. Craig 1-Stack Data by MDM Date 9/28/99

Post-Test No. ~~Craig 2-Stack~~

Pre 1-Stack

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?
0	0.1			
10.54	10.7			

Analyzer ID

Pre-Test No. Craig Data by D. W Date 9-28-99

Post-Test No.

Post 2-Stack

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?
10.54	10.5			
0	.1			

Analyzer ID

Pre-Test No. Data by Date

Post-Test No.

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?

Portable Analyzer Linearity Check

Instructions:

Craig 1

1. Perform at the beginning and end of each test day.
2. Calibrate instrument on air.
3. Introduce mid range and zero cal gases. Read on lowest instrument scale possible
4. Linearity specification in ±2% of scale (±0.1% O_2 on 0-55 scale, ±0.2% on a 0-10% scale, and ±0.5% on 0-25% scale).

Mid range cal gas value _____ Bottle # _____

Zero Bottle # _____

Analyzer ID _____

Pre-Test No. _____ Data by MM Date 9/28/99

Post-Test No. _____

Pre 3 - Inlet

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?
0	0.1			
10.56	10.5			

Analyzer ID _____

Pre-Test No. _____ Data by MM Date 9/29/99

Post-Test No. _____

Post 3 - Hg

Post 1 - HCl

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?
0	0.0			
10.56	10.8			

Analyzer ID _____

Pre-Test No. _____ Data by _____ Date _____

Post-Test No. _____

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?

Portable Analyzer Linearity Check

Instructions:

1. Perform at the beginning and end of each test day. Craig 1
2. Calibrate instrument on air.
3. Introduce mid range and zero cal gases. Read on lowest instrument scale possible
4. Linearity specification in ±2% of scale (±0.1% O_2 on 0-55 scale, ±0.2% on a 0-10% scale, and ±0.5% on 0-25% scale).

Mid range cal gas value 10.5 Bottle # _____

Zero Bottle # ALM12499

Analyzer ID Stack

Pre-Test No. _____ Data by D. Cw Date ~~9-29~~ Pre 3-Stack

Post-Test No. _____

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
13.59	10.6			
0	0.1			

Analyzer ID _____

Pre-Test No. _____ Data by MM Date 9/29/99

Post-Test No. _____ post 3-Hg post 1-HCl

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
0	0.1			
10.58	10.09			

Analyzer ID _____

Pre-Test No. _____ Data by _____ Date _____

Post-Test No. _____

Gas Value	Reading	Difference % O_2	% of Scale	Pass?

Portable Analyzer Linearity Check

PRAXAIR
5700 South Alameda Street
Los Angeles, CA 90058
Telephone: (213) 585-2154
Facsimile: (714) 542-6689

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER DELTA AIR P.O NUMBER

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
CARBON DIOXIDE GMIS	vs 1674b	52693	10.02 %
OXYGEN GMIS	vs. 2658a	SA 9818	10.02%

ANALYZER READINGS

R=REFERENCE STANDARD *Z=ZERO GAS* *C=GAS CANDIDATE*

1. COMPONENT CARBON DIOXIDE GMIS ANALYZER MAKE-MODEL-S/N Siemens Ultramat 5E S/N A12-730
   ANALYTICAL PRINCIPLE NDIR LAST CALIBRATION DATE 05/15/98
   FIRST ANALYSIS DATE 06/01/98 SECOND ANALYSIS DATE

Z 0.00	R 10.00	C 10.10	CONC. 10.12	Z	R	C	CONC.
R 10.02	Z 0.00	C 10.12	CONC. 10.12	R	Z	C	CONC.
Z 0.00	C 10.12	R 10.02	CONC. 10.12	Z	C	R	CONC.
U/M %	MEAN TEST ASSAY 10.12 %			U/M %	MEAN TEST ASSAY		

2. COMPONENT OXYGEN GMIS ANALYZER MAKE-MODEL-S/N Siemens Oxymat 5E S/N A12-839
   ANALYTICAL PRINCIPLE Paramagnetic LAST CALIBRATION DATE 05/15/98
   FIRST ANALYSIS DATE 06/01/98 SECOND ANALYSIS DATE

Z 0.00	R 10.02	C 10.54	CONC. 10.54	Z	R	C	CONC.
R 10.02	Z 0.00	C 10.54	CONC. 10.54	R	Z	C	CONC.
Z 0.00	C 10.54	R 10.02	CONC. 10.54	Z	C	R	CONC.
U/M %	MEAN TEST ASSAY 10.54 %			U/M %	MEAN TEST ASSAY		

Values not valid below 150 psig

THIS CYLINDER NO. SA 20651
HAS BEEN CERTIFIED ACCORDING TO SECTION EPA-600/R97/121
OF TRACEABILITY PROTOCOL NO. Rev. 9/97
PROCEDURE G1
CERTIFIED ACCURACY ± 1 % NIST TRACEABLE
CYLINDER PRESSURE 2000 PSIG
CERTIFICATION DATE 06/01/98
EXPIRATION DATE 06/01/01 TERM 36 MONTHS

CERTIFIED CONCENTRATION

CARBON DIOXIDE	10.12 %
OXYGEN	10.54 %
NITROGEN	BALANCE

SA 20651

ANALYZED BY JOSEPH CHARLES

CERTIFIED BY KWAN TOONG

DELTA AIR QUALITY SERVICES, INC.

EPA Method 5
522 Series Meter Box Calibration
Post-Test Orifice Method
English Meter Box Units, English K' Factor

Filename: C:\APEX\[3-wcs-shrt-11-8-99.xls]522ORPO3
Revised: 7/25/95 Version: 2.2

CONVERSION FACTORS

1 mm Hg =	0.13330	kPa
1 cm =	0.39370	inch
1 mm =	0.03937	inch
1 cu ft =	28.32	liters

PROJECT: Epri Hg
Model #: apex
Serial #: 3-wcs

Date: ----------> November 8-9
Barometric Pressure: ----------> 29.92 (in. Hg)
Theoretical Critical Vacuum:---> 14.11 (in. Hg)

!!!!!!!!
IMPORTAN For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTAN The Critical Orifice Coefficient, K', must be entered in English units, (ft)^3*(deg R)^0.5/((in.Hg)*(min)).
!!!!!!!!

---------- DRY GAS METER READINGS ----------

-CRITICAL ORIFICE READINGS-

dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	-- Ambient Temperature -- Initial (deg F)	Final (deg F)	Average (deg F)
1.15	10.00	932.000	938.161	6.161	80.0	69.0	80.0	70.0	55	0.459	18.0	69.0	69.0	69.0
1.15	10.00	938.300	944.470	6.170	80.0	70.0	83.0	71.0	55	0.459	18.0	69.0	69.0	69.0
1.15	10.00	944.600	950.789	6.189	84.0	71.0	87.0	72.0	55	0.459	18.0	69.0	70.0	69.5

-- Average Temperatures --

DGM Outlet (deg R)	DGM Overall (deg R)	Ambient Temp (deg R)
529.5	534.8	529.0
530.5	536.0	529.0
531.5	538.5	529.5

********** RESULTS **********

--- DRY GAS METER ---

VOLUME ORRECTE Vm(std) (cu ft)	VOLUME RRECTED Vm(std) (liters)
6.098	172.7
6.093	172.5
6.083	172.3

-------- ORIFICE --------

VOLUME CORRECTE Vcr(std) (cu ft)	VOLUME ORRECTE Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)
5.971	169.1	5.985
5.971	169.1	5.985
5.968	169.0	5.988

Average Y ------->

-- DRY GAS METER --

CALIBRATION FACTOR Y Value (number)	Variation (number)
0.979	-0.001
0.980	0.000
0.981	0.001
0.980	

-------- ORIFICE --------

CALIBRATION FACTOR dH@ Value (in H2O)	Value (mm H2O)	Variation (in H2O)
1.809	45.95	0.003
1.806	45.87	-0.001
1.804	45.82	-0.002
1.806	45.88	<------- Average dH@

CFM @ dH=1 0.558

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

EPA Method 5
Meter Box Calibration
Pre/Post-Test Orifice Method

System I.D.: 3-WCS
Meter Serial #: ADEX

Date: 3/23/99
Barometric Pressure: 24.80 (in Hg)

DRY GAS METER READINGS											CRITICAL ORIFICE READINGS				
dH (in H2O)	Start Time hh:mm:ss	Stop Time hh:mm:ss	Elapsed Time mm.mm	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient	Actual Vacuum (in Hg)	Ambient Temperature Initial (deg F)	Ambient Temperature Final (deg F)
0.25	16			936.8	941.833	5.033	74	72	73	72	40	.239	21	60	60
0.54	25			925.1	936.44	11.34	72	70	74	72	48	.347	21	60	60
0.96	9			942.3	947.752	5.452	73	72	75	72	55	.459	17	60	60
1.6	10			948.2	955.986	7.786	76	72	78	72	63	.589	18	61	61
2.9	10			957.1	967.815	10.715	78	73	85	74	73	.820	15	61	61

RESULTS

DRY GAS METER VOLUME CORRECTED Vm(std) (cu ft)		ORIFICE VOLUME CORRECTED Vor(std) (cu ft)		VOLUME NOMINAL Vor (cu ft)		DRY GAS METER CALIBRATION FACTOR Y Value (number)	DRY GAS METER CALIBRATION FACTOR Variation (number)		ORIFICE CALIBRATION FACTOR dH@ Value (in H2O)		ORIFICE CALIBRATION FACTOR Variation (in H2O)	
4.136		4.159		4.193		1.000	0		1.712		-.037	
9.340		9.435		11.214		1.010	.004		1.758		.009	
4.488		4.493		5.340		1.001	-.005		1.783		.033	
6.403		6.400		7.621		0.999	-.006		1.808		.059	
8.796		8.909		10.610		1.013	.007		1.686		-.063	
			Average Y →	1.006					1.749	← Average dH@		

SIGNED: Stafford Dean for Bob Davis

Date: ~~4/21~~ 3/23/99

DGM Orifice Calibration Log Sheet

EPA Method 5
Meter Box Calibration
Pre/Post-Test Orifice Method

System I.D.: 3-WCS
Meter Serial #:

Date: 7-16-99 (in. Hg)
Barometric Pressure: 29.90 (in. Hg)

DRY GAS METER READINGS											CRITICAL ORIFICE READINGS				
dH (in H2O)	Start Time hh:mm:ss	Stop Time hh:mm:ss	Elapsed Time mm.mm	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	'K' Orifice Coefficient	Actual Vacuum (in Hg)	Ambient Temperature Initial (deg F)	Ambient Temperature Final (deg F)
2.00	stop watch		8 00	103.662	109.840	6.278	78.0	73.0	81	74	63	0.589	19.	73	74
2.00	↓	↓	8 00	109.840	116.071	6.231	78.0	74.0	82	74	63	0.589	19	73	73
2.00	↓	↓	8 00	116.071	122.315	6.244	79.0	75.0	83	75	63	0.589	19	72	72.5

RESULTS

DRY GAS METER VOLUME CORRECTED Vm(std) (cu ft)		ORIFICE VOLUME CORRECTED Vcr(std) (cu ft)		ORIFICE VOLUME NOMINAL Vcr (cu ft)		DRY GAS METER CALIBRATION FACTOR Y Value (number)	DRY GAS METER CALIBRATION FACTOR Variation (number)		ORIFICE CALIBRATION FACTOR dH@ Value (in H2O)		ORIFICE Variation (in H2O)	
6.163		6.097		6.173		0.989	-0.002		1.916		0.005	
6.150		6.103		6.167		0.992	0.001		1.910		0.000	
6.152		6.105		6.164		0.993	0.001		1.905		-0.005	

Average Y ⟶ 0.991

1.910 ⟵ Average dH@

SIGNED:

Date: 7-16-99

DGM Orifice Calibration Log Sheet

EPA Method 5
Meter Box Calibration
Pre/Post-Test Orifice Method

System I.D.: 3-WCS
Meter Serial#: Apex

Date: 8/4/99
Barometric Pressure: 29.74 (in. Hg)

DRY GAS METER READINGS											CRITICAL ORIFICE READINGS				
dH (in H2O)	Start Time hh:mm:ss	Stop Time hh:mm:ss	Elapsed Time mm.mm	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient	Actual Vacuum (in Hg)	Ambient Temperature Initial (deg F)	Ambient Temperature Final (deg F)
1.2	0	10	10	48.773	54.810	6.037	80	77	82	78	55	.459	21	81	81
1.2		20	10	54.810	61.040	6.230	82	78	84	79				81	82
1.2		30	10	61.040	67.183	6.143	84	79	86	81				82	82

RESULTS

DRY GAS METER VOLUME CORRECTED Vm(std) (cu ft)		ORIFICE VOLUME CORRECTED Vcr(std) (cu ft)		ORIFICE VOLUME NOMINAL Vcr (cu ft)		DRY GAS METER CALIBRATION FACTOR Y Value (number)	DRY GAS METER CALIBRATION FACTOR Variation (number)		ORIFICE CALIBRATION FACTOR dH@ Value (in H2O)		ORIFICE CALIBRATION FACTOR Variation (in H2O)	
5.891		5.869		6.052		0.996	.014		1.913		.002	
6.062		5.866		6.055		0.968	.015		1.912		.001	
5.958		5.863		6.058		0.984	.001		1.908		.003	
									1.911			

Average Y → 0.983 | 0.543 ← Average dH@

SIGNED:

Date: 8/4/99

DGM Orifice Calibration Log Sheet

APEX INSTRUMENTS
EPA Method 5
522 Series Meter Box Calibration
Pre-Test Orifice Method
English Meter Box Units, English K' Factor

Filename: C:\meter cal\Apex\[FERCO BOX 7 -99.xls]scenorth
Revised: 7/25/95 Version: 2.2

Model #: FERCO BOX
Serial #: 1-FERCO

Date: ----------> 07/19/99
Barometric Pressure: ----------> 29.95 (in. Hg)
Theoretical Critical Vacuum:---> 14.13 (in. Hg)

!!!!!!!!!
IMPORTAN For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTAN The Critical Orifice Coefficient, K', must be entered in English units, (ft)^3*(deg R)^0.5/((in.Hg)*(min)).
!!!!!!!!!

---------- DRY GAS METER READINGS ----------

-CRITICAL ORIFICE READINGS-

dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	Ambient Temperature Initial (deg F)	Ambient Temperature Final (deg F)	Ambient Temperature Average (deg F)
0.32	17.00	660.110	665.510	5.400	89.0	86.0	89.0	86.0	40	0.239	19.0	88.0	89.0	88.5
0.71	11.00	665.510	670.552	5.042	88.0	87.0	90.0	87.0	48	0.347	19.0	90.0	90.0	90.0
1.30	11.00	653.403	660.110	6.707	86.0	87.0	89.0	86.0	55	0.459	17.0	85.0	87.0	86.0
2.15	8.00	670.552	676.750	6.198	90.0	87.0	94.0	88.0	63	0.589	15.0	91.0	90.0	90.5
4.20	6.00	647.000	653.403	6.403	86.0	85.0	85.0	87.0	73	0.820	17.0	84.0	84.0	84.0

********** RESULTS **********

--- DRY GAS METER ---

VOLUME CORRECTE Vm(std) (cu ft)	VOLUME RRECTED Vm(std) (liters)
5.215	147.7
4.869	137.9
6.499	184.0
5.988	169.6
6.262	177.4

--------- ORIFICE ---------

VOLUME CORRECTE Vcr(std) (cu ft)	VOLUME ORRECTE Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)
5.196	147.1	5.394
4.875	138.0	5.075
6.472	183.3	6.688
6.015	170.3	6.267
6.318	178.9	6.505

-- DRY GAS METER --

CALIBRATION FACTOR Y

Value (number)	Variation (number)
0.996	-0.005
1.001	0.000
0.996	-0.005
1.005	0.003
1.009	0.008

Average Y -------> 1.001

--------- ORIFICE ---------

CALIBRATION FACTOR dH@

Value (in H2O)	Value (mm H2O)	Variation (in H2O)	
1.865	47.38	-0.135	
1.965	49.91	-0.035	
2.043	51.90	0.043	
2.065	52.46	0.065	
2.063	52.39	0.062	
2.000	50.81		<------- Average dH@
d	0.530		

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

For Orifice Calibration Factor dH@, the orifice differential pressure in inches of H20 that equates to 0.75 cfm of air at 68 F and 29.92 inches of Hg, acceptable tolerance of individual values from the average is +-0.2.

SIGNED: _____ Date: 7-19-99

Post Test Meter Cal

For Ferco Meter

APEX INSTRUMENTS
EPA Method 5
522 Series Meter Box Calibration
Pre-Test Orifice Method
English Meter Box Units, English K' Factor

Filename: C:\My Documents\[posthgferco.xls]sceneorth
Revised: 7/25/95 Version: 2.2

Model #:
Serial #:

Date: ——————> 10-29-99
Barometric Pressure: ——> 29.90 (in. Hg)
Theoretical Critical Vacuum:—> 14.10 (in. Hg)

!!!!!!!
IMPORTAN For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTAN The Critical Orifice Coefficient, K', must be entered in English units, (ft)^3*(deg R)^0.5/((in.Hg)*(min)).
!!!!!!!

——— DRY GAS METER READINGS ———— -CRITICAL ORIFICE READINGS-

dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual – Ambient Temperature – Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
1.28	11.00	747.000	753.463	6.463	78.0	71.0	80.0	72.0	53	0.459	17.0	78.0	78.0	78.0
1.28	11.00	754.000	760.491	6.491	79.0	73.0	81.0	75.0	48	0.459	17.0	78.0	78.0	78.0
1.28	11.00	761.000	767.505	6.505	81.0	75.0	81.0	76.0	48	0.459	17.0	78.0	78.0	78.0

********** RESULTS **********

— DRY GAS METER — VOLUME CORRECTE Vm(std) (cu ft)	VOLUME RRECTED Vm(std) (liters)	——— ORIFICE ——— VOLUME CORRECTE Vcr(std) (cu ft)	VOLUME ORRECTE Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)	– DRY GAS METER – CALIBRATION FACTOR Y Value (number)	Variation (number)	——— ORIFICE ——— CALIBRATION FACTOR dH@ Value (in H2O)	Value (mm H2O)	Variation (in H2O)
6.389	180.9	6.509	184.3	6.639	1.019	0.001	2.042	51.86	0.008
6.385	181.1	6.509	184.3	6.639	1.018	0.000	2.032	51.62	-0.001
6.394	181.1	6.509	184.3	6.639	1.018	0.000	2.026	51.47	-0.007
		Average Y ——>			1.018		2.033	51.65	<—— Average dH@
							CFM @ dH=	0.526	

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

For Orifice Calibration Factor dH@, the orifice differential pressure in inches of H20 that equates to 0.75 cfm of air at 68 F and 29.92 inches of Hg, acceptable tolerance of individual values from the average is +-0.2.

SIGNED: _____ Date: 10-29-99

FOSSIL ENERGY RESEARCH CORP

PITOT TUBE DIMENSIONAL CALIBRATION

Pitot tube ID	Inlet Hg Probe - Craig 1 and Craig 3	Tube diameter (D_t)	3/8"
Date	10-5-99	P_A	0.5
Data by	JT	P_B	0.5

(a) Face opening plane angle = 90 deg (Y/N)?	A	Y
	B	Y
(b) Face opening planes parallell to longitudinal axis (Y/N)?	A	Y
	B	Y
(c) Both legs equal length and centerline coincident?	A	Y
	B	Y
(d) $P_A = P_B$ (Y/N)?		Y
(e) $1.05\ D_t \leq P \leq 1.50\ D_t$ (Y/N)?		Y

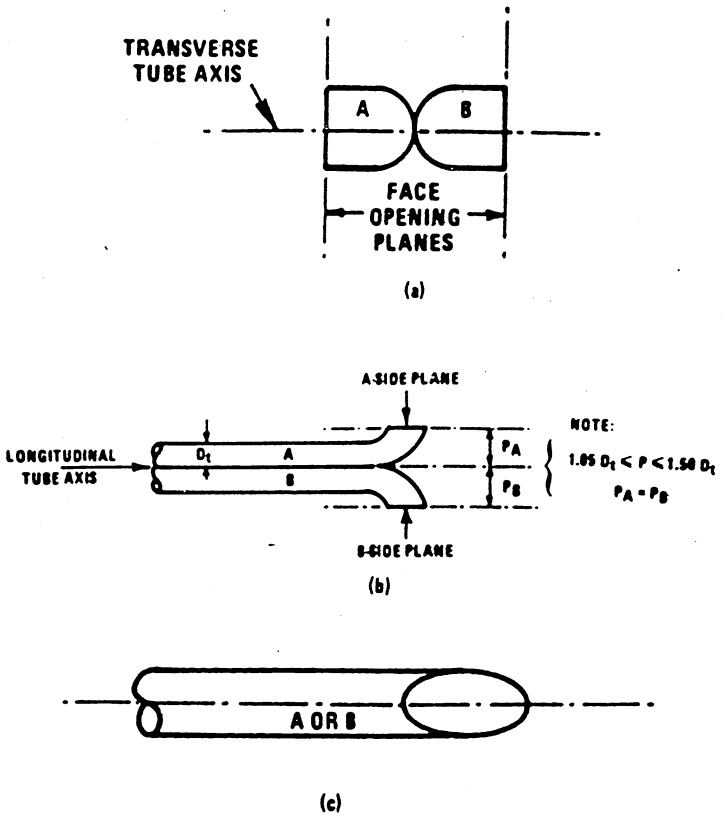


Figure 2-2. Properly constructed Type S pitot tube, shown in: (a) end view; face opening planes perpendicular to transverse axis; (b) top view; face opening planes parallel to longitudinal axis; (c) side view; both legs of equal length and centerlines coincident, when viewed from both sides. Baseline coefficient values of 0.84 may be assigned to pitot tubes constructed this way.

FOSSIL ENERGY RESEARCH CORP
PITOT TUBE DIMENSIONAL CALIBRATION

Stack Hg and HCl/PM
Craig 1 and
Craig 3
9/27-10/6/99

Pitot tube ID	#13-S-type	Tube diameter (D_t)	.375
Date	9-27-99	P_A	.44
Data by	Dave Goulet	P_B	.43

(a) Face opening plane angle = 90 deg (Y/N)?	A	Y
	B	Y
(b) Face opening planes parallell to longitudinal axis (Y/N)?	A	Y
	B	Y
(c) Both legs equal length and centerline coincident?	A	Y
	B	Y
(d) $P_A = P_B$ (Y/N)?		
(e) $1.05\ D_t \leq P \leq 1.50\ D_t$ (Y/N)?		Y

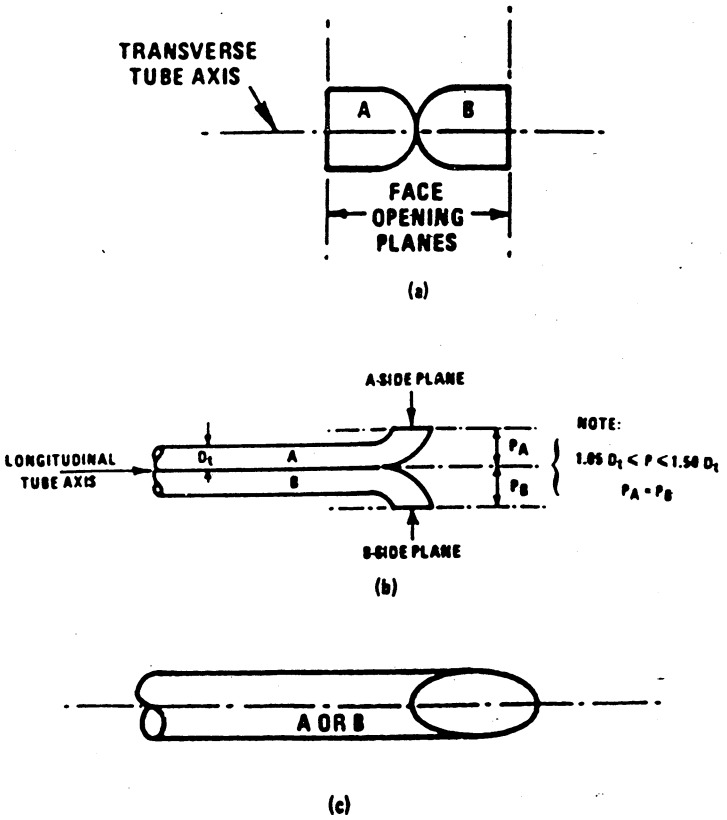


Figure 2-2. Properly constructed Type S pitot tube, shown in: (a) end view; face opening planes perpendicular to transverse axis; (b) top view; face opening planes parallel to longitudinal axis; (c) side view; both legs of equal length and centerlines coincident, when viewed from both sides. Baseline coefficient values of 0.84 may be assigned to pitot tubes constructed this way.

Table 2. Unit # 1, Gas flow Rate Calibration and Wall Effects Test Results

Load Setting	Load, Megawatts	Plant Flow Rate, WSCFH	Reference Method 2 Flow Rate, WSCFH	Reference Method 2F Flow Rate, WSCFH	% Difference from Method 2	% Difference from Method 2F	% Difference of Method 2 and Method 2F	Wall Effects Adjustment Factor
Low	235.8	56,083,000	52,710,597	46,259,486	-6.4%	-21.2%	12.2%	1.0033
Medium	308.8	61,090,000	56,203,184	55,074,152	-8.7%	-10.9%	2.0%	0.9987
High	432.7	78,128,000	73,157,043	70,161,986	-6.8%	-11.4%	4.1%	0.9988
				Averages	-7.3%	-14.5%	6.1 %	1.0003

use high load data

Table 3. Unit # 2, Gas flow Rate Calibration and Wall Effects Test Results

Load Setting	Load, Megawatts	Plant Flow Rate, WSCFH	Reference Method 2 Flow Rate, WSCFH	Reference Method 2F Flow Rate, WSCFH	% Difference from Method 2	% Difference from Method 2F	% Difference of Method 2 and Method 2F	Wall Effects Adjustment Factor
Low	244.4	53,024,000	49,034,681	48,412,691	-8.1%	-9.5%	1.3%	0.9992
Medium	318.5	62,650,000	62,290,001	57,444,325	-0.6%	-9.1%	7.8%	0.9946
High	No Data	73,140,000	72,107,624	69,572,163	-1.4%	-5.1%	3.5%	1.0048
				Averages	-3.4%	-7.9%	4.2%	0.9995

Table 4. Unit # 3, Gas flow Rate Calibration and Wall Effects Test Results

Load Setting	Load, Megawatts	Plant Flow Rate, WSCFH	Reference Method 2 Flow Rate, WSCFH	Reference Method 2F Flow Rate, WSCFH	% Difference from Method 2	% Difference from Method 2F	% Difference of Method 2 and Method 2F	Wall Effects Adjustment Factor
Low	236.6	57,129,000	54,580,566	51,995,318	-4.7%	-9.9%	4.7%	0.9990
Medium	321.5	63,442,000	61,841,345	59,485,807	-2.6%	-6.7%	3.8%	1.0017
High	422.1	77,709,000	77,076,612	73,069,383	-0.8%	-6.3%	5.2%	1.0007
				Averages	-2.7%	-7.6%	4.6%	1.0005

use high load data

Appendix C. Chain-of-Custody Records

Chain-of-Custody Records

CHAIN OF CUSTODY

CLIENT: Craig

TEST DATE(S): 9/27-28 99

LOCATION: Units 1 and 3

SAMPLER(S): Don Wondercheck, Paul Anderson

SAMPLE LOCATION: Inlet and Stack

PROJECT MANAGER: Mark McDaniel

TEST METHOD(S): Ontario Hydro Mercury

DATE DUE: December 1, 1999 or to meet 45 day turnaround

OUTSIDE LAB REQUIRED?: Yes - Phillip Analytical

COMPLIANCE TEST? Yes - EPA

DATE	TIME	TEST #	SAMPLE DESCRIPTION	CONTAINERS	SAMPLER	COMMENTS
9/27/99	1700	Reagent Blanks	Thimble Filters 31, 36, 44	3	DB	quartz
			83mm filters 83UP 93, 94, 95	3	DB	quartz
			0.1N HNO_3 Blank	1	DB	50 ml
			1N KCl Blank	1	DB	50 ml
			5% HNO_3/10% H_2O_2 Blank	1	DB	50 ml
			$KMnO_4$/H_2SO_4 Blank	1	DB	50 ml
			10% Hydroxylamine Sulfate/Sodium Chloride Blank	1	DB	100 ml
9/27/99	1700	Stack Field Blank	83UP-108	1	DW	
			Probe Wash @ F/H	1	DW	
			KCl impinger	1	DW	
			HNO_3/H_2O_2 impinger	1	DW	
			$KMnO_4$ impinger	1	DW	

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	9/28/99 0900		

ANALYSIS REQUIRED:

Speciated Hg by Ontario Hydro Method

Delta

CHAIN OF CUSTODY

1 of 2

CLIENT: Craig

TEST DATE(S): 9/27

LOCATION: Unit 1

SAMPLER(S): Dan Wondolecky, Paul Anderson

SAMPLE LOCATION: Unit 1 Inlet and Stack

PROJECT MANAGER: Mark McDaniel

TEST METHOD(S): Ontario Hydro Mercury

DATE DUE: To meet m Hod Ton Round Trip

OUTSIDE LAB REQUIRED?: Yes - Phillip Analytical

COMPLIANCE TEST? Yes - EPA

DATE	TIME	TEST #	SAMPLE DESCRIPTION	CONTAINERS	SAMPLER	COMMENTS
9/27/99	1200	Inlet Field Blank	QT-30 Thimble	1	PA	
			Front half	1		
			KCl impinger	1		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1		
9/28/99	1200	1-Inlet-Hg	Thimble QT-27	1	PA	
			Front half	1		
			KCl impinger	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1		
9/28/99	1400	1-Stack-Hg	Filter 830F-104	1	PW	
			Probe Wash & F/H	1		
			KCl impinger	2		
			HNO_3/H_2O_2 imp $KMnO_4$ imp	1		

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	9/28/99 1400		

ANALYSIS REQUIRED: Mercury speciation analysis by Ontario Hydro Method

Delta

1 of 3

CHAIN OF CUSTODY

CLIENT: Craig Unit 1 / Tri State — TEST DATE(S): 9/28/99

LOCATION: Craig Unit 1 — SAMPLER(S): DW, PA

SAMPLE LOCATION: Stack and Inlet — PROJECT MANAGER: Mark McDaniel

TEST METHOD(S): Ontario Hydro Mercury — DATE DUE: Due 1 on 45 day turnaround

OUTSIDE LAB REQUIRED?: Yes - Phillips Analytical — COMPLIANCE TEST? Yes

DATE	TIME	TEST #	SAMPLE DESCRIPTION	CONTAINERS	SAMPLER	COMMENTS
9/28/99	1600	2-Stack-Hg	Filter 83VP-92	1	DW	
			Probe Wash & F'h	1	↓	
			KCl imp + rinses	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1	↓	
9/28/99	1600	2-Inlet-Hg	Thimble QT-37	1	PA	
			Front half	1	↓	
			KCl imp + rinses	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1	↓	

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
[signature]	9/29/99 0900		

ANALYSIS REQUIRED:

Speciated mercury by Ontario Hydro Method

Delta

1 4

CHAIN OF CUSTODY

CLIENT: Tri State — TEST DATE(S): 9/29/99

LOCATION: Craig Unit 1 — SAMPLER(S): D.W. / P.A.

SAMPLE LOCATION: Stack and Inlet — PROJECT MANAGER: Mark McDaniel

TEST METHOD(S): Ontario Hydro Mercury — DATE DUE: 45 day turn around

OUTSIDE LAB REQUIRED?: Yes - Phillips — COMPLIANCE TEST? Yes - EPA

DATE	TIME	TEST #	SAMPLE DESCRIPTION	CONTAINERS	SAMPLER	COMMENTS
9/29/99	1300	3-Stack-Hg	Filter 83VR 96	1	DW	
			Probe Wash & Fit	1	↓	
			KCl imp	2		
			WO_3/H_2O_2 imp	1		
			KMnO4 imp	1		
9/29/99	1400	3-Inlet-Hg	Thimble QF-34	1	PA	
			Front Fit	1	↓	
			KCl imp	2		
			WO_3/H_2O_2 imp	1		
			KMnO4 imp	1		

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	9/29/99 1500		

ANALYSIS REQUIRED: Mercury Speciation by Ontario Hydro Method

Delta

List of FERCo Samples Shipped to Philip, October 27, 1999							
Ontario Hydro Samples							
Plant	Description	Test Date	Due Date	Comments			
Craig 1, Craig 3	Reagent Blanks	27-Sep	11-Nov				
Craig 1	Inlet Field Blank	27-Sep	11-Nov				
Craig 1	Stack Field Blank	27-Sep	11-Nov				
Craig 1	1-Inlet	28-Sep	12-Nov				
Craig 1	1-Stack	28-Sep	12-Nov				
Craig 1	2-Inlet	28-Sep	12-Nov				
Craig 1	2-Stack	28-Sep	12-Nov				
Craig 1	3-Inlet	29-Sep	13-Nov				
Craig 1	3-Stack	29-Sep	13-Nov				
Craig 3	Inlet Field Blank	2-Oct	16-Nov				
Craig 3	Stack Field Blank	2-Oct	16-Nov				
Craig 3	1-Inlet	4-Oct	18-Nov				
Craig 3	1-Stack	4-Oct	18-Nov				
Craig 3	2-Inlet	4-Oct	18-Nov				
Craig 3	2-Stack	4-Oct	18-Nov				
Craig 3	3-Inlet	4-Oct	18-Nov				
Craig 3	3-Stack	4-Oct	18-Nov				
Coronado 1, San Juan 2, Navajo 3	Reagent Blanks	19-Oct	3-Dec				
Coronado 1	Inlet Field Blank	19-Oct	3-Dec				
Coronado 1	Outlet Field Blank	19-Oct	3-Dec				
Coronado 1	1-Inlet	18-Oct	2-Dec				
Coronado 1	1-Outlet	18-Oct	2-Dec				
Coronado 1	2-Inlet	19-Oct	3-Dec				
Coronado 1	2-Outlet	19-Oct	3-Dec				
Coronado 1	3-Inlet	19-Oct	3-Dec				
Coronado 1	3-Outlet	19-Oct	3-Dec				
San Juan 2	Inlet Field Blank	22-Oct	6-Dec				
San Juan 2	Outlet Field Blank	22-Oct	6-Dec				
San Juan 2	2-Inlet	21-Oct	5-Dec				
San Juan 2	2-Outlet	21-Oct	5-Dec				
San Juan 2	3-Inlet	22-Oct	6-Dec	Has two filters. Analyze filters separately.			
San Juan 2	3-Outlet	22-Oct	6-Dec				
San Juan 2	4-Inlet	22-Oct	6-Dec				
San Juan 2	4-Outlet	22-Oct	6-Dec				
Navajo 3	Inlet Field Blank	26-Oct	10-Dec				
Navajo 3	Outlet Field Blank	26-Oct	10-Dec				
Navajo 3	1-Inlet	25-Oct	9-Dec				
Navajo 3	1-Outlet	25-Oct	9-Dec				
Navajo 3	2-Inlet	26-Oct	10-Dec				
Navajo 3	2-Outlet	26-Oct	10-Dec				
Navajo 3	3-Inlet	26-Oct	10-Dec				
Navajo 3	3-Outlet	26-Oct	10-Dec				
Total number of samples		42					

List of FERCo Samples Shipped to Philip, October 27, 1999			
Coal Samples, analyze for Hg, Cl			
Plant	Description	Test Date	Target Date
Craig 1	Run 1	28-Sep	12-Nov
Craig 1	Run 2	28-Sep	12-Nov
Craig 1	Run 3	29-Sep	13-Nov
Craig 3	Run 1	4-Oct	18-Nov
Craig 3	Run 2	4-Oct	18-Nov
Craig 3	Run 3	4-Oct	18-Nov
Coronado 1	Run 1	18-Oct	2-Dec
Coronado 1	Run 2	19-Oct	3-Dec
Coronado 1	Run 3	19-Oct	3-Dec
San Juan 2	Run 2	21-Oct	5-Dec
San Juan 2	Run 3	22-Oct	6-Dec
San Juan 2	Run 4	22-Oct	6-Dec
Navajo 3	Run 1	25-Oct	9-Dec
Navajo 3	Run 2	26-Oct	10-Dec
Navajo 3	Run 3	26-Oct	10-Dec
Total number of samples		15	

NOTICE OF SAMPLE RECEIPT-PHILIP ANALYTICAL SERVICES

Attention: Mark McDaniel
Client: Fossil Energy Research Corp.
Re Client Project: Craig
FAX #: 949-859-7916
Phone #: 949-859-4466

Samples for: OH' Hg Trains
were received in good condition unless indicated below.

SAMPLE LISTING

Philip ID #	Sample ID	Date Sampled	Date Received
065693	Reagent Blank	99/09/27	99/10/29
065701	Unit 1 Stack-FB	99/09/27	99/10/29
065702	Unit 1 Stack-R1	99/09/28	99/10/29
065703	Unit 1 Stack-R2	99/09/28	99/10/29
065704	Unit 1 Stack-R3	99/09/29	99/10/29
065705	Unit 1 Inlet-FB	99/09/27	99/10/29
065706	Unit 1 Inlet-R1	99/09/28	99/10/29
065707	Unit 1 Inlet-R2	99/09/28	99/10/29
065708	Unit 1 Inlet-R3	99/09/29	99/10/29
065709	Unit 3 Stack-FB	99/10/02	99/10/29
065710	Unit 3 Stack-R1	99/10/04	99/10/29
065711	Unit 3 Stack-R2	99/10/04	99/10/29
065712	Unit 3 Stack-R3	99/10/05	99/10/29
065713	Unit 3 Inlet-FB	99/10/02	99/10/29
065714	Unit 3 Inlet-R1	99/10/04	99/10/29
065715	Unit 3 Inlet-R2	99/10/04	99/10/29
065716	Unit 3 Inlet-R3	99/10/05	99/10/29
065764	Reagent Blank QT40	99/10/19	99/10/29
065766	Unit 1 Stack-FB	99/10/19	99/10/29
065767	Unit 1 Stack-R1	99/10/18	99/10/29
065768	Unit 1 Stack-R2	99/10/19	99/10/29
065769	Unit 1 Stack-R3	99/10/19	99/10/29
065770	Unit 1 Inlet-FB	99/10/19	99/10/29
065771	Unit 1 Inlet-R1	99/10/18	99/10/29
065772	Unit 1 Inlet-R2	99/10/19	99/10/29
065773	Unit 1 Inlet-R3	99/10/19	99/10/29
065782	Unit 2 Stack-FB	99/10/22	99/10/29
065783	Unit 2 Stack-R2	99/10/21	99/10/29
065784	Unit 2 Stack-R3	99/10/22	99/10/29
065786	Unit 2 Stack-R4	99/10/22	99/10/29
065787	Unit 2 Inlet-FB	99/10/22	99/10/29
065788	Unit 2 Inlet-R2	99/10/21	99/10/29
065789	Unit 2 Inlet-R3	99/10/22	99/10/29
065790	Unit 2 Inlet-R4	99/10/22	99/10/29
065831	Unit 3 Stack-FB	99/10/25	99/10/29
065832	Unit 3 Stack-R11	99/10/25	99/10/29

Comments: _____

Date 99/11/08

NOTICE OF SAMPLE RECEIPT-PHILIP ANALYTICAL SERVICES

Attention: Mark McDaniel
Client: Fossil Energy Research Corp.
Re Client Project: Navajo
FAX #: 949-859-7916
Phone #: 949-859-4466

Samples for: 'DH' Hg Tr ans
were received in good condition unless indicated below.

SAMPLE LISTING

Philip ID #	Sample ID	Date Sampled	Date Received
065833	Unit 3 Stack-R2	99/10/26	99/10/29
065834	Unit 3 Stack-R3	99/10/26	99/10/29
065835	Unit 3 Inlet-FB	99/10/26	99/10/29
065836	Unit 3 Inlet-R1	99/10/25	99/10/29
065837	Unit 3 Inlet-R2	99/10/26	99/10/29
065838	Unit 3 Inlet-R3	99/10/26	99/10/29

Comments: _____

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Date 99/11/08

NOTICE OF SAMPLE RECEIPT-PHILIP ANALYTICAL SERVICES

Attention: Mark McDaniel
Client: Fossil Energy Research Corp.
Re Client Project: Craig
FAX #: 949-859-7916
Phone #: 949-859-4466

Samples for: Hg via 7471 and Cl (coal) via Bomb/IC.
were received in good condition unless
indicated below.

SAMPLE LISTING

Philip ID #	Sample ID	Date Sampled	Date Received
065718	Unit 1 Coal-R1	99/10/05	99/10/29
065719	Unit 1 Coal-R2	99/10/05	99/10/29
065720	Unit 1 Coal-R3	99/10/05	99/10/29
065721	Unit 3 Coal-R1	99/10/04	99/10/29
065722	Unit 3 Coal-R2	99/10/04	99/10/29
065723	Unit 3 Coal-R3	99/10/04	99/10/29
065724	Unit 1 Ash-R1	99/09/28	99/10/29
065725	Unit 1 Ash-R2	99/09/28	99/10/29
065726	Unit 1 Ash-R3	99/09/28	99/10/29
065727	Unit 3 Ash-R1	99/10/04	99/10/29
065728	Unit 3 Ash-R2	99/10/04	99/10/29
065729	Unit 3 Ash-R3	99/10/04	99/10/29
065775	Unit 1 Coal-R1	99/10/18	99/10/29
065776	Unit 1 Coal-R2	99/10/19	99/10/29
065777	Unit 1 Coal-R3	99/10/19	99/10/29
065778	Unit 1 Ash-R1	99/10/18	99/10/29
065779	Unit 1 Ash-R2	99/10/18	99/10/29
065780	Unit 1 Ash-R3	99/10/19	99/10/29
065792	Unit 2 Coal-R2	99/10/22	99/10/29
065793	Unit 2 Coal-R3	99/10/22	99/10/29
065794	Unit 2 Coal-R4	99/10/22	99/10/29
065828	Unit 2 Ash-R2	99/10/21	99/10/29
065829	Unit 2 Ash-R3/4	99/10/22	99/10/29
065840	Unit 3 Coal-R1	99/10/25	99/10/29
065841	Unit 3 Coal-R2	99/10/26	99/10/29
065842	Unit 3 Coal-R3	99/10/26	99/10/29
065843	Unit 3 Ash-R1	99/10/25	99/10/29
065844	Unit 3 Ash-R2	99/10/26	99/10/29
065845	Unit 3 Ash-R3	99/10/26	99/10/29

Comments: _____

_____

_____

Date 99/11/08

Craig Units 1 and 3

Mercury ICR Program

Consumables Record Form and Tracking Log

Reagent	Supplier	Lot Number	Date rec'd	Date opened	Opened by	Meets inspection criteria	Date blank taken	Tests used
Quartz thimble	Ofiera	NA	7/1/99	7/1/99	JB	Yes	9/28/99	
Quartz 8.3mm filter	Ofiera	NA	7/1/99	7/1/99	JB	Yes	9/28/99	
DI H_2O	Brookhead/Na	NA	9/22/99	9/22/99	JB	Yes cond=0.8 µmhos	w/ reagents	
30% H_2O_2	Fisher	992088	7/1/99	9/28, 9/30/99	JB	Yes	w/ HNO_3/H_2O_2 reagent	9/28/99
conc. HCl	Fisher	418110	7/1/99	9/22/99	JB	Yes	for cleaning	
Nitric Acid	Fisher	118100	7/1/99	9/22/99	JB	Yes	9/28/99	
$SnCl_2$	Fisher	~~986479~~ 318067-13	7/30/99	7/30/99	JB	Yes	9/28/99 w/	hydroxylamine
Sulfuric Acid	Fisher	318061	7/1/99	9/22/99	JB	Yes	9/28/99 w/	$KMnO_4$/H_2SO_4 reagent
Potassium Chloride	Fisher	986514	7/1/99	9/22/99	JB	Yes	9/28/99	
Hydroxylamine Sulfate	Fisher	991665	7/1/99	7/1/99	JB	Yes	9/28/99	
Potassium Permanganate	Fisher	987715	7/1/99	9/22/99	JB	Yes	9/28/99	w/ $KMnO_4$/H_2SO_4 reagent

Appendix D. Analytical Lab Reports

Gas Samples

Coal Samples

PHILIP SERVICES

Certificate of Analysis

CLIENT INFORMATION

Attention:	Mark McDaniel
Client Name:	Fossil Energy Research Corp.
Project:	Craig
Project Desc:	Craig Units 1,3
Address:	23342 C South Pointe Laguna Hills, CA CA 92653
Fax Number:	949-859-7916
Phone Number:	949-859-4466

LABORATORY INFORMATION

Contact:	Ron McLeod
Project:	AN991386
Date Received:	99/10/29
Date Reported:	99/11/23
Submission No.:	9K0064
Sample No.:	065693-065716

NOTES: ***'-' – not analysed '<' – less than Method Detection Limit (MDL) 'NA' – no data available***
LOQ can by determined for all analytes by multiplying the appropriate MDL X 3.33
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)

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COMMENTS:

Certified by:

PHILIP ANALYTICAL SERVICES CORPORATION
5555 North Service Road, Burlington, Ontario, Canada L7L 5H7 Tel: (905) 332-8788 Fax: (905) 332-9169

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Certified by: _____

			Method Blank	Blank Spike #1	Blank Spike #1	Blank Spike #2	Blank Spike #2	Reagent Blank	RB TF unmarked	RB 83mm 830P-93	Unit 1 Stack-FB	Unit 1 Stack-R1
Client ID:												
Lab No.:			065692 99	065692 99	065692 99	065692 99	065692 99	065693 99	065697 99	065698 99	065701 99	065702 99
Date Sampled:			-	-	-	-	-	99/09/27	99/09/27	99/09/27	99/09/27	99/09/28
Component	**MDL**	**Units**			% Recoveries		% Recoveries					
Mercury - Outlet - FH	0.010	ug	<	0.097	97	0.10	100	-	-	<	<	<
Mercury - Inlet - bulk	0.010	"	<	0.11	110	0.11	110	-	<0.080	-	-	-
Mercury - hydroxylamine	0.010	"	<	0.096	96	0.094	94	<	-	-	-	-
Mercury - KCl	0.030	"	<	0.30	100	0.30	99	<0.10	-	-	<0.10	0.15
Mercury - KMnO4	0.030	"	<	0.30	100	0.30	100	<0.050	-	-	<0.050	2.4
Mercury - H202	0.010	"	<	0.10	100	0.10	100	<0.25	-	-	<0.25	<0.25
Mercury - probe rinse	0.010	"	-	-	-	-	-	<	-	-	-	-

			Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 1
Client ID:			Stack-R1	Stack-R1	Stack-R1	Stack-R1	Stack-R1	Stack-R2	Stack-R3	Inlet-FB	Inlet-R1	Inlet-R1
Lab No.:			065702 99	065702 99	065702 99	065702 99	065702 99	065703 99	065704 99	065705 99	065706 99	065706 99
Date Sampled:			99/09/28	99/09/28	99/09/28	99/09/28	99/09/28	99/09/28	99/09/29	99/09/27	99/09/28	99/09/28
Component	**MDL**	**Units**	Duplicate	M. Spike	MS % Rec.	MS Dup	MSD % Rec.					Duplicate
Mercury - Outlet - FH	0.010	ug	<	0.12	110	0.12	120	<	0.015	-	-	-
Mercury - Inlet - bulk	0.010	"	-	-	-	-	-	-	-	0.082	<0.080	<0.080
Mercury - hydroxylamine	0.010	"	-	-	-	-	-	-	-	-	-	-
Mercury - KCl	0.030	"	0.14	1.1	99	1.2	100	0.14	0.12	0.16	0.33	-
Mercury - KMnO4	0.030	"	2.5	3.0	100	2.9	91	2.7	2.6	2.7	2.6	-
Mercury - H202	0.010	"	<0.25	2.5	100	2.4	97	<0.25	<0.25	<0.25	0.96	-
Mercury - probe rinse	0.010	"	-	-	-	-	-	-	-	-	-	-

PASC - Certificate of Analysis

			Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 3	Unit 3	Unit 3
Client ID:			Inlet-R1	Inlet-R1	Inlet-R1	Inlet-R1	Inlet-R2	Inlet-R3	Stack-FB	Stack-R1	Stack-R1
Lab No.:			065706 99	065706 99	065706 99	065706 99	065707 99	065708 99	065709 99	065710 99	065710 99
Date Sampled:			99/09/28	99/09/28	99/09/28	99/09/28	99/09/28	99/09/29	99/10/02	99/10/04	99/10/04
Component	MDL	Units	M. Spike	MS % Rec.	MS Dup	MSD % Rec.					Duplicate
Mercury - Outlet - FH	0.010	ug	-	-	-	-	-	-	<	<	-
Mercury - Inlet - bulk	0.010	"	0.91	110	0.89	110	<0.080	<0.080	-	-	-
Mercury - hydroxylamine	0.010	"	-	-	-	-	-	-	-	-	-
Mercury - KCl	0.030	"	-	-	-	-	0.31	0.17	<0.10	<0.10	<0.10
Mercury - KMnO4	0.030	"	-	-	-	-	2.7	2.1	<0.050	1.2	1.2
Mercury - H202	0.010	"	-	-	-	-	<0.25	<0.25	<0.25	<0.25	<0.25
Mercury - probe rinse	0.010	"	-	-	-	-	-	-	-	-	-

Component	MDL	Units				
Batch Code:						
Filter weight	1.0	mg	-	-	-	-
Batch Code:						
Final volume measured	0	ml	-	-	-	-
Batch Code:						
Impinger volume - hydroxylamine		"	-	-	-	-
Batch Code:						
Impinger volume - KCl - combined		"	-	-	-	-
Batch Code:						
Impinger volume - KMnO4 - combined		"	-	-	-	-
Batch Code:						
Mercury - filter	0.010	ug	-	-	-	-
Batch Code:						
Mercury - filter - bulk	0.010	"	-	-	-	-
Batch Code:					**11181BHY**	**M. Spike**
Mercury - hydroxylamine	0.010	"	-	-	<	0.096
Batch Code:						
Mercury - KCl	0.030	"	-	-	-	-
Batch Code:						
Mercury - KMnO4	0.030	"	-	-	-	-
Batch Code:			**11191NPO**	**M. Spike**		
Mercury - H202	0.010	"	<	0.10	-	-
Batch Code:						
Mercury - probe rinse	0.010	"	-	-	-	-

Component	MDL	Units				
Batch Code:						
Filter weight	1.0	mg	-	-	-	-
Batch Code:						
Final volume measured	0	ml	-	-	-	-
Batch Code:						
Impinger volume - hydroxylamine		"	-	-	-	-
Batch Code:						
Impinger volume - KCl - combined		"	-	-	-	-
Batch Code:						
Impinger volume - KMnO4 - combined		"	-	-	-	-
Batch Code:						
Mercury - filter	0.010	ug	-	-	-	-
Batch Code:						
Mercury - filter - bulk	0.010	"	-	-	-	-
Batch Code:						
Mercury - hydroxylamine	0.010	"	-	-	-	-
Batch Code:					**11193NKC**	**M. Spike**
Mercury - KCl	0.030	"	-	-	<	0.30
Batch Code:			**11191BMN**	**M. Spike**		
Mercury - KMnO4	0.030	"	<	0.30	-	-
Batch Code:						
Mercury - H202	0.010	"	-	-	-	-
Batch Code:						
Mercury - probe rinse	0.010	"	-	-	-	-

Component	MDL	Units				
Batch Code:						
Filter weight	1.0	mg	-	-	-	-
Batch Code:						
Final volume measured	0	ml	-	-	-	-
Batch Code:						
Impinger volume - hydroxylamine		"	-	-	-	-
Batch Code:						
Impinger volume - KCl - combined		"	-	-	-	-
Batch Code:						
Impinger volume - KMnO4 - combined		"	-	-	-	-
Batch Code:					**11221NFT**	**M. Spike**
Mercury - filter	0.010	ug	-	-	<	0.097
Batch Code:			**11222NFB**	**M. Spike**		
Mercury - filter - bulk	0.010	"	<	0.11	-	-
Batch Code:						
Mercury - hydroxylamine	0.010	"	-	-	-	-
Batch Code:						
Mercury - KCl	0.030	"	-	-	-	-
Batch Code:						
Mercury - KMnO4	0.030	"	-	-	-	-
Batch Code:						
Mercury - H202	0.010	"	-	-	-	-
Batch Code:						
Mercury - probe rinse	0.010	"	-	-	-	-

Component	MDL	Units				
Batch Code:						
Filter weight	1.0	mg	-	-	-	-
Batch Code:						
Final volume measured	0	ml	-	-	-	-
Batch Code:						
Impinger volume - hydroxylamine		"	-	-	-	-
Batch Code:						
Impinger volume - KCl - combined		"	-	-	-	-
Batch Code:						
Impinger volume - KMnO4 - combined		"	-	-	-	-
Batch Code:						
Mercury - filter	0.010	ug	-	-	-	-
Batch Code:						
Mercury - filter - bulk	0.010	"	-	-	-	-
Batch Code:						
Mercury - hydroxylamine	0.010	"	-	-	-	-
Batch Code:			**11194NKC**	**M. Spike**		
Mercury - KCl	0.030	"	<	0.31	-	-
Batch Code:					**11192BMN**	**M. Spike**
Mercury - KMnO4	0.030	"	-	-	<	0.29
Batch Code:						
Mercury - H202	0.010	"	-	-	-	-
Batch Code:						
Mercury - probe rinse	0.010	"	-	-	-	-

Component	MDL	Units		
Batch Code:				
Filter weight	1.0	mg	-	-
Batch Code:				
Final volume measured	0	ml	-	-
Batch Code:				
Impinger volume - hydroxylamine		"	-	-
Batch Code:				
Impinger volume - KCl - combined		"	-	-
Batch Code:				
Impinger volume - KMnO4 - combined		"	-	-
Batch Code:				
Mercury - filter	0.010	ug	-	-
Batch Code:				
Mercury - filter - bulk	0.010	"	-	-
Batch Code:				
Mercury - hydroxylamine	0.010	"	-	-
Batch Code:				
Mercury - KCl	0.030	"	-	-
Batch Code:				
Mercury - KMnO4	0.030	"	-	-
Batch Code:			**11192NPO**	**M. Spike**
Mercury - H202	0.010	"	<	0.099
Batch Code:				
Mercury - probe rinse	0.010	"	-	-

Batch Code:	**11221NFT**	
Mercury - filter	065698 99	
	065701 99	
	065702 99	
	065703 99	
	065704 99	
Run Date:	99/11/22	
Date of Sample Prep:	99/11/22	
Batch Code:	**11222NFB**	
Mercury - filter - bulk	065697 99	
	065705 99	
	065706 99	
	065707 99	
	065708 99	
Run Date:	99/11/22	
Date of Sample Prep:	99/11/22	
Batch Code:	**11181BHY**	
Mercury - hydroxylamine	065693 99	
Run Date:	99/11/18	
Date of Sample Prep:	99/11/18	
Batch Code:	**11193NKC**	**11223NOH**
Mercury - KCl	065693 99	065708 99
	065701 99	
	065702 99	
	065703 99	
	065704 99	
	065705 99	
	065706 99	
	065707 99	
Run Date:	99/11/19	99/11/22
Date of Sample Prep:	99/11/19	99/11/22
Batch Code:	**11191BMN**	**11223NOH**
Mercury - KMnO4	065693 99	065705 99
	065701 99	
	065702 99	
	065703 99	
	065704 99	
	065706 99	
	065707 99	
	065708 99	
Run Date:	99/11/19	99/11/22
Date of Sample Prep:	99/11/19	99/11/22
Batch Code:	**11191NPO**	
Mercury - H202	065693 99	
	065701 99	

	065702 99
	065703 99
	065704 99
	065705 99
	065706 99
	065707 99
	065708 99
Run Date:	99/11/19
Date of Sample Prep:	99/11/19

Batch Code:	**11221NFT**
Mercury - filter	065698 99
	065709 99
	065710 99
	065711 99
	065712 99
Run Date:	99/11/22
Date of Sample Prep:	99/11/22
Batch Code:	**11222NFB**
Mercury - filter - bulk	065697 99
	065713 99
	065714 99
	065715 99
	065716 99
Run Date:	99/11/22
Date of Sample Prep:	99/11/22
Batch Code:	**11181BHY**
Mercury - hydroxylamine	065693 99
Run Date:	99/11/18
Date of Sample Prep:	99/11/18
Batch Code:	**11193NKC**
Mercury - KCl	065693 99
	065709 99
	065710 99
	065711 99
	065712 99
	065713 99
	065714 99
	065715 99
	065716 99
Run Date:	99/11/19
Date of Sample Prep:	99/11/19
Batch Code:	**11192BMN**
Mercury - KMnO4	065693 99
	065709 99
	065710 99
	065711 99
	065712 99
	065713 99
	065714 99
	065715 99
	065716 99
Run Date:	99/11/19
Date of Sample Prep:	99/11/19
Batch Code:	**11191NPO**

Mercury - H202	065693 99
	065709 99
	065710 99
	065711 99
	065712 99
	065713 99
	065714 99
	065715 99
	065716 99
Run Date:	99/11/19
Date of Sample Prep:	99/11/19

Batch Code:	**11221NFT**		
Mercury - filter	065698 99		
	065701 99		
	065702 99		
	065703 99		
	065704 99		
	065709 99		
	065710 99		
	065711 99		
	065712 99		
Run Date:	99/11/22		
Date of Sample Prep:	99/11/22		
Batch Code:	**11222NFB**		
Mercury - filter - bulk	065697 99		
	065705 99		
	065706 99		
	065707 99		
	065708 99		
	065713 99		
	065714 99		
	065715 99		
	065716 99		
Run Date:	99/11/22		
Date of Sample Prep:	99/11/22		
Batch Code:	**11181BHY**		
Mercury - hydroxylamine	065693 99		
Run Date:	99/11/18		
Date of Sample Prep:	99/11/18		
Batch Code:	**11193NKC**	**11223NOH**	**11194NKC**
Mercury - KCl	065693 99	065708 99	065710 99
	065701 99		065711 99
	065702 99		065712 99
	065703 99		065713 99
	065704 99		065714 99
	065705 99		065715 99
	065706 99		065716 99
	065707 99		
	065709 99		
Run Date:	99/11/19	99/11/22	99/11/19
Date of Sample Prep:	99/11/19	99/11/22	99/11/19
Batch Code:	**11191BMN**	**11223NOH**	**11192BMN**
Mercury - KMnO4	065693 99	065705 99	065710 99
	065701 99		065711 99
	065702 99		065712 99
	065703 99		065713 99
	065704 99		065714 99

	065706 99		065715 99
	065707 99		065716 99
	065708 99		
	065709 99		
Run Date:	99/11/19	99/11/22	99/11/19
Date of Sample Prep:	99/11/19	99/11/22	99/11/19

Batch Code:	**11191NPO**	**11192NPO**
Mercury - H202	065693 99	065710 99
	065701 99	065711 99
	065702 99	065712 99
	065703 99	065713 99
	065704 99	065714 99
	065705 99	065715 99
	065706 99	065716 99
	065707 99	
	065708 99	
	065709 99	
Run Date:	99/11/19	99/11/19
Date of Sample Prep:	99/11/19	99/11/19

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Phone Number:	949-859-4466

LABORATORY INFORMATION

Contact:	Ron McLeod
Project:	AN991386
Date Received:	99/10/29
Date Reported:	99/12/16
Submission No.:	9K0064
Sample No.:	065717-065729

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COMMENTS:

Certified by: _____

PASC - Certificate of Analysis

	Client ID:		Method Blank	Blank Spike	Blank Spike	Unit 1 Coal-R1	Unit 1 Coal-R1	Unit 1 Coal-R1	Unit 1 Coal-R1	Unit 1 Coal-R2	Unit 1 Coal-R3	Unit 1 Ash-R1
	Lab No.:		065717 99	065717 99	065717 99	065718 99	065718 99	065718 99	065718 99	065719 99	065720 99	065724 99
	Date Sampled:		-	-	-	99/10/05	99/10/05	99/10/05	99/10/05	99/10/05	99/10/05	99/09/28
Component	**MDL**	**Units**			% Recoveries		Duplicate	M. Spike	MS % Rec.			
Total Chlorine (as Cl)	0.0005	(%)	-	-	-	0.040	-	-	-	0.020	0.020	0.0013
Mercury	0.04	mg/kg	<	1.0	100	<	<	1.1	110	<	<	<

			Unit 1	Unit 1
	Client ID:		Ash-R2	Ash-R3
	Lab No.:		065725 99	065726 99
	Date Sampled:		99/09/28	99/09/28
Component	**MDL**	**Units**		
Total Chlorine (as Cl)	0.0005	(%)	0.0026	0.0012
Mercury	0.04	mg/kg	<	<

Batch Code:	**1111LTA1**
Mercury	065717 99
	065718 99
	065719 99
	065720 99
	065724 99
	065725 99
	065726 99
Run Date:	99/11/12
Date of Sample Prep:	99/11/11

Batch Code:	**1111LTA1**
Mercury	065717 99
	065721 99
	065722 99
	065723 99
	065727 99
	065728 99
	065729 99
Run Date:	99/11/12
Date of Sample Prep:	99/11/11

FRONTIER GEOSCIENCES INC.
ENVIRONMENTAL RESEARCH & SPECIALTY ANALYTICAL LABORATORY
(206) 622-6960 • FAX: (206) 622-6870
E-MAIL: INFO@FRONTIER.WA.COM
414 PONTIUS NORTH • SEATTLE, WA 98109

Mark McDannel
Fossil Energy Research Corp.
23342C South Pointe
Laguna Hills, CA 92653

December 20, 1999

SUBJECT: RESULTS FOR RUSH COAL SAMPLES

Dear Mr. McDannel,

Attached please find results for your rush samples. There are no analytical issues associated with these results and all of the associated quality control results look good.

Please call or e-mail (jamesk@frontier.wa.com) me if you have any questions or concerns.

Sincerely,

James Keithly

CONFIDENTIAL DATA

Table 1: Results of Mercury Analysis - Fossil Energy Research Corp. Frontier Geosciences Inc

			Reagent and System Blank Corrected			
Sample ID	Lab Data Set	Total Hg ng Hg/gram	Matrix Duplicate ng Hg/gram	Matrix Duplicate RPD	Matrix Dup Average ng Hg/gram	As Received ppm Hg (ug Hg/gram)
Craig 1, Run 1, 9/28/99	THg81-991217	18.93 ng/g				0.019
Craig 1, Run 2, 9/28/99	THg81-991217	21.57 ng/g				0.022
Craig 1, Run 3, 9/28/99	THg81-991217	17.23 ng/g				0.017
Craig 3, Run 1, 10/4/99	THg81-991217	9.26 ng/g				0.009
Craig 3, Run 2, 10/4/99	THg81-991217	7.88 ng/g				0.008
Craig 3, Run 3, 10/4/99	THg81-991217	7.43 ng/g	6.46 ng/g	14.0%	6.94	0.007
					Ave	0.014 ug/g
					SD	0.006 ug/g
					RSD	45.5%

Estimated MDL - 991217	**0.0005 ug Hg/g**

Frontier Geosciences Inc
Quality Assurance Data Tables

QA Table 1: Data Set Matrix Duplicate Analysis

Lab Sample ID	Lab Data Set	Rep 1 ng Hg/gram	Rep 2 ng Hg/gram	Average Result ng Hg/gram	Matrix Duplicate RPD
Craig 3, Run 3, 10/4/99	991217	7.43 ng/g	6.46 ng/g	6.94	14.0%

QA Table 2: Data Set Matrix Spike Recovery (100ng Hg/sample Matrix Spike)

Lab Sample ID	Lab Data Set	Amt Spiked Per Gram ng Hg/gram	Spike Result ng Hg/gram	Amount Recovered ng Hg/gram	Matrix Spike Rec. %
Craig 3, Run 3, 10/4/99	991217	191.30	203.83	196.89	102.9%
Craig 3, Run 3, 10/4/99	991217	180.90	184.55	177.60	98.2%

Average Matrix Spike Recovery = 100.5%

QA Table 3: Standard Reference Material Recovery

IMPORTANT NOTE: SRM 1630a
Note the certified value for this SRM is being revised as a result of a recent round-robin study. Frontier was informed that the new certified value will be 85 ng/g. Therefore, we are altering the true value for this report.

Results: SRM 1630a Trace Mercury in Coal					
Lab Sample ID	Lab Data Set	Reference Value ng Hg/gram	Measured Value ng Hg/gram	Excepted Recovery Range (%)	Actual Recovery %
NIST 1630a	991217	85	99.5	75-125	117.0%

COMMERCIAL TESTING & ENGINEERING CO.

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SUITE B-200
DENVER, CO 80239
TEL: (303) 373-4772
FAX: (303) 373-4791

October 26, 1999

FOSSIL ENERGY RESEARCH
23342 C South Pointe
Laguna Hills CA 92653

Sample identification by
FOSSIL ENERGY RESEARCH CORP.

SAMPLE ID: CRAIG 1, TEST 1
REQUISITION NO: 99-6693-1463.3

Kind of sample COAL

Sample taken by FOSSIL ENERGY RESEARCH CORP.

Date sampled September 28, 1999

Date received October 21, 1999

Analysis report no. 72-416087

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	15.84	xxxxx
%Ash	6.75	8.02
Btu/lb	10370	12322
% Sulfur	0.44	0.52

MAF BTU/lb	13396		
lb SO_2/mm Btu	0.85	lb Sulfur/mm Btu	0.42
% Air Dry Loss	10.21	As Received Net Sample Wt.	555.00 g

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Denver Laboratory

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DENVER, CO 80239
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FAX: (303) 373-4791

October 26, 1999

FOSSIL ENERGY RESEARCH
23342 C South Pointe
Laguna Hills CA 92653

Sample identification by
FOSSIL ENERGY RESEARCH CORP.

SAMPLE ID: CRAIG 1, TEST 2
REQUISITION NO: 99-6693-1463.3

Kind of sample COAL

Sample taken by FOSSIL ENERGY RESEARCH CORP.

Date sampled September 28, 1999

Date received October 21, 1999

Analysis report no. 72-416088

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	14.81	xxxxx
%Ash	6.96	8.17
Btu/lb	10604	12448
% Sulfur	0.44	0.52

MAF BTU/lb	13555		
lb SO_2/mm Btu	0.83	lb Sulfur/mm Btu	0.41
% Air Dry Loss	10.68	As Received Net Sample Wt.	303.10 g

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Denver Laboratory

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FAX: (303) 373-4791

October 26, 1999

FOSSIL ENERGY RESEARCH
23342 C South Pointe
Laguna Hills CA 92653

Sample identification by
FOSSIL ENERGY RESEARCH CORP.

SAMPLE ID: CRAIG 1, TEST 3
REQUISITION NO: 99-6693-1463.3

Kind of sample COAL

Sample taken by FOSSIL ENERGY RESEARCH CORP.

Date sampled September 23, 1999

Date received October 21, 1999

Analysis report no. 72-416089

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	18.08	xxxxx
%Ash	5.22	6.37
Btu/lb	10200	12451
% Sulfur	0.48	0.58

MAF BTU/lb	13298		
lb SO_2/mm Btu	0.94	lb Sulfur/mm Btu	0.47
% Air Dry Loss	13.21	As Received Net Sample Wt.	401.30 g

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Denver Laboratory

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Appendix E. Audit Data Sheets

(no audits performed)

Appendix F. List of Participants

List of Participants		
Craig Unit 1 Hg Emissions Testing		
Name	*Position on Test Team*	*Affiliation*
Mark McDannel	Team Leader, Data Reduction	Fossil Energy Research Corp.
Arlene Bell	Project Chemist, Sample Recovery and Custody	Delta Air Quality Services
Dave Wonderly	Stack Sampling Leader	Delta Air Quality Services
Greg Walker	Stack Assistant	Delta Air Quality Services
Paul Anderson	Inlet Sampling Leader	Fossil Energy Research Corp.
Jerry Bovee	Inlet Assistant	Fossil Energy Research Corp.
Ron McLeod	Laboratory Analyses	Philip Analytical Services
Ed Lasnik	Tri State Program Manager	Tri State
John Mihalich	Unit Monitoring and Coal Sampling	Tri State

Appendix G. Additional Information

CEMS Data

ESP Data

Boiler Data

Scrubber Data

Fuel Flow and Load Data

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
28-Sep-99	8:24	11.4	0.306	0.344	12.4	66213	442.3
28-Sep-99	8:25	11.41	0.305	0.343	8.7	66350	443.3
28-Sep-99	8:26	11.41	0.306	0.342	9.2	66065	442.9
28-Sep-99	8:27	11.41	0.307	0.342	8.4	65363	442.5
28-Sep-99	8:28				9.4	66258	442.2
28-Sep-99	8:29				8.9	66241	442
28-Sep-99	8:30				8.8	65474	441.6
28-Sep-99	8:31				8.7	66044	443
28-Sep-99	8:32	11.04	0.303	0.316	9.6	64849	444.2
28-Sep-99	8:33	11.33	0.302	0.323	9.6	65306	443
28-Sep-99	8:34	11.45	0.301	0.327	8.4	65734	442.2
28-Sep-99	8:35	11.52	0.297	0.333	10	66768	442.3
28-Sep-99	8:36	11.55	0.295	0.336	8.9	65952	443
28-Sep-99	8:37	11.56	0.293	0.338	8.8	65761	444.1
28-Sep-99	8:38	11.58	0.292	0.34	8.2	66212	441.9
28-Sep-99	8:39	11.61	0.29	0.341	8.4	65939	442.5
28-Sep-99	8:40	11.6	0.289	0.34	8.7	66012	443.4
28-Sep-99	8:41	11.58	0.289	0.339	8.4	65888	443.7
28-Sep-99	8:42	11.57	0.289	0.339	8.6	65189	441.7
28-Sep-99	8:43	11.57	0.291	0.34	8	63959	443
28-Sep-99	8:44	11.58	0.291	0.34	8.5	64179	443.3
28-Sep-99	8:45	11.59	0.291	0.341	8.7	63994	442.6
28-Sep-99	8:46	11.55	0.292	0.339	8.7	64745	442.7
28-Sep-99	8:47	11.62	0.291	0.339	9.8	64073	442.8
28-Sep-99	8:48	11.59	0.292	0.339	8.8	64816	442.7
28-Sep-99	8:49	11.59	0.291	0.339	8.8	64954	442.5
28-Sep-99	8:50	11.59	0.292	0.339	9	65547	442.3
28-Sep-99	8:51	11.61	0.292	0.339	10	65663	442.5
28-Sep-99	8:52	11.6	0.292	0.338	8.8	65691	443.4
28-Sep-99	8:53	11.63	0.293	0.338	8.6	65630	443
28-Sep-99	8:54	11.63	0.293	0.338	8.4	65460	442.4
28-Sep-99	8:55	11.62	0.292	0.338	8.5	65074	442.6
28-Sep-99	8:56	11.59	0.292	0.338	8.3	65681	443
28-Sep-99	8:57	11.61	0.292	0.338	9.2	65380	442.5
28-Sep-99	8:58	11.61	0.292	0.338	8.9	65525	441.7
28-Sep-99	8:59	11.64	0.292	0.338	9.4	66231	442.9
28-Sep-99	9:00	11.63	0.293	0.338	9.8	65435	443.4
28-Sep-99	9:01	11.64	0.293	0.338	8.3	65564	442.4
28-Sep-99	9:02	11.62	0.294	0.338	8.1	65657	442.6
28-Sep-99	9:03	11.62	0.294	0.338	8.9	65765	443.9
28-Sep-99	9:04	11.66	0.293	0.338	9.4	65715	441.6
28-Sep-99	9:05	11.63	0.293	0.338	8	65211	442.6
28-Sep-99	9:06	11.62	0.293	0.338	8.3	66318	442.1
28-Sep-99	9:07	11.6	0.293	0.337	8.1	66084	443.8
28-Sep-99	9:08	11.66	0.292	0.337	8.2	66229	443
28-Sep-99	9:09	11.64	0.293	0.337	8.8	66605	443.3
28-Sep-99	9:10	11.64	0.293	0.338	8.6	65544	442.6
28-Sep-99	9:11	11.63	0.293	0.338	9.3	65146	442.4

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
28-Sep-99	9:12	11.62	0.292	0.338	9	66039	442
28-Sep-99	9:13	11.62	0.292	0.338	9.2	65918	442.4
28-Sep-99	9:14	11.64	0.291	0.338	8.5	66430	441.9
28-Sep-99	9:15	11.63	0.291	0.338	8.8	66476	442.6
28-Sep-99	9:16	11.64	0.29	0.338	8.3	66848	442.9
28-Sep-99	9:17	11.65	0.29	0.339	7.6	65203	443.3
28-Sep-99	9:18	11.61	0.291	0.338	7.7	65436	442.2
28-Sep-99	9:19	11.68	0.29	0.338	7.1	65156	443
28-Sep-99	9:20	11.68	0.29	0.338	7.1	65830	443.4
28-Sep-99	9:21	11.65	0.29	0.339	7.2	65225	442.7
28-Sep-99	9:22	11.67	0.289	0.339	7.6	64604	442.4
28-Sep-99	9:23	11.69	0.289	0.339	7.2	64859	443.6
28-Sep-99	9:24	11.67	0.289	0.339	7.4	65064	442.2
28-Sep-99	9:25	11.67	0.29	0.338	6.7	65118	441.9
28-Sep-99	9:26	11.64	0.29	0.338	7.7	65107	443.4
28-Sep-99	9:27	11.68	0.289	0.338	7.7	40955	442.9
28-Sep-99	9:28				7.3	40467	443.5
28-Sep-99	9:29				6.9	52870	442.6
28-Sep-99	9:30				7.7	62477	443.2
28-Sep-99	9:31				10	69514	442
28-Sep-99	9:32				8.5	65816	443.6
28-Sep-99	9:33	11.41	0.303	0.328	8.4	65961	441.8
28-Sep-99	9:34	11.5	0.306	0.332	7.5	66601	442.8
28-Sep-99	9:35	11.54	0.302	0.334	7.4	65491	442.4
28-Sep-99	9:36	11.55	0.297	0.335	7.8	65091	442.3
28-Sep-99	9:37	11.58	0.294	0.334	7.3	66871	444.9
28-Sep-99	9:38	11.6	0.293	0.332	7.6	66163	444
28-Sep-99	9:39	11.61	0.293	0.332	6.9	64352	443.5
28-Sep-99	9:40	11.58	0.292	0.333	7.2	63678	441
28-Sep-99	9:41	11.61	0.289	0.335	6.7	65469	441.8
28-Sep-99	9:42	11.54	0.286	0.335	7.3	65842	440.6
28-Sep-99	9:43	11.57	0.286	0.336	7.1	65091	441.9
28-Sep-99	9:44	11.56	0.287	0.337	7.4	65981	442.2
28-Sep-99	9:45	11.59	0.287	0.337	7.4	65303	443
28-Sep-99	9:46	11.58	0.288	0.337	7.1	65693	441.9
28-Sep-99	9:47	11.59	0.288	0.338	6.9	65833	442.9
28-Sep-99	9:48	11.59	0.287	0.338	7.1	65378	441.8
28-Sep-99	9:49	11.62	0.288	0.337	7.5	65918	442.3
28-Sep-99	9:50	11.59	0.288	0.338	7.3	66355	442.5
28-Sep-99	9:51	11.56	0.287	0.338	7.5	65879	442.7
28-Sep-99	9:52	11.6	0.287	0.338	7.9	65449	443.1
28-Sep-99	9:53	11.62	0.287	0.337	7.8	64934	441.8
28-Sep-99	9:54	11.57	0.287	0.337	8.1	65588	442.5
28-Sep-99	9:55	11.6	0.287	0.338	7.4	65286	442.8
28-Sep-99	9:56	11.6	0.287	0.337	7	65557	443.6
28-Sep-99	9:57	11.64	0.288	0.337	7.3	65650	441.3
28-Sep-99	9:58	11.6	0.288	0.337	7.6	66262	443.1
28-Sep-99	9:59	11.62	0.288	0.337	7.5	67103	443.8

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
28-Sep-99	10:00	11.61	0.288	0.336	7.2	66470	441.7
28-Sep-99	10:01	11.65	0.289	0.336	7	65757	441.6
28-Sep-99	10:02	11.6	0.289	0.336	7.1	66291	443.5
28-Sep-99	10:03	11.65	0.288	0.336	7.1	65669	442.1
28-Sep-99	10:04	11.64	0.288	0.335	7.1	65110	443.1
28-Sep-99	10:05	11.66	0.287	0.336	7.1	64694	442
28-Sep-99	10:06	11.65	0.287	0.336	7.2	64576	441.9
28-Sep-99	10:07	11.64	0.288	0.336	8.1	65617	443.9
28-Sep-99	10:08	11.67	0.288	0.336	7.7	65644	442.4
28-Sep-99	10:09	11.67	0.29	0.336	7.5	65633	441.7
28-Sep-99	10:10	11.64	0.29	0.336	7.2	65337	442
28-Sep-99	10:11	11.65	0.29	0.335	7.7	65480	443.2
28-Sep-99	10:12	11.65	0.29	0.335	7.7	65492	443.3
28-Sep-99	10:13	11.63	0.291	0.335	7.2	66089	443
28-Sep-99	10:14	11.62	0.291	0.334	7.5	66053	441.9
28-Sep-99	10:15	11.67	0.291	0.334	7.3	65689	442.3
28-Sep-99	10:16	11.64	0.291	0.334	8.1	65939	443.1
28-Sep-99	10:17	11.66	0.291	0.334	7.2	65421	443
28-Sep-99	10:18	11.63	0.291	0.334	7.1	64987	441.9
28-Sep-99	10:19	11.66	0.291	0.334	7	65925	443.2
28-Sep-99	10:20	11.64	0.291	0.334	7.5	65549	443
28-Sep-99	10:21	11.62	0.291	0.334	7.6	64640	443.9
28-Sep-99	10:22	11.62	0.291	0.333	7.2	65250	442.4
28-Sep-99	10:23	11.62	0.291	0.333	7	63741	441.5
28-Sep-99	10:24	11.63	0.29	0.332	7.8	65723	441.8
28-Sep-99	10:25	11.67	0.289	0.331	8.2	65170	443.5
28-Sep-99	10:26	11.65	0.289	0.331	8.3	65966	442.8
28-Sep-99	10:27	11.63	0.291	0.331	8	65736	441.3
28-Sep-99	10:28				8.3	66011	442.7
28-Sep-99	10:29				8.2	66263	443
28-Sep-99	10:30				7.9	64803	443.7
28-Sep-99	10:31				7.9	64537	442.6
28-Sep-99	10:32				7.9	64465	441.7
28-Sep-99	10:33				7.8	64018	442.6
28-Sep-99	10:34	11.51	0.297	0.317	8.4	65303	443.1
28-Sep-99	10:35	11.56	0.299	0.321	8.8	66109	443.3
28-Sep-99	10:36	11.58	0.3	0.331	8.1	66458	442.9
28-Sep-99	10:37	11.57	0.301	0.333	8.2	67160	441.5
28-Sep-99	10:38	11.58	0.299	0.336	8.5	67350	443
28-Sep-99	10:39	11.53	0.298	0.339	8.7	66618	442.6
28-Sep-99	10:40	11.5	0.298	0.343	7.8	67113	443.8
28-Sep-99	10:41	11.48	0.298	0.346	8	69059	442.3
28-Sep-99	10:42	11.46	0.298	0.347	7.9	69322	442.4
28-Sep-99	10:43	11.44	0.3	0.348	8.2	68197	442.4
28-Sep-99	10:44	11.46	0.3	0.35	7.7	67803	443.4
28-Sep-99	10:45	11.41	0.301	0.351	7.8	68410	442.4
28-Sep-99	10:46	11.44	0.301	0.352	7.6	67589	442.1
28-Sep-99	10:47	11.45	0.301	0.352	8.3	67982	442.3

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
28-Sep-99	10:48	11.43	0.3	0.352	8.3	67667	442.5
28-Sep-99	10:49	11.42	0.3	0.351	7.8	67552	443.1
28-Sep-99	10:50	11.45	0.3	0.352	7.8	67034	443
28-Sep-99	10:51	11.45	0.301	0.352	7.5	67584	441.9
28-Sep-99	10:52	11.42	0.301	0.352	8	68033	444.5
28-Sep-99	10:53	11.42	0.302	0.352	7.7	67408	442.9
28-Sep-99	10:54	11.42	0.302	0.351	7.2	67012	442.2
28-Sep-99	10:55	11.4	0.302	0.351	7.1	66859	443.1
28-Sep-99	10:56	11.44	0.301	0.351	7.7	67164	443.1
28-Sep-99	10:57	11.41	0.301	0.351	7.9	67711	443.3
28-Sep-99	10:58	11.42	0.301	0.351	7.3	66781	442.5
28-Sep-99	10:59	11.42	0.301	0.351	7.7	67186	443.2
28-Sep-99	11:00	11.44	0.302	0.351	7.4	67576	442.4
28-Sep-99	11:01	11.42	0.302	0.351	7.5	67048	444.2
28-Sep-99	11:02	11.4	0.303	0.351	7.2	67178	443
28-Sep-99	11:03	11.4	0.303	0.35	7	66627	442.6
28-Sep-99	11:04	11.43	0.302	0.35	7.1	67222	443.1
28-Sep-99	11:05	11.4	0.302	0.349	7.6	67558	442.5
28-Sep-99	11:06	11.43	0.303	0.35	7.6	66275	442.6
28-Sep-99	11:07	11.42	0.303	0.35	6.9	66522	443.6
28-Sep-99	11:08	11.46	0.303	0.35	6.9	66718	443
28-Sep-99	11:09	11.43	0.304	0.349	7.1	66032	442.5
28-Sep-99	11:10	11.43	0.304	0.349	7.4	66810	442.7
28-Sep-99	11:11	11.43	0.304	0.349	7.4	67590	443.1
28-Sep-99	11:12	11.45	0.304	0.349	7.3	66776	442.5
28-Sep-99	11:13	11.43	0.303	0.348	7	66340	443.7
28-Sep-99	11:14	11.45	0.303	0.347	7.4	66670	442.6
28-Sep-99	11:15	11.4	0.304	0.347	7.6	67670	443.4
28-Sep-99	11:16	11.46	0.304	0.347	7	67362	443
28-Sep-99	11:17	11.45	0.304	0.347	6.7	67529	441.6
28-Sep-99	11:18	11.45	0.304	0.347	7	67715	442.8
28-Sep-99	11:19	11.45	0.304	0.346	7.3	66497	443.1
28-Sep-99	11:20	11.49	0.304	0.346	7	66555	442.9
28-Sep-99	11:21	11.46	0.304	0.346	7	66819	443.7
28-Sep-99	11:22	11.5	0.304	0.346	7.1	67151	442.1
28-Sep-99	11:23	11.48	0.304	0.345	6.9	65649	442.1
28-Sep-99	11:24	11.52	0.304	0.346	7.2	65450	443.5
28-Sep-99	11:25	11.5	0.304	0.346	6.9	65450	443.1
28-Sep-99	11:26	11.51	0.304	0.346	6.9	49952	442.9
28-Sep-99	11:27	11.51	0.304	0.346	6.9	40935	443.3
28-Sep-99	11:28				7.6	40935	443
28-Sep-99	11:29				7.5	73088	442.8
28-Sep-99	11:30				7.3	86740	442.6
28-Sep-99	11:31				6.8	71439	442.7
28-Sep-99	11:32				7.3	65665	443.5
28-Sep-99	11:33	11.29	0.303	0.327	7.1	66002	442.2
28-Sep-99	11:34	11.46	0.307	0.334	6.9	65280	441.6
28-Sep-99	11:35	11.5	0.305	0.337	7	65928	442.7

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
28-Sep-99	11:36	11.58	0.306	0.338	7	66851	442.8
28-Sep-99	11:37	11.57	0.305	0.339	7.4	66114	443
28-Sep-99	11:38	11.58	0.306	0.341	7.3	66797	442.4
28-Sep-99	11:39	11.65	0.306	0.341	7.4	66108	441.8
28-Sep-99	11:40	11.61	0.305	0.341	7.3	65611	443.8
28-Sep-99	11:41	11.55	0.303	0.341	7.3	66276	442.2
28-Sep-99	11:42	11.59	0.304	0.341	7.2	65543	443.3
28-Sep-99	11:43	11.56	0.303	0.342	6.9	65241	442.6
28-Sep-99	11:44	11.57	0.304	0.342	6.6	65620	442.5
28-Sep-99	11:45	11.59	0.304	0.342	6.8	65780	442.6
28-Sep-99	11:46	11.59	0.303	0.342	7.2	66861	443.5
28-Sep-99	11:47	11.59	0.303	0.342	7	66087	442.4
28-Sep-99	11:48	11.63	0.302	0.342	6.9	65708	443.1
Test 1 Average		***11.55***	***0.296***	***0.340***	***7.83***	***65528***	***443***
28-Sep-99	12:30				6.9	65488	442.3
28-Sep-99	12:31				7	65752	443.4
28-Sep-99	12:32				7.3	66501	443
28-Sep-99	12:33	11.34	0.295	0.326	7.1	65114	442.9
28-Sep-99	12:34	11.55	0.299	0.324	7.3	66277	443
28-Sep-99	12:35	11.57	0.299	0.324	7.9	67220	443.2
28-Sep-99	12:36	11.65	0.299	0.323	7.4	65592	442.3
28-Sep-99	12:37	11.59	0.299	0.326	6.9	66667	443.5
28-Sep-99	12:38	11.6	0.297	0.332	6.6	65891	443.5
28-Sep-99	12:39	11.58	0.294	0.332	7	66546	441.7
28-Sep-99	12:40	11.6	0.292	0.333	7.1	65845	441.5
28-Sep-99	12:41	11.55	0.291	0.332	6.9	65840	442.7
28-Sep-99	12:42	11.6	0.292	0.331	7.2	66037	442.3
28-Sep-99	12:43	11.62	0.293	0.331	7.2	67023	443.9
28-Sep-99	12:44	11.64	0.294	0.33	6.9	66679	443.1
28-Sep-99	12:45	11.58	0.295	0.329	7	65777	442.1
28-Sep-99	12:46	11.6	0.295	0.329	7	66086	442.5
28-Sep-99	12:47	11.63	0.295	0.329	7	65558	443
28-Sep-99	12:48	11.66	0.296	0.328	7.1	65874	443.2
28-Sep-99	12:49	11.62	0.297	0.326	7.3	64759	441.6
28-Sep-99	12:50	11.66	0.298	0.327	7.5	66213	442.7
28-Sep-99	12:51	11.64	0.298	0.327	7.9	65699	443.2
28-Sep-99	12:52	11.63	0.299	0.327	7.6	65848	443.5
28-Sep-99	12:53	11.62	0.298	0.328	7.6	65118	442.8
28-Sep-99	12:54	11.63	0.298	0.328	7.3	65179	441.9
28-Sep-99	12:55	11.66	0.298	0.328	7.2	65422	442.8
28-Sep-99	12:56	11.66	0.297	0.328	7	65154	443.2
28-Sep-99	12:57	11.61	0.297	0.328	6.8	64497	442.3
28-Sep-99	12:58	11.61	0.297	0.328	6.9	65597	441
28-Sep-99	12:59	11.64	0.296	0.328	7.2	67021	443.2
28-Sep-99	13:00	11.64	0.296	0.328	8.5	66756	443.7
28-Sep-99	13:01	11.61	0.298	0.327	8	65879	442.6
28-Sep-99	13:02	11.65	0.299	0.327	7.5	65266	442.5

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
28-Sep-99	13:03	11.58	0.301	0.327	7.8	65643	441.9
28-Sep-99	13:04	11.65	0.302	0.326	7.5	66812	441.9
28-Sep-99	13:05	11.56	0.302	0.327	7.5	66342	442.3
28-Sep-99	13:06	11.65	0.302	0.326	7.1	65326	443.6
28-Sep-99	13:07	11.69	0.301	0.326	7.3	65877	442.5
28-Sep-99	13:08	11.65	0.3	0.326	6.9	66130	442.7
28-Sep-99	13:09	11.63	0.3	0.326	7.2	65959	442.1
28-Sep-99	13:10	11.63	0.3	0.326	7.4	66473	443.6
28-Sep-99	13:11	11.57	0.299	0.326	7.3	65628	442.9
28-Sep-99	13:12	11.64	0.3	0.326	7.5	66132	442.4
28-Sep-99	13:13	11.63	0.3	0.326	7.7	66111	442.1
28-Sep-99	13:14	11.65	0.299	0.327	7.5	65798	442.1
28-Sep-99	13:15	11.6	0.299	0.327	7.3	66437	443.4
28-Sep-99	13:16	11.64	0.299	0.326	7.8	66715	442.7
28-Sep-99	13:17	11.62	0.298	0.326	7.3	65997	442.4
28-Sep-99	13:18	11.63	0.299	0.327	7.6	67330	443.8
28-Sep-99	13:19	11.58	0.299	0.327	7.4	66962	441.8
28-Sep-99	13:20	11.65	0.3	0.328	7.1	67202	442.1
28-Sep-99	13:21	11.63	0.299	0.328	7.4	66343	443
28-Sep-99	13:22	11.65	0.299	0.329	7.5	66479	442
28-Sep-99	13:23	11.63	0.299	0.328	7.4	67191	443.2
28-Sep-99	13:24	11.66	0.3	0.329	7.3	67216	442.3
28-Sep-99	13:25	11.63	0.299	0.329	7.4	67205	441.8
28-Sep-99	13:26	11.65	0.3	0.329	7	67216	443
28-Sep-99	13:27	11.67	0.3	0.329	7.2	88943	443
28-Sep-99	13:28	11.49	0.3	0.329	7.1	69945	441.8
28-Sep-99	13:29				7.4	88866	442.5
28-Sep-99	13:30				7.6	88885	442.4
28-Sep-99	13:31				7.2	67294	444.3
28-Sep-99	13:32				7.4	65469	442.8
28-Sep-99	13:33				7.2	64995	443.1
28-Sep-99	13:34	11.48	0.297	0.309	7.5	65039	443.2
28-Sep-99	13:35	11.53	0.297	0.313	7.2	64528	442.6
28-Sep-99	13:36	11.63	0.297	0.316	7	65271	443.6
28-Sep-99	13:37	11.6	0.295	0.319	7	64752	443.1
28-Sep-99	13:38	11.63	0.293	0.321	7	64779	442.3
28-Sep-99	13:39	11.61	0.291	0.32	7.6	65667	442.3
28-Sep-99	13:40	11.66	0.29	0.321	7.7	65622	442.3
28-Sep-99	13:41	11.65	0.291	0.321	7.4	65756	443
28-Sep-99	13:42	11.67	0.291	0.325	7.4	66134	441.7
28-Sep-99	13:43	11.62	0.291	0.325	7.3	65571	442.9
28-Sep-99	13:44	11.65	0.29	0.326	7.5	66072	443.6
28-Sep-99	13:45	11.6	0.291	0.325	7.6	65480	442.5
28-Sep-99	13:46	11.67	0.291	0.326	7.7	65350	442.8
28-Sep-99	13:47	11.64	0.29	0.326	7.5	65390	442.5
28-Sep-99	13:48	11.69	0.29	0.327	7.5	66601	443.8
28-Sep-99	13:49	11.65	0.289	0.328	7.2	65358	442.4
28-Sep-99	13:50	11.68	0.29	0.328	7.3	66005	441.8

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
28-Sep-99	13:51	11.65	0.29	0.328	7.6	66180	442.4
28-Sep-99	13:52	11.7	0.291	0.329	7.8	66065	443.3
28-Sep-99	13:53	11.65	0.291	0.328	7.3	65315	443.6
28-Sep-99	13:54	11.68	0.291	0.329	7.3	65481	443.3
28-Sep-99	13:55	11.65	0.291	0.329	7.2	65381	443.3
28-Sep-99	13:56	11.7	0.291	0.328	7.2	65883	442.5
28-Sep-99	13:57	11.65	0.291	0.328	7.4	66195	441.9
28-Sep-99	13:58	11.68	0.291	0.327	7.3	66653	442.4
28-Sep-99	13:59	11.69	0.29	0.327	7.1	66398	442.7
28-Sep-99	14:00	11.72	0.29	0.327	7.4	67424	442.8
28-Sep-99	14:01	11.68	0.29	0.327	7.6	66914	442.3
28-Sep-99	14:02	11.69	0.291	0.328	7.1	66353	442.9
28-Sep-99	14:03	11.68	0.291	0.328	7.2	64962	442.9
28-Sep-99	14:04	11.72	0.291	0.329	7.2	65363	443.3
28-Sep-99	14:05	11.71	0.29	0.328	7.1	65090	442.9
28-Sep-99	14:06	11.72	0.289	0.329	6.8	65025	443.6
28-Sep-99	14:07	11.7	0.289	0.328	7	64778	442.8
28-Sep-99	14:08	11.67	0.289	0.328	7	65468	442.2
28-Sep-99	14:09	11.7	0.29	0.329	7.1	66648	441.8
28-Sep-99	14:10	11.68	0.29	0.328	7.3	66283	443.4
28-Sep-99	14:11	11.7	0.29	0.329	7.6	65546	443.1
28-Sep-99	14:12	11.72	0.29	0.329	7.2	65513	443.6
28-Sep-99	14:13	11.7	0.291	0.328	6.9	65362	441.5
28-Sep-99	14:14	11.7	0.291	0.329	7.1	65772	442.8
28-Sep-99	14:15	11.67	0.291	0.329	7.2	66016	443.3
28-Sep-99	14:16	11.68	0.291	0.329	7.3	65707	443.5
28-Sep-99	14:17	11.68	0.292	0.329	6.9	66286	441.6
28-Sep-99	14:18	11.7	0.292	0.329	7.1	65937	443.8
28-Sep-99	14:19	11.67	0.292	0.329	7.4	66906	442.2
28-Sep-99	14:20	11.71	0.292	0.329	6.9	65250	441.9
28-Sep-99	14:21	11.68	0.292	0.33	7	65779	442.9
28-Sep-99	14:22	11.68	0.293	0.33	7	65671	443.4
28-Sep-99	14:23	11.65	0.292	0.33	7.3	65223	442.8
28-Sep-99	14:24	11.68	0.291	0.33	7.3	65527	444
28-Sep-99	14:25	11.67	0.291	0.33	6.9	65598	442
28-Sep-99	14:26	11.67	0.291	0.329	6.8	65268	442.1
28-Sep-99	14:27	11.67	0.291	0.329	7.1	66315	443.8
28-Sep-99	14:28				7.4	66010	442.3
28-Sep-99	14:29				6.7	65367	442.1
28-Sep-99	14:30				7.1	66340	442.8
28-Sep-99	14:31				7.2	66326	442.2
28-Sep-99	14:32				7.3	66701	443.4
28-Sep-99	14:33				7.4	66459	443.4
28-Sep-99	14:34	11.57	0.294	0.308	7.2	66379	442.7
28-Sep-99	14:35	11.66	0.295	0.317	7	66545	443.2
28-Sep-99	14:36	11.62	0.293	0.321	7.1	67595	442.6
28-Sep-99	14:37	11.65	0.292	0.327	7	65927	442
28-Sep-99	14:38	11.67	0.291	0.329	7.1	66521	442.9

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
28-Sep-99	14:39	11.56	0.288	0.33	6.9	65321	443.4
28-Sep-99	14:40	11.63	0.288	0.331	7	65150	442.4
28-Sep-99	14:41	11.63	0.287	0.335	6.9	64941	444.1
28-Sep-99	14:42	11.61	0.287	0.335	7	64897	442.5
28-Sep-99	14:43	11.6	0.288	0.334	6.8	65428	441.4
28-Sep-99	14:44	11.62	0.29	0.335	6.7	65438	442.7
28-Sep-99	14:45	11.6	0.289	0.334	6.8	66420	443.6
28-Sep-99	14:46	11.62	0.289	0.334	6.9	64928	444.3
28-Sep-99	14:47	11.64	0.29	0.334	6.9	65453	443.5
28-Sep-99	14:48	11.62	0.29	0.333	7	66327	442.8
28-Sep-99	14:49	11.62	0.291	0.332	6.8	64905	442.5
28-Sep-99	14:50	11.63	0.29	0.331	7.2	64868	443.4
28-Sep-99	14:51	11.66	0.29	0.331	7.5	65191	443.8
28-Sep-99	14:52	11.66	0.29	0.33	7.2	65329	442.8
28-Sep-99	14:53	11.69	0.291	0.33	7.2	65615	441.9
28-Sep-99	14:54	11.68	0.291	0.33	7	65909	442.9
28-Sep-99	14:55	11.65	0.291	0.329	7.1	66267	443.2
28-Sep-99	14:56	11.7	0.291	0.329	6.7	65179	443.6
28-Sep-99	14:57	11.69	0.29	0.329	8.3	65472	443.5
28-Sep-99	14:58	11.67	0.29	0.328	9.4	65294	442.9
28-Sep-99	14:59	11.71	0.29	0.328	8.7	65739	442.6
28-Sep-99	15:00	11.7	0.29	0.327	8.6	66063	443.5
28-Sep-99	15:01	11.72	0.29	0.327	7.6	64976	442.6
28-Sep-99	15:02	11.69	0.29	0.326	7.8	65446	441.7
28-Sep-99	15:03	11.7	0.29	0.327	8	65608	442.5
28-Sep-99	15:04	11.69	0.29	0.327	9.2	65865	442.7
28-Sep-99	15:05	11.76	0.291	0.326	9.3	65760	442.8
28-Sep-99	15:06	11.68	0.291	0.326	9.7	65456	442.9
28-Sep-99	15:07	11.7	0.291	0.326	9.5	65649	441.6
28-Sep-99	15:08	11.66	0.291	0.326	9.2	65067	442.7
28-Sep-99	15:09	11.74	0.291	0.325	8.9	65963	442.8
28-Sep-99	15:10	11.72	0.291	0.325	8.1	65974	442.9
28-Sep-99	15:11	11.71	0.29	0.324	8	65547	443.3
28-Sep-99	15:12	11.73	0.29	0.324	7.5	65884	443.4
Test 2 Average		***11.65***	***0.294***	***0.327***	***7.37***	***66316***	***443***

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
29-Sep-99	8:20	11.25	0.264	0.299	10	66440	442.2
29-Sep-99	8:21	11.25	0.264	0.299	13	67144	442.4
29-Sep-99	8:22	11.26	0.264	0.299	12.8	66193	442.2
29-Sep-99	8:23	11.26	0.267	0.298	13.5	66773	442.2
29-Sep-99	8:24	11.28	0.271	0.298	11.6	66252	441.7
29-Sep-99	8:25	11.28	0.272	0.299	10.7	65617	441
29-Sep-99	8:26	11.29	0.269	0.298	10.3	65169	441.6
29-Sep-99	8:27	11.27	0.266	0.298	13.5	66363	441.7
29-Sep-99	8:28	11.3	0.264	0.298	15.1	66091	441.9
29-Sep-99	8:29				12.2	65855	441.8
29-Sep-99	8:30				11.5	65551	442.1
29-Sep-99	8:31				10.7	65187	441.1
29-Sep-99	8:32				10.9	64871	441.3
29-Sep-99	8:33				13.2	66371	440.9
29-Sep-99	8:34				14.1	66346	441.3
29-Sep-99	8:35	11.41	0.25	0.276	15.1	67533	443
29-Sep-99	8:36	11.4	0.248	0.28	13.5	67168	441.7
29-Sep-99	8:37	11.43	0.246	0.286	13.7	65997	442.7
29-Sep-99	8:38	11.44	0.244	0.288	12.6	66101	441.8
29-Sep-99	8:39	11.41	0.243	0.288	14.2	65303	441.8
29-Sep-99	8:40	11.43	0.243	0.288	13.9	65663	441.5
29-Sep-99	8:41	11.44	0.241	0.289	13	66062	441.9
29-Sep-99	8:42	11.42	0.24	0.291	13.3	64577	440.8
29-Sep-99	8:43	11.45	0.239	0.291	11.9	64127	441.7
29-Sep-99	8:44	11.44	0.237	0.289	11.3	65335	442.5
29-Sep-99	8:45	11.41	0.235	0.29	11.9	65539	442.6
29-Sep-99	8:46	11.44	0.234	0.29	12.5	65771	441.8
29-Sep-99	8:47	11.45	0.234	0.29	11.6	65585	440.6
29-Sep-99	8:48	11.41	0.234	0.29	11.2	65199	441.2
29-Sep-99	8:49	11.44	0.234	0.29	10.9	65794	442
29-Sep-99	8:50	11.43	0.234	0.29	11.1	65457	440.8
29-Sep-99	8:51	11.42	0.234	0.29	12.8	66242	442.2
29-Sep-99	8:52	11.42	0.233	0.291	11.5	65665	441.7
29-Sep-99	8:53	11.44	0.234	0.291	11	66614	442.4
29-Sep-99	8:54	11.46	0.233	0.291	11.5	66146	442
29-Sep-99	8:55	11.41	0.233	0.291	11.5	65360	442.2
29-Sep-99	8:56	11.47	0.233	0.291	10.9	65191	440.5
29-Sep-99	8:57	11.4	0.232	0.291	11.7	65898	441
29-Sep-99	8:58	11.45	0.231	0.29	11.3	65776	442
29-Sep-99	8:59	11.44	0.231	0.29	11.7	65602	442.5
29-Sep-99	9:00	11.43	0.232	0.29	12.3	66504	441.9
29-Sep-99	9:01	11.45	0.232	0.29	12	65911	441.1
29-Sep-99	9:02	11.44	0.232	0.29	11.7	65554	440.6
29-Sep-99	9:03	11.41	0.232	0.29	12	65556	441
29-Sep-99	9:04	11.43	0.232	0.29	12.8	65755	441.1
29-Sep-99	9:05	11.42	0.231	0.29	11.8	66443	441.3
29-Sep-99	9:06	11.46	0.231	0.289	12	67357	443.1
29-Sep-99	9:07	11.45	0.23	0.289	11.2	66835	441.7

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
29-Sep-99	9:08	11.48	0.231	0.29	11.1	66834	441.3
29-Sep-99	9:09	11.46	0.231	0.29	12.1	66692	441.7
29-Sep-99	9:10	11.46	0.231	0.29	11.7	66733	442.2
29-Sep-99	9:11	11.46	0.231	0.29	11.3	65535	441.3
29-Sep-99	9:12	11.49	0.231	0.29	10.9	65733	441.2
29-Sep-99	9:13	11.48	0.229	0.29	11.5	65818	442.1
29-Sep-99	9:14	11.53	0.229	0.291	11.7	65889	442
29-Sep-99	9:15	11.48	0.23	0.291	11.8	64807	441.2
29-Sep-99	9:16	11.49	0.23	0.291	11.9	65193	440.6
29-Sep-99	9:17	11.49	0.229	0.291	12.5	65665	441.5
29-Sep-99	9:18	11.51	0.229	0.291	13.1	65883	442.4
29-Sep-99	9:19	11.46	0.23	0.291	11.4	65997	441.6
29-Sep-99	9:20	11.5	0.23	0.291	11.5	66152	442.3
29-Sep-99	9:21	11.45	0.231	0.291	11.8	65783	442.1
29-Sep-99	9:22	11.49	0.232	0.291	12.1	66414	442.4
29-Sep-99	9:23	11.45	0.233	0.291	11.6	66436	441.4
29-Sep-99	9:24	11.48	0.234	0.291	10.9	66447	440.5
29-Sep-99	9:25	11.45	0.233	0.291	11.1	85690	442.4
29-Sep-99	9:26	11.49	0.233	0.291	12.2	85765	442.7
29-Sep-99	9:27	11.43	0.234	0.291	12.5	85877	441.7
29-Sep-99	9:28	11.42	0.234	0.291	11.8	85839	441.9
29-Sep-99	9:29				11.7	81815	441.8
29-Sep-99	9:30				11.5	65977	441.6
29-Sep-99	9:31				11.9	64814	441.8
29-Sep-99	9:32				10.8	65174	440.7
29-Sep-99	9:33				11.2	65515	442.1
29-Sep-99	9:34				11.3	65719	442.3
29-Sep-99	9:35	11.41	0.238	0.277	11	65881	441.4
29-Sep-99	9:36	11.46	0.237	0.283	11.7	66435	441.1
29-Sep-99	9:37	11.45	0.234	0.289	10.6	65177	440.7
29-Sep-99	9:38	11.47	0.233	0.291	10.4	65720	441.1
29-Sep-99	9:39	11.46	0.23	0.292	10.9	65804	441.8
29-Sep-99	9:40	11.45	0.23	0.292	11.2	66062	443.6
29-Sep-99	9:41	11.44	0.231	0.292	10.7	66571	441.9
29-Sep-99	9:42	11.47	0.231	0.293	10.6	65980	440.7
29-Sep-99	9:43	11.43	0.231	0.294	10.6	66920	441.4
29-Sep-99	9:44	11.45	0.232	0.294	10.8	66603	441.9
29-Sep-99	9:45	11.48	0.232	0.294	10.8	66100	441.5
29-Sep-99	9:46	11.49	0.231	0.295	10.5	66006	442.3
29-Sep-99	9:47	11.44	0.231	0.296	10.6	66539	441.7
29-Sep-99	9:48	11.46	0.232	0.296	10.3	66406	442.1
29-Sep-99	9:49	11.46	0.233	0.297	11.2	65648	442.7
29-Sep-99	9:50	11.46	0.234	0.297	10.3	64776	440.8
29-Sep-99	9:51	11.43	0.235	0.298	10.4	65245	442.2
29-Sep-99	9:52	11.46	0.235	0.298	10.5	65522	441.9
29-Sep-99	9:53	11.42	0.235	0.298	10.3	65493	442.5
29-Sep-99	9:54	11.43	0.236	0.298	11.9	66092	441
29-Sep-99	9:55	11.43	0.237	0.298	10.6	66061	441

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
29-Sep-99	9:56	11.42	0.237	0.299	10.1	65378	440.6
29-Sep-99	9:57	11.43	0.238	0.3	10.3	67112	441
29-Sep-99	9:58	11.44	0.238	0.3	10.9	65880	442.6
29-Sep-99	9:59	11.4	0.238	0.301	10.3	65878	442.8
29-Sep-99	10:00	11.44	0.24	0.301	10.3	66366	442.5
29-Sep-99	10:01	11.37	0.241	0.301	9.8	65537	441.7
29-Sep-99	10:02	11.4	0.241	0.302	10.3	67018	441.3
29-Sep-99	10:03	11.4	0.24	0.303	10.6	65748	441.4
29-Sep-99	10:04	11.41	0.24	0.303	10.5	66199	442.6
29-Sep-99	10:05	11.39	0.24	0.303	9.7	66506	441.9
29-Sep-99	10:06	11.39	0.241	0.303	9.9	67227	441.6
29-Sep-99	10:07	11.4	0.241	0.304	10.2	66917	441.8
29-Sep-99	10:08	11.41	0.24	0.304	9.8	65598	442.7
29-Sep-99	10:09	11.39	0.241	0.304	10.2	66300	442.1
29-Sep-99	10:10	11.36	0.241	0.306	9.7	66417	441.4
29-Sep-99	10:11	11.38	0.241	0.306	9.9	66171	442.2
29-Sep-99	10:12	11.41	0.24	0.306	10.3	66371	442.6
29-Sep-99	10:13	11.37	0.24	0.306	9.7	66005	441.3
29-Sep-99	10:14	11.4	0.239	0.306	10	67054	441.4
29-Sep-99	10:15	11.37	0.239	0.306	10.8	66828	442.4
29-Sep-99	10:16	11.42	0.238	0.306	11.1	66409	442.4
29-Sep-99	10:17	11.38	0.238	0.306	10.2	66353	441.5
29-Sep-99	10:18	11.4	0.239	0.306	10.3	67070	441.9
29-Sep-99	10:19	11.37	0.238	0.306	9.9	66974	442.4
29-Sep-99	10:20	11.4	0.237	0.306	10.3	66779	442.1
29-Sep-99	10:21	11.4	0.236	0.307	10.4	67242	441.5
29-Sep-99	10:22	11.41	0.235	0.307	10.1	67053	441.1
29-Sep-99	10:23	11.39	0.235	0.307	10	67055	442.2
29-Sep-99	10:24	11.41	0.236	0.308	10	66970	441.6
29-Sep-99	10:25	11.39	0.237	0.308	9.9	67184	442.2
29-Sep-99	10:26	11.41	0.237	0.308	9.7	66431	441.6
29-Sep-99	10:27	11.39	0.237	0.308	10.1	65498	440.4
29-Sep-99	10:28	11.41	0.237	0.308	10	65439	441.9
29-Sep-99	10:29				10.2	65804	441.7
29-Sep-99	10:30				10.7	65756	441.5
29-Sep-99	10:31				9.7	66266	442.1
29-Sep-99	10:32				9.7	65897	442
29-Sep-99	10:33				9.8	65713	441.6
29-Sep-99	10:34				9.9	65968	440.9
29-Sep-99	10:35	11.39	0.24	0.29	9.9	65938	442.8
29-Sep-99	10:36	11.5	0.239	0.295	9.9	66023	441.8
29-Sep-99	10:37	11.51	0.238	0.3	9.7	65540	441.6
29-Sep-99	10:38	11.53	0.237	0.307	10.1	65794	441.8
29-Sep-99	10:39	11.52	0.235	0.308	10.3	65984	440.9
29-Sep-99	10:40	11.48	0.232	0.309	10.1	66329	441.6
29-Sep-99	10:41	11.44	0.231	0.31	9.8	66253	442.8
29-Sep-99	10:42	11.48	0.233	0.309	9.8	66080	441.1
29-Sep-99	10:43	11.41	0.233	0.309	9.7	66201	440.6

Craig Unit 1 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
29-Sep-99	10:44	11.47	0.234	0.308	9.8	66478	442.9
29-Sep-99	10:45	11.41	0.235	0.309	11	65822	442.8
29-Sep-99	10:46	11.44	0.236	0.309	9.8	60695	441.1
29-Sep-99	10:47	11.4	0.237	0.309	9.3	63939	442.2
29-Sep-99	10:48	11.41	0.238	0.309	10	66406	441.8
29-Sep-99	10:49	11.38	0.237	0.309	9.3	65783	440.7
29-Sep-99	10:50	11.46	0.238	0.309	9.4	65970	441.3
29-Sep-99	10:51	11.38	0.237	0.309	9.5	66159	442.3
29-Sep-99	10:52	11.42	0.237	0.309	10	66455	441.6
29-Sep-99	10:53	11.4	0.236	0.309	9.4	67186	441.9
29-Sep-99	10:54	11.38	0.236	0.309	10	66056	442.9
29-Sep-99	10:55	11.38	0.235	0.309	9.7	67595	443.3
29-Sep-99	10:56	11.42	0.234	0.309	9.1	66405	440.9
29-Sep-99	10:57	11.37	0.233	0.309	10.5	67364	441.6
29-Sep-99	10:58	11.42	0.232	0.309	9.7	66395	441.3
29-Sep-99	10:59	11.41	0.231	0.309	9.9	66091	442.6
29-Sep-99	11:00	11.45	0.232	0.309	9.5	66402	441.9
29-Sep-99	11:01	11.39	0.231	0.309	9.3	66681	442
29-Sep-99	11:02	11.46	0.231	0.309	8.8	65808	441
29-Sep-99	11:03	11.4	0.231	0.309	9.3	66069	442.1
29-Sep-99	11:04	11.45	0.232	0.309	9.2	66294	442.5
29-Sep-99	11:05	11.38	0.232	0.309	9.5	65955	441.7
29-Sep-99	11:06	11.41	0.233	0.31	9.8	66062	441.4
29-Sep-99	11:07	11.4	0.233	0.31	9	66586	441.3
29-Sep-99	11:08	11.37	0.232	0.31	8.5	65985	442.1
29-Sep-99	11:09	11.34	0.231	0.31	9	66083	441.6
29-Sep-99	11:10	11.38	0.232	0.309	9	66140	442.8
29-Sep-99	11:11	11.35	0.232	0.31	9.3	66257	441.5
29-Sep-99	11:12	11.37	0.231	0.31	9	66636	441.5
29-Sep-99	11:13	11.33	0.231	0.31	9	67117	441.4
29-Sep-99	11:14	11.36	0.231	0.31	8.9	66420	441.5
29-Sep-99	11:15	11.31	0.232	0.31	9.7	67276	441.4
29-Sep-99	11:16	11.34	0.231	0.311	9	66397	442
29-Sep-99	11:17	11.33	0.231	0.311	9.2	66923	442.2
29-Sep-99	11:18	11.34	0.231	0.311	9.7	67061	441.9
29-Sep-99	11:19	11.32	0.231	0.311	9.9	66633	442.8
29-Sep-99	11:20	11.36	0.231	0.312	9.3	66855	442.1
29-Sep-99	11:21	11.33	0.231	0.312	9.2	65868	441
29-Sep-99	11:22	11.33	0.231	0.312	9	67868	442.5
29-Sep-99	11:23	11.29	0.23	0.313	9.4	67822	441.5
29-Sep-99	11:24	11.35	0.231	0.313	9.3	67822	442.2
29-Sep-99	11:25	11.29	0.231	0.314	8.6	88139	442.5
Test 3 Average		***10.90***	***0.236***	***0.299***	***10.78***	***66740***	***442***

Craig 1 ESP Data Summary				
Date	Time	Power level	# Sections in service	# Sections out of service
28-Sep-99	8:20	224	73	7
28-Sep-99	8:30	231	73	7
28-Sep-99	8:40	230	71	9
28-Sep-99	8:50	226	71	9
28-Sep-99	9:00	225	71	9
28-Sep-99	9:10	229	71	9
28-Sep-99	9:20	242	73	7
28-Sep-99	9:30	235	73	7
28-Sep-99	9:40	244	73	7
28-Sep-99	9:50	236	73	7
28-Sep-99	10:00	240	73	7
28-Sep-99	10:10	241	73	7
28-Sep-99	10:20	238	73	7
28-Sep-99	10:30	242	73	7
28-Sep-99	10:40	251	73	7
28-Sep-99	10:50	253	73	7
28-Sep-99	11:00	253	73	7
28-Sep-99	11:10	256	73	7
28-Sep-99	11:20	250	73	7
28-Sep-99	11:30	255	73	7
28-Sep-99	11:40	256	73	7
28-Sep-99	11:50	254	73	7
Test 1 Average		***241***	***73***	***7***
28-Sep-99	12:30	244	73	7
28-Sep-99	12:40	248	73	7
28-Sep-99	12:50	247	73	7
28-Sep-99	13:00	236	73	7
28-Sep-99	13:10	243	73	7
28-Sep-99	13:20	242	73	7
28-Sep-99	13:30	245	73	7
28-Sep-99	13:40	242	73	7
28-Sep-99	13:50	242	73	7
28-Sep-99	14:00	238	73	7
28-Sep-99	14:10	244	73	7
28-Sep-99	14:20	245	73	7
28-Sep-99	14:30	249	73	7
28-Sep-99	14:40	228	73	7
28-Sep-99	14:50	245	73	7
28-Sep-99	15:00	245	73	7
28-Sep-99	15:10	249	73	7
Test 2 Average		***243***	***73***	***7***

Craig 1 ESP Data Summary				
Date	Time	Power level	# Sections in service	# Sections out of service
29-Sep-99	8:20	205	59	21
29-Sep-99	8:30	195	58	22
29-Sep-99	8:40	195	56	24
29-Sep-99	8:50	193	56	24
29-Sep-99	9:00	191	56	24
29-Sep-99	9:10	192	56	24
29-Sep-99	9:20	194	56	24
29-Sep-99	9:30	196	56	24
29-Sep-99	9:40	193	54	26
29-Sep-99	9:50	195	54	26
29-Sep-99	10:00	198	54	26
29-Sep-99	10:10	202	54	26
29-Sep-99	10:20	202	54	26
29-Sep-99	10:30	206	54	26
29-Sep-99	10:40	208	54	26
29-Sep-99	10:50	210	54	26
29-Sep-99	11:00	211	54	26
29-Sep-99	11:10	222	54	26
29-Sep-99	11:20	222	54	26
29-Sep-99	11:30	216	54	26
Test 3 Average		***202***	***55***	***25***

	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	A Air Heater Gas In Temp North	A Air Heater Gas In Temp South	A Air Heater Gas In Temp East	A Air Heater Gas In Temp West	B Air Heater Gas In Temp	B Air Heater Gas In Temp North	B Air Heater Gas In Temp South	B Air Heater Gas In Temp East	Economizer Gas Out Temp
09/28/1999 8:24	2.49	1.52	4.46	4.06	4.18	3.43	2.52	3.49	656	657	653	650	653	650		649	650	709
09/28/1999 8:25	2.58	1.83	4.46	4.03	4.18	3.56	2.32	3.35	656	657	653	650	654	650		649	650	709
09/28/1999 8:26	2.52	1.76	4.46	4.04	4.18	3.44	2.58	3.34	656	657	653	650	654	650		649	650	709
09/28/1999 8:27	2.69	1.90	4.46	3.99	4.18	3.58	2.29	3.24	655	658	653	650	654	650		649	650	709
09/28/1999 8:28	2.72	1.84	4.45	3.93	4.18	3.60	2.50	3.16	656	658	654	650	654	650		649	651	709
09/28/1999 8:29	2.65	1.74	4.45	3.95	4.18	3.25	2.53	3.35	656	658	654	650	654	650		650	651	709
09/28/1999 8:30	2.70	1.88	4.45	4.05	4.18	3.33	2.49	3.62	656	658	654	650	654	651		650	651	710
09/28/1999 8:31	2.59	1.66	4.45	4.04	4.18	3.37	2.35	3.37	656	658	654	650	654	651		650	651	710
09/28/1999 8:32	2.65	1.77	4.45	4.00	4.18	3.44	2.64	3.36	656	658	654	651	654	651		650	651	710
09/28/1999 8:33	2.60	1.78	4.45	4.03	4.18	3.56	2.23	3.54	656	658	654	651	654	651		650	651	710
09/28/1999 8:34	2.45	1.97	4.45	4.07	4.18	3.47	2.21	3.59	656	658	654	651	654	651		650	651	710
09/28/1999 8:35	2.54	1.75	4.44	4.02	4.18	3.41	2.48	3.43	656	658	654	651	654	651		650	651	710
09/28/1999 8:36	2.74	1.68	4.43	3.89	4.18	3.20	2.39	3.35	656	658	654	651	654	651		650	651	710
09/28/1999 8:37	2.71	1.68	4.43	3.88	4.18	3.19	2.58	3.40	656	658	654	651	655	651		650	652	710
09/28/1999 8:38	2.72	1.79	4.43	3.97	4.18	3.08	2.66	3.15	656	658	654	651	655	651		650	651	710
09/28/1999 8:39	2.62	1.75	4.43	3.99	4.18	2.78	2.63	3.17	656	659	655	651	655	651		650	651	710
09/28/1999 8:40	2.73	1.83	4.44	4.01	4.18	2.81	2.55	3.23	657	659	655	651	655	651		651	652	710
09/28/1999 8:41	2.64	1.76	4.45	4.03	4.18	2.71	2.38	3.39	657	659	655	651	655	652		651	652	710
09/28/1999 8:42	2.80	1.90	4.46	4.01	4.18	3.30	2.55	3.34	657	659	655	651	655	652		651	652	711
09/28/1999 8:43	2.62	1.87	4.46	4.00	4.18	3.61	2.09	3.11	657	659	655	651	655	652		651	652	710
09/28/1999 8:44	2.47	1.79	4.45	3.95	4.18	3.56	2.62	3.30	657	659	655	651	655	652		651	652	711
09/28/1999 8:45	2.56	1.90	4.45	3.95	4.18	3.45	2.38	3.28	657	659	655	652	655	652		651	652	711
09/28/1999 8:46	2.65	1.58	4.44	3.99	4.18	3.39	2.36	3.42	657	659	655	652	655	652		651	652	710
09/28/1999 8:47	2.67	1.72	4.43	4.04	4.18	3.35	2.42	3.26	657	659	655	652	655	652		651	652	710
09/28/1999 8:48	2.61	1.87	4.41	3.91	4.18	3.55	2.55	3.10	657	659	655	652	655	652		651	652	710
09/28/1999 8:49	2.68	1.86	4.40	3.93	4.18	3.47	2.45	3.30	657	659	655	652	655	652		651	652	711
09/28/1999 8:50	2.80	1.78	4.39	3.93	4.18	3.43	2.10	3.12	657	659	655	652	655	652		651	652	711
09/28/1999 8:51	2.68	1.72	4.39	3.91	4.18	3.39	2.59	3.21	657	659	655	652	655	652		651	652	711
09/28/1999 8:52	2.87	1.73	4.39	3.99	4.18	3.44	2.40	3.37	657	659	655	652	656	653		651	652	711
09/28/1999 8:53	2.64	1.64	4.39	4.01	4.18	3.40	2.34	3.41	657	659	655	652	655	653		651	653	711
09/28/1999 8:54	2.70	1.84	4.39	3.97	4.18	3.47	2.23	3.29	657	659	655	652	656	653		651	653	711
09/28/1999 8:55	2.74	1.87	4.39	3.96	4.18	3.50	2.40	3.37	658	659	655	652	655	653		652	653	712
09/28/1999 8:56	2.72	1.96	4.38	3.91	4.18	3.54	2.51	3.14	658	659	655	652	655	653		652	653	712
09/28/1999 8:57	2.71	1.85	4.37	3.92	4.18	3.55	2.54	3.21	658	659	655	652	656	653		652	653	712
09/28/1999 8:58	2.65	1.89	4.37	3.91	4.18	3.54	2.39	3.23	658	659	655	652	656	653		652	653	712
09/28/1999 8:59	2.86	2.15	4.37	3.85	4.18	3.50	2.54	2.96	658	659	656	652	656	653		652	653	712
09/28/1999 9:00	2.86	1.99	4.37	3.82	4.18	3.06	2.39	3.11	658	659	656	652	656	653		652	653	713
09/28/1999 9:01	2.80	1.94	4.36	3.94	4.18	3.01	2.42	3.33	658	660	656	652	656	653		652	653	713
09/28/1999 9:02	2.69	1.86	4.37	4.02	4.18	3.51	2.30	3.57	658	660	656	652	656	653		652	653	713
09/28/1999 9:03	2.61	1.75	4.36	4.00	4.18	3.40	2.42	3.35	658	660	656	653	656	653		652	653	713
09/28/1999 9:04	2.69	1.84	4.35	4.00	4.18	3.62	2.58	3.24	658	660	656	653	656	653		652	654	713
09/28/1999 9:05	2.67	1.86	4.35	4.05	4.18	3.52	2.25	3.30	658	660	656	653	656	653		652	654	713
09/28/1999 9:06	2.69	1.78	4.35	4.06	4.18	3.42	2.52	3.37	658	660	656	653	656	653		653	654	713
09/28/1999 9:07	2.64	1.78	4.36	3.96	4.18	3.45	2.23	3.11	658	660	656	653	656	653		653	654	713
09/28/1999 9:08	2.74	1.91	4.36	3.89	4.18	3.51	2.50	3.18	658	660	656	653	656	654		653	654	714
09/28/1999 9:09	2.66	1.79	4.37	3.93	4.18	3.48	2.33	3.26	658	660	656	653	656	654		653	654	713
09/28/1999 9:10	2.63	1.80	4.36	3.98	4.18	3.39	2.34	3.41	658	660	656	653	656	654		653	654	713
09/28/1999 9:11	2.60	1.79	4.37	3.97	4.18	3.33	2.21	3.51	658	660	656	653	656	654		653	654	713
09/28/1999 9:12	2.68	1.81	4.36	3.91	4.18	3.48	2.71	3.34	658	660	656	653	656	654		653	654	713
09/28/1999 9:13	2.70	1.69	4.35	3.96	4.18	3.55	2.54	3.33	658	660	656	653	656	654		653	654	713
09/28/1999 9:14	2.75	1.95	4.35	3.93	4.18	3.60	2.35	3.13	658	660	656	653	656	654		653	654	714

09/28/1999 9:15	2.79	1.68	4.36	3.95	4.18	3.56	2.30	3.17	659	660	656	653	656	654		653	654	714
09/28/1999 9:16	2.79	1.80	4.36	3.97	4.18	3.50	2.33	3.33	659	660	656	653	657	654		653	654	714
09/28/1999 9:17	2.76	1.88	4.36	3.98	4.18	3.56	2.19	3.48	659	661	656	653	657	654		654	654	714
09/28/1999 9:18	2.70	2.02	4.36	3.93	4.18	3.61	2.53	3.14	659	661	656	653	657	654		654	654	714
09/28/1999 9:19	2.57	1.84	4.35	3.82	4.18	3.62	2.51	3.01	659	661	657	653	657	655		654	655	714
09/28/1999 9:20	2.70	1.92	4.35	3.82	4.18	3.62	2.61	2.91	659	661	657	653	657	655		654	655	714
09/28/1999 9:21	2.73	1.92	4.36	3.91	4.18	3.69	2.31	3.26	659	661	657	653	657	655		654	655	714
09/28/1999 9:22	2.71	1.95	4.35	3.81	4.18	3.57	2.12	3.17	659	661	657	653	657	655		654	655	714
09/28/1999 9:23	2.69	1.81	4.34	3.87	4.18	3.57	2.31	3.28	659	661	657	653	657	655		654	655	714
09/28/1999 9:24	2.73	1.89	4.34	3.86	4.18	3.56	2.75	3.10	659	661	657	653	657	655		654	655	714
09/28/1999 9:25	2.72	1.72	4.36	3.92	4.18	3.56	2.26	3.32	659	661	657	653	657	655		654	655	714
09/28/1999 9:26	2.58	1.61	4.35	3.93	4.18	3.46	2.33	3.24	659	661	657	654	657	655		654	655	714
09/28/1999 9:27	2.66	1.61	4.35	3.96	4.18	3.42	2.08	3.41	659	661	657	654	657	655		654	655	715
09/28/1999 9:28	2.75	1.68	4.34	3.95	4.18	3.52	2.53	3.14	659	661	657	654	657	655		654	655	715
09/28/1999 9:29	2.86	1.94	4.34	3.89	4.18	3.66	2.54	3.10	659	661	657	654	657	655		654	655	714
09/28/1999 9:30	3.02	1.84	4.33	3.83	4.18	3.55	2.55	2.98	659	661	657	654	657	655		654	655	714
09/28/1999 9:31	3.32	2.07	4.33	3.82	4.18	2.94	2.31	3.14	659	661	657	654	657	655		654	655	714
09/28/1999 9:32	2.71	2.04	4.33	3.91	4.18	2.48	2.18	3.56	659	661	657	654	657	655		655	656	712
09/28/1999 9:33	2.69	2.16	4.33	4.01	4.18	2.90	2.41	3.73	659	661	657	654	657	655		655	656	713
09/28/1999 9:34	2.60	2.17	4.33	4.01	4.18	2.90	2.43	3.46	659	661	657	654	658	656		655	656	712
09/28/1999 9:35	3.06	2.06	4.33	4.05	4.18	3.16	2.38	3.34	659	661	657	654	657	656		655	656	711
09/28/1999 9:36	2.78	1.91	4.34	3.94	4.18	3.19	2.17	3.30	659	661	657	654	657	656		655	656	710
09/28/1999 9:37	2.25	1.83	4.34	3.91	4.18	3.39	2.22	3.39	659	661	657	654	657	656		655	656	709
09/28/1999 9:38	2.61	1.89	4.34	4.00	4.18	3.54	2.51	3.60	659	661	657	654	657	656		655	656	710
09/28/1999 9:39	2.56	1.88	4.34	4.12	4.18	3.59	2.35	3.76	659	661	657	654	657	656		655	656	709
09/28/1999 9:40	2.41	2.12	4.35	4.11	4.18	3.74	2.67	3.65	659	661	657	654	657	656		655	656	708
09/28/1999 9:41	2.45	1.94	4.36	4.13	4.18	3.45	2.46	3.66	659	661	657	654	657	656		655	656	708
09/28/1999 9:42	2.63	2.08	4.36	4.08	4.18	3.32	2.52	3.58	659	661	657	653	657	656		655	656	708
09/28/1999 9:43	2.77	2.04	4.36	4.00	4.18	3.59	2.14	3.41	659	660	656	653	657	656		655	656	709
09/28/1999 9:44	2.61	1.85	4.37	4.00	4.18	3.46	2.43	3.71	659	660	656	653	657	656		655	656	710
09/28/1999 9:45	2.66	1.99	4.36	4.05	4.18	3.49	2.19	3.62	659	660	656	653	657	656		655	656	710
09/28/1999 9:46	2.69	1.92	4.36	4.07	4.18	3.59	2.41	3.62	658	660	656	653	657	656		655	656	710
09/28/1999 9:47	2.64	1.95	4.37	4.04	4.18	3.41	2.14	3.67	658	660	656	653	657	656		655	656	710
09/28/1999 9:48	2.53	2.14	4.37	3.96	4.18	3.46	2.11	3.93	658	660	656	653	656	656		656	656	710
09/28/1999 9:49	2.53	1.84	4.38	3.97	4.18	3.61	2.59	3.54	658	660	656	653	656	656		656	656	710
09/28/1999 9:50	2.64	1.78	4.38	3.96	4.18	3.58	2.26	3.29	658	659	656	653	656	656		656	656	710
09/28/1999 9:51	2.72	1.85	4.40	4.02	4.18	3.50	1.98	3.69	658	659	655	653	656	656		656	657	710
09/28/1999 9:52	2.70	1.98	4.38	4.05	4.18	3.33	2.43	3.50	658	659	655	652	656	656		656	657	709
09/28/1999 9:53	2.67	1.94	4.37	4.02	4.18	3.45	2.25	3.41	658	659	655	652	656	656		656	657	709
09/28/1999 9:54	2.60	2.07	4.37	3.94	4.18	3.56	1.80	3.47	657	659	655	652	656	656		656	657	709
09/28/1999 9:55	2.60	2.20	4.35	3.89	4.18	3.52	1.90	3.80	657	659	655	652	656	656		656	657	710
09/28/1999 9:56	2.49	1.99	4.34	3.94	4.18	3.61	2.01	3.49	657	659	655	652	656	656		656	657	710
09/28/1999 9:57	2.63	1.98	4.34	3.95	4.18	3.56	2.32	3.54	657	658	655	652	655	656		656	657	709
09/28/1999 9:58	2.76	1.95	4.33	3.97	4.18	3.51	2.14	3.29	657	658	655	652	655	656		656	657	709
09/28/1999 9:59	2.64	1.83	4.34	3.98	4.18	3.48	2.19	3.51	657	658	654	652	655	656		656	657	710
09/28/1999 10:00	2.60	1.90	4.34	4.04	4.18	3.55	2.03	3.77	657	658	654	652	655	657		656	657	710
09/28/1999 10:01	2.59	1.96	4.34	4.05	4.18	3.56	1.68	3.75	657	658	654	652	655	657		656	657	710
09/28/1999 10:02	2.42	2.08	4.34	4.07	4.18	3.59	1.96	3.68	656	658	654	651	655	657		656	657	709
09/28/1999 10:03	2.55	2.19	4.34	4.05	4.18	3.62	1.90	3.72	656	658	654	652	655	657		656	657	710
09/28/1999 10:04	2.56	2.13	4.33	3.97	4.18	3.44	1.71	3.64	656	658	654	651	655	657		656	657	710
09/28/1999 10:05	2.65	2.01	4.31	4.03	4.18	3.44	1.85	3.91	656	658	654	651	655	657		656	657	710
09/28/1999 10:06	2.70	2.24	4.31	4.08	4.18	3.41	1.66	3.74	656	658	654	651	655	657		656	657	710
09/28/1999 10:07	2.65	1.99	4.30	3.93	4.18	3.36	2.09	3.49	656	657	654	651	655	657		656	657	710
09/28/1999 10:08	2.65	1.92	4.30	3.99	4.18	3.29	2.12	3.88	656	657	654	651	654	657		656	657	711
09/28/1999 10:09	2.65	1.98	4.31	4.15	4.18	3.34	1.79	4.18	656	657	654	651	654	657		656	657	711
09/28/1999 10:10	2.66	2.08	4.31	4.15	4.18	3.41	2.05	3.96	656	657	653	651	654	657		656	657	711
09/28/1999 10:11	2.66	2.00	4.31	3.99	4.18	3.43	2.20	3.53	656	657	653	651	654	657		656	657	711

09/28/1999 10:12	2.65	2.13	4.31	3.86	4.18	3.28	1.84	3.75	656	657	653	651	654	657		656	657	711
09/28/1999 10:13	2.65	2.33	4.32	4.06	4.18	3.43	2.00	3.46	656	657	653	650	654	657		656	657	711
09/28/1999 10:14	2.65	2.17	4.32	4.10	4.18	3.51	2.00	3.55	655	657	653	650	654	657		656	657	711
09/28/1999 10:15	2.65	1.88	4.32	4.07	4.18	3.46	1.95	3.66	656	657	653	650	654	657		656	657	711
09/28/1999 10:16	2.48	2.08	4.32	4.10	4.18	3.46	2.27	3.86	655	657	653	650	654	657		657	657	711
09/28/1999 10:17	2.49	2.19	4.32	4.13	4.18	3.47	2.14	3.65	656	657	653	650	654	657		656	657	711
09/28/1999 10:18	2.47	2.19	4.32	4.08	4.18	3.42	2.17	3.58	655	657	653	650	654	657		657	657	711
09/28/1999 10:19	2.51	2.19	4.32	3.95	4.18	3.48	1.71	3.56	656	657	653	650	654	657		657	657	711
09/28/1999 10:20	2.47	2.19	4.31	3.94	4.18	3.36	2.06	3.84	655	657	653	650	654	657		657	658	711
09/28/1999 10:21	2.49	2.19	4.31	3.92	4.18	3.44	2.01	3.41	655	657	653	650	654	657		657	658	711
09/28/1999 10:22	2.53	2.19	4.30	3.89	4.18	3.54	2.10	3.43	655	657	653	650	654	657		657	658	710
09/28/1999 10:23	2.52	2.19	4.30	3.97	4.18	3.54	1.70	3.39	655	657	653	650	654	658		657	658	709
09/28/1999 10:24	2.43	2.18	4.28	3.88	4.18	3.45	2.22	3.29	655	657	653	650	653	658		657	658	708
09/28/1999 10:25	2.50	2.06	4.28	3.86	4.18	3.51	1.72	3.44	655	657	653	650	653	658		657	658	708
09/28/1999 10:26	2.56	2.00	4.28	4.01	4.18	3.41	1.93	3.97	655	657	653	650	653	658		657	658	708
09/28/1999 10:27	2.53	1.99	4.28	4.11	4.18	3.46	1.89	3.52	655	657	653	650	653	658		657	658	708
09/28/1999 10:28	2.21	2.12	4.28	4.05	4.18	3.72	1.76	3.64	655	657	653	650	653	658		657	658	708
09/28/1999 10:29	2.22	2.38	4.28	3.94	4.18	3.87	2.13	3.42	655	657	653	650	653	658		657	658	709
09/28/1999 10:30	2.58	2.29	4.28	3.88	4.18	3.84	2.11	3.32	655	657	653	650	653	658		657	658	709
09/28/1999 10:31	2.75	2.17	4.28	3.92	4.18	3.68	2.40	3.43	655	657	653	650	653	658		657	658	709
09/28/1999 10:32	2.73	1.96	4.28	3.95	4.18	3.75	2.30	3.23	655	657	653	650	653	658		657	658	708
09/28/1999 10:33	2.69	2.01	4.28	4.04	4.18	3.61	2.14	3.46	655	657	653	650	653	658		657	658	708
09/28/1999 10:34	2.83	2.05	4.02	4.06	4.18	3.59	2.10	3.31	655	657	653	650	653	658		657	658	708
09/28/1999 10:35	2.93	2.21	2.26	4.05	4.18	3.76	2.58	3.55	655	657	653	650	653	658		657	658	709
09/28/1999 10:36	3.25	2.28	2.27	4.05	4.18	3.79	2.71	3.87	655	657	653	650	653	658		657	658	710
09/28/1999 10:37	2.60	2.79	2.45	4.05	4.18	4.27	3.24	3.35	655	657	653	650	653	658		657	658	711
09/28/1999 10:38	2.15	2.94	2.62	4.05	4.18	4.95	3.03	3.33	655	657	653	650	653	658		657	658	711
09/28/1999 10:39	3.14	2.77	2.77	4.05	4.18	4.26	2.99	3.81	655	657	653	650	654	658		657	658	712
09/28/1999 10:40	3.42	2.60	2.91	4.05	4.18	3.95	2.52	3.93	656	657	654	650	654	658		657	658	713
09/28/1999 10:41	3.21	2.52	3.04	4.05	4.18	3.99	2.93	3.70	656	657	654	650	654	658		658	658	713
09/28/1999 10:42	3.28	2.40	3.16	4.05	4.18	3.99	2.72	3.87	656	658	654	650	654	658		658	658	713
09/28/1999 10:43	3.25	2.63	3.27	4.09	4.18	3.89	2.88	3.96	656	658	654	650	654	659		658	658	714
09/28/1999 10:44	3.25	2.51	3.35	4.34	4.18	3.83	2.79	3.70	656	658	654	650	654	659		658	658	713
09/28/1999 10:45	3.21	2.56	3.45	4.30	4.18	3.77	2.73	3.81	656	658	654	650	654	659		658	658	714
09/28/1999 10:46	3.34	2.58	3.54	4.34	4.18	3.83	2.60	3.90	656	658	654	650	654	659		658	659	713
09/28/1999 10:47	3.20	2.32	3.61	4.41	4.18	3.66	2.55	3.91	656	658	654	650	654	659		658	659	713
09/28/1999 10:48	3.09	2.39	3.68	4.35	4.18	3.77	2.77	3.74	656	658	654	651	655	659		658	659	713
09/28/1999 10:49	3.10	2.55	3.73	4.33	4.18	3.78	2.75	4.14	656	658	655	651	655	659		658	659	713
09/28/1999 10:50	3.24	2.51	3.79	4.42	4.18	3.45	2.69	4.12	657	658	655	651	655	659		658	659	714
09/28/1999 10:51	3.37	2.28	3.84	4.50	4.18	3.58	2.61	3.99	657	658	655	651	655	659		658	659	714
09/28/1999 10:52	3.17	2.26	3.88	4.45	4.18	3.52	2.51	3.87	657	659	655	651	655	659		658	659	715
09/28/1999 10:53	3.02	2.50	3.91	4.34	4.18	3.68	2.37	3.86	657	659	655	651	655	659		658	659	715
09/28/1999 10:54	3.04	2.42	3.94	4.31	4.18	3.78	2.69	3.81	657	659	655	651	655	659		658	659	714
09/28/1999 10:55	3.10	2.25	3.98	4.29	4.18	3.67	2.74	3.70	657	659	655	651	655	659		658	659	714
09/28/1999 10:56	3.03	2.31	4.00	4.37	4.18	3.51	2.64	3.84	657	659	655	652	655	659		658	659	714
09/28/1999 10:57	3.10	2.38	4.03	4.32	4.18	3.46	2.49	3.85	657	659	655	652	655	660		659	659	714
09/28/1999 10:58	3.05	2.35	4.06	4.29	4.18	3.30	2.49	3.69	657	659	655	652	656	660		659	660	715
09/28/1999 10:59	3.17	2.25	4.07	4.23	4.18	3.48	2.50	3.68	657	659	656	652	656	660		659	660	714
09/28/1999 11:00	3.07	2.28	4.09	4.06	4.18	3.66	2.96	3.39	658	659	656	652	656	660		659	660	714
09/28/1999 11:01	2.93	2.05	4.12	4.11	4.18	3.80	2.50	3.46	658	659	656	652	656	660		659	660	713
09/28/1999 11:02	2.96	2.45	4.13	4.12	4.18	3.85	2.66	3.49	658	659	656	652	656	660		659	660	713
09/28/1999 11:03	3.07	2.23	4.14	4.11	4.18	3.65	2.63	3.45	658	659	656	652	656	660		659	660	713
09/28/1999 11:04	3.02	2.26	4.14	4.15	4.18	3.52	2.50	3.76	658	660	656	652	656	660		659	659	714
09/28/1999 11:05	3.09	2.16	4.14	4.23	4.18	3.47	2.72	3.83	658	660	656	652	656	660		659	660	714
09/28/1999 11:06	3.09	2.25	4.15	4.25	4.18	3.56	2.60	3.62	658	660	656	652	656	660		659	660	715
09/28/1999 11:07	2.84	2.15	4.16	4.18	4.18	3.44	2.30	3.71	658	660	656	653	656	660		659	660	715
09/28/1999 11:08	2.99	2.29	4.17	4.20	4.18	3.50	2.53	3.74	658	660	656	653	656	660		659	660	715

09/28/1999 11:09	3.05	2.16	4.17	4.20	4.18	3.62	2.63	3.45	658	660	656	653	656	660		659	660	715
09/28/1999 11:10	2.90	2.15	4.17	4.21	4.18	3.53	2.62	3.85	658	660	656	653	657	660		659	660	715
09/28/1999 11:11	3.02	2.10	4.18	4.23	4.18	3.44	2.20	3.97	658	660	656	653	657	660		659	660	715
09/28/1999 11:12	2.99	2.27	4.17	4.14	4.18	3.46	2.63	3.58	658	660	656	653	657	660		659	660	715
09/28/1999 11:13	2.99	2.27	4.18	4.09	4.18	3.20	2.44	3.57	658	660	656	653	657	660		659	660	715
09/28/1999 11:14	2.90	2.14	4.17	4.13	4.18	3.22	2.54	3.58	658	660	656	653	657	660		659	660	715
09/28/1999 11:15	2.93	2.09	4.17	4.11	4.18	3.38	2.44	3.53	658	660	656	653	657	660		659	660	715
09/28/1999 11:16	2.81	2.19	4.17	4.08	4.18	3.31	2.35	3.63	658	660	656	653	657	660		659	660	715
09/28/1999 11:17	2.91	2.03	4.17	4.17	4.18	3.35	2.28	3.75	658	661	656	653	657	661		659	660	715
09/28/1999 11:18	2.80	2.09	4.16	4.19	4.18	3.35	2.27	3.55	659	661	657	653	657	661		659	660	715
09/28/1999 11:19	2.87	2.12	4.16	4.16	4.18	3.54	2.40	3.52	659	661	657	653	657	661		659	660	715
09/28/1999 11:20	2.86	2.18	4.15	4.07	4.18	3.56	2.40	3.53	659	661	657	653	657	661		660	660	716
09/28/1999 11:21	2.99	2.20	4.15	4.11	4.18	3.56	2.23	3.41	659	661	657	653	657	661		660	660	716
09/28/1999 11:22	2.99	2.23	4.15	4.08	4.18	3.56	2.67	3.38	659	661	657	653	657	661		659	660	716
09/28/1999 11:23	2.90	2.17	4.15	4.09	4.18	3.56	2.44	3.53	659	661	657	653	657	661		659	660	716
09/28/1999 11:24	2.79	2.04	4.15	4.08	4.18	3.56	2.38	3.59	659	661	657	653	658	661		660	660	716
09/28/1999 11:25	2.77	2.15	4.15	4.06	4.18	3.56	2.30	3.61	659	661	657	653	658	661		660	660	716
09/28/1999 11:26	2.77	2.07	4.14	4.13	4.18	3.57	2.53	3.80	659	661	657	653	658	661		659	661	716
09/28/1999 11:27	2.83	2.03	4.15	4.14	4.18	3.56	2.44	3.64	659	661	657	653	658	661		659	661	717
09/28/1999 11:28	2.86	2.06	4.15	4.06	4.18	3.56	2.31	3.48	659	661	657	654	658	661		659	661	717
09/28/1999 11:29	2.90	2.31	4.15	4.00	4.18	3.55	2.40	3.56	659	661	657	654	658	661		659	661	717
09/28/1999 11:30	2.87	2.14	4.14	4.00	4.18	3.46	11.42	3.70	659	661	657	654	658	661		659	661	717
09/28/1999 11:31	2.82	1.89	4.12	4.04	4.18	3.40	11.81	3.61	659	661	658	654	658	661		659	661	717
09/28/1999 11:32	2.83	1.99	4.12	4.04	4.18	3.25	11.81	3.59	659	661	658	654	658	661		660	661	717
09/28/1999 11:33	2.73	2.21	4.11	4.01	4.18	3.23	8.60	3.53	659	661	658	654	658	661		660	661	717
09/28/1999 11:34	2.83	2.18	4.11	4.08	4.18	3.28	2.18	3.81	659	661	658	654	658	661		660	661	717
09/28/1999 11:35	2.92	2.16	4.10	4.05	4.18	3.35	2.10	3.68	660	661	658	654	658	661		660	661	717
09/28/1999 11:36	2.77	2.12	4.10	3.97	4.18	3.39	2.08	3.40	660	662	658	654	658	662		660	661	717
09/28/1999 11:37	2.85	2.25	4.10	3.99	4.18	3.43	2.42	3.46	660	661	658	654	658	661		660	661	718
09/28/1999 11:38	2.77	2.29	4.11	3.92	4.18	3.29	2.44	3.49	660	661	658	654	658	661		660	661	718
09/28/1999 11:39	2.82	2.23	4.12	4.01	4.18	3.48	2.56	3.44	660	661	658	654	658	662		660	661	718
09/28/1999 11:40	2.96	2.12	4.12	4.06	4.18	3.40	2.54	3.39	660	661	658	654	658	662		660	661	718
09/28/1999 11:41	2.85	2.26	4.12	4.01	4.18	3.46	2.58	3.38	660	661	658	654	658	662		660	661	719
09/28/1999 11:42	2.83	2.03	4.12	4.09	4.18	3.47	2.20	3.36	660	662	658	654	658	662		660	661	719
09/28/1999 11:43	2.90	2.04	4.12	4.08	4.18	3.31	2.49	3.70	660	662	658	654	659	662		660	662	719
09/28/1999 11:44	2.88	2.25	4.11	4.06	4.18	3.49	2.53	3.40	660	662	658	655	659	662		661	662	718
09/28/1999 11:45	2.95	2.15	4.11	3.98	4.18	3.46	2.48	3.46	660	662	658	655	659	662		661	662	719
09/28/1999 11:46	2.87	1.99	4.12	4.02	4.18	3.38	2.51	3.58	660	662	658	655	659	662		661	662	719
09/28/1999 11:47	2.85	1.96	4.12	4.07	4.18	3.40	2.46	3.49	660	662	658	655	659	662		661	662	719
09/28/1999 11:48	2.80	2.04	4.12	4.05	4.18	3.53	2.43	3.36	661	662	659	655	659	662		661	662	719
Test 1 Average				***3.26***				***3.43***				***656***					***656***	***712***
09/28/1999 12:30	2.78	2.04	4.03	3.90	4.18	3.70	2.47	3.09	662	664	660	657	661	664		662	663	714
09/28/1999 12:31	2.62	1.92	4.03	3.83	4.18	3.71	2.47	2.95	662	664	660	657	661	664		662	663	713
09/28/1999 12:32	2.79	2.03	4.02	3.82	4.18	3.60	2.59	3.27	662	664	660	657	661	664		662	663	714
09/28/1999 12:33	2.76	1.98	4.03	3.93	4.18	3.54	2.35	3.32	662	664	660	657	661	664		662	663	714
09/28/1999 12:34	2.34	1.92	4.02	3.86	4.18	3.09	2.74	2.89	662	664	660	657	661	664		662	663	714
09/28/1999 12:35	2.71	2.11	4.02	3.90	4.18	3.09	2.75	3.27	662	664	661	657	661	664		662	663	714
09/28/1999 12:36	2.80	2.05	4.03	3.93	4.18	2.89	2.49	3.04	662	664	660	657	661	664		662	663	715
09/28/1999 12:37	2.70	2.03	4.03	3.88	4.18	3.04	2.76	2.92	662	664	660	657	661	664		662	663	715
09/28/1999 12:38	2.92	2.03	4.04	3.85	4.18	3.41	2.51	3.24	662	664	660	657	661	664		662	663	715
09/28/1999 12:39	2.82	2.00	4.04	3.88	4.18	3.47	2.48	3.26	662	664	660	657	661	663		662	663	715
09/28/1999 12:40	2.79	2.05	4.05	3.97	4.18	3.49	2.34	3.39	662	664	660	657	661	663		662	663	714
09/28/1999 12:41	2.72	2.07	4.04	3.92	4.18	3.39	2.45	3.18	662	664	660	657	661	663		662	663	715
09/28/1999 12:42	2.89	2.15	4.03	3.89	4.18	3.55	2.48	3.12	663	664	660	657	661	663		662	663	715
09/28/1999 12:43	2.72	2.06	4.04	3.89	4.18	3.54	2.35	2.97	663	664	660	657	661	663		662	663	714
09/28/1999 12:44	2.96	1.99	4.03	3.89	4.18	3.54	2.52	3.20	663	664	660	657	661	663		662	663	715

09/28/1999 12:45	2.84	1.95	4.04	3.93	4.18	3.45	2.39	3.42	663	664	661	657	661	663		662	663	715
09/28/1999 12:46	2.58	2.07	4.04	3.89	4.18	3.42	2.23	3.40	663	664	661	657	661	663		662	663	714
09/28/1999 12:47	2.66	1.81	4.04	3.89	4.18	3.37	2.54	3.37	663	664	661	657	661	663		662	663	715
09/28/1999 12:48	2.67	1.97	4.04	3.88	4.18	3.45	2.63	3.22	663	664	661	657	661	663		662	663	715
09/28/1999 12:49	2.77	1.90	4.05	4.02	4.18	2.88	2.18	3.51	663	664	661	657	661	663		662	663	715
09/28/1999 12:50	2.72	1.86	4.05	3.97	4.18	2.65	2.49	3.30	663	664	661	657	662	663		662	663	715
09/28/1999 12:51	2.97	1.98	4.05	3.94	4.18	2.65	2.44	3.54	663	664	661	657	661	663		662	663	715
09/28/1999 12:52	2.87	1.79	4.06	3.94	4.18	2.72	2.45	3.48	663	665	661	657	662	663		662	663	715
09/28/1999 12:53	2.90	2.04	4.06	3.94	4.18	3.22	2.51	3.53	663	664	661	657	661	663		662	663	716
09/28/1999 12:54	2.89	1.95	4.07	3.93	4.18	2.80	2.45	3.12	663	664	661	657	662	664		662	663	715
09/28/1999 12:55	2.93	1.93	4.07	3.92	4.18	3.20	2.63	3.31	663	664	661	657	661	663		662	663	715
09/28/1999 12:56	2.77	1.77	4.09	3.90	4.18	3.27	2.55	3.36	663	664	661	657	661	664		662	663	715
09/28/1999 12:57	2.86	1.85	4.09	3.94	4.18	3.46	2.46	3.42	663	664	661	658	662	664		662	663	716
09/28/1999 12:58	2.93	1.97	4.10	3.96	4.18	3.37	2.55	3.14	663	665	661	658	662	664		662	663	715
09/28/1999 12:59	2.91	2.10	4.10	3.84	4.18	3.35	3.16	2.79	663	664	661	658	662	664		662	663	716
09/28/1999 13:00	2.80	1.96	4.10	3.75	4.18	3.40	3.01	2.48	663	664	661	657	662	664		662	663	714
09/28/1999 13:01	2.94	2.03	4.10	3.88	4.18	3.39	2.39	3.47	663	665	661	657	662	664		662	663	712
09/28/1999 13:02					4.18	3.16	2.43	3.71	663	665	661	657	662	663		662	663	712
09/28/1999 13:03					4.18	3.29	2.79	3.60	663	664	661	657	662	663		662	663	712
09/28/1999 13:04	2.65	1.96	4.14	3.89	4.18	3.04	2.89	3.07	663	665	661	657	662	663		662	663	712
09/28/1999 13:05	2.76	2.14	4.13	3.78	4.18	3.21	2.47	3.14	663	665	661	658	662	663		662	663	712
09/28/1999 13:06	2.77	1.82	4.13	3.89	4.18	3.31	2.52	3.43	663	665	661	658	662	663		662	663	711
09/28/1999 13:07	2.61	1.86	4.14	3.92	4.18	2.97	2.47	3.43	663	664	661	658	662	663		662	663	711
09/28/1999 13:08	2.80	1.99	4.14	3.89	4.18	3.30	2.28	3.40	663	665	661	658	662	663		662	663	711
09/28/1999 13:09	2.85	1.92	4.14	3.85	4.18	3.54	2.40	3.15	663	665	661	658	662	663		662	663	711
09/28/1999 13:10	2.79	1.91	4.14	3.85	4.18	3.56	2.69	3.05	663	665	661	658	662	663		662	663	710
09/28/1999 13:11	2.79	1.96	4.14	3.76	4.18	3.59	2.41	3.10	663	665	661	658	662	663		662	663	710
09/28/1999 13:12	2.82	1.97	4.14	3.83	4.18	3.64	2.61	3.09	663	665	661	658	662	663		661	663	710
09/28/1999 13:13	2.64	1.98	4.14	3.88	4.18	3.73	2.55	3.08	663	665	661	658	662	662		661	663	710
09/28/1999 13:14	2.69	1.87	4.14	3.87	4.18	3.30	2.47	3.23	663	665	661	658	662	662		661	662	710
09/28/1999 13:15	2.81	2.03	4.14	3.92	4.18	2.67	2.51	3.26	663	665	661	658	662	662		661	662	710
09/28/1999 13:16	2.77	1.97	4.14	3.91	4.18	2.56	2.68	3.37	663	665	661	658	662	662		661	662	710
09/28/1999 13:17	2.91	2.04	4.14	3.94	4.18	2.51	2.52	3.30	663	665	661	657	662	662		661	662	710
09/28/1999 13:18	2.89	2.04	4.14	3.85	4.18	2.65	2.74	3.19	663	665	661	658	662	662		660	662	711
09/28/1999 13:19	2.95	2.00	4.14	3.91	4.18	3.36	2.77	3.15	663	665	661	658	662	662		660	662	711
09/28/1999 13:20	2.93	2.09	4.15	3.92	4.18	3.59	2.51	3.20	663	665	661	658	662	662		660	662	711
09/28/1999 13:21	2.74	1.94	4.15	3.84	4.18	3.48	2.62	3.23	663	665	661	658	662	661		660	662	711
09/28/1999 13:22	2.72	2.06	4.15	3.84	4.18	3.56	2.72	3.10	663	665	661	658	662	661		660	662	710
09/28/1999 13:23	2.79	2.00	4.15	3.85	4.18	3.28	2.74	3.34	663	665	661	658	662	661		660	661	711
09/28/1999 13:24	2.91	2.15	4.15	3.85	4.18	2.63	2.85	3.18	663	665	661	658	662	661		660	661	711
09/28/1999 13:25	3.06	2.24	4.15	3.84	4.18	2.78	2.76	2.84	663	665	661	658	662	661		660	661	711
09/28/1999 13:26	2.85	2.11	4.16	3.78	4.18	2.84	2.72	3.11	663	665	661	657	662	661		659	661	712
09/28/1999 13:27	2.94	2.10	4.16	3.80	4.18	2.70	2.89	3.22	663	665	661	657	662	661		660	661	712
09/28/1999 13:28	3.02	2.15	4.15	3.89	4.18	3.25	2.84	3.20	663	665	661	657	662	661		659	661	712
09/28/1999 13:29	2.90	2.02	4.15	3.83	4.18	3.41	2.44	3.07	663	665	661	657	662	661		660	661	712
09/28/1999 13:30	2.70	2.01	4.14	3.76	4.18	3.51	2.68	3.18	663	665	661	657	662	661		659	661	712
09/28/1999 13:31	2.72	1.88	4.14	3.78	4.18	3.55	2.42	3.24	663	665	661	658	662	661		659	661	712
09/28/1999 13:32	2.85	2.04	4.13	3.73	4.18	3.57	2.64	3.09	663	665	661	658	662	661		659	660	712
09/28/1999 13:33	2.76	1.99	4.13	3.75	4.18	3.63	2.47	3.03	663	665	661	658	662	660		659	660	712
09/28/1999 13:34	2.89	2.16	4.13	3.70	4.18	3.70	2.59	3.02	664	665	661	658	662	660		659	660	713
09/28/1999 13:35	2.87	1.99	4.12	3.66	4.18	3.66	2.52	3.15	663	665	661	658	662	660		659	661	713
09/28/1999 13:36	2.96	1.92	4.12	3.74	4.18	3.56	2.42	3.22	664	665	661	658	662	660		659	660	713
09/28/1999 13:37	2.94	1.91	4.10	3.80	4.18	3.47	2.56	3.31	664	665	661	658	662	660		659	660	713
09/28/1999 13:38	2.85	1.89	4.10	3.79	4.18	3.31	2.37	3.12	664	665	662	658	662	660		659	660	713
09/28/1999 13:39	2.83	1.98	4.09	3.81	4.18	2.65	2.64	3.46	664	665	661	658	662	660		659	660	713
09/28/1999 13:40	2.86	1.99	4.09	3.87	4.18	2.40	2.57	3.50	664	665	662	658	662	660		659	660	713
09/28/1999 13:41	2.83	1.83	4.09	3.96	4.18	2.36	2.63	3.49	664	665	662	658	662	660		659	660	714

09/28/1999 13:42	3.00	1.99	4.09	4.02	4.18	3.17	2.43	3.61	664	665	661	658	662	660		659	660	715
09/28/1999 13:43	2.78	1.88	4.11	3.94	4.18	3.14	2.48	3.17	664	665	661	658	662	660		659	660	714
09/28/1999 13:44	2.82	1.87	4.11	3.88	4.18	3.29	2.57	3.47	663	665	661	658	662	660		659	660	715
09/28/1999 13:45	2.87	1.85	4.12	3.86	4.18	3.34	2.37	3.26	664	665	661	658	662	660		659	660	715
09/28/1999 13:46	2.90	1.83	4.12	3.85	4.18	3.35	2.62	3.52	664	665	661	658	662	660		659	660	715
09/28/1999 13:47	2.98	1.82	4.13	3.76	4.18	3.32	2.45	3.29	664	665	661	658	662	660		659	660	715
09/28/1999 13:48	2.91	1.94	4.13	3.74	4.18	2.96	2.55	3.22	664	665	662	658	662	660		659	660	716
09/28/1999 13:49	2.85	1.88	4.13	3.79	4.18	2.41	2.63	3.62	664	665	662	658	662	660		659	660	716
09/28/1999 13:50	2.86	1.96	4.12	3.90	4.18	2.33	2.56	3.53	664	665	662	658	662	660		659	660	716
09/28/1999 13:51	2.86	1.95	4.13	3.91	4.18	2.33	2.58	3.47	664	665	662	658	662	660		659	660	717
09/28/1999 13:52	2.90	1.91	4.13	3.94	4.18	2.77	2.50	3.52	664	665	662	658	662	660		659	660	717
09/28/1999 13:53	2.94	1.96	4.14	3.89	4.18	3.16	2.54	3.45	664	665	662	658	662	660		659	660	717
09/28/1999 13:54	2.70	1.74	4.13	3.79	4.18	3.25	2.56	3.45	664	665	662	658	662	660		659	660	717
09/28/1999 13:55	2.77	1.64	4.13	3.80	4.18	3.23	2.45	3.41	664	665	662	658	663	660		659	660	717
09/28/1999 13:56	2.82	1.82	4.13	3.81	4.18	3.31	2.57	3.36	664	665	662	658	663	660		659	660	717
09/28/1999 13:57	2.93	2.09	4.13	3.81	4.18	3.55	2.51	3.28	664	665	662	658	663	660		659	660	717
09/28/1999 13:58	2.94	2.00	4.12	3.77	4.18	3.52	2.70	3.22	664	665	662	659	663	660		659	660	717
09/28/1999 13:59	2.89	1.90	4.12	3.76	4.18	2.98	2.41	3.41	664	665	662	659	663	660		659	660	718
09/28/1999 14:00	2.83	2.05	4.12	3.78	4.18	2.50	2.74	3.26	664	666	662	659	663	660		659	660	718
09/28/1999 14:01	3.01	2.09	4.13	3.82	4.18	2.75	2.54	3.41	664	666	662	659	663	660		659	660	719
09/28/1999 14:02	2.96	1.88	4.13	3.82	4.18	3.26	2.72	3.44	664	666	662	659	663	660		659	660	719
09/28/1999 14:03	2.94	1.89	4.13	3.86	4.18	3.34	2.41	3.43	664	666	662	659	663	660		659	660	719
09/28/1999 14:04	2.88	1.89	4.14	3.83	4.18	3.49	2.54	3.18	664	666	662	659	663	660		659	660	718
09/28/1999 14:05	2.79	1.92	4.13	3.70	4.18	3.55	2.66	3.30	665	666	662	659	663	661		659	660	718
09/28/1999 14:06	2.82	1.78	4.13	3.72	4.18	3.45	2.35	3.24	664	666	662	659	663	661		659	660	718
09/28/1999 14:07	2.96	1.87	4.13	3.74	4.18	3.39	2.65	3.41	665	666	663	659	663	661		659	660	719
09/28/1999 14:08	2.79	1.77	4.13	3.81	4.18	3.45	2.68	3.25	665	666	663	659	663	661		659	660	719
09/28/1999 14:09	2.83	1.97	4.13	3.75	4.18	3.20	2.66	3.12	665	666	663	659	663	661		659	660	718
09/28/1999 14:10	2.81	1.93	4.12	3.79	4.18	2.59	2.42	3.35	665	666	663	659	663	661		659	660	719
09/28/1999 14:11	2.85	1.95	4.11	3.80	4.18	2.36	2.77	3.39	665	666	663	659	663	661		659	660	719
09/28/1999 14:12	2.97	2.09	4.12	3.89	4.18	2.75	2.61	3.51	665	666	663	659	663	661		659	660	720
09/28/1999 14:13	2.78	1.87	4.13	3.90	4.18	3.30	2.71	3.54	665	667	663	659	664	661		659	660	720
09/28/1999 14:14	2.83	1.78	4.13	3.88	4.18	3.45	2.42	3.08	665	667	663	660	664	661		659	660	720
09/28/1999 14:15	2.92	1.86	4.13	3.86	4.18	3.49	2.62	3.38	665	667	663	659	664	661		660	661	720
09/28/1999 14:16	2.75	1.89	4.13	3.85	4.18	3.41	2.37	3.44	665	667	663	660	664	661		660	661	720
09/28/1999 14:17	2.72	1.69	4.13	3.89	4.18	3.41	2.70	3.37	665	667	663	660	664	661		660	661	720
09/28/1999 14:18	2.74	1.79	4.13	3.83	4.18	2.86	2.40	3.27	665	667	663	660	664	661		660	661	720
09/28/1999 14:19	2.89	1.88	4.13	3.83	4.18	2.36	2.75	3.63	665	667	663	660	664	661		660	661	721
09/28/1999 14:20	2.78	1.97	4.13	3.86	4.18	2.35	2.77	3.22	665	667	664	660	664	662		660	661	721
09/28/1999 14:21	3.05	2.08	4.13	3.83	4.18	2.66	2.57	3.40	665	667	664	660	664	662		660	661	721
09/28/1999 14:22	2.96	1.92	4.14	3.81	4.18	3.27	2.47	3.55	666	667	664	660	664	662		660	661	721
09/28/1999 14:23	2.80	1.93	4.13	3.82	4.18	3.54	2.36	3.53	666	667	664	660	664	662		660	661	721
09/28/1999 14:24	2.73	1.83	4.13	3.77	4.18	3.50	2.66	3.25	666	667	664	660	664	662		661	661	721
09/28/1999 14:25	2.79	1.72	4.13	3.80	4.18	3.49	2.51	3.41	666	667	664	660	664	662		661	661	722
09/28/1999 14:26	2.90	1.84	4.13	3.86	4.18	3.54	2.47	3.34	666	667	664	660	664	662		661	661	722
09/28/1999 14:27	2.67	1.86	4.12	3.75	4.18	3.52	2.56	3.00	666	667	664	660	664	662		661	662	721
09/28/1999 14:28	2.83	1.90	4.12	3.81	4.18	3.56	2.68	3.52	666	667	664	660	664	662		661	662	721
09/28/1999 14:29	2.86	2.01	4.12	3.87	4.18	3.65	2.41	3.03	666	667	664	660	664	662		661	662	721
09/28/1999 14:30	2.81	1.93	4.11	3.75	4.18	3.59	2.57	3.15	666	668	664	660	664	662		661	662	721
09/28/1999 14:31	2.93	2.01	4.11	3.71	4.18	3.53	2.56	3.29	666	668	664	660	665	662		661	662	722
09/28/1999 14:32	2.70	1.99	4.12	3.70	4.18	2.86	2.53	3.15	666	668	664	660	665	663		661	662	722
09/28/1999 14:33	2.86	2.03	4.11	3.74	4.18	2.90	2.66	3.19	666	668	664	661	665	663		661	662	722
09/28/1999 14:34	2.90	1.83	4.11	3.80	4.18	3.40	2.49	3.35	666	668	664	661	665	663		661	662	723
09/28/1999 14:35	2.74	1.94	4.12	3.79	4.18	3.20	2.62	3.08	666	668	665	661	665	663		661	662	723
09/28/1999 14:36	2.91	1.96	4.11	3.82	4.18	2.64	2.74	3.41	666	668	664	661	665	663		662	662	723
09/28/1999 14:37	2.88	1.78	4.12	3.88	4.18	2.72	2.62	3.26	667	668	665	661	665	663		662	662	723
09/28/1999 14:38	2.84	2.10	4.12	3.86	4.18	3.29	2.66	3.35	667	668	665	661	665	663		662	662	723

09/28/1999 14:39	2.93	1.87	4.12	3.87	4.18	2.84	2.59	3.22	667	668	665	661	665	663		662	662	724
09/28/1999 14:40	2.92	1.85	4.12	3.84	4.18	3.18	2.74	3.16	667	668	665	661	665	663		662	663	724
09/28/1999 14:41	2.77	1.74	4.12	3.82	4.18	3.43	2.61	3.09	667	668	665	661	665	664		662	663	723
09/28/1999 14:42	2.89	1.90	4.13	3.85	4.18	3.52	2.68	3.23	667	669	665	661	665	664		662	663	723
09/28/1999 14:43	3.02	2.13	4.13	3.88	4.18	3.71	2.53	3.28	667	669	665	661	665	664		662	663	723
09/28/1999 14:44	2.91	2.01	4.13	3.83	4.18	3.60	2.35	3.18	667	669	665	661	666	664		662	663	723
09/28/1999 14:45	2.71	1.77	4.12	3.75	4.18	3.35	2.34	3.28	667	669	665	661	666	664		662	663	723
09/28/1999 14:46	2.71	1.75	4.12	3.74	4.18	3.47	2.42	3.16	667	669	665	661	666	664		662	663	723
09/28/1999 14:47	2.70	1.99	4.11	3.65	4.18	3.40	2.62	2.79	667	669	665	661	666	664		662	663	723
09/28/1999 14:48	2.73	1.91	4.10	3.63	4.18	3.51	2.38	3.11	667	669	665	661	666	664		662	663	723
09/28/1999 14:49	2.73	1.83	4.09	3.67	4.18	3.30	2.46	3.02	667	669	665	661	666	664		663	663	723
09/28/1999 14:50	2.71	1.87	4.08	3.70	4.18	3.34	2.41	3.15	667	669	665	661	666	664		663	663	723
09/28/1999 14:51	2.65	1.90	4.07	3.68	4.18	3.43	2.45	3.00	667	669	665	661	666	664		663	664	723
09/28/1999 14:52	2.72	1.89	4.06	3.64	4.18	3.47	2.26	2.86	668	669	665	662	666	664		663	664	723
09/28/1999 14:53	2.66	1.95	4.05	3.65	4.18	3.44	2.55	3.09	667	669	665	662	666	664		663	664	723
09/28/1999 14:54	2.70	1.71	4.05	3.73	4.18	3.33	2.27	3.00	667	669	665	661	666	664		663	664	723
09/28/1999 14:55	2.73	1.71	4.04	3.65	4.18	3.43	2.44	3.08	667	669	665	662	666	664		663	664	724
09/28/1999 14:56	2.75	1.77	4.04	3.66	4.18	3.11	2.34	3.16	667	669	665	662	666	664		663	664	724
09/28/1999 14:57	2.65	1.81	4.03	3.66	4.18	3.16	2.36	2.84	667	669	665	662	666	665		663	664	723
09/28/1999 14:58	2.60	1.80	4.02	3.56	4.18	3.27	2.49	3.06	668	669	666	662	666	665		663	664	723
09/28/1999 14:59	2.62	1.87	4.01	3.59	4.18	3.42	2.39	2.90	668	669	665	662	666	665		663	664	723
09/28/1999 15:00	2.56	1.82	4.00	3.60	4.18	3.30	2.41	2.94	668	669	665	662	666	665		663	664	723
09/28/1999 15:01	2.60	1.71	3.99	3.63	4.18	2.63	2.29	3.17	668	669	666	662	666	665		663	664	723
09/28/1999 15:02	2.64	1.82	3.99	3.71	4.18	3.13	2.30	3.12	668	669	666	662	666	665		664	664	724
09/28/1999 15:03	2.66	1.75	3.98	3.68	4.17	3.47	2.32	3.11	668	670	666	662	666	665		664	665	724
09/28/1999 15:04	2.72	1.87	3.98	3.64	4.17	3.02	2.46	3.11	668	670	666	662	666	665		664	665	724
09/28/1999 15:05	2.73	1.90	3.98	3.64	4.17	2.81	2.36	3.11	668	670	666	662	666	665		664	665	725
09/28/1999 15:06	2.73	1.84	3.97	3.67	4.17	3.31	2.49	3.11	668	670	666	662	666	665		664	665	725
09/28/1999 15:07	2.74	1.76	3.97	3.62	4.17	3.52	2.42	3.11	668	670	666	662	666	665		664	665	725
09/28/1999 15:08	2.71	1.74	3.97	3.68	4.17	3.57	2.33	3.11	668	670	666	662	666	665		664	665	725
09/28/1999 15:09	2.73	1.68	3.97	3.69	4.17	3.40	2.46	3.11	668	670	666	662	666	665		664	665	725
09/28/1999 15:10	2.66	1.63	3.96	3.68	4.17	3.25	2.41	3.11	668	670	666	663	666	666		664	665	725
09/28/1999 15:11	2.62	1.74	3.96	3.64	4.17	3.12	2.50	2.79	668	670	666	663	666	666		664	665	725
09/28/1999 15:12	2.81	1.97	3.96	3.58	4.17	3.40	3.98	2.57	668	670	666	663	666	666		664	665	725
Test 2 Average				***3.16***				***3.30***				***663***					***662***	***717***

	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	A Air Heater Gas In Temp North	A Air Heater Gas In Temp South	A Air Heater Gas In Temp East	A Air Heater Gas In Temp West	B Air Heater Gas In Temp	B Air Heater Gas In Temp North	B Air Heater Gas In Temp South	B Air Heater Gas In Temp East	Economizer Gas Out Temp
09/29/1999 8:20	2.67	2.22	3.93	4.31	4.19	3.69	1.88	3.33	653	655	651	646	651	662		661	661	714
09/29/1999 8:21	2.71	2.61	3.93	4.28	4.19	3.47	1.96	3.88	653	655	651	646	652	662		661	662	715
09/29/1999 8:22	2.51	2.34	3.94	4.32	4.19	2.64	1.80	3.91	653	656	651	647	652	662		661	662	713
09/29/1999 8:23	2.71	2.37	3.94	4.44	4.19	2.59	2.05	4.21	654	656	652	647	652	663		661	662	712
09/29/1999 8:24	2.83	2.46	3.95	4.55	4.19	2.56	2.02	4.01	654	656	652	647	652	663		662	662	711
09/29/1999 8:25	2.79	2.47	3.95	4.44	4.19	2.82	1.97	3.71	654	656	652	647	652	663		662	662	710
09/29/1999 8:26	2.70	2.27	3.95	4.34	4.19	3.33	1.86	3.78	654	656	652	647	653	663		662	663	711
09/29/1999 8:27	2.59	2.34	3.93	4.29	4.19	3.63	1.93	3.00	654	656	652	647	653	663		662	663	710
09/29/1999 8:28	2.79	2.42	3.93	4.24	4.19	3.89	1.74	3.68	654	656	652	648	653	664		662	663	707
09/29/1999 8:29	2.69	2.26	3.94	4.07	4.19	3.56	1.66	3.84	654	656	652	648	653	664		662	663	705
09/29/1999 8:30	2.63	2.27	3.93	4.03	4.19	3.33	1.86	3.88	654	656	653	648	653	664		663	663	704
09/29/1999 8:31	2.74	2.46	3.94	3.95	4.19	3.65	2.27	3.42	654	657	653	648	653	664		663	663	703
09/29/1999 8:32	2.60	2.33	3.94	3.89	4.19	3.61	1.88	3.47	654	656	653	648	653	664		663	663	703
09/29/1999 8:33	2.55	2.16	3.93	4.12	4.19	3.86	2.02	3.65	654	656	653	648	653	664		663	663	703
09/29/1999 8:34	2.57	2.30	3.93	4.14	4.18	3.23	1.54	3.34	654	656	653	648	653	664		663	664	702
09/29/1999 8:35	2.56	2.39	3.93	4.03	4.18	2.62	1.94	3.98	654	656	653	648	654	664		663	664	701
09/29/1999 8:36	2.78	2.54	3.94	4.07	4.18	2.68	2.20	3.54	654	656	652	648	653	664		663	664	701
09/29/1999 8:37	2.69	2.47	3.94	4.16	4.18	3.57	1.78	3.55	654	656	652	648	654	664		663	664	702
09/29/1999 8:38	2.59	2.45	3.93	4.16	4.18	3.68	1.84	3.53	654	656	652	648	653	664		663	664	700
09/29/1999 8:39	2.63	2.28	3.93	4.32	4.18	2.94	1.61	3.59	654	656	652	648	653	664		662	664	698
09/29/1999 8:40	2.76	2.50	3.92	4.32	4.18	2.65	2.12	3.77	654	656	652	648	653	663		662	663	697
09/29/1999 8:41	2.76	2.49	3.92	4.21	4.18	3.12	1.87	3.48	654	656	652	648	653	663		662	663	696
09/29/1999 8:42	2.74	2.29	3.92	4.23	4.18	3.57	1.90	3.66	654	656	652	648	653	663		662	664	696
09/29/1999 8:43	2.53	2.16	3.90	4.14	4.18	3.57	1.77	3.67	654	656	652	648	653	663		662	663	696
09/29/1999 8:44	2.61	2.23	3.90	4.15	4.18	3.54	1.95	3.60	654	655	651	648	653	663		662	663	696
09/29/1999 8:45	2.73	2.34	3.89	4.15	4.18	3.58	1.84	3.47	654	655	651	648	653	662		662	663	696
09/29/1999 8:46	2.53	2.24	3.89	4.21	4.18	3.58	1.76	3.67	653	655	651	648	653	662		661	663	696
09/29/1999 8:47	2.56	2.27	3.89	4.15	4.18	3.67	2.03	3.42	653	655	651	648	653	662		661	663	695
09/29/1999 8:48	2.76	2.21	3.90	3.99	4.18	3.41	1.77	3.53	653	655	651	648	652	662		661	662	695
09/29/1999 8:49	2.72	2.30	3.90	4.06	4.18	3.58	1.87	3.60	653	654	651	648	652	662		661	662	695
09/29/1999 8:50	2.67	2.32	3.90	4.16	4.18	3.63	1.92	3.75	653	654	650	648	652	662		660	662	695
09/29/1999 8:51	2.56	2.30	3.90	3.88	4.18	3.33	1.92	3.25	653	654	650	647	652	661		660	662	695
09/29/1999 8:52	2.75	2.28	3.90	3.87	4.18	3.60	1.91	3.60	653	654	650	647	652	661		660	661	695
09/29/1999 8:53	2.69	2.35	3.90	3.98	4.18	3.71	1.75	3.33	652	654	650	647	652	661		659	661	695
09/29/1999 8:54	2.68	2.66	3.91	3.77	4.18	3.73	2.36	2.78	652	653	650	647	651	661		659	661	696
09/29/1999 8:55	2.50	2.48	3.91	3.61	4.18	3.72	2.03	3.18	652	653	650	647	651	660		659	661	695
09/29/1999 8:56	2.68	2.40	3.91	3.93	4.18	3.74	1.70	3.74	652	653	649	647	651	660		659	661	695
09/29/1999 8:57	2.47	2.55	3.91	3.84	4.18	3.67	1.84	3.32	652	653	649	646	651	660		658	660	695
09/29/1999 8:58	2.55	2.24	3.90	3.93	4.18	3.67	1.98	3.56	652	653	649	646	651	660		658	660	695
09/29/1999 8:59	2.62	2.21	3.90	4.07	4.18	3.61	1.80	3.83	652	653	649	646	651	660		658	660	696
09/29/1999 9:00	2.56	2.24	3.90	4.18	4.18	3.77	1.67	3.82	651	653	649	646	651	659		658	660	696
09/29/1999 9:01	2.54	2.09	3.90	4.20	4.18	3.64	1.92	3.77	651	652	649	646	651	659		658	660	696
09/29/1999 9:02	2.57	2.30	3.91	4.11	4.18	3.66	1.59	3.80	651	652	649	645	650	659		657	660	696
09/29/1999 9:03	2.54	2.39	3.90	4.10	4.18	3.71	1.80	3.59	651	652	648	645	650	659		657	659	696
09/29/1999 9:04	2.70	2.37	3.90	4.01	4.18	3.63	1.74	3.53	651	652	648	645	650	659		657	659	696
09/29/1999 9:05	2.57	2.20	3.90	4.02	4.18	3.57	2.09	3.35	651	652	648	645	650	659		657	659	695
09/29/1999 9:06	2.59	2.25	3.90	4.05	4.18	3.64	1.79	3.49	651	652	648	645	650	659		657	659	696
09/29/1999 9:07	2.60	2.36	3.90	4.03	4.18	3.69	1.66	3.38	651	652	648	645	650	658		657	659	696
09/29/1999 9:08	2.61	2.48	3.90	4.07	4.18	3.83	1.69	3.45	650	651	648	645	650	658		657	658	696
09/29/1999 9:09	2.43	2.18	3.90	4.06	4.18	3.62	1.56	3.46	650	651	648	645	650	658		657	658	696
09/29/1999 9:10	2.36	2.41	3.88	4.02	4.18	3.65	2.03	3.19	650	651	648	645	649	658		657	658	696

09/29/1999 9:11	2.60	2.39	3.88	3.99	4.18	3.70	1.75	3.39	650	651	648	645	649	658		656	658	696
09/29/1999 9:12	2.55	2.44	3.88	3.89	4.18	3.70	1.95	3.31	650	651	648	644	649	658		656	658	696
09/29/1999 9:13	2.44	2.30	3.88	3.98	4.18	3.88	1.77	3.15	650	651	647	644	649	658		656	658	696
09/29/1999 9:14	2.53	2.48	3.88	4.05	4.18	3.82	1.97	3.32	650	651	648	644	649	657		656	658	696
09/29/1999 9:15	2.53	2.35	3.88	4.12	4.18	3.78	1.78	3.55	650	651	647	644	649	657		656	657	696
09/29/1999 9:16	2.36	2.23	3.89	4.18	4.18	3.88	2.20	3.32	650	651	647	644	649	657		656	658	696
09/29/1999 9:17	2.41	2.39	3.90	4.12	4.18	3.77	1.79	3.38	650	651	647	644	649	657		656	657	696
09/29/1999 9:18	2.44	2.50	3.90	4.00	4.18	3.72	1.92	3.46	650	651	647	644	649	657		656	657	697
09/29/1999 9:19	2.41	2.39	3.90	3.99	4.18	3.89	1.88	3.32	650	651	647	644	649	657		655	657	697
09/29/1999 9:20	2.42	2.40	3.90	4.01	4.18	3.88	1.96	3.53	650	651	647	644	649	657		655	657	697
09/29/1999 9:21	2.49	2.46	3.90	4.04	4.18	3.77	1.80	3.29	650	651	647	644	649	657		655	657	698
09/29/1999 9:22	2.60	2.42	3.90	4.15	4.18	3.85	1.81	3.52	650	651	647	644	649	657		655	657	698
09/29/1999 9:23	2.56	2.32	3.90	4.19	4.18	3.66	1.89	3.65	650	651	647	644	649	657		655	657	698
09/29/1999 9:24	2.58	2.32	3.90	4.21	4.18	3.70	1.61	3.74	650	651	647	644	649	657		655	657	698
09/29/1999 9:25	2.44	2.30	3.90	4.18	4.18	3.57	1.60	3.54	650	651	647	644	649	657		655	657	698
09/29/1999 9:26	2.63	2.41	3.89	4.15	4.18	3.69	1.70	3.57	650	651	647	644	649	657		655	657	698
09/29/1999 9:27	2.51	2.35	3.89	4.15	4.18	3.70	1.76	3.57	650	651	647	644	648	657		655	657	698
09/29/1999 9:28	2.57	2.42	3.89	4.17	4.18	3.72	1.76	3.50	649	651	647	644	648	656		655	657	698
09/29/1999 9:29	2.41	2.20	3.89	4.08	4.18	3.55	1.91	3.50	649	651	647	643	648	657		655	657	698
09/29/1999 9:30	2.48	2.35	3.89	4.09	4.18	3.72	1.79	3.44	649	651	647	643	648	656		655	657	699
09/29/1999 9:31	2.54	2.55	3.88	4.07	4.18	3.69	1.91	3.33	649	651	647	643	648	656		655	657	698
09/29/1999 9:32	2.58	2.45	3.89	4.06	4.18	3.61	1.64	3.57	649	651	647	643	648	656		655	657	698
09/29/1999 9:33	2.45	2.29	3.89	4.07	4.18	3.62	1.66	3.65	649	651	647	643	648	657		655	657	698
09/29/1999 9:34	2.59	2.24	3.89	4.08	4.18	3.66	2.02	3.78	649	651	647	643	648	656		655	657	699
09/29/1999 9:35	2.53	1.99	3.89	4.16	4.18	3.49	1.70	3.70	649	651	647	643	648	656		655	657	699
09/29/1999 9:36	2.63	2.26	3.89	4.19	4.18	3.49	1.82	3.61	649	651	647	643	648	657		655	657	699
09/29/1999 9:37	2.39	2.25	3.89	4.20	4.18	3.63	1.67	3.64	649	651	647	643	648	656		655	656	699
09/29/1999 9:38	2.43	2.25	3.89	4.19					649	651	647	644	648	657		655	657	699
09/29/1999 9:39	2.55	2.37	3.89	4.05					650	651	647	644	648	656		655	657	699
09/29/1999 9:40	2.52	2.16	3.88	4.06					650	651	647	644	648	657		655	656	699
09/29/1999 9:41	2.40	2.35	3.87	4.00					650	651	647	644	648	656		655	657	699
09/29/1999 9:42	2.49	2.48	3.88	3.87					650	651	647	644	648	656		655	656	699
09/29/1999 9:43	2.44	2.45	3.87	3.90					650	651	647	644	649	656		655	656	699
09/29/1999 9:44	2.41	2.28	3.87	3.90	4.06	3.62	1.39	3.49	650	651	647	644	649	657		655	657	699
09/29/1999 9:45	2.48	2.29	3.87	4.00	4.03	3.66	1.51	3.56	650	651	648	644	649	657		655	656	699
09/29/1999 9:46	2.49	2.31	3.86	4.11	3.94	3.65	1.53	3.75	650	651	647	644	649	657		655	656	700
09/29/1999 9:47	2.49	2.43	3.85	4.19	3.95	3.72	1.60	3.70	650	651	647	644	649	656		655	657	700
09/29/1999 9:48	2.56	2.31	3.86	4.23	4.02	3.72	1.43	3.60	650	651	647	644	649	656		655	657	700
09/29/1999 9:49	2.54	2.32	3.88	4.14	4.06	3.61	1.66	3.63	650	651	648	644	649	657		655	657	701
09/29/1999 9:50	2.67	2.40	3.88	4.21	4.08	3.78	1.62	3.68	650	651	647	644	649	657		655	657	700
09/29/1999 9:51	2.60	2.38	3.88	4.31	4.04	3.81	1.50	3.80	650	651	648	644	649	657		655	657	700
09/29/1999 9:52	2.55	2.45	3.88	4.17	4.04	3.72	1.80	3.90	650	651	648	644	649	657		655	657	701
09/29/1999 9:53	2.72	2.52	3.89	4.18	4.08	3.85	1.73	3.16	650	652	648	644	649	657		655	657	700
09/29/1999 9:54	2.80	2.60	3.90	4.18	4.11	3.79	1.82	3.58	650	652	648	644	649	657		655	657	701
09/29/1999 9:55	2.70	2.49	3.90	4.26	4.14	3.86	1.53	3.71	650	652	648	644	649	657		656	657	701
09/29/1999 9:56	2.73	2.41	3.91	4.34	4.18	3.84	1.77	3.75	650	652	648	644	649	657		656	657	701
09/29/1999 9:57	2.72	2.53	3.91	4.38	4.20	3.88	1.61	3.66	650	652	648	644	649	657		656	657	702
09/29/1999 9:58	2.70	2.52	3.91	4.28	4.19	3.76	1.62	3.34	650	652	648	644	649	657		656	657	702
09/29/1999 9:59	2.75	2.51	3.92	4.22	4.16	3.67	1.72	3.47	650	652	648	644	649	657		656	657	702
09/29/1999 10:00	2.76	2.57	3.93	4.27	4.18	3.67	1.64	3.62	650	652	648	645	649	657		656	657	702
09/29/1999 10:01	2.74	2.48	3.93	4.27	4.16	3.65	1.61	3.55	650	652	648	644	649	657		656	657	702
09/29/1999 10:02	2.60	2.32	3.93	4.29	4.11	3.55	1.67	3.97	651	652	648	645	650	657		656	657	702
09/29/1999 10:03	2.70	2.56	3.92	4.24	4.12	3.69	1.53	3.65	651	652	648	645	650	657		656	657	702
09/29/1999 10:04	2.65	2.52	3.92	4.20	4.07	3.71	1.64	3.50	651	652	649	645	650	657		656	657	702
09/29/1999 10:05	2.71	2.44	3.92	4.19	4.10	3.72	1.67	3.56	651	652	649	645	650	657		656	657	702
09/29/1999 10:06	2.75	2.48	3.93	4.21	4.11	3.79	1.79	3.57	651	653	649	645	650	657		656	657	702
09/29/1999 10:07	2.68	2.43	3.94	4.13	4.19	3.77	1.66	3.48	651	653	649	645	650	658		656	657	703

09/29/1999 10:08	2.72	2.40	3.94	4.10	4.14	3.71	1.73	3.39	651	653	649	645	650	658		656	657	703
09/29/1999 10:09	2.71	2.42	3.94	4.20	4.14	3.58	1.69	3.77	651	653	649	645	650	658		657	657	703
09/29/1999 10:10	2.68	2.41	3.94	4.24	4.19	3.53	1.65	3.84	651	653	649	645	650	658		657	657	703
09/29/1999 10:11	2.83	2.42	3.94	4.21	4.11	3.61	1.71	3.25	651	653	649	645	650	658		657	657	703
09/29/1999 10:12	2.77	2.32	3.94	4.20	4.05	3.63	1.75	3.49	651	653	649	645	650	658		657	658	703
09/29/1999 10:13	2.89	2.52	3.94	4.24	4.10	3.66	1.84	3.71	651	653	649	645	650	658		657	658	704
09/29/1999 10:14	2.80	2.41	3.94	4.25	4.07	3.79	1.70	3.34	651	653	649	645	650	658		657	658	704
09/29/1999 10:15	2.77	2.59	3.94	4.15	4.11	3.88	1.64	3.22	652	653	649	645	650	658		657	658	704
09/29/1999 10:16	2.82	2.51	3.94	4.10	4.19	3.78	1.66	3.21	652	653	649	646	650	658		657	658	704
09/29/1999 10:17	2.77	2.57	3.94	4.16	4.21	3.68	1.86	3.59	652	654	650	646	650	658		657	658	705
09/29/1999 10:18	2.68	2.40	3.95	4.21	4.13	3.69	1.69	3.41	652	654	650	646	651	658		657	658	705
09/29/1999 10:19	2.66	2.48	3.95	4.17	4.13	3.66	1.64	3.48	652	654	650	646	651	658		657	658	705
09/29/1999 10:20	2.65	2.48	3.95	4.12	4.11	3.62	1.86	3.50	652	654	650	646	651	659		657	658	705
09/29/1999 10:21	2.80	2.46	3.95	4.22	4.15	3.70	1.71	3.62	652	654	650	646	651	659		657	658	705
09/29/1999 10:22	2.72	2.35	3.96	4.27	4.04	3.74	1.72	3.53	652	654	650	646	651	659		657	658	705
09/29/1999 10:23	2.80	2.48	3.96	4.23	4.03	3.79	1.80	3.19	652	654	650	646	651	659		657	658	706
09/29/1999 10:24	2.78	2.55	3.97	4.20	4.06	3.81	1.89	3.44	653	654	650	647	651	659		657	659	706
09/29/1999 10:25	2.65	2.54	3.97	4.25	4.08	3.75	1.70	3.41	652	654	650	647	651	659		657	659	706
09/29/1999 10:26	2.60	2.55	3.97	4.16	4.09	3.71	1.75	3.51	653	654	650	647	651	659		657	659	706
09/29/1999 10:27	2.76	2.62	3.97	4.08	4.20	3.73	1.79	3.35	653	655	651	647	652	659		658	659	706
09/29/1999 10:28	2.70	2.70	3.98	4.14	4.18	3.78	1.66	3.41	653	655	651	647	652	659		658	659	706
09/29/1999 10:29	2.70	2.52	3.98	4.18	4.14	3.83	1.66	3.65	653	655	651	647	652	659		658	659	706
09/29/1999 10:30	2.77	2.38	3.97	4.28	4.08	3.81	1.79	3.37	653	655	651	647	652	659		658	659	706
09/29/1999 10:31	2.70	2.58	3.97	4.26	4.06	3.76	1.76	3.55	653	655	651	647	652	660		658	659	707
09/29/1999 10:32	2.68	2.35	3.97	4.24	4.06	3.69	1.79	3.74	653	655	651	647	652	660		658	659	707
09/29/1999 10:33	2.73	2.40	3.96	4.24	4.08	3.69	1.78	3.58	653	655	651	647	652	660		658	659	707
09/29/1999 10:34	2.61	2.22	3.97	4.27	4.02	3.66	1.61	3.57	653	655	651	647	652	660		659	659	707
09/29/1999 10:35	2.62	2.23	3.97	4.23	3.98	3.58	1.62	3.63	653	655	651	648	652	660		659	660	707
09/29/1999 10:36	2.73	2.30	3.97	4.32	4.00	3.68	1.78	3.80	654	655	652	648	652	660		659	660	707
09/29/1999 10:37	2.66	2.31	3.98	4.32	4.07	3.72	1.78	3.83	654	655	652	648	653	660		659	660	708
09/29/1999 10:38	2.53	2.41	3.97	4.31	4.04	3.58	1.64	3.73	654	656	652	648	653	660		659	660	708
09/29/1999 10:39	2.65	2.42	3.98	4.24	4.12	3.62	1.81	3.70	654	656	652	648	653	660		659	660	708
09/29/1999 10:40	2.65	2.33	3.99	4.20	4.12	3.61	1.57	3.72	654	656	652	648	653	660		659	660	708
09/29/1999 10:41	2.60	2.54	3.99	4.10	4.09	3.57	1.66	3.50	654	656	652	648	653	661		659	660	708
09/29/1999 10:42	2.65	2.44	3.98	4.17	4.04	3.73	1.62	3.72	654	656	652	648	653	661		659	660	709
09/29/1999 10:43	2.74	2.51	3.97	4.30	4.11	3.88	1.68	3.76	654	656	652	648	653	661		659	660	708
09/29/1999 10:44	2.60	2.32	3.98	4.28	4.09	3.68	1.72	3.54	654	656	652	648	653	661		659	660	709
09/29/1999 10:45	2.61	2.41	3.98	4.24	4.04	3.70	1.65	3.59	655	656	652	649	653	661		659	661	709
09/29/1999 10:46	2.58	2.38	4.00	4.25	4.00	3.66	1.76	3.77	655	656	653	649	653	661		659	661	709
09/29/1999 10:47	2.52	2.45	3.98	4.21	3.98	3.70	1.63	3.59	655	657	652	649	653	661		660	661	709
09/29/1999 10:48	2.59	2.40	3.97	4.17	3.99	3.66	1.65	3.76	655	657	653	649	653	661		660	661	709
09/29/1999 10:49	2.68	2.51	3.96	4.22	4.04	3.74	1.51	3.62	655	657	653	649	654	662		660	661	709
09/29/1999 10:50	2.65	2.52	3.96	4.25	4.02	3.85	1.43	3.50	655	657	653	649	654	662		660	661	709
09/29/1999 10:51	2.58	2.34	3.95	4.32	4.04	3.79	1.43	3.53	655	657	653	649	654	662		660	661	709
09/29/1999 10:52	2.58	2.36	3.95	4.37	3.99	3.80	1.43	3.61	655	657	653	649	654	662		661	661	710
09/29/1999 10:53	2.62	2.30	3.95	4.37	3.95	3.70	1.43	3.59	655	657	653	649	654	662		661	662	710
09/29/1999 10:54	2.58	2.40	3.94	4.29	3.97	3.60	1.43	3.45	655	657	653	649	654	662		661	662	710
09/29/1999 10:55	2.48	2.30	3.94	4.22	3.91	3.59	1.43	3.43	655	657	653	649	654	662		661	662	710
09/29/1999 10:56	2.63	2.40	3.93	4.15	4.03	3.57	1.43	3.28	655	657	653	649	654	662		661	662	710
09/29/1999 10:57	2.83	2.34	3.94	4.20	4.03	3.63	1.43	2.96	655	657	653	649	654	662		661	662	709
09/29/1999 10:58	2.95	2.28	3.94	4.14	4.08	3.67	1.44	2.95	656	658	653	649	654	663		661	662	709
09/29/1999 10:59	2.77	2.32	3.94	4.16	4.03	3.60	1.68	2.90	656	658	654	649	654	663		661	662	709
09/29/1999 11:00	2.75	2.24	3.95	4.16	4.03	3.67	1.73	3.12	656	658	654	649	655	663		662	662	710
09/29/1999 11:01	2.82	2.40	3.95	4.15	4.02	3.73	1.81	2.99	656	658	654	650	655	663		662	662	710
09/29/1999 11:02	2.84	2.44	3.96	4.22	4.10	3.52	1.79	3.49	656	658	654	650	655	663		662	662	710
09/29/1999 11:03	2.77	2.45	3.95	4.27	4.05	3.72	1.88	3.06	656	658	654	650	655	663		662	662	711
09/29/1999 11:04	2.82	2.48	3.96	4.20	4.02	3.72	2.06	2.88	656	658	654	650	655	663		662	663	711

09/29/1999 11:05	2.98	2.58	3.97	4.19	4.17	3.88	1.93	2.78	656	658	654	650	655	663		662	663	711
09/29/1999 11:06	3.06	2.60	3.98	4.25	4.18	3.93	2.00	2.94	656	658	654	650	655	664		662	663	712
Test 3 Average				***3.28***				***3.26***				***650***					***659***	***702***

Craig 1 Scrubber Data

Time	1A LS Slurry Flow	1A SBF Amps	1A Mixed Gas Temp	1A SBF Flow	1A Inlet DP to Tray	1A Inlet DP to Demist	1A Module DP	1A Bypass RHT Damper	1B LS Slurry Flow	1B SBF Amps	1B Mixed Gas Temp	1B SBF Flow	1B Inlet DP to Tray	1B Inlet DP to Demist	1B Module DP	1B Bypass RHT Damper	1C LS Slurry Flow	1C SBF Amps	1C Mixed Gas Temp	1C SBF Flow	1C Inlet DP to Tray	1C Inlet DP to Demist	1C Module DP	1C Bypass RHT Damper	1D LS Slurry Flow	1D SBF Amps	1D Mixed Gas Temp	1D SBF Flow	1D Inlet DP to Tray	1D Inlet DP to Demist	1D Module DP	1D Bypass RHT Damper
09/28/1999 8:24	4	73	140	579	0.7	2.8	1.0	29	17.2	85	140	922	0.8	1.3	1.4	32	8.0	88	140	777	0.5	1.8	1.8	22	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:25	4	73	140	582	0.7	2.7	1.0	29	17.3	85	140	922	0.8	1.3	1.4	32	8.5	87	140	779	0.5	1.8	1.9	22	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:26	5	73	140	579	0.7	2.8	1.0	29	17.1	85	140	922	0.8	1.3	1.4	32	8.8	88	140	778	0.4	1.8	1.8	22	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:27	5	73	140	583	0.7	2.7	1.0	29	17.2	85	140	922	0.8	1.3	1.4	32	9.3	88	140	779	0.5	1.8	1.8	22	0.2	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 8:28	5	73	140	585	0.7	2.7	1.0	29	16.7	85	140	922	0.8	1.3	1.4	32	10.3	88	140	779	0.4	1.8	1.8	22	0.3	2.3	69	128	0.0	0.0	0.0	0.0
09/28/1999 8:29	5	73	140	582	0.7	2.7	1.0	29	16.8	85	140	922	0.8	1.3	1.4	31	10.7	87	140	777	0.4	1.8	1.8	22	0.2	2.3	69	127	0.0	0.0	0.0	0.0
09/28/1999 8:30	5	73	140	580	0.7	2.7	1.0	29	16.8	85	140	922	0.8	1.3	1.4	31	11.2	88	140	779	0.4	1.8	1.8	22	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 8:31	5	73	140	577	0.7	2.8	1.0	29	16.5	85	140	922	0.8	1.3	1.4	31	11.4	88	140	776	0.5	1.8	1.8	22	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:32	6	73	140	575	0.7	2.7	1.0	29	16.4	85	140	922	0.8	1.4	1.4	31	12.1	87	140	779	0.4	1.8	1.8	22	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 8:33	6	73	140	579	0.7	2.7	1.0	29	16.1	85	140	922	0.8	1.4	1.4	31	12.7	88	140	779	0.5	1.8	1.8	22	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:34	6	73	140	579	0.7	2.8	1.0	29	16.0	85	140	922	0.8	1.3	1.4	31	12.8	88	140	776	0.5	1.9	1.9	22	0.3	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 8:35	7	73	140	585	0.7	2.8	1.0	29	15.8	85	140	922	0.8	1.3	1.4	31	13.3	88	140	776	0.6	1.9	1.9	22	0.3	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 8:36	7	72	140	582	0.7	2.7	1.0	29	15.7	85	140	922	0.8	1.3	1.4	31	13.9	87	140	779	0.5	1.9	1.9	21	0.3	2.3	69	122	0.0	0.0	0.0	0.0
09/28/1999 8:37	7	73	140	582	0.7	2.8	1.0	29	15.4	85	140	922	0.8	1.3	1.4	31	14.3	87	140	779	0.4	1.8	1.8	21	0.3	2.3	69	124	0.0	0.0	0.0	0.0
09/28/1999 8:38	8	73	140	587	0.7	2.7	1.0	29	15.4	85	140	922	0.8	1.3	1.4	31	14.4	87	140	778	0.4	1.8	1.8	21	0.3	2.3	69	124	0.0	0.0	0.0	0.0
09/28/1999 8:39	8	73	140	596	0.7	2.8	1.0	29	9.5	85	140	922	0.8	1.3	1.4	31	14.9	87	140	780	0.4	1.8	1.8	21	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 8:40	8	73	140	601	0.7	2.7	1.0	29	6.1	85	140	922	0.8	1.3	1.4	31	15.6	88	140	779	0.4	1.8	1.9	21	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:41	8	73	140	588	0.7	2.7	1.0	29	5.1	85	140	922	0.8	1.3	1.4	31	15.6	87	140	777	0.4	1.8	1.9	21	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:42	8	73	140	583	0.7	2.8	1.0	29	4.8	85	140	922	0.8	1.3	1.4	31	15.8	87	140	777	0.5	1.8	1.9	21	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 8:43	9	73	140	587	0.7	2.7	1.0	29	4.4	85	140	922	0.8	1.3	1.4	31	16.7	88	140	778	0.4	1.8	1.9	21	0.3	2.3	69	127	0.0	0.0	0.0	0.0
09/28/1999 8:44	9	73	140	598	0.7	2.7	1.0	29	4.1	85	140	922	0.8	1.3	1.4	31	16.7	88	140	776	0.5	1.8	1.8	21	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:45	9	73	140	596	0.7	2.7	1.0	29	4.3	85	140	922	0.8	1.3	1.4	31	16.7	88	140	775	0.4	1.8	1.8	21	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 8:46	10	73	140	577	0.7	2.7	1.0	29	4.4	85	140	922	0.8	1.3	1.4	31	17.4	87	140	779	0.5	1.8	1.9	21	0.3	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 8:47	10	73	140	570	0.7	2.7	1.0	28	4.2	84	140	922	0.8	1.3	1.4	31	17.5	87	140	779	0.4	1.8	1.9	21	0.3	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 8:48	10	73	140	563	0.7	2.7	1.0	28	4.5	85	140	922	0.8	1.3	1.4	31	17.8	87	140	776	0.5	1.8	1.9	21	0.2	2.3	69	119	0.0	0.0	0.0	0.0
09/28/1999 8:49	10	73	140	568	0.7	2.8	1.0	28	4.9	85	140	922	0.8	1.3	1.4	31	18.0	87	140	777	0.5	1.8	1.9	21	0.2	2.3	69	120	0.0	0.0	0.0	0.0
09/28/1999 8:50	11	73	140	571	0.7	2.7	1.0	28	5.1	85	140	922	0.8	1.4	1.4	31	18.2	87	140	779	0.5	1.8	1.9	21	0.2	2.3	69	120	0.0	0.0	0.0	0.0
09/28/1999 8:51	11	73	140	579	0.7	2.7	1.0	28	5.3	85	140	922	0.8	1.3	1.4	31	18.3	88	140	775	0.5	1.9	1.9	21	0.2	2.3	69	120	0.0	0.0	0.0	0.0
09/28/1999 8:52	12	73	140	581	0.7	2.8	1.0	28	5.5	85	140	922	0.8	1.3	1.4	31	18.4	88	140	777	0.7	1.9	1.9	21	0.2	2.3	69	120	0.0	0.0	0.0	0.0
09/28/1999 8:53	12	73	140	578	0.7	2.7	1.0	28	5.8	85	140	922	0.8	1.3	1.4	31	18.6	88	140	778	0.6	1.9	1.9	21	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 8:54	12	73	140	575	0.7	2.8	1.0	28	6.2	85	140	922	0.8	1.3	1.4	31	18.8	88	140	778	0.6	1.8	1.9	21	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 8:55	13	73	140	571	0.7	2.7	1.0	28	6.6	85	140	922	0.8	1.3	1.4	31	18.8	87	140	781	0.5	1.8	1.9	21	0.2	2.3	69	120	0.0	0.0	0.0	0.0
09/28/1999 8:56	13	73	140	581	0.7	2.7	1.0	28	7.3	85	140	922	0.8	1.3	1.4	31	18.8	87	140	778	0.5	1.8	1.9	20	0.2	2.3	69	124	0.0	0.0	0.0	0.0
09/28/1999 8:57	13	73	140	579	0.7	2.7	1.0	28	7.6	85	140	922	0.8	1.3	1.4	31	19.0	87	140	778	0.4	1.8	1.9	20	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 8:58	13	73	140	576	0.7	2.8	1.0	28	8.1	85	140	922	0.8	1.3	1.4	31	19.0	88	140	778	0.5	1.8	1.9	20	0.2	2.3	69	122	0.0	0.0	0.0	0.0
09/28/1999 8:59	14	73	140	580	0.7	2.7	1.0	28	8.2	85	140	922	0.8	1.3	1.4	31	18.9	87	140	781	0.4	1.8	1.9	20	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:00	14	73	140	582	0.7	2.7	1.0	28	8.9	85	140	922	0.8	1.3	1.4	31	18.9	88	140	779	0.4	1.8	1.9	20	0.2	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 9:01	14	73	140	582	0.7	2.8	1.0	28	9.8	85	140	922	0.8	1.3	1.4	31	18.8	88	140	776	0.4	1.8	1.9	20	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:02	14	73	140	581	0.7	2.8	1.0	28	10.1	85	140	922	0.8	1.3	1.4	31	18.8	88	140	777	0.5	1.9	1.9	20	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:03	15	73	140	579	0.7	2.8	1.0	28	10.5	85	140	922	0.8	1.3	1.4	31	18.7	87	140	777	0.4	1.8	1.9	20	0.2	2.3	69	119	0.0	0.0	0.0	0.0
09/28/1999 9:04	15	73	140	581	0.7	2.7	1.0	28	11.1	85	140	922	0.8	1.3	1.4	31	18.6	88	140	779	0.4	1.8	1.9	20	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:05	15	73	140	579	0.7	2.7	1.0	28	11.9	85	140	922	0.8	1.3	1.4	31	16.9	88	140	780	0.3	1.8	1.9	20	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:06	16	73	140	575	0.7	2.9	1.0	28	12.5	85	140	922	0.8	1.3	1.4	31	7.8	87	140	780	0.4	1.8	1.9	20	0.2	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 9:07	16	73	140	580	0.7	2.7	1.0	28	13.0	85	140	922	0.8	1.4	1.4	31	6.0	88	140	778	0.4	1.8	1.9	20	0.2	2.3	69	124	0.0	0.0	0.0	0.0
09/28/1999 9:08	16	73	140	583	0.7	2.8	1.0	28	13.0	85	140	922	0.8	1.3	1.4	31	5.0	88	140	778	0.4	1.9	1.9	20	0.2	2.3	69	120	0.0	0.0	0.0	0.0
09/28/1999 9:09	16	73	140	583	0.7	2.7	1.0	28	13.9	85	140	922	0.8	1.3	1.4	31	4.4	88	140	780	0.4	1.9	1.9	20	0.2	2.3	69	122	0.0	0.0	0.0	0.0
09/28/1999 9:10	16	73	140	583	0.7	2.8	1.0	28	14.3	85	140	922	0.8	1.3	1.4	31	4.3	88	140	777	0.5	1.9	1.9	20	0.1	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 9:11	17	73	140	580	0.7	2.8	1.0	28	14.7	85	140	922	0.8	1.3	1.4	31	4.4	88	140	778	0.4	1.8	1.9	20	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:12	11	73	140	579	0.7	2.7	1.0	28	15.1	85	140	922	0.8	1.3	1.4	31	4.7	87	140	779	0.3	1.9	1.9	19	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:13	4	73	140	585	0.7	2.8	1.0	28	15.4	85	140	922	0.8	1.3	1.4	31	5.1	87	140	780	0.4	1.9	1.9	19	0.2	2.3	69	122	0.0	0.0	0.0	0.0
09/28/1999 9:14	3	73	140	583	0.7	2.8	1.0	28	15.7	85	140	922	0.8	1.3	1.4	31	5.3	88	140	779	0.4	1.9	1.9	19	0.2	2.3	69	122	0.0	0.0	0.0	0.0
09/28/1999 9:15	3	73	140	580	0.7	2.8	1.0	28	16.2	85	140	922	0.8	1.3	1.4	31	4.8	87	140	777	0.4	1.8	1.9	19	0.2	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 9:16	3	73	140	582	0.7	2.8	1.0	28	16.5	85	140	922	0.8	1.3	1.4	31	5.6	88	140	775	0.4	1.8	1.9	19	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 9:17	3	73	140	582	0.7	2.8	1.0	28	16.6	85	140	922	0.8	1.3	1.4	31	6.1	88	140	778	0.3	1.9	1.9	19	0.3	2.3	69	127	0.0	0.0	0.0	0.0
09/28/1999 9:18	4	73	140	581	0.7	2.8	1.0	28	16.7	85	140	922	0.8	1.3	1.4	31	6.3	88	140	778	0.3	1.9	1.9	19	0.2	2.3	69	130	0.0	0.0	0.0	0.0
09/28/1999 9:19	4	73	140	578	0.7	2.8	1.0	28	17.1	85	140	922	0.8	1.3	1.4	31	6.2	87	140	778	0.3	1.8	1.9	19	0.3	2.3	69	130	0.0	0.0	0.0	0.0
09/28/1999 9:20	4	73	140	577	0.7	2.7	1.0	28	17.1	85	140	922	0.8	1.3	1.4	31	7.3	87	140	777	0.3	1.9	1.9	19	0.3	2.3	69	128	0.0	0.0	0.0	0.0
09/28/1999 9:21	4	73	140	575	0.7	2.8	1.0	28	17.2	85	140	922	0.8	1.3	1.4	31	7.4	87	140	777	0.3	1.8	1.9	19	0.3	2.3	69	127	0.0	0.0	0.0	0.0
09/28/1999 9:22	4	73	140	582	0.7	2.7	1.0	28	17.3	85	140	922	0.8	1.3	1.4	31	8.4	87	140	780	0.3	1.8	1.9	19	0.2	2.3	69	130	0.0	0.0	0.0	0.0
09/28/1999 9:23	4	73	140	582	0.7	2.8	1.1	28	17.2	85	140	922	0.8	1.3	1.4	31	8.3	87	140	778	0.3	1.9	1.9	19	0.3	2.3	69	130	0.0	0.0	0.0	0.0
09/28/1999 9:24	5	73	140	579	0.7	2.7	1.0	28	17.5	85	140	922	0.8	1.4	1.4	31	8.8	88	140	779	0.3	1.9	1.9	19	0.2	2.3	69	129	0.0	0.0	0.0	0.0
09/28/1999 9:25	5	73	140	584	0.7	2.7	1.0	28	17.6	85	140	922	0.8	1.4	1.5	31	8.8	87	140	778	0.2	1.9	1.9	19	0.3	2.3	69	129	0.0	0.0	0.0	0.0
09/28/1999 9:26	6	72	140	586	0.7	2.8	1.0	28	17.6	84	140	922	0.8	1.3	1.4	31	9.8	87	140	779	0.3	1.9	1.9	19	0.2	2.3	69	129	0.0	0.0	0.0	0.0

Craig 1 Scrubber Data

Time	1A LS Slurry Flow	1A SBF Amps	1A Mixed Gas Temp	1A SBF Flow	1A Inlet DP to Tray	1A Inlet DP to Demist	1A Module DP	1A Bypass RHT Damper	1B LS Slurry Flow	1B SBF Amps	1B Mixed Gas Temp	1B SBF Flow	1B Inlet DP to Tray	1B Inlet DP to Demist	1B Module DP	1B Bypass RHT Damper	1C LS Slurry Flow	1C SBF Amps	1C Mixed Gas Temp	1C SBF Flow	1C Inlet DP to Tray	1C Inlet DP to Demist	1C Module DP	1C Bypass RHT Damper	1D LS Slurry Flow	1D SBF Amps	1D Mixed Gas Temp	1D SBF Flow	1D Inlet DP to Tray	1D Inlet DP to Demist	1D Module DP	1D Bypass RHT Damper
09/28/1999 9:27	6	73	140	581	0.7	2.7	1.0	28	17.6	84	140	922	0.8	1.3	1.4	31	10.1	87	140	779	0.3	1.9	1.9	19	0.3	2.3	69	128	0.0	0.0	0.0	0.0
09/28/1999 9:28	6	73	140	578	0.7	2.8	1.0	28	17.4	84	140	922	0.8	1.3	1.4	31	10.9	87	140	779	0.3	1.9	1.9	19	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 9:29	7	72	140	574	0.7	2.7	1.0	28	17.4	84	140	922	0.8	1.3	1.4	31	11.4	87	140	777	0.3	1.8	1.9	19	0.3	2.3	69	129	0.0	0.0	0.0	0.0
09/28/1999 9:30	7	73	140	581	0.7	2.7	1.0	28	17.1	85	140	922	0.8	1.3	1.4	31	12.0	87	140	777	0.4	1.9	1.9	19	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:31	7	73	140	579	0.7	2.8	1.0	28	16.9	85	140	922	0.8	1.3	1.4	31	12.2	88	140	777	0.4	1.9	1.9	19	0.3	2.3	69	122	0.0	0.0	0.0	0.0
09/28/1999 9:32	7	73	140	577	0.7	2.8	1.0	28	16.8	85	140	922	0.8	1.3	1.4	31	12.7	87	140	778	0.3	1.9	1.9	19	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 9:33	8	73	140	584	0.7	2.8	1.0	28	16.6	85	140	922	0.8	1.3	1.4	31	13.2	87	140	781	0.4	1.9	1.9	19	0.3	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 9:34	8	73	140	582	0.7	2.7	1.0	28	16.5	85	140	922	0.8	1.3	1.4	31	13.7	87	140	776	0.3	1.9	1.9	19	0.2	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 9:35	8	73	140	582	0.7	2.7	1.0	28	16.4	85	140	922	0.8	1.3	1.4	31	14.3	87	140	775	0.3	1.9	1.9	19	0.2	2.3	69	121	0.0	0.0	0.0	0.0
09/28/1999 9:36	9	73	140	580	0.7	2.8	1.0	28	16.0	85	140	922	0.8	1.3	1.4	31	14.8	88	140	776	0.3	1.9	1.9	19	0.2	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 9:37	9	73	140	579	0.7	2.8	1.0	28	15.8	85	140	922	0.8	1.3	1.4	30	14.9	87	140	774	0.3	1.9	1.9	19	0.2	2.3	69	119	0.0	0.0	0.0	0.0
09/28/1999 9:38	9	73	140	577	0.7	2.7	1.0	28	15.4	85	140	922	0.8	1.3	1.4	30	15.4	87	140	779	0.3	1.8	1.9	19	0.2	2.3	69	120	0.0	0.0	0.0	0.0
09/28/1999 9:39	10	73	140	578	0.7	2.8	1.0	28	15.4	84	140	922	0.8	1.3	1.4	30	15.7	87	140	776	0.3	1.9	1.9	19	0.2	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 9:40	10	73	140	579	0.7	2.8	1.0	28	11.7	85	140	922	0.8	1.3	1.4	30	16.3	87	140	777	0.3	1.9	1.9	19	0.3	2.3	69	124	0.0	0.0	0.0	0.0
09/28/1999 9:41	10	73	140	576	0.7	2.8	1.0	28	6.4	85	140	922	0.8	1.4	1.4	30	16.8	87	140	779	0.3	1.8	1.9	19	0.3	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 9:42	10	73	140	582	0.7	2.8	1.0	28	5.5	85	140	922	0.8	1.4	1.5	30	16.8	88	140	778	0.3	1.9	1.9	19	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 9:43	11	73	140	583	0.8	2.8	1.0	28	4.5	85	140	922	0.8	1.3	1.4	30	17.4	88	140	778	0.3	1.9	1.9	19	0.3	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 9:44	11	73	140	584	0.7	2.7	1.0	28	4.3	85	140	922	0.8	1.3	1.4	30	17.7	88	140	777	0.4	1.9	1.9	19	0.2	2.3	69	124	0.0	0.0	0.0	0.0
09/28/1999 9:45	11	73	140	582	0.7	2.7	1.0	28	4.1	85	140	922	0.8	1.3	1.4	30	18.0	87	140	777	0.3	1.9	1.9	19	0.2	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 9:46	12	73	140	579	0.7	2.7	1.0	28	3.8	84	140	922	0.8	1.3	1.4	30	18.2	87	140	777	0.2	1.9	1.9	19	0.2	2.3	69	127	0.0	0.0	0.0	0.0
09/28/1999 9:47	12	73	140	576	0.7	2.8	1.0	28	4.1	85	140	922	0.8	1.3	1.4	30	18.3	88	140	776	0.3	1.9	1.9	19	0.2	2.3	69	128	0.0	0.0	0.0	0.0
09/28/1999 9:48	12	73	140	578	0.7	2.8	1.0	28	4.0	85	140	922	0.8	1.3	1.4	30	18.7	88	140	777	0.3	1.9	1.9	19	0.2	2.3	69	128	0.0	0.0	0.0	0.0
09/28/1999 9:49	12	73	140	578	0.7	2.8	1.0	28	4.4	85	140	922	0.8	1.3	1.4	30	18.8	87	140	777	0.3	1.9	1.9	19	0.2	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 9:50	13	73	140	581	0.7	2.8	1.0	28	4.4	85	140	922	0.8	1.3	1.4	30	18.8	87	140	777	0.4	1.9	1.9	19	0.2	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 9:51	13	73	140	580	0.7	2.7	1.0	28	4.5	85	140	922	0.8	1.3	1.4	30	19.0	88	140	777	0.2	1.9	1.9	19	0.2	2.3	69	124	0.0	0.0	0.0	0.0
09/28/1999 9:52	14	73	140	585	0.7	2.7	1.0	28	4.9	85	140	922	0.8	1.3	1.4	30	19.1	87	140	775	0.2	1.9	1.9	19	0.2	2.3	69	124	0.0	0.0	0.0	0.0
09/28/1999 9:53	14	73	140	581	0.7	2.8	1.0	28	5.2	85	140	922	0.8	1.3	1.4	30	19.2	87	140	779	0.3	1.9	1.9	19	0.2	2.3	69	123	0.0	0.0	0.0	0.0
09/28/1999 9:54	14	73	140	581	0.7	2.8	1.0	28	5.5	85	140	922	0.8	1.3	1.4	30	19.3	87	140	779	0.3	1.9	1.9	19	0.2	2.3	69	128	0.0	0.0	0.0	0.0
09/28/1999 9:55	14	73	140	575	0.7	2.8	1.0	28	5.7	85	140	922	0.8	1.3	1.4	30	19.3	87	140	778	0.3	1.9	1.9	19	0.2	2.3	69	128	0.0	0.0	0.0	0.0
09/28/1999 9:56	15	73	140	577	0.7	2.8	1.0	28	6.1	85	140	922	0.8	1.3	1.4	30	19.3	88	140	776	0.3	1.9	1.9	19	0.2	2.3	69	129	0.0	0.0	0.0	0.0
09/28/1999 9:57	15	73	140	575	0.7	2.8	1.0	28	6.7	85	140	922	0.8	1.3	1.4	30	19.3	87	140	776	0.3	1.9	1.9	19	0.2	2.3	69	127	0.0	0.0	0.0	0.0
09/28/1999 9:58	15	73	140	582	0.7	2.8	1.0	28	7.3	85	140	922	0.8	1.4	1.4	30	19.2	88	140	776	0.3	1.9	1.9	19	0.2	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 9:59	15	73	140	580	0.7	2.9	1.0	28	7.9	85	140	922	0.8	1.4	1.5	30	19.2	88	140	777	0.3	1.9	1.9	19	0.2	2.3	69	130	0.0	0.0	0.0	0.0
09/28/1999 10:00	16	73	140	583	0.7	2.8	1.0	28	7.9	85	140	922	0.8	1.3	1.4	30	19.3	88	140	775	0.4	1.9	1.9	19	0.2	2.3	69	131	0.0	0.0	0.0	0.0
09/28/1999 10:01	16	73	140	584	0.7	2.7	1.0	28	8.7	85	140	922	0.8	1.3	1.4	30	19.1	88	140	775	0.4	1.9	1.9	19	0.2	2.3	69	130	0.0	0.0	0.0	0.0
09/28/1999 10:02	16	73	140	583	0.7	2.8	1.0	28	9.5	85	140	922	0.8	1.3	1.4	30	19.1	87	140	776	0.4	1.9	1.9	19	0.2	2.3	69	129	0.0	0.0	0.0	0.0
09/28/1999 10:03	16	73	140	578	0.7	2.8	1.0	28	9.8	85	140	922	0.8	1.3	1.4	30	18.8	87	140	776	0.3	1.8	1.9	19	0.2	2.3	69	128	0.0	0.0	0.0	0.0
09/28/1999 10:04	17	73	140	576	0.7	2.8	1.0	28	10.4	85	140	922	0.8	1.3	1.4	30	18.8	87	140	776	0.3	1.8	1.9	19	0.2	2.3	69	126	0.0	0.0	0.0	0.0
09/28/1999 10:05	17	73	140	576	0.7	2.7	1.0	28	11.1	85	140	922	0.8	1.3	1.4	30	18.6	88	140	776	0.3	1.8	1.9	19	0.2	2.3	69	125	0.0	0.0	0.0	0.0
09/28/1999 10:06	17	73	140	578	0.7	2.8	1.0	27	12.0	85	140	922	0.8	1.3	1.4	30	18.4	87	140	778	0.4	1.9	1.9	19	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:07	18	73	140	576	0.7	2.8	1.0	27	12.8	85	140	922	0.8	1.3	1.4	30	7.7	87	140	777	0.4	1.8	1.9	19	0.3	2.3	70	129	0.0	0.0	0.0	0.0
09/28/1999 10:08	18	73	140	582	0.7	2.8	1.0	27	13.4	85	140	922	0.8	1.3	1.4	30	7.3	87	140	778	0.3	1.9	1.9	19	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:09	18	73	140	587	0.7	2.8	1.0	27	14.0	85	140	922	0.8	1.3	1.4	30	5.9	87	140	777	0.3	1.8	1.9	19	0.2	2.3	70	127	0.0	0.0	0.0	0.0
09/28/1999 10:10	18	73	140	586	0.7	2.8	1.0	27	14.5	85	140	922	0.8	1.3	1.4	30	5.3	87	140	777	0.4	1.8	1.9	19	0.1	2.3	70	128	0.0	0.0	0.0	0.0
09/28/1999 10:11	18	73	140	586	0.7	2.8	1.0	27	15.1	85	140	922	0.8	1.3	1.4	30	4.9	88	140	778	0.4	1.9	1.9	19	0.1	2.3	70	129	0.0	0.0	0.0	0.0
09/28/1999 10:12	18	73	140	579	0.7	2.8	1.0	27	15.5	85	140	922	0.8	1.3	1.4	30	4.9	87	140	777	0.4	1.8	1.9	19	0.1	2.3	70	124	0.0	0.0	0.0	0.0
09/28/1999 10:13	13	73	140	579	0.7	2.8	1.0	27	16.0	85	140	922	0.8	1.3	1.4	30	5.2	88	140	776	0.4	1.8	1.9	19	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:14	5	73	140	577	0.7	2.8	1.0	27	16.7	85	140	922	0.8	1.3	1.4	30	5.2	88	140	777	0.4	1.9	1.9	19	0.3	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 10:15	4	73	140	576	0.8	2.8	1.1	27	17.1	85	140	922	0.8	1.3	1.4	29	5.0	88	140	777	0.4	1.8	1.9	19	0.2	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 10:16	3	73	140	578	0.7	2.8	1.0	27	17.5	85	140	922	0.8	1.4	1.5	29	5.3	88	140	776	0.5	1.9	1.9	19	0.3	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 10:17	3	73	140	580	0.7	2.8	1.0	27	18.0	85	140	922	0.8	1.3	1.4	29	5.6	87	140	776	0.5	1.9	1.9	19	0.3	2.3	70	122	0.0	0.0	0.0	0.0
09/28/1999 10:18	3	73	140	585	0.7	2.8	1.0	27	18.2	85	140	922	0.8	1.3	1.4	29	6.3	88	141	778	0.5	1.9	1.9	18	0.2	2.3	70	120	0.0	0.0	0.0	0.0
09/28/1999 10:19	3	73	140	587	0.7	2.8	1.0	27	18.6	85	140	922	0.8	1.3	1.4	29	5.9	88	141	776	0.6	1.9	1.9	18	0.2	2.3	70	122	0.0	0.0	0.0	0.0
09/28/1999 10:20	4	73	140	587	0.7	2.7	1.0	27	18.8	84	140	922	0.8	1.3	1.4	29	6.1	87	140	778	0.4	1.9	1.9	18	0.3	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 10:21	4	73	140	585	0.7	2.8	1.0	27	18.7	84	140	922	0.8	1.3	1.4	29	7.0	87	140	777	0.5	1.9	1.9	18	0.3	2.3	70	122	0.0	0.0	0.0	0.0
09/28/1999 10:22	4	73	140	574	0.8	2.8	1.0	27	18.8	84	140	922	0.8	1.3	1.4	29	7.3	87	140	778	0.5	1.9	1.9	18	0.3	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:23	4	73	140	580	0.7	2.8	1.0	27	18.9	85	140	922	0.8	1.3	1.4	29	7.6	87	140	778	0.5	1.9	1.9	18	0.3	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:24	5	73	140	582	0.7	2.8	1.0	27	19.1	84	140	922	0.8	1.3	1.4	29	8.0	87	140	778	0.6	1.9	1.9	18	0.3	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:25	5	73	140	582	0.7	2.8	1.0	27	19.1	84	140	922	0.8	1.4	1.4	29	8.5	87	140	777	0.5	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:26	5	73	140	577	0.7	2.8	1.0	27	19.1	85	140	922	0.8	1.6	1.4	29	9.0	87	140	777	0.5	1.9	1.9	18	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:27	5	73	140	579	0.7	2.8	1.0	27	19.1	85	140	922	0.8	1.7	1.4	29	9.4	87	140	776	0.5	1.9	1.9	18	0.2	2.3	70	127	0.0	0.0	0.0	0.0
09/28/1999 10:28	6	73	140	585	0.7	2.8	1.0	27	19.0	85	140	922	0.8	1.4	1.4	29	9.9	87	140	777	0.6	1.9	1.9	18	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:29	6	73	140	584	0.7	2.8	1.0	27	18.8	85	140	922	0.8	1.5	1.4	29	10.2	87	140	779	0.5	1.9	1.9	18	0.2	2.3	70	124	0.0	0.0	0.0	0.0

Craig 1 Scrubber Data																																
Time	1A LS Slurry Flow	1A SBF Amps	1A Mixed Gas Temp	1A SBF Flow	1A Inlet DP to Tray	1A Inlet DP to Demist	1A Module DP	1A Bypass RHT Damper	1B LS Slurry Flow	1B SBF Amps	1B Mixed Gas Temp	1B SBF Flow	1B Inlet DP to Tray	1B Inlet DP to Demist	1B Module DP	1B Bypass RHT Damper	1C LS Slurry Flow	1C SBF Amps	1C Mixed Gas Temp	1C SBF Flow	1C Inlet DP to Tray	1C Inlet DP to Demist	1C Module DP	1C Bypass RHT Damper	1D LS Slurry Flow	1D SBF Amps	1D Mixed Gas Temp	1D SBF Flow	1D Inlet DP to Tray	1D Inlet DP to Demist	1D Module DP	1D Bypass RHT Damper
09/28/1999 10:30	6	73	140	582	0.7	2.8	1.0	27	18.7	85	140	922	0.8	1.4	1.4	29	10.8	88	140	779	0.5	1.9	1.9	18	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:31	7	73	140	583	0.7	2.8	1.0	27	18.5	84	140	922	0.8	1.4	1.4	29	11.3	87	140	781	0.5	1.9	1.9	18	0.2	2.3	70	121	0.0	0.0	0.0	0.0
09/28/1999 10:32	7	73	140	578	0.7	3.0	1.1	27	18.5	85	140	922	0.8	1.4	1.4	29	11.8	87	140	781	0.6	1.9	1.9	18	0.2	2.3	70	120	0.0	0.0	0.0	0.0
09/28/1999 10:33	7	72	140	582	0.7	2.8	1.0	27	18.2	84	140	922	0.8	1.6	1.5	29	12.2	87	140	779	0.6	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:34	8	73	140	584	0.7	2.9	1.0	27	17.9	84	140	922	0.8	1.4	1.5	30	12.5	87	140	777	0.7	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:35	8	72	140	580	0.7	2.9	1.0	27	17.6	84	140	922	0.8	1.3	1.4	30	13.1	87	140	780	0.7	1.9	2.0	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:36	8	73	140	580	0.7	2.9	1.0	27	17.3	84	139	922	0.8	1.3	1.4	30	13.5	87	140	777	0.7	1.9	1.9	18	0.2	2.3	70	124	0.0	0.0	0.0	0.0
09/28/1999 10:37	9	73	140	580	0.7	2.9	1.0	27	17.1	84	140	922	0.8	1.3	1.4	30	14.2	87	140	779	0.7	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:38	9	73	140	584	0.7	2.9	1.0	27	16.8	84	140	922	0.8	1.3	1.4	30	14.5	87	140	776	0.7	1.9	1.9	18	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:39	9	73	140	587	0.7	2.9	1.0	27	16.4	85	140	922	0.8	1.3	1.4	30	14.8	87	140	778	0.7	1.9	1.9	18	0.2	2.3	70	121	0.0	0.0	0.0	0.0
09/28/1999 10:40	10	72	140	587	0.7	2.9	1.0	27	16.0	84	140	922	0.8	1.3	1.4	30	15.1	87	140	775	0.7	1.9	1.9	18	0.2	2.3	70	124	0.0	0.0	0.0	0.0
09/28/1999 10:41	10	73	140	581	0.7	2.9	1.0	28	12.0	84	140	922	0.8	1.3	1.4	30	15.7	87	140	778	0.7	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:42	10	73	140	581	0.7	2.8	1.0	28	7.8	85	140	922	0.8	1.3	1.4	30	16.0	87	140	779	0.6	1.9	1.9	18	0.2	2.3	70	127	0.0	0.0	0.0	0.0
09/28/1999 10:43	11	73	140	585	0.7	2.9	1.0	28	5.6	85	140	922	0.8	1.3	1.4	30	16.5	87	140	778	0.8	1.9	1.9	18	0.3	2.3	70	127	0.0	0.0	0.0	0.0
09/28/1999 10:44	11	73	140	582	0.7	2.8	1.0	28	4.7	84	140	922	0.8	1.3	1.4	30	16.5	87	140	780	0.7	1.9	1.9	18	0.3	2.3	70	128	0.0	0.0	0.0	0.0
09/28/1999 10:45	11	73	140	583	0.7	2.8	1.0	28	4.2	85	140	922	0.8	1.3	1.4	30	16.8	87	140	778	0.7	1.9	1.9	18	0.2	2.3	70	127	0.0	0.0	0.0	0.0
09/28/1999 10:46	12	73	140	584	0.7	2.9	1.0	28	3.8	85	140	922	0.8	1.3	1.4	30	17.0	87	140	779	0.8	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:47	12	73	140	581	0.7	2.9	1.0	28	3.6	85	140	922	0.8	1.3	1.4	30	17.2	87	140	779	0.8	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:48	13	73	140	585	0.7	2.9	1.0	28	3.3	85	140	922	0.8	1.3	1.4	30	17.6	87	140	780	0.7	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:49	13	73	140	584	0.7	2.9	1.1	28	3.5	85	140	922	0.8	1.3	1.4	30	17.8	87	140	780	0.8	1.9	1.9	18	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:50	13	73	140	584	0.8	2.9	1.0	28	3.4	85	140	922	0.8	1.4	1.5	30	18.1	87	140	780	0.7	1.9	1.9	18	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:51	13	73	140	584	0.7	2.8	1.0	28	3.5	84	140	922	0.8	1.4	1.5	30	18.2	87	140	783	0.8	1.9	1.9	18	0.2	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 10:52	14	73	140	577	0.7	2.8	1.0	28	3.8	85	140	922	0.8	1.3	1.4	30	18.4	87	140	777	0.9	1.9	2.0	18	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:53	14	73	140	582	0.7	2.9	1.0	28	3.9	85	140	922	0.8	1.3	1.4	30	18.4	87	140	778	0.9	1.9	2.0	17	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:54	14	73	140	578	0.7	2.9	1.0	28	4.4	85	140	922	0.8	1.3	1.4	30	18.5	87	140	778	0.9	1.9	1.9	17	0.2	2.3	70	125	0.0	0.0	0.0	0.0
09/28/1999 10:55	15	73	140	581	0.7	2.9	1.0	28	4.4	84	140	922	0.8	1.3	1.4	30	18.4	87	140	779	0.8	1.9	1.9	17	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:56	15	73	140	580	0.7	2.9	1.0	28	4.6	85	140	922	0.8	1.3	1.4	30	18.5	87	140	778	0.8	1.9	1.9	17	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 10:57	15	73	140	583	0.7	2.9	1.0	28	5.2	85	140	922	0.8	1.5	1.4	30	18.6	87	140	777	0.8	1.9	1.9	17	0.2	2.3	70	120	0.0	0.0	0.0	0.0
09/28/1999 10:58	15	73	140	580	0.7	2.9	1.0	28	5.6	85	140	922	0.8	1.3	1.4	30	18.5	87	140	781	0.8	1.9	1.9	17	0.2	2.3	70	122	0.0	0.0	0.0	0.0
09/28/1999 10:59	16	73	140	587	0.7	2.9	1.0	28	5.9	85	140	922	0.8	1.5	1.4	30	18.6	87	140	779	0.8	1.9	1.9	17	0.2	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:00	16	73	140	587	0.7	3.0	1.0	28	6.4	85	140	922	0.8	1.4	1.4	30	18.6	87	140	778	0.9	1.9	1.9	17	0.2	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:01	16	73	140	584	0.7	2.9	1.0	28	6.9	85	140	922	0.8	1.4	1.4	30	18.6	87	140	777	0.8	1.9	1.9	17	0.2	2.3	70	124	0.0	0.0	0.0	0.0
09/28/1999 11:02	16	73	140	585	0.7	2.8	1.0	28	7.5	85	140	922	0.8	1.4	1.4	30	18.6	87	140	781	0.9	1.9	1.9	17	0.2	2.3	70	128	0.0	0.0	0.0	0.0
09/28/1999 11:03	17	73	140	581	0.7	2.9	1.0	28	7.6	85	140	922	0.8	1.4	1.4	30	18.5	87	140	777	0.9	1.9	1.9	17	0.2	2.3	70	127	0.0	0.0	0.0	0.0
09/28/1999 11:04	17	73	140	582	0.7	2.9	1.0	28	8.4	84	140	922	0.8	1.4	1.4	30	18.4	87	140	778	1.0	1.9	1.9	17	0.2	2.3	70	130	0.0	0.0	0.0	0.0
09/28/1999 11:05	17	73	140	582	0.7	2.9	1.0	28	9.2	85	140	922	0.8	1.3	1.4	30	18.2	87	140	776	1.0	1.9	1.9	17	0.2	2.3	70	129	0.0	0.0	0.0	0.0
09/28/1999 11:06	17	73	140	584	0.7	3.0	1.0	28	9.7	85	140	922	0.8	1.3	1.4	30	18.1	87	140	779	1.0	1.9	1.9	17	0.2	2.3	70	130	0.0	0.0	0.0	0.0
09/28/1999 11:07	17	73	140	581	0.7	2.9	1.0	28	10.2	85	140	922	0.8	1.4	1.4	30	18.3	87	140	779	1.0	1.9	1.9	17	0.2	2.3	70	128	0.0	0.0	0.0	0.0
09/28/1999 11:08	18	73	140	584	0.7	2.9	1.0	28	10.7	85	140	922	0.8	1.4	1.5	30	10.2	87	140	777	1.1	1.9	1.9	18	0.2	2.3	70	128	0.0	0.0	0.0	0.0
09/28/1999 11:09	18	73	140	584	0.7	2.9	1.0	28	11.6	85	140	922	0.8	1.3	1.4	30	5.9	87	140	778	1.1	1.9	1.9	18	0.2	2.3	70	128	0.0	0.0	0.0	0.0
09/28/1999 11:10	18	73	140	584	0.7	2.9	1.0	28	12.6	85	140	922	0.8	1.3	1.4	30	4.7	87	140	779	1.1	1.9	1.9	18	0.2	2.3	70	129	0.0	0.0	0.0	0.0
09/28/1999 11:11	18	73	140	584	0.7	2.8	1.0	28	12.9	85	140	922	0.8	1.3	1.4	30	4.6	87	140	779	1.1	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 11:12	18	73	140	582	0.7	2.9	1.0	28	13.4	85	140	922	0.8	1.3	1.4	30	4.5	87	140	777	1.1	1.9	1.9	18	0.2	2.3	70	126	0.0	0.0	0.0	0.0
09/28/1999 11:13	18	73	140	576	0.7	2.9	1.0	28	13.6	85	140	922	0.8	1.3	1.4	30	4.5	87	140	775	1.0	1.9	1.9	18	0.1	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:14	14	73	140	579	0.7	2.9	1.0	28	14.3	85	140	922	0.8	1.3	1.4	30	4.7	87	140	777	1.1	1.9	1.9	18	0.2	2.3	70	119	0.0	0.0	0.0	0.0
09/28/1999 11:15	7	73	140	583	0.7	2.9	1.0	28	15.0	85	140	922	0.8	1.3	1.4	30	4.9	87	140	776	1.1	1.9	1.9	18	0.2	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:16	4	73	140	580	0.7	3.0	1.0	28	15.4	85	140	922	0.8	1.3	1.4	30	4.9	87	140	775	1.1	1.9	1.9	18	0.2	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:17	3	73	140	578	0.7	2.9	1.0	28	16.0	85	140	922	0.8	1.3	1.4	30	5.0	87	140	780	1.1	1.9	1.9	18	0.2	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:18	3	73	140	585	0.8	2.9	1.0	28	16.4	85	140	922	0.8	1.3	1.4	30	5.4	87	140	778	1.1	1.9	1.9	18	0.2	2.3	70	124	0.0	0.0	0.0	0.0
09/28/1999 11:19	3	73	140	583	0.7	2.9	1.0	28	16.9	85	140	922	0.8	1.3	1.4	30	5.6	87	140	778	1.1	1.9	1.9	18	0.2	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:20	3	73	140	583	0.7	2.9	1.0	28	17.1	85	140	922	0.8	1.3	1.4	30	6.0	87	140	775	1.1	1.9	1.9	18	0.3	2.3	70	122	0.0	0.0	0.0	0.0
09/28/1999 11:21	3	73	140	586	0.7	2.9	1.0	28	17.1	85	140	922	0.8	1.3	1.4	30	6.7	87	140	777	1.2	1.9	1.9	18	0.2	2.3	70	120	0.0	0.0	0.0	0.0
09/28/1999 11:22	3	73	140	586	0.7	2.9	1.0	28	17.3	84	140	922	0.8	1.3	1.4	30	6.7	87	140	777	1.2	1.9	1.9	18	0.3	2.3	70	124	0.0	0.0	0.0	0.0
09/28/1999 11:23	4	73	140	583	0.7	2.9	1.0	28	17.6	85	140	922	0.8	1.3	1.4	30	6.7	87	140	779	1.2	1.9	1.9	18	0.2	2.3	70	120	0.0	0.0	0.0	0.0
09/28/1999 11:24	4	73	140	578	0.7	2.9	1.0	28	17.9	85	140	922	0.8	1.3	1.4	30	7.2	87	140	776	1.2	1.9	1.9	18	0.2	2.3	70	122	0.0	0.0	0.0	0.0
09/28/1999 11:25	4	73	140	578	0.7	2.8	1.0	28	18.0	85	140	922	0.8	1.4	1.5	30	7.6	87	140	776	1.2	1.9	1.9	18	0.3	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:26	4	73	140	578	0.7	2.9	1.0	28	18.2	85	140	922	0.8	1.3	1.4	30	8.2	87	140	777	1.3	1.9	1.9	18	0.3	2.3	70	123	0.0	0.0	0.0	0.0
09/28/1999 11:27	5	73	140	581	0.7	2.9	1.0	28	18.2	85	140	922	0.8	1.3	1.4	30	8.8	87	140	776	1.4	1.9	1.9	18	0.3	2.3	70	121	0.0	0.0	0.0	0.0
09/28/1999 11:28	5	73	140	581	0.7	2.9	1.0	28	18.3	84	140	922	0.8	1.3	1.4	30	9.2	87	140	779	1.3	1.9	1.9	18	0.3	2.3	70	124	0.0	0.0	0.0	0.0
09/28/1999 11:29	5	73	140	582	0.7	2.9	1.0	28	18.3	85	140	922	0.8	1.3	1.4	30	10.0	87	140	777	1.3	1.9	1.9	18	0.2	2.3	70	128	0.0	0.0	0.0	0.0
09/28/1999 11:30	5	73	140	585	0.7	3.0	1.0	28	18.4	85	140	922	0.8	1.3	1.4	30	10.2	87	140	775	1.3	1.9	1.9	18	0.3	2.3	71	129	0.0	0.0	0.0	0.0
09/28/1999 11:31	5	73	140	588	0.7	2.9	1.0	28	18.1	84	140	922	0.8	1.3	1.4	30	10.8	87	140	775	1.3	1.9	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 11:32	6	73	140	586	0.7	2.9	1.0	28	18.1	85	140	922	0.8	1.3	1.4	30	11.6	87	140	778	1.3	1.9	1.9	18	0.3	2.3	71	127	0.0	0.0	0.0	0.0

Craig 1 Scrubber Data																															
Time	1A LS Slurry Flow	1A SBF Amps	1A Mixed Gas Temp	1A SBF Flow	1A Inlet DP to Tray	1A Inlet DP to Demist	1A Module DP	1A Bypass RHT Damper	1B LS Slurry Flow	1B SBF Amps	1B Mixed Gas Temp	1B SBF Flow	1B Inlet DP to Tray	1B Inlet DP to Demist	1B Module DP	1B Bypass RHT Damper	1C LS Slurry Flow	1C SBF Amps	1C Mixed Gas Temp	1C SBF Flow	1C Inlet DP to Tray	1C Inlet DP to Demist	1C Module DP	1C Bypass RHT Damper	1D LS Slurry Flow	1D SBF Amps	1D Mixed Gas Temp	1D SBF Flow	1D Inlet DP to Tray	1D Inlet DP to Demist	1D Module DP	1D Bypass RHT Damper
09/28/1999 11:33	6	73	140	584	0.7	2.9	1.0	28	18.1	85	140	922	0.8	1.3	1.4	30	11.9	87	140	776	1.3	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 11:34	6	73	140	581	0.7	2.9	1.0	28	18.0	85	140	922	0.8	1.3	1.4	30	12.3	87	140	778	1.3	1.9	1.9	18	0.3	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 11:35	6	73	140	579	0.7	2.9	1.0	28	17.8	85	140	922	0.8	1.3	1.4	30	12.9	87	140	778	1.3	1.9	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 11:36	7	73	140	578	0.7	2.9	1.0	28	17.5	85	140	922	0.8	1.3	1.4	30	13.2	87	140	777	1.4	1.9	1.9	18	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 11:37	7	73	140	577	0.7	2.9	1.0	28	17.3	85	140	922	0.8	1.3	1.4	30	13.8	87	140	777	1.4	1.9	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 11:38	7	73	140	577	0.7	2.8	1.0	28	17.1	85	140	922	0.8	1.3	1.4	30	14.3	87	140	779	1.3	1.9	1.9	18	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 11:39	8	73	140	578	0.7	2.9	1.0	28	16.8	85	140	922	0.8	1.3	1.4	29	14.9	88	140	778	1.3	1.9	1.9	18	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 11:40	8	73	140	586	0.7	2.9	1.0	28	16.6	84	140	922	0.8	1.3	1.4	29	15.3	87	140	777	1.4	1.9	1.9	18	0.2	2.3	71	123	0.0	0.0	0.0	0.0
09/28/1999 11:41	8	73	140	587	0.7	2.9	1.1	28	16.3	85	140	922	0.8	1.3	1.4	29	15.6	87	140	778	1.4	1.9	1.9	18	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 11:42	9	73	140	583	0.8	2.9	1.0	28	12.6	85	140	922	0.8	1.4	1.5	29	15.9	87	140	776	1.4	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 11:43	9	73	140	583	0.7	2.9	1.0	28	9.0	85	140	922	0.8	1.4	1.5	29	16.4	87	140	777	1.5	1.9	1.9	18	0.2	2.3	71	125	0.0	0.0	0.0	0.0
09/28/1999 11:44	9	73	140	582	0.7	2.9	1.0	28	5.3	85	140	922	0.8	1.3	1.4	29	17.0	87	140	776	1.5	1.9	1.9	18	0.3	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 11:45	9	73	140	592	0.7	2.9	1.0	28	4.8	85	140	922	0.8	1.3	1.4	29	17.2	88	140	777	1.6	1.9	1.9	18	0.2	2.3	71	129	0.0	0.0	0.0	0.0
09/28/1999 11:46	10	73	140	590	0.7	2.9	1.0	28	4.2	84	140	922	0.8	1.3	1.4	29	17.2	87	140	775	1.5	1.9	1.9	18	0.2	2.3	71	130	0.0	0.0	0.0	0.0
09/28/1999 11:47	10	73	140	588	0.7	2.9	1.0	28	4.0	85	140	922	0.8	1.3	1.4	29	17.6	87	140	777	1.4	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 11:48	10	73	140	578	0.7	2.9	1.0	28	4.0	85	140	922	0.8	1.3	1.4	29	17.8	87	140	779	1.5	1.9	1.9	18	0.2	2.3	71	124	0.0	0.0	0.0	0.0
Test 1 Average	***10***	***73***	***140***	***581***	***0.7***	***2.8***	***1.0***	***28***	***12***	***85***	***140***	***922***	***0.8***	***1.3***	***1.4***	***30***	***13***	***87***	***140***	***778***	***0.6***	***1.9***	***1.9***	***19***	***0.2***	***2.3***	***70***	***125***	***0***	***0***	***0***	***0***
09/28/1999 11:49	11	73	140	581	0.7	2.9	1.0	28	3.8	85	140	922	0.8	1.3	1.4	29	18.2	87	140	777	1.5	1.9	1.9	18	0.2	2.3	71	124	0.0	0.0	0.0	0.0
09/28/1999 11:50	11	73	140	580	0.7	2.9	1.0	27	4.1	85	140	922	0.8	1.3	1.4	29	18.5	87	140	777	1.5	1.8	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 11:51	11	73	140	583	0.7	2.9	1.0	27	4.0	85	140	922	0.8	1.3	1.4	29	18.7	87	140	778	1.5	1.9	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 11:52	12	73	140	586	0.7	2.9	1.0	27	4.4	84	140	922	0.8	1.3	1.4	29	19.0	87	140	777	1.5	1.9	1.9	18	0.2	2.3	71	124	0.0	0.0	0.0	0.0
09/28/1999 11:53	12	73	140	585	0.7	2.9	1.0	27	4.5	84	140	922	0.8	1.3	1.4	29	19.0	87	140	777	1.5	1.9	1.9	18	0.2	2.3	71	125	0.0	0.0	0.0	0.0
09/28/1999 11:54	12	73	140	580	0.7	2.9	1.0	27	4.8	84	140	922	0.8	1.3	1.4	29	19.2	87	140	776	1.6	1.9	1.9	18	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 11:55	13	73	140	579	0.7	2.9	1.0	27	5.0	84	140	922	0.8	1.3	1.4	29	19.5	87	140	778	1.5	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 11:56	13	73	140	586	0.7	2.9	1.0	27	5.7	84	140	922	0.8	1.3	1.4	29	19.5	87	140	776	1.5	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 11:57	13	73	140	584	0.8	2.9	1.0	27	6.2	84	140	922	0.8	1.3	1.4	29	19.6	87	140	774	1.5	1.8	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 11:58	14	73	140	582	0.7	3.0	1.1	27	6.6	84	140	922	0.8	1.3	1.4	29	19.6	87	140	775	1.6	1.9	1.9	18	0.2	2.3	71	130	0.0	0.0	0.0	0.0
09/28/1999 11:59	14	73	140	579	0.7	2.9	1.0	27	7.1	85	140	922	0.8	1.4	1.5	29	19.7	87	140	775	1.6	1.9	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 12:00	14	73	140	580	0.7	2.9	1.0	27	7.4	84	140	922	0.8	1.4	1.4	29	19.6	87	140	776	1.5	1.9	1.9	18	0.2	2.3	71	125	0.0	0.0	0.0	0.0
09/28/1999 12:01	15	73	140	585	0.7	2.9	1.0	27	7.8	84	140	922	0.8	1.3	1.4	29	19.6	87	140	777	1.6	1.9	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 12:02	15	73	140	577	0.7	2.9	1.0	27	8.7	84	140	922	0.8	1.3	1.4	29	19.6	87	140	775	1.7	1.9	1.9	18	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 12:03	15	73	140	585	0.7	2.8	1.0	27	9.2	85	140	922	0.8	1.3	1.4	29	19.4	87	140	776	1.6	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 12:04	15	73	140	582	0.7	2.8	1.0	27	9.9	85	140	922	0.8	1.3	1.4	29	19.3	87	140	778	1.5	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 12:05	16	73	140	582	0.7	2.9	1.0	27	10.5	84	140	922	0.8	1.3	1.4	29	19.3	87	140	775	1.6	1.9	1.9	18	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 12:06	16	73	140	576	0.7	2.8	1.0	27	11.0	85	140	922	0.8	1.3	1.4	29	19.1	87	140	778	1.5	1.9	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 12:07	16	73	140	580	0.7	2.8	1.0	27	11.6	84	140	922	0.8	1.3	1.4	29	18.9	87	140	777	1.5	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 12:08	17	73	140	579	0.7	2.8	1.0	27	12.1	84	140	922	0.8	1.3	1.4	29	18.6	87	140	777	1.6	1.9	1.9	18	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 12:09	17	73	140	580	0.7	2.9	1.0	27	12.9	84	140	922	0.8	1.3	1.4	29	11.9	87	140	776	1.6	1.9	1.9	18	0.2	2.3	71	125	0.0	0.0	0.0	0.0
09/28/1999 12:10	17	73	140	578	0.7	2.9	1.0	27	13.4	84	140	922	0.8	1.3	1.4	29	8.6	87	140	776	1.6	1.9	1.9	18	0.2	2.3	71	123	0.0	0.0	0.0	0.0
09/28/1999 12:11	18	73	140	581	0.7	2.9	1.0	27	14.0	84	140	922	0.8	1.3	1.4	29	7.1	87	140	776	1.7	1.9	1.9	18	0.2	2.3	71	125	0.0	0.0	0.0	0.0
09/28/1999 12:12	18	73	140	583	0.7	2.8	1.0	27	14.6	84	140	922	0.8	1.3	1.4	29	5.4	87	140	778	1.6	1.9	1.9	18	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 12:13	18	73	140	582	0.7	2.9	1.0	27	15.0	84	140	922	0.8	1.3	1.4	29	4.9	87	140	777	1.7	1.9	1.9	17	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 12:14	18	73	140	581	0.7	2.8	1.0	27	15.5	84	140	922	0.8	1.3	1.4	29	4.7	87	140	774	1.6	1.9	1.9	17	0.2	2.3	71	129	0.0	0.0	0.0	0.0
09/28/1999 12:15	14	73	140	582	0.7	2.9	1.0	27	16.1	84	140	922	0.8	1.3	1.4	29	4.6	87	140	773	1.7	1.9	1.9	17	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 12:16	9	73	140	580	0.7	2.8	1.0	27	16.4	84	140	922	0.8	1.4	1.5	29	4.6	87	140	775	1.6	1.9	1.9	17	0.3	2.3	71	125	0.0	0.0	0.0	0.0
09/28/1999 12:17	4	73	140	585	0.7	2.8	1.0	27	16.9	84	140	922	0.8	1.4	1.5	29	5.1	87	140	776	1.7	1.9	1.9	17	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 12:18	3	73	140	584	0.7	2.8	1.0	27	17.3	84	140	922	0.8	1.3	1.4	29	5.4	87	140	776	1.7	1.9	1.9	17	0.2	2.3	71	128	0.0	0.0	0.0	0.0
09/28/1999 12:19	3	73	140	576	0.7	2.9	1.0	27	17.7	84	140	922	0.8	1.3	1.4	29	5.7	87	140	775	1.8	1.9	1.9	17	0.3	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 12:20	3	73	140	572	0.7	2.9	1.0	27	17.8	84	140	922	0.8	1.3	1.4	29	6.3	87	140	776	1.8	1.9	1.9	17	0.2	2.3	71	126	0.0	0.0	0.0	0.0
09/28/1999 12:21	3	73	140	573	0.7	2.9	1.0	27	18.1	84	140	922	0.8	1.3	1.4	29	6.1	87	140	774	1.8	1.9	1.9	17	0.3	2.3	71	123	0.0	0.0	0.0	0.0
09/28/1999 12:22	4	73	140	574	0.7	2.9	1.0	27	18.5	84	140	922	0.8	1.3	1.4	29	6.4	87	140	775	1.8	1.9	1.9	17	0.2	2.3	71	127	0.0	0.0	0.0	0.0
09/28/1999 12:23	4	73	140	576	0.7	2.9	1.0	27	18.4	84	140	922	0.8	1.3	1.4	29	6.7	87	140	775	1.8	1.9	1.9	17	0.3	2.3	71	125	0.0	0.0	0.0	0.0
09/28/1999 12:24	4	73	140	575	0.7	2.9	1.0	27	18.5	84	140	922	0.8	1.3	1.4	29	7.4	87	140	775	1.8	1.9	1.9	17	0.3	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 12:25	5	73	140	572	0.7	2.9	1.0	26	18.9	84	140	922	0.8	1.3	1.4	28	7.6	87	140	774	1.7	1.9	1.9	17	0.3	2.3	72	126	0.0	0.0	0.0	0.0
09/28/1999 12:26	5	73	140	576	0.7	2.9	1.0	26	19.0	84	140	922	0.8	1.3	1.4	28	8.2	87	140	775	1.8	1.9	1.9	17	0.3	2.3	72	123	0.0	0.0	0.0	0.0
09/28/1999 12:27	5	73	140	581	0.7	2.9	1.0	26	19.0	84	140	922	0.8	1.3	1.4	28	8.7	87	140	775	1.8	1.9	1.9	17	0.2	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 12:28	6	73	140	583	0.7	2.9	1.0	26	19.0	84	140	922	0.8	1.3	1.4	28	9.6	87	140	777	1.8	1.9	1.9	17	0.2	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 12:29	6	73	140	583	0.7	2.8	1.0	26	19.0	84	140	922	0.8	1.3	1.4	28	9.5	87	140	776	1.8	1.9	1.9	17	0.2	2.3	72	131	0.0	0.0	0.0	0.0
09/28/1999 12:30	6	73	140	584	0.7	2.8	1.0	26	19.1	84	140	922	0.8	1.3	1.4	28	10.2	87	140	776	1.7	1.9	1.9	17	0.2	2.3	72	131	0.0	0.0	0.0	0.0
09/28/1999 12:31	7	73	140	579	0.7	2.9	1.0	26	18.9	84	140	922	0.8	1.3	1.4	28	10.8	87	140	777	1.8	1.9	1.9	17	0.3	2.3	72	130	0.0	0.0	0.0	0.0
09/28/1999 12:32	7	73	140	575	0.7	2.9	1.0	26	18.9	84	140	922	0.8	1.3	1.4	28	11.3	87	140	777	1.8	1.9	1.9	17	0.2	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 12:33	7	73	140	575	0.7	2.9	1.0	26	18.9	84	140	922	0.8	1.4	1.4	28	11.7	87	140	777	1.8	1.9	1.9	17	0.2	2.3	72	127	0.0	0.0	0.0	0.0

09/28/1999 14:42	12	76	140	629	0.8	3.3	1.1	26	17.3	84	140	922	0.8	1.4	1.4	28	15.1	87	140	775	2.6	1.9	1.9	16	0.2	2.3	74	125	0.0	0.0	0.0	0.0

Craig 1 Scrubber Data

Time	1A LS Slurry Flow	1A SBF Amps	1A Mixed Gas Temp	1A SBF Flow	1A Inlet DP to Tray	1A Inlet DP to Demist	1A Module DP	1A Bypass RHT Damper	1B LS Slurry Flow	1B SBF Amps	1B Mixed Gas Temp	1B SBF Flow	1B Inlet DP to Tray	1B Inlet DP to Demist	1B Module DP	1B Bypass RHT Damper	1C LS Slurry Flow	1C SBF Amps	1C Mixed Gas Temp	1C SBF Flow	1C Inlet DP to Tray	1C Inlet DP to Demist	1C Module DP	1C Bypass RHT Damper	1D LS Slurry Flow	1D SBF Amps	1D Mixed Gas Temp	1D SBF Flow	1D Inlet DP to Tray	1D Inlet DP to Demist	1D Module DP	1D Bypass RHT Damper
09/28/1999 12:34	8	73	140	572	0.7	2.9	1.0	26	18.8	84	140	922	0.8	1.4	1.5	28	12.4	87	140	776	1.8	1.9	1.9	17	0.2	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 12:35	8	73	140	576	0.7	2.9	1.0	26	18.7	84	140	922	0.8	1.4	1.4	28	13.1	87	140	776	1.9	1.9	1.9	17	0.2	2.3	72	126	0.0	0.0	0.0	0.0
09/28/1999 12:36	8	73	140	576	0.7	2.9	1.0	26	18.5	84	140	922	0.8	1.3	1.4	28	13.4	87	140	775	2.0	1.9	2.0	17	0.2	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 12:37	9	73	140	577	0.7	2.9	1.0	26	18.3	84	140	922	0.8	1.3	1.4	28	13.9	87	140	776	1.9	1.9	1.9	17	0.2	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 12:38	9	73	140	576	0.7	3.0	1.0	26	18.1	84	140	922	0.8	1.3	1.4	28	14.3	87	140	774	2.0	1.9	1.9	17	0.2	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 12:39	9	73	140	577	0.7	2.9	1.0	26	17.9	84	140	922	0.8	1.3	1.4	28	14.7	87	140	777	1.9	1.9	1.9	17	0.2	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 12:40	10	73	140	579	0.7	2.9	1.0	26	17.4	84	140	922	0.8	1.3	1.4	28	15.3	87	140	776	1.9	1.9	1.9	17	0.2	2.3	72	123	0.0	0.0	0.0	0.0
09/28/1999 12:41	10	73	140	579	0.7	2.9	1.0	26	17.0	84	140	922	0.8	1.3	1.4	28	15.6	87	140	774	1.9	1.9	1.9	17	0.2	2.3	72	126	0.0	0.0	0.0	0.0
09/28/1999 12:42	11	73	140	583	0.7	2.9	1.0	26	16.7	84	140	922	0.8	1.3	1.4	28	16.0	87	140	775	1.9	1.9	1.9	17	0.2	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 12:43	11	73	140	583	0.7	2.9	1.0	26	14.0	84	140	922	0.8	1.3	1.4	28	16.3	87	140	775	1.9	1.9	1.9	17	0.2	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 12:44	11	73	140	584	0.7	2.9	1.0	26	8.8	84	140	922	0.8	1.3	1.4	28	16.8	87	140	777	1.9	1.9	1.9	17	0.3	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 12:45	12	73	140	579	0.7	2.9	1.0	26	5.5	84	140	922	0.8	1.3	1.4	28	17.4	87	140	776	1.9	1.9	1.9	17	0.2	2.3	73	127	0.0	0.0	0.0	0.0
09/28/1999 12:46	12	73	141	581	0.7	2.9	1.0	26	4.4	84	140	922	0.8	1.3	1.4	28	17.6	87	140	776	1.9	1.9	1.9	17	0.2	2.3	73	126	0.0	0.0	0.0	0.0
09/28/1999 12:47	12	73	141	580	0.7	2.9	1.0	25	3.9	84	140	922	0.8	1.3	1.4	28	17.9	87	140	774	1.9	1.9	1.9	16	0.2	2.3	73	126	0.0	0.0	0.0	0.0
09/28/1999 12:48	13	73	141	583	0.7	2.9	1.0	25	3.5	84	141	922	0.8	1.3	1.4	28	18.3	87	140	776	1.9	1.9	1.9	16	0.2	2.3	73	128	0.0	0.0	0.0	0.0
09/28/1999 12:49	13	73	141	580	0.7	2.8	1.0	25	3.5	84	141	922	0.8	1.3	1.4	27	18.5	87	141	775	1.8	1.9	1.9	16	0.2	2.3	73	128	0.0	0.0	0.0	0.0
09/28/1999 12:50	13	73	141	581	0.8	2.9	1.1	25	3.1	84	141	922	0.8	1.4	1.4	27	19.0	87	141	774	1.8	1.9	1.9	16	0.2	2.3	73	129	0.0	0.0	0.0	0.0
09/28/1999 12:51	14	73	140	579	0.7	2.8	1.0	25	3.3	84	140	922	0.8	1.4	1.5	27	19.0	87	141	777	1.8	1.9	1.9	16	0.2	2.3	73	131	0.0	0.0	0.0	0.0
09/28/1999 12:52	14	73	140	581	0.7	2.9	1.0	25	3.3	84	140	922	0.8	1.4	1.4	27	19.2	87	141	774	1.9	1.9	1.9	16	0.2	2.3	73	128	0.0	0.0	0.0	0.0
09/28/1999 12:53	14	73	140	580	0.7	2.9	1.0	25	3.5	84	140	922	0.8	1.3	1.4	27	19.4	87	141	775	2.0	1.9	1.9	16	0.2	2.3	73	123	0.0	0.0	0.0	0.0
09/28/1999 12:54	15	73	140	576	0.7	2.9	1.0	25	3.8	84	140	922	0.8	1.3	1.4	27	19.5	87	140	773	1.9	1.9	1.9	16	0.2	2.3	73	121	0.0	0.0	0.0	0.0
09/28/1999 12:55	15	72	140	578	0.7	2.8	1.0	25	3.8	84	140	922	0.8	1.3	1.4	27	19.7	87	140	776	1.9	1.9	1.9	16	0.2	2.3	72	127	0.0	0.0	0.0	0.0
09/28/1999 12:56	15	73	140	581	0.7	2.8	1.0	25	4.4	84	140	922	0.8	1.3	1.4	27	19.7	87	140	778	1.8	1.9	1.9	16	0.2	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 12:57	16	72	140	583	0.7	2.8	1.0	25	4.5	84	140	922	0.8	1.3	1.4	27	19.9	87	140	776	1.9	1.9	1.9	15	0.2	2.3	72	123	0.0	0.0	0.0	0.0
09/28/1999 12:58	16	73	140	578	0.7	2.8	1.0	25	4.9	84	140	922	0.8	1.3	1.4	28	20.0	87	140	773	1.9	1.9	1.9	15	0.2	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 12:59	16	73	140	581	0.7	2.8	1.0	25	5.4	84	140	922	0.8	1.3	1.4	28	20.0	87	140	774	2.0	1.9	1.9	15	0.2	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 13:00	17	73	140	583	0.7	2.9	1.0	25	6.0	84	140	922	0.8	1.3	1.4	28	19.8	87	140	775	2.1	1.9	1.9	15	0.2	2.3	72	126	0.0	0.0	0.0	0.0
09/28/1999 13:01	17	73	140	583	0.7	2.9	1.0	25	6.5	84	140	922	0.8	1.3	1.4	28	19.9	87	140	777	2.1	1.9	1.9	15	0.2	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 13:02	17	73	140	582	0.7	2.9	1.0	25	7.1	84	140	922	0.8	1.3	1.4	28	19.7	87	140	776	2.2	1.9	1.9	15	0.2	2.3	72	129	0.0	0.0	0.0	0.0
09/28/1999 13:03	17	73	140	582	0.7	2.9	1.0	25	7.5	84	140	922	0.8	1.3	1.4	28	19.5	87	140	775	2.2	1.9	1.9	15	0.2	2.3	72	127	0.0	0.0	0.0	0.0
09/28/1999 13:04	18	73	140	580	0.7	2.8	1.0	25	7.9	84	140	922	0.8	1.3	1.4	28	19.4	87	140	773	2.1	1.9	1.9	15	0.2	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 13:05	18	73	140	575	0.7	2.8	1.0	25	8.9	84	140	922	0.8	1.3	1.4	28	19.2	87	140	775	2.1	1.9	1.9	15	0.2	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 13:06	18	73	140	575	0.7	2.8	1.0	25	9.5	84	140	922	0.8	1.3	1.4	28	18.9	87	140	775	2.1	1.9	1.9	15	0.2	2.3	72	127	0.0	0.0	0.0	0.0
09/28/1999 13:07	18	73	140	579	0.7	2.9	1.1	25	10.1	84	140	922	0.8	1.3	1.4	28	18.9	87	140	775	2.1	1.9	1.9	15	0.2	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 13:08	18	73	140	582	0.7	2.8	1.0	25	10.7	84	140	922	0.8	1.4	1.5	28	18.9	87	140	774	2.1	1.9	1.9	15	0.2	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 13:09	18	73	140	583	0.7	2.9	1.0	25	11.3	84	140	922	0.8	1.4	1.5	28	18.7	87	140	773	2.2	1.9	1.9	15	0.3	2.3	72	122	0.0	0.0	0.0	0.0
09/28/1999 13:10	19	73	140	580	0.7	2.8	1.0	25	12.2	84	140	922	0.8	1.3	1.4	28	12.7	87	140	775	2.2	1.9	2.0	15	0.2	2.3	72	124	0.0	0.0	0.0	0.0
09/28/1999 13:11	20	72	139	581	0.7	2.9	1.0	25	12.7	84	140	922	0.8	1.3	1.4	28	11.0	87	140	773	2.3	1.9	2.0	15	0.2	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 13:12	20	72	140	581	0.7	2.8	1.0	25	13.2	84	140	922	0.8	1.3	1.4	28	9.4	87	140	774	2.2	1.9	1.9	15	0.1	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 13:13	20	73	139	579	0.7	2.9	1.0	26	13.9	84	140	922	0.8	1.3	1.4	28	6.4	87	140	774	2.2	1.9	1.9	15	0.1	2.3	72	126	0.0	0.0	0.0	0.0
09/28/1999 13:14	20	72	140	580	0.7	2.9	1.0	26	14.5	84	140	922	0.8	1.3	1.4	28	5.1	87	140	777	2.3	1.9	1.9	15	0.2	2.3	72	123	0.0	0.0	0.0	0.0
09/28/1999 13:15	20	73	140	580	0.7	2.9	1.0	26	14.9	84	140	922	0.8	1.3	1.4	28	4.9	87	140	774	2.2	1.9	1.9	16	0.1	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 13:16	18	73	140	582	0.7	2.8	1.0	26	15.4	84	140	922	0.8	1.3	1.4	28	4.9	87	140	775	2.2	1.9	1.9	16	0.2	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 13:17	9	73	140	582	0.7	2.9	1.0	26	15.8	84	140	922	0.8	1.3	1.4	28	5.0	87	140	774	2.2	1.9	1.9	16	0.2	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 13:18	5	73	140	582	0.7	2.8	1.0	26	16.5	84	140	922	0.8	1.3	1.4	28	5.1	87	140	774	2.2	1.9	1.9	16	0.2	2.3	72	129	0.0	0.0	0.0	0.0
09/28/1999 13:19	3	73	140	580	0.7	2.9	1.0	26	16.8	84	140	922	0.8	1.3	1.4	28	5.3	87	140	776	2.2	1.9	1.9	16	0.2	2.3	72	128	0.0	0.0	0.0	0.0
09/28/1999 13:20	3	73	140	579	0.7	2.8	1.0	26	17.2	84	140	922	0.8	1.3	1.4	28	5.6	87	140	776	2.2	1.9	1.9	16	0.2	2.3	72	121	0.0	0.0	0.0	0.0
09/28/1999 13:21	3	73	140	581	0.7	2.9	1.0	26	17.5	84	140	922	0.8	1.3	1.4	28	5.5	87	140	774	2.2	1.9	1.9	16	0.2	2.3	72	126	0.0	0.0	0.0	0.0
09/28/1999 13:22	3	73	140	579	0.7	2.9	1.0	26	17.7	84	140	922	0.8	1.3	1.4	28	5.8	87	140	774	2.2	1.9	1.9	16	0.2	2.3	72	123	0.0	0.0	0.0	0.0
09/28/1999 13:23	3	73	140	578	0.7	2.9	1.0	26	18.3	84	140	922	0.8	1.3	1.4	28	6.1	87	140	777	2.2	1.9	1.9	16	0.2	2.3	72	126	0.0	0.0	0.0	0.0
09/28/1999 13:24	4	73	140	576	0.8	2.9	1.1	26	18.3	84	140	922	0.8	1.3	1.4	28	6.6	87	140	776	2.2	1.9	1.9	16	0.2	2.3	72	126	0.0	0.0	0.0	0.0
09/28/1999 13:25	4	74	140	585	0.7	3.1	1.0	29	18.5	84	140	922	0.8	1.4	1.5	28	7.0	87	140	776	2.2	1.9	1.9	16	0.2	2.3	72	125	0.0	0.0	0.0	0.0
09/28/1999 13:26	4	76	140	618	0.7	3.2	1.0	31	18.7	85	140	922	0.8	1.4	1.5	28	7.3	87	140	771	2.3	1.9	1.9	16	0.2	2.3	73	128	0.0	0.0	0.0	0.0
09/28/1999 13:27	4	76	140	626	0.7	3.2	1.0	31	19.0	84	140	922	0.8	1.3	1.4	28	7.7	87	140	773	2.3	1.9	1.9	16	0.2	2.3	73	125	0.0	0.0	0.0	0.0
09/28/1999 13:28	4	76	140	624	0.7	3.2	1.0	31	19.1	84	140	922	0.8	1.3	1.4	28	8.2	87	140	775	2.3	1.9	1.9	16	0.3	2.3	73	125	0.0	0.0	0.0	0.0
09/28/1999 13:29	5	76	140	626	0.7	3.2	1.0	31	19.2	84	140	922	0.8	1.3	1.4	28	9.0	87	140	775	2.3	1.9	1.9	16	0.2	2.3	73	121	0.0	0.0	0.0	0.0
09/28/1999 13:30	5	76	140	624	0.7	3.2	1.0	31	19.2	84	140	922	0.8	1.3	1.4	28	9.5	87	140	776	2.3	1.9	1.9	16	0.3	2.3	73	123	0.0	0.0	0.0	0.0
09/28/1999 13:31	5	76	141	625	0.7	3.2	1.0	31	19.3	84	140	922	0.8	1.3	1.4	28	9.6	87	140	775	2.3	1.9	1.9	16	0.3	2.3	73	124	0.0	0.0	0.0	0.0
09/28/1999 13:32	5	76	141	624	0.7	3.2	1.0	30	19.1	84	140	922	0.8	1.3	1.4	28	10.4	87	140	777	2.3	1.9	1.9	16	0.2	2.3	73	124	0.0	0.0	0.0	0.0
09/28/1999 13:33	6	76	141	629	0.7	3.2	1.0	30	19.1	84	140	922	0.8	1.3	1.4	28	10.8	87	140	773	2.3	1.9	1.9	16	0.2	2.3	73	128	0.0	0.0	0.0	0.0
09/28/1999 13:34	6	76	141	630	0.7	3.2	1.0	30	18.9	84	140	922	0.8	1.3	1.4	28	11.3	87	140	772	2.3	1.9	1.9	16	0.2	2.3	73	127	0.0	0.0	0.0	0.0
09/28/1999 13:35	6	76	141	630	0.7	3.2	1.0	30	18.9	84	140	922	0.8	1.3	1.4	28	11.7	87	140	777	2.3	1.9	1.9	16	0.2	2.3	73	127	0.0	0.0	0.0	0.0
09/28/1999 13:36	6	76	141	625	0.7	3.2	1.0	30	18.6	84	140	922	0.8	1.3	1.4	28	12.2	87	140	775	2.3	1.9	1.9	16	0.2	2.3	73	126	0.0	0.0	0.0	0.0

Craig 1 Scrubber Data																																
Time	1A LS Slurry Flow	1A SBF Amps	1A Mixed Gas Temp	1A SBF Flow	1A Inlet DP to Tray	1A Inlet DP to Demist	1A Module DP	1A Bypass RHT Damper	1B LS Slurry Flow	1B SBF Amps	1B Mixed Gas Temp	1B SBF Flow	1B Inlet DP to Tray	1B Inlet DP to Demist	1B Module DP	1B Bypass RHT Damper	1C LS Slurry Flow	1C SBF Amps	1C Mixed Gas Temp	1C SBF Flow	1C Inlet DP to Tray	1C Inlet DP to Demist	1C Module DP	1C Bypass RHT Damper	1D LS Slurry Flow	1D SBF Amps	1D Mixed Gas Temp	1D SBF Flow	1D Inlet DP to Tray	1D Inlet DP to Demist	1D Module DP	1D Bypass RHT Damper
09/29/1999 12:30	20	91	140	769	0.8	4.7	1.2	26	7.7	92	140	922	0.8	1.4	1.5	26	16.7	91	140	803	0.0	1.9	2.0	12	0.8	2.3	92	133	0.0	0.0	0.0	-0.4
09/29/1999 12:31	20	92	140	765	0.8	4.8	1.3	26	8.3	92	140	922	0.8	1.4	1.5	26	16.7	92	140	801	0.0	1.9	2.0	12	0.5	2.3	92	130	0.0	0.0	0.0	-0.4
09/29/1999 12:32	20	92	140	767	0.8	4.7	1.3	26	8.9	92	140	922	0.8	1.4	1.5	26	16.2	92	140	803	0.0	1.9	2.0	12	0.6	2.3	92	128	0.0	0.0	0.0	-0.4
09/29/1999 12:33	20	92	140	767	0.8	4.8	1.3	26	9.5	92	139	922	0.8	1.4	1.5	26	15.9	92	140	802	0.0	1.9	2.0	12	0.4	2.3	92	130	0.0	0.0	0.0	-0.4
09/29/1999 12:34	20	92	140	768	0.8	4.7	1.2	26	10.0	92	139	922	0.8	1.4	1.5	26	15.8	92	140	803	0.0	1.9	2.0	12	0.8	2.3	92	130	0.0	0.0	0.0	-0.4
09/29/1999 12:35	20	92	140	770	0.8	4.7	1.3	26	10.7	92	139	922	0.8	1.4	1.5	26	15.6	92	140	801	0.0	1.9	2.0	12	0.5	2.3	92	133	0.0	0.0	0.0	-0.4
09/29/1999 12:36	19	92	140	770	0.8	4.6	1.3	26	11.2	92	140	922	0.8	1.4	1.5	26	15.5	91	140	802	0.0	1.9	2.0	12	0.4	2.3	92	134	0.0	0.0	0.0	-0.4
09/29/1999 12:37	21	92	140	769	0.8	4.7	1.3	26	11.9	92	140	922	0.8	1.4	1.5	26	9.1	91	140	803	0.0	1.9	2.0	12	0.3	2.3	92	131	0.0	0.0	0.0	-0.4
09/29/1999 12:38	21	91	140	769	0.8	4.7	1.3	26	12.5	92	140	922	0.8	1.4	1.5	26	10.1	91	140	803	0.0	1.9	2.0	12	0.4	2.3	92	127	0.0	0.0	0.0	-0.4
09/29/1999 12:39	20	92	140	767	0.8	4.7	1.3	26	13.0	92	140	922	0.8	1.4	1.5	26	12.1	91	140	803	0.0	1.9	2.0	12	0.3	2.3	92	129	0.0	0.0	0.0	-0.4
09/29/1999 12:40	21	92	140	759	0.8	4.7	1.3	26	13.6	92	140	922	0.8	1.4	1.4	26	7.2	92	140	801	0.0	1.9	2.0	12	0.1	2.3	92	132	0.0	0.0	0.0	-0.4
09/29/1999 12:41	21	92	140	764	0.8	4.7	1.3	26	14.1	92	140	922	0.8	1.4	1.5	26	4.9	91	140	805	0.0	1.9	2.0	12	0.1	2.3	92	136	0.0	0.0	0.0	-0.4
09/29/1999 12:42	22	91	140	763	0.8	4.7	1.2	26	14.6	92	140	922	0.8	1.4	1.5	26	4.0	91	140	803	0.0	1.9	2.0	12	0.2	2.3	92	135	0.0	0.0	0.0	-0.4
09/29/1999 12:43	15	92	140	759	0.8	4.6	1.3	26	15.0	91	140	922	0.8	1.4	1.4	26	4.1	91	140	804	0.0	1.9	2.0	12	0.2	2.3	92	129	0.0	0.0	0.0	-0.4
09/29/1999 12:44	14	91	140	762	0.8	4.7	1.3	26	15.4	91	140	922	0.8	1.4	1.4	26	4.1	91	140	802	0.0	1.9	2.0	12	0.2	2.2	92	136	0.0	0.0	0.0	-0.4
09/29/1999 12:45	15	92	140	761	0.8	4.7	1.3	26	15.6	91	140	922	0.8	1.4	1.5	26	4.4	92	139	803	0.0	1.9	2.0	12	0.2	2.3	92	133	0.0	0.0	0.0	-0.4
09/29/1999 12:46	10	91	140	762	0.8	4.7	1.3	26	16.1	91	140	922	0.8	1.4	1.5	26	4.8	92	139	803	0.0	1.9	2.0	12	0.2	2.2	92	136	0.0	0.0	0.0	-0.4
09/29/1999 12:47	8	91	140	762	0.8	4.8	1.2	26	16.3	92	140	922	0.8	1.4	1.5	26	5.0	92	139	803	0.0	1.9	2.0	12	0.2	2.2	92	134	0.0	0.0	0.0	-0.4
09/29/1999 12:48	7	91	140	763	0.8	4.7	1.2	25	16.6	92	140	922	0.8	1.4	1.5	26	5.6	92	139	805	0.0	1.9	2.0	12	0.2	2.2	92	133	0.0	0.0	0.0	-0.4
09/29/1999 12:49	8	91	141	764	0.8	4.7	1.3	25	16.9	92	140	922	0.8	1.4	1.5	26	6.0	91	140	805	0.0	1.9	2.0	13	0.2	2.2	93	134	0.0	0.0	0.0	-0.4
09/29/1999 12:50	8	92	141	760	0.8	4.7	1.3	25	17.1	92	140	922	0.8	1.5	1.5	26	6.5	91	140	804	0.0	1.9	2.0	13	0.2	2.2	93	133	0.0	0.0	0.0	-0.4
09/29/1999 12:51	9	91	141	764	0.8	4.7	1.3	25	17.1	92	140	922	0.8	1.5	1.5	26	7.0	91	140	803	0.0	1.9	2.0	13	0.2	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 12:52	9	92	141	763	0.8	4.7	1.3	25	17.0	92	140	922	0.8	1.5	1.4	26	7.5	92	140	802	0.0	1.9	2.0	13	0.2	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 12:53	10	91	141	766	0.8	4.7	1.3	24	16.7	92	140	922	0.8	1.5	1.4	26	8.0	92	140	805	0.0	1.9	2.0	13	0.2	2.2	93	134	0.0	0.0	0.0	-0.4
09/29/1999 12:54	11	91	141	764	0.8	4.8	1.3	24	16.7	92	140	922	0.8	1.5	1.5	26	8.6	92	141	801	0.0	1.9	2.0	12	0.2	2.2	93	130	0.0	0.0	0.0	-0.4
09/29/1999 12:55	11	92	141	763	0.8	4.8	1.3	24	16.4	92	140	922	0.8	1.4	1.5	26	9.2	92	141	801	0.0	1.9	2.0	12	0.2	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 12:56	12	91	141	765	0.8	4.7	1.3	24	16.4	92	140	922	0.8	1.4	1.5	26	9.7	91	141	804	0.0	1.9	2.0	12	0.2	2.2	93	132	0.0	0.0	0.0	-0.4
09/29/1999 12:57	13	91	141	768	0.8	4.7	1.3	24	16.2	92	140	922	0.8	1.4	1.4	26	10.2	91	141	804	0.0	1.9	2.0	12	0.1	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 12:58	14	91	141	770	0.8	4.6	1.3	24	16.1	92	140	922	0.8	1.4	1.5	26	10.7	91	141	805	0.0	1.9	2.0	12	0.1	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 12:59	14	91	141	768	0.8	4.6	1.3	23	15.9	92	140	922	0.8	1.4	1.5	26	11.4	91	141	803	0.0	1.9	2.0	12	0.2	2.2	93	132	0.0	0.0	0.0	-0.4
09/29/1999 13:00	15	91	141	780	0.8	4.6	1.3	23	15.9	92	140	922	0.8	1.4	1.5	26	11.9	91	141	803	0.0	1.9	2.0	11	0.1	2.2	93	136	0.0	0.0	0.0	-0.4
09/29/1999 13:01	16	91	141	773	0.8	4.8	1.3	23	15.9	92	140	922	0.8	1.4	1.5	26	12.1	91	141	803	0.0	1.9	2.0	11	0.2	2.2	93	139	0.0	0.0	0.0	-0.4
09/29/1999 13:02	16	91	141	767	0.8	4.7	1.3	23	15.6	92	140	922	0.8	1.4	1.5	26	13.0	91	141	805	0.0	1.9	2.0	11	0.6	2.2	93	138	0.0	0.0	0.0	-0.4
09/29/1999 13:03	17	91	141	767	0.8	4.6	1.3	23	15.5	92	140	922	0.8	1.4	1.5	26	13.0	91	141	804	0.0	1.9	2.0	11	0.6	2.2	93	137	0.0	0.0	0.0	-0.4
09/29/1999 13:04	17	91	141	766	0.8	4.7	1.3	23	15.3	91	140	922	0.8	1.4	1.5	26	13.3	91	141	803	0.0	1.9	2.0	11	0.6	2.2	93	136	0.0	0.0	0.0	-0.4
09/29/1999 13:05	17	91	141	767	0.8	4.7	1.3	23	15.5	92	140	922	0.8	1.4	1.5	26	13.2	92	141	802	0.0	1.9	2.0	11	0.7	2.2	93	132	0.0	0.0	0.0	-0.4
09/29/1999 13:06	17	91	141	766	0.8	4.7	1.3	23	15.6	92	139	922	0.8	1.4	1.5	26	13.6	91	141	803	0.0	1.9	2.0	11	0.5	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 13:07	18	91	140	768	0.8	4.7	1.3	23	15.5	91	139	922	0.8	1.4	1.5	26	13.3	91	141	804	0.0	1.9	2.0	11	0.6	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 13:08	18	91	140	767	0.8	4.7	1.3	23	15.4	92	139	922	0.8	1.4	1.5	26	13.2	91	140	803	0.0	1.9	2.0	11	0.4	2.2	93	129	0.0	0.0	0.0	-0.4
09/29/1999 13:09	19	91	140	769	0.8	4.7	1.3	23	15.4	91	139	922	0.8	1.4	1.4	26	12.8	92	140	804	0.0	1.9	2.0	11	0.4	2.2	92	132	0.0	0.0	0.0	-0.4
09/29/1999 13:10	19	91	140	768	0.8	4.8	1.3	23	15.2	91	140	922	0.8	1.4	1.4	26	13.3	91	140	804	0.0	1.9	2.0	11	0.2	2.2	92	133	0.0	0.0	0.0	-0.4
09/29/1999 13:11	19	91	140	767	0.8	4.7	1.3	23	12.7	91	140	922	0.8	1.4	1.5	27	14.3	91	140	803	0.0	1.9	2.0	11	0.1	2.2	92	132	0.0	0.0	0.0	-0.4
09/29/1999 13:12	20	91	140	769	0.8	4.7	1.3	23	9.3	91	140	922	0.8	1.4	1.5	27	15.7	91	140	803	0.0	1.9	2.0	11	0.2	2.2	92	132	0.0	0.0	0.0	-0.4
09/29/1999 13:13	19	91	140	766	0.8	4.7	1.3	23	13.7	91	140	922	0.8	1.4	1.4	27	13.6	91	140	802	0.0	1.9	2.0	11	0.7	2.2	92	134	0.0	0.0	0.0	-0.4
09/29/1999 13:14	20	91	140	766	0.8	4.8	1.3	23	8.6	91	140	922	0.8	1.4	1.4	27	15.9	91	140	803	0.0	1.9	2.0	11	0.6	2.2	92	128	0.0	0.0	0.0	-0.4
09/29/1999 13:15	21	91	140	765	0.8	4.7	1.3	23	5.9	91	140	922	0.8	1.4	1.4	27	17.4	91	140	803	0.0	1.9	2.0	11	0.4	2.2	92	130	0.0	0.0	0.0	-0.4
09/29/1999 13:16	21	91	140	765	0.8	4.7	1.3	23	4.2	91	140	922	0.8	1.4	1.5	27	17.7	91	140	801	0.0	1.9	2.0	11	0.3	2.2	92	132	0.0	0.0	0.0	-0.4
09/29/1999 13:17	21	91	140	767	0.8	4.7	1.3	23	3.5	91	140	922	0.8	1.4	1.4	27	18.0	91	140	803	0.0	1.9	2.0	11	0.1	2.2	92	129	0.0	0.0	0.0	-0.4
09/29/1999 13:18	21	91	140	766	0.8	4.6	1.3	23	3.0	91	140	922	0.8	1.4	1.5	27	17.8	91	140	804	0.0	1.9	2.0	11	0.2	2.2	92	126	0.0	0.0	0.0	-0.4
09/29/1999 13:19	21	91	140	764	0.8	4.7	1.3	23	3.0	91	140	922	0.8	1.4	1.4	27	17.7	91	140	803	0.0	1.9	2.0	11	0.2	2.2	92	124	0.0	0.0	0.0	-0.4
09/29/1999 13:20	21	91	140	766	0.8	4.7	1.3	23	2.9	91	140	922	0.8	1.4	1.5	27	17.7	91	140	803	0.0	1.9	2.0	11	0.1	2.2	92	126	0.0	0.0	0.0	-0.4
09/29/1999 13:21	21	91	140	763	0.8	4.7	1.3	23	2.9	92	140	922	0.8	1.4	1.4	27	18.1	92	140	800	0.0	1.9	2.0	10	0.1	2.2	92	132	0.0	0.0	0.0	-0.4
09/29/1999 13:22	21	91	140	765	0.8	4.7	1.3	23	3.2	92	140	922	0.8	1.4	1.4	27	18.1	91	140	802	0.0	1.9	2.0	10	0.2	2.2	92	137	0.0	0.0	0.0	-0.4
09/29/1999 13:23	21	91	140	766	0.8	4.7	1.3	23	3.3	92	140	922	0.8	1.4	1.5	27	18.1	91	140	803	0.0	1.9	2.0	10	0.2	2.2	92	137	0.0	0.0	0.0	-0.4
09/29/1999 13:24	21	91	140	767	0.8	4.7	1.3	23	3.4	92	140	922	0.8	1.4	1.5	27	18.0	91	140	802	0.0	1.9	2.0	10	0.2	2.2	92	136	0.0	0.0	0.0	-0.4
09/29/1999 13:25	21	91	140	768	0.8	4.6	1.3	23	3.8	91	140	922	0.8	1.4	1.5	26	17.8	91	140	803	0.0	1.9	2.0	10	0.1	2.2	92	141	0.0	0.0	0.0	-0.4
09/29/1999 13:26	21	91	140	765	0.8	4.7	1.3	23	4.0	92	141	922	0.8	1.4	1.5	26	17.8	91	140	802	0.0	1.9	2.0	10	0.2	2.2	92	135	0.0	0.0	0.0	-0.4
09/29/1999 13:27	21	91	140	765	0.8	4.7	1.3	23	4.6	92	141	922	0.8	1.4	1.5	26	17.2	91	140	800	0.0	1.9	2.0	10	0.2	2.2	92	138	0.0	0.0	0.0	-0.4
09/29/1999 13:28	21	91	140	764	0.8	4.7	1.3	23	5.1	92	141	922	0.8	1.4	1.5	26	17.2	91	140	802	0.0	1.9	2.0	10	0.4	2.2	93	137	0.0	0.0	0.0	-0.4
09/29/1999 13:29	21	91	140	766	0.8	4.8	1.3	23	5.4	92	141	922	0.8	1.4	1.5	26	17.0	92	140	802	0.0	1.9	2.0	10	0.6	2.2	93	134	0.0	0.0	0.0	-0.4
09/29/1999 13:30	21	91	140	764	0.8	4.7	1.3	23	5.8	92	141	922	0.8	1.4	1.5	26	17.2	91	140	802	0.0	1.9	2.0	10	0.6	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 13:31	21	91	140	766	0.8	4.6	1.3	23	6.2	91	141	922	0.8	1.4	1.5	26	16.9	91	140	802	0.0	1.9	2.0	10	0.5	2.2	93	137	0.0	0.0	0.0	-0.4
09/29/1999 13:32	20	91	140	769	0.8	4.7	1.3	23	6.7	92	141	922	0.8	1.4	1.5	26	17.1	91	140	801	0.0	1.9	2.0	10	0.5	2.2	93	137	0.0	0.0	0.0	-0.4

Craig 1 Scrubber Data

Time	1A LS Slurry Flow	1A SBF Amps	1A Mixed Gas Temp	1A SBF Flow	1A Inlet DP to Tray	1A Inlet DP to Demist	1A Module DP	1A Bypass RHT Damper	1B LS Slurry Flow	1B SBF Amps	1B Mixed Gas Temp	1B SBF Flow	1B Inlet DP to Tray	1B Inlet DP to Demist	1B Module DP	1B Bypass RHT Damper	1C LS Slurry Flow	1C SBF Amps	1C Mixed Gas Temp	1C SBF Flow	1C Inlet DP to Tray	1C Inlet DP to Demist	1C Module DP	1C Bypass RHT Damper	1D LS Slurry Flow	1D SBF Amps	1D Mixed Gas Temp	1D SBF Flow	1D Inlet DP to Tray	1D Inlet DP to Demist	1D Module DP	1D Bypass RHT Damper
09/29/1999 13:33	20	91	140	768	0.8	4.7	1.3	23	6.9	92	140	922	0.8	1.4	1.5	26	16.7	91	140	801	0.0	1.9	2.0	10	0.3	2.2	93	133	0.0	0.0	0.0	-0.4
09/29/1999 13:34	20	91	140	766	0.8	4.7	1.3	23	7.5	91	140	922	0.8	1.4	1.5	26	16.5	91	140	801	0.0	1.9	2.0	10	0.3	2.2	93	129	0.0	0.0	0.0	-0.4
09/29/1999 13:35	20	91	140	767	0.8	4.7	1.3	23	8.2	91	141	922	0.8	1.4	1.5	26	16.3	91	140	803	0.0	1.9	2.0	10	0.4	2.2	93	129	0.0	0.0	0.0	-0.4
09/29/1999 13:36	20	91	140	767	0.8	4.8	1.3	23	8.7	92	140	922	0.8	1.4	1.5	25	15.9	91	140	799	0.0	1.9	2.0	10	0.5	2.2	93	128	0.0	0.0	0.0	-0.4
09/29/1999 13:37	20	91	140	769	0.8	4.7	1.3	23	9.2	91	140	922	0.8	1.4	1.4	25	15.8	91	140	803	0.0	1.9	2.0	10	0.4	2.2	93	133	0.0	0.0	0.0	-0.4
09/29/1999 13:38	21	91	140	768	0.8	4.6	1.3	23	10.0	91	140	922	0.8	1.3	1.4	25	10.4	91	140	804	0.0	1.9	2.0	10	0.3	2.2	93	135	0.0	0.0	0.0	-0.4
09/29/1999 13:39	21	91	140	769	0.8	4.6	1.3	23	10.5	91	140	922	0.8	1.2	1.4	25	9.7	91	140	801	0.0	1.9	2.0	10	0.3	2.2	93	137	0.0	0.0	0.0	-0.4
09/29/1999 13:40	20	91	140	767	0.8	4.7	1.3	23	11.1	92	140	922	0.8	1.4	1.5	25	13.3	91	140	803	0.0	1.9	2.0	10	0.3	2.2	93	134	0.0	0.0	0.0	-0.4
09/29/1999 13:41	21	91	140	764	0.8	4.7	1.3	23	11.7	92	140	922	0.8	1.4	1.5	25	8.2	91	140	801	0.0	1.9	2.0	10	0.1	2.2	93	127	0.0	0.0	0.0	-0.4
09/29/1999 13:42	22	91	140	766	0.8	4.7	1.3	23	12.4	92	140	922	0.8	1.4	1.5	25	5.4	91	139	800	0.0	1.9	2.0	11	0.1	2.2	93	131	0.0	0.0	0.0	-0.4
09/29/1999 13:43	22	91	140	768	0.8	4.7	1.3	23	12.9	91	140	922	0.8	1.3	1.5	25	4.4	91	139	803	0.0	1.9	2.0	11	0.1	2.2	93	128	0.0	0.0	0.0	-0.4
09/29/1999 13:44	18	91	140	767	0.8	4.7	1.3	23	13.5	91	140	922	0.8	1.3	1.5	25	4.4	91	139	802	0.0	1.9	2.0	11	0.2	2.2	93	130	0.0	0.0	0.0	-0.4
09/29/1999 13:45	13	91	140	769	0.8	4.7	1.3	23	13.8	91	140	922	0.8	1.4	1.5	25	4.7	91	139	802	0.0	1.9	2.0	11	0.2	2.2	93	132	0.0	0.0	0.0	-0.4
09/29/1999 13:46	16	91	140	767	0.8	4.7	1.3	23	14.3	91	140	922	0.8	1.5	1.5	25	4.9	91	139	803	0.0	1.9	2.0	11	0.2	2.2	93	132	0.0	0.0	0.0	-0.4
09/29/1999 13:47	10	91	140	767	0.8	4.7	1.3	24	14.8	92	140	922	0.8	1.6	1.5	25	5.2	91	139	801	0.0	1.9	2.0	11	0.2	2.2	93	130	0.0	0.0	0.0	-0.4
09/29/1999 13:48	8	91	140	766	0.8	4.6	1.3	24	15.1	91	140	922	0.8	1.5	1.5	25	5.7	91	139	801	0.0	1.9	2.0	11	0.3	2.2	94	132	0.0	0.0	0.0	-0.4
09/29/1999 13:49	8	91	140	766	0.8	4.6	1.3	24	15.6	91	140	922	0.8	1.5	1.5	25	6.1	91	139	801	0.0	1.9	2.0	11	0.3	2.2	94	133	0.0	0.0	0.0	-0.4
09/29/1999 13:50	8	91	140	767	0.8	4.7	1.2	24	15.8	91	140	922	0.8	1.6	1.5	24	6.6	91	139	802	0.0	1.9	2.0	11	0.2	2.2	94	138	0.0	0.0	0.0	-0.4
09/29/1999 13:51	9	91	140	767	0.8	4.7	1.3	24	16.1	91	140	922	0.8	1.6	1.5	24	7.0	91	139	802	0.0	1.9	2.0	12	0.2	2.2	94	135	0.0	0.0	0.0	-0.4
09/29/1999 13:52	9	91	140	767	0.8	4.6	1.3	24	16.3	91	140	922	0.8	1.5	1.5	24	7.6	91	139	802	0.0	1.9	2.0	12	0.2	2.2	94	132	0.0	0.0	0.0	-0.4
09/29/1999 13:53	10	91	140	766	0.8	4.7	1.3	24	16.6	91	140	922	0.8	1.6	1.5	24	8.1	91	139	803	0.0	1.9	2.0	12	0.2	2.2	94	130	0.0	0.0	0.0	-0.4
09/29/1999 13:54	11	91	140	767	0.8	4.7	1.3	24	16.4	91	140	922	0.8	1.3	1.5	24	8.7	91	139	803	0.0	1.9	2.0	12	0.2	2.2	94	132	0.0	0.0	0.0	-0.4
09/29/1999 13:55	11	91	140	766	0.8	4.7	1.3	24	16.1	91	140	922	0.8	1.3	1.5	24	9.2	91	139	801	0.0	1.9	2.0	12	0.2	2.2	94	129	0.0	0.0	0.0	-0.4
09/29/1999 13:56	12	91	140	764	0.8	4.7	1.2	24	16.3	91	140	922	0.8	1.4	1.5	24	9.6	91	139	802	0.0	1.9	2.0	12	0.1	2.2	94	132	0.0	0.0	0.0	-0.4
09/29/1999 13:57	13	91	140	765	0.8	4.7	1.3	24	16.2	91	140	922	0.8	1.4	1.5	24	10.3	91	139	802	0.0	1.9	2.0	12	0.2	2.2	94	138	0.0	0.0	0.0	-0.4
09/29/1999 13:58	14	91	140	766	0.8	4.7	1.3	24	16.1	91	140	922	0.8	1.4	1.5	24	10.8	91	139	801	0.0	1.9	2.0	12	0.1	2.2	94	136	0.0	0.0	0.0	-0.4
09/29/1999 13:59	14	91	140	765	0.8	4.7	1.3	24	15.9	91	140	922	0.8	1.5	1.5	24	11.3	91	139	799	0.0	1.9	2.0	12	0.1	2.2	94	134	0.0	0.0	0.0	-0.4
09/29/1999 14:00	15	91	140	766	0.8	4.7	1.2	24	15.6	91	140	922	0.8	1.5	1.5	24	11.9	91	139	802	0.0	1.9	1.9	13	0.1	2.2	94	134	0.0	0.0	0.0	-0.4
09/29/1999 14:01	16	91	140	765	0.8	4.8	1.3	24	15.8	91	140	922	0.8	1.6	1.5	24	12.2	91	139	800	0.0	1.9	1.9	13	0.2	2.2	94	130	0.0	0.0	0.0	-0.4
09/29/1999 14:02	16	91	140	765	0.8	4.7	1.3	24	15.6	91	140	922	0.8	1.4	1.5	24	12.7	91	139	799	0.0	1.9	1.9	13	0.2	2.2	94	129	0.0	0.0	0.0	-0.4
09/29/1999 14:03	17	91	140	765	0.8	4.7	1.3	24	15.5	91	140	922	0.8	1.4	1.5	24	13.4	91	139	801	0.0	1.9	1.9	13	0.4	2.2	94	127	0.0	0.0	0.0	-0.5
09/29/1999 14:04	17	91	140	768	0.8	4.7	1.2	24	15.4	91	140	922	0.8	1.4	1.5	24	13.3	91	139	802	0.0	1.9	1.9	13	0.3	2.2	94	126	0.0	0.0	0.0	-0.5
09/29/1999 14:05	17	91	140	767	0.8	4.6	1.2	24	15.5	91	140	922	0.8	1.4	1.5	24	13.3	91	139	802	0.0	1.9	1.9	13	0.3	2.2	94	132	0.0	0.0	0.0	-0.5
09/29/1999 14:06	17	91	140	767	0.8	4.7	1.2	24	15.4	91	140	922	0.8	1.4	1.5	24	13.7	91	139	801	0.0	1.9	2.0	13	0.5	2.2	95	138	0.0	0.0	0.0	-0.5
09/29/1999 14:07	18	91	140	766	0.8	4.7	1.3	24	15.4	91	140	922	0.8	1.4	1.5	24	13.4	91	139	798	0.0	1.9	1.9	13	0.4	2.2	95	133	0.0	0.0	0.0	-0.5
09/29/1999 14:08	19	91	140	765	0.8	4.6	1.2	24	15.2	91	140	922	0.8	1.4	1.5	24	13.2	91	139	800	0.0	1.9	1.9	14	0.4	2.2	95	132	0.0	0.0	0.0	-0.5
09/29/1999 14:09	19	91	140	764	0.8	4.7	1.2	24	15.4	91	140	922	0.8	1.4	1.5	24	13.2	91	139	800	0.0	1.9	1.9	14	0.6	2.2	95	128	0.0	0.0	0.0	-0.5
09/29/1999 14:10	19	91	140	765	0.8	4.7	1.3	24	15.4	91	140	922	0.8	1.4	1.5	24	13.6	91	139	801	0.0	1.9	1.9	14	0.9	2.2	95	131	0.0	0.0	0.0	-0.5
09/29/1999 14:11	19	91	140	762	0.8	4.8	1.3	24	15.3	91	140	922	0.8	1.4	1.5	24	13.3	91	139	798	0.0	1.9	1.9	14	0.5	2.2	95	137	0.0	0.0	0.0	-0.5
09/29/1999 14:12	19	91	140	762	0.8	4.8	1.3	24	14.4	91	140	922	0.8	1.4	1.5	24	13.3	91	139	800	0.0	1.9	1.9	14	0.3	2.2	95	137	0.0	0.0	0.0	-0.5
09/29/1999 14:13	20	91	140	772	0.8	4.8	1.3	23	7.6	91	140	922	0.8	1.4	1.5	24	16.3	91	140	800	0.0	1.9	1.9	14	0.3	2.2	95	137	0.0	0.0	0.0	-0.5
09/29/1999 14:14	19	90	140	768	0.8	4.7	1.3	23	14.3	91	140	922	0.8	1.4	1.5	24	13.5	91	140	800	0.0	1.9	1.9	14	0.5	2.2	95	139	0.0	0.0	0.0	-0.5
09/29/1999 14:15	20	91	141	762	0.8	4.7	1.3	23	9.3	91	140	922	0.8	1.4	1.5	24	15.8	91	140	799	0.0	1.9	1.9	14	0.3	2.2	95	140	0.0	0.0	0.0	-0.5
09/29/1999 14:16	21	91	141	763	0.8	4.7	1.3	23	5.9	91	140	922	0.8	1.4	1.5	24	17.0	91	140	801	0.0	1.9	1.9	14	0.2	2.2	95	138	0.0	0.0	0.0	-0.5
09/29/1999 14:17	21	91	140	774	0.8	4.7	1.3	23	4.5	91	140	922	0.8	1.4	1.5	24	17.4	91	140	800	0.0	1.9	1.9	14	0.2	2.2	95	139	0.0	0.0	0.0	-0.5
09/29/1999 14:18	21	91	140	772	0.8	4.7	1.3	23	3.6	91	140	922	0.8	1.4	1.5	24	17.5	91	140	800	0.0	1.9	1.9	14	0.2	2.2	95	137	0.0	0.0	0.0	-0.5
09/29/1999 14:19	21	91	140	772	0.8	4.7	1.3	23	3.3	91	140	922	0.8	1.4	1.5	24	17.6	91	140	800	0.0	1.9	1.9	14	0.1	2.2	95	137	0.0	0.0	0.0	-0.5
09/29/1999 14:20	21	91	140	776	0.8	4.6	1.3	23	3.1	91	140	922	0.8	1.4	1.5	24	17.7	91	140	799	0.0	1.9	1.9	14	0.2	2.2	95	139	0.0	0.0	0.0	-0.5
09/29/1999 14:21	21	91	140	768	0.8	4.7	1.3	23	3.3	91	140	922	0.8	1.4	1.5	24	17.6	91	140	800	0.0	1.9	1.9	14	0.2	2.2	95	142	0.0	0.0	0.0	-0.5
09/29/1999 14:22	21	91	140	766	0.8	4.6	1.2	23	3.4	91	140	922	0.8	1.4	1.5	24	17.4	91	140	801	0.0	1.9	1.9	14	0.1	2.2	96	140	0.0	0.0	0.0	-0.5
09/29/1999 14:23	21	90	140	769	0.8	4.6	1.2	23	3.6	91	140	922	0.8	1.4	1.5	24	17.5	91	140	801	0.0	1.9	1.9	14	0.2	2.2	96	137	0.0	0.0	0.0	-0.5
09/29/1999 14:24	21	90	140	768	0.8	4.6	1.3	23	3.8	91	140	922	0.8	1.4	1.5	24	17.4	91	140	799	0.0	1.9	1.9	14	0.2	2.2	96	136	0.0	0.0	0.0	-0.5
09/29/1999 14:25	21	91	140	775	0.8	4.7	1.3	23	4.2	91	140	922	0.8	1.4	1.5	24	17.5	91	140	800	0.0	1.9	1.9	14	0.2	2.2	96	132	0.0	0.0	0.0	-0.5
09/29/1999 14:26	21	91	140	769	0.8	4.8	1.2	23	4.3	91	140	922	0.8	1.4	1.5	24	17.3	91	140	799	0.0	1.9	1.9	14	0.2	2.2	96	134	0.0	0.0	0.0	-0.5
09/29/1999 14:27	21	91	140	767	0.8	4.7	1.3	23	4.7	91	140	922	0.8	1.4	1.5	24	17.0	91	140	800	0.0	1.9	1.9	14	0.2	2.2	96	136	0.0	0.0	0.0	-0.5
09/29/1999 14:28	21	91	140	760	0.8	4.7	1.3	23	5.2	91	140	922	0.8	1.4	1.5	24	16.9	91	140	798	0.0	1.9	1.9	14	0.2	2.2	96	133	0.0	0.0	0.0	-0.5
09/29/1999 14:29	21	91	140	757	0.8	4.7	1.3	23	5.8	91	140	922	0.8	1.4	1.5	24	16.6	91	140	798	0.0	1.9	1.9	14	0.2	2.2	96	133	0.0	0.0	0.0	-0.5
09/29/1999 14:30	21	91	141	761	0.8	4.6	1.3	23	6.2	91	140	922	0.8	1.4	1.5	24	16.9	91	141	800	0.0	1.9	1.9	14	0.2	2.2	96	131	0.0	0.0	0.0	-0.5
09/29/1999 14:31	20	91	141	764	0.8	4.6	1.3	22	6.4	91	140	922	0.8	1.4	1.5	24	16.7	91	141	801	0.0	1.9	1.9	14	0.2	2.2	96	130	0.0	0.0	0.0	-0.5
09/29/1999 14:32	20	91	141	757	0.8	4.6	1.3	22	7.2	91	140	922	0.8	1.4	1.4	24	16.4	91	141	798	0.0	1.9	1.9	14	0.2	2.2	96	131	0.0	0.0	0.0	-0.5
09/29/1999 14:33	20	90	141	759	0.8	4.6	1.3	22	7.7	91	140	922	0.8	1.4	1.5	24	16.1	91	141	799	0.0	1.9	1.9	14	0.2	2.2	96	135	0.0	0.0	0.0	-0.5
09/29/1999 14:34	20	91	141	759	0.8	4.7	1.3	22	8.3	91	140	922	0.8	1.4	1.5	24	16.2	91	141	798	0.0	1.9	1.9	14	0.2	2.2	96	135	0.0	0.0	0.0	-0.5
09/29/1999 14:35	20	91	141	759	0.8	4.7	1.3	22	8.8	91	140	922	0.8	1.4	1.5	24	16.0	91	141	799	0.0	1.9	1.9	13	0.2	2.2	96	133	0.0	0.0	0.0	-0.5

Craig 1 Scrubber Data																																
Time	1A LS Slurry Flow	1A SBF Amps	1A Mixed Gas Temp	1A SBF Flow	1A Inlet DP to Tray	1A Inlet DP to Demist	1A Module DP	1A Bypass RHT Damper	1B LS Slurry Flow	1B SBF Amps	1B Mixed Gas Temp	1B SBF Flow	1B Inlet DP to Tray	1B Inlet DP to Demist	1B Module DP	1B Bypass RHT Damper	1C LS Slurry Flow	1C SBF Amps	1C Mixed Gas Temp	1C SBF Flow	1C Inlet DP to Tray	1C Inlet DP to Demist	1C Module DP	1C Bypass RHT Damper	1D LS Slurry Flow	1D SBF Amps	1D Mixed Gas Temp	1D SBF Flow	1D Inlet DP to Tray	1D Inlet DP to Demist	1D Module DP	1D Bypass RHT Damper
09/29/1999 14:36	20	91	141	762	0.8	4.6	1.3	22	9.3	91	140	922	0.8	1.4	1.5	24	15.8	91	141	799	0.0	1.9	1.9	13	0.2	2.2	96	136	0.0	0.0	0.0	-0.5
09/29/1999 14:37	20	91	141	763	0.8	4.6	1.3	22	9.9	91	140	922	0.8	1.4	1.5	24	15.5	91	141	799	0.0	1.9	1.9	13	0.2	2.2	96	133	0.0	0.0	0.0	-0.5
09/29/1999 14:38	20	90	140	771	0.8	4.6	1.3	22	10.4	90	140	922	0.8	1.4	1.5	23	15.4	91	141	800	0.0	1.9	1.9	13	0.2	2.2	96	131	0.0	0.0	0.0	-0.5
09/29/1999 14:39	20	91	140	771	0.8	4.7	1.3	22	11.1	91	140	922	0.8	1.4	1.5	23	11.3	91	141	799	0.0	1.9	1.9	13	0.2	2.2	96	135	0.0	0.0	0.0	-0.5
09/29/1999 14:40	21	90	140	769	0.8	4.7	1.2	22	11.8	91	140	922	0.8	1.4	1.5	23	8.5	91	141	800	0.0	1.9	1.9	13	0.2	2.2	96	135	0.0	0.0	0.0	-0.5
09/29/1999 14:41	20	91	140	763	0.8	4.7	1.3	22	12.3	91	140	922	0.8	1.4	1.5	23	13.7	91	141	801	0.0	1.9	1.9	13	0.1	2.2	96	136	0.0	0.0	0.0	-0.5
09/29/1999 14:42	21	91	140	760	0.8	4.7	1.3	22	13.0	91	140	922	0.8	1.4	1.5	23	8.4	91	141	799	0.0	1.9	2.0	12	0.1	2.2	96	134	0.0	0.0	0.0	-0.5
09/29/1999 14:43	21	90	140	756	0.8	4.7	1.3	22	13.5	91	140	922	0.8	1.4	1.5	23	5.7	91	141	798	0.0	1.9	2.0	12	0.1	2.2	96	134	0.0	0.0	0.0	-0.5
09/29/1999 14:44	21	91	140	759	0.8	4.6	1.3	22	14.0	91	140	922	0.8	1.5	1.5	23	4.7	91	141	802	0.0	1.9	2.0	12	0.1	2.2	96	130	0.0	0.0	0.0	-0.5
09/29/1999 14:45	21	90	140	758	0.8	4.6	1.3	22	14.5	91	140	922	0.8	1.5	1.5	23	4.6	91	141	798	0.0	1.9	2.0	12	0.2	2.2	96	131	0.0	0.0	0.0	-0.5
09/29/1999 14:46	10	90	140	761	0.8	4.6	1.3	22	14.9	91	140	922	0.8	1.4	1.5	23	4.9	91	141	798	0.0	2.0	2.0	12	0.2	2.2	96	124	0.0	0.0	0.0	-0.5
09/29/1999 14:47	17	91	140	763	0.8	4.6	1.3	22	15.3	91	139	922	0.8	1.4	1.5	24	4.8	91	141	797	0.0	2.0	2.0	11	0.1	2.2	96	121	0.0	0.0	0.0	-0.5
09/29/1999 14:48	11	90	140	769	0.8	4.6	1.3	22	15.9	91	140	922	0.8	1.4	1.5	24	5.1	91	141	798	0.0	1.9	2.0	11	0.2	2.2	96	118	0.0	0.0	0.0	-0.5
09/29/1999 14:49	9	91	140	774	0.8	4.6	1.3	22	16.3	91	140	922	0.8	1.4	1.5	24	5.6	91	141	799	0.0	1.9	2.0	11	0.2	2.2	96	116	0.0	0.0	0.0	-0.5
09/29/1999 14:50	8	91	139	772	0.8	4.6	1.3	22	16.4	91	140	922	0.8	1.4	1.5	24	6.2	91	141	799	0.0	1.9	2.0	11	0.2	2.2	97	124	0.0	0.0	0.0	-0.5
09/29/1999 14:51	8	90	139	764	0.8	4.6	1.2	22	16.8	91	140	922	0.8	1.4	1.5	24	6.7	91	141	800	0.0	1.9	2.0	11	0.2	2.2	97	123	0.0	0.0	0.0	-0.5
09/29/1999 14:52	8	91	139	761	0.8	4.6	1.3	22	16.9	91	140	922	0.8	1.4	1.5	24	7.2	91	141	798	0.0	1.9	2.0	11	0.2	2.2	97	117	0.0	0.0	0.0	-0.5
09/29/1999 14:53	9	90	140	759	0.8	4.6	1.3	22	16.8	91	140	922	0.8	1.4	1.5	24	7.8	91	141	799	0.0	1.9	2.0	11	0.2	2.2	97	117	0.0	0.0	0.0	-0.5
09/29/1999 14:54	9	91	140	758	0.8	4.6	1.3	22	16.8	91	140	922	0.8	1.4	1.5	24	8.4	91	141	800	0.0	1.9	2.0	11	0.2	2.2	97	122	0.0	0.0	0.0	-0.5
09/29/1999 14:55	10	91	140	756	0.8	4.7	1.2	22	16.7	91	140	922	0.8	1.4	1.5	24	9.0	91	141	797	0.0	1.9	2.0	10	0.2	2.2	97	121	0.0	0.0	0.0	-0.5
09/29/1999 14:56	11	90	140	764	0.8	4.6	1.3	22	16.4	90	140	922	0.8	1.4	1.5	24	9.6	91	141	800	0.0	1.9	2.0	10	0.2	2.2	97	126	0.0	0.0	0.0	-0.5
09/29/1999 14:57	11	91	140	760	0.8	4.6	1.3	22	16.3	91	140	922	0.8	1.4	1.5	24	10.2	91	141	800	0.0	1.9	2.0	10	0.2	2.2	97	127	0.0	0.0	0.0	-0.5
09/29/1999 14:58	12	90	140	761	0.8	4.7	1.3	22	16.2	91	140	922	0.8	1.4	1.5	24	10.7	91	141	798	0.0	1.9	2.0	10	0.2	2.2	97	125	0.0	0.0	0.0	-0.5
09/29/1999 14:59	13	90	140	771	0.8	4.6	1.3	22	16.2	91	140	922	0.8	1.4	1.5	24	11.4	91	141	800	0.0	1.9	2.0	10	0.2	2.2	97	126	0.0	0.0	0.0	-0.5
09/29/1999 15:00	13	91	140	771	0.8	4.7	1.3	22	15.9	91	140	922	0.8	1.4	1.5	24	12.1	91	141	801	0.0	1.9	2.0	10	0.1	2.2	97	129	0.0	0.0	0.0	-0.5
09/29/1999 15:01	14	90	140	762	0.8	4.6	1.3	22	15.8	91	140	922	0.8	1.4	1.5	24	12.6	91	141	799	0.0	1.9	2.0	10	0.1	2.2	97	134	0.0	0.0	0.0	-0.5
09/29/1999 15:02	15	91	140	758	0.8	4.7	1.3	22	15.7	91	140	922	0.8	1.5	1.5	24	13.0	91	141	798	0.0	1.9	2.0	10	0.2	2.2	97	131	0.0	0.0	0.0	-0.5
09/29/1999 15:03	15	90	140	757	0.8	4.6	1.3	22	15.5	91	140	922	0.8	1.4	1.5	24	13.4	91	141	798	0.0	2.0	2.0	10	0.1	2.2	97	131	0.0	0.0	0.0	-0.5
09/29/1999 15:04	16	90	140	761	0.8	4.6	1.3	22	15.5	90	140	922	0.8	1.4	1.5	24	13.4	91	141	799	0.0	2.0	2.0	9	0.1	2.2	97	128	0.0	0.0	0.0	-0.5
09/29/1999 15:05	16	90	140	761	0.8	4.6	1.3	22	15.4	90	140	922	0.8	1.4	1.5	24	13.8	91	141	801	0.0	2.0	2.0	9	0.2	2.2	97	125	0.0	0.0	0.0	-0.5
09/29/1999 15:06	17	90	140	758	0.8	4.6	1.3	22	15.3	91	140	922	0.8	1.4	1.5	24	13.9	91	141	799	0.0	1.9	2.0	9	0.1	2.2	97	130	0.0	0.0	0.0	-0.5
09/29/1999 15:07	17	90	140	761	0.8	4.5	1.3	22	15.2	91	140	922	0.8	1.4	1.5	24	14.2	91	141	800	0.0	1.9	2.0	9	0.1	2.2	97	134	0.0	0.0	0.0	-0.5
09/29/1999 15:08	17	90	140	761	0.8	4.6	1.3	22	15.0	91	140	922	0.8	1.4	1.4	24	13.6	91	141	797	0.0	1.9	2.0	9	0.1	2.2	97	131	0.0	0.0	0.0	-0.5
09/29/1999 15:09	18	90	140	764	0.8	4.6	1.3	22	14.7	91	140	922	0.8	1.4	1.5	24	13.3	91	140	799	0.0	1.9	2.0	9	0.1	2.2	97	133	0.0	0.0	0.0	-0.5
09/29/1999 15:10	18	90	140	767	0.8	4.6	1.3	22	14.6	90	140	922	0.8	1.4	1.5	24	13.6	91	140	800	0.0	1.9	2.0	9	0.1	2.2	97	131	0.0	0.0	0.0	-0.5
09/29/1999 15:11	18	90	140	764	0.8	4.7	1.3	22	14.4	90	140	922	0.8	1.4	1.4	24	13.7	91	140	798	0.0	1.9	2.0	9	0.2	2.2	97	132	0.0	0.0	0.0	-0.5
09/29/1999 15:12	19	91	140	762	0.8	4.7	1.3	22	14.4	91	140	922	0.8	1.4	1.5	24	13.4	91	140	799	0.0	1.9	2.0	9	0.1	2.2	97	135	0.0	0.0	0.0	-0.5
Test 3 Average	*17*	*91*	*140*	*765*	*0.8*	*4.7*	*1.3*	*23*	*12*	*91*	*140*	*922*	*0.8*	*1.4*	*1.5*	*25*	*12.2*	*91*	*140*	*801*	*0.0*	*1.9*	*2.0*	*12*	*0.3*	*2.2*	*94*	*132*	*0.0*	*0.0*	*0.0*	*-0.4*

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 8:24	83.6	83.2	83.2	73.8	73.9	416.3	
09/28/1999 8:25	85.1	85.1	84.7	74.9	75.1	417.4	
09/28/1999 8:26	84.7	84.5	84.8	74.6	74.6	417.0	
09/28/1999 8:27	85.5	85.3	85.3	75.5	75.2	416.5	
09/28/1999 8:28	84.3	84.9	85.4	75.1	75.2	415.9	
09/28/1999 8:29	84.8	85.2	85.2	74.9	75.5	415.6	
09/28/1999 8:30	85.6	85.2	85.9	75.7	75.2	416.0	
09/28/1999 8:31	86.8	85.9	86.2	75.9	75.8	417.0	
09/28/1999 8:32	85.2	85.1	85.3	75.0	75.1	417.8	
09/28/1999 8:33	83.9	84.2	84.4	73.9	74.0	416.6	
09/28/1999 8:34	84.8	85.5	84.9	74.9	74.7	415.9	
09/28/1999 8:35	83.5	83.8	84.0	73.6	73.9	415.9	
09/28/1999 8:36	84.3	84.5	84.9	74.6	74.8	417.1	
09/28/1999 8:37	84.8	84.7	84.4	74.8	74.5	417.7	
09/28/1999 8:38	85.0	84.7	84.3	74.7	74.4	416.0	
09/28/1999 8:39	84.3	85.2	84.7	74.4	74.6	416.5	
09/28/1999 8:40	84.9	84.7	85.0	75.1	74.9	417.0	
09/28/1999 8:41	84.9	84.6	85.3	74.9	75.0	417.7	
09/28/1999 8:42	84.3	83.9	83.5	74.0	73.6	415.9	
09/28/1999 8:43	84.4	84.7	84.3	74.4	74.4	416.6	
09/28/1999 8:44	82.8	83.5	83.1	72.9	73.5	416.5	
09/28/1999 8:45	82.6	83.5	83.0	72.6	73.1	416.4	
09/28/1999 8:46	83.9	84.7	83.9	74.1	73.9	416.7	
09/28/1999 8:47	84.7	84.6	84.3	74.1	74.1	417.0	
09/28/1999 8:48	85.3	84.9	85.0	75.6	75.7	416.7	
09/28/1999 8:49	85.6	84.6	85.0	75.3	75.8	416.1	
09/28/1999 8:50	85.0	83.8	84.5	74.4	74.8	415.5	
09/28/1999 8:51	84.3	84.9	84.4	74.4	74.2	416.8	
09/28/1999 8:52	85.1	85.4	85.3	75.1	75.3	417.3	
09/28/1999 8:53	83.9	84.3	84.1	73.8	73.8	416.9	
09/28/1999 8:54	84.1	84.1	83.8	74.1	73.8	415.9	
09/28/1999 8:55	84.6	84.7	84.1	74.6	74.3	416.0	
09/28/1999 8:56	85.1	86.0	85.7	75.7	75.6	417.3	
09/28/1999 8:57	84.5	84.8	84.9	74.9	74.1	416.7	
09/28/1999 8:58	84.9	84.9	84.9	74.9	74.7	415.8	
09/28/1999 8:59	85.5	85.3	85.4	75.5	75.5	417.2	
09/28/1999 9:00	85.6	85.2	85.4	75.7	75.2	417.7	
09/28/1999 9:01	85.6	85.3	84.6	75.0	74.8	416.9	
09/28/1999 9:02	84.5	84.5	84.5	74.3	74.4	416.6	
09/28/1999 9:03	84.7	84.6	84.7	74.9	75.1	417.6	
09/28/1999 9:04	84.6	84.5	83.7	74.2	74.1	415.6	
09/28/1999 9:05	85.3	85.8	86.0	75.6	75.8	416.6	
09/28/1999 9:06	85.2	84.9	85.2	75.1	75.5	415.9	
09/28/1999 9:07	85.2	85.3	85.5	75.4	75.2	417.7	
09/28/1999 9:08	84.3	84.4	83.6	73.7	73.5	416.6	

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 9:09	83.7	84.2	83.6	73.7	74.1	416.8	
09/28/1999 9:10	83.2	83.9	84.1	74.1	74.5	416.2	
09/28/1999 9:11	84.6	84.7	84.9	74.7	74.5	416.4	
09/28/1999 9:12	85.7	85.2	85.3	75.2	74.9	416.0	
09/28/1999 9:13	86.3	85.4	86.6	76.2	76.3	416.0	
09/28/1999 9:14	84.9	84.4	85.1	74.8	75.0	415.6	
09/28/1999 9:15	87.1	86.5	87.0	76.7	77.2	416.5	
09/28/1999 9:16	85.6	85.8	85.8	75.7	75.4	416.5	
09/28/1999 9:17	85.3	85.2	85.5	75.3	75.3	416.9	
09/28/1999 9:18	84.0	84.9	84.3	74.2	74.4	416.1	
09/28/1999 9:19	84.4	84.5	84.2	74.2	74.5	417.0	
09/28/1999 9:20	85.8	86.0	86.0	75.9	75.8	417.3	409.4
09/28/1999 9:21	84.7	84.7	84.4	74.4	74.7	416.0	403.0
09/28/1999 9:22	83.9	84.4	83.8	74.1	74.3	415.9	400.5
09/28/1999 9:23	86.3	85.6	86.0	75.9	76.1	417.5	409.8
09/28/1999 9:24	85.8	85.2	85.3	75.4	75.3	416.0	406.9
09/28/1999 9:25	85.2	85.6	85.6	75.3	75.6	416.1	407.3
09/28/1999 9:26	85.0	85.0	84.5	74.7	74.5	417.0	403.5
09/28/1999 9:27	83.7	84.2	83.1	73.4	73.5	417.0	398.0
09/28/1999 9:28	85.2	84.7	84.7	74.6	74.2	417.0	403.3
09/28/1999 9:29	84.2	84.2	84.1	74.0	73.9	416.5	400.4
09/28/1999 9:30	85.9	85.1	86.4	76.1	76.1	416.4	409.6
09/28/1999 9:31	84.1	84.3	84.5	74.4	74.3	415.4	401.7
09/28/1999 9:32	85.8	85.8	85.5	75.9	75.7	417.4	408.7
09/28/1999 9:33	83.5	84.2	83.3	73.5	73.3	415.9	397.7
09/28/1999 9:34	84.0	85.0	84.4	74.0	73.6	416.5	400.9
09/28/1999 9:35	85.5	85.3	85.7	75.3	76.0	416.4	407.8
09/28/1999 9:36	84.6	84.9	85.3	91.8	74.2	416.4	420.8
09/28/1999 9:37	85.2	84.1	84.2	97.8	73.6	419.0	424.8
09/28/1999 9:38	80.3	82.3	80.5	57.8	70.4	418.3	371.3
09/28/1999 9:39	81.5	83.0	82.1	67.7	71.7	417.1	386.0
09/28/1999 9:40	84.3	84.7	83.9	72.7	74.2	415.4	399.8
09/28/1999 9:41	86.6	85.6	86.7	76.4	76.4	415.6	411.7
09/28/1999 9:42	85.6	84.8	86.2	75.7	75.8	414.4	408.1
09/28/1999 9:43	86.0	85.5	86.6	76.4	76.3	416.1	410.8
09/28/1999 9:44	85.8	85.7	85.7	76.1	76.2	416.3	409.5
09/28/1999 9:45	85.5	85.4	85.2	74.9	75.3	416.9	406.4
09/28/1999 9:46	84.7	84.5	84.4	74.3	74.3	416.4	402.2
09/28/1999 9:47	84.7	84.4	84.2	74.4	74.8	416.5	402.6
09/28/1999 9:48	85.4	85.2	85.5	75.4	75.2	415.8	406.8
09/28/1999 9:49	84.4	84.8	85.1	74.5	74.8	416.1	403.8
09/28/1999 9:50	84.2	84.6	84.3	74.2	74.2	416.2	401.5
09/28/1999 9:51	84.6	84.7	84.2	74.3	74.2	417.0	401.9
09/28/1999 9:52	84.7	84.8	84.2	74.9	74.7	416.5	403.4
09/28/1999 9:53	85.1	84.6	84.4	74.5	74.9	415.7	403.5

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 9:54	85.3	84.1	84.2	74.4	74.9	416.3	403.0
09/28/1999 9:55	83.8	84.7	83.5	73.9	74.1	416.5	399.9
09/28/1999 9:56	84.9	85.0	85.1	74.9	75.4	417.3	405.3
09/28/1999 9:57	84.2	84.9	84.9	74.8	74.9	415.5	403.8
09/28/1999 9:58	86.5	85.9	86.1	76.4	76.4	417.3	411.3
09/28/1999 9:59	85.7	85.0	85.5	75.8	75.6	417.2	407.5
09/28/1999 10:00	84.5	84.6	84.6	74.9	74.4	415.7	403.0
09/28/1999 10:01	84.0	84.1	83.9	74.1	74.5	415.6	400.6
09/28/1999 10:02	84.5	84.4	84.9	74.4	74.7	417.1	402.9
09/28/1999 10:03	85.2	85.4	85.4	75.4	75.4	415.8	406.8
09/28/1999 10:04	84.9	85.1	84.8	75.0	75.0	417.2	404.7
09/28/1999 10:05	85.9	85.5	85.5	75.5	75.4	415.8	407.8
09/28/1999 10:06	86.6	86.7	86.5	76.8	76.6	415.8	413.3
09/28/1999 10:07	85.9	85.2	85.4	75.8	75.7	417.8	408.0
09/28/1999 10:08	85.2	85.2	85.2	75.2	75.4	416.6	406.2
09/28/1999 10:09	85.0	84.9	85.0	74.8	75.3	415.4	405.1
09/28/1999 10:10	85.6	85.6	85.8	75.8	75.9	415.9	408.7
09/28/1999 10:11	86.8	85.5	86.1	76.4	76.5	417.1	411.3
09/28/1999 10:12	84.2	83.5	84.1	74.1	73.9	416.6	399.8
09/28/1999 10:13	85.7	85.6	85.5	75.3	75.5	416.9	407.7
09/28/1999 10:14	85.1	85.2	85.0	74.8	75.1	415.4	405.4
09/28/1999 10:15	85.4	85.6	85.8	75.6	75.9	416.0	408.3
09/28/1999 10:16	86.0	85.9	85.8	75.5	75.5	417.0	408.8
09/28/1999 10:17	85.1	85.5	85.3	75.3	75.5	417.0	406.7
09/28/1999 10:18	85.5	86.1	85.7	75.6	75.6	416.1	408.4
09/28/1999 10:19	86.8	86.5	86.9	76.7	76.4	417.0	413.2
09/28/1999 10:20	84.2	84.8	84.3	74.2	74.3	417.3	401.8
09/28/1999 10:21	84.9	85.3	84.2	74.5	74.0	418.0	403.0
09/28/1999 10:22	83.9	84.5	83.4	73.3	73.1	416.1	398.3
09/28/1999 10:23	84.9	85.2	85.2	74.8	74.9	415.5	405.0
09/28/1999 10:24	86.7	85.9	86.0	76.1	76.1	416.2	410.8
09/28/1999 10:25	87.5	86.4	87.5	77.4	77.0	417.3	415.8
09/28/1999 10:26	87.1	85.6	86.6	-76.8	76.6	416.5	412.6
09/28/1999 10:27	86.5	86.2	86.8	76.5	76.6	415.6	412.6
09/28/1999 10:28	86.0	85.6	85.7	75.6	75.4	415.6	408.3
09/28/1999 10:29	85.5	85.3	85.7	75.3	75.2	416.6	407.0
09/28/1999 10:30	85.8	85.4	85.3	75.4	75.5	417.7	407.4
09/28/1999 10:31	85.0	85.7	85.0	75.2	75.0	416.5	405.9
09/28/1999 10:32	85.5	84.9	85.6	75.2	75.5	415.5	406.6
09/28/1999 10:33	86.1	85.5	85.9	76.0	75.7	416.5	409.2
09/28/1999 10:34	86.6	86.0	86.7	76.3	76.8	417.0	412.5
09/28/1999 10:35	84.8	84.6	85.1	74.8	75.6	416.4	404.8
09/28/1999 10:36	84.8	85.9	85.5	75.5	75.2	416.2	406.9
09/28/1999 10:37	85.9	85.8	85.8	75.6	75.4	415.4	408.4
09/28/1999 10:38	87.5	86.7	87.5	78.1	78.1	415.9	417.8

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 10:39	85.2	84.8	84.6	75.0	74.6	416.0	404.3
09/28/1999 10:40	85.0	85.0	85.0	75.3	75.2	417.1	405.5
09/28/1999 10:41	86.7	85.4	85.6	76.2	75.8	415.3	409.7
09/28/1999 10:42	87.1	86.5	86.7	76.7	76.8	416.2	413.8
09/28/1999 10:43	84.7	84.8	84.6	74.8	74.2	415.7	403.1
09/28/1999 10:44	86.3	85.7	85.6	75.9	76.0	417.2	409.5
09/28/1999 10:45	86.2	86.3	85.7	75.7	75.9	416.6	409.7
09/28/1999 10:46	85.8	85.8	86.0	75.5	75.9	415.7	409.0
09/28/1999 10:47	86.3	86.3	85.8	76.0	76.2	415.8	410.6
09/28/1999 10:48	87.4	87.1	87.0	77.3	76.9	416.3	415.7
09/28/1999 10:49	87.1	86.4	86.3	76.6	76.8	416.6	413.1
09/28/1999 10:50	85.3	85.6	84.9	75.2	75.6	416.2	406.6
09/28/1999 10:51	86.2	86.7	86.2	76.1	76.3	415.7	411.4
09/28/1999 10:52	86.4	85.6	85.5	75.7	75.5	417.6	408.7
09/28/1999 10:53	85.1	85.9	85.3	75.1	74.4	416.4	405.8
09/28/1999 10:54	85.8	85.7	85.7	75.4	75.7	415.8	408.2
09/28/1999 10:55	85.5	85.9	86.1	76.2	76.0	416.7	409.7
09/28/1999 10:56	86.9	86.9	87.1	76.7	76.7	416.7	414.3
09/28/1999 10:57	85.2	85.2	85.2	75.5	75.0	416.7	406.1
09/28/1999 10:58	86.4	86.7	86.8	76.8	76.9	415.6	413.6
09/28/1999 10:59	86.7	86.1	87.3	76.7	77.2	416.3	413.9
09/28/1999 11:00	84.7	85.1	85.1	74.7	74.5	416.0	404.2
09/28/1999 11:01	85.8	86.1	86.2	75.9	75.6	417.7	409.6
09/28/1999 11:02	84.6	84.7	84.6	74.2	74.2	416.4	402.2
09/28/1999 11:03	86.8	86.6	86.4	76.5	76.2	416.5	412.6
09/28/1999 11:04	87.4	86.7	87.8	77.1	77.2	416.7	416.3
09/28/1999 11:05	86.4	85.6	86.4	76.0	76.1	415.5	410.4
09/28/1999 11:06	85.6	85.3	85.3	75.1	75.3	416.5	406.6
09/28/1999 11:07	85.8	85.6	85.4	75.0	74.4	417.3	406.3
09/28/1999 11:08	86.1	85.6	86.2	75.8	75.6	416.7	409.3
09/28/1999 11:09	87.3	86.2	87.1	76.8	76.6	415.9	413.9
09/28/1999 11:10	85.7	86.0	86.5	75.6	76.1	416.3	409.8
09/28/1999 11:11	85.4	85.7	85.6	75.3	75.8	416.7	407.8
09/28/1999 11:12	85.4	85.9	85.4	75.5	75.4	416.4	407.6
09/28/1999 11:13	86.8	86.4	86.7	76.6	76.5	417.4	412.9
09/28/1999 11:14	86.7	85.8	86.6	76.3	76.6	416.6	411.9
09/28/1999 11:15	86.0	85.5	86.0	75.8	75.7	417.4	409.1
09/28/1999 11:16	84.6	84.5	84.4	74.0	74.0	416.6	401.5
09/28/1999 11:17	86.6	86.6	87.1	76.2	75.7	415.9	412.2
09/28/1999 11:18	85.3	85.3	85.4	75.2	75.7	415.9	407.0
09/28/1999 11:19	87.3	86.2	87.4	77.0	76.8	416.7	414.8
09/28/1999 11:20	85.8	85.2	85.7	75.2	75.2	416.1	407.2
09/28/1999 11:21	86.3	86.4	86.7	76.3	76.0	417.3	411.7
09/28/1999 11:22	84.9	85.5	85.3	75.2	75.0	415.5	406.0
09/28/1999 11:23	87.4	87.1	87.1	77.4	77.3	415.8	416.2

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 11:24	86.2	85.2	85.7	75.7	75.6	416.9	408.5
09/28/1999 11:25	86.1	86.2	85.5	75.6	76.0	416.9	409.4
09/28/1999 11:26	85.7	85.2	85.6	75.3	75.4	416.6	407.2
09/28/1999 11:27	84.8	84.8	85.0	74.7	74.6	416.6	403.9
09/28/1999 11:28	86.1	85.7	85.8	75.5	76.1	416.8	409.1
09/28/1999 11:29	86.4	86.0	86.2	76.2	76.2	416.4	411.1
09/28/1999 11:30	86.4	85.4	85.6	75.4	75.3	416.3	408.1
09/28/1999 11:31	86.0	86.4	87.2	76.6	77.2	416.7	413.4
09/28/1999 11:32	85.6	85.1	85.9	75.5	75.6	417.4	407.7
09/28/1999 11:33	84.8	85.8	85.4	75.3	75.0	415.8	406.4
09/28/1999 11:34	86.0	86.0	85.8	76.0	75.6	415.2	409.5
09/28/1999 11:35	87.0	86.5	87.5	77.1	76.9	415.8	415.1
09/28/1999 11:36	86.4	85.7	86.7	76.1	75.6	416.3	410.5
09/28/1999 11:37	86.1	86.5	86.4	76.0	76.1	416.3	411.1
09/28/1999 11:38	86.4	86.4	86.1	76.1	75.9	416.4	410.9
09/28/1999 11:39	87.5	86.9	86.5	76.9	77.0	415.2	414.9
09/28/1999 11:40	86.8	86.9	86.8	76.9	76.7	417.3	414.2
09/28/1999 11:41	85.5	85.3	85.5	75.1	75.3	416.0	406.8
09/28/1999 11:42	85.9	86.7	86.0	75.9	76.1	417.2	410.6
09/28/1999 11:43	86.1	86.2	85.4	75.7	75.8	416.4	409.2
09/28/1999 11:44	87.2	86.7	86.7	76.7	76.3	416.4	413.5
09/28/1999 11:45	86.8	86.9	87.0	77.0	76.5	416.3	414.2
09/28/1999 11:46	86.7	86.6	87.0	76.6	76.3	417.2	413.2
09/28/1999 11:47	86.0	86.6	86.3	76.1	76.0	416.2	410.9
09/28/1999 11:48	86.7	86.5	87.2	76.6	76.8	417.1	413.7
Test 1 Average	***85.4***	***85.3***	***85.3***	***75.4***	***75.3***	***416.5***	***407.8***
09/28/1999 12:31	86.8	86.7	86.8	76.5	77.0	417.2	413.9
09/28/1999 12:32	85.9	85.3	85.1	75.0	75.3	416.7	406.7
09/28/1999 12:33	86.5	86.6	86.4	76.3	76.5	416.6	412.3
09/28/1999 12:34	87.5	87.3	87.7	77.3	77.4	416.7	417.2
09/28/1999 12:35	88.0	87.0	88.0	77.6	77.8	416.7	418.4
09/28/1999 12:36	86.5	86.4	86.2	76.1	76.2	416.7	411.4
09/28/1999 12:37	85.8	85.7	85.6	75.5	75.3	417.4	407.9
09/28/1999 12:38	86.5	86.3	86.0	75.8	75.5	417.1	410.1
09/28/1999 12:39	85.4	85.6	85.3	75.2	75.2	415.6	406.7
09/28/1999 12:40	87.2	87.0	87.3	76.8	76.8	415.3	415.1
09/28/1999 12:41	87.0	86.3	87.2	76.2	76.2	416.5	412.8
09/28/1999 12:42	87.2	87.3	87.6	76.9	77.1	416.4	416.1
09/28/1999 12:43	86.7	86.2	86.6	76.1	76.1	417.5	411.7
09/28/1999 12:44	86.6	86.7	86.5	75.8	76.5	417.0	412.1
09/28/1999 12:45	87.2	87.1	87.0	76.9	76.3	415.9	414.6
09/28/1999 12:46	85.2	85.5	85.4	75.3	75.4	416.0	406.8
09/28/1999 12:47	86.5	87.0	86.5	76.0	75.9	417.4	411.9
09/28/1999 12:48	86.3	86.5	86.6	76.0	76.1	416.5	411.5

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 12:49	87.4	87.5	87.4	76.9	77.0	416.0	416.2
09/28/1999 12:50	85.3	85.5	85.3	75.0	75.4	416.2	406.4
09/28/1999 12:51	86.0	86.8	86.3	76.2	76.5	416.9	411.9
09/28/1999 12:52	85.9	86.2	86.1	75.8	75.9	417.0	409.9
09/28/1999 12:53	87.0	86.9	86.7	76.7	76.8	416.5	414.0
09/28/1999 12:54	87.0	86.4	87.5	76.5	76.5	415.5	413.9
09/28/1999 12:55	87.5	87.3	87.4	77.0	77.4	416.6	416.6
09/28/1999 12:56	86.3	86.4	86.0	75.8	75.5	416.8	410.0
09/28/1999 12:57	86.5	86.4	86.5	75.9	76.3	416.0	411.7
09/28/1999 12:58	87.3	87.3	86.9	76.8	76.5	415.0	414.8
09/28/1999 12:59	87.4	87.7	88.3	77.5	77.2	417.0	418.1
09/28/1999 13:00	86.9	86.6	86.9	76.7	76.9	417.4	413.9
09/28/1999 13:01	85.7	85.7	85.1	75.2	74.9	416.7	406.6
09/28/1999 13:02	86.5	86.6	86.3	76.0	76.2	417.4	411.7
09/28/1999 13:03	87.7	87.6	87.7	77.2	76.8	415.8	417.0
09/28/1999 13:04	87.6	86.9	88.1	77.3	77.8	415.8	417.7
09/28/1999 13:05	85.7	85.2	85.7	75.3	75.7	416.1	407.6
09/28/1999 13:06	85.8	86.1	85.2	75.1	74.9	417.6	407.0
09/28/1999 13:07	86.7	86.5	86.4	76.3	75.9	416.4	411.9
09/28/1999 13:08	86.9	86.3	86.4	76.7	76.1	415.9	412.4
09/28/1999 13:09	86.7	86.5	86.8	76.7	76.3	416.0	413.0
09/28/1999 13:10	87.2	86.5	87.1	77.0	76.8	417.4	414.5
09/28/1999 13:11	86.6	86.6	86.3	76.2	75.8	416.5	411.6
09/28/1999 13:12	87.3	86.8	87.1	77.0	76.7	416.0	414.9
09/28/1999 13:13	87.0	86.8	87.1	76.6	77.0	415.8	414.6
09/28/1999 13:14	85.3	85.9	85.3	75.2	75.6	415.9	407.3
09/28/1999 13:15	86.3	87.3	86.6	76.4	76.3	417.2	412.8
09/28/1999 13:16	85.4	86.0	85.5	75.2	75.5	416.5	407.6
09/28/1999 13:17	86.4	87.1	86.7	76.3	76.8	416.4	413.4
09/28/1999 13:18	87.7	87.2	87.4	77.0	77.3	417.3	416.7
09/28/1999 13:19	86.9	86.5	87.2	76.8	76.7	415.5	414.1
09/28/1999 13:20	86.5	86.7	86.6	76.4	76.2	416.3	412.5
09/28/1999 13:21	86.8	86.7	86.8	76.4	76.3	416.4	413.1
09/28/1999 13:22	87.5	87.2	87.7	77.4	78.0	416.0	417.7
09/28/1999 13:23	88.4	88.0	88.5	77.9	77.8	417.1	420.6
09/28/1999 13:24	86.8	86.6	86.5	76.3	76.4	416.1	412.6
09/28/1999 13:25	86.5	86.8	86.6	76.4	76.5	415.5	412.9
09/28/1999 13:26	86.7	86.4	86.1	76.2	76.7	417.2	412.2
09/28/1999 13:27	87.0	87.1	86.9	76.6	77.1	416.7	414.6
09/28/1999 13:28	87.6	87.5	87.2	77.3	77.2	416.0	416.7
09/28/1999 13:29	86.0	84.9	85.3	75.5	75.6	415.9	407.3
09/28/1999 13:30	86.0	86.2	85.9	75.7	75.3	416.3	409.1
09/28/1999 13:31	87.1	87.0	86.9	76.6	76.6	418.0	414.1
09/28/1999 13:32	86.5	86.7	86.8	76.5	76.5	416.0	413.1
09/28/1999 13:33	86.8	86.7	87.2	76.9	76.5	416.9	414.1

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 13:34	86.5	86.3	86.4	76.5	76.2	417.2	411.9
09/28/1999 13:35	85.8	86.3	85.4	75.7	75.3	416.2	408.5
09/28/1999 13:36	87.1	87.0	87.3	76.9	76.8	417.4	415.2
09/28/1999 13:37	85.5	85.9	85.4	75.1	75.4	416.2	407.3
09/28/1999 13:38	86.4	87.2	86.8	76.4	76.9	416.1	413.8
09/28/1999 13:39	87.3	86.9	87.9	77.6	77.7	415.8	417.5
09/28/1999 13:40	87.1	87.0	87.6	77.3	77.1	415.9	416.2
09/28/1999 13:41	86.4	86.5	86.3	75.3	75.6	416.2	410.0
09/28/1999 13:42	86.4	87.1	86.5	76.2	75.7	415.4	411.9
09/28/1999 13:43	88.2	88.2	87.5	77.6	77.8	416.8	419.3
09/28/1999 13:44	84.5	85.3	84.9	74.4	74.6	417.3	403.8
09/28/1999 13:45	86.0	86.4	86.3	75.9	76.1	416.5	410.6
09/28/1999 13:46	87.3	86.8	87.1	76.8	76.9	416.5	414.8
09/28/1999 13:47	87.6	86.8	87.2	77.2	77.0	416.4	415.9
09/28/1999 13:48	86.9	86.4	87.7	76.9	77.0	416.9	414.9
09/28/1999 13:49	86.6	86.5	86.6	76.1	75.6	416.0	411.4
09/28/1999 13:50	87.8	87.2	88.0	77.3	76.9	415.8	417.2
09/28/1999 13:51	87.4	86.8	86.8	77.1	77.3	416.6	415.4
09/28/1999 13:52	84.6	85.7	85.5	75.1	75.9	416.8	406.8
09/28/1999 13:53	86.9	87.6	86.8	76.9	76.4	417.6	414.5
09/28/1999 13:54	85.9	86.0	85.9	75.6	75.4	417.0	408.9
09/28/1999 13:55	86.4	86.3	86.5	76.4	76.5	417.4	412.2
09/28/1999 13:56	86.7	87.0	87.1	76.7	76.4	416.2	414.0
09/28/1999 13:57	87.4	87.4	88.0	77.4	77.7	415.9	417.9
09/28/1999 13:58	87.7	87.4	88.1	77.6	77.2	415.9	418.0
09/28/1999 13:59	88.0	87.4	87.5	78.0	77.9	416.4	418.8
09/28/1999 14:00	88.6	87.8	88.4	77.8	77.7	416.7	420.4
09/28/1999 14:01	86.8	86.6	86.9	76.4	76.4	415.9	413.0
09/28/1999 14:02	87.4	87.0	87.2	77.0	76.9	416.5	415.5
09/28/1999 14:03	85.9	86.2	85.9	75.5	75.4	416.6	408.8
09/28/1999 14:04	87.1	87.7	87.6	77.0	77.0	417.3	416.4
09/28/1999 14:05	85.5	86.0	85.7	75.5	75.1	416.4	407.8
09/28/1999 14:06	87.0	87.6	87.5	77.5	77.3	417.2	417.0
09/28/1999 14:07	87.5	87.2	87.4	77.5	77.7	416.8	417.3
09/28/1999 14:08	87.6	87.1	87.9	77.5	77.7	415.8	417.9
09/28/1999 14:09	86.4	86.9	87.1	76.4	76.5	415.2	413.4
09/28/1999 14:10	87.7	87.2	88.1	77.6	77.5	416.6	418.1
09/28/1999 14:11	85.9	86.3	86.2	76.1	76.4	416.3	410.9
09/28/1999 14:12	87.2	87.4	87.6	77.2	77.7	416.9	417.2
09/28/1999 14:13	87.8	87.6	88.0	77.8	77.8	415.6	419.0
09/28/1999 14:14	87.0	86.8	86.7	77.1	77.0	416.2	414.6
09/28/1999 14:15	87.7	87.4	87.5	77.3	77.7	417.1	417.6
09/28/1999 14:16	85.7	86.4	85.5	75.3	75.4	416.8	408.3
09/28/1999 14:17	87.2	87.5	86.9	76.7	76.2	415.1	414.5
09/28/1999 14:18	87.3	87.5	87.3	77.2	77.3	417.2	416.6

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 14:19	87.3	87.0	87.2	76.9	77.0	415.6	415.4
09/28/1999 14:20	86.8	87.2	87.1	76.5	76.6	415.8	414.2
09/28/1999 14:21	88.1	87.2	87.7	77.4	77.0	416.2	417.3
09/28/1999 14:22	88.1	87.9	88.3	77.8	78.0	417.2	420.1
09/28/1999 14:23	88.1	87.9	88.5	77.9	78.0	416.9	420.4
09/28/1999 14:24	87.5	87.5	87.1	76.8	76.7	417.7	415.5
09/28/1999 14:25	87.0	87.1	86.4	76.5	76.8	415.7	413.7
09/28/1999 14:26	88.2	87.7	88.0	78.0	78.1	416.5	420.0
09/28/1999 14:27	87.3	87.1	86.5	76.7	76.7	417.8	414.3
09/28/1999 14:28	86.6	86.4	85.9	76.0	76.1	415.9	410.9
09/28/1999 14:29	87.6	87.7	87.6	77.5	77.5	415.9	417.9
09/28/1999 14:30	88.4	87.7	88.5	78.1	78.1	416.1	420.8
09/28/1999 14:31	86.4	86.1	86.9	76.6	77.0	416.4	413.0
09/28/1999 14:32	86.5	86.9	86.9	76.5	76.9	416.9	413.9
09/28/1999 14:33	87.9	88.0	87.9	77.7	77.8	417.1	419.2
09/28/1999 14:34	86.8	86.6	87.2	76.9	76.7	416.5	414.2
09/28/1999 14:35	87.3	87.4	87.4	77.4	76.6	416.9	416.0
09/28/1999 14:36	87.3	87.2	87.5	77.0	77.6	415.6	416.6
09/28/1999 14:37	88.5	88.5	89.0	78.3	77.9	415.8	422.2
09/28/1999 14:38	88.1	87.1	88.7	77.9	77.6	416.9	419.4
09/28/1999 14:39	87.2	87.5	87.9	77.3	77.0	416.9	416.8
09/28/1999 14:40	87.3	87.8	87.3	76.9	77.0	415.8	416.2
09/28/1999 14:41	87.4	87.9	87.5	77.2	77.2	417.9	417.3
09/28/1999 14:42	88.2	88.1	87.8	77.4	77.9	416.1	419.5
09/28/1999 14:43	87.9	88.2	87.8	77.4	77.3	414.8	418.6
09/28/1999 14:44	87.5	87.9	87.7	77.3	77.1	417.0	417.6
09/28/1999 14:45	86.0	86.5	85.8	75.2	75.6	417.0	409.2
09/28/1999 14:46	86.1	86.8	86.2	76.1	76.0	418.3	411.1
09/28/1999 14:47	87.4	87.2	86.8	76.6	76.5	417.0	414.5
09/28/1999 14:48	87.6	87.4	87.9	77.2	77.0	416.4	417.0
09/28/1999 14:49	86.5	86.6	86.1	76.0	75.4	416.1	410.6
09/28/1999 14:50	86.8	87.1	86.6	76.4	75.7	417.3	412.6
09/28/1999 14:51	87.0	87.1	87.2	76.5	76.3	417.5	414.0
09/28/1999 14:52	87.3	87.0	87.9	77.3	77.9	416.4	417.4
09/28/1999 14:53	87.6	87.7	87.2	77.5	77.6	415.4	417.6
09/28/1999 14:54	87.4	87.1	87.5	76.8	76.6	416.7	415.5
09/28/1999 14:55	86.3	87.0	86.4	75.6	75.8	417.5	411.0
09/28/1999 14:56	85.6	85.9	85.2	74.8	74.6	417.2	406.1
09/28/1999 14:57	86.6	87.0	87.0	76.5	76.6	417.7	413.7
09/28/1999 14:58	85.6	85.8	85.6	75.2	75.3	416.8	407.6
09/28/1999 14:59	87.7	87.7	87.8	77.5	77.2	416.7	418.0
09/28/1999 15:00	86.8	86.7	86.6	76.2	77.1	417.0	413.3
09/28/1999 15:01	87.6	87.6	87.5	77.2	77.2	416.1	417.1
09/28/1999 15:02	87.7	87.0	87.5	76.8	77.2	415.6	416.2
09/28/1999 15:03	88.6	88.3	88.9	78.3	78.5	416.6	422.5

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/28/1999 15:04	86.4	86.4	86.7	76.0	76.1	416.5	411.6
09/28/1999 15:05	88.0	88.1	88.3	77.6	77.8	416.7	419.9
09/28/1999 15:06	88.1	87.4	87.7	77.1	77.1	417.0	417.5
09/28/1999 15:07	86.2	86.0	86.5	75.4	75.5	415.7	409.6
09/28/1999 15:08	86.7	86.8	86.0	76.3	75.9	416.5	411.8
09/28/1999 15:09	87.5	87.5	86.9	76.7	76.9	416.4	415.5
09/28/1999 15:10	86.8	87.0	87.0	76.8	76.6	417.1	414.2
09/28/1999 15:11	87.5	87.4	87.7	77.4	76.8	417.0	416.7
09/28/1999 15:12	86.4	86.9	87.1	76.7	76.3	417.3	413.4
Test 2 Average	***86.9***	***86.9***	***86.9***	***76.6***	***76.6***	***416.5***	***414.0***

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/29/1999 8:20	87.6	87.9	87.3	77.5	77.7	415.4	
09/29/1999 8:21	87.1	88.4	87.3	77.0	76.9	415.6	
09/29/1999 8:22	84.6	91.1	85.0	74.4	74.4	415.9	
09/29/1999 8:23	84.7	89.1	84.7	74.5	74.7	415.7	
09/29/1999 8:24	85.7	89.1	85.8	75.7	75.5	414.9	
09/29/1999 8:25	86.9	89.9	86.4	76.1	76.2	414.6	
09/29/1999 8:26	87.7	90.3	87.9	77.5	77.2	415.3	
09/29/1999 8:27	86.5	88.5	86.5	75.9	75.3	414.9	
09/29/1999 8:28	86.6	89.9	87.0	76.4	76.3	415.1	
09/29/1999 8:29	85.9	88.2	85.2	75.4	75.3	415.4	
09/29/1999 8:30	84.1	86.6	83.7	73.5	73.3	415.3	
09/29/1999 8:31	85.8	88.3	85.3	74.8	74.2	414.8	
09/29/1999 8:32	86.8	89.5	86.4	75.8	76.0	415.7	
09/29/1999 8:33	86.4	88.5	87.1	76.4	76.6	414.2	
09/29/1999 8:34	86.6	89.2	87.0	76.7	76.8	415.0	
09/29/1999 8:35	86.7	89.3	86.5	76.3	76.8	416.3	
09/29/1999 8:36	86.0	88.6	85.8	75.7	75.8	415.3	
09/29/1999 8:37	87.1	88.9	86.7	76.1	76.4	416.2	
09/29/1999 8:38	85.5	88.2	86.5	75.3	75.1	415.0	
09/29/1999 8:39	85.7	89.6	85.8	75.7	75.3	415.4	
09/29/1999 8:40	87.0	89.4	86.1	76.3	76.5	415.0	
09/29/1999 8:41	87.2	89.3	86.7	76.6	76.7	415.2	
09/29/1999 8:42	86.5	88.6	86.0	76.0	75.7	414.9	
09/29/1999 8:43	86.5	89.1	87.2	76.6	76.4	415.0	
09/29/1999 8:44	86.4	89.1	86.1	76.0	75.7	416.6	
09/29/1999 8:45	85.5	88.4	85.4	75.2	75.4	416.1	
09/29/1999 8:46	86.7	89.5	86.7	76.2	75.7	415.7	
09/29/1999 8:47	85.5	87.9	85.8	75.3	75.4	414.5	
09/29/1999 8:48	86.9	89.3	86.9	76.6	76.6	414.7	
09/29/1999 8:49	87.3	89.5	87.3	76.9	76.8	415.3	
09/29/1999 8:50	87.0	89.6	86.9	76.3	75.9	414.4	
09/29/1999 8:51	87.0	89.3	87.2	76.4	76.7	415.6	
09/29/1999 8:52	86.9	88.9	86.7	76.1	76.1	415.5	
09/29/1999 8:53	86.5	89.4	86.5	76.4	76.1	415.6	
09/29/1999 8:54	85.9	89.3	85.9	75.7	75.5	415.9	
09/29/1999 8:55	85.2	88.4	84.9	74.6	74.5	415.9	
09/29/1999 8:56	86.5	89.9	86.3	76.3	76.3	414.5	
09/29/1999 8:57	87.7	89.3	87.6	77.2	77.2	414.6	
09/29/1999 8:58	87.3	89.3	87.1	76.6	76.8	415.6	
09/29/1999 8:59	86.7	89.1	87.0	76.3	76.3	416.1	
09/29/1999 9:00	85.9	89.1	86.4	75.7	75.8	415.4	
09/29/1999 9:01	85.5	88.7	86.5	75.6	75.7	414.6	
09/29/1999 9:02	85.2	88.4	84.9	74.8	75.2	414.8	
09/29/1999 9:03	87.0	90.2	87.0	76.8	76.5	414.7	
09/29/1999 9:04	86.7	88.8	86.9	76.5	76.0	415.1	

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/29/1999 9:05	87.6	89.7	87.1	77.3	76.9	415.1	
09/29/1999 9:06	87.2	89.1	86.8	76.6	76.4	416.5	
09/29/1999 9:07	86.1	89.4	86.8	76.0	75.5	415.5	
09/29/1999 9:08	86.0	88.6	86.3	76.4	76.2	415.2	
09/29/1999 9:09	85.9	88.7	85.5	75.6	75.4	415.2	
09/29/1999 9:10	85.8	88.7	85.0	75.5	75.7	415.8	
09/29/1999 9:11	86.6	89.0	86.2	75.9	76.4	415.1	
09/29/1999 9:12	87.9	90.1	87.8	77.3	77.2	414.8	
09/29/1999 9:13	88.4	90.2	88.5	78.1	77.8	415.5	
09/29/1999 9:14	86.0	88.0	86.0	75.6	75.7	415.5	
09/29/1999 9:15	85.8	88.8	85.6	75.3	75.3	415.0	
09/29/1999 9:16	86.8	89.4	86.7	76.7	76.7	414.4	
09/29/1999 9:17	86.9	89.3	87.7	76.9	76.9	415.5	
09/29/1999 9:18	86.0	88.2	85.9	75.7	75.3	415.8	
09/29/1999 9:19	87.0	90.3	87.4	77.2	77.1	415.1	
09/29/1999 9:20	88.2	90.5	88.3	78.0	78.2	415.8	423.1
09/29/1999 9:21	87.8	89.4	87.9	77.3	77.6	415.6	420.0
09/29/1999 9:22	87.2	89.5	87.5	76.7	76.6	416.0	417.4
09/29/1999 9:23	86.5	88.8	85.8	75.6	75.7	414.6	412.6
09/29/1999 9:24	85.8	89.7	86.0	76.0	75.8	414.4	413.4
09/29/1999 9:25	87.3	89.1	87.1	76.9	76.9	415.9	417.3
09/29/1999 9:26	87.0	89.7	86.7	76.8	76.1	416.2	416.4
09/29/1999 9:27	86.2	88.8	85.3	75.4	75.8	415.1	411.6
09/29/1999 9:28	87.5	90.6	87.6	77.2	77.0	415.5	420.0
09/29/1999 9:29	87.0	88.8	87.0	76.6	76.3	415.2	415.7
09/29/1999 9:30	87.5	90.3	87.7	77.4	77.1	415.3	420.0
09/29/1999 9:31	87.3	89.7	86.9	77.0	77.0	415.2	418.0
09/29/1999 9:32	87.3	89.5	87.4	77.1	76.9	414.6	418.2
09/29/1999 9:33	88.3	90.2	87.9	77.9	77.8	415.5	421.9
09/29/1999 9:34	87.6	90.1	87.3	77.2	77.2	415.8	419.3
09/29/1999 9:35	86.2	89.3	86.6	76.2	76.6	414.9	414.8
09/29/1999 9:36	86.2	89.2	86.4	76.1	75.8	414.8	413.8
09/29/1999 9:37	87.4	89.5	87.3	77.2	76.9	414.4	418.3
09/29/1999 9:38	87.0	89.4	87.2	77.0	76.8	414.6	417.4
09/29/1999 9:39	87.7	90.0	87.9	77.4	77.2	415.3	420.3
09/29/1999 9:40	86.6	89.5	86.5	76.4	76.4	416.9	415.4
09/29/1999 9:41	87.1	89.4	86.7	76.3	75.9	415.5	415.4
09/29/1999 9:42	86.5	89.6	87.0	76.4	76.3	414.5	415.9
09/29/1999 9:43	87.3	89.8	86.6	76.8	77.1	414.9	417.6
09/29/1999 9:44	87.1	90.4	87.5	76.9	77.1	415.6	419.1
09/29/1999 9:45	86.5	89.7	86.7	76.1	75.9	415.0	414.9
09/29/1999 9:46	88.4	90.7	88.2	77.9	77.6	416.0	422.9
09/29/1999 9:47	87.4	89.3	86.9	77.0	77.1	414.8	417.6
09/29/1999 9:48	89.0	90.7	88.9	78.2	78.3	415.6	425.1
09/29/1999 9:49	85.9	88.5	85.5	75.0	74.8	415.7	409.7

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/29/1999 9:50	85.4	88.8	85.4	75.1	75.7	414.5	410.3
09/29/1999 9:51	87.4	90.4	87.7	77.6	78.0	415.9	421.1
09/29/1999 9:52	86.9	88.6	86.6	76.1	76.1	414.9	414.4
09/29/1999 9:53	88.1	90.2	88.0	77.7	78.0	415.9	422.0
09/29/1999 9:54	88.1	90.4	87.9	77.4	77.6	414.4	421.4
09/29/1999 9:55	87.4	89.9	87.0	77.4	77.5	414.6	419.3
09/29/1999 9:56	87.1	89.8	87.6	77.3	77.1	414.2	418.8
09/29/1999 9:57	87.4	89.4	87.1	76.7	76.8	414.5	417.4
09/29/1999 9:58	86.1	89.6	85.9	75.9	75.8	416.3	413.4
09/29/1999 9:59	87.5	90.6	87.7	77.4	77.7	415.9	420.9
09/29/1999 10:00	87.1	89.5	87.0	76.5	76.5	415.7	416.5
09/29/1999 10:01	87.9	89.9	87.1	77.0	76.4	414.8	418.3
09/29/1999 10:02	85.9	89.6	86.9	75.8	75.8	414.7	414.0
09/29/1999 10:03	87.3	89.9	87.4	77.4	77.0	415.1	418.9
09/29/1999 10:04	87.0	88.9	87.1	76.9	76.8	416.0	416.7
09/29/1999 10:05	87.2	90.4	87.4	76.9	77.1	415.6	419.1
09/29/1999 10:06	87.1	89.5	87.4	76.7	76.7	415.1	417.4
09/29/1999 10:07	87.5	89.6	87.7	77.1	76.9	415.2	418.8
09/29/1999 10:08	88.1	90.6	88.2	77.7	77.5	416.1	422.0
09/29/1999 10:09	86.3	89.8	87.1	76.6	76.2	415.5	415.9
09/29/1999 10:10	86.6	89.8	87.4	76.7	76.7	415.3	417.1
09/29/1999 10:11	85.4	88.3	85.1	75.0	74.7	416.2	408.5
09/29/1999 10:12	85.9	89.4	85.6	75.5	75.9	416.0	412.3
09/29/1999 10:13	86.4	88.9	86.4	75.8	75.8	414.5	413.2
09/29/1999 10:14	89.0	91.3	88.7	78.4	78.4	414.7	425.8
09/29/1999 10:15	87.5	89.6	87.7	76.9	77.5	415.3	419.2
09/29/1999 10:16	88.0	90.1	87.4	77.1	77.5	415.6	420.0
09/29/1999 10:17	86.7	89.8	86.7	76.4	76.3	414.6	415.8
09/29/1999 10:18	85.9	88.4	85.9	75.4	75.5	415.1	411.1
09/29/1999 10:19	87.0	89.7	87.1	76.6	76.8	415.6	417.2
09/29/1999 10:20	86.5	89.5	86.4	76.2	76.1	415.4	414.6
09/29/1999 10:21	88.1	90.1	87.8	77.3	77.4	414.6	420.7
09/29/1999 10:22	87.6	89.1	87.9	77.1	77.0	414.2	418.6
09/29/1999 10:23	87.2	90.1	87.1	76.9	76.8	415.8	418.2
09/29/1999 10:24	85.9	89.3	86.1	75.8	75.5	415.1	412.7
09/29/1999 10:25	86.3	89.8	87.5	76.7	76.8	415.6	417.1
09/29/1999 10:26	88.2	90.0	87.7	77.3	77.3	414.9	420.5
09/29/1999 10:27	86.9	89.0	86.7	76.5	76.2	413.9	415.4
09/29/1999 10:28	88.1	90.2	88.1	77.7	77.7	415.3	421.9
09/29/1999 10:29	86.9	89.8	86.7	76.6	76.6	414.8	416.6
09/29/1999 10:30	86.8	89.7	87.5	76.6	76.6	415.1	417.1
09/29/1999 10:31	87.1	88.8	87.2	76.3	76.4	415.2	415.8
09/29/1999 10:32	87.6	90.8	87.8	77.3	77.3	415.3	420.8
09/29/1999 10:33	87.4	90.1	87.4	76.5	76.8	415.1	418.2
09/29/1999 10:34	86.8	89.6	87.3	76.3	76.1	414.4	416.0

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/29/1999 10:35	87.2	90.2	88.2	77.3	77.3	415.8	420.2
09/29/1999 10:36	87.9	90.1	87.2	77.3	77.3	415.0	419.7
09/29/1999 10:37	87.5	90.9	87.5	77.2	77.3	415.0	420.5
09/29/1999 10:38	86.9	89.7	87.0	76.5	77.0	414.8	417.1
09/29/1999 10:39	87.6	90.4	87.6	77.4	77.7	414.4	420.6
09/29/1999 10:40	87.7	89.5	86.9	76.5	76.9	414.8	417.5
09/29/1999 10:41	87.7	90.4	87.8	77.3	77.3	416.0	420.3
09/29/1999 10:42	87.4	90.3	87.7	76.8	76.9	414.5	419.1
09/29/1999 10:43	89.1	91.1	88.7	78.3	78.7	414.1	426.1
09/29/1999 10:44	87.1	89.7	87.0	76.6	76.8	416.2	417.3
09/29/1999 10:45	87.6	90.0	87.5	76.6	76.5	416.1	418.2
09/29/1999 10:46	84.3	88.5	85.3	74.6	74.7	414.4	407.4
09/29/1999 10:47	87.7	90.1	87.9	77.3	77.5	415.5	420.4
09/29/1999 10:48	87.1	89.8	87.3	77.0	77.3	414.7	418.5
09/29/1999 10:49	87.8	90.1	87.6	77.1	76.7	413.8	419.3
09/29/1999 10:50	88.0	90.7	88.0	77.4	77.7	414.6	421.8
09/29/1999 10:51	87.0	89.4	87.3	76.6	76.5	415.5	416.8
09/29/1999 10:52	87.5	90.1	87.3	77.2	77.1	414.9	419.1
09/29/1999 10:53	85.6	89.2	86.3	75.9	76.5	415.0	413.5
09/29/1999 10:54	87.8	90.5	88.4	77.4	77.5	416.5	421.5
09/29/1999 10:55	86.1	88.8	86.2	75.8	76.1	416.3	413.0
09/29/1999 10:56	87.0	90.2	86.8	76.3	76.7	414.4	417.0
09/29/1999 10:57	87.4	89.8	87.0	76.4	76.3	414.5	416.9
09/29/1999 10:58	87.5	89.7	87.8	76.8	76.9	414.8	418.7
09/29/1999 10:59	87.1	89.3	86.8	76.5	76.6	415.4	416.3
09/29/1999 11:00	87.2	90.3	87.2	76.6	76.8	415.1	418.2
09/29/1999 11:01	87.4	90.0	87.7	77.3	77.6	415.1	420.1
09/29/1999 11:02	86.8	90.2	87.3	77.0	76.9	414.0	418.0
09/29/1999 11:03	87.7	90.2	88.5	77.9	78.0	415.4	422.4
09/29/1999 11:04	86.9	89.5	87.2	76.7	76.7	415.8	417.0
09/29/1999 11:05	86.4	89.5	86.7	75.8	76.5	414.7	415.0
09/29/1999 11:06	89.2	91.0	88.0	78.0	77.5	414.5	423.7
09/29/1999 11:07	86.5	88.0	86.1	75.8	76.1	414.1	412.5
09/29/1999 11:08	87.9	90.1	87.1	76.8	76.7	415.2	418.6
09/29/1999 11:09	86.4	89.8	86.6	76.1	76.3	415.0	415.3
09/29/1999 11:10	88.0	90.8	87.9	77.8	78.1	416.1	422.5
09/29/1999 11:11	86.8	89.8	86.8	76.3	77.2	414.1	416.8
09/29/1999 11:12	87.5	89.9	87.5	76.8	76.8	414.5	418.5
09/29/1999 11:13	87.9	90.0	87.1	76.9	77.1	414.4	418.9
09/29/1999 11:14	88.2	90.0	88.5	77.7	77.7	414.1	422.1
09/29/1999 11:15	87.1	89.8	87.4	76.7	77.1	414.3	418.1
09/29/1999 11:16	88.7	90.4	87.9	78.0	77.5	415.1	422.5
09/29/1999 11:17	87.8	90.0	87.6	76.8	77.0	415.3	419.3
09/29/1999 11:18	88.1	90.7	88.0	77.3	77.6	414.6	421.7
09/29/1999 11:19	87.7	90.4	87.9	77.3	77.5	415.8	420.8

Craig Unit 1 Coal Feeder Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Net Generation	Total Coal Flow, klb/hr
09/29/1999 11:20	86.4	89.6	87.2	76.7	76.8	414.9	416.7
09/29/1999 11:21	88.2	91.1	87.9	77.3	77.3	414.1	421.8
09/29/1999 11:22	87.7	90.0	88.0	77.4	77.6	415.4	420.7
09/29/1999 11:23	87.2	90.4	86.9	77.0	76.8	414.6	418.3
09/29/1999 11:24	87.1	89.7	86.9	76.5	76.6	415.2	416.8
09/29/1999 11:25	87.8	89.6	87.4	77.0	77.2	415.8	419.0
09/29/1999 11:26	86.1	89.0	86.0	75.8	75.8	413.8	412.8
Test 3 Average	***87.0***	***89.6***	***87.0***	***76.6***	***76.6***	***415.2***	***417.9***

Appendix A. Results and Calculations

Spreadsheet Printouts

General Calculations

Mercury Specific Calculations and Examples

Data Tracking Logs

FOSSIL ENERGY RESEARCH CORP.

ISOKINETIC TEST DATA SUMMARY

Test Program Information				
Client	Tri-State	*Data input by*	MDM	
Plant/Unit	Craig Unit 3	*Method*	Ontario Hydro	
Sample Location	APH Exits	*Stack Area, ft^2*	586.5	
Fuel	Coal	*Sample Train ID*	1-FERCo	
Fuel F-factor, dscf/MMBtu	9780	*Meter factor, Y_D*	1.001	
		Ref Temp, F	68	
Pre-test Information				
Test Number	1-Inlet-Hg	2-Inlet-Hg	3-Inlet-Hg	Average
Date	04-Oct-99	04-Oct-99	05-Oct-99	
Pitot Factor, C_p	0.84	0.84	0.84	-
Barometric Pressure, in Hg	24.1	24.1	24.1	-
Sample Time, min	150	150	150	-
Nozzle Diameter, in	0.187	0.187	0.187	-
Sample Train Data				
Meter Volume, acf	64.700	65.995	65.460	-
Static Pressure, iwg	-7.5	-7.5	-7.5	-7.5
ΔP, iwg	0.6322	0.6630	0.6581	0.6511
ΔH, iwg	0.59	0.61	0.60	0.60
Meter Temp, F	63.1	84.8	61.4	69.8
Stack Temp, F	279.6	293.5	270.6	281.2
Water collected, g	120.6	110.0	107.5	112.7
O_2, %	6.57	6.36	6.36	6.43
CO_2, %	12.05	12.84	12.86	12.58
Start time/stop time	0921/1233	1335/1636	0836/1142	
Sample Train Results				
Std Sample Vol, dscf	52.742	51.659	53.538	52.646
Std Sample Vol, m^3	1.493	1.463	1.516	1.491
Std Moisture Vol, dscf	5.692	5.192	5.074	-
Moisture, %	9.74%	9.13%	8.66%	9.18%
Dry Molecular Weight	30.19	30.31	30.31	-
Wet Molecular Weight	29.00	29.18	29.25	29.14
Stack Gas Velocity, ft/s	59.32	61.13	59.90	60.12
Stack Gas Flow, wacfm	2,087,312	2,151,083	2,108,054	2,115,483
Stack Gas Flow, dscfm	1,058,631	1,077,973	1,095,201	1,077,268
Isokinetic Ratio, %	102.16	98.27	100.24	-
Mercury catch, ug				
Particulate	0.69	1.10	1.10	
Oxidized	0.78	0.60	0.29	
Elemental	0.24	0.21	0.15	
Total	1.71	1.91	1.54	1.72
Mercury catch, ug/m^3				
Particulate	0.462	0.752	0.726	0.65
Oxidized	0.522	0.410	0.191	0.37
Elemental	0.161	0.144	0.099	0.13
Total	1.145	1.306	1.016	1.16
Mercury catch, lb/10^{12} Btu				
Particulate	0.411	0.658	0.635	0.568
Oxidized	0.464	0.359	0.168	0.330
Elemental	0.143	0.126	0.087	0.118
Total	1.017	1.143	0.890	1.017
Mercury, lb/hr				
Particulate	0.0017	0.0027	0.0026	0.0024
Oxidized	0.0019	0.0015	0.0007	0.0014
Elemental	0.0006	0.0005	0.0004	0.0005
Total	0.0042	0.0047	0.0037	0.0042

FOSSIL ENERGY RESEARCH CORP.

ISOKINETIC TEST DATA SUMMARY

Test Program Information				
Client	Tri-State	*Data input by*	MDM	
Plant/Unit	Craig Unit 3	*Method*	Ontario Hydro	
Sample Location	Stack	*Stack Area, ft^2*	489.3	
Fuel	Coal	*Sample Train ID*	1-FERCo	
Fuel F-factor, dscf/MMBtu	9780	*Meter factor, Y_D*	1.001	
		Ref Temp, F	68	
Pre-test Information				
Test Number	1-Stack-Hg	2-Stack-Hg	3-Stack-Hg	Average
Date	04-Oct-99	04-Oct-99	05-Oct-99	
Pitot Factor, C_p	0.84	0.84	0.84	-
Barometric Pressure, in Hg	23.8	23.8	23.3	-
Sample Time, min	144	144	144	-
Nozzle Diameter, in	0.188	0.188	0.188	-
Sample Train Data				
Meter Volume, acf	87.300	87.536	87.004	-
Static Pressure, iwg	-1.35	-1.40	-1.40	-1.38
ΔP, iwg	0.9681	0.9887	0.9597	0.9722
ΔH, iwg	0.91	0.92	0.90	0.91
Meter Temp, F	86.9	92.0	88.3	89.1
Stack Temp, F	177.0	186.1	174.7	179.3
Water collected, g	165.2	162.6	160.3	162.7
O_2, %	8.43	8.27	8.03	8.24
CO_2, %	10.49	11.15	11.38	11.01
Start time/stop time	0930/1219	1335/1629	0830/1120	
Sample Train Results				
Std Sample Vol, dscf	67.294	66.855	65.491	66.547
Std Sample Vol, m^3	1.906	1.893	1.855	1.884
Std Moisture Vol, dscf	7.797	7.675	7.566	-
Moisture, %	10.38%	10.30%	10.36%	10.35%
Dry Molecular Weight	30.02	30.11	30.14	-
Wet Molecular Weight	28.77	28.87	28.88	28.84
Measured Stack Gas Velocity, ft/s	68.18	69.28	68.36	68.61
Measured Stack Gas Flow, wacfm	2,001,735	2,033,973	2,006,853	2,014,187
Measured Stack Gas Flow, dscfm	1,177,843	1,180,909	1,160,303	1,173,018
Corrected Stack Gas Flow, dscfm	1,116,595	1,119,502	1,099,967	1,112,021
Isokinetic Ratio, %	100.7	99.8	99.5	-
Mercury catch, ug				
Particulate	0.01	0.01	0.01	
Oxidized	0.10	0.10	0.10	
Elemental	1.2	1.2	1.1	
Total	1.2	1.2	1.1	1.17
Mercury catch, ug/m^3				
Particulate	0.005	0.005	0.005	0.015
Oxidized	0.05	0.05	0.05	0.05
Elemental	0.63	0.63	0.59	0.62
Total	0.63	0.63	0.59	0.62
Mercury catch, lb/10^{12} Btu				
Particulate	0.005	0.005	0.005	0.005
Oxidized	0.05	0.05	0.05	0.05
Elemental	0.64	0.64	0.59	0.62
Total	0.64	0.64	0.59	0.62
Mercury, lb/hr				
Particulate	0.0000	0.0000	0.0000	0.0000
Oxidized	0.0002	0.0002	0.0002	0.0002
Elemental	0.0026	0.0027	0.0024	0.0026
Total	0.0026	0.0027	0.0024	0.0026

Note-shaded cells are not detected. Calculations are for DL's.

EMISSION CALCULATIONS

1. Sample Volume and Isokinetics

a. Sample gas volume, dscf

$V_{m\ std} = 0.03342 V_m\ [P_{bar} + (H/13.6)](T_{ref}/T_m)(Y)$

b. Water vapor volume, scf

$V_{w\ std} = 0.0472\ V_{lc}\ (T_{ref}/528°R)$

c. Moisture content, nondimensional

$B_{wo} = V_{w\ std}/(V_{m\ std} + V_{w\ std})$

d. Stack gas molecular weight, lb/lb mole

$MW_{dry} = 0.44(\%\ CO_2) + 0.32(\%\ O_2) + 0.28\ (\%\ N_2)$

$MW_{wet} = MW_{dry}\ (1 - B_{wo}) + 18\ (B_{wo})$

e. Absolute stack pressure, iwg

$Ps = P_{bar} + P_{sg}/13.6$

f. Stack velocity, ft/sec

$$V_s = 2.90\ C_p \sqrt{\Delta P Ts}\ \sqrt{\frac{29.92}{Ps} \times \frac{28.95}{MW_{wet}}}$$

g. Actual stack gas flow rate, wacfm

$Q = (V_s)(A_s)(60)$

h. Standard stack gas flow, dscfm

$Q_{sd} = Q(1 - B_{wo})\ (T_{ref}/Ts)(Ps/29.92)$

i. Percent isokinetic

$$I = \frac{17.32 \times T_s\ (V_{m\ std})}{(1 - B_{wo})\ \theta \times V_s \times Ps \times Dn^2} \times \frac{528°R}{T_{ref}}$$

2. Particulate Emissions

a. Grain loading, gr/dscf

$C = 0.01543\ (M_n/V_{m\ std})$

b. Grain loading at 12% CO_2, gr/dscf

$C_{(12\%\ CO2)} = C\ (12/\%CO_2)$

c. Mass emissions, lb/hr

M = C x Qsd x (60 min/hr)/(7000 gr/lb)

3. Gaseous Emissions, lb/hr

$$M = ppm \times 10^{-6} \quad \frac{MW_i\ lb/lb\ mole}{SV} \quad X\ Qsd\ X\ 60\ min/hr$$

where SV = specific molar volume of an ideal gas:

385.3 ft^3/lb mole for T_{ref} = 528°R

379.5 ft^3/lb mole for T_{ref} = 520°R

4. Emissions Rates, lb/10^6 Btu

a. Fuel factor at 68°F, dscf/10^6 Btu at 0% O_2

$$F_{68} = \frac{10^6[3.64(\%H) + 1.53(\%C) + 0.14(\%N) + 0.57(\%S) - 0.46(\%O_2, fuel)]}{HHV,\ Btu/lb}$$

b. Fuel factor at 60°F

$F_{60} = F_{68}$ (520°R/528°R)

c. Gaseous emission factor

$$lb/10^6\ Btu_i = ppm_i \times 10^{-6} \times \frac{MW_i\ lb}{lb\ mole} \times \frac{1}{SV} \times F \times \frac{20.9}{20.9 - \%O_2}$$

d. Particulate emission factor

$$lb/10^6\ Btu = C \times \frac{1\ lb}{7000\ gr} \times F \times \frac{20.9}{20.9 - \%O_2}$$

These calculations are routinely performed on FERCo's computer.

Nomenclature:

A_s = stack area, ft^2
B_{wo} = flue gas moisture content
$C_{12\%CO2}$ = particulate grain loading, gr/dscf corrected to 12% CO_2
C = particulate grain loading, gr/dscf
C_p = pitot calibration factor, dimensionless
Dn = nozzle diameter, in.
F = fuel F factor, dscf/10^6 Btu at 0% O_2
H = orifice pressure differential, iwg
I = % isokinetics
M_n = mass of collected particulate, mg
M_i = mass of emissions species i, lb/hr
MW = molecular weight of flue gas
MW_i = molecular weight of species i:
- NO_x: 64
- CO: 28
- SO_2: 64
- HC: 16

Σ = sample time, min.

ΔP = average velocity head, iwg = $\left(\overline{\sqrt{\Delta P}}\right)^2$

P_{bar} = barometric pressure, in. Hg
Ps = stack absolute pressure, in. Hg
Psg = stack static pressure, iwg
Q = wet stack gas flow rate at actual conditions, wacfm
qsd = dry stack gas flow rate at standard conditions, dscfm
SV = specific molar volume of an ideal gas at std conditions, ft^3/lb mole
Tm = meter temperature, °R
T_{ref} = reference temperature, °R
Ts = stack temperature, °R
V_s = stack velocity, ft/sec
V_{lc} = volume of liquid collected in impingers, ml
V_m = dry meter volume uncorrected, dcf
$V_{m\ std}$ = dry meter volume at standard conditions, dscf
$V_{w\ std}$ = volume of water vapor at standard conditions, scf
Y = meter calibration coefficient

FOSSIL ENERGY RESEARCH CORP.

23342 C SOUTH POINTE, LAGUNA HILLS, CA 92653 (714) 859-4466

Date _____ Operator _____

Sampling train _____ Checked by _____

Site _____ Used for runs _____

1. C_p (for S-type pitots) = _____
2. P_b (barometric pressure at location) = _____
3. D_n (nozzle diameter inches) = _____
4. B_w (moisture in gas stream, percent) = _____
5. P_m (barometric pressure at meter, in Hg) $= \frac{\text{AVG } \Delta H}{13.6} + P_b$ = _____
6. $\Delta H@$ (pressure differential of orifice in meterbox, H_2O) = _____
7. P_s (stack pressure, in Hg) $= P_b \pm \frac{\text{stack static pressure } (H_2O)}{13.6}$ = _____
8. T_s (average stack temperature, °R) = _____ °F + 460 = _____ °R
9. T_m (average meter temperature, °R = ambient + 20°F + 460 = _____ °R
10. M_d (molecular weight of stack gas, dry, lb/lb mole)
    $= (0.44 \times \% CO_2) + (0.32 \times \% O_2) + [0.28 + \% N_2]$
    $=$ (0.44 × _____) + (0.32 × _____) + (0.28 + _____) = _____
11. M_s (molecular weight of stack gas with water vapor, lb/lb mole)
    $= [M_d \times (1\text{-}B_w)] + [18 \times B_w]$
    $=$ [_____ × (1 - _____)] + [18 × _____] = _____
12. $K = (846.72)(D_n^4)(\Delta H@)(C_p^2)(1\text{-}B_w)^2 \left[\frac{M_d}{M_s}\right]\left[\frac{P_s}{P_m}\right]\left[\frac{T_m}{T_s}\right]$

    K = (846.72) (_____)⁴ (_____) (_____)² (_____)² (_____) (_____) (_____)

    K = _____

$\Delta H = K\Delta P$
Correlation Chart

ΔH	ΔP

K-Factor Calculation Form

Calculations to determine mercury as lb/10^{12} Btu in fuel												
Mercury	=	Mercury	x	1.E-06	x	(1-H_2O)	/	HHV	*	1.E+12		
lb/10^{12} Btu		ppm dry						lb/Btu				
Example, Craig 3 Test 3												
0.72	=	0.009	x	1.E-06	x	0.8206	/	10,308	*	1.E+12		
lb/10^{12} Btu		ppm dry						lb/Btu				
Calculations to determine mercury as lb/hr in fuel												
Mercury	=	Mercury	x	1.E-06	x	(1-H_2O)	x	coal flow				
lb/hr		ppm dry						lb/hr as-fired				
Example, Craig 3 Test 3												
0.0031	=	0.009	x	1.E-06	x	0.8206	x	412000				
lb/hr		ppm dry						lb/hr as-fired				
Calculations to determine gas flow rates from fuel input												
Oxygen based												
Flow	=	fuel flow	x	HHV	x	Fd-factor	x	20.9/(20.9-O_2)	/	60	/	1,000,000
dscfm		lb/hr		Btu/lb		dscf/mmBtu				min/hr		
Example, Craig 3 Test 3-Stack												
1,124,157	=	412000	x	10308	x	9780	x	1.624	/	60	/	1,000,000
dscfm		lb/hr		Btu/lb		dscf/mmBtu				min/hr		
Carbon based												
Flow	=	fuel flow	x	HHV	x	Fc-factor	x	100/CO_2	/	60	/	1,000,000
dscfm		lb/hr		Btu/lb		dscf/mmBtu				min/hr		
Example, Craig 3 Test 3-Stack												
1,119,726	=	412000	x	10308	x	1800	x	8.789	/	60	/	1,000,000
dscfm		lb/hr		Btu/lb		dscf/mmBtu				min/hr		

Calculations to determine mercury as lb/10^{12} Btu in gas												
Mercury	=	Mercury	/	Sample vol	x	2.20.E-09	x	9780	*	20.9/(20.9-O_2)	*	1.E+06
lb/10^{12} Btu		ug/sample		dscf		lb/ug		f-factor		dilution		10^{12}/10^{6}
								dscf/10^{6} Btu		correciton		
Example, Craig 3 Test 3 Stack Total Mercury												
0.588	=	1.10	/	65.49	x	2.20.E-09	x	9780	x	1.624	*	1.E+06
lb/10^{12} Btu		ug/sample		dscf		lb/ug		f-factor		dilution		10^{12}/10^{6}
								dscf/10^{6} Btu		correction		
Calculations to determine mercury as lb/hr in gas												
Mercury	=	Mercury	/	Sample vol	x	2.20.E-09	x	Gas flow	x	60		
lb/hr		ug/sample		dscf		lb/ug		dscfm		min/hr		
Example, Craig 3 Test 3 Stack Total Mercury												
2.44E-03	=	1.10	/	65.49	x	2.20.E-09	x	1,099,967	x	60		
lb/hr		ug/sample		dscf		lb/ug		dscfm		min/hr		

Data Tracking Log

Test Unit	Craig 3
Test Dates	10/4 - 10/5/99

	By	Date
Mercury Gas Data		
Data taken	MM	10/5
Data reduced	MM	10/5
Entered in spreadsheet	MM	10/5
Field custody taken	MM	10/5
Lab data received	MM	11/30
Lab data entered	MM	11/30
Results prepared/summarized	MM	12/6
Results entered in report	MM	12/6
Coal sample data		
Lab data received	MM	11/30
Lab data entered	MM	11/30
Results prepared/summarized	MM	12/6
Results entered in report	MM	12/6

Appendix B. Raw Field Data and Calibration Data Sheets

Sampling Data

Velocity Traverses

O_2 Meter Calibration

O_2 Meter Gas Certificates

Dry Gas Meter Calibration

Pitot Probe Calibration

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Crang Unit 3 | UNIT 3 | TEST NO Field Blank-Hg | METHOD OH | PAGE 1 OF 1
SAMPLE LOCATION Inlet | TEST CONDITION Field Blank | AMBIENT TEMPERATURE
OPERATOR/ASSISTANT | METER VOLUME START/END / | DATE 10-7-99

PRE-TEST DATA:	EQUIPMENT INFO:	IMPINGER WEIGHTS:					LEAK CHECKS:				
Barometric Pressure, In.Hg	Meter No. #1 FERC	Imp #	Contents	Wt (end)	Wt (start)	Wt gain		CFM	Vacuum	Pitot	Initial
Assumed Stack Pressure, iwg	Meter Yd 1.001	1	KCl	✓	600.3		Pre-test	.007	11"	OK	✓
Assumed Moisture, %	Δ H @ 2.000	2	KCl	✓	588.8		Post-test				
Assumed Molecular Weight	Pitot ID, Cp 131.84	3	KCl	✓	714.2		PRE-TEST METER CALIBRATION CHECK:				
Assumed Stack Temperature	O_2/CO_2 Method	4	HNO_3/H_2O_2	✓	686.9			Time	Δ H	Meter Reading	Meter In/Out
Assumed Meter Temperature	Teflon connecting line? (Y/N) Y	5	$KMnO_4$	✓	615.9		Start				/
Average ΔP	Probe material Teflon	6	$KMnO_4$	✓	576.3		Stop				/
Stack diameter/area	Probe length 10'	7	$KMnO_4$	✓	704.4		Avg/total				
Sample time, min/point	Nozzle material Glass	8	SG	✓	829.0						
ΔH = _____ x ΔP	Nozzle diameter, in. .163					Total					
	Filter No. QT-33	COMMENTS:									
	Filter material quartz										

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER in	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
															Impingers Loaded ✓
Start	7:15														Impingers Recovered ✓
End	9:30														Filter Loaded ✓
															Filter Recovered ✓
															Probe Wash (Fr) ✓
															TEST AVERAGES/TOTALS
															Calculated by:
															Checked by:
															Δ P, iwg
															Δ H, iwg
															Sample vol, acf
															Stack temp, F
															Meter temp, F
															Static press, iwg
															Water collected, g
															O_2, %
															Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Cross Unit 3 UNIT 3 TEST NO. 1 Inlet-Hg METHOD OH PAGE 1 OF 4
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT METER VOLUME START/END 646 / DATE

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, Iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = .9 x ΔP	Nozzle diameter, in.
	Filter No. QT-32
	Filter material quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	753.7	-	620.7	=	133.0
2	KCl	586.9	-	578.7	=	8.2
3	KCl	659.8	-	661.0	=	-1.2
4	HNO_3/H_2O_2	645.6	-	642.5	=	3.1
5	$KMnO_4$	602.6	-	600.9	=	1.7
6	$KMnO_4$	605.9	-	606.1	=	-0.2
7	$KMnO_4$	673.8	-	673.6	=	0.2
8	silica	782.7	-	761.9	=	25.8
				-50	Total	120.6

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	0.0	18"	0	PA
Post-test	0.0	15		PA

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP Iwg	ΔH Iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER In	METER out	IMP OUT	O_2	VAC.	STATIC PRESS. Iwg	CHAIN OF CUSTODY INFORMATION
WA5	9:21	649.00	1.0	.9	278	278	261	46	45	43	5.8	5		Impingers Loaded 15
4	9:35	649.2	1.0	.9	260			46	45	43				Impingers Recovered 15
3	9:46	650.6	1.0	.9	255	241	265	47	45	43	6.1	5		Filter Loaded 15
2	9:55	651.62	.9	.81	246	241	268	48	46	43				Filter Recovered 15
1	10:31	653.1	.6	.54	246	240	270	49	46	43	6.2	5		Probe Wash AB
	10:35	654.14												
														TEST AVERAGES/TOTALS
WB5	9:34	654.3	.7	.63	264	247	272	49	46	43	5.9			Calculated by:
4	10:05	655.3	.8	.72	273	251								Checked by:
3	10:34	656.5	.7	.63	255	245	272	50	47	44	5.8	5		ΔP, Iwg 0.6322
2	10:41.5	657.6	.6	.54	262	244								ΔH, Iwg
1	10:44	658.7	.52	.47	272	247	273	50	47	44	6.2			Sample vol, acf
	10:46.5	659.78												Stack temp, F
WC5	9:47	660.0	.156	.5	260	249	271	50	48	44	6.1	5		Meter temp, F
4	10:44.5	660.9	.162	.156	251	252								Static press, iwg
3	10:52	661.95	.154	.49	284	248	272	51	48	44	5.9	5		Water collected, g
2	10:54.5	662.9	.154	.5	283	246								O_2, %
1	10:57	663.9	.14	.36	244	246	272	51	49	46	6.2	5		Sample time, min
	11:05	664.88												

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig UNIT 3 TEST NO. 1-Inlet-Hg METHOD _____ PAGE 2 OF 4
SAMPLE LOCATION Inlet TEST CONDITION _____ AMBIENT TEMPERATURE _____
OPERATOR/ASSISTANT _____ METER VOLUME START/END _____ / _____ DATE 10/4/99

PRE-TEST DATA:	*EQUIPMENT INFO:*
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	Δ H @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, In.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	Δ H	Meter Reading	Meter In/Out
Start				/_____
Stop				/_____
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
D 5	10:01	665.39	.7	.63	246	240	R T2	52	50	45		6.8			Impingers Loaded
4	03:8	666.45	.58	.52	260	253									Impingers Recovered
3	06	667.5	.52	.47	259	251	272	59	51	46		6.3	5		Filter Loaded
2	08.5	668.5	.46	.41	265	253									Filter Recovered
1	11	669.4	.3	.27	254	253	272	54	52	49		6.0	4		Probe Wash
	13.5	670.14													
E 5	15	670.6	.49	.4	253	253	270	55	52	49		7.2	5		TEST AVERAGES/TOTALS
4	17.5	671.5	.5	.45	262	255									Calculated by:
3	20	672.5	.46	.41	270	247	272	56	53	50		5.9	5		Checked by:
2	22.5	673.4	.44	.4	275	248									Δ P, iwg
1	25	674.34	.38	.34	249	250	272	57	54	50		6.5	4		Δ H, iwg
	27.5	675.2													Sample vol, acf
F 5	28.5	675.57	.72	.65	267	257	275	57	54	49		6.3	5		Stack temp, F
4	31	676.7	.62	.56	276	257									Meter temp, F
3	33.5	677.8	.6	.54	283	257	272	56	55	50		6.0	5		Static press, iwg
2	36	678.8	.66	.59	263	246									Water collected, g
1	38.5	679.9	.76	.67	255	250	271	59	56	51		6.2	5		O_2, %
	41	680.88													Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Conesville UNIT 3 TEST NO. 1-Inlet-1tg METHOD PAGE 5 OF 4
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT METER VOLUME START/END / DATE 10/4/99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	Δ H @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
				Total		

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	Δ H	Meter Reading	Meter In/Out
Start				/___
Stop				/___
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
EA 5	10.5	688.17	.76	.68	293	288	268	68	65	56	7.5	5		Impingers Loaded
4	11.5	692.75	.78	.7	303	293								Impingers Recovered
3	14	683.9	.70	.65	301	290	271	69	66	55	7.4	5		Filter Loaded
2	16.5	685.0	.46	.41	292	291								Filter Recovered
1	19	686.05	.4	.36	282	244	271	71	68	56	7.5	5		Probe Wash
	21.5	686.97												
B 5	11 23	691.39	.64	.54	297	258	270	72	68	57	7.8	5		TEST AVERAGES/TOTALS
4	25.5	688.4	.62	.58	294	259	270							Calculated by:
3	28	689.4	.56	.5	303	253	271	73	70	58	7.2	5		Checked by:
2	30.5	690.4	.44	.40	278	253								Δ P, iwg
1	33	691.39	.36	.32	275	254	270	74	71	59	8.1			Δ H, iwg
	35.5	692.25												Sample vol, acf
C 5	37.5	692.7	.8	.72	284	256	269	74	72	60	8.0	6		Stack temp, F
4	40	693.84	.7	.63	298	261								Meter temp, F
3	42.5	694.98	.6	.54	289	256	270	75	73	60	7.1	6		Static press, iwg
2	45	696.02	.44	.4	294	253								Water collected, g
1	47.5	697.0	.36	.32	290	252	270	76	74	61	7.4	6		O_2, %
	50	697.9												Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig UNIT 3 TEST NO. 1-Inlet METHOD Hg PAGE 4 OF 4
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT METER VOLUME START/END / DATE 10/4/99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, in.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER in	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
E D5	11 52	698.14	.8	.72	291	258	271	76	75	61		7.5	6		Impingers Loaded
4	54.5	699.4	.76	.68	301	267									Impingers Recovered
3	57	700.6	.7	.63	316	258	269	78	76	61		6.7	6		Filter Loaded
2	59.5	701.75	.54	.5	320	265									Filter Recovered
1	12 02	702.8	.48	.43	310	256	269	79	77	62		7.2	5		Probe Wash
	12 05	703.85													
E 5	1206	704.2	.66	.54	301	260	269	79	77	64		6.4	6		TEST AVERAGES/TOTALS
4	08.5	705.12	.9	.81	321	267									Calculated by:
3	11	706.6	.76	.68	290	259	268	80	78	63		6.0	7		Checked by:
2	13.5	707.8	.7	.63	310	257	269								ΔP, iwg
1	16	708.92	.6	.54	295	257	269	81	78	63		6.3	6		ΔH, iwg
	18.5	710.11													Sample vol, acf
F 5	12 20	710.65	1.0	.9	300	261	271	81	79	65		5.8	8		Stack temp, F
4	22.5	712.0	1.0	.9	295	269									Meter temp, F
3	25	713.4	1.1	.99	312	265	269	82	80	64		6.0	9		Static press, iwg
2	27.5	714.8	.9	.81	316	262									Water collected, g
1	30	716.1	.7	.81	302	263	269	82	80	65		5.8	9		O_2, %
	32.5	717.45													Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 3 UNIT 3 TEST NO. 2-Tp-Hg METHOD OH PAGE 1 OF 4
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT DB/PA METER VOLUME START/END / DATE 10/4/99

PRE-TEST DATA:

Barometric Pressure, in.Hg	24.1
Assumed Stack Pressure, iwg	
Assumed Moisture, %	
Assumed Molecular Weight	
Assumed Stack Temperature	
Assumed Meter Temperature	
Average ΔP	
Stack diameter/area	
Sample time, min/point	
ΔH = _____ x ΔP	

EQUIPMENT INFO:

Meter No.	
Meter Yd	
ΔH @	
Pitot ID, Cp	
O_2/CO_2 Method	
Teflon connecting line? (Y/N)	
Probe material	
Probe length	
Nozzle material	
Nozzle diameter, in.	
Filter No.	
Filter material	

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	743.0	-	622.7	=	
2	KCl	602.9	-	591.7	=	
3	KCl	699.7	-	697.7	=	
4	HNO_3/H_2O_2	619.2	-	615.1	=	
5	$KMnO_4$	600.7	-	600.7	=	
6	$KMnO_4$	568.3	-	566.6	=	
7	$KMnO_4$	699.0	-	699.6	=	
8	SG	921.0	-	899.7	=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	0.0	18"	OK	PA
Post-test	0.0	15"	✓	PA

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER in	METER out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg
E5	13:30	720.00	1.0	.9	301	230	257	83	83	60	6.2	5	
4	37.5	721.4	1.0	.99	305	242							
3	40	722.7	1.1	.99	295	249	264	83	83	58	5.0	5	
2	42.5	724.13	1.0	.9	307	254							
1	45	725.5	.9	.81	302	259	269	85	83	57	5.5	5	
	47.5	726.74	.8	.72									
E5	48.5	727.3	.8	.72	308	262	272	86	84	57	6.3	4	
E4	51	728.27	.95	.85	315	261							
4	53.5	729.6	.9	.81	310	258	272	86	84	57	5.8	5	
2	56	730.9	.9	.81	315	257							
1	58.5	732.1	.95	.85	306	259	271	86	84	57	5.8	5	
	1401	733.5											
D5	1402	733.9	.8	.72	280	262	271	87	85	58	6.9	5	
4	04.5	735.3	.78	.7	295	262							
3	07	736.2	.7	.63	296	254	271	88	85	58	6.5	5	
2	09.5	737.1	.6	.54	317	255							
1	12	738.45	.5	.45	316	258	270	88	86	59	6.8	5	
	14.5	739.5											

CHAIN OF CUSTODY INFORMATION

Impingers Loaded	JB
Impingers Recovered	AB
Filter Loaded	JB
Filter Recovered	AB
Probe Wash	JB/PA

TEST AVERAGES/TOTALS

Calculated by:	MM
Checked by:	MM
Δ P, iwg	
Δ H, iwg	
Sample vol, acf	
Stack temp, F	
Meter temp, F	
Static press, iwg	
Water collected, g	
O_2, %	
Sample time, min	

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig UNIT 3 TEST NO. 2-Inlet METHOD PAGE 2 OF 4
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT METER VOLUME START/END / DATE 10/4/99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER in	METER out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
PC 5	14 16	740.00	.7	.63	241	262	270	88	86	57	7.5	5		Impingers Loaded
4	18.5	741.1	.76	.68	290	261								Impingers Recovered
3	21	742.3	.64	.58	316	259	269	88	87	55	6.2	5		Filter Loaded
2	23.5	743.4	.5	.45	295	259								Filter Recovered
1	26	744.4	.46	.41	303	261	268	88	87	54	6.9	5		Probe Wash
	28.5	745.37												
B 5	430	745.75	.5	.45	291	262	268	88	87	54	7.4	5		TEST AVERAGES/TOTALS
4	32.5	746.9	.56	.5	293	254								Calculated by:
3	35	747.7	.58	.52	292	257	268	88	88	53	6.3	5		Checked by:
2	37.5	748.8	.46	.41	287	257								ΔP, iwg
1	40	749.75	.4	.36	282	259	268	87	88	53	7.4	5		ΔH, iwg
	425	750.65												Sample vol, acf
A 5	43.7	750.9	.57	.63	352	262	268	89	88	53	6.7	5		Stack temp, F
4	46	752.0	.76	.68	298	259								Meter temp, F
3	48.5	753.15	.68	.61	316	257	268	89	89	52	6.7	5		Static press, iwg
2	51	754.3	.48	.43	297	257								Water collected, g
1	53.5	755.3	.42	.38	304	259	268	89	89	53	6.8	5		O_2, %
	56	756.23												Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig UNIT 3 TEST NO. 2-Inlet METHOD PAGE 3 OF 4
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT METER VOLUME START/END / DATE 10/19/99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	Δ H @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/___
Stop				/___
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: in	METER: out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
6 A5	15 14	756.52	1.0	.9	274	240	263	84	84	59	6.5	5		Impingers Loaded
4	16.5	757.8	.9	.81	290	259								Impingers Recovered
3	19	759.1	.95	.86	289	260	270	84	83	54	6.1	6		Filter Loaded
2	21.5	760.35	.9	.81	278	263								Filter Recovered
1	24	761.64	.7	.63	279	263	273	84	83	54	5.8	6		Probe Wash
	26.5	762.19												
B 5	15 28	763.35	.7	.63	291	259	273	84	82	55	6.3	6		TEST AVERAGES/TOTALS
4	30.5	764.4	.8	.72	288	258								Calculated by:
3	33	765.5	.68	.61	274	257	273	84	82	55	5.9	6		Checked by:
2	35.5	766.7	.68	.61	276	260								Δ P, iwg
1	38	767.8	.58	.52	283	262	272	84	82	56	6.1	6		Δ H, iwg
	40.5	768.9												Sample vol, acf
C 5	41.5	769.55	.66	.59	280	262	270	84	82	56	6.5	6		Stack temp, F
4	44	770.5	.66	.59	288	263								Meter temp, F
3	46.5	771.55	.56	.5	306	254	272	84	81	57	5.9	6		Static press, iwg
2	49	772.6	.52	.47	302	257								Water collected, g
1	51.5	773.63	.46	.41	295	260	271	84	82	57	6.5	6		O_2, %
	54	774.63												Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Clay UNIT 3 TEST NO. 2-Inlet METHOD _____ PAGE 4 OF 4
SAMPLE LOCATION Inlet TEST CONDITION _____ AMBIENT TEMPERATURE _____
OPERATOR/ASSISTANT _____ METER VOLUME START/END _____ / _____ DATE 10/4/99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER in	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
WD 5	1556	775.15	.64	.58	265	261	270	84	82	58		6.5	6		Impingers Loaded
4	58.5	776.0	.7	.63	272	258									Impingers Recovered
3	16:01	777.27	.6	.54	284	257	271	84	82	58		6.2	6		Filter Loaded
2	03.5	778.26	.44	.4	297	259									Filter Recovered
1	06	779.2	.36	.32	275	261	271	84	82	59		6.5	6		Probe Wash
	08.5	780.95	.5	.45											
K 5	16 10	780.06	.5	.45	288	264	273	84	81	60		6.7	6		TEST AVERAGES/TOTALS
4	12.5	781.9	.54	.49	291	260									Calculated by:
3	15	782.42	.52	.47	300	259	272	84	82	59		6.1	6		Checked by:
2	17.5	783.4	.46	.41	294	260									ΔP, iwg
1	20	784.41	.48	.43	280	262	271	85	82	60		6.3	6		ΔH, iwg
	22.5	785.37													Sample vol, acf
F 5	1624	785.94	.7	.63	281	258	271	85	82	60		6.2	6		Stack temp, F
4	26.6	787.07	.74	.67	292	259									Meter temp, F
3	29	788.2	.66	.59	293	258	271	85	83	61		6.0	7		Static press, iwg
2	31.5	789.3	.62	.47	298	257									Water collected, g
1	34	790.38	.44	.4	289	260	271	85	82	62		6.3	7		O_2, %
	36.5	791.365													Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Coal Unit 3 UNIT 3 TEST NO. 3-Tbl-1Hg METHOD OH PAGE 1 OF 4
SAMPLE LOCATION Inlet TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT Paul Anderson / Jerry Boyer METER VOLUME START/END 794.53 / DATE 10/5/98

PRE-TEST DATA:	
Barometric Pressure, in.Hg	23.5
Assumed Stack Pressure, iwg	
Assumed Moisture, %	
Assumed Molecular Weight	
Assumed Stack Temperature	
Assumed Meter Temperature	
Average ΔP	
Stack diameter/area	
Sample time, min/point	
ΔH = _____ x ΔP	

EQUIPMENT INFO:	
Meter No.	
Meter Yd	
Δ H @	
Pitot ID, Cp	
O_2/CO_2 Method	
Teflon connecting line? (Y/N)	
Probe material	
Probe length	
Nozzle material	
Nozzle diameter, in.	
Filter No.	QT-38
Filter material	quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	745.2	-	623.2	=	122.0
2	KCl	591.1	-	580.8	=	10.3
3	KCl	667.7	-	667.4	=	0.3
4	H_2O_2/H_2O	650.8	-	648.6	=	2.4
5	$KMnO_4$	597.9	-	598.3	=	-0.4
6	$KMnO_4$	614.3	-	613.6	=	0.7
7	$KMnO_4$	651.0	-	652.6	=	-1.6
8	SG	811.6	-	787.8	=	23.8

Tare Imp -50 Total 107.5

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	0.0	18"	✓	RH
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: in	METER: out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
WF 5	0	794.53	.68	.61	257	214	270	44	43	41	7.1	5		Impingers Loaded AB
4	38.5	795.6	.76	.68	265	232								Impingers Recovered AB
3	41	796.75	.7	.63	257	239	269	46	43	42	6.3	5		Filter Loaded AB
2	43.5	797.9	.48	.43	268	244								Filter Recovered AB
1	46	798.68	.4	.36	240	247	269	45	43	42	6.4	3		Probe Wash PA/JB
	48.5	799.7												
R 5	49.5	800.02	.6	.54	248	253	270	45	44	42	6.7	4		
4	52	800.9	.56	.5	271	257								TEST AVERAGES/TOTALS
3	54.5	801.92	.5	.45	263	255	270	47	45	43	6.0	4		Calculated by: MM
2	57	803.88	.52	.47	263	251								Checked by: MM
1	58.5	803.85	.4	.36	250	251	270	48	45	44	6.3	3		ΔP, iwg .6581
	60.2	804.73												ΔH, iwg .60
D 5	803.5	805.85	.48	.42	244	253	271	48	46	44	6.4	4		Sample vol, acf 65.460
4	06	806.1	.56	.5	266	259								Stack temp, F 270.6
3	08.5	807.05	.52	.48	269	258	271	49	46	45	6.0	4		Meter temp, F 61.4
2	11	808.06	.46	.43	265	253								Static press, iwg -7.0 (from C/R)
1	13.5	808.95	.36	.32	257	253	271	50	47	46	6.0	4		Water collected, g 107.5
	16	809.83												O_2, % 6.36
														Sample time, min 150

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY _____ UNIT _____ TEST NO. _____ METHOD _____ PAGE 2 OF 4

SAMPLE LOCATION _____ TEST CONDITION _____ AMBIENT TEMPERATURE _____

OPERATOR/ASSISTANT _____ METER VOLUME START/END _____ / _____ DATE _____

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH@
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/_____
Stop				/_____
Avg/total				/_____

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F					IMP OUT	O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
					STACK	PROBE	FILTER	METER In	METER out					
WC 5	9:17.5	810.26	.6	.54	250	256	271	50	48	46	6.0	5		Impingers Loaded
4	20	811.25	.56	.52	274	262								Impingers Recovered
3	22.5	812.26	.56	.52	263	257	271	51	48	46	5.4	5		Filter Loaded
2	25	813.25	.62	.47	270	254								Filter Recovered
1	27.5	814.2	.44	.4	260	253	271	52	49	47	6.1	5		Probe Wash
	30	815.17												
BS	31.5	815.45	.64	.58	264	257	271	52	50	48	6.2	5		TEST AVERAGES/TOTALS
4	34	816.49	.9	.61	255	262								Calculated by:
3	36.5	817.67	.8	.72	261	258	270	54	51	50	5.8	6		Checked by:
2	39	818.9	.74	.67	257	256								Δ P, iwg
1	41.5	820.05	.58	.52	261	257	271	55	52	51	6.0	5		Δ H, iwg
	44	821.15												Sample vol, acf
A 5	45.5	821.55	1.0	.9	252	260	270	55	52	51	5.6	6		Stack temp, F
4	48	822.87	1.1	.99	266	254								Meter temp, F
3	50.5	824.18	1.0	.9	255	252	271	56	53	52	5.7	7		Static press, iwg
2	53	825.52	.9	.88	260	255								Water collected, g
1	55.5	826.74	.7	.63	257	254	271	57	54	53	5.6	7		O_2, %
	58	827.975												

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY _____ UNIT 3 TEST NO. 3 METHOD _____ PAGE 3 OF 4

SAMPLE LOCATION Inlet TEST CONDITION _____ AMBIENT TEMPERATURE _____

OPERATOR/ASSISTANT _____ METER VOLUME START/END _____ / _____ DATE 10/5/99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/_____
Stop				/_____
Avg/total				/_____

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg
E F 5	10:20	828.75	1.1	.94	271	244	264	65	62	53	6.3	8	
4	22.5	830.13	1.1	.99	286	260							
3	25	831.43	1.0	.9	280	259	269	67	63	54			
2	27.5	832.8	.94	.85	275	260					5.2	10	
1	30	834.05	.8	.72	276	264	271	64	65	58			
	32.5	835.32									6.1	9	
E 5	1034	835.8	.68	.61	267	264	272	70	66	58			
4	36.5	836.8	.9	.81	280	264					6.0	7	
3	39	838.1	.9	.81	299	254	271	71	67	54			
2	41.5	839.5	.8	.72	293	255					6.0	10	
1	44	840.54	.78	.7	289	255	270	72	68	58			
	46.5	841.77									5.7	10	
D 5	1048	842.31	.78	.7	270	259	270	73	64	57			
4	50.5	843.4	.84	.76	285	257					6.2	8	
3	53	844.6	.74	.67	298	254	270	75	71	56			
2	55.5	845.8	.62	.56	293	254					6.5	10	
1	58	846.85	.56	.5	263	255	268	76	72	56			
	1100.5	849.00											

CHAIN OF CUSTODY INFORMATION
Impingers Loaded
Impingers Recovered
Filter Loaded
Filter Recovered
Probe Wash
TEST AVERAGES/TOTALS
Calculated by:
Checked by:
Δ P, iwg
Δ H, iwg
Sample vol, acf
Stack temp, F
Meter temp, F
Static press, iwg

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY _____ UNIT 3 TEST NO. 3 METHOD _____ PAGE 4 OF 4

SAMPLE LOCATION Inlet TEST CONDITION _____ AMBIENT TEMPERATURE _____

OPERATOR/ASSISTANT _____ METER VOLUME START/END _____ / _____ DATE _____

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	ΔH @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No.
	Filter material

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1			-		=	
2			-		=	
3			-		=	
4			-		=	
5			-		=	
6			-		=	
7			-		=	
8			-		=	
				Total		

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test				
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: in	METER: out	IMP OUT	O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
C5	11:02	848.63	.66	.57	271	259	269	77	73	57	7.8	8		Impingers Loaded
4	04.5	849.65	.7	.63	291	260								Impingers Recovered
3	07	850.75	.6	.54	293	254	269	78	74	56	6.9	8		Filter Loaded
2	09.5	851.7	.5	.45	294	255								Filter Recovered
1	12	852.4	.46	.41	265	256	269	79	75	56	7.2	8		Probe Wash
	14.5	853.3												
B5	15:5	854.55	.55	[illegible]	281	262	269	80	76	56	7.4	8		
4	18	855.4	.52	.47	296	260								TEST AVERAGES/TOTALS
3	20.5	856.1	.5	.45	286	256	269	81	77	57	6.6	9		Calculated by:
2	23	857.1	.56	.5	278	258								Checked by:
1	25.5	858.1	.44	.4	261	261	269	82	78	57	7.4	8		ΔP, iwg
	28	859.5	[illegible]											ΔH, iwg
A5	11:30	859.95	.72	.65	287	261	269	83	79	58	6.5	9		Sample vol, acf
4	32.5	860.92	.76	.68	297	258								Stack temp, F
3	35	862.0	.7	.63	295	256	268	84	80	58	6.7	10		Meter temp, F
2	37.5	863.28	.6	.54	283	256								Static press, iwg
1	40	864.48	.38	.34	291	258	268	84	81	59	7.2	8		Water collected, g
	42.5	865.765												O_2, %
														Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Crag Unit 3 UNIT 3 TEST NO FB-Stack-Hg METHOD OH PAGE 1 OF 1

SAMPLE LOCATION Stack TEST CONDITION AMBIENT TEMPERATURE

OPERATOR/ASSISTANT DH/GW METER VOLUME START/END / DATE 10-2-99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No.
Assumed Stack Pressure, iwg	Meter Yd
Assumed Moisture, %	Δ H @
Assumed Molecular Weight	Pitot ID, Cp
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N)
Average ΔP	Probe material
Stack diameter/area	Probe length
Sample time, min/point	Nozzle material
ΔH = _____ x ΔP	Nozzle diameter, in.
	Filter No. 83VP-98
	Filter material quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	✓	-	619.0	=	
2	KCl	✓	-	610.7	=	
3	KCl	✓	-	679.2	=	
4	HNO_3/H_2O_2	✓	-	604.9	=	
5	$KMnO_4$	✓	-	202.9	=	
6	$KMnO_4$	✓	-	717.9	=	
7	$KMnO_4$	✓	-	570.0	=	
8	SG	✓	-	823.4	=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test		OK		
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	Δ H	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft^3	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
	730														Impingers Loaded ✓ JS
															Impingers Recovered ✓ JS
	1015														Filter Loaded ✓ JS
															Filter Recovered ✓ JS
															Probe Wash 10W
															TEST AVERAGES/TOTALS
															Calculated by:
															Checked by:
															Δ P, iwg
															Δ H, iwg
															Sample vol, acf
															Stack temp, F
															Meter temp, F
															Static press, iwg
															Water collected, g
															O_2, %
															Sample time, min

Field Blank

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 3 | UNIT 3 | TEST NO Stack-Hg | METHOD OH | PAGE 1 OF 1
SAMPLE LOCATION Stack | TEST CONDITION Full load | AMBIENT TEMPERATURE 50°
OPERATOR/ASSISTANT DW / GW | METER VOLUME START/END 479.020 / | DATE 10-4-99

PRE-TEST DATA:

Barometric Pressure, In.Hg	23.8
Assumed Stack Pressure, iwg	-1.4
Assumed Moisture, %	11.5
Assumed Molecular Weight	27
Assumed Stack Temperature	173
Assumed Meter Temperature	85
Average ΔP	1.1
Stack diameter/area	
Sample time, min/point	12/12
ΔH = .94 x ΔP	

EQUIPMENT INFO:

Meter No.	3.0005
Meter Yd	1.0006
ΔH @	1.749
Pitot ID, Cp	.841
O_2/CO_2 Method	Portable
Teflon connecting line? (Y/N)	Y
Probe material	glass
Probe length	9'
Nozzle material	glass
Nozzle diameter, in.	.188
Filter No.	83UP-99
Filter material	quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	755.5	-	607.4	=	148.1
2	KCl	634.1	-	598.0	=	36.1
3	KCl	577.7	-	569.1	=	8.6
4	HNO_3/H_2O_2	636.9	-	633.2	=	3.7
5	$KMnO_4$	694.2	-	694.0	=	0.2
6	$KMnO_4$	642.0	-	640.1	=	1.9
7	$KMnO_4$	702.0	-	701.2	=	0.8
8	SG	899.7	-	883.9	=	15.8
				-50	Total	165.2

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.008	10	ok	RW
Post-test	.008	10	ok	RW

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	Line	FILTER	METER In	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
W-3	920	479.020	1.1	1.0	174	258	267	267	86	77	55		8.5	10		Impingers Loaded 15
2	932	486.8	1.05	.99	175	260	278	260	92	78	52		8.5	10	-1.35	Impingers Recovered 15
1	944	494.7	.92	.86	174	264	275	257	93	79	54		8.5	10		Filter Loaded 13
Stop	956	501.530														Filter Recovered 13
N-3	1006	501.760	1.0	.94	174	265	270	265	92	79	55		8.4	9		Probe Wash DW
2	1018	508.915	.98	.92	175	266	268	268	95	81	53		8.4	9		
1	1030	516.335	.88	.82	176	264	273	261	95	83	54		8.3	8		TEST AVERAGES/TOTALS
Stop	1042	523.311	.8													Calculated by: MM
																Checked by: MM
E-3	1056	523.700	1.0	.94	179	268	258	263	90	80	58		8.5	5		ΔP, iwg .968 ✓
2	1110	530.9	1.1	1.0	179	263	275	257	95	81	57		8.5	8		ΔH, iwg .91 ✓
1	1122	538.6	.90	.84	179	263	275	257	96	82	56		8.5	8		Sample vol, acf 87.300 ✓
	1134	545.785														Stack temp, F 177.0 ✓
																Meter temp, F 86.9 ✓
S-3	1143	546.10	1.0	.94	175	260	273	259	90	82	57		8.3	6		Static press, iwg -1.35 ✓
2	1155	553.4	.90	.85	182	263	272	260	97	82	52		8.3	6		Water collected, g 165.2 ✓
1	1207	560.5	.81	.76	182	262	274	264	97	83	59		8.4	6		O_2, % 8.43 ✓
	1219	567.254														Sample time, min 144

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 3 | UNIT 3 | TEST NO. 2-Stack-10g | METHOD OH | PAGE 1 OF 1
SAMPLE LOCATION Stack | TEST CONDITION | AMBIENT TEMPERATURE
OPERATOR/ASSISTANT DW GW | METER VOLUME START/END / | DATE 10-24-99

PRE-TEST DATA:

Barometric Pressure, In.Hg	23.8
Assumed Stack Pressure, iwg	-1.4
Assumed Moisture, %	11.5
Assumed Molecular Weight	27
Assumed Stack Temperature	175
Assumed Meter Temperature	85
Average ΔP	1.0
Stack diameter/area	
Sample time, min/point	12/20
ΔH = _____ x ΔP	

EQUIPMENT INFO:

Meter No.	3-CVC5
Meter Yd	1.006
ΔH@	1.749
Pitot ID, Cp	ft. 4 - .84
O_2/CO_2 Method	Port. OZ
Teflon connecting line? (Y/N)	Y
Probe material	glass
Probe length	9'
Nozzle material	glass
Nozzle diameter, in.	.188
Filter No.	83UP-101
Filter material	quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	789.4	-	617.4	=	172
2	KCl	629.9	-	612.8	=	17.1
3	KCl	662.2	-	660.0	=	2.2
4	HNO_3/H_2O_2	642.9	-	641.2	=	1.7
5	$KMnO_4$	711.1	-	711.2	=	-0.1
6	$KMnO_4$	715.3	-	715.2	=	0.1
7	$KMnO_4$	617.1	-	616.9	=	0.2
8	SG	842.5	-	823.1	=	19.4
				-50	Total	162.8

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.008	12	ok	ok
Post-test	.008	12	ok	ok

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	Line	METER in	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
S-3	1335	570.500	1.1	1.0	187	263	268	262	90	82	55		8.2	5		Impingers Loaded 15
2	1347	577.9	.97	.91	186	262	267	270	100	84	55		8.1	5		Impingers Recovered
1	1359	585.3	.80	.75	185	263	269	263	99	85	47		8.2	5		Filter Loaded 15
	1411	592.150	.78													Filter Recovered
																Probe Wash
W-3	1421	592.425	1.1	1.0	183	256	251	264	92	65	47		8.2	5		
2	1433	600.0	1.05	.97	186	259	262	263	100	66	47		8.3	5	-1.4	TEST AVERAGES/TOTALS
1	1445	607.6	.93	.87	187	260	261	263	101	67	47		8.7	5		Calculated by: MM
	1457	614.757														Checked by: MM
																ΔP, iwg .9887
N-3	1510	615.000	1.15	1.05	187	257	263	271	96	86	48		8.3	5		ΔH, iwg .92
2	1522	622.7	1.1	1.0	188	261	262	271	101	88	47		8.2	5		Sample vol, acf 87,536
1	1534	630.3	.92	.86	187	262	263	260	101	87	48		8.3	5		Stack temp, F 186.1
	1546	637.472														Meter temp, F 92.0
E-3	1553	637.750	1.0	.94	185	258	262	259	95	87	47		8.3	5		Static press, iwg -1.4
2	1605	645.3	.95	.88	186	259	260	260	101	87	47		8.2	5		Water collected, g 162.8
1	1617	652.5	.83	.78	186	258	262	263	101	87	48		8.3	5		O_2, % 8.27
	1629	659.332														Sample time, min 144

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Crang Unit 3 UNIT 3 TEST NO. 3-Stack-1Hg METHOD OH PAGE 1 OF 1
SAMPLE LOCATION Stack TEST CONDITION AMBIENT TEMPERATURE
OPERATOR/ASSISTANT DW GW METER VOLUME START/END / DATE 10-5-95

PRE-TEST DATA:

Barometric Pressure, In.Hg	22.3
Assumed Stack Pressure, iwg	-1.4
Assumed Moisture, %	10.5
Assumed Molecular Weight	27
Assumed Stack Temperature	175
Assumed Meter Temperature	89
Average ΔP	.95
Stack diameter/area	
Sample time, min/point	12/20
ΔH = .94 x ΔP	12/60

EQUIPMENT INFO:

Meter No.	3-CUCS
Meter Yd	1.006
ΔH @	1.764
Pitot ID, Cp	#4 .84
O_2/CO_2 Method	Port. O2
Teflon connecting line? (Y/N)	Y
Probe material	SS
Probe length	9'
Nozzle material	SS
Nozzle diameter, in.	.188
Filter No.	83VR-102
Filter material	Quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	747.0	-	600.5	=	146.5
2	KCl	620.3	-	583.5	=	36.8
3	KCl	575.6	-	570.2	=	5.4
4	H_2O_2 H_2O	625.0	-	620.8	=	4.2
5	$KMnO_4$	713.2	-	713.2	=	0
6	$KMnO_4$	654.4	-	653.0	=	1.4
7	$KMnO_4$	708.6	-	709.9	=	-1.3
8	SG	889.0	-	871.7	=	17.3
		Line rinse -.50			Total	160.3

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.005	10	OK	22.0
Post-test	.005	0	OK	0

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft³	ΔP iwg	ΔH iwg	TEMPERATURES, F STACK	PROBE	FILTER (Line)		METER in	METER out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
N 3	830	660.115	1.0	.94	173	258	257	258	84	78	1CC		7.9	7		Impingers Loaded 3
2	842	667.5	.95	.90	174	258	262	261	97	80	55		7.9	7		Impingers Recovered AB
1	854	674.8	.77	.72	174	260			97	83	55		7.9	7		Filter Loaded 3
	906	681.317														Filter Recovered AB
W 3	913	681.600	1.05	.99	174	265	265	270	92	82	54		7.9	7		Probe Wash DW/GW
2	925	689.2	1.1	1.0	175	254	259	257	97	83	54		7.9	7		
1	937	696.8	.95	.90	175	255	262	264	97	83	53		7.9	7		
	949	704.200														TEST AVERAGES/TOTALS
																Calculated by: MM
S 3	1000	704.427	1.1	1.0	175	256	262	256	92	83	57		7.9	7		Checked by: MM
2	1012	712.0	.98	.92	175	259	263	262	97	87	52		8.0	7		ΔP, iwg .9597
1	1024	719.4	.85	.80	175	260	258	263	97	87	52		8.9	7		ΔH, iwg .90
	1036	726.150														Sample vol, acf 87.004
																Stack temp, F 174.7
E 3	1044	726.440	1.0	.94	175	262	259	263	91	83	53		8.2	7		Meter temp, F 88.3
2	1056	733.8	1.0	.94	176	263	259	260	96	87	57		8.3	7		Static press, iwg -1.4
1	1106	741.3	.80	.75	175	263	259	261	96	87	51		8.9	7		Water collected, g 160.3
	1120	747.919														O_2, % 8.03
																Sample time, min 144

FOSSIL ENERGY RESEARCH CORP.

SAMPLING POINT LOCATION DATA
EPA Method 1

Plant Craig Data by Anderson/Bovee

Date 10-2-99 Test Location Unit 3 Inlet

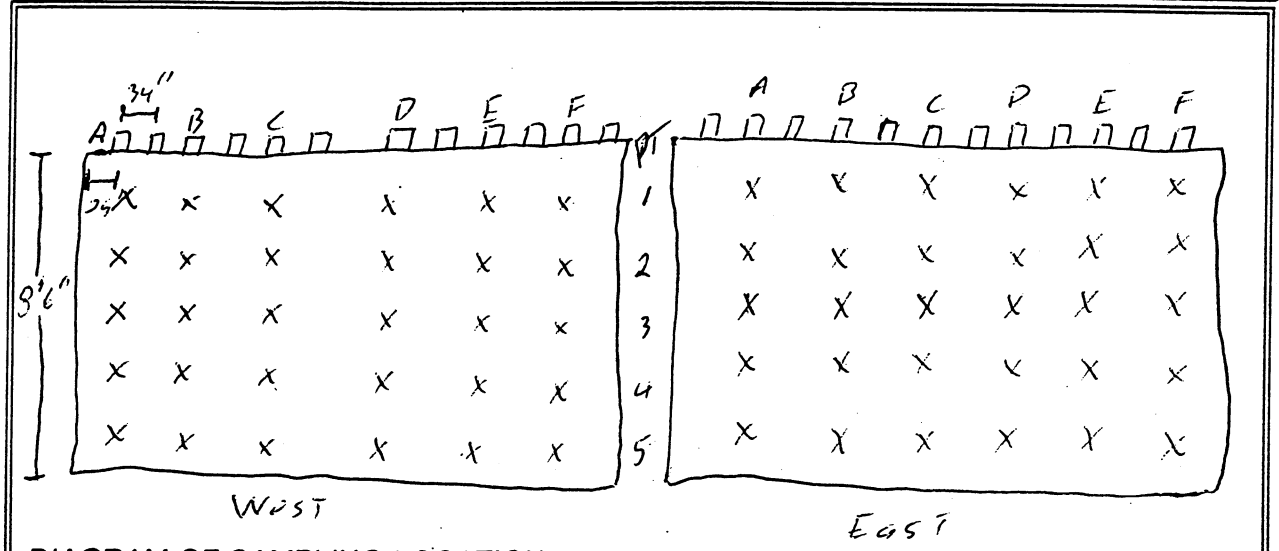


DIAGRAM OF SAMPLING LOCATION

Upstream Dist./Dia._____

Downstream Dist./Dia_____

Coupling Length 18"

No. of Sampling Pts. 60

Stack Dimension 8'6" x

Stack Are, ft²_____

*Inches from wall plus coupling length

Sample Point	% of Diameter	In. from Near Wall	In. from Nozzle*
1	10	10.2	28.2
2	30	30.6	48.6
3	50	51.0	69.0
4	70	71.4	89.4
5	90	91.8	109.8

FERCo-SPLD11/92

Fossil Energy Research Corp.
Preliminary Velocity Traverse and Cyclonic Flow Check Data Sheet

Test No. Pre 1 - Inlet
Client/Unit Craig #3
Location West Inlet

Date 10-4-11
Data by JJ
Start time
Stop time

Barometric pressure
Static pressure, iwg

pre Test 1- Inlet

Port	Point	ΔP	Temp	Yaw Angle
A	5	.85	256	0°
	4	.87	246	0°
	3	.85	243	0°
	2	.70	240	2°
	1	.41	263	0°
B	5	.78	256	5°
	4	.63	257	0°
	3	.50	266	5°
	2	.150	252	0°
	1	.30	259	0°
C	5	.60	255	0°
	4	.53	272	0°
	3	.43	250	0°
	2	.33	250	0°
	1	.23	260	0°
D	5	.37	235	0
	4	.36	250	0
	3	.44	255	0
	2	.30	263	0
	1	.17	246	0

Port	Point	ΔP	Temp	Yaw Angle
E	5	.130	248	0
	4	.141	268	5
	3	.13	265	0
	2	.135	241	0
	1	.128	251	0
F	5	.155	250	0
	4	.155	260	0
	3	.147	256	0
	2	.131	247	0
	1	.132	256	0

Leak check: Pre-test OK
Post-test

Manometer zero: Pre-test OK
Post-test

Notes/Comments

Fossil Energy Research Corp.
Preliminary Velocity Traverse and Cyclonic Flow Check Data Sheet

Test No. Post 3-Hg
Client/Unit Craig 3
Location UNIT 3 INLET EAST DUCT.

Date 10/5/99
Data by PH/GB
Start time
Stop time

Barometric pressure
Static pressure, iwg

Port	Point	ΔP	Temp	Yaw Angle
A	5			0
	4			0
	3			0
	2			0
	1			0
B	5			0
	4			0
	3			5
	2			0
	1			0
C	5			0
	4			0
	3			0
	2			0
	1			0
D	5			0
	4			0
	3			5
	2			0
	1			0

Port	Point	ΔP	Temp	Yaw Angle
E	5			5
	4			5
	3			5
	2			5
	1			0
F	5			0
	4			0
	3			0
	2			0
	1			0

Leak check: Pre-test 0
Post-test 0

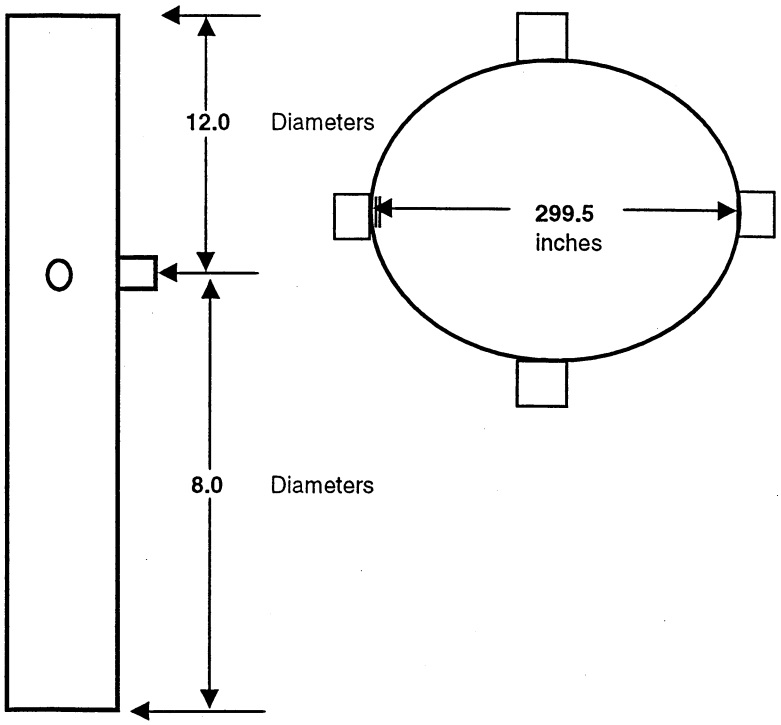
Manometer zero: Pre-test 0
Post-test 0

Notes/Comments

FOSSIL ENERGY RESEARCH CORP.
METHOD 1 DATA SHEET
Craig 3 12-Point Traverse

Client: Tri-State Date: 09/21/1999

Sample Location: Craig 3 Stack Prepared By: Mark McDannel



Diameter (in.)	299.50
Upstream (Ft.)	200
Down Stream (Ft.)	300
Coupling (in.)	18
Stack Area (ft^2)	489.24

Point No.	% Dia.	Distances A	Distances B
1	4.4	13.05	31.05
2	14.6	43.86	61.86
3	29.6	88.61	106.61
4	70.4	210.89	228.89
5	85.4	255.64	273.64
6	95.6	286.45	304.45

Notes on distances:
A = distance from inside stack wall to traverse point.
B = distance from outside of sample port to probe tip.

Fossil Energy Research Corp.
Preliminary Velocity Traverse and Cyclonic Flow Check Data Sheet

Test No. Prelim Vel
Client/Unit Jus debris Cross 3
Location stack

Date ~~10-4-99~~ 10-5-99
Data by [illegible]
Start time 830
Stop time 920

Barometric pressure
Static pressure, iwg -1.3

Port	Point	ΔP	Temp	Yaw Angle
4	3	1.1	174	<5°
	2	.95	173	<5°
	1	.88	173	<5°
5	3	.95	173	<5°
	2	.95	174	<5°
	1	.90	173	<5°
E3		1.1	173	<5°
2		1.0	174	<5°
1		.88	174	<5°
N3		1.1	175	<5°
2		1.0	175	<5°
1		.76	174	<5°

Port	Point	ΔP	Temp	Yaw Angle

Leak check: Pre-test ok
Post-test ok

Manometer zero: Pre-test ok
Post-test ok

Notes/Comments

Portable Oxygen Meter Calibration Summary							
Unit	**Craig 3**	**Range, %**	**25**				
Zero Bottle #	**ALM12499**	**O_2 Bottle #**	**10.54**	**O_2 Value, %**	**SA20651**		
Date	*Location*	*Pre Test No.*	*Post Test No.*	*Reading*	*Diff, % O_2*	*Diff, % scale*	*Pass?*
04-Oct	Inlet	1		0.0	0.0	0.0	Y
04-Oct	Inlet	1		10.7	0.2	0.6	Y
04-Oct	Inlet		2	0.1	0.1	0.4	Y
04-Oct	Inlet		2	10.6	0.1	0.2	Y
04-Oct	Stack	1		0.1	0.1	0.4	Y
04-Oct	Stack	1		10.6	0.1	0.2	Y
04-Oct	Stack		2	0.1	0.1	0.4	Y
04-Oct	Stack		2	10.6	0.1	0.2	Y
05-Oct	Inlet	3		0.1	0.1	0.4	Y
05-Oct	Inlet	3		10.6	0.1	0.2	Y
05-Oct	Inlet		3	0.0	0.0	0.0	Y
05-Oct	Inlet		3	10.6	0.1	0.2	Y
05-Oct	Stack	3		0.1	0.1	0.4	Y
05-Oct	Stack	3		10.6	0.1	0.2	Y
05-Oct	Stack		3	0.0	0.0	0.0	Y
05-Oct	Stack		3	10.7	0.2	0.6	Y

Instructions:

10/4/99

1. Perform at the beginning and end of each test day.
2. Calibrate instrument on air.
3. Introduce mid range and zero cal gases. Read on lowest instrument scale possible
4. Linearity specification in ±2% of scale (±0.1% O_2 on 0-55 scale, ±0.2% on a 0-10% scale, and ±0.5% on 0-25% scale).

Mid range cal gas value _____ Bottle # _____

Zero Bottle # _____

Analyzer ID Inlet

Pre-Test No. _____ Data by MDM Date 10/4/99

Post-Test No. _____

Inlet Pre1 Hg

Craig 3

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?
0	0.0			
10.54	10.7			

Analyzer ID _____

Pre-Test No. _____ Data by DW Date 10/4/99

Post-Test No. _____

Craig 3 Inlet

Post 2-Hg

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?
	.1			
	10.6			

Analyzer ID _____

Pre-Test No. _____ Data by _____ Date _____

Post-Test No. _____

Gas Value	Reading	Difference % O_2	Difference % of Scale	Pass?

Portable Analyzer Linearity Check

Instructions:

1. Perform at the beginning and end of each test day.
2. Calibrate instrument on air.
3. Introduce mid range and zero cal gases. Read on lowest instrument scale possible
4. Linearity specification in ±2% of scale (±0.1% O_2 on 0-55 scale, ±0.2% on a 0-10% scale, and ±0.5% on 0-25% scale).

Mid range cal gas value _____ Bottle # _____

Zero Bottle # _____

Analyzer ID _____

Pre-Test No. _____ Data by DW Date 10/4/99

Post-Test No. _____

Craig 3 Stack

Pre 1-Hg

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
_____	.1	_____	_____	_____
_____	10.6	_____	_____	_____

Analyzer ID _____

Pre-Test No. _____ Data by DW Date _____

Post-Test No. _____

Craig 3 Stack

Post 2-Hg

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
_____	.1	_____	_____	_____
_____	10.6	_____	_____	_____

Analyzer ID _____

Pre-Test No. _____ Data by _____ Date _____

Post-Test No. _____

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Portable Analyzer Linearity Check

Inlet 10/5/99

Instructions:

1. Perform at the beginning and end of each test day.
2. Calibrate instrument on air.
3. Introduce mid range and zero cal gases. Read on lowest instrument scale possible
4. Linearity specification in ±2% of scale (±0.1% O_2 on 0-55 scale, ±0.2% on a 0-10% scale, and ±0.5% on 0-25% scale).

Mid range cal gas value _____ Bottle # _____

Zero Bottle # _____

Analyzer ID _____

Pre-Test No. _____ Data by DW Date 10/5

Post-Test No. _____

Pre 3-Hg-Inlet

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
0	0.1	0.1		
10.54	10.6			

Analyzer ID _____

Pre-Test No. _____ Data by MDM Date 10/5

Post-Test No. _____

Post 3-Hg-In

Post 1-PM10

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
	0.0			
	10.6			

Analyzer ID _____

Pre-Test No. _____ Data by _____ Date _____

Post-Test No. _____

Gas Value	Reading	Difference % O_2	% of Scale	Pass?

Portable Analyzer Linearity Check

Stack 10/5/94

Instructions:

1. Perform at the beginning and end of each test day.
2. Calibrate instrument on air.
3. Introduce mid range and zero cal gases. Read on lowest instrument scale possible
4. Linearity specification in ±2% of scale (±0.1% O_2 on 0-55 scale, ±0.2% on a 0-10% scale, and ±0.5% on 0-25% scale).

Mid range cal gas value _____ Bottle # _____

Zero Bottle # _____

Analyzer ID _____

Pre-Test No. _____ Data by DW Date 10/5

Post-Test No. _____

pre 3-Hg-Stack

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
0	0.1			
10.59	10.6			

Analyzer ID _____

Pre-Test No. _____ Data by MPM Date 10/5

Post-Test No. _____

Post 3-Hg-Stack

Gas Value	Reading	Difference % O_2	% of Scale	Pass?
	0.0			
	10.7			

Analyzer ID _____

Pre-Test No. _____ Data by _____ Date _____

Post-Test No. _____

Gas Value	Reading	Difference % O_2	% of Scale	Pass?

Portable Analyzer Linearity Check

PRAXAIR
Praxair
5700 South Alameda Street
Los Angeles, CA 90058
Telephone: (213) 585-2154
Facsimile: (714) 542-6689

CERTIFICATE OF ANALYSIS / EPA PROTOCOL GAS

CUSTOMER DELTA AIR P.O NUMBER

REFERENCE STANDARD

COMPONENT	NIST SRM NO.	CYLINDER NO.	CONCENTRATION
CARBON DIOXIDE GMIS	vs 1674b	52693	10.02 %
OXYGEN GMIS	vs. 2658a	SA 9818	10.02%

ANALYZER READINGS

R=REFERENCE STANDARD *Z=ZERO GAS* *C=GAS CANDIDATE*

1. COMPONENT CARBON DIOXIDE GMIS ANALYZER MAKE-MODEL-S/N Siemens Ultramat 5E S/N A12-730
   ANALYTICAL PRINCIPLE NDIR LAST CALIBRATION DATE 05/15/98
   FIRST ANALYSIS DATE 06/01/98 SECOND ANALYSIS DATE

Z 0.00	R 10.00	C 10.10	CONC. 10.12	Z	R	C	CONC.
R 10.02	Z 0.00	C 10.12	CONC. 10.12	R	Z	C	CONC.
Z 0.00	C 10.12	R 10.02	CONC. 10.12	Z	C	R	CONC.

U/M % MEAN TEST ASSAY 10.12 % U/M % MEAN TEST ASSAY

2. COMPONENT OXYGEN GMIS ANALYZER MAKE-MODEL-S/N Siemens Oxymat 5E S/N A12-839
   ANALYTICAL PRINCIPLE Paramagnetic LAST CALIBRATION DATE 05/15/98
   FIRST ANALYSIS DATE 06/01/98 SECOND ANALYSIS DATE

Z 0.00	R 10.02	C 10.54	CONC. 10.54	Z	R	C	CONC.
R 10.02	Z 0.00	C 10.54	CONC. 10.54	R	Z	C	CONC.
Z 0.00	C 10.54	R 10.02	CONC. 10.54	Z	C	R	CONC.

U/M % MEAN TEST ASSAY 10.54 % U/M % MEAN TEST ASSAY

Values not valid below 150 psig

THIS CYLINDER NO. SA 20651
HAS BEEN CERTIFIED ACCORDING TO SECTION EPA-600/R97/121
OF TRACEABILITY PROTOCOL NO. Rev. 9/97
PROCEDURE G1
CERTIFIED ACCURACY ± 1 % NIST TRACEABLE
CYLINDER PRESSURE 2000 PSIG
CERTIFICATION DATE 06/01/98
EXPIRATION DATE 06/01/01 TERM 36 MONTHS

CERTIFIED CONCENTRATION

CARBON DIOXIDE	10.12 %
OXYGEN	10.54 %
NITROGEN	BALANCE

SA 20651

ANALYZED BY JOSEPH CHARLES

CERTIFIED BY KWAN YOUNG

DELTA AIR QUALITY SERVICES, INC.

EPA Method 5
522 Series Meter Box Calibration
Post-Test Orifice Method
English Meter Box Units, English K' Factor

Filename: C:\APEX\[3-wcs-shrt-11-8-99.xls]522ORPO3
Revised: 7/25/95 Version: 2.2

CONVERSION FACTORS

1 mm Hg =	0.13330	kPa
1 cm =	0.39370	inch
1 mm =	0.03937	inch
1 cu ft =	28.32	liters

PROJECT: Epri Hg
Model #: apex
Serial #: 3-wcs

Date: ----------> November 8-9
Barometric Pressure: ----------> 29.92 (in. Hg)
Theoretical Critical Vacuum:---> 14.11 (in. Hg)

!!!!!!!!
IMPORTAN For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTAN The Critical Orifice Coefficient, K', must be entered in English units, (ft)^3*(deg R)^0.5/((in.Hg)*(min)).
!!!!!!!!

---------- DRY GAS METER READINGS ---------- -CRITICAL ORIFICE READINGS-

dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Actual Vacuum (in Hg)	-- Ambient Temperature -- Initial (deg F)	Final (deg F)	Average (deg F)
1.15	10.00	932.000	938.161	6.161	80.0	69.0	80.0	70.0	55	0.459	18.0	69.0	69.0	69.0
1.15	10.00	938.300	944.470	6.170	80.0	70.0	83.0	71.0	55	0.459	18.0	69.0	69.0	69.0
1.15	10.00	944.600	950.789	6.189	84.0	71.0	87.0	72.0	55	0.459	18.0	69.0	70.0	69.5

-- Average Temperatures --

DGM Outlet (deg R)	DGM Overall (deg R)	Ambient Temp (deg R)
529.5	534.8	529.0
530.5	536.0	529.0
531.5	538.5	529.5

********** RESULTS **********

--- DRY GAS METER --- -------- ORIFICE --------

VOLUME ORRECTE Vm(std) (cu ft)	VOLUME RRECTED Vm(std) (liters)	VOLUME CORRECTE Vcr(std) (cu ft)	VOLUME ORRECTE Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)
6.098	172.7	5.971	169.1	5.985
6.093	172.5	5.971	169.1	5.985
6.083	172.3	5.968	169.0	5.988
		Average Y ------->		

-- DRY GAS METER -- -------- ORIFICE --------

CALIBRATION FACTOR Y Value (number)	Variation (number)	CALIBRATION FACTOR dH@ Value (in H2O)	Value (mm H2O)	Variation (in H2O)	
0.979	-0.001	1.809	45.95	0.003	
0.980	0.000	1.806	45.87	-0.001	
0.981	0.001	1.804	45.82	-0.002	
0.980		1.806	45.88	<-------- Average dH@	
		CFM @ dH=1	0.558		

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

EPA Method 5
Meter Box Calibration
Pre/Post-Test Orifice Method

System I.D.: 3-WCS
Meter Serial #: ADEX

Date: 3/23/99
Barometric Pressure: 24.80 (in Hg)

DRY GAS METER READINGS											CRITICAL ORIFICE READINGS				
dH (in H2O)	Start Time hh:mm:ss	Stop Time hh:mm:ss	Elapsed Time mm.mm	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient	Actual Vacuum (in Hg)	Ambient Temperature Initial (deg F)	Ambient Temperature Final (deg F)
0.25	16			936.8	941.833	5.033	74	72	73	72	40	.239	21	60	60
0.54	25			925.1	936.44	11.34	72	70	74	72	48	.347	21	60	60
0.96	9			942.3	947.752	5.452	73	72	75	72	55	.459	17	60	60
1.6	10			948.2	955.986	7.786	76	72	78	72	63	.569	18	61	61
2.9	10			957.1	967.815	10.715	78	73	85	74	73	.820	15	61	61

RESULTS

DRY GAS METER VOLUME CORRECTED Vm(std) (cu ft)		ORIFICE VOLUME CORRECTED Vcr(std) (cu ft)		ORIFICE VOLUME NOMINAL Vcr (cu ft)		DRY GAS METER CALIBRATION FACTOR Y Value (number)	DRY GAS METER CALIBRATION FACTOR Variation (number)		ORIFICE CALIBRATION FACTOR dH@ Value (in H2O)		ORIFICE CALIBRATION FACTOR Variation (in H2O)	
4.136		4.159		4.943		1.000	0		1.712		-.037	
9.340		9.435		11.214		1.010	.004		1.758		.009	
4.488		4.493		5.340		1.001	-.005		1.783		.033	
6.403		6.400		7.621		0.999	-.006		1.808		.059	
8.796		8.909		10.610		1.013	.007		1.686		-.063	
			Average Y →	1.006					1.749		← Average dH@	

SIGNED: Stafford Dean for Bob Davis

Date: ~~4/21~~ 3/23/99

DGM Orifice Calibration Log Sheet

EPA Method 5
Meter Box Calibration
Pre/Post-Test Orifice Method

System ID.: 3-WCS
Meter Serial #:

Date: 7-16-99
Barometric Pressure: 29.90 (in. Hg)

DRY GAS METER READINGS											CRITICAL ORIFICE READINGS				
dH (in H2O)	Start Time hh:mm:ss	Stop Time hh:mm:ss	Elapsed Time mm.mm	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	'K' Orifice Coefficient	Actual Vacuum (in Hg)	Ambient Temperature Initial (deg F)	Ambient Temperature Final (deg F)
2.00	stop watch		8 00	103.602	109.840	6.238	78.0	73.0	81	74	63	0.589	19.	73	74
2.00			8 00	109.840	116.071	6.231	78.0	74.0	82	74	63	0.589	19	73	73
2.00	↓	↓	8 00	116.071	122.315	6.244	79.0	75.0	83	75	63	0.589	19	72	72.5

RESULTS

DRY GAS METER VOLUME CORRECTED Vm(std) (cu ft)		ORIFICE VOLUME CORRECTED Vcr(std) (cu ft)		ORIFICE VOLUME NOMINAL Vcr (cu ft)		DRY GAS METER CALIBRATION FACTOR Y Value (number)	DRY GAS METER CALIBRATION FACTOR Y Variation (number)		ORIFICE CALIBRATION FACTOR dH@ Value (in H2O)		ORIFICE CALIBRATION FACTOR Variation (in H2O)	
6.163		6.097		6.173		0.989	-0.002		1.916		0.005	
6.150		6.103		6.167		0.992	0.001		1.910		0.000	
6.152		6.105		6.164		0.993	0.001		1.905		-0.005	

Average Y ⟶ 0.991

1.91 ⟵ Average dH@

SIGNED:

Date: 7-16-99

DGM Orifice Calibration Log Sheet

EPA Method 5
Meter Box Calibration
Pre/Post-Test Orifice Method

System I.D.: 3-WCS
Meter Serial#: Apex

Date: 8/4/99
Barometric Pressure: 29.74 (in. Hg)

DRY GAS METER READINGS											CRITICAL ORIFICE READINGS				
dH (in H2O)	Start Time hh:mm:ss	Stop Time hh:mm:ss	Elapsed Time mm.mm	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient	Actual Vacuum (in Hg)	Ambient Temperature Initial (deg F)	Ambient Temperature Final (deg F)
1.2	0	10	10	48.773	54.810	6.037	80	77	82	78	55	.459	21	81	81
1.2		20	10	54.810	61.040	6.230	82	78	84	79				81	82
1.2		30	10	61.040	67.183	6.143	84	79	86	81				82	82

RESULTS

DRY GAS METER VOLUME CORRECTED Vm(std) (cu ft)		ORIFICE VOLUME CORRECTED Vcr(std) (cu ft)		ORIFICE VOLUME NOMINAL Vcr (cu ft)		DRY GAS METER CALIBRATION FACTOR Y Value (number)	DRY GAS METER CALIBRATION FACTOR Variation (number)		ORIFICE CALIBRATION FACTOR dH@ Value (in H2O)		ORIFICE CALIBRATION FACTOR Variation (in H2O)	
5.891		5.869		6.052		0.996	.014		1.913		0.002	
6.062		5.866		6.055		0.968	-.015		1.912		.001	
5.958		5.863		6.058		0.984	.001		1.908		-.003	
									1.911			
		Average Y →				0.983			0.543		← Average dH@	

SIGNED: [signature]
Date: 8/4/99

DGM Orifice Calibration Log Sheet

EPA Method 5
Meter Box Calibration
Pre/Post-Test Orifice Method

System I.D.: 3-WCS
Meter Serial #: APEX

Date: 10-11-99
Barometric Pressure: 29.92 (in. Hg)

DRY GAS METER READINGS											CRITICAL ORIFICE READINGS				
dH (in H2O)	Start Time hh:mm:ss	Stop Time hh:mm:ss	Elapsed Time mm.mm	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Initial Temps. Inlet (deg F)	Initial Temps. Outlet (deg F)	Final Temps. Inlet (deg F)	Final Temps. Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient	Actual Vacuum (in Hg)	Ambient Temperature Initial (deg F)	Ambient Temperature Final (deg F)
0.32	0947	1003	16:00	971.53	976.739	5.209	77	73	76	74	40	0.239	21	60	60
0.62	1006	1017	11:00	977.0	982.133	5.133	72	72	73	72	48	0.347	21	60	60
1.20	1019	1028	9:00	982.290	987.87	5.580	72	72	73	72	55	0.459	17	60	60
1.90	1030	1037	7:00	988.3	993.846	5.546	73	72	76	73	63	0.589	18	61	61
3.00	1039	1044	5:00	994.8	1000.265	5.465	76	73	73	73	73	0.820	15	61	61

RESULTS

DRY GAS METER VOLUME CORRECTED Vm(std) (cu ft)					ORIFICE VOLUME CORRECTED Vcr(std) (cu ft)		ORIFICE VOLUME NOMINAL Vcr (cu ft)		DRY GAS METER CALIBRATION FACTOR Y Value (number)	DRY GAS METER CALIBRATION FACTOR Variation (number)		ORIFICE CALIBRATION FACTOR dH@ Value (in H2O)		ORIFICE CALIBRATION FACTOR Variation (in H2O)	
5.143					5.017		4.943		0.976	-0.005		1.812		0.101	
5.098					5.008		4.934		0.982	0.002		1.670		-0.041	
5.550					5.420		5.340		0.977	-0.004		1.847		0.136	
5.512					5.405		5.335		0.980	0.000		1.778		0.067	
5.444					5.374		5.305		0.987	0.007		1.447		-0.264	

Average Y ⟶ 0.980

1.711 ⟵ Average dH@

SIGNED: Teresa Redregon

Date: 10-11-99

DGM Orifice Calibration Log Sheet

TEMPERATURE SYSTEM CALIBRATION

T_1 Reference Thermometer I.D.: F95-185
T_1 Reference Thermometer I.D.: F95-195
T_1 Reference Thermometer I.D.: F95-195

T/C I.D. #2	Readout I.D.	T/C - Readout °F				Reference Thermometer °F				Difference	
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)
T_1	3-WCS	32	32	32	32	32	32	32	32	0	0.0%
T_2	3-WCS	213	213	212	213	212	212	212	212	1	0.1%
T_3	3-WCS	385	387	386	386	390	390	390	390	-4	-0.5%
T_1	6-WCS	33	32	33	33	32	32	32	32	1	0.1%
T_2	6-WCS	214	214	213	214	212	212	212	212	2	0.2%
T_3	6-WCS	387	387	387	387	390	390	390	390	-3	-0.4%
T_1	CC-1	33	33	33	33	32	32	32	32	1	0.2%
T_2	CC-1	216	215	215	215	212	212	212	212	3	0.5%
T_3	CC-1	387	388	387	387	390	390	390	390	-3	-0.3%
T_1	2-WCS	33	33	33	33	32	32	32	32	1	0.2%
T_2	2-WCS	214	214	214	214	212	212	212	212	2	0.3%
T_3	2-WCS	385	384	386	385	390	390	390	390	-5	-0.6%
T_1	5-WCS	33	33	33	33	32	32	32	32	1	0.2%
T_2	5-WCS	213	213	213	213	212	212	212	212	1	0.1%
T_3	5-WCS	382	383	383	383	390	390	390	390	-7	-0.9%
T_1	8-WCS	35	34	34	34	32	32	32	32	2	0.5%
T_2	8-WCS	217	216	216	216	212	212	212	212	4	0.6%
T_3	8-WCS	388	388	387	388	390	390	390	390	-2	-0.3%
T_1	PTC-6	33	32	32	32	32	32	32	32	0	0.1%
T_2	PTC-6	212	212	212	212	212	212	212	212	0	0.0%
T_3	PTC-6	380	381	381	381	390	390	390	390	-9	-1.1%
T_1	PTC-2	35	35	35	35	32	32	32	32	3	0.6%
T_2	PTC-2	213	213	213	213	212	212	212	212	1	0.1%
T_3	PTC-2	384	384	384	384	390	390	390	390	-6	-0.7%
T_1	PTC-1	33	33	33	33	32	32	32	32	1	0.2%
T_2	PTC-1	214	213	214	214	212	212	212	212	2	0.2%
T_3	PTC-1	386	387	387	387	390	390	390	390	-3	-0.4%
T_1	7-WCS	33	33	33	33	32	32	32	32	1	0.2%
T_2	7-WCS	212	212	212	212	212	212	212	212	0	0.0%
T_3	7-WCS	388	388	389	388	390	390	390	390	-2	-0.2%

Notes: Performed on 4-27-99 by D. Wonderly, M. McCune, and L. Pedregon

APEX INSTRUMENTS
EPA Method 5
522 Series Meter Box Calibration
Pre-Test Orifice Method
English Meter Box Units, English K' Factor

Filename: C:\meter cal\Apex\[FERCO BOX 7 -99.xls]scenorth
Revised: 7/25/95 Version: 2.2

Model #: FERCO BOX
Serial #: 1-FERCO

Date: ----------> 07/19/99
Barometric Pressure: ----------> 29.95 (in. Hg)
Theoretical Critical Vacuum:---> 14.13 (in. Hg)

!!!!!!!!
IMPORTAN For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTAN The Critical Orifice Coefficient, K', must be entered in English units, (ft)^3*(deg R)^0.5/((in.Hg)*(min)).
!!!!!!!!

---------- DRY GAS METER READINGS ----------									-CRITICAL ORIFICE READINGS-					
					Initial Temps.		Final Temps.				Actual -- Ambient Temperature --			
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
0.32	17.00	660.110	665.510	5.400	89.0	86.0	89.0	86.0	40	0.239	19.0	88.0	89.0	88.5
0.71	11.00	665.510	670.552	5.042	88.0	87.0	90.0	87.0	48	0.347	19.0	90.0	90.0	90.0
1.30	11.00	653.403	660.110	6.707	86.0	87.0	89.0	86.0	55	0.459	17.0	85.0	87.0	86.0
2.15	8.00	670.552	676.750	6.198	90.0	87.0	94.0	88.0	63	0.589	15.0	91.0	90.0	90.5
4.20	6.00	647.000	653.403	6.403	86.0	85.0	85.0	87.0	73	0.820	17.0	84.0	84.0	84.0

********** RESULTS **********

--- DRY GAS METER ---

VOLUME ORRECTE Vm(std) (cu ft)	VOLUME RRECTED Vm(std) (liters)
5.215	147.7
4.869	137.9
6.499	184.0
5.988	169.6
6.262	177.4

-------- ORIFICE --------

VOLUME CORRECTE Vcr(std) (cu ft)	VOLUME ORRECTE Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)
5.196	147.1	5.394
4.875	138.0	5.075
6.472	183.3	6.688
6.015	170.3	6.267
6.318	178.9	6.505

Average Y ------->

-- DRY GAS METER --

CALIBRATION FACTOR Y

Value (number)	Variation (number)
0.996	-0.005
1.001	0.000
0.996	-0.005
1.005	0.003
1.009	0.008
1.001	

-------- ORIFICE --------

CALIBRATION FACTOR dH@

Value (in H2O)	Value (mm H2O)	Variation (in H2O)
1.865	47.38	-0.135
1.965	49.91	-0.035
2.043	51.90	0.043
2.065	52.46	0.065
2.063	52.39	0.062
2.000	50.81	<------- Average dH@
d	0.530	

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

For Orifice Calibration Factor dH@, the orifice differential pressure in inches of H20 that equates to 0.75 cfm of air at 68 F and 29.92 inches of Hg, acceptable tolerance of individual values from the average is +-0.2.

SIGNED: _____ Date: 7-19-99

Post test Meter Cal
For Ferco Meter

APEX INSTRUMENTS
EPA Method 5
522 Series Meter Box Calibration
Pre-Test Orifice Method
English Meter Box Units, English K' Factor

Filename: C:\My Documents\[posthgferco.xls]scenario
Revised: 7/25/95 Version: 2.2

Model #:
Serial #:

Date: ——————> 10-29-99
Barometric Pressure: ——> 29.90 (in. Hg)
Theoretical Critical Vacuum:—> 14.10 (in. Hg)

!!!!!!!
IMPORTAN For valid test results, the Actual Vacuum should be 1 to 2 in. Hg greater than the Theoretical Critical Vacuum shown above.
IMPORTAN The Critical Orifice Coefficient, K', must be entered in English units, (ft)^3*(deg R)^0.5/((in.Hg)*(min)).
!!!!!!!

DRY GAS METER READINGS									CRITICAL ORIFICE READINGS					
					Initial Temps.		Final Temps.				Actual – Ambient Temperature –			
dH (in H2O)	Time (min)	Volume Initial (cu ft)	Volume Final (cu ft)	Volume Total (cu ft)	Inlet (deg F)	Outlet (deg F)	Inlet (deg F)	Outlet (deg F)	Orifice Serial# (number)	K' Orifice Coefficient (see above)	Vacuum (in Hg)	Initial (deg F)	Final (deg F)	Average (deg F)
1.28	11.00	747.000	753.463	6.463	78.0	71.0	80.0	72.0	53	0.459	17.0	78.0	78.0	78.0
1.28	11.00	754.000	760.491	6.491	79.0	73.0	81.0	75.0	48	0.459	17.0	78.0	78.0	78.0
1.28	11.00	761.000	767.505	6.505	81.0	75.0	81.0	76.0	48	0.459	17.0	78.0	78.0	78.0

RESULTS

— DRY GAS METER —		——— ORIFICE ———			– DRY GAS METER –		——— ORIFICE ———		
					CALIBRATION FACTOR Y		CALIBRATION FACTOR dH@		
VOLUME CORRECTE Vm(std) (cu ft)	VOLUME RRECTED Vm(std) (liters)	VOLUME CORRECTE Vcr(std) (cu ft)	VOLUME ORRECTE Vcr(std) (liters)	VOLUME NOMINAL Vcr (cu ft)	Value (number)	Variation (number)	Value (in H2O)	Value (mm H2O)	Variation (in H2O)
6.389	180.9	6.509	184.3	6.639	1.019	0.001	2.042	51.86	0.008
6.385	181.1	6.509	184.3	6.639	1.018	0.000	2.032	51.62	-0.001
6.394	181.1	6.509	184.3	6.639	1.018	0.000	2.026	51.47	-0.007
		Average Y ——>			1.018		2.033	51.65	<—— Average dH@
							CDF @ dH=	0.526	

Note: For Calibration Factor Y, the ratio of the reading of the calibration meter to the dry gas meter, acceptable tolerance of individual values from the average is +-0.02.

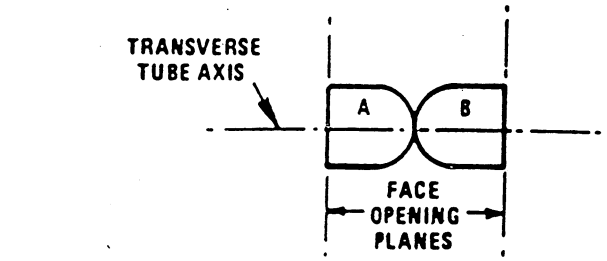
For Orifice Calibration Factor dH@, the orifice differential pressure in inches of H20 that equates to 0.75 cfm of air at 68 F and 29.92 inches of Hg, acceptable tolerance of individual values from the average is +-0.2.

SIGNED: _____ Date: 10-29-99

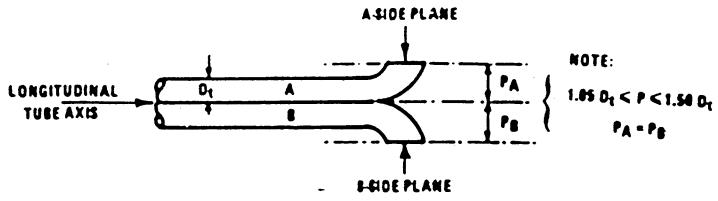
FOSSIL ENERGY RESEARCH CORP
PITOT TUBE DIMENSIONAL CALIBRATION

Pitot tube ID	Inlet Hg Probe - Craig 1 and Craig 3	Tube diameter (D_t)	3/8"
Date	10-5-99	P_A	0.5
Data by	JT	P_B	0.5

(a) Face opening plane angle = 90 deg (Y/N)?	A	Y
	B	Y
(b) Face opening planes parallell to longitudinal axis (Y/N)?	A	Y
	B	Y
(c) Both legs equal length and centerline coincident?	A	Y
	B	Y
(d) $P_A = P_B$ (Y/N)?		Y
(e) $1.05\ D_t \leq P \leq 1.50\ D_t$ (Y/N)?		Y



(a)



(b)

(c)

Figure 2-2. Properly constructed Type S pitot tube, shown in: (a) end view; face opening planes perpendicular to transverse axis; (b) top view; face opening planes parallel to longitudinal axis; (c) side view; both legs of equal length and centerlines coincident, when viewed from both sides. Baseline coefficient values of 0.84 may be assigned to pitot tubes constructed this way.

FOSSIL ENERGY RESEARCH CORP
PITOT TUBE DIMENSIONAL CALIBRATION

Stack Hg and HCl/PM
Craig 1 and
Craig 3
9/27-10/6

Pitot tube ID	#13-S-type	Tube diameter (D_t)	.375
Date	9-27-99	P_A	.44
Data by	Dave Goulet	P_B	.43

(a) Face opening plane angle = 90 deg (Y/N)?	A	Y
	B	Y
(b) Face opening planes parallell to longitudinal axis (Y/N)?	A	Y
	B	Y
(c) Both legs equal length and centerline coincident?	A	Y
	B	Y
(d) $P_A = P_B$ (Y/N)?		
(e) $1.05\ D_t \leq P \leq 1.50\ D_t$ (Y/N)?		Y

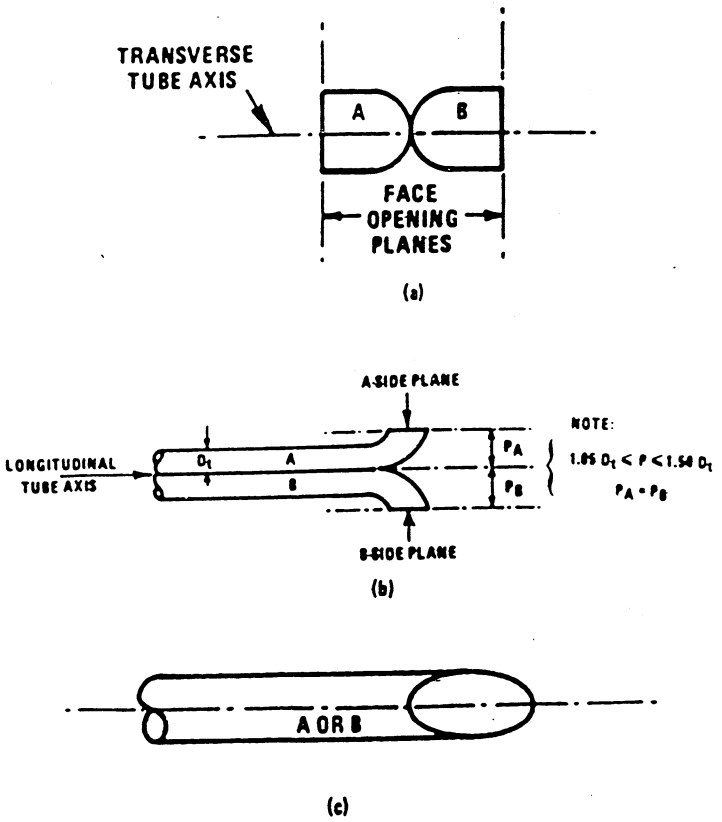


Figure 2-2. Properly constructed Type S pitot tube, shown in: (a) end view; face opening planes perpendicular to transverse axis; (b) top view; face opening planes parallel to longitudinal axis; (c) side view; both legs of equal length and centerlines coincident, when viewed from both sides. Baseline coefficient values of 0.84 may be assigned to pitot tubes constructed this way.

Table 2. Unit # 1, Gas flow Rate Calibration and Wall Effects Test Results

Load Setting	Load, Megawatts	Plant Flow Rate, WSCFH	Reference Method 2 Flow Rate, WSCFH	Reference Method 2F Flow Rate, WSCFH	% Difference from Method 2	% Difference from Method 2F	% Difference of Method 2 and Method 2F	Wall Effects Adjustment Factor
Low	235.8	56,083,000	52,710,597	46,259,486	-6.4%	-21.2%	12.2%	1.0033
Medium	308.8	61,090,000	56,203,184	55,074,152	-8.7%	-10.9%	2.0%	0.9987
High	432.7	78,128,000	73,157,043	70,161,986	-6.8%	-11.4%	4.1%	0.9988
				Averages	-7.3%	-14.5%	6.1 %	1.0003

use high load data

Table 3. Unit # 2, Gas flow Rate Calibration and Wall Effects Test Results

Load Setting	Load, Megawatts	Plant Flow Rate, WSCFH	Reference Method 2 Flow Rate, WSCFH	Reference Method 2F Flow Rate, WSCFH	% Difference from Method 2	% Difference from Method 2F	% Difference of Method 2 and Method 2F	Wall Effects Adjustment Factor
Low	244.4	53,024,000	49,034,681	48,412,691	-8.1%	-9.5%	1.3%	0.9992
Medium	318.5	62,650,000	62,290,001	57,444,325	-0.6%	-9.1%	7.8%	0.9946
High	No Data	73,140,000	72,107,624	69,572,163	-1.4%	-5.1%	3.5%	1.0048
				Averages	-3.4%	-7.9%	4.2%	0.9995

Table 4. Unit # 3, Gas flow Rate Calibration and Wall Effects Test Results

Load Setting	Load, Megawatts	Plant Flow Rate, WSCFH	Reference Method 2 Flow Rate, WSCFH	Reference Method 2F Flow Rate, WSCFH	% Difference from Method 2	% Difference from Method 2F	% Difference of Method 2 and Method 2F	Wall Effects Adjustment Factor
Low	236.6	57,129,000	54,580,566	51,995,318	-4.7%	-9.9%	4.7%	0.9990
Medium	321.5	63,442,000	61,841,345	59,485,807	-2.6%	-6.7%	3.8%	1.0017
High	422.1	77,709,000	77,076,612	73,069,383	-0.8%	-6.3%	5.2%	1.0007
				Averages	-2.7%	-7.6%	4.6%	1.0005

use high load data

Appendix C. Chain-of-Custody Records

Chain-of-Custody Records

CHAIN OF CUSTODY

CLIENT: TVA Shawnee — TEST DATE(S): 10/2/99

LOCATION: Gang Unit 3 — SAMPLER(S): PA / DW

SAMPLE LOCATION: Inlet and Stack — PROJECT MANAGER: Mark McDaniel

TEST METHOD(S): Ontario Hydro Mercury — DATE DUE: 45 days

OUTSIDE LAB REQUIRED?: Yes - Philip Analytical — COMPLIANCE TEST? Yes

DATE	TIME	TEST #	SAMPLE DESCRIPTION	CONTAINERS	SAMPLER	COMMENTS
10/2/99	1000	Field Blank Inlet	Thimble QT-33	1	DB/PA	
			Front half	1		
			KCl imp	1		
			HNO_3 / H_2O_2 imp	1		
			$KMnO_4$ imp	1		
10/2/99	1030	Field Blank Stack	F.b. 8310-98	1	DW	
			Probe Wash & F/h	1		
			KCl imp	1		
			HNO_3 / H_2O_2 imp	1		
			$KMnO_4$ imp	1		

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	10/4/99 1000		

ANALYSIS REQUIRED:

Mercury speciation by OH Method

Delta

CHAIN OF CUSTODY

CLIENT: Tri State Gas TEST DATE(S): 10/4/99

LOCATION: Craig Unit 3 SAMPLER(S): DW / PA

SAMPLE LOCATION: Inlet and Stack PROJECT MANAGER: Mark McDannel

TEST METHOD(S): Ontario Hydro Mercury DATE DUE: 45 days

OUTSIDE LAB REQUIRED?: Yes - Philip Analytical COMPLIANCE TEST? Yes - EPA

DATE	TIME	TEST #	SAMPLE DESCRIPTION	CONTAINERS	SAMPLER	COMMENTS
10/4/99	1400	1-Inlet-Hg	Thimble QT-32	1	PA	
			Probe half	1	↓	
			KCl imp	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1	↓	
10/4/99	1500	1-Stack-Hg	Filter 830P-99	1	DW	
			Probe front & Filter	1	↓	
			KCl imp	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1	↓	

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	10/4/99 1500		

ANALYSIS REQUIRED:

Mercury by OH speciation method

Delta

CHAIN OF CUSTODY

CLIENT: Tri State | TEST DATE(S): 10/4/99

LOCATION: Craig Unit 3 | SAMPLER(S): DW / PA

SAMPLE LOCATION: Inlet and Stack | PROJECT MANAGER: Mark McDaniel

TEST METHOD(S): Ontario Hydro Mercury | DATE DUE: 15 days

OUTSIDE LAB REQUIRED?: Yes - Phillip Analytical | COMPLIANCE TEST? Yes - EPA

DATE	TIME	TEST #	SAMPLE DESCRIPTION	CONTAINERS	SAMPLER	COMMENTS
10/4/99	1700	2-Stack-Hg	Filter 8316-101	1	DW	
			Probe Wash & Frt	1	↓	
			KCl imp	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1		
10/4/99	1700	2-Inlet-Hg	Thimble QT-35	1	PA	
			Probe Wash	1	↓	
			KCl imp	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1		

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	10/5/99 1000		

ANALYSIS REQUIRED: Mercury by OH Hg speciation method

Delta

CHAIN OF CUSTODY

CLIENT: Tri-State TEST DATE(S): 10/5/99

LOCATION: Craig Unit 3 SAMPLER(S): DW/PA

SAMPLE LOCATION: Inlet and Stack PROJECT MANAGER: Mark McDaniel

TEST METHOD(S): Ontario Hydro Mercury DATE DUE: 45 days

OUTSIDE LAB REQUIRED?: Yes - Phillips Analytical COMPLIANCE TEST? Yes - EPA

DATE	TIME	TEST #	SAMPLE DESCRIPTION	CONTAINERS	SAMPLER	COMMENTS
10/5/99	1200	3-Stack-Hg	Filter 8308-102	1	DW	
			Probe Wash & F'k	1		
			KCl imp	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1		
10/5/99	1200	3-Inlet-Hg	Thimble GF-38	1	PA	
			F'k	1		
			KCl imp	2		
			HNO_3/H_2O_2 imp	1		
			$KMnO_4$ imp	1		

RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
	10/5/99 1300		

ANALYSIS REQUIRED:

Mercury Speciation by OH method

Delta

List of FERCo Samples Shipped to Philip, October 27, 1999								
Ontario Hydro Samples								
Plant	Description	Test Date	Due Date	Comments				
Craig 1, Craig 3	Reagent Blanks	27-Sep	11-Nov					
Craig 1	Inlet Field Blank	27-Sep	11-Nov					
Craig 1	Stack Field Blank	27-Sep	11-Nov					
Craig 1	1-Inlet	28-Sep	12-Nov					
Craig 1	1-Stack	28-Sep	12-Nov					
Craig 1	2-Inlet	28-Sep	12-Nov					
Craig 1	2-Stack	28-Sep	12-Nov					
Craig 1	3-Inlet	29-Sep	13-Nov					
Craig 1	3-Stack	29-Sep	13-Nov					
Craig 3	Inlet Field Blank	2-Oct	16-Nov					
Craig 3	Stack Field Blank	2-Oct	16-Nov					
Craig 3	1-Inlet	4-Oct	18-Nov					
Craig 3	1-Stack	4-Oct	18-Nov					
Craig 3	2-Inlet	4-Oct	18-Nov					
Craig 3	2-Stack	4-Oct	18-Nov					
Craig 3	3-Inlet	4-Oct	18-Nov					
Craig 3	3-Stack	4-Oct	18-Nov					
Coronado 1, San Juan 2, Navajo 3	Reagent Blanks	19-Oct	3-Dec					
Coronado 1	Inlet Field Blank	19-Oct	3-Dec					
Coronado 1	Outlet Field Blank	19-Oct	3-Dec					
Coronado 1	1-Inlet	18-Oct	2-Dec					
Coronado 1	1-Outlet	18-Oct	2-Dec					
Coronado 1	2-Inlet	19-Oct	3-Dec					
Coronado 1	2-Outlet	19-Oct	3-Dec					
Coronado 1	3-Inlet	19-Oct	3-Dec					
Coronado 1	3-Outlet	19-Oct	3-Dec					
San Juan 2	Inlet Field Blank	22-Oct	6-Dec					
San Juan 2	Outlet Field Blank	22-Oct	6-Dec					
San Juan 2	2-Inlet	21-Oct	5-Dec					
San Juan 2	2-Outlet	21-Oct	5-Dec					
San Juan 2	3-Inlet	22-Oct	6-Dec	Has two filters. Analyze filters separately.				
San Juan 2	3-Outlet	22-Oct	6-Dec					
San Juan 2	4-Inlet	22-Oct	6-Dec					
San Juan 2	4-Outlet	22-Oct	6-Dec					
Navajo 3	Inlet Field Blank	26-Oct	10-Dec					
Navajo 3	Outlet Field Blank	26-Oct	10-Dec					
Navajo 3	1-Inlet	25-Oct	9-Dec					
Navajo 3	1-Outlet	25-Oct	9-Dec					
Navajo 3	2-Inlet	26-Oct	10-Dec					
Navajo 3	2-Outlet	26-Oct	10-Dec					
Navajo 3	3-Inlet	26-Oct	10-Dec					
Navajo 3	3-Outlet	26-Oct	10-Dec					
Total number of samples		42						

List of FERCo Samples Shipped to Philip, October 27, 1999			
Coal Samples, analyze for Hg, Cl			
Plant	Description	Test Date	Target Date
Craig 1	Run 1	28-Sep	12-Nov
Craig 1	Run 2	28-Sep	12-Nov
Craig 1	Run 3	29-Sep	13-Nov
Craig 3	Run 1	4-Oct	18-Nov
Craig 3	Run 2	4-Oct	18-Nov
Craig 3	Run 3	4-Oct	18-Nov
Coronado 1	Run 1	18-Oct	2-Dec
Coronado 1	Run 2	19-Oct	3-Dec
Coronado 1	Run 3	19-Oct	3-Dec
San Juan 2	Run 2	21-Oct	5-Dec
San Juan 2	Run 3	22-Oct	6-Dec
San Juan 2	Run 4	22-Oct	6-Dec
Navajo 3	Run 1	25-Oct	9-Dec
Navajo 3	Run 2	26-Oct	10-Dec
Navajo 3	Run 3	26-Oct	10-Dec
Total number of samples		15	

NOTICE OF SAMPLE RECEIPT-PHILIP ANALYTICAL SERVICES

Attention: Mark McDaniel
Client: Fossil Energy Research Corp.
Re Client Project: Craig
FAX #: 949-859-7916
Phone #: 949-859-4466

Samples for: OH' Hg Trains
were received in good condition unless indicated below.

SAMPLE LISTING

Philip ID #	Sample ID	Date Sampled	Date Received
065693	Reagent Blank	99/09/27	99/10/29
065701	Unit 1 Stack-FB	99/09/27	99/10/29
065702	Unit 1 Stack-R1	99/09/28	99/10/29
065703	Unit 1 Stack-R2	99/09/28	99/10/29
065704	Unit 1 Stack-R3	99/09/29	99/10/29
065705	Unit 1 Inlet-FB	99/09/27	99/10/29
065706	Unit 1 Inlet-R1	99/09/28	99/10/29
065707	Unit 1 Inlet-R2	99/09/28	99/10/29
065708	Unit 1 Inlet-R3	99/09/29	99/10/29
065709	Unit 3 Stack-FB	99/10/02	99/10/29
065710	Unit 3 Stack-R1	99/10/04	99/10/29
065711	Unit 3 Stack-R2	99/10/04	99/10/29
065712	Unit 3 Stack-R3	99/10/05	99/10/29
065713	Unit 3 Inlet-FB	99/10/02	99/10/29
065714	Unit 3 Inlet-R1	99/10/04	99/10/29
065715	Unit 3 Inlet-R2	99/10/04	99/10/29
065716	Unit 3 Inlet-R3	99/10/05	99/10/29
065764	Reagent Blank QT40	99/10/19	99/10/29
065766	Unit 1 Stack-FB	99/10/19	99/10/29
065767	Unit 1 Stack-R1	99/10/18	99/10/29
065768	Unit 1 Stack-R2	99/10/19	99/10/29
065769	Unit 1 Stack-R3	99/10/19	99/10/29
065770	Unit 1 Inlet-FB	99/10/19	99/10/29
065771	Unit 1 Inlet-R1	99/10/18	99/10/29
065772	Unit 1 Inlet-R2	99/10/19	99/10/29
065773	Unit 1 Inlet-R3	99/10/19	99/10/29
065782	Unit 2 Stack-FB	99/10/22	99/10/29
065783	Unit 2 Stack-R2	99/10/21	99/10/29
065784	Unit 2 Stack-R3	99/10/22	99/10/29
065786	Unit 2 Stack-R4	99/10/22	99/10/29
065787	Unit 2 Inlet-FB	99/10/22	99/10/29
065788	Unit 2 Inlet-R2	99/10/21	99/10/29
065789	Unit 2 Inlet-R3	99/10/22	99/10/29
065790	Unit 2 Inlet-R4	99/10/22	99/10/29
065831	Unit 3 Stack-FB	99/10/25	99/10/29
065832	Unit 3 Stack-R11	99/10/25	99/10/29

Comments: _____

_____

_____

Date 99/11/08

NOTICE OF SAMPLE RECEIPT-PHILIP ANALYTICAL SERVICES

Attention: Mark McDaniel
Client: Fossil Energy Research Corp.
Re Client Project: Navajo
FAX #: 949-859-7916
Phone #: 949-859-4466

Samples for: 'DH' Hg Trains
were received in good condition unless indicated below.

SAMPLE LISTING

Philip ID #	Sample ID	Date Sampled	Date Received
065833	Unit 3 Stack-R2	99/10/26	99/10/29
065834	Unit 3 Stack-R3	99/10/26	99/10/29
065835	Unit 3 Inlet-FB	99/10/26	99/10/29
065836	Unit 3 Inlet-R1	99/10/25	99/10/29
065837	Unit 3 Inlet-R2	99/10/26	99/10/29
065838	Unit 3 Inlet-R3	99/10/26	99/10/29

Comments:_____

_____

_____

Date 99/11/08

NOTICE OF SAMPLE RECEIPT-PHILIP ANALYTICAL SERVICES

Attention: Mark McDaniel
Client: Fossil Energy Research Corp.
Re Client Project: Craig
FAX #: 949-859-7916
Phone #: 949-859-4466

Samples for: Hg via 7471 and Cl (coal) via Parr bomb/IC.
were received in good condition unless
indicated below.

SAMPLE LISTING

Philip ID #	Sample ID	Date Sampled	Date Received
065718	Unit 1 Coal-R1	99/10/05	99/10/29
065719	Unit 1 Coal-R2	99/10/05	99/10/29
065720	Unit 1 Coal-R3	99/10/05	99/10/29
065721	Unit 3 Coal-R1	99/10/04	99/10/29
065722	Unit 3 Coal-R2	99/10/04	99/10/29
065723	Unit 3 Coal-R3	99/10/04	99/10/29
065724	Unit 1 Ash-R1	99/09/28	99/10/29
065725	Unit 1 Ash-R2	99/09/28	99/10/29
065726	Unit 1 Ash-R3	99/09/28	99/10/29
065727	Unit 3 Ash-R1	99/10/04	99/10/29
065728	Unit 3 Ash-R2	99/10/04	99/10/29
065729	Unit 3 Ash-R3	99/10/04	99/10/29
065775	Unit 1 Coal-R1	99/10/18	99/10/29
065776	Unit 1 Coal-R2	99/10/19	99/10/29
065777	Unit 1 Coal-R3	99/10/19	99/10/29
065778	Unit 1 Ash-R1	99/10/18	99/10/29
065779	Unit 1 Ash-R2	99/10/18	99/10/29
065780	Unit 1 Ash-R3	99/10/19	99/10/29
065792	Unit 2 Coal-R2	99/10/22	99/10/29
065793	Unit 2 Coal-R3	99/10/22	99/10/29
065794	Unit 2 Coal-R4	99/10/22	99/10/29
065828	Unit 2 Ash-R2	99/10/21	99/10/29
065829	Unit 2 Ash-R3/4	99/10/22	99/10/29
065840	Unit 3 Coal-R1	99/10/25	99/10/29
065841	Unit 3 Coal-R2	99/10/26	99/10/29
065842	Unit 3 Coal-R3	99/10/26	99/10/29
065843	Unit 3 Ash-R1	99/10/25	99/10/29
065844	Unit 3 Ash-R2	99/10/26	99/10/29
065845	Unit 3 Ash-R3	99/10/26	99/10/29

Comments: _____

Date 99/11/08

Craig Units 1 and 3

Mercury ICR Program

Consumables Record Form and Tracking Log

Reagent	Supplier	Lot Number	Date rec'd	Date opened	Opened by	Meets inspection criteria	Date blank taken	Tests used
Quiconk Standard	Ajax	NA	7/1/99	7/1/99	JB	Yes	9/28/99	
Quiconk 83mm filter	Ajax	NA	7/1/99	7/1/99	JB	Yes	9/28/99	
DI H_2O	Brookfield/Aldrich	NA	9/22/99	9/22/99	JB	Yes cond=0.8 µmhos	w/ reagents	
30wt% H_2O_2	Fisher	992088	7/1/99	9/28, 9/30/99	JB	Yes	w/ $KMnO_4$/H_2SO_4 reagent 9/28/99	
conc. HCl	Fisher	418110	7/1/99	9/22/99	JB	Yes	for cleaning	
Nitric Acid	Fisher	118100	7/1/99	9/22/99	JB	Yes	9/28/99	0
NaCl	Fisher	286470 318067-13	7/20/99	7/20/99	JB	Yes	9/28/99 w/	hydroxylamine
Silver Acid	Fisher	318061	7/1/99	9/22/99	JB	Yes	9/28/99 w/	$KMnO_4$/H_2SO_4 reagent
Potassium Chloride	Fisher	986514	7/1/99	9/22/99	JB	Yes	9/28/99	
Hydroxylamine Sulfate	Fisher	991665	7/1/99	7/1/99	JB	Yes	9/28/99	
Potassium Permanganate	Fisher	987715	7/1/99	9/22/99	JB	Yes	9/28/99 w/	$KMnO_4$/H_2SO_4 reagent

Appendix D. Analytical Lab Reports

Gas Samples

Coal Samples

PHILIP SERVICES

Certificate of Analysis

CLIENT INFORMATION		LABORATORY INFORMATION	
Attention:	Mark McDaniel	**Contact:**	Ron McLeod
Client Name:	Fossil Energy Research Corp.	**Project:**	AN991386
Project:	Craig	**Date Received:**	99/10/29
Project Desc:	Craig Units 1,3	**Date Reported:**	99/11/23
Address:	23342 C South Pointe Laguna Hills, CA CA 92653	**Submission No.:**	9K0064
		Sample No.:	065693-065716
Fax Number:	949-859-7916		
Phone Number:	949-859-4466		

NOTES: *'-' – not analysed '<' – less than Method Detection Limit (MDL) 'NA' – no data available*
LOQ can by determined for all analytes by multiplying the appropriate MDL X 3.33
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)

Methods used by PASC are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Nineteenth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PASC for a period of three weeks from receipt of data or as per contract.

COMMENTS:

Certified by: 

PHILIP ANALYTICAL SERVICES CORPORATION
5555 North Service Road, Burlington, Ontario, Canada L7L 5H7 Tel: (905) 332-8788 Fax: (905) 332-9169

Certificate of Analysis

CLIENT INFORMATION

Attention:	Mark McDaniel
Client Name:	Fossil Energy Research Corp.
Project:	Craig
Project Desc:	Craig Units 1, 3
Address:	23342 C South Pointe Laguna Hills, CA CA 92653
Fax Number:	949-859-7916
Phone Number:	949-859-4466

LABORATORY INFORMATION

Contact:	Ron McLeod
Project:	AN991386
Date Received:	99/10/29
Date Reported:	99/11/23
Submission No.:	9K0064
Sample No.:	065693-065716

NOTES: *''-' = not analysed '<' = less than Method Detection Limit (MDL) 'NA' = no data available*
LOQ can by determined for all analytes by multiplying the appropriate MDL X 3.33
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)

Methods used by PASC are based upon those found in 'Standard Methods for the Examination of Water and Wastewater', Nineteenth Edition. Other methods are based on the principles of MISA or EPA methodologies. New York State: ELAP Identification Number 10756.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Any and all use of these test results shall be limited to the actual cost of the pertinent analysis done. There is no other warranty expressed or implied. Your samples will be retained at PASC for a period of three weeks from receipt of data or as per contract.

COMMENTS:

Certified by: _____

PASC - Certificate of Analysis

			Method Blank	Blank Spike #1	Blank Spike #1	Blank Spike #2	Blank Spike #2	Reagent Blank	RB TF unmarked	RB 83mm 830P-93	Unit 1 Stack-FB	Unit 1 Stack-R1
Client ID:												
Lab No.:			065692 99	065692 99	065692 99	065692 99	065692 99	065693 99	065697 99	065698 99	065701 99	065702 99
Date Sampled:			-	-	-	-	-	99/09/27	99/09/27	99/09/27	99/09/27	99/09/28
Component	**MDL**	**Units**			% Recoveries		% Recoveries					
Mercury - Outlet - FH	0.010	ug	<	0.097	97	0.10	100	-	-	<	<	<
Mercury - Inlet - bulk	0.010	"	<	0.11	110	0.11	110	-	<0.080	-	-	-
Mercury - hydroxylamine	0.010	"	<	0.096	96	0.094	94	<	-	-	-	-
Mercury - KCl	0.030	"	<	0.30	100	0.30	99	<0.10	-	-	<0.10	0.15
Mercury - KMnO4	0.030	"	<	0.30	100	0.30	100	<0.050	-	-	<0.050	2.4
Mercury - H202	0.010	"	<	0.10	100	0.10	100	<0.25	-	-	<0.25	<0.25
Mercury - probe rinse	0.010	"	-	-	-	-	-	<	-	-	-	-

			Method Blank	Blank Spike #1	Blank Spike #1	Blank Spike #2	Blank Spike #2	Reagent Blank	RB TF unmarked	RB 83mm 830P-93	Unit 3 Stack-FB	Unit 3 Stack-R1
Client ID:												
Lab No.:			065692 99	065692 99	065692 99	065692 99	065692 99	065693 99	065697 99	065698 99	065709 99	065710 99
Date Sampled:			-	-	-	-	-	99/09/27	99/09/27	99/09/27	99/10/02	99/10/04
Component	**MDL**	**Units**			% Recoveries		% Recoveries					
Mercury - Outlet - FH	0.010	ug	<	0.097	97	0.10	100	-	-	<	<	<
Mercury - Inlet - bulk	0.010	"	<	0.11	110	0.11	110	-	<0.080	-	-	-
Mercury - hydroxylamine	0.010	"	<	0.096	96	0.094	94	<	-	-	-	-
Mercury - KCl	0.030	"	<	0.30	100	0.30	99	<0.10	-	-	<0.10	<0.10
Mercury - KMnO4	0.030	"	<	0.30	100	0.30	100	<0.050	-	-	<0.050	1.2
Mercury - H202	0.010	"	<	0.10	100	0.10	100	<0.25	-	-	<0.25	<0.25
Mercury - probe rinse	0.010	"	-	-	-	-	-	<	-	-	-	-

			Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3
	Client ID:		Stack-R1	Stack-R1	Stack-R1	Stack-R1	Stack-R1	Stack-R2	Stack-R3	Inlet-FB	Inlet-R1	Inlet-R2
	Lab No.:		065710 99	065710 99	065710 99	065710 99	065710 99	065711 99	065712 99	065713 99	065714 99	065715 99
	Date Sampled:		99/10/04	99/10/04	99/10/04	99/10/04	99/10/04	99/10/04	99/10/05	99/10/02	99/10/04	99/10/04
Component	**MDL**	**Units**	Duplicate	M. Spike	MS % Rec.	MS Dup	MSD % Rec.					
Mercury - Outlet - FH	0.010	ug	-	-	-	-	-	<	<	-	-	-
Mercury - Inlet - bulk	0.010	"	-	-	-	-	-	-	-	<0.080	0.69	1.1
Mercury - hydroxylamine	0.010	"	-	-	-	-	-	-	-	-	-	-
Mercury - KCl	0.030	"	<0.10	1.1	100	1.1	100	<0.10	<0.10	<0.10	0.78	0.60
Mercury - KMnO4	0.030	"	1.2	1.8	110	1.8	110	1.2	1.1	<0.050	0.24	0.21
Mercury - H202	0.010	"	<0.25	2.6	100	2.6	100	<0.25	<0.25	<0.25	<0.25	<0.25
Mercury - probe rinse	0.010	"	-	-	-	-	-	-	-	-	-	-

			Unit 3
	Client ID:		Inlet-R3
	Lab No.:		065716 99
	Date Sampled:		99/10/05
Component	**MDL**	**Units**	
Mercury - Outlet - FH	0.010	ug	-
Mercury - Inlet - bulk	0.010	"	1.1
Mercury - hydroxylamine	0.010	"	-
Mercury - KCl	0.030	"	0.29
Mercury - KMnO4	0.030	"	0.15
Mercury - H202	0.010	"	<0.25
Mercury - probe rinse	0.010	"	-

			Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 1	Unit 3	Unit 3	Unit 3
	Client ID:		Inlet-R1	Inlet-R1	Inlet-R1	Inlet-R1	Inlet-R2	Inlet-R3	Stack-FB	Stack-R1	Stack-R1
	Lab No.:		065706 99	065706 99	065706 99	065706 99	065707 99	065708 99	065709 99	065710 99	065710 99
	Date Sampled:		99/09/28	99/09/28	99/09/28	99/09/28	99/09/28	99/09/29	99/10/02	99/10/04	99/10/04
Component	**MDL**	**Units**	M. Spike	MS % Rec.	MS Dup	MSD % Rec.					Duplicate
Mercury - Outlet - FH	0.010	ug	-	-	-	-	-	-	<	<	-
Mercury - Inlet - bulk	0.010	"	0.91	110	0.89	110	<0.080	<0.080	-	-	-
Mercury - hydroxylamine	0.010	"	-	-	-	-	-	-	-	-	-
Mercury - KCl	0.030	"	-	-	-	-	0.31	0.17	<0.10	<0.10	<0.10
Mercury - KMnO4	0.030	"	-	-	-	-	2.7	2.1	<0.050	1.2	1.2
Mercury - H202	0.010	"	-	-	-	-	<0.25	<0.25	<0.25	<0.25	<0.25
Mercury - probe rinse	0.010	"	-	-	-	-	-	-	-	-	-

			Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3
	Client ID:		Stack-R1	Stack-R1	Stack-R1	Stack-R1	Stack-R2	Stack-R3	Inlet-FB	Inlet-R1	Inlet-R2	Inlet-R3
	Lab No.:		065710 99	065710 99	065710 99	065710 99	065711 99	065712 99	065713 99	065714 99	065715 99	065716 99
	Date Sampled:		99/10/04	99/10/04	99/10/04	99/10/04	99/10/04	99/10/05	99/10/02	99/10/04	99/10/04	99/10/05
Component	**MDL**	**Units**	M. Spike	MS % Rec.	MS Dup	MSD % Rec.						
Mercury - Outlet - FH	0.010	ug	-	-	-	-	<	<	-	-	-	-
Mercury - Inlet - bulk	0.010	"	-	-	-	-	-	-	<0.080	0.69	1.1	1.1
Mercury - hydroxylamine	0.010	"	-	-	-	-	-	-	-	-	-	-
Mercury - KCl	0.030	"	1.1	100	1.1	100	<0.10	<0.10	<0.10	0.78	0.60	0.29
Mercury - KMnO4	0.030	"	1.8	110	1.8	110	1.2	1.1	<0.050	0.24	0.21	0.15
Mercury - H202	0.010	"	2.6	100	2.6	100	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Mercury - probe rinse	0.010	"	-	-	-	-	-	-	-	-	-	-

Component	MDL	Units				
Batch Code:						
Filter weight	1.0	mg	-	-	-	-
Batch Code:						
Final volume measured	0	ml	-	-	-	-
Batch Code:						
Impinger volume - hydroxylamine		"	-	-	-	-
Batch Code:						
Impinger volume - KCl - combined		"	-	-	-	-
Batch Code:						
Impinger volume - KMnO4 - combined		"	-	-	-	-
Batch Code:						
Mercury - filter	0.010	ug	-	-	-	-
Batch Code:						
Mercury - filter - bulk	0.010	"	-	-	-	-
Batch Code:					**11181BHY**	**M. Spike**
Mercury - hydroxylamine	0.010	"	-	-	<	0.096
Batch Code:						
Mercury - KCl	0.030	"	-	-	-	-
Batch Code:						
Mercury - KMnO4	0.030	"	-	-	-	-
Batch Code:			**11191NPO**	**M. Spike**		
Mercury - H202	0.010	"	<	0.10	-	-
Batch Code:						
Mercury - probe rinse	0.010	"	-	-	-	-

Component	MDL	Units				
Batch Code:						
Filter weight	1.0	mg	-	-	-	-
Batch Code:						
Final volume measured	0	ml	-	-	-	-
Batch Code:						
Impinger volume - hydroxylamine		"	-	-	-	-
Batch Code:						
Impinger volume - KCl - combined		"	-	-	-	-
Batch Code:						
Impinger volume - KMnO4 - combined		"	-	-	-	-
Batch Code:						
Mercury - filter	0.010	ug	-	-	-	-
Batch Code:						
Mercury - filter - bulk	0.010	"	-	-	-	-
Batch Code:						
Mercury - hydroxylamine	0.010	"	-	-	-	-
Batch Code:					**11193NKC**	**M. Spike**
Mercury - KCl	0.030	"	-	-	<	0.30
Batch Code:			**11191BMN**	**M. Spike**		
Mercury - KMnO4	0.030	"	<	0.30	-	-
Batch Code:						
Mercury - H202	0.010	"	-	-	-	-
Batch Code:						
Mercury - probe rinse	0.010	"	-	-	-	-

Component	MDL	Units				
Batch Code:						
Filter weight	1.0	mg	-	-	-	-
Batch Code:						
Final volume measured	0	ml	-	-	-	-
Batch Code:						
Impinger volume - hydroxylamine		"	-	-	-	-
Batch Code:						
Impinger volume - KCl - combined		"	-	-	-	-
Batch Code:						
Impinger volume - KMnO4 - combined		"	-	-	-	-
Batch Code:					**11221NFT**	**M. Spike**
Mercury - filter	0.010	ug	-	-	<	0.097
Batch Code:			**11222NFB**	**M. Spike**		
Mercury - filter - bulk	0.010	"	<	0.11	-	-
Batch Code:						
Mercury - hydroxylamine	0.010	"	-	-	-	-
Batch Code:						
Mercury - KCl	0.030	"	-	-	-	-
Batch Code:						
Mercury - KMnO4	0.030	"	-	-	-	-
Batch Code:						
Mercury - H202	0.010	"	-	-	-	-
Batch Code:						
Mercury - probe rinse	0.010	"	-	-	-	-

Component	MDL	Units				
Batch Code:						
Filter weight	1.0	mg	-	-	-	-
Batch Code:						
Final volume measured	0	ml	-	-	-	-
Batch Code:						
Impinger volume - hydroxylamine		"	-	-	-	-
Batch Code:						
Impinger volume - KCl - combined		"	-	-	-	-
Batch Code:						
Impinger volume - KMnO4 - combined		"	-	-	-	-
Batch Code:						
Mercury - filter	0.010	ug	-	-	-	-
Batch Code:						
Mercury - filter - bulk	0.010	"	-	-	-	-
Batch Code:						
Mercury - hydroxylamine	0.010	"	-	-	-	-
Batch Code:			**11194NKC**	**M. Spike**		
Mercury - KCl	0.030	"	<	0.31	-	-
Batch Code:					**11192BMN**	**M. Spike**
Mercury - KMnO4	0.030	"	-	-	<	0.29
Batch Code:						
Mercury - H202	0.010	"	-	-	-	-
Batch Code:						
Mercury - probe rinse	0.010	"	-	-	-	-

Component	MDL	Units		
Batch Code:				
Filter weight	1.0	mg	-	-
Batch Code:				
Final volume measured	0	ml	-	-
Batch Code:				
Impinger volume - hydroxylamine		"	-	-
Batch Code:				
Impinger volume - KCl - combined		"	-	-
Batch Code:				
Impinger volume - KMnO4 - combined		"	-	-
Batch Code:				
Mercury - filter	0.010	ug	-	-
Batch Code:				
Mercury - filter - bulk	0.010	"	-	-
Batch Code:				
Mercury - hydroxylamine	0.010	"	-	-
Batch Code:				
Mercury - KCl	0.030	"	-	-
Batch Code:				
Mercury - KMnO4	0.030	"	-	-
Batch Code:			**11192NPO**	**M. Spike**
Mercury - H202	0.010	"	<	0.099
Batch Code:				
Mercury - probe rinse	0.010	"	-	-

Batch Code:	**11221NFT**	
Mercury - filter	065698 99	
	065701 99	
	065702 99	
	065703 99	
	065704 99	
Run Date:	99/11/22	
Date of Sample Prep:	99/11/22	
Batch Code:	**11222NFB**	
Mercury - filter - bulk	065697 99	
	065705 99	
	065706 99	
	065707 99	
	065708 99	
Run Date:	99/11/22	
Date of Sample Prep:	99/11/22	
Batch Code:	**11181BHY**	
Mercury - hydroxylamine	065693 99	
Run Date:	99/11/18	
Date of Sample Prep:	99/11/18	
Batch Code:	**11193NKC**	**11223NOH**
Mercury - KCl	065693 99	065708 99
	065701 99	
	065702 99	
	065703 99	
	065704 99	
	065705 99	
	065706 99	
	065707 99	
Run Date:	99/11/19	99/11/22
Date of Sample Prep:	99/11/19	99/11/22
Batch Code:	**11191BMN**	**11223NOH**
Mercury - KMnO4	065693 99	065705 99
	065701 99	
	065702 99	
	065703 99	
	065704 99	
	065706 99	
	065707 99	
	065708 99	
Run Date:	99/11/19	99/11/22
Date of Sample Prep:	99/11/19	99/11/22
Batch Code:	**11191NPO**	
Mercury - H202	065693 99	
	065701 99	

	065702 99
	065703 99
	065704 99
	065705 99
	065706 99
	065707 99
	065708 99
Run Date:	99/11/19
Date of Sample Prep:	99/11/19

Batch Code:	**11221NFT**
Mercury - filter	065698 99
	065709 99
	065710 99
	065711 99
	065712 99
Run Date:	99/11/22
Date of Sample Prep:	99/11/22
Batch Code:	**11222NFB**
Mercury - filter - bulk	065697 99
	065713 99
	065714 99
	065715 99
	065716 99
Run Date:	99/11/22
Date of Sample Prep:	99/11/22
Batch Code:	**11181BHY**
Mercury - hydroxylamine	065693 99
Run Date:	99/11/18
Date of Sample Prep:	99/11/18
Batch Code:	**11193NKC**
Mercury - KCl	065693 99
	065709 99
	065710 99
	065711 99
	065712 99
	065713 99
	065714 99
	065715 99
	065716 99
Run Date:	99/11/19
Date of Sample Prep:	99/11/19
Batch Code:	**11192BMN**
Mercury - KMnO4	065693 99
	065709 99
	065710 99
	065711 99
	065712 99
	065713 99
	065714 99
	065715 99
	065716 99
Run Date:	99/11/19
Date of Sample Prep:	99/11/19
Batch Code:	**11191NPO**

Mercury - H202	065693 99
	065709 99
	065710 99
	065711 99
	065712 99
	065713 99
	065714 99
	065715 99
	065716 99
Run Date:	99/11/19
Date of Sample Prep:	99/11/19

Batch Code:	**11221NFT**		
Mercury - filter	065698 99		
	065701 99		
	065702 99		
	065703 99		
	065704 99		
	065709 99		
	065710 99		
	065711 99		
	065712 99		
Run Date:	99/11/22		
Date of Sample Prep:	99/11/22		
Batch Code:	**11222NFB**		
Mercury - filter - bulk	065697 99		
	065705 99		
	065706 99		
	065707 99		
	065708 99		
	065713 99		
	065714 99		
	065715 99		
	065716 99		
Run Date:	99/11/22		
Date of Sample Prep:	99/11/22		
Batch Code:	**11181BHY**		
Mercury - hydroxylamine	065693 99		
Run Date:	99/11/18		
Date of Sample Prep:	99/11/18		
Batch Code:	**11193NKC**	**11223NOH**	**11194NKC**
Mercury - KCl	065693 99	065708 99	065710 99
	065701 99		065711 99
	065702 99		065712 99
	065703 99		065713 99
	065704 99		065714 99
	065705 99		065715 99
	065706 99		065716 99
	065707 99		
	065709 99		
Run Date:	99/11/19	99/11/22	99/11/19
Date of Sample Prep:	99/11/19	99/11/22	99/11/19
Batch Code:	**11191BMN**	**11223NOH**	**11192BMN**
Mercury - KMnO4	065693 99	065705 99	065710 99
	065701 99		065711 99
	065702 99		065712 99
	065703 99		065713 99
	065704 99		065714 99

	065706 99		065715 99
	065707 99		065716 99
	065708 99		
	065709 99		
Run Date:	99/11/19	99/11/22	99/11/19
Date of Sample Prep:	99/11/19	99/11/22	99/11/19

Batch Code:	**11191NPO**	**11192NPO**
Mercury - H202	065693 99	065710 99
	065701 99	065711 99
	065702 99	065712 99
	065703 99	065713 99
	065704 99	065714 99
	065705 99	065715 99
	065706 99	065716 99
	065707 99	
	065708 99	
	065709 99	
Run Date:	99/11/19	99/11/19
Date of Sample Prep:	99/11/19	99/11/19

Certificate of Analysis

CLIENT INFORMATION

Attention:	Mark McDaniel
Client Name:	Fossil Energy Research Corp.
Project:	Craig
Project Desc:	Craig Units 1,3
Address:	23342 C South Pointe Laguna Hills, CA CA 92653
Fax Number:	949-859-7916
Phone Number:	949-859-4466

LABORATORY INFORMATION

Contact:	Ron McLeod
Project:	AN991386
Date Received:	99/10/29
Date Reported:	99/12/16
Submission No.:	9K0064
Sample No.:	065717-065729

NOTES: *"-' = not analysed '<' = less than Method Detection Limit (MDL) 'NA' = no data available*
LOQ can by determined for all analytes by multiplying the appropriate MDL X 3.33
Solids data is based on dry weight except for biota analyses.
Organic analyses are not corrected for extraction recovery standards except for isotope dilution methods, (i.e. CARB 429 PAH, all PCDD/F and DBD/DBF analyses)

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COMMENTS:

Certified by: _____

PASC - Certificate of Analysis

			Method	Blank	Blank	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3	Unit 3
Client ID:			Blank	Spike	Spike	Coal-R1	Coal-R2	Coal-R3	Ash-R1	Ash-R2	Ash-R2	Ash-R2	Ash-R2	Ash-R3
Lab No.:			065717 99	065717 99	065717 99	065721 99	065722 99	065723 99	065727 99	065728 99	065728 99	065728 99	065728 99	065729 99
Date Sampled:			-	-	-	99/10/04	99/10/04	99/10/04	99/10/04	99/10/04	99/10/04	99/10/04	99/10/04	99/10/04
Component	**MDL**	**Units**			% Recoveries						Duplicate	M. Spike	MS % Rec.	
Total Chlorine (as Cl)	0.0005	(%)	-	-	-	0.010	<0.010	0.020	-	-	-	-	-	-
Mercury	0.04	mg/kg	<	1.0	100	<	<	<	0.040	<	<	1.1	110	<

Batch Code:	**1111LTA1**
Mercury	065717 99
	065718 99
	065719 99
	065720 99
	065724 99
	065725 99
	065726 99
Run Date:	99/11/12
Date of Sample Prep:	99/11/11

PASC - Summary of Analysis Pre. Dates

Batch Code:	**1111LTA1**
Mercury	065717 99
	065721 99
	065722 99
	065723 99
	065727 99
	065728 99
	065729 99
Run Date:	99/11/12
Date of Sample Prep:	99/11/11

FRONTIER GEOSCIENCES INC.
Environmental Research & Specialty Analytical Laboratory
(206) 622-6960 • fax: (206) 622-6870
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414 Pontius North • Seattle, WA 98109

Mark McDannel
Fossil Energy Research Corp.
23342C South Pointe
Laguna Hills, CA 92653

December 20, 1999

SUBJECT: RESULTS FOR RUSH COAL SAMPLES

Dear Mr. McDannel,

Attached please find results for your rush samples. There are no analytical issues associated with these results and all of the associated quality control results look good.

Please call or e-mail (jamesk@frontier.wa.com) me if you have any questions or concerns.

Sincerely,

James Keithly

CONFIDENTIAL DATA

Table 1: Results of Mercury Analysis - Fossil Energy Research Corp.
Frontier Geosciences Inc

			Reagent and System Blank Corrected			
Sample ID	Lab Data Set	Total Hg ng Hg/gram	Matrix Duplicate ng Hg/gram	Matrix Duplicate RPD	Matrix Dup Average ng Hg/gram	As Received ppm Hg (ug Hg/gram)
Craig 1, Run 1, 9/28/99	THg81-991217	18.93 ng/g				0.019
Craig 1, Run 2, 9/28/99	THg81-991217	21.57 ng/g				0.022
Craig 1, Run 3, 9/28/99	THg81-991217	17.23 ng/g				0.017
Craig 3, Run 1, 10/4/99	THg81-991217	9.26 ng/g				0.009
Craig 3, Run 2, 10/4/99	THg81-991217	7.88 ng/g				0.008
Craig 3, Run 3, 10/4/99	THg81-991217	7.43 ng/g	6.46 ng/g	14.0%	6.94	0.007
					Ave	0.014 ug/g
					SD	0.006 ug/g
					RSD	45.5%

Estimated MDL - 991217	**0.0005 ug Hg/g**

Frontier Geosciences Inc
Quality Assurance Data Tables

QA Table 1: Data Set Matrix Duplicate Analysis

Lab Sample ID	Lab Data Set	Rep 1 ng Hg/gram	Rep 2 ng Hg/gram	Average Result ng Hg/gram	Matrix Duplicate RPD
Craig 3, Run 3, 10/4/99	991217	7.43 ng/g	6.46 ng/g	6.94	14.0%

QA Table 2: Data Set Matrix Spike Recovery (100ng Hg/sample Matrix Spike)

Lab Sample ID	Lab Data Set	Amt Spiked Per Gram ng Hg/gram	Spike Result ng Hg/gram	Amount Recovered ng Hg/gram	Matrix Spike Rec. %
Craig 3, Run 3, 10/4/99	991217	191.30	203.83	196.89	102.9%
Craig 3, Run 3, 10/4/99	991217	180.90	184.55	177.60	98.2%

Average Matrix Spike Recovery = 100.5%

QA Table 3: Standard Reference Material Recovery

IMPORTANT NOTE: SRM 1630a
Note the certified value for this SRM is being revised as a result of a recent round-robin study. Frontier was informed that the new certified value will be 85 ng/g. Therefore, we are altering the true value for this report.

Results: SRM 1630a Trace Mercury in Coal					
Lab Sample ID	Lab Data Set	Reference Value ng Hg/gram	Measured Value ng Hg/gram	Excepted Recovery Range (%)	Actual Recovery %
NIST 1630a	991217	85	99.5	75-125	117.0%

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FAX: (303) 373-4791

October 26, 1999

FOSSIL ENERGY RESEARCH
23342 C South Pointe
Laguna Hills CA 92653

Sample identification by
FOSSIL ENERGY RESEARCH CORP.

SAMPLE ID: CRAIG 3, TEST 1
REQUISITION NO: 99-6693-1463.3

Kind of sample COAL

Sample taken by FOSSIL ENERGY RESEARCH CORP.

Date sampled October 4, 1999

Date received October 21, 1999

Analysis report no. 72-416090

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	17.09	xxxxx
%Ash	5.50	6.63
Btu/lb	10404	12549
% Sulfur	0.39	0.47

MAF BTU/lb	13440		
lb SO_2/mm Btu	0.75	lb Sulfur/mm Btu	0.37
% Air Dry Loss	13.03	As Received Net Sample Wt.	294.30 g

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

Denver Laboratory

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October 26, 1999

FOSSIL ENERGY RESEARCH
23342 C South Pointe
Laguna Hills CA 92653

Sample identification by
FOSSIL ENERGY RESEARCH CORP.

SAMPLE ID: CRAIG 3, TEST 2
REQUISITION NO: 99-6693-1463.3

Kind of sample COAL

Sample taken by FOSSIL ENERGY RESEARCH CORP.

Date sampled October 4, 1999

Date received October 21, 1999

Analysis report no. 72-416091

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	17.11	xxxxx
%Ash	4.94	5.96
Btu/lb	10464	12624
% Sulfur	0.36	0.44

MAF BTU/lb	13424		
lb SO_2/mm Btu	0.69	lb Sulfur/mm Btu	0.34
% Air Dry Loss	12.56	As Received Net Sample Wt.	353.30 g

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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October 26, 1999

FOSSIL ENERGY RESEARCH
23342 C South Pointe
Laguna Hills CA 92653

Sample identification by
FOSSIL ENERGY RESEARCH CORP.

SAMPLE ID: CRAIG 3, TEST 3
REQUISITION NO: 99-6693-1463.3

Kind of sample COAL

Sample taken by FOSSIL ENERGY RESEARCH CORP.

Date sampled October 5, 1999

Date received October 21, 1999

Analysis report no. 72-416092

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis
% Moisture	17.94	xxxxx
%Ash	5.25	6.40
Btu/lb	10308	12562
% Sulfur	0.40	0.49

MAF BTU/lb	13421		
lb SO_2/mm Btu	0.78	lb Sulfur/mm Btu	0.39
% Air Dry Loss	13.01	As Received Net Sample Wt.	387.90 g

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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Appendix E. Audit Data Sheets

(no audits performed)

Appendix F. List of Participants

List of Participants		
Craig Unit 3 Hg Emissions Testing		
Name	*Position on Test Team*	*Affiliation*
Mark McDannel	Team Leader, Data Reduction	Fossil Energy Research Corp.
Arlene Bell	Project Chemist, Sample Recovery and Custody	Delta Air Quality Services
Dave Wonderly	Stack Sampling Leader	Delta Air Quality Services
Greg Walker	Stack Assistant	Delta Air Quality Services
Paul Anderson	Inlet Sampling Leader	Fossil Energy Research Corp.
Jerry Bovee	Inlet Assistant	Fossil Energy Research Corp.
Ron McLeod	Laboratory Analyses	Philip Analytical Services
Ed Lasnik	Tri State Program Manager	Tri State
Christina Garaas	Tri State On-Site Coordinator	Tri State
John Mihalich	Unit Monitoring and Coal Sampling	Tri State

Appendix G. Additional Information

CEMS Data

Boiler Data

Scrubber Data

Fuel Flow and Load Data

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
04-Oct-99	9:21	10.02	0.119	0.424	3.3	76420	433.5
04-Oct-99	9:22	10	0.117	0.427	3.4	75910	433.8
04-Oct-99	9:23	10.03	0.116	0.427	3.3	76290	433
04-Oct-99	9:24	10.04	0.114	0.431	3.5	76392	433.6
04-Oct-99	9:25	10.04	0.113	0.435	3.5	75190	433.4
04-Oct-99	9:26	10.02	0.112	0.44	3.4	76847	433.9
04-Oct-99	9:27	10.06	0.112	0.437	3.4	75985	433.5
04-Oct-99	9:28	10.04	0.111	0.432	3.3	77591	433.3
04-Oct-99	9:29	10.02	0.111	0.431	3.3	74799	434.8
04-Oct-99	9:30	9.1	0.115	0.433	3.3	76889	433
04-Oct-99	9:31	1.29	0.026	0	3.3	75116	434.7
04-Oct-99	9:32	7.47	0.159	0.477	3.5	78281	432.7
04-Oct-99	9:33	9.33	0.125	0.322	3.5	76029	434.7
04-Oct-99	9:34	9.76	0.092	0.458	3.4	75673	432.9
04-Oct-99	9:35	9.85	0.097	0.456	3.4	75851	434
04-Oct-99	9:36	9.9	0.102	0.449	3.3	74921	433.7
04-Oct-99	9:37	9.93	0.103	0.447	3.5	76009	434.8
04-Oct-99	9:38	9.98	0.102	0.447	3.4	75507	433.9
04-Oct-99	9:39	9.99	0.103	0.453	3.4	75898	433.6
04-Oct-99	9:40	10.02	0.103	0.454	3.3	74133	435.2
04-Oct-99	9:41	10.01	0.103	0.443	3.4	76753	434.9
04-Oct-99	9:42	10.03	0.103	0.438	3.4	75202	434.7
04-Oct-99	9:43	10.03	0.104	0.431	3.5	76476	434
04-Oct-99	9:44	9.99	0.105	0.43	3.4	74778	433.5
04-Oct-99	9:45	10.06	0.104	0.43	3.4	76824	432.9
04-Oct-99	9:46	10.04	0.106	0.43	3.3	73670	433.1
04-Oct-99	9:47	10.07	0.106	0.43	3.5	76642	433.3
04-Oct-99	9:48	10.03	0.107	0.431	3.5	75669	433.1
04-Oct-99	9:49	10.07	0.107	0.432	3.4	75716	434.7
04-Oct-99	9:50	10.04	0.108	0.434	3.3	75000	433.4
04-Oct-99	9:51	10.05	0.109	0.435	3.3	77121	434.3
04-Oct-99	9:52	10.02	0.109	0.436	3.1	76085	433.8
04-Oct-99	9:53	10.09	0.109	0.434	3.6	75352	434.3
04-Oct-99	9:54	10.04	0.109	0.435	3.5	75665	433.5
04-Oct-99	9:55	10.08	0.111	0.437	3.4	76780	433.3
04-Oct-99	9:56	10.05	0.111	0.439	3.3	74921	434.6
04-Oct-99	9:57	10.12	0.112	0.437	3.4	77014	433.3
04-Oct-99	9:58	10.07	0.111	0.437	3.6	76001	432.5
04-Oct-99	9:59	10.09	0.111	0.435	3.7	76211	431.4
04-Oct-99	10:00	10.08	0.11	0.431	3.4	76183	433
04-Oct-99	10:01	10.11	0.11	0.429	3.3	75637	433.4
04-Oct-99	10:02	10.12	0.11	0.427	4	76238	434.2
04-Oct-99	10:03	10.07	0.11	0.426	3.4	74807	434.5
04-Oct-99	10:04	10.09	0.11	0.426	3.4	77034	432.9
04-Oct-99	10:05	10.09	0.11	0.425	3.4	75384	433.7
04-Oct-99	10:06	10.09	0.109	0.249	3.5	75423	432.9
04-Oct-99	10:07	10.13	0.109	0.179	3.5	75008	433.7
04-Oct-99	10:08	10.05	0.108	0.261	3.4	75056	434.7

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
04-Oct-99	10:09	10.11	0.108	0.297	3.4	75653	434.7
04-Oct-99	10:10	10.09	0.108	0.345	3.4	73551	433.1
04-Oct-99	10:11	10.11	0.108	0.366	3.4	75787	433.1
04-Oct-99	10:12	10.09	0.108	0.373	3.5	74818	433.9
04-Oct-99	10:13	10.09	0.108	0.376	3.5	75443	434.3
04-Oct-99	10:14	10.07	0.108	0.384	3.4	73861	434.1
04-Oct-99	10:15	10.09	0.108	0.399	3.4	75538	433.1
04-Oct-99	10:16	10.09	0.108	0.404	3.4	74205	434
04-Oct-99	10:17	10.09	0.108	0.419	3.4	75685	432.9
04-Oct-99	10:18	10.07	0.107	0.544	3.5	75878	434.6
04-Oct-99	10:19	10.13	0.108	0.657	3.4	75629	433.7
04-Oct-99	10:20	10.07	0.108	0.711	3.4	75159	434.9
04-Oct-99	10:21	10.11	0.109	0.71	3.4	76194	432.7
04-Oct-99	10:22	10.07	0.109	0.676	3.4	76175	434.3
04-Oct-99	10:23	10.13	0.109	0.661	3.6	75301	433.9
04-Oct-99	10:24	10.05	0.11	0.631	3.6	75278	434.7
04-Oct-99	10:25	10.11	0.11	0.597	3.5	76198	433.5
04-Oct-99	10:26	10.05	0.111	0.58	3.5	75866	434.1
04-Oct-99	10:27	10.09	0.111	0.567	3.5	75408	434.3
04-Oct-99	10:28	10.07	0.111	0.553	3.7	75842	434.4
04-Oct-99	10:29	10.13	0.111	0.553	3.4	74685	435.6
04-Oct-99	10:30	9.81	0.113	N/A	3.4	76249	435.1
04-Oct-99	10:31	5.33	N/A	N/A	3.5	74903	435.3
04-Oct-99	10:32	5.97	0.221	N/A	3.7	75878	432.3
04-Oct-99	10:33	9.03	N/A	N/A	3.4	75637	434.4
04-Oct-99	10:34	9.71	0.139	N/A	3.5	74784	433.4
04-Oct-99	10:35	9.9	N/A	N/A	3.4	75463	435.3
04-Oct-99	10:36	9.91	N/A	N/A	3.3	75823	434.5
04-Oct-99	10:37	10.01	N/A	N/A	3.5	76103	434.7
04-Oct-99	10:38	9.99	N/A	N/A	3.4	75049	433.3
04-Oct-99	10:39	10.05	N/A	N/A	3.5	75057	434
04-Oct-99	10:40	10.05	0.139	N/A	3.4	74836	433.9
04-Oct-99	10:41	10.07	0.139	0.379	3.4	76043	434.5
04-Oct-99	10:42	10.07	0.139	0.906	3.5	74714	434.5
04-Oct-99	10:43	10.08	0.139	N/A	3.5	76572	434.1
04-Oct-99	10:44	10.08	0.139	N/A	3.3	74600	434.3
04-Oct-99	10:45	10.09	0.139	N/A	3.4	77293	431.9
04-Oct-99	10:46	10.08	0.139	N/A	3.4	76283	432.5
04-Oct-99	10:47	10.08	0.139	N/A	3.5	76272	432.3
04-Oct-99	10:48	10.01	0.139	N/A	3.6	76980	433.1
04-Oct-99	10:49	10.05	0.139	N/A	3.4	75724	433.4
04-Oct-99	10:50	10.07	0.139	N/A	3.4	76354	433.9
04-Oct-99	10:51	10.09	0.139	N/A	3.4	75810	433.8
04-Oct-99	10:52	10.05	0.138	N/A	3.2	75452	432.7
04-Oct-99	10:53	10.11	0.137	N/A	4.2	76861	432.7
04-Oct-99	10:54	10.04	0.137	N/A	3.5	75979	432.8
04-Oct-99	10:55	10.01	0.136	N/A	3.4	76152	432.1
04-Oct-99	10:56	10	0.382	N/A	3.6	74598	434.2

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
04-Oct-99	10:57	4.64	N/A	N/A	3.8	76762	433.3
04-Oct-99	10:58	0.26	N/A	N/A	3.7	74920	434
04-Oct-99	10:59	-0.04	N/A	N/A	3.5	77191	433.1
04-Oct-99	11:00	-0.05	N/A	N/A	3.5	73854	434.3
04-Oct-99	11:01	-0.05	N/A	N/A	3.5	76589	433.8
04-Oct-99	11:02	-0.05	N/A	N/A	3.5	73596	435.9
04-Oct-99	11:03	-0.05	N/A	N/A	3.4	76124	432.7
04-Oct-99	11:04	-0.05	N/A	N/A	3.5	75145	433.7
04-Oct-99	11:05	2.04	N/A	N/A	3.5	75594	432.3
04-Oct-99	11:06	7.7	0.197	N/A	3.6	76093	433.5
04-Oct-99	11:07	9.2	0.17	N/A	3.4	76077	433.8
04-Oct-99	11:08	9.65	0.14	0.47	3.5	76438	433.9
04-Oct-99	11:09	9.88	0.131	0.464	3.5	75617	433.3
04-Oct-99	11:10	9.85	0.127	0.446	3.4	75582	433.2
04-Oct-99	11:11	9.96	0.126	0.45	3.4	75594	433.5
04-Oct-99	11:12	9.89	0.126	0.446	3.5	75558	433.5
04-Oct-99	11:13	9.98	0.126	0.443	3.5	105276	434.2
04-Oct-99	11:14	9.94	0.124	0.439	3.4	105207	433.8
04-Oct-99	11:15	9.93	0.124	0.438	3.5	105161	433.5
04-Oct-99	11:16	9.88	0.125	0.437	3.5	105161	433.8
04-Oct-99	11:17	10.02	0.124	0.434	3.6	75405	433.6
04-Oct-99	11:18	9.94	0.123	0.433	3.5	74116	434.9
04-Oct-99	11:19	9.97	0.122	0.431	3.4	75750	433.1
04-Oct-99	11:20	9.94	0.122	0.43	3.4	75531	433.1
04-Oct-99	11:21	9.96	0.122	0.427	3.5	74876	434.8
04-Oct-99	11:22	9.96	0.122	0.425	3.7	76217	434.2
04-Oct-99	11:23	10.03	0.122	0.425	3.6	75084	434
04-Oct-99	11:24	9.95	0.122	0.427	3.7	77753	432.5
04-Oct-99	11:25	9.99	0.123	0.427	3.6	75092	434.9
04-Oct-99	11:26	9.97	0.123	0.427	3.7	75594	433.6
04-Oct-99	11:27	10.02	0.125	0.425	3.7	76534	434.1
04-Oct-99	11:28	9.96	0.128	0.425	3.5	75844	434
04-Oct-99	11:29	10.04	0.13	0.425	3.4	76048	433.7
04-Oct-99	11:30	10	0.136	0.425	3.4	74530	433.9
04-Oct-99	11:31	6.14	0.148	0.429	3.5	76597	432.3
04-Oct-99	11:32	3.01	0.056	0.364	3.6	75289	433.7
04-Oct-99	11:33	8.23	0.096	0.48	3.5	75930	433.5
04-Oct-99	11:34	9.52	0.125	0.409	3.4	76039	433.5
04-Oct-99	11:35	9.87	0.128	0.404	3.5	74905	434
04-Oct-99	11:36	9.88	0.129	0.409	3.5	76274	432.8
04-Oct-99	11:37	10.01	0.129	0.408	3.6	75836	433.7
04-Oct-99	11:38	9.92	0.13	0.409	3.5	77237	432.9
04-Oct-99	11:39	10.08	0.131	0.415	3.4	76814	434.1
04-Oct-99	11:40	9.95	0.131	0.424	3.5	75566	433.5
04-Oct-99	11:41	10.04	0.132	0.426	3.5	76345	434.3
04-Oct-99	11:42	10	0.133	0.43	3.6	74775	435.4
04-Oct-99	11:43	10.05	0.132	0.432	3.6	75543	435.3
04-Oct-99	11:44	10.03	0.132	0.432	3.5	75378	433.2

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
04-Oct-99	11:45	10.12	0.132	0.432	3.5	75292	432.3
04-Oct-99	11:46	10.07	0.131	0.435	3.5	76599	432.9
04-Oct-99	11:47	10.11	0.131	0.438	3.6	75989	433.4
04-Oct-99	11:48	10.09	0.131	0.437	3.5	77005	433.9
04-Oct-99	11:49	10.15	0.131	0.437	3.4	75777	433.9
04-Oct-99	11:50	10.09	0.132	0.439	3.4	75449	434.4
04-Oct-99	11:51	10.19	0.132	0.437	4	76098	433.5
04-Oct-99	11:52	10.09	0.132	0.437	3.6	76434	433.7
04-Oct-99	11:53	10.1	0.133	0.436	3.9	75949	433.3
04-Oct-99	11:54	10.08	0.133	0.437	3.6	75425	433.9
04-Oct-99	11:55	10.17	0.132	0.437	3.5	75343	434.4
04-Oct-99	11:56	10.11	0.132	0.438	3.6	75625	434.7
04-Oct-99	11:57	10.15	0.133	0.438	3.7	74686	433.5
04-Oct-99	11:58	10.11	0.133	0.438	3.8	75550	433.8
04-Oct-99	11:59	10.22	0.132	0.438	3.6	75996	434.1
04-Oct-99	12:00	10.13	0.132	0.437	3.6	75245	434.5
04-Oct-99	12:01	10.22	0.132	0.437	3.6	75719	434.3
04-Oct-99	12:02	10.11	0.132	0.436	3.5	75789	433.2
04-Oct-99	12:03	10.21	0.132	0.435	3.5	76700	433.9
04-Oct-99	12:04	10.11	0.132	0.434	3.5	75594	434.8
04-Oct-99	12:05	10.22	0.133	0.433	3.6	76973	433.9
04-Oct-99	12:06	10.11	0.132	0.431	3.5	75218	434.7
04-Oct-99	12:07	10.22	0.132	0.429	3.5	75156	434.9
04-Oct-99	12:08	10.09	0.132	0.428	3.5	75262	432.4
04-Oct-99	12:09	10.15	0.133	0.425	3.5	76070	432.5
04-Oct-99	12:10	10.14	0.134	0.423	3.5	75949	433.7
04-Oct-99	12:11	10.2	0.133	0.42	3.5	75164	433.9
04-Oct-99	12:12	10.1	0.132	0.419	3.6	74094	434
04-Oct-99	12:13	10.19	0.132	0.416	3.5	74301	433.7
04-Oct-99	12:14	10.1	0.133	0.414	3.5	75035	433.8
04-Oct-99	12:15	10.18	0.133	0.412	3.5	75453	433.4
04-Oct-99	12:16	10.1	0.132	0.409	3.4	75195	433.5
04-Oct-99	12:17	10.14	0.132	0.407	3.9	75301	434.5
04-Oct-99	12:18	10.11	0.133	0.405	3.6	75152	435.3
04-Oct-99	12:19	10.24	0.133	0.402	3.5	76109	433.7
04-Oct-99	12:20	10.13	0.134	0.401	3.5	75363	432.1
04-Oct-99	12:21	10.13	0.133	0.399	3.6	75691	432.7
04-Oct-99	12:22	10.12	0.134	0.399	3.5	75340	433.3
04-Oct-99	12:23	10.14	0.134	0.397	3.7	75656	434.3
04-Oct-99	12:24	10.1	0.134	0.397	3.7	74797	435.1
04-Oct-99	12:25	10.23	0.134	0.395	3.6	75445	434.2
04-Oct-99	12:26	10.11	0.135	0.395	3.6	76066	433.5
04-Oct-99	12:27	10.22	0.135	0.394	3.6	75094	432.9
04-Oct-99	12:28	10.1	0.135	0.394	3.5	76038	433.1
04-Oct-99	12:29	10.17	0.135	0.392	3.5	76206	432.8
04-Oct-99	12:30	10.17	0.136	0.391	3.7	74607	433.1
04-Oct-99	12:31				3.7	76373	432.5
04-Oct-99	12:32				3.6	73898	434

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
04-Oct-99	12:33					74790	434.8
Test 1 Average		***9.40***	***0.12***	***0.44***	***3.50***	***76293***	***434***
04-Oct-99	13:36	9.94	0.138	0.373	3.5	76025	430.6
04-Oct-99	13:37	10.01	0.138	0.375	3.5	77140	432.2
04-Oct-99	13:38	10.02	0.137	0.374	3.4	76029	431.5
04-Oct-99	13:39	10.15	0.137	0.375	3.5	75232	431.9
04-Oct-99	13:40	10.05	0.137	0.376	3.8	74073	432.2
04-Oct-99	13:41	10.1	0.137	0.377	3.6	75061	431.5
04-Oct-99	13:42	10.08	0.136	0.376	3.6	75314	431.6
04-Oct-99	13:43	10.15	0.135	0.375	3.6	74477	432.3
04-Oct-99	13:44	10.11	0.134	0.375	3.5	75831	430.5
04-Oct-99	13:45	10.15	0.135	0.376	3.6	76215	430.1
04-Oct-99	13:46	10.11	0.135	0.375	3.6	75154	430.4
04-Oct-99	13:47	10.2	0.135	0.375	3.6	74819	430.7
04-Oct-99	13:48	10.1	0.134	0.374	3.5	75387	431.3
04-Oct-99	13:49	10.17	0.133	0.372	3.6	75994	430.5
04-Oct-99	13:50	10.15	0.133	0.37	3.5	75473	431.5
04-Oct-99	13:51	10.15	0.132	0.369	3.4	74893	430.6
04-Oct-99	13:52	10.13	0.132	0.367	4.2	75551	430.3
04-Oct-99	13:53	10.2	0.132	0.367	3.6	74532	429.7
04-Oct-99	13:54	10.12	0.131	0.367	3.6	75776	430.3
04-Oct-99	13:55	10.18	0.131	0.366	3.6	75621	430.5
04-Oct-99	13:56	10.13	0.131	0.364	3.7	75862	431.8
04-Oct-99	13:57	10.2	0.131	0.363	3.8	75068	431.6
04-Oct-99	13:58	10.19	0.13	0.362	3.7	76939	430.7
04-Oct-99	13:59	10.23	0.129	0.36	3.7	73932	431.3
04-Oct-99	14:00	10.14	0.129	0.358	3.6	75562	430.5
04-Oct-99	14:01	10.21	0.127	0.358	3.6	76798	430.4
04-Oct-99	14:02	10.17	0.127	0.357	3.6	75314	431.6
04-Oct-99	14:03	10.21	0.127	0.356	3.6	76426	430.7
04-Oct-99	14:04	10.19	0.127	0.357	3.6	75193	432.5
04-Oct-99	14:05	10.23	0.126	0.355	3.6	75126	431.1
04-Oct-99	14:06	10.17	0.125	0.354	3.9	75644	431.9
04-Oct-99	14:07	10.23	0.122	0.353	3.7	74695	433
04-Oct-99	14:08	10.17	0.122	0.353	3.6	76119	430.7
04-Oct-99	14:09	10.22	0.121	0.352	3.5	75333	432.4
04-Oct-99	14:10	10.17	0.12	0.352	3.7	75663	431.3
04-Oct-99	14:11	10.19	0.12	0.352	3.7	74485	433.1
04-Oct-99	14:12	10.19	0.119	0.352	3.5	75963	431.3
04-Oct-99	14:13	10.24	0.12	0.352	3.6	75586	432.1
04-Oct-99	14:14	10.15	0.118	0.352	3.5	76457	431.5
04-Oct-99	14:15	10.28	0.117	0.352	3.5	75247	432.3
04-Oct-99	14:16	10.11	0.117	0.353	3.6	74010	432.3
04-Oct-99	14:17	10.23	0.117	0.353	3.7	76733	431.6
04-Oct-99	14:18	10.13	0.115	0.353	3.5	75430	433.1
04-Oct-99	14:19	10.23	0.112	0.354	3.5	76558	432.7
04-Oct-99	14:20	10.17	0.112	0.354	3.6	76146	432.5

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
04-Oct-99	14:21	10.21	0.11	0.354	3.5	75236	431.9
04-Oct-99	14:22	10.17	0.109	0.354	3.6	75656	432.1
04-Oct-99	14:23	10.19	0.108	0.354	3.8	76072	433.1
04-Oct-99	14:24	10.19	0.107	0.353	3.6	74792	433.4
04-Oct-99	14:25	10.21	0.106	0.352	3.6	76158	431.8
04-Oct-99	14:26	10.15	0.106	0.352	3.6	75951	432.1
04-Oct-99	14:27	10.25	0.103	0.353	3.5	74633	431.1
04-Oct-99	14:28	10.21	0.101	0.352	3.5	76558	431.4
04-Oct-99	14:29	10.24	0.1	0.352	3.5	75298	432.7
04-Oct-99	14:30	10.2	0.101	0.351	3.6	75562	433.3
04-Oct-99	14:31	10.05	0.104	0.351	3.6	74665	433.9
04-Oct-99	14:32	5.68	0.062	0.253	3.6	75415	432.6
04-Oct-99	14:33	5.33	0.056	N/A	3.4	75698	432.7
04-Oct-99	14:34	9.05	0.097	0.368	3.6	74785	432.1
04-Oct-99	14:35	10.21	0.111	0.324	3.6	76153	432.2
04-Oct-99	14:36	10.1	0.112	0.324	3.6	74560	433.9
04-Oct-99	14:37	10.27	0.113	0.325	3.5	75446	433.6
04-Oct-99	14:38	10.23	0.114	0.321	3.5	75764	433.5
04-Oct-99	14:39	10.32	0.113	0.321	3.6	75294	431.7
04-Oct-99	14:40	10.29	0.113	0.323	3.7	75364	432.3
04-Oct-99	14:41	10.31	0.112	0.323	3.6	74305	433.3
04-Oct-99	14:42	10.29	0.112	0.323	3.6	75815	433.7
04-Oct-99	14:43	10.34	0.113	0.324	3.6	75221	432.7
04-Oct-99	14:44	10.28	0.112	0.324	3.6	75648	432.5
04-Oct-99	14:45	10.32	0.112	0.325	3.6	75058	433.7
04-Oct-99	14:46	10.26	0.112	0.325	3.6	75155	433.2
04-Oct-99	14:47	10.35	0.112	0.324	3.7	76156	432.5
04-Oct-99	14:48	10.26	0.112	0.326	3.6	76738	432.1
04-Oct-99	14:49	10.3	0.112	0.326	3.6	75489	432.3
04-Oct-99	14:50	10.25	0.112	0.326	3.5	75198	432.6
04-Oct-99	14:51	10.31	0.113	0.327	3.4	74682	433.8
04-Oct-99	14:52	10.25	0.114	0.328	4	76319	432.9
04-Oct-99	14:53	10.32	0.115	0.329	3.7	74969	433.7
04-Oct-99	14:54	10.23	0.115	0.33	3.6	75974	431.7
04-Oct-99	14:55	10.34	0.115	0.331	3.7	75776	432.3
04-Oct-99	14:56	10.27	0.115	0.331	3.8	75737	432.2
04-Oct-99	14:57	10.31	0.115	0.331	3.9	75345	433.4
04-Oct-99	14:58	10.22	0.116	0.332	3.7	75008	432.6
04-Oct-99	14:59	10.3	0.117	0.333	3.8	76951	433.7
04-Oct-99	15:00	10.28	0.117	0.333	3.8	75120	432.9
04-Oct-99	15:01	10.32	0.117	0.332	3.8	75191	433
04-Oct-99	15:02	10.26	0.117	0.332	3.6	74931	432.7
04-Oct-99	15:03	10.32	0.117	0.334	3.6	75737	433.3
04-Oct-99	15:04	10.25	0.118	0.335	3.6	75248	432.8
04-Oct-99	15:05	10.32	0.118	0.335	3.8	76229	433.6
04-Oct-99	15:06	10.25	0.117	0.337	3.6	74853	433.6
04-Oct-99	15:07	10.34	0.117	0.338	3.6	76271	433.4
04-Oct-99	15:08	10.23	0.118	0.339	3.6	73631	433.3

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
04-Oct-99	15:09	10.27	0.118	0.338	3.7	76647	431.7
04-Oct-99	15:10	10.29	0.118	0.338	3.6	76124	432.2
04-Oct-99	15:11	10.31	0.118	0.338	3.8	76054	431.8
04-Oct-99	15:12	10.24	0.119	0.338	3.6	76066	432.3
04-Oct-99	15:13	10.32	0.12	0.337	3.6	76089	432.7
04-Oct-99	15:14	10.28	0.12	0.336	3.6	107497	434.5
04-Oct-99	15:15	10.3	0.119	0.334	3.7	107497	433.3
04-Oct-99	15:16	10.21	0.118	0.333	3.7	107404	435
04-Oct-99	15:17	10.32	0.115	0.332	3.6	102743	432.9
04-Oct-99	15:18	10.33	0.114	0.331	3.5	75973	433.1
04-Oct-99	15:19	10.39	0.112	0.331	3.5	75323	431.4
04-Oct-99	15:20	10.28	0.111	0.331	3.6	76042	433.2
04-Oct-99	15:21	10.32	0.108	0.332	3.6	74723	432.9
04-Oct-99	15:22	10.23	0.108	0.332	3.8	75999	433.1
04-Oct-99	15:23	10.34	0.108	0.332	3.7	74541	433.5
04-Oct-99	15:24	10.27	0.109	0.333	3.8	75686	433.9
04-Oct-99	15:25	10.36	0.109	0.332	3.7	73996	433.5
04-Oct-99	15:26	10.25	0.111	0.331	3.7	75253	431.8
04-Oct-99	15:27	10.34	0.113	0.33	3.6	74731	434
04-Oct-99	15:28	10.29	0.114	0.33	3.5	75528	432.7
04-Oct-99	15:29	10.3	0.116	0.33	3.9	74712	432.2
04-Oct-99	15:30	10.26	0.115	0.33	3.7	74510	430.9
04-Oct-99	15:31	10.26	0.112	0.329	3.7	75590	431.3
04-Oct-99	15:32	9.53	0.106	0.332	3.5	74966	431.1
04-Oct-99	15:33	3.08	0.055	0.287	3.6	75632	429.6
04-Oct-99	15:34	8.22	0.069	0.388	3.7	76131	430.5
04-Oct-99	15:35	9.63	0.089	0.313	3.6	74722	429.8
04-Oct-99	15:36	9.97	0.098	0.305	3.6	76596	429.4
04-Oct-99	15:37	10.11	0.099	0.306	3.5	74272	430.5
04-Oct-99	15:38	10.12	0.099	0.31	3.6	74826	429.5
04-Oct-99	15:39	10.18	0.098	0.318	3.6	74884	430.3
04-Oct-99	15:40	10.14	0.097	0.318	3.6	75489	429.1
04-Oct-99	15:41	10.18	0.097	0.318	3.6	75051	429.6
04-Oct-99	15:42	10.17	0.097	0.32	3.5	75431	428.7
04-Oct-99	15:43	10.22	0.097	0.322	3.6	75245	428.9
04-Oct-99	15:44	10.16	0.097	0.323	3.5	74853	429.1
04-Oct-99	15:45	10.2	0.097	0.324	3.7	76442	427.5
04-Oct-99	15:46	10.22	0.097	0.324	3.6	74520	429.9
04-Oct-99	15:47	10.18	0.098	0.325	3.6	76035	429
04-Oct-99	15:48	10.17	0.1	0.327	3.6	75966	429.7
04-Oct-99	15:49	10.18	0.1	0.328	3.5	74949	429
04-Oct-99	15:50	10.21	0.099	0.329	3.4	74950	428.9
04-Oct-99	15:51	10.21	0.098	0.331	3.9	75167	429
04-Oct-99	15:52	10.21	0.099	0.332	3.7	75725	427.9
04-Oct-99	15:53	10.2	0.099	0.332	3.7	75027	428.7
04-Oct-99	15:54	10.16	0.1	0.332	3.6	75047	427.9
04-Oct-99	15:55	10.19	0.101	0.331	3.8	75016	428.9
04-Oct-99	15:56	10.17	0.101	0.331	4.1	75012	430.3

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
04-Oct-99	15:57	10.23	0.101	0.331	4	74799	428.7
04-Oct-99	15:58	10.23	0.102	0.331	3.6	73487	428.9
04-Oct-99	15:59	10.23	0.102	0.331	3.7	73917	428.1
04-Oct-99	16:00	10.23	0.102	0.331	3.7	75082	428.5
04-Oct-99	16:01	10.22	0.102	0.332	3.6	73671	427.9
04-Oct-99	16:02	10.2	0.103	0.331	3.6	73821	428.3
04-Oct-99	16:03	10.2	0.104	0.329	3.6	72936	427.7
04-Oct-99	16:04	10.23	0.106	0.327	3.5	74724	427.9
04-Oct-99	16:05	10.2	0.107	0.326	3.6	73096	428.9
04-Oct-99	16:06	10.18	0.107	0.326	3.6	75830	427.3
04-Oct-99	16:07	10.22	0.108	0.324	3.6	74286	429.2
04-Oct-99	16:08	10.18	0.108	0.323	3.5	74456	428.5
04-Oct-99	16:09	10.22	0.108	0.323	3.6	74298	428.2
04-Oct-99	16:10	10.14	0.108	0.323	3.7	72933	427.9
04-Oct-99	16:11	10.21	0.11	0.321	3.6	75257	428.3
04-Oct-99	16:12	10.23	0.114	0.321	3.6	74047	429.3
04-Oct-99	16:13	10.21	0.118	0.321	3.6	75543	428
04-Oct-99	16:14	10.21	0.117	0.321	3.5	74531	428.5
04-Oct-99	16:15	10.22	0.115	0.32	3.6	74996	428.2
04-Oct-99	16:16	10.23	0.114	0.319	3.5	75652	429.1
04-Oct-99	16:17	10.2	0.113	0.32	3.5	75636	429.7
04-Oct-99	16:18	10.21	0.114	0.319	3.5	75935	428.1
04-Oct-99	16:19	10.19	0.114	0.32	3.5	75128	427.7
04-Oct-99	16:20	10.23	0.114	0.319	3.5	75047	427.9
04-Oct-99	16:21	10.22	0.114	0.32	3.6	76946	427
04-Oct-99	16:22	10.2	0.113	0.32	3.6	73903	428.3
04-Oct-99	16:23	10.15	0.113	0.32	3.9	75803	427.2
04-Oct-99	16:24	10.21	0.114	0.32	3.8	74034	428.9
04-Oct-99	16:25	10.17	0.114	0.321	3.6	75438	428.9
04-Oct-99	16:26	10.19	0.114	0.322	3.5	74593	430.5
04-Oct-99	16:27	10.19	0.114	0.322	3.6	75171	428.8
04-Oct-99	16:28	10.13	0.114	0.324	3.6	75663	429
04-Oct-99	16:29	10.17	0.113	0.324	3.6	75935	427.1
04-Oct-99	16:30	10.21	0.113	0.325	3.6	74845	428.5
04-Oct-99	16:31	10.14	0.113	0.327	3.5	75400	426.7
04-Oct-99	16:32	9.58	0.111	0.329	3.6	75768	428.3
04-Oct-99	16:33	4.36	0.045	0.444	3.5	75078	427.7
04-Oct-99	16:34	7.18	0.074	0.445	3.6	75621	427.6
04-Oct-99	16:35	9.63	0.099	0.321	3.6	73985	428.6
04-Oct-99	16:36	9.91	0.114	0.311	3.5	75423	428.5
Test 2 Average		***10.04***	***0.11***	***0.34***	***3.62***	***75989***	***431***

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
05-Oct-99	8:30	10.12	0.103	0.401	3.2	71514	433.9
05-Oct-99	8:31	10.23	0.102	0.4	3.1	73419	433.1
05-Oct-99	8:32	9.36	0.101	0.402	3.6	71596	433.7
05-Oct-99	8:33	1.48	0.026	0.328	3.7	72714	432.8
05-Oct-99	8:34	7.71	0.107	0.518	3.3	70044	433.1
05-Oct-99	8:35	9.73	0.102	0.376	3.3	72226	431.6
05-Oct-99	8:36	10.06	0.093	0.364	3.3	70832	432.3
05-Oct-99	8:37	10.27	0.09	0.366	3.3	71767	430.3
05-Oct-99	8:38	10.25	0.089	0.378	3.3	71654	430.5
05-Oct-99	8:39	10.36	0.09	0.384	3.2	70337	429.9
05-Oct-99	8:40	10.34	0.09	0.384	3.2	71043	430.7
05-Oct-99	8:41	10.37	0.09	0.384	3.1	70634	431.4
05-Oct-99	8:42	10.32	0.09	0.384	3.1	72961	431.3
05-Oct-99	8:43	10.39	0.091	0.38	3.1	69304	430.9
05-Oct-99	8:44	10.4	0.093	0.377	3.8	73511	430.8
05-Oct-99	8:45	10.45	0.093	0.371	3.2	69640	430.9
05-Oct-99	8:46	10.43	0.093	0.37	3.2	72442	431
05-Oct-99	8:47	10.49	0.095	0.368	3.3	71126	430.2
05-Oct-99	8:48	10.42	0.096	0.368	3.6	72101	428.5
05-Oct-99	8:49	10.42	0.095	0.367	3.7	71311	427.3
05-Oct-99	8:50	10.42	0.096	0.367	3.3	74240	428.3
05-Oct-99	8:51	10.51	0.099	0.371	3.2	72578	428.5
05-Oct-99	8:52	10.43	0.102	0.369	3.3	73318	428.8
05-Oct-99	8:53	10.49	0.103	0.369	3.5	72317	429.7
05-Oct-99	8:54	10.46	0.103	0.368	3.3	72709	429.4
05-Oct-99	8:55	10.53	0.104	0.37	3.2	71307	430.5
05-Oct-99	8:56	10.48	0.105	0.372	3.2	72109	429.1
05-Oct-99	8:57	10.49	0.105	0.372	3.3	72105	430.4
05-Oct-99	8:58	10.44	0.104	0.37	3.5	72177	429.5
05-Oct-99	8:59	10.48	0.104	0.369	3.3	72815	429.1
05-Oct-99	9:00	10.4	0.106	0.368	3.2	73206	428.5
05-Oct-99	9:01	10.44	0.107	0.365	3.1	74010	429.1
05-Oct-99	9:02	10.44	0.107	0.364	3.3	73025	429.1
05-Oct-99	9:03	10.48	0.109	0.363	3.3	74434	429.1
05-Oct-99	9:04	10.44	0.111	0.362	3.3	73298	430.2
05-Oct-99	9:05	10.44	0.112	0.362	3.3	73341	429.1
05-Oct-99	9:06	10.42	0.112	0.361	3.4	73714	430.3
05-Oct-99	9:07	10.51	0.114	0.362	3.4	73531	430.1
05-Oct-99	9:08	10.44	0.116	0.363	3.5	74283	430.9
05-Oct-99	9:09	10.42	0.116	0.363	3.5	72473	431.4
05-Oct-99	9:10	10.41	0.114	0.363	3.3	73578	431.4
05-Oct-99	9:11	10.5	0.113	0.363	3.2	72940	432.7
05-Oct-99	9:12	10.4	0.111	0.364	3.2	73238	433.3
05-Oct-99	9:13	10.4	0.113	0.364	3.2	73776	433.5
05-Oct-99	9:14	10.4	0.114	0.364	3.3	73765	433.1
05-Oct-99	9:15	10.38	0.114	0.365	3.5	73753	433.9
05-Oct-99	9:16	10.41	0.115	0.366	3.4	81246	433.8
05-Oct-99	9:17	10.4	0.119	0.367	3.3	101985	433.7

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
05-Oct-99	9:18	10.36	0.124	0.366	3.2	102007	432.6
05-Oct-99	9:19	10.34	0.124	0.365	3.2	101941	433.5
05-Oct-99	9:20	10.42	0.122	0.366	3.2	90346	433.1
05-Oct-99	9:21	10.49	0.12	0.367	3.1	73591	433.2
05-Oct-99	9:22	10.4	0.123	0.369	3.6	73943	434.5
05-Oct-99	9:23	10.48	0.126	0.37	3.3	74539	433.6
05-Oct-99	9:24	10.44	0.124	0.371	3.1	73575	433.1
05-Oct-99	9:25	10.42	0.122	0.371	3.2	73228	432
05-Oct-99	9:26	10.42	0.123	0.369	3.3	74800	432.1
05-Oct-99	9:27	10.42	0.124	0.369	3.3	74335	434.1
05-Oct-99	9:28	10.44	0.127	0.368	3.2	73241	434.5
05-Oct-99	9:29	10.49	0.134	0.368	3.1	74369	434.2
05-Oct-99	9:30	10.44	0.133	0.368	3.1	73376	433
05-Oct-99	9:31	10.51	0.122	0.367	3.1	73566	433.5
05-Oct-99	9:32	10.42	0.122	0.366	3.3	73269	434.3
05-Oct-99	9:33				3.3	72807	434.4
05-Oct-99	9:34				3.1	71792	434.5
05-Oct-99	9:35				3.1	73823	433.1
05-Oct-99	9:36				3.1	73700	433.8
05-Oct-99	9:37	10.24	0.133	0.343	3	72799	432.7
05-Oct-99	9:38	10.23	0.133	0.344	3.7	73096	434.5
05-Oct-99	9:39	10.38	0.135	0.343	3.4	73349	434
05-Oct-99	9:40	10.35	0.136	0.344	3.3	73329	434.5
05-Oct-99	9:41	10.44	0.134	0.344	3.2	73632	433.6
05-Oct-99	9:42	10.38	0.136	0.344	3.3	74281	434.1
05-Oct-99	9:43	10.46	0.136	0.346	3.6	72858	435.3
05-Oct-99	9:44	10.43	0.135	0.348	3.6	71993	434.5
05-Oct-99	9:45	10.53	0.139	0.35	3.4	72918	434.8
05-Oct-99	9:46	10.46	0.138	0.35	3.3	73439	434.7
05-Oct-99	9:47	10.59	0.137	0.349	3.4	73566	434
05-Oct-99	9:48	10.48	0.136	0.349	3.3	72388	433.7
05-Oct-99	9:49	10.53	0.137	0.349	3.2	74111	433.2
05-Oct-99	9:50	10.53	0.138	0.35	3.2	72316	434.7
05-Oct-99	9:51	10.59	0.137	0.351	3.2	73174	434.7
05-Oct-99	9:52	10.53	0.137	0.35	3.2	73305	434.9
05-Oct-99	9:53	10.61	0.138	0.351	3.4	72894	435.5
05-Oct-99	9:54	10.54	0.139	0.352	3.3	73024	435.3
05-Oct-99	9:55	10.58	0.143	0.353	3.1	74708	435.1
05-Oct-99	9:56	10.54	0.142	0.354	3.2	73751	434.5
05-Oct-99	9:57	10.58	0.14	0.354	3.3	73739	433.3
05-Oct-99	9:58	10.55	0.142	0.355	3.3	73118	433.8
05-Oct-99	9:59	10.63	0.142	0.355	3.3	73545	433.8
05-Oct-99	10:00	10.53	0.139	0.354	3.1	72959	434.6
05-Oct-99	10:01	10.59	0.134	0.355	3.1	72813	435.2
05-Oct-99	10:02	10.58	0.134	0.353	3.4	73366	435.2
05-Oct-99	10:03	10.65	0.134	0.353	3.4	72988	434.9
05-Oct-99	10:04	10.55	0.134	0.353	3.3	73854	433.7
05-Oct-99	10:05	10.62	0.133	0.354	3.2	73209	435.1

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
05-Oct-99	10:06	10.53	0.133	0.355	3.1	73557	434
05-Oct-99	10:07	10.66	0.133	0.358	3.1	72988	434.1
05-Oct-99	10:08	10.48	0.386	0.36	3.3	72861	434.4
05-Oct-99	10:09				3.2	75443	432.8
05-Oct-99	10:10				3.2	73617	434.4
05-Oct-99	10:11				3.4	74448	433.9
05-Oct-99	10:12				3.4	73842	433.9
05-Oct-99	10:13				3.2	73593	434.1
05-Oct-99	10:14				3.2	73752	433.9
05-Oct-99	10:15				3.2	74052	433.7
05-Oct-99	10:16				3.2	73989	433
05-Oct-99	10:17				3.2	73330	434.8
05-Oct-99	10:18				3.2	73380	433.7
05-Oct-99	10:19				3.1	74163	433
05-Oct-99	10:20				3.2	73661	432.9
05-Oct-99	10:21				3.2	74191	433.5
05-Oct-99	10:22				3.3	73851	434
05-Oct-99	10:23				3.2	73093	434.9
05-Oct-99	10:24				3.2	74554	434
05-Oct-99	10:25				3.2	73748	433.7
05-Oct-99	10:26				3.2	73475	433
05-Oct-99	10:27				3.2	73416	433.9
05-Oct-99	10:28				3.2	74044	433.1
05-Oct-99	10:29				3.1	73997	432.9
05-Oct-99	10:30				3.2	73061	434.2
05-Oct-99	10:31				3.2	73337	434.7
05-Oct-99	10:32				3.4	74076	434.5
05-Oct-99	10:33				3.8	74013	434.1
05-Oct-99	10:34				3.2	74072	434
05-Oct-99	10:35				3.3	74210	433.2
05-Oct-99	10:36				3.5	74013	433.7
05-Oct-99	10:37				3.3	74076	434.1
05-Oct-99	10:38				3.7	74942	432
05-Oct-99	10:39				3.3	75854	432.6
05-Oct-99	10:40				3.3	74412	434.4
05-Oct-99	10:41				3.3	74562	434.1
05-Oct-99	10:42				3.3	74045	433.7
05-Oct-99	10:43				3.2	74614	433.9
05-Oct-99	10:44				3.2	74882	436
05-Oct-99	10:45				3.1	73981	433.3
05-Oct-99	10:46	10.7	0.117	0.339	3.2	75254	432.1
05-Oct-99	10:47	10.51	0.122	0.356	3.2	74906	434.7
05-Oct-99	10:48	10.39	0.131	0.371	3.2	74673	434.9
05-Oct-99	10:49	10.37	0.138	0.377	3.2	73574	433.6
05-Oct-99	10:50	10.33	0.135	0.377	3.1	73554	432.8
05-Oct-99	10:51	10.32	0.137	0.373	3.1	74685	434.1
05-Oct-99	10:52	10.29	0.139	0.377	3.1	72795	435
05-Oct-99	10:53	10.3	0.139	0.382	3.2	74400	433.1

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
05-Oct-99	10:54	10.26	0.138	0.381	3.1	74582	432.9
05-Oct-99	10:55	10.31	0.138	0.38	3.1	74124	434.6
05-Oct-99	10:56	10.26	0.14	0.379	3	73926	434.7
05-Oct-99	10:57	10.3	0.14	0.377	3.1	73851	433.1
05-Oct-99	10:58	10.26	0.138	0.376	3.2	73958	433.7
05-Oct-99	10:59	10.28	0.138	0.376	3.2	73808	434.3
05-Oct-99	11:00	10.26	0.139	0.374	3	74547	433.5
05-Oct-99	11:01	10.28	0.139	0.374	3.5	74922	431.5
05-Oct-99	11:02	10.3	0.139	0.374	3.1	75440	433.7
05-Oct-99	11:03	10.23	0.139	0.374	3.3	73539	435.4
05-Oct-99	11:04	10.28	0.139	0.375	3.4	74456	433.4
05-Oct-99	11:05	10.26	0.139	0.374	3.3	74883	432.7
05-Oct-99	11:06	10.26	0.139	0.371	3.2	75068	433.3
05-Oct-99	11:07	10.3	0.139	0.372	3	75578	434.3
05-Oct-99	11:08	10.28	0.138	0.372	3.1	74341	434
05-Oct-99	11:09	10.24	0.138	0.372	3.1	75965	431.7
05-Oct-99	11:10	10.26	0.137	0.373	3.2	74606	434.1
05-Oct-99	11:11	10.26	0.137	0.372	3.3	73718	434.9
05-Oct-99	11:12	10.24	0.137	0.372	3.2	73840	433.3
05-Oct-99	11:13	10.26	0.137	0.373	3.1	72350	433.1
05-Oct-99	11:14	10.23	0.135	0.373	3.1	72361	433.7
05-Oct-99	11:15	10.28	0.134	0.373	3.1	72350	434.3
05-Oct-99	11:16	10.24	0.133	0.372	3.2	72339	433
05-Oct-99	11:17	10.3	0.134	0.373	3.3	100234	432.5
05-Oct-99	11:18	10.21	0.132	0.374	3.1	100255	434.4
05-Oct-99	11:19	10.2	0.131	0.374	3	100190	433.7
05-Oct-99	11:20	10.22	0.134	0.374	3.1	100168	432.7
05-Oct-99	11:21	10.26	0.134	0.374	3.4	72225	432.1
05-Oct-99	11:22	10.23	0.133	0.376	3.4	73671	432.3
05-Oct-99	11:23	10.26	0.134	0.377	3.2	73292	432.8
05-Oct-99	11:24	10.21	0.135	0.379	3.2	74565	433.1
05-Oct-99	11:25	10.26	0.134	0.38	3.2	73273	434.6
05-Oct-99	11:26	10.21	0.132	0.381	3.3	74278	434.4
05-Oct-99	11:27	10.24	0.131	0.381	3.5	73607	432.4
05-Oct-99	11:28	9.71	0.137	0.383	3.4	74070	433.6
05-Oct-99	11:29	1.22	0.041	0	3.2	74529	433.7
05-Oct-99	11:30	6.84	0.088	0.565	3.2	74394	433.3
05-Oct-99	11:31	9.54	0.107	0.365	3.2	73752	432.8
05-Oct-99	11:32	9.84	0.127	0.361	3.6	74830	433.9
05-Oct-99	11:33	10.02	0.132	0.376	3.6	74026	435.5
05-Oct-99	11:34	10.1	0.132	0.384	3.4	74746	433.9
05-Oct-99	11:35	10.13	0.133	0.393	3.3	74959	433.6
05-Oct-99	11:36	10.15	0.13	0.39	3.4	73721	434.7
05-Oct-99	11:37	10.17	0.129	0.39	3.4	73745	436.1
05-Oct-99	11:38	10.19	0.13	0.394	3.3	73294	436
05-Oct-99	11:39	10.23	0.13	0.389	3.1	74509	433.7
05-Oct-99	11:40	10.23	0.127	0.387	3.3	73176	433.5
05-Oct-99	11:41	10.24	0.126	0.388	3.3	74126	432.9

Craig 3 CEMS Data							
Date	Time	CO_2, % wet	SO_2, lb/MMBtu	NOx, lb/MMBtu	Opacity	Stack flow, kwscfm	MW
05-Oct-99	11:42	10.24	0.127	0.389	3.4	74868	434.4
Test 3 Average		***10.20***	***0.12***	***0.37***	***3.27***	***74603***	***433***

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 9:21	4.90	1.92	5.80	3.61	4.13	4.08	2.55	2.85	775	770
10/04/1999 9:22	5.36	2.21	5.79	3.69	4.21	4.09	2.55	2.79	775	770
10/04/1999 9:23	4.93	1.89	5.52	3.49	3.98	3.90	2.40	2.59	775	770
10/04/1999 9:24	5.22	2.11	5.73	3.64	4.11	4.02	2.48	2.84	775	770
10/04/1999 9:25	5.07	1.85	5.63	3.57	3.98	3.97	2.30	2.59	775	770
10/04/1999 9:26	5.21	2.11	5.66	3.63	4.14	4.04	2.58	2.85	775	771
10/04/1999 9:27	4.88	2.08	5.56	3.62	4.03	4.06	2.00	2.56	775	771
10/04/1999 9:28	5.10	2.30	5.79	3.72	4.08	4.12	2.29	2.56	775	771
10/04/1999 9:29	5.20	2.02	5.55	3.66	4.08	3.95	2.30	2.26	775	771
10/04/1999 9:30	5.42	2.16	5.73	3.60	4.05	3.99	2.63	2.70	775	771
10/04/1999 9:31	5.36	2.24	5.62	3.59	4.09	4.07	2.59	2.86	775	771
10/04/1999 9:32	5.32	2.30	5.68	3.66	4.04	4.08	2.48	2.83	776	771
10/04/1999 9:33	5.51	2.25	5.17	3.75	4.08	4.00	2.59	2.75	776	771
10/04/1999 9:34	4.98	1.94	5.40	3.46	4.00	3.94	2.49	2.71	776	772
10/04/1999 9:35	5.22	2.02	5.50	3.55	3.99	4.11	2.47	2.68	776	772
10/04/1999 9:36	5.15	1.98	5.62	3.55	3.94	4.03	2.45	2.66	776	772
10/04/1999 9:37	5.41	2.34	5.66	3.69	4.08	4.17	2.68	2.87	776	772
10/04/1999 9:38	4.68	1.77	5.46	3.47	3.76	4.00	1.98	2.51	776	772
10/04/1999 9:39	5.19	2.22	5.53	3.69	4.08	4.12	2.52	2.59	776	772
10/04/1999 9:40	5.00	2.03	5.47	3.52	3.95	3.81	2.07	2.18	776	772
10/04/1999 9:41	5.35	2.62	5.68	3.85	4.26	4.19	2.75	2.91	776	772
10/04/1999 9:42	4.84	2.06	5.70	3.64	3.99	4.18	2.49	2.91	776	772
10/04/1999 9:43	5.22	2.14	5.70	3.69	4.14	4.31	2.44	2.77	776	771
10/04/1999 9:44	5.15	1.95	5.59	3.59	3.93	4.07	2.12	2.55	776	772
10/04/1999 9:45	5.30	2.41	5.63	3.78	4.10	4.33	2.40	2.85	776	771
10/04/1999 9:46	5.01	2.22	5.57	3.74	4.02	4.36	2.40	2.85	776	772
10/04/1999 9:47	4.97	2.27	5.52	3.77	4.06	4.31	2.16	2.74	776	772
10/04/1999 9:48	4.84	1.96	5.62	3.65	4.05	4.24	2.20	2.74	777	772
10/04/1999 9:49	5.14	2.26	5.66	3.78	4.24	4.36	2.51	2.68	777	772
10/04/1999 9:50	4.90	1.98	5.56	3.60	3.86	4.13	2.28	2.72	777	772
10/04/1999 9:51	5.16	2.49	5.64	3.78	4.18	4.39	2.53	2.73	777	772
10/04/1999 9:52	4.96	2.17	5.59	3.64	4.07	4.18	2.38	2.78	777	772
10/04/1999 9:53	5.10	2.21	5.62	3.66	4.18	4.28	2.32	2.57	777	772
10/04/1999 9:54	4.87	1.85	5.54	3.53	3.96	4.03	2.10	2.47	777	772
10/04/1999 9:55	5.31	2.27	5.60	3.66	4.25	4.12	2.64	2.69	777	772
10/04/1999 9:56	5.20	2.36	5.73	3.80	4.29	4.22	2.56	2.83	777	772
10/04/1999 9:57	5.37	2.40	5.75	3.90	4.28	4.28	2.47	2.79	777	773
10/04/1999 9:58	5.25	2.08	5.64	3.68	4.12	4.07	2.32	2.59	777	773
10/04/1999 9:59	4.91	2.13	5.72	3.63	4.01	4.10	2.42	2.59	778	773
10/04/1999 10:00	5.23	2.40	5.70	3.81	4.10	4.24	2.39	2.64	778	773
10/04/1999 10:01	5.08	2.23	5.70	3.79	4.14	4.21	2.40	2.53	778	773
10/04/1999 10:02	5.24	2.27	5.94	3.81	4.09	4.47	2.74	2.78	777	773
10/04/1999 10:03	5.03	2.06	5.72	3.67	4.00	4.18	2.39	2.54	777	773
10/04/1999 10:04	4.95	2.19	5.80	3.64	3.94	4.19	2.30	2.59	777	773

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 10:05	5.01	2.20	5.59	3.69	4.13	4.10	2.42	2.65	777	772
10/04/1999 10:06	4.59	1.90	5.42	3.56	3.86	4.24	2.21	2.73	777	773
10/04/1999 10:07	5.06	2.14	5.60	3.72	4.04	4.51	2.33	2.76	777	772
10/04/1999 10:08	4.92	2.17	5.74	3.72	4.16	4.27	2.32	2.74	777	773
10/04/1999 10:09	5.21	2.45	5.73	3.85	4.28	4.32	2.51	2.72	777	772
10/04/1999 10:10	4.40	1.76	5.71	3.54	3.82	4.14	1.94	2.48	777	773
10/04/1999 10:11	5.35	2.53	5.91	3.85	4.10	4.87	2.48	2.99	777	772
10/04/1999 10:12	4.89	2.01	5.71	3.59	3.93	4.29	2.37	2.71	777	773
10/04/1999 10:13	5.56	2.21	5.78	3.80	3.97	4.90	2.54	2.87	777	773
10/04/1999 10:14	4.88	1.95	5.56	3.54	3.97	4.13	2.26	2.42	777	773
10/04/1999 10:15	5.16	2.20	5.71	3.58	4.06	4.12	2.48	2.75	777	773
10/04/1999 10:16	5.08	2.13	5.51	3.62	4.02	4.25	2.38	2.78	777	773
10/04/1999 10:17	5.04	2.07	5.60	3.54	3.95	4.19	2.38	2.90	777	773
10/04/1999 10:18	5.04	1.91	5.63	3.60	4.11	4.19	2.50	2.81	777	773
10/04/1999 10:19	4.85	1.82	5.69	3.52	3.97	4.14	2.40	2.88	777	774
10/04/1999 10:20	5.37	2.32	5.70	3.79	4.18	4.22	2.41	2.61	777	773
10/04/1999 10:21	4.87	2.19	5.79	3.66	4.04	4.16	2.28	2.63	777	773
10/04/1999 10:22	4.85	2.32	5.71	3.71	4.08	4.28	2.32	2.77	777	773
10/04/1999 10:23	4.75	2.20	5.57	3.58	3.97	4.21	2.38	2.88	778	773
10/04/1999 10:24	4.94	2.15	5.62	3.59	4.00	4.15	2.34	2.61	777	773
10/04/1999 10:25	4.98	2.08	5.67	3.63	3.94	4.13	2.43	2.88	777	773
10/04/1999 10:26	5.33	2.13	5.58	3.60	4.06	4.20	2.51	2.74	778	773
10/04/1999 10:27	4.88	1.72	5.61	3.39	3.87	4.01	2.14	2.56	778	773
10/04/1999 10:28	5.03	1.97	5.60	3.43	3.97	4.19	2.32	2.77	778	773
10/04/1999 10:29	5.01	2.10	5.59	3.55	4.03	4.00	2.36	2.48	778	773
10/04/1999 10:30	5.66	2.25	5.79	3.75	3.96	4.32	2.53	2.75	777	773
10/04/1999 10:31	5.56	2.27	5.72	3.74	4.02	4.34	2.46	2.65	778	773
10/04/1999 10:32	4.98	2.07	5.66	3.52	3.81	4.10	2.32	2.76	778	773
10/04/1999 10:33	5.15	1.95	5.71	3.65	3.86	4.28	2.17	2.56	777	773
10/04/1999 10:34	4.89	1.80	5.72	3.48	3.88	3.97	2.22	2.45	778	773
10/04/1999 10:35	5.30	2.19	5.79	3.62	4.06	4.19	2.58	2.66	778	773
10/04/1999 10:36	4.86	2.08	5.92	3.55	3.90	4.18	2.30	2.65	778	774
10/04/1999 10:37	5.25	2.32	5.95	3.76	4.05	4.37	2.40	2.69	778	774
10/04/1999 10:38	4.85	1.78	5.76	3.58	3.79	3.99	2.12	2.50	778	774
10/04/1999 10:39	5.17	2.17	5.69	3.78	4.15	4.17	2.79	2.82	778	774
10/04/1999 10:40	4.69	1.77	5.66	3.50	3.98	3.96	2.18	2.56	778	774
10/04/1999 10:41	5.70	2.28	5.77	3.83	4.24	4.47	2.71	2.89	777	774
10/04/1999 10:42	4.83	2.12	5.68	3.75	3.99	4.19	2.22	2.68	778	774
10/04/1999 10:43	5.09	2.32	5.90	3.76	4.08	4.27	2.40	2.90	778	774
10/04/1999 10:44	5.36	2.12	5.60	3.68	4.03	4.07	2.47	2.63	778	774
10/04/1999 10:45	5.03	1.93	5.92	3.51	4.06	4.04	2.48	2.81	778	774
10/04/1999 10:46	5.23	2.12	5.90	3.65	4.15	4.15	2.53	2.87	778	774
10/04/1999 10:47	4.80	1.89	5.69	3.57	4.06	4.11	2.09	2.60	779	775
10/04/1999 10:48	5.12	2.13	5.77	3.55	4.13	4.06	2.39	2.68	779	774

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 10:49	5.38	2.20	6.00	3.71	4.28	3.94	2.62	2.59	779	774
10/04/1999 10:50	5.29	2.22	5.93	3.70	4.02	3.96	2.32	2.66	779	774
10/04/1999 10:51	5.27	2.09	5.93	3.68	4.08	4.08	2.46	2.75	779	774
10/04/1999 10:52	5.15	2.02	5.87	3.62	4.06	4.06	2.36	2.59	779	775
10/04/1999 10:53	5.44	2.44	5.97	3.84	4.25	4.26	2.69	2.89	779	775
10/04/1999 10:54	4.72	1.79	5.62	3.54	3.89	4.07	2.30	2.58	779	775
10/04/1999 10:55	5.32	2.20	5.71	3.67	4.12	4.27	2.73	2.89	779	775
10/04/1999 10:56	4.95	1.88	5.58	3.51	3.87	4.18	2.22	2.76	779	775
10/04/1999 10:57	5.46	2.37	5.86	3.74	4.07	4.23	2.49	2.77	779	775
10/04/1999 10:58	4.89	1.90	5.67	3.62	3.98	4.11	2.25	2.62	779	775
10/04/1999 10:59	5.42	2.19	5.77	3.63	3.97	4.12	2.57	2.75	778	775
10/04/1999 11:00	5.29	1.82	5.50	3.58	3.71	4.12	2.13	2.32	779	775
10/04/1999 11:01	5.02	1.87	5.64	3.54	3.74	3.95	2.36	2.63	779	775
10/04/1999 11:02	5.35	2.22	5.84	3.73	3.98	4.07	2.54	2.57	778	775
10/04/1999 11:03	4.97	2.00	5.83	3.66	3.91	4.01	2.48	2.72	778	775
10/04/1999 11:04	5.04	2.11	5.72	3.71	4.05	4.11	2.58	2.69	778	775
10/04/1999 11:05	4.78	1.95	5.87	3.55	4.01	4.09	2.46	2.67	779	775
10/04/1999 11:06	5.36	2.08	5.62	3.56	4.03	4.02	2.65	2.61	779	775
10/04/1999 11:07	5.06	2.04	5.89	3.50	4.17	4.07	2.59	2.66	779	775
10/04/1999 11:08	5.26	2.11	5.84	3.59	4.21	4.12	2.66	2.67	779	776
10/04/1999 11:09	4.74	1.88	5.72	3.48	3.93	4.04	2.37	2.50	779	776
10/04/1999 11:10	5.18	2.20	5.96	3.65	3.98	4.08	2.50	2.61	779	776
10/04/1999 11:11	5.16	2.11	5.86	3.58	3.92	4.05	2.35	2.59	779	776
10/04/1999 11:12	4.81	2.03	5.97	3.54	3.96	4.08	2.27	2.69	780	776
10/04/1999 11:13	5.14	2.23	5.88	3.68	4.07	4.14	2.45	2.63	779	776
10/04/1999 11:14	4.90	1.96	5.70	3.51	3.92	3.93	2.12	2.46	779	776
10/04/1999 11:15	5.39	2.26	5.87	3.64	4.12	4.00	2.60	2.58	779	776
10/04/1999 11:16	5.26	2.11	5.71	3.61	4.05	4.00	2.42	2.51	779	776
10/04/1999 11:17	5.06	2.14	5.77	3.55	4.04	3.99	2.48	2.68	779	776
10/04/1999 11:18	5.45	2.41	6.05	3.76	4.24	4.11	2.71	2.71	779	776
10/04/1999 11:19	4.79	1.71	5.63	3.35	4.00	3.94	2.05	2.49	780	776
10/04/1999 11:20	5.23	- 2.09	5.88	3.53	4.19	4.10	2.59	2.69	780	776
10/04/1999 11:21	5.11	2.08	5.81	3.61	4.20	4.03	2.32	2.71	780	776
10/04/1999 11:22	5.05	2.20	5.84	3.65	4.19	4.13	2.06	2.76	780	776
10/04/1999 11:23	4.90	2.06	5.57	3.59	4.06	4.10	2.09	2.71	780	776
10/04/1999 11:24	4.81	2.07	5.86	3.54	4.10	4.16	2.43	2.87	780	776
10/04/1999 11:25	5.14	2.15	5.81	3.63	4.21	4.22	2.69	2.93	780	776
10/04/1999 11:26	4.80	1.78	5.79	3.47	4.08	4.03	2.24	2.78	780	776
10/04/1999 11:27	4.98	2.07	5.90	3.61	4.16	4.23	2.39	2.89	780	776
10/04/1999 11:28	4.80	1.87	5.86	3.46	4.12	4.12	2.15	2.70	781	776
10/04/1999 11:29	5.22	2.37	6.16	3.69	4.38	4.22	2.72	2.89	780	776
10/04/1999 11:30	4.99	2.06	5.91	3.58	4.17	4.01	2.39	2.49	780	777
10/04/1999 11:31	4.91	1.94	5.93	3.50	4.12	3.88	2.34	2.45	781	777
10/04/1999 11:32	5.08	2.06	5.79	3.54	4.23	3.94	2.27	2.51	780	777

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 11:33	5.00	2.04	5.76	3.58	4.09	4.06	2.25	2.74	781	777
10/04/1999 11:34	5.36	2.18	5.90	3.68	4.26	4.10	2.60	2.78	780	776
10/04/1999 11:35	5.06	1.76	5.86	3.54	3.99	4.06	2.33	2.67	780	777
10/04/1999 11:36	5.13	2.02	6.00	3.61	4.16	4.13	2.67	2.89	780	777
10/04/1999 11:37	4.96	1.90	5.80	3.54	4.02	4.07	2.56	2.84	781	777
10/04/1999 11:38	4.99	1.85	5.73	3.42	3.94	3.98	2.34	2.73	781	777
10/04/1999 11:39	5.32	2.24	5.93	3.58	4.22	4.16	2.39	2.62	781	777
10/04/1999 11:40	4.70	2.23	5.79	3.74	4.08	4.11	1.92	2.64	781	777
10/04/1999 11:41	5.15	2.46	5.79	3.73	4.10	4.14	2.19	2.71	781	777
10/04/1999 11:42	5.21	2.53	5.75	3.76	4.15	4.13	2.49	2.92	780	777
10/04/1999 11:43	4.94	2.27	5.80	3.71	4.01	4.21	2.47	2.97	780	777
10/04/1999 11:44	5.16	2.30	5.72	3.65	4.00	4.10	2.40	2.74	780	777
10/04/1999 11:45	4.71	2.22	5.67	3.55	3.91	4.17	2.20	2.87	780	777
10/04/1999 11:46	5.04	2.28	5.70	3.62	3.89	4.19	2.25	2.82	780	777
10/04/1999 11:47	5.20	2.26	5.84	3.63	4.00	4.09	2.28	2.83	781	777
10/04/1999 11:48	4.94	2.13	5.85	3.62	4.10	4.14	2.23	2.91	781	777
10/04/1999 11:49	4.92	2.29	5.92	3.70	4.12	4.33	2.31	2.94	781	777
10/04/1999 11:50	4.91	2.31	5.91	3.75	4.11	4.27	2.31	2.79	781	777
10/04/1999 11:51	5.18	2.49	5.87	3.83	4.08	4.30	2.10	2.74	781	777
10/04/1999 11:52	5.01	2.46	5.80	3.84	4.01	4.29	2.10	2.64	780	777
10/04/1999 11:53	4.83	2.42	5.60	3.75	3.92	4.25	2.00	2.55	780	777
10/04/1999 11:54	4.96	2.35	5.64	3.64	4.06	4.24	2.19	2.78	780	777
10/04/1999 11:55	5.02	2.36	5.82	3.68	4.06	4.29	2.25	2.77	780	777
10/04/1999 11:56	4.94	2.36	5.58	3.68	4.08	4.21	2.19	2.80	780	777
10/04/1999 11:57	4.66	2.22	5.82	3.62	4.07	4.17	2.02	2.76	780	777
10/04/1999 11:58	4.91	2.17	5.72	3.57	3.99	4.19	2.17	2.87	780	777
10/04/1999 11:59	4.87	2.27	5.73	3.68	4.03	4.23	2.25	2.75	780	777
10/04/1999 12:00	4.74	2.28	5.83	3.76	4.16	4.32	2.45	2.91	780	777
10/04/1999 12:01	4.84	2.30	5.80	3.72	4.11	4.25	2.21	2.70	780	777
10/04/1999 12:02	4.38	2.16	5.58	3.53	3.83	4.29	1.80	2.83	780	777
10/04/1999 12:03	4.82	2.40	5.87	3.72	4.20	4.32	2.27	2.85	780	777
10/04/1999 12:04	4.94	2.20	5.73	3.70	4.25	4.28	2.30	2.77	780	777
10/04/1999 12:05	4.39	2.05	5.64	3.52	3.99	4.18	2.16	2.78	780	777
10/04/1999 12:06	5.00	2.46	5.85	3.70	4.26	4.29	2.62	2.83	780	777
10/04/1999 12:07	5.10	2.41	5.72	3.78	4.19	4.27	2.45	2.93	780	777
10/04/1999 12:08	4.79	2.27	5.62	3.60	3.92	4.20	2.16	2.65	780	777
10/04/1999 12:09	5.10	2.38	5.75	3.72	4.10	4.18	2.27	2.65	780	777
10/04/1999 12:10	5.03	2.46	5.74	3.81	4.21	4.24	2.36	2.79	780	778
10/04/1999 12:11	4.88	2.24	5.61	3.70	4.03	4.18	2.19	2.65	780	778
10/04/1999 12:12	4.64	2.41	5.75	3.79	4.02	4.25	2.09	2.65	780	777
10/04/1999 12:13	4.98	2.48	5.79	3.86	4.00	4.29	2.08	2.76	780	777
10/04/1999 12:14	4.96	2.54	5.85	3.90	3.98	4.24	2.03	2.78	780	777
10/04/1999 12:15	4.74	2.18	5.64	3.72	3.88	4.25	1.83	2.47	780	777
10/04/1999 12:16	4.87	2.14	5.61	3.63	3.87	4.20	1.98	2.57	780	777

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 12:17	5.15	2.51	5.84	3.79	4.09	4.27	2.19	2.66	780	777
10/04/1999 12:18	5.12	2.68	5.81	3.97	4.11	4.31	2.29	2.71	780	778
10/04/1999 12:19	4.97	2.31	5.64	3.79	3.91	4.23	2.05	2.75	780	778
10/04/1999 12:20	5.02	2.30	5.77	3.75	3.95	4.28	2.18	2.79	780	778
10/04/1999 12:21	4.89	2.28	5.69	3.70	3.98	4.23	2.25	2.70	780	778
10/04/1999 12:22	4.91	1.97	5.50	3.48	3.81	4.05	2.14	2.76	780	778
10/04/1999 12:23	5.38	2.40	5.75	3.73	3.98	4.20	2.61	2.75	780	778
10/04/1999 12:24	5.26	2.48	5.63	3.89	3.97	4.16	2.38	2.85	780	778
10/04/1999 12:25	4.98	2.28	5.67	3.79	3.76	4.14	2.03	2.73	779	778
10/04/1999 12:26	5.21	2.40	5.69	3.81	3.77	4.11	2.38	2.64	779	778
10/04/1999 12:27	5.35	2.59	5.67	3.96	4.05	4.27	2.48	2.82	779	777
10/04/1999 12:28	4.94	2.22	5.59	3.80	3.98	4.18	1.91	2.64	779	777
10/04/1999 12:29	4.97	2.32	5.75	3.81	4.14	4.25	2.50	2.90	779	777
10/04/1999 12:30	4.80	2.13	5.64	3.65	4.13	4.27	2.19	2.78	779	777
10/04/1999 12:31	4.89	2.01	5.64	3.56	4.03	4.17	2.10	2.75	779	778
10/04/1999 12:32	5.07	2.30	5.62	3.72	4.09	4.22	2.25	2.81	779	777
10/04/1999 12:33	4.85	2.04	5.63	3.66	3.89	4.18	2.21	2.82	779	777
Test 1 Average				***3.65***				***2.71***	***778***	***775***
10/04/1999 13:36	4.61	2.10	5.77	3.73	3.99	4.23	2.28	2.81	774	773
10/04/1999 13:37	4.71	2.50	5.96	4.02	4.11	4.45	2.63	2.93	774	773
10/04/1999 13:38	4.54	2.09	5.75	3.87	3.84	4.34	2.17	2.75	774	773
10/04/1999 13:39	4.69	1.94	5.83	3.63	4.06	4.15	2.41	2.91	774	773
10/04/1999 13:40	5.02	2.29	5.96	3.84	4.18	4.31	2.47	2.89	773	773
10/04/1999 13:41	4.76	2.23	5.76	3.91	3.70	4.20	1.98	2.55	773	773
10/04/1999 13:42	4.76	2.01	5.99	3.74	4.01	4.19	2.36	2.82	773	773
10/04/1999 13:43	5.20	2.36	5.94	3.92	4.22	4.36	2.47	2.85	773	772
10/04/1999 13:44	4.61	2.08	5.60	3.82	3.84	4.23	2.22	2.73	773	772
10/04/1999 13:45	4.83	2.23	5.72	3.83	4.06	4.24	2.21	2.72	773	772
10/04/1999 13:46	4.88	2.23	5.74	3.75	4.12	4.17	2.21	2.72	773	772
10/04/1999 13:47	4.90	2.36	5.88	3.85	4.21	4.22	2.44	2.88	773	772
10/04/1999 13:48	4.75	1.92	5.76	3.70	4.07	4.01	2.21	2.58	773	772
10/04/1999 13:49	4.85	1.90	5.80	3.59	4.10	3.97	2.60	2.76	773	772
10/04/1999 13:50	4.98	2.28	5.81	3.77	4.23	4.22	2.45	2.86	773	772
10/04/1999 13:51	4.89	2.11	5.79	3.65	4.00	4.21	2.57	2.97	773	772
10/04/1999 13:52	5.15	2.42	5.87	3.80	4.03	4.17	2.46	2.74	773	772
10/04/1999 13:53	4.96	2.15	5.66	3.73	3.86	4.04	2.37	2.63	773	773
10/04/1999 13:54	4.92	2.24	5.66	3.67	3.87	4.05	2.47	2.74	774	773
10/04/1999 13:55	4.95	2.15	5.65	3.59	3.96	4.05	2.48	2.74	774	773
10/04/1999 13:56	5.15	2.52	5.76	3.83	4.05	4.10	2.74	2.90	774	773
10/04/1999 13:57	4.82	2.27	5.72	3.83	3.86	4.10	2.29	2.66	774	773
10/04/1999 13:58	5.05	2.33	5.69	3.82	3.77	4.12	2.33	2.69	774	773
10/04/1999 13:59	5.13	2.63	5.84	3.97	3.98	4.30	2.39	2.72	774	773
10/04/1999 14:00	4.86	2.26	5.70	3.84	3.77	4.08	1.95	2.43	774	773

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 14:01	4.91	2.49	5.83	3.80	3.88	4.11	2.32	2.76	774	773
10/04/1999 14:02	4.79	2.46	5.64	3.81	3.82	4.07	2.18	2.63	773	773
10/04/1999 14:03	4.86	2.38	5.75	3.79	3.87	4.10	2.36	2.65	774	773
10/04/1999 14:04	4.87	2.50	5.80	3.90	3.98	4.20	2.46	2.75	774	773
10/04/1999 14:05	4.68	2.03	5.40	3.68	3.68	3.98	2.02	2.36	774	773
10/04/1999 14:06	5.12	2.61	5.84	3.92	4.06	4.19	2.71	2.93	775	773
10/04/1999 14:07	4.93	2.47	5.48	3.93	3.86	4.18	2.26	2.62	774	773
10/04/1999 14:08	5.00	2.21	5.74	3.67	3.86	3.99	2.28	2.61	773	773
10/04/1999 14:09	5.08	2.21	5.64	3.78	3.85	4.05	1.99	2.50	774	773
10/04/1999 14:10	5.16	2.22	5.78	3.75	3.96	4.10	2.43	2.78	775	774
10/04/1999 14:11	5.05	2.44	5.85	3.88	3.98	4.25	2.19	2.61	774	774
10/04/1999 14:12	4.84	2.41	5.71	3.76	3.88	4.25	2.27	2.84	775	774
10/04/1999 14:13	4.87	2.53	5.78	3.91	3.99	4.32	2.32	2.93	775	774
10/04/1999 14:14	4.85	2.20	5.70	3.67	3.97	4.02	2.21	2.68	775	774
10/04/1999 14:15	5.14	2.63	5.90	3.91	4.01	4.23	2.31	2.77	774	774
10/04/1999 14:16	4.89	2.36	5.69	3.86	3.93	4.19	2.29	2.76	775	774
10/04/1999 14:17	5.08	2.33	5.58	3.74	3.90	4.08	2.36	2.73	776	775
10/04/1999 14:18	5.23	2.32	5.82	3.80	4.05	4.04	2.46	2.80	776	775
10/04/1999 14:19	4.99	2.27	5.79	3.81	3.96	4.01	2.28	2.63	776	775
10/04/1999 14:20	5.01	2.30	5.71	3.75	4.02	4.08	2.45	2.70	774	775
10/04/1999 14:21	5.04	2.28	5.63	3.76	3.90	4.13	2.38	2.75	775	775
10/04/1999 14:22	4.73	2.03	5.58	3.65	3.82	4.02	2.30	2.68	776	775
10/04/1999 14:23	5.07	2.21	5.76	3.73	3.95	4.06	2.54	2.84	775	775
10/04/1999 14:24	5.36	2.53	5.78	3.86	3.96	4.06	2.38	2.54	775	774
10/04/1999 14:25	5.14	2.27	5.60	3.73	3.97	4.07	2.47	2.64	776	775
10/04/1999 14:26	5.01	2.43	5.81	3.90	4.07	4.27	2.40	2.73	776	774
10/04/1999 14:27	4.54	2.06	5.74	3.75	3.96	4.16	2.32	2.62	776	774
10/04/1999 14:28	4.85	2.22	5.65	3.82	3.86	4.13	2.12	2.57	776	775
10/04/1999 14:29	4.92	2.22	5.54	3.85	3.81	4.19	2.19	2.55	774	775
10/04/1999 14:30	5.00	2.39	5.80	3.82	4.06	4.16	2.49	2.71	775	775
10/04/1999 14:31	5.20	2.46	5.60	3.88	3.99	4.07	2.38	2.44	776	775
10/04/1999 14:32	4.92	2.25	5.53	3.69	3.72	4.02	2.38	2.66	777	775
10/04/1999 14:33	5.16	2.61	5.74	3.89	4.01	4.15	2.52	2.68	776	775
10/04/1999 14:34	4.79	2.17	5.51	3.70	3.73	3.93	2.17	2.31	777	776
10/04/1999 14:35	4.99	2.39	5.70	3.83	3.94	4.10	2.67	2.86	777	776
10/04/1999 14:36	4.91	2.36	5.61	3.86	3.84	4.15	2.37	2.77	777	776
10/04/1999 14:37	5.01	2.36	5.64	3.82	3.72	4.10	2.31	2.61	776	776
10/04/1999 14:38	5.13	2.71	5.76	4.00	3.92	4.27	2.43	2.76	776	776
10/04/1999 14:39	4.60	2.33	5.53	3.82	3.54	4.17	1.90	2.58	776	776
10/04/1999 14:40	4.78	2.54	5.64	3.92	3.47	4.21	2.30	2.87	776	776
10/04/1999 14:41	4.96	2.70	5.93	4.03	4.03	4.29	2.36	2.87	776	776
10/04/1999 14:42	4.97	2.59	5.87	4.00	3.94	4.18	2.28	2.82	776	776
10/04/1999 14:43	4.86	2.20	5.54	3.80	3.73	4.06	2.14	2.59	776	776
10/04/1999 14:44	4.82	2.22	5.72	3.71	3.85	4.09	2.20	2.66	777	776

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 14:45	5.37	2.51	5.81	3.94	4.07	4.15	2.66	2.88	777	776
10/04/1999 14:46	5.28	2.33	5.77	3.98	4.04	4.12	2.54	2.87	777	776
10/04/1999 14:47	5.06	2.18	5.70	3.77	3.99	4.08	2.23	2.69	777	776
10/04/1999 14:48	5.16	2.23	5.79	3.72	3.95	4.06	2.27	2.62	777	776
10/04/1999 14:49	4.91	2.21	5.63	3.75	3.90	4.02	2.30	2.64	777	777
10/04/1999 14:50	5.12	2.48	5.77	3.85	3.93	4.10	2.42	2.79	777	777
10/04/1999 14:51	4.95	2.53	5.73	4.00	3.91	4.17	2.13	2.63	777	777
10/04/1999 14:52	4.81	2.30	5.67	3.87	3.75	4.15	2.14	2.69	777	777
10/04/1999 14:53	5.14	2.67	5.64	4.08	3.94	4.36	2.29	2.83	777	776
10/04/1999 14:54	4.81	2.37	5.47	3.75	3.88	4.15	2.23	2.85	777	777
10/04/1999 14:55	4.94	2.41	5.55	3.76	3.95	4.18	2.25	2.72	777	777
10/04/1999 14:56	4.99	2.32	5.63	3.67	3.84	4.15	2.31	2.85	777	777
10/04/1999 14:57	5.00	2.49	5.76	3.88	3.96	4.23	2.17	2.79	777	777
10/04/1999 14:58	4.79	2.26	5.61	3.74	3.80	4.16	2.25	2.67	777	777
10/04/1999 14:59	4.97	2.61	5.60	3.92	4.07	4.19	2.39	2.74	777	777
10/04/1999 15:00	4.64	2.26	5.64	3.78	3.81	4.08	2.16	2.60	777	777
10/04/1999 15:01	5.02	2.68	5.68	3.96	3.93	4.23	2.31	2.78	777	777
10/04/1999 15:02	4.86	2.26	5.62	3.74	3.85	3.91	2.28	2.63	777	778
10/04/1999 15:03	4.92	2.57	5.65	3.89	3.95	4.14	2.18	2.70	777	777
10/04/1999 15:04	4.69	2.30	5.51	3.73	3.81	4.02	1.95	2.34	777	778
10/04/1999 15:05	5.22	2.67	5.62	3.91	4.09	4.15	2.30	2.56	777	777
10/04/1999 15:06	4.72	2.35	5.51	3.82	3.81	3.99	2.12	2.32	777	777
10/04/1999 15:07	5.10	2.79	5.77	4.01	4.20	4.22	2.76	2.88	777	777
10/04/1999 15:08	4.88	2.28	5.37	3.84	3.79	4.06	2.01	2.44	777	778
10/04/1999 15:09	5.28	2.51	5.74	4.02	4.02	4.24	2.71	2.87	777	778
10/04/1999 15:10	4.84	2.31	5.52	3.91	3.81	4.14	2.21	2.67	777	778
10/04/1999 15:11	5.09	2.36	5.63	3.78	3.76	4.05	2.54	2.68	778	778
10/04/1999 15:12	4.82	2.35	5.53	3.80	3.79	4.03	2.36	2.59	778	778
10/04/1999 15:13	4.80	2.43	5.61	3.83	3.83	4.10	2.34	2.61	778	778
10/04/1999 15:14	4.76	2.43	5.54	3.90	3.77	4.19	2.19	2.63	778	778
10/04/1999 15:15	4.85	2.12	5.45	3.72	3.63	4.10	2.57	2.92	778	778
10/04/1999 15:16	5.14	2.57	5.52	3.91	3.99	4.30	2.58	2.97	778	778
10/04/1999 15:17	4.96	2.08	5.60	3.69	3.69	4.03	2.44	2.69	778	778
10/04/1999 15:18	4.94	2.52	5.73	3.91	3.82	4.21	2.37	2.79	778	778
10/04/1999 15:19	4.62	2.09	5.49	3.71	3.68	4.17	2.33	2.72	778	778
10/04/1999 15:20	5.06	2.57	5.69	3.94	3.98	4.40	2.56	3.03	778	779
10/04/1999 15:21	4.71	2.13	5.54	3.76	3.74	4.15	2.24	2.69	779	779
10/04/1999 15:22	5.28	2.90	5.85	4.12	3.87	4.25	2.41	2.87	779	778
10/04/1999 15:23	4.30	2.49	5.60	4.03	3.60	4.08	2.25	2.58	779	778
10/04/1999 15:24	5.11	2.83	5.62	4.11	3.99	4.46	2.76	2.86	778	777
10/04/1999 15:25	4.77	2.16	5.42	3.83	3.77	4.39	2.13	2.58	777	776
10/04/1999 15:26	4.85	2.72	5.69	4.07	3.77	4.07	2.30	2.73	774	775
10/04/1999 15:27	5.32	3.07	5.71	4.11	3.86	4.05	2.37	2.64	773	775
10/04/1999 15:28	4.95	2.31	5.54	3.78	3.62	4.06	2.70	2.88	772	774

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 15:29	5.07	2.45	5.47	3.89	3.73	4.17	2.62	2.98	771	774
10/04/1999 15:30	4.93	2.08	5.34	3.72	3.75	4.09	2.49	2.79	771	774
10/04/1999 15:31	5.30	2.48	5.44	3.84	3.87	4.14	2.68	2.97	770	774
10/04/1999 15:32	4.95	2.53	5.47	3.92	3.83	4.24	2.20	2.72	770	773
10/04/1999 15:33	4.86	2.22	5.34	3.73	3.67	4.17	2.28	2.62	769	773
10/04/1999 15:34	5.36	2.70	5.68	4.05	3.94	4.27	2.82	2.97	768	773
10/04/1999 15:35	5.02	2.28	5.34	3.88	3.81	4.11	2.22	2.62	768	772
10/04/1999 15:36	5.14	2.24	5.39	3.72	3.82	3.98	2.56	2.76	768	772
10/04/1999 15:37	5.22	2.39	5.40	3.81	4.01	4.04	2.56	2.74	768	772
10/04/1999 15:38	5.15	2.30	5.64	3.77	4.00	4.17	2.66	2.90	768	772
10/04/1999 15:39	5.01	2.27	5.43	3.81	3.89	4.20	2.36	2.65	767	772
10/04/1999 15:40	4.88	2.19	5.43	3.75	3.89	4.13	2.44	2.69	766	772
10/04/1999 15:41	5.35	2.67	5.68	4.08	4.08	4.21	2.65	2.70	767	771
10/04/1999 15:42	5.05	2.30	5.46	3.91	3.69	4.10	2.10	2.54	766	772
10/04/1999 15:43	5.10	2.36	5.52	3.90	3.74	4.26	2.58	2.91	767	772
10/04/1999 15:44	5.03	2.26	5.39	3.91	3.68	4.26	2.10	2.68	767	772
10/04/1999 15:45	4.87	2.21	5.36	3.82	3.70	4.24	2.55	2.83	767	772
10/04/1999 15:46	4.94	2.49	5.59	3.97	3.96	4.32	2.62	2.85	767	771
10/04/1999 15:47	4.72	2.07	5.29	3.74	3.77	4.13	2.54	2.70	767	771
10/04/1999 15:48	5.09	2.63	5.33	3.97	4.15	4.24	2.95	2.98	767	771
10/04/1999 15:49	4.95	2.01	5.49	3.79	4.02	4.13	2.61	2.79	767	771
10/04/1999 15:50	5.03	2.20	5.44	3.89	4.02	4.19	2.81	2.91	767	771
10/04/1999 15:51	4.92	2.43	5.25	3.96	4.04	4.26	2.81	2.97	767	771
10/04/1999 15:52	4.89	2.13	5.66	3.83	4.01	4.16	2.48	2.68	767	772
10/04/1999 15:53	5.08	2.33	5.55	3.91	4.03	4.24	2.37	2.80	767	772
10/04/1999 15:54	4.69	1.99	5.25	3.67	3.76	4.11	2.31	2.76	767	772
10/04/1999 15:55	5.13	2.41	5.61	3.87	3.92	4.26	2.53	2.96	767	771
10/04/1999 15:56	4.84	2.16	5.33	3.72	4.01	4.13	2.70	2.89	767	771
10/04/1999 15:57	5.15	2.28	5.56	3.82	3.97	4.14	2.54	2.72	767	771
10/04/1999 15:58	5.25	2.43	5.66	4.05	4.00	4.20	2.40	2.79	767	772
10/04/1999 15:59	5.07	2.08	5.61	3.86	3.79	4.20	2.29	2.83	767	772
10/04/1999 16:00	5.17	2.28	5.67	3.94	3.87	4.26	2.33	2.69	767	772
10/04/1999 16:01	5.25	2.35	5.63	3.94	3.89	4.19	2.43	2.62	767	772
10/04/1999 16:02	5.29	2.55	5.58	3.96	4.00	4.29	2.42	2.83	767	772
10/04/1999 16:03	5.14	2.19	5.36	3.81	3.72	4.09	2.23	2.41	767	772
10/04/1999 16:04	5.11	2.46	5.58	3.86	3.88	4.19	2.65	2.84	767	771
10/04/1999 16:05	4.86	2.46	5.46	3.91	3.82	4.28	2.20	2.61	766	771
10/04/1999 16:06	4.92	2.03	5.53	3.81	3.71	4.21	2.33	2.76	766	771
10/04/1999 16:07	5.21	2.49	5.48	4.04	4.03	4.55	2.62	3.11	767	771
10/04/1999 16:08	4.97	2.08	5.52	3.81	3.78	4.20	2.51	2.85	767	771
10/04/1999 16:09	4.99	2.58	5.70	4.01	3.79	4.50	2.51	2.79	767	771
10/04/1999 16:10	4.89	2.25	5.44	3.90	3.73	4.29	2.17	2.56	767	772
10/04/1999 16:11	5.35	2.47	5.60	3.90	3.94	4.15	2.63	2.82	767	772
10/04/1999 16:12	4.79	2.63	5.48	4.06	3.62	4.32	2.30	2.83	767	772

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/04/1999 16:13	5.08	2.50	5.65	3.92	3.81	4.25	2.41	2.73	767	772
10/04/1999 16:14	4.99	2.26	5.61	3.92	3.85	4.19	2.44	2.77	767	772
10/04/1999 16:15	4.91	2.19	5.49	3.76	3.51	4.09	2.46	2.67	767	772
10/04/1999 16:16	5.21	2.34	5.62	3.83	3.74	4.13	2.70	2.84	767	772
10/04/1999 16:17	5.14	2.45	5.58	3.98	3.89	4.23	2.46	2.72	767	771
10/04/1999 16:18	4.90	2.07	5.32	3.74	3.61	4.14	2.58	2.85	767	771
10/04/1999 16:19	5.18	2.54	5.51	3.93	4.01	4.29	3.05	3.10	767	771
10/04/1999 16:20	4.76	2.03	5.13	3.70	3.74	4.19	2.34	2.68	767	771
10/04/1999 16:21	5.20	2.58	5.37	3.81	3.97	4.25	2.90	2.90	768	771
10/04/1999 16:22	5.12	2.13	5.43	3.83	3.78	4.17	2.35	2.67	768	772
10/04/1999 16:23	5.04	2.31	5.46	3.76	4.00	4.25	2.64	2.92	768	772
10/04/1999 16:24	4.95	2.42	5.21	3.80	3.84	4.14	2.14	2.55	768	772
10/04/1999 16:25	5.12	2.39	5.42	3.86	3.78	4.08	2.58	2.72	768	772
10/04/1999 16:26	4.95	2.40	5.32	3.95	3.82	4.15	2.54	2.75	768	771
10/04/1999 16:27	4.89	2.33	5.55	3.87	3.88	4.32	2.98	3.17	768	772
10/04/1999 16:28	5.06	2.22	5.51	3.87	3.87	4.27	2.46	2.84	768	771
10/04/1999 16:29	5.10	1.83	5.56	3.57	3.88	4.15	2.75	3.02	768	771
10/04/1999 16:30	5.02	2.16	5.53	3.75	4.04	4.30	2.83	3.14	768	771
10/04/1999 16:31	5.01	2.03	5.45	3.74	3.88	4.19	2.60	2.94	768	771
10/04/1999 16:32	4.90	2.48	5.50	3.79	3.95	4.29	2.80	2.89	769	771
10/04/1999 16:33	4.78	2.28	5.42	3.82	3.87	4.25	2.43	2.91	769	771
10/04/1999 16:34	4.85	2.24	5.34	3.72	3.96	4.22	2.54	3.06	769	771
10/04/1999 16:35	5.25	2.42	5.49	3.86	4.03	4.29	2.54	2.97	769	771
10/04/1999 16:36	4.70	2.00	5.39	3.59	3.87	4.06	2.38	2.66	769	771
Test 2 Average				***4.19***				***3.30***	***773***	***774***

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/05/1999 8:30	3.73	1.90	5.01	3.37	3.65	3.78	2.00	2.23	763	763
10/05/1999 8:31	4.16	2.16	5.07	3.31	3.63	3.74	2.18	2.31	762	762
10/05/1999 8:32	4.10	1.54	4.71	3.15	3.63	3.75	2.35	2.36	761	762
10/05/1999 8:33	4.34	1.45	4.73	2.96	3.73	3.79	2.72	2.65	760	762
10/05/1999 8:34	4.28	1.60	4.84	3.04	3.95	3.92	2.46	2.58	760	761
10/05/1999 8:35	4.31	1.39	5.06	2.91	3.78	3.78	2.48	2.44	759	761
10/05/1999 8:36	4.46	1.79	5.09	3.16	3.93	3.97	2.37	2.69	759	760
10/05/1999 8:37	3.80	1.36	4.84	2.92	3.57	3.80	2.41	2.46	758	760
10/05/1999 8:38	4.29	1.92	5.16	3.13	3.61	4.05	2.41	2.54	758	759
10/05/1999 8:39	3.92	1.59	5.06	2.80	3.57	3.67	2.01	2.19	758	759
10/05/1999 8:40	4.03	1.86	5.32	3.21	3.79	3.94	2.32	2.45	757	759
10/05/1999 8:41	3.89	1.22	5.01	2.91	3.63	3.85	2.10	2.23	756	758
10/05/1999 8:42	4.20	2.04	5.14	3.32	3.82	4.00	2.41	2.56	755	757
10/05/1999 8:43	4.16	1.87	4.72	3.09	3.61	3.69	2.13	2.17	754	757
10/05/1999 8:44	4.54	2.03	4.82	3.11	3.84	3.91	2.45	2.51	754	756
10/05/1999 8:45	4.27	1.52	4.86	3.02	3.65	3.73	2.19	2.58	754	756
10/05/1999 8:46	4.51	1.71	5.02	3.10	3.72	3.90	2.28	2.66	754	756
10/05/1999 8:47	4.34	1.51	5.00	3.03	3.63	3.97	2.35	2.25	753	755
10/05/1999 8:48	4.45	1.66	4.86	3.03	3.78	4.09	2.10	2.52	753	755
10/05/1999 8:49	3.92	1.39	4.83	2.85	3.56	3.85	2.02	2.67	754	755
10/05/1999 8:50	4.02	2.05	4.94	3.19	3.36	4.14	2.47	2.83	754	755
10/05/1999 8:51	4.16	1.89	5.01	3.04	3.83	3.86	2.13	2.56	754	756
10/05/1999 8:52	4.36	1.98	5.21	3.25	4.05	4.04	2.21	2.64	754	756
10/05/1999 8:53	4.15	1.32	4.63	3.03	3.73	4.06	1.94	2.34	754	756
10/05/1999 8:54	4.65	1.51	4.99	3.03	3.77	4.09	2.38	2.56	753	755
10/05/1999 8:55	4.28	2.35	5.15	3.59	3.86	3.95	2.40	2.42	752	754
10/05/1999 8:56	4.13	1.69	4.34	3.09	3.58	3.64	2.59	2.58	751	754
10/05/1999 8:57	4.60	1.86	4.88	3.06	3.56	3.84	2.42	2.66	751	754
10/05/1999 8:58	4.85	1.78	4.89	3.15	3.64	3.84	2.45	2.66	751	754
10/05/1999 8:59	4.30	1.43	4.41	2.79	3.63	3.94	1.87	2.27	751	754
10/05/1999 9:00	4.50	1.32	4.47	2.70	3.56	3.86	1.86	2.16	751	753
10/05/1999 9:01	4.63	1.55	4.64	2.80	3.68	3.91	2.40	2.72	751	753
10/05/1999 9:02	4.57	1.77	4.78	3.05	3.65	3.95	2.27	2.66	752	753
10/05/1999 9:03	4.95	1.47	4.95	2.94	3.64	3.70	2.21	2.17	752	753
10/05/1999 9:04	4.80	1.78	4.82	3.19	3.68	3.81	2.29	2.38	752	754
10/05/1999 9:05	4.66	1.55	4.85	2.90	3.63	3.86	2.18	2.24	753	754
10/05/1999 9:06	5.06	2.08	5.20	3.42	3.76	4.08	2.39	2.71	752	754
10/05/1999 9:07	5.24	1.57	4.85	3.22	3.50	3.74	2.15	2.24	752	754
10/05/1999 9:08	4.92	1.77	4.89	3.19	3.53	3.78	2.22	2.21	752	754
10/05/1999 9:09	4.56	1.69	4.80	3.23	3.51	3.94	2.01	2.43	751	753
10/05/1999 9:10	4.60	1.37	4.85	2.94	3.54	4.02	2.03	2.30	750	752
10/05/1999 9:11	4.74	1.94	4.92	3.09	3.53	3.88	2.25	2.41	750	751
10/05/1999 9:12	4.67	1.78	4.76	3.07	3.45	3.76	2.21	2.39	750	751
10/05/1999 9:13	4.33	1.70	4.81	3.00	3.48	3.76	2.17	2.47	750	751

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/05/1999 9:14	4.49	1.48	4.74	3.02	3.56	4.03	2.04	2.52	750	752
10/05/1999 9:15	4.64	1.30	4.64	2.77	3.51	3.99	1.97	2.20	749	751
10/05/1999 9:16	4.77	1.70	4.85	3.04	3.60	3.96	2.19	2.56	749	750
10/05/1999 9:17	4.34	1.39	4.64	2.98	3.41	3.67	2.11	2.38	749	750
10/05/1999 9:18	4.51	1.80	4.87	3.18	3.43	3.84	2.37	2.73	748	750
10/05/1999 9:19	4.67	1.52	4.66	3.06	3.54	3.94	2.16	2.47	748	749
10/05/1999 9:20	4.52	1.26	4.62	2.77	3.34	3.96	1.76	2.06	748	748
10/05/1999 9:21	4.57	1.72	4.69	3.02	3.47	3.89	2.25	2.76	747	748
10/05/1999 9:22	4.86	1.70	4.68	3.01	3.50	3.82	2.02	2.45	747	748
10/05/1999 9:23	4.47	1.41	4.71	3.01	3.47	3.67	2.06	2.37	748	748
10/05/1999 9:24	4.67	1.50	4.84	3.08	3.65	3.80	1.99	2.05	748	749
10/05/1999 9:25	4.34	1.51	4.79	3.01	3.59	3.93	1.78	2.00	748	749
10/05/1999 9:26	4.60	1.45	4.69	2.84	3.58	3.55	1.92	2.16	748	749
10/05/1999 9:27	4.78	1.68	4.84	3.01	3.62	3.84	2.23	2.54	749	750
10/05/1999 9:28	4.52	1.71	4.69	3.07	3.63	3.85	2.16	2.53	749	750
10/05/1999 9:29	4.52	1.45	4.86	3.01	3.64	3.77	2.24	2.52	749	750
10/05/1999 9:30	4.24	1.37	4.63	3.12	3.42	3.71	2.00	2.32	749	750
10/05/1999 9:31	4.26	1.55	4.62	3.02	3.42	3.70	1.95	2.31	748	750
10/05/1999 9:32	4.59	1.92	4.83	3.02	3.65	3.79	2.16	2.38	749	751
10/05/1999 9:33	4.82	1.88	4.84	3.14	3.60	3.76	2.07	2.29	749	751
10/05/1999 9:34	4.55	1.49	4.78	3.04	3.59	3.78	2.09	2.24	748	750
10/05/1999 9:35	4.69	1.73	4.81	3.17	3.71	3.70	2.18	2.23	747	750
10/05/1999 9:36	4.49	1.75	4.63	3.05	3.68	3.74	2.03	2.25	747	750
10/05/1999 9:37	4.43	1.44	4.60	2.91	3.65	3.60	2.04	2.22	748	750
10/05/1999 9:38	4.74	1.94	4.73	3.08	3.78	3.85	2.25	2.49	748	750
10/05/1999 9:39	4.72	1.40	4.67	2.82	3.43	3.55	2.03	2.17	749	750
10/05/1999 9:40	4.55	1.85	4.93	3.14	3.67	3.68	2.18	2.25	749	750
10/05/1999 9:41	4.37	1.42	4.57	3.10	3.57	3.66	1.95	1.90	749	750
10/05/1999 9:42	4.74	1.54	4.94	3.04	3.70	3.57	2.20	1.98	749	750
10/05/1999 9:43	4.75	1.76	4.86	3.21	3.70	3.67	2.09	1.99	749	750
10/05/1999 9:44	4.51	1.26	4.69	2.90	3.63	3.51	2.29	2.19	749	750
10/05/1999 9:45	4.86	1.71	4.73	3.07	3.86	3.77	2.50	2.46	749	749
10/05/1999 9:46	4.68	1.82	4.65	3.06	3.71	3.75	2.18	2.42	749	749
10/05/1999 9:47	4.50	1.94	4.71	2.96	3.69	3.72	2.21	2.33	748	749
10/05/1999 9:48	4.48	1.77	4.68	2.92	3.54	3.77	1.87	2.20	747	749
10/05/1999 9:49	4.65	1.57	4.75	2.92	3.57	3.71	2.10	2.19	747	749
10/05/1999 9:50	4.42	1.55	4.64	3.07	3.70	3.70	2.23	2.20	747	749
10/05/1999 9:51	4.22	1.47	4.67	2.93	3.57	3.87	2.24	2.52	747	748
10/05/1999 9:52	4.40	1.40	4.59	2.86	3.50	3.80	2.35	2.24	748	747
10/05/1999 9:53	4.68	1.48	4.74	3.01	3.70	3.73	2.53	2.22	748	746
10/05/1999 9:54	4.86	1.71	4.80	3.22	3.80	3.90	2.33	2.11	748	745
10/05/1999 9:55	5.16	1.93	4.77	3.34	3.78	3.70	2.26	2.23	747	745
10/05/1999 9:56	5.01	1.68	4.83	2.85	3.60	3.59	2.23	2.13	742	745
10/05/1999 9:57	5.32	1.63	4.89	2.78	3.62	3.60	2.11	2.02	738	745

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/05/1999 9:58	5.26	1.72	4.87	2.89	3.55	3.64	2.16	2.05	735	746
10/05/1999 9:59	4.69	1.31	4.59	2.58	3.40	3.60	2.06	2.11	734	745
10/05/1999 10:00	4.70	1.47	4.51	2.55	3.45	3.73	2.28	2.45	735	742
10/05/1999 10:01	4.50	1.62	4.70	2.67	3.44	3.81	2.27	2.59	736	739
10/05/1999 10:02	4.96	1.71	4.93	2.87	3.60	3.90	2.57	2.49	736	735
10/05/1999 10:03	4.54	1.37	4.57	2.67	3.36	3.71	2.14	2.26	737	733
10/05/1999 10:04	4.34	1.34	4.60	2.50	3.38	3.57	2.08	2.12	738	733
10/05/1999 10:05	4.74	1.77	4.71	2.88	3.66	3.76	2.24	2.31	739	734
10/05/1999 10:06	4.46	1.63	4.75	2.80	3.69	3.78	2.01	2.26	739	734
10/05/1999 10:07	4.83	1.92	4.88	2.95	3.82	4.03	2.29	2.58	740	735
10/05/1999 10:08	4.48	1.47	4.44	2.76	3.64	3.83	1.76	2.34	740	735
10/05/1999 10:09	4.68	1.47	4.56	2.67	3.65	3.80	2.17	2.22	740	735
10/05/1999 10:10	4.96	2.06	4.79	3.04	3.68	4.05	2.36	2.63	741	736
10/05/1999 10:11	4.55	1.50	4.60	2.69	3.55	3.57	2.03	2.12	741	736
10/05/1999 10:12	4.91	1.77	4.70	2.83	3.62	3.70	2.32	2.28	741	736
10/05/1999 10:13	4.78	1.95	4.77	2.93	3.68	3.72	2.32	2.39	741	737
10/05/1999 10:14	4.59	1.88	4.78	2.94	3.58	3.68	2.08	2.14	741	737
10/05/1999 10:15	4.84	1.67	4.62	2.77	3.61	3.67	2.05	2.18	741	737
10/05/1999 10:16	4.82	1.72	4.69	2.73	3.58	3.62	2.14	2.25	742	737
10/05/1999 10:17	4.81	1.91	4.78	2.88	3.47	3.67	2.12	2.55	742	737
10/05/1999 10:18	4.80	1.99	4.98	3.03	3.58	3.77	2.14	2.54	742	737
10/05/1999 10:19	4.57	1.74	4.78	2.91	3.58	3.78	1.94	2.37	742	737
10/05/1999 10:20	4.53	1.83	4.78	2.91	3.59	3.76	1.96	2.38	742	737
10/05/1999 10:21	4.78	1.65	4.51	2.65	3.55	3.75	1.90	2.43	743	738
10/05/1999 10:22	4.94	1.93	4.82	2.71	3.68	3.62	2.15	2.54	743	738
10/05/1999 10:23	4.54	1.96	4.72	3.13	3.76	3.89	2.30	2.63	742	738
10/05/1999 10:24	4.65	1.78	4.71	2.90	3.75	3.75	2.31	2.60	742	738
10/05/1999 10:25	4.60	1.76	4.66	2.87	3.78	3.87	2.22	2.47	742	738
10/05/1999 10:26	4.42	1.37	4.74	2.53	3.70	3.58	2.11	2.29	743	738
10/05/1999 10:27	4.78	1.85	4.90	2.88	3.95	3.95	2.47	2.78	743	738
10/05/1999 10:28	4.38	1.51	4.65	2.78	3.77	3.77	1.98	2.32	743	738
10/05/1999 10:29	4.30	1.32	4.57	2.52	3.48	3.59	1.87	2.15	743	738
10/05/1999 10:30	5.03	1.80	4.75	2.94	3.68	3.72	2.27	2.38	743	738
10/05/1999 10:31	5.06	2.06	4.76	3.14	3.81	3.76	2.42	2.33	743	738
10/05/1999 10:32	4.64	1.69	4.71	2.81	3.72	3.65	2.15	2.17	742	738
10/05/1999 10:33	4.78	1.96	4.94	2.87	3.61	3.73	2.23	2.25	740	738
10/05/1999 10:34	4.70	1.83	4.80	2.92	3.74	3.67	2.21	2.35	740	738
10/05/1999 10:35	4.23	1.51	4.71	2.55	3.58	3.62	1.88	2.19	741	738
10/05/1999 10:36	4.68	1.86	4.90	2.74	3.73	3.80	2.10	2.62	741	738
10/05/1999 10:37	4.60	1.96	4.87	2.89	3.71	3.81	1.95	2.65	742	739
10/05/1999 10:38	4.45	1.32	4.69	2.43	3.54	3.51	1.69	2.22	743	739
10/05/1999 10:39	4.50	1.72	5.12	2.60	3.82	3.78	2.16	2.73	744	739
10/05/1999 10:40	4.43	1.97	5.02	2.93	3.94	3.95	2.21	2.55	744	739
10/05/1999 10:41	4.27	1.58	4.84	2.63	3.66	3.79	1.91	2.54	744	739

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/05/1999 10:42	4.18	1.64	4.75	2.53	3.70	3.85	2.03	2.62	745	739
10/05/1999 10:43	4.62	1.98	4.93	2.88	3.80	3.87	2.38	2.66	745	739
10/05/1999 10:44	4.48	1.94	4.97	2.96	3.92	3.85	2.30	2.63	744	739
10/05/1999 10:45	4.16	1.43	4.62	2.44	3.55	3.62	1.81	2.06	745	739
10/05/1999 10:46	4.37	1.50	4.76	2.48	3.52	3.66	2.04	2.28	745	740
10/05/1999 10:47	4.92	2.04	4.95	2.95	3.78	3.73	2.41	2.51	745	740
10/05/1999 10:48	4.48	1.87	4.85	2.85	3.67	3.53	2.34	2.20	745	740
10/05/1999 10:49	4.51	1.64	4.84	2.78	3.71	3.73	2.27	2.33	745	740
10/05/1999 10:50	4.21	1.51	4.75	2.57	3.61	3.64	2.04	2.24	745	740
10/05/1999 10:51	4.71	1.97	5.02	2.94	3.79	3.78	2.43	2.55	745	740
10/05/1999 10:52	4.54	1.79	4.76	2.86	3.82	3.81	1.99	2.49	745	740
10/05/1999 10:53	4.44	1.41	4.45	2.52	3.55	3.52	1.77	2.20	745	740
10/05/1999 10:54	4.46	2.05	4.99	2.83	3.68	3.80	2.14	2.55	746	740
10/05/1999 10:55	4.53	2.28	4.99	3.01	3.92	3.95	2.40	2.69	746	740
10/05/1999 10:56	4.41	1.77	4.73	2.78	3.78	3.76	1.86	2.38	746	740
10/05/1999 10:57	4.38	1.58	4.71	2.58	3.62	3.67	1.68	2.22	746	741
10/05/1999 10:58	4.63	1.86	4.95	2.83	3.79	3.89	2.25	2.71	746	741
10/05/1999 10:59	4.77	1.99	5.01	3.02	3.85	3.99	2.52	2.82	746	741
10/05/1999 11:00	4.39	1.57	4.84	2.75	3.78	3.79	1.99	2.57	747	741
10/05/1999 11:01	4.28	1.40	4.81	2.55	3.63	3.71	1.79	2.49	747	741
10/05/1999 11:02	4.72	1.95	5.06	2.90	3.87	3.90	2.43	2.72	747	741
10/05/1999 11:03	4.62	2.04	4.92	3.05	3.84	3.79	2.38	2.34	747	741
10/05/1999 11:04	4.27	1.64	4.90	2.73	3.62	3.62	2.07	2.30	747	741
10/05/1999 11:05	4.47	1.60	4.87	2.69	3.79	3.70	2.19	2.47	747	741
10/05/1999 11:06	4.46	1.63	5.00	2.73	3.81	3.73	2.21	2.52	747	741
10/05/1999 11:07	4.62	1.95	4.86	2.80	3.76	3.82	2.47	2.58	747	741
10/05/1999 11:08	4.35	1.73	4.36	2.70	3.63	3.59	1.86	2.09	747	741
10/05/1999 11:09	4.48	1.72	4.73	2.60	3.71	3.58	2.14	2.15	748	742
10/05/1999 11:10	4.85	2.10	4.93	3.08	3.96	3.85	2.52	2.57	748	742
10/05/1999 11:11	4.37	1.92	4.70	2.98	3.80	3.73	2.09	2.39	748	742
10/05/1999 11:12	4.42	1.69	4.69	2.86	3.78	3.72	2.01	2.38	748	742
10/05/1999 11:13	4.31	1.58	4.92	2.76	3.84	3.77	2.17	2.66	748	742
10/05/1999 11:14	4.69	1.72	4.72	2.82	3.95	3.71	2.48	2.69	748	742
10/05/1999 11:15	4.87	1.92	4.85	3.01	3.91	3.71	2.07	2.32	748	742
10/05/1999 11:16	4.50	1.75	4.72	2.87	3.75	3.68	1.86	2.12	748	742
10/05/1999 11:17	4.63	1.88	4.92	2.84	3.94	3.75	2.38	2.51	748	742
10/05/1999 11:18	4.59	2.03	4.83	3.05	4.15	3.92	2.52	2.70	748	742
10/05/1999 11:19	4.34	1.55	4.74	2.66	3.79	3.71	2.14	2.65	748	742
10/05/1999 11:20	4.57	1.82	4.77	2.89	3.84	3.89	2.39	2.85	748	742
10/05/1999 11:21	4.54	1.71	4.95	2.82	3.96	3.92	2.49	2.72	749	742
10/05/1999 11:22	4.24	1.66	4.78	2.70	3.85	3.83	2.09	2.47	749	742
10/05/1999 11:23	4.52	1.59	4.69	2.65	3.77	3.69	2.05	2.31	749	743
10/05/1999 11:24	4.45	1.64	4.96	2.76	3.82	3.80	2.12	2.49	749	743
10/05/1999 11:25	4.91	2.01	4.99	2.97	3.97	3.91	2.30	2.48	749	742

Craig 3 Boiler Data										
	O2 Econ Left East Upper	O2 Econ Left East Lower	O2 Econ Left West Upper	O2 Economizer Left West Lower	O2 Econ Right East Upper	O2 Econ Right East Lower	O2 Econ Right West Upper	O2 Economizer Right West Lower	A Air Heater Gas In Temp	B Air Heater Gas In Temp
10/05/1999 11:26	4.72	1.71	4.70	2.88	3.79	3.59	1.97	2.19	749	743
10/05/1999 11:27	4.49	1.52	4.93	2.59	3.66	3.59	2.04	2.51	749	743
10/05/1999 11:28	4.58	1.75	5.00	2.78	3.88	3.83	2.22	2.82	749	743
10/05/1999 11:29	4.33	1.67	4.97	2.73	3.80	3.89	2.00	2.57	749	743
10/05/1999 11:30	4.36	1.60	4.89	2.73	3.70	3.83	2.05	2.38	749	743
10/05/1999 11:31	4.35	1.62	4.88	2.71	3.72	3.78	1.96	2.27	750	743
10/05/1999 11:32	4.53	1.67	4.84	2.70	3.88	3.66	2.00	2.06	750	743
10/05/1999 11:33	4.70	2.02	4.77	3.00	3.92	3.75	2.32	2.40	750	743
10/05/1999 11:34	4.36	1.79	4.76	2.88	3.75	3.73	2.12	2.33	750	743
10/05/1999 11:35	4.23	1.64	4.66	2.65	3.52	3.60	1.95	1.95	750	743
10/05/1999 11:36	4.47	1.84	4.90	2.84	3.77	3.65	2.17	2.12	750	743
10/05/1999 11:37	4.60	1.96	5.09	2.96	3.93	3.65	2.40	2.49	750	743
10/05/1999 11:38	4.45	1.53	4.68	2.80	3.74	3.55	2.04	2.28	750	743
10/05/1999 11:39	4.42	1.63	4.76	2.69	3.81	3.75	2.28	2.79	750	743
10/05/1999 11:40	4.45	1.53	4.82	2.73	3.76	3.76	2.00	2.59	750	743
10/05/1999 11:41	4.31	1.48	4.68	2.56	3.75	3.66	2.08	2.44	750	743
10/05/1999 11:42	4.31	1.64	4.82	2.66	3.80	3.68	2.13	2.47	751	744
Test 3 Average				***2.91***				***2.40***	***748***	***746***

Craig 3 Scrubber Data																													
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/04/1999 9:21	276	145	6.1	21.7	85.9	0.48	0.034	261	142	4.7	23.3	93.1	0.55	3.75	71	67	0.0	0.1	0.3	0.0	0.4	254	141	4.3	22.2	74.0	0.43	8.41
10/04/1999 9:22	277	145	6.4	20.3	92.4	0.48	0.034	261	142	4.5	22.9	95.9	0.55	4.39	72	67	0.0	0.1	0.3	0.0	0.4	254	141	4.2	24.2	47.7	0.43	7.98
10/04/1999 9:23	276	144	6.3	19.0	95.6	0.48	0.056	261	141	4.7	21.5	99.0	0.55	6.43	72	67	0.0	0.1	0.3	0.0	0.4	255	156	4.3	23.1	16.2	0.43	-0.04
10/04/1999 9:24	276	144	6.2	21.9	87.7	0.48	0.079	261	141	4.5	23.4	91.1	0.55	6.80	71	67	0.0	0.1	0.3	0.0	0.4	254	158	4.3	18.2	75.9	0.43	-0.16
10/04/1999 9:25	276	145	6.2	23.2	84.9	0.48	0.079	261	142	4.7	24.5	88.9	0.55	4.60	71	67	0.0	0.1	0.3	0.0	0.4	255	149	4.3	17.1	106.1	0.42	4.88
10/04/1999 9:26	276	145	6.2	22.3	88.4	0.48	0.079	261	142	4.4	24.2	90.7	0.55	3.74	71	67	0.0	0.1	0.3	0.0	0.4	255	141	4.2	25.3	93.3	0.43	13.27
10/04/1999 9:27	276	145	6.3	20.8	90.8	0.48	0.079	261	143	4.7	22.9	95.1	0.55	3.92	72	67	0.0	0.1	0.3	0.0	0.4	255	139	4.3	27.3	60.5	0.43	12.15
10/04/1999 9:28	276	145	6.2	21.6	90.9	0.48	0.079	261	142	4.5	23.2	92.8	0.55	4.53	72	67	0.0	0.1	0.3	0.0	0.4	254	141	4.2	22.0	76.2	0.42	8.43
10/04/1999 9:29	276	145	6.4	21.9	90.3	0.48	0.079	262	142	4.7	23.5	92.5	0.55	4.28	71	67	0.0	0.1	0.3	0.0	0.4	255	141	4.3	21.5	80.8	0.43	9.08
10/04/1999 9:30	276	146	6.1	21.9	91.2	0.48	0.079	261	143	4.6	23.7	92.0	0.55	3.55	72	67	0.0	0.1	0.3	0.0	0.4	255	140	4.3	21.7	81.1	0.43	10.30
10/04/1999 9:31	277	146	6.4	21.5	91.1	0.48	0.079	261	142	4.6	23.4	92.9	0.55	3.67	72	67	0.0	0.1	0.3	0.0	0.4	255	139	4.2	22.8	74.0	0.42	10.25
10/04/1999 9:32	276	145	6.0	21.8	88.0	0.48	0.079	261	143	4.6	23.5	93.0	0.55	3.24	71	67	0.0	0.1	0.3	0.0	0.4	255	140	4.3	21.8	78.1	0.43	8.85
10/04/1999 9:33	277	146	6.5	21.7	91.3	0.48	0.079	261	142	4.5	23.5	93.5	0.55	3.69	71	67	0.0	0.1	0.3	0.0	0.4	255	140	4.2	22.3	75.1	0.43	9.93
10/04/1999 9:34	277	146	5.8	21.7	92.1	0.48	0.079	261	142	4.7	23.5	92.3	0.55	3.13	71	67	0.0	0.1	0.3	0.0	0.4	255	141	4.3	21.8	76.5	0.42	8.28
10/04/1999 9:35	277	146	6.5	21.8	91.8	0.48	0.079	262	142	4.4	23.6	92.7	0.55	3.63	71	67	0.0	0.1	0.3	0.0	0.4	255	140	4.2	21.1	77.2	0.43	9.43
10/04/1999 9:36	277	146	5.9	21.8	91.9	0.48	0.079	262	142	4.7	23.5	92.4	0.55	3.22	72	67	0.0	0.1	0.3	0.0	0.4	255	140	4.3	21.9	78.1	0.42	8.82
10/04/1999 9:37	277	145	6.5	21.8	90.6	0.48	0.079	261	142	4.4	23.4	93.1	0.55	4.05	71	67	0.0	0.1	0.3	0.0	0.4	255	140	4.2	21.2	76.8	0.43	9.66
10/04/1999 9:38	277	146	5.9	21.8	87.8	0.48	0.079	262	142	4.7	23.5	92.8	0.55	3.17	71	67	0.0	0.1	0.3	0.0	0.4	255	140	4.3	20.9	78.8	0.43	8.59
10/04/1999 9:39	277	145	6.6	21.7	88.0	0.48	0.079	262	142	4.5	23.5	92.5	0.55	3.36	71	67	0.0	0.1	0.3	0.0	0.4	256	140	4.2	21.7	78.1	0.43	9.74
10/04/1999 9:40	277	145	6.0	21.7	84.4	0.48	0.079	262	143	4.8	23.5	92.6	0.55	2.60	71	67	0.0	0.1	0.3	0.0	0.4	256	140	4.3	21.4	77.6	0.43	8.56
10/04/1999 9:41	277	146	6.6	21.8	81.7	0.48	0.079	262	143	4.5	23.6	92.7	0.55	2.60	71	67	0.0	0.1	0.3	0.0	0.4	256	140	4.3	21.8	78.5	0.43	9.56
10/04/1999 9:42	278	147	6.0	21.6	82.0	0.48	0.079	262	143	4.7	23.3	92.8	0.55	1.71	72	67	0.0	0.1	0.3	0.0	0.4	255	140	4.3	23.2	75.9	0.42	8.88
10/04/1999 9:43	277	147	6.6	21.7	83.7	0.48	0.079	263	143	4.6	23.3	93.0	0.55	1.44	72	67	0.0	0.1	0.3	0.0	0.4	257	140	4.3	22.6	76.9	0.43	8.95
10/04/1999 9:44	278	147	6.0	21.8	87.1	0.48	0.079	262	143	4.7	23.5	92.3	0.55	0.71	72	67	0.1	0.1	0.3	0.0	0.4	256	140	4.3	21.6	78.5	0.43	8.97
10/04/1999 9:45	277	147	6.6	21.7	81.1	0.48	0.079	262	144	4.6	23.6	92.8	0.55	0.70	72	67	0.0	0.1	0.3	0.0	0.4	256	140	4.3	22.2	77.9	0.43	9.50
10/04/1999 9:46	278	147	5.9	21.9	76.1	0.48	0.079	262	143	4.6	23.5	92.1	0.55	0.33	71	67	0.0	0.1	0.3	0.0	0.4	256	140	4.3	22.2	76.0	0.42	9.43
10/04/1999 9:47	277	148	6.6	23.4	73.4	0.48	0.079	263	145	4.8	24.5	87.2	0.55	-0.09	72	67	0.0	0.1	0.3	0.0	0.4	256	140	4.3	21.2	79.2	0.43	8.83
10/04/1999 9:48	278	148	6.0	21.6	86.7	0.48	0.079	263	145	4.7	23.3	92.4	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	256	140	4.3	21.8	78.7	0.43	9.11
10/04/1999 9:49	278	147	6.5	21.5	87.8	0.48	0.079	263	144	4.8	23.2	93.2	0.55	0.27	71	67	0.0	0.1	0.3	0.0	0.4	257	140	4.3	21.0	78.6	0.43	9.19
10/04/1999 9:50	278	147	6.0	21.6	90.9	0.48	0.079	263	145	4.7	23.2	93.0	0.55	-0.11	72	67	0.0	0.1	0.3	0.0	0.4	257	140	4.3	21.5	80.1	0.43	8.71
10/04/1999 9:51	278	147	6.4	21.5	90.5	0.48	0.079	263	144	4.6	23.2	93.4	0.55	0.12	71	67	0.0	0.1	0.3	0.0	0.4	256	139	4.2	22.4	78.4	0.43	9.74
10/04/1999 9:52	278	147	6.3	21.4	90.8	0.48	0.079	263	144	4.8	23.1	93.0	0.55	-0.18	71	67	0.0	0.1	0.3	0.0	0.4	257	140	4.3	22.3	75.7	0.43	8.69
10/04/1999 9:53	279	147	6.4	21.6	88.2	0.48	0.079	264	145	4.7	23.1	93.0	0.55	-0.12	72	67	0.0	0.1	0.3	0.0	0.4	257	140	4.3	22.2	79.2	0.43	8.46
10/04/1999 9:54	279	148	6.4	21.6	85.8	0.48	0.079	264	145	4.8	23.2	93.3	0.55	-0.23	72	67	0.0	0.1	0.3	0.0	0.4	258	140	4.4	23.0	80.1	0.43	9.04
10/04/1999 9:55	279	147	6.2	21.6	86.5	0.48	0.079	263	145	4.7	23.1	93.0	0.55	-0.24	72	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	22.4	78.5	0.42	9.55
10/04/1999 9:56	278	147	6.4	21.7	88.6	0.48	0.079	264	145	4.8	23.1	93.3	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	258	141	4.3	21.2	80.2	0.42	8.92
10/04/1999 9:57	279	148	6.1	21.8	88.8	0.48	0.079	264	145	4.7	23.2	93.2	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	21.0	82.7	0.43	9.27
10/04/1999 9:58	279	148	6.3	21.5	89.8	0.48	0.079	264	145	4.7	23.1	93.6	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	21.8	78.6	0.42	9.71
10/04/1999 9:59	279	148	6.3	21.6	90.7	0.48	0.079	264	145	4.8	23.0	93.2	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	258	141	4.4	21.5	78.6	0.43	8.56
10/04/1999 10:00	279	148	6.2	21.7	85.6	0.48	0.079	264	144	4.6	23.1	93.1	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	21.8	82.9	0.43	9.22
10/04/1999 10:01	279	148	6.4	21.5	83.6	0.48	0.079	264	145	4.8	22.9	93.8	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	22.0	77.8	0.43	9.29
10/04/1999 10:02	279	147	6.1	21.8	87.8	0.48	0.079	264	145	4.7	22.9	92.9	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	21.0	82.0	0.43	8.66
10/04/1999 10:03	280	148	6.5	21.6	88.1	0.48	0.079	264	145	4.7	23.0	93.6	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	21.9	80.9	0.43	9.75
10/04/1999 10:04	280	148	6.0	21.6	85.8	0.48	0.079	264	145	4.7	23.0	93.1	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	21.8	79.4	0.43	8.88
10/04/1999 10:05	280	148	6.6	21.6	91.0	0.48	0.079	265	145	4.8	23.0	93.7	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.3	21.7	80.0	0.42	8.92
10/04/1999 10:06	280	149	6.0	21.7	89.2	0.48	0.079	265	146	4.8	23.1	92.4	0.55	-0.24	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.3	22.1	83.9	0.42	8.88
10/04/1999 10:07	280	148	6.6	21.3	85.5	0.48	0.079	265	145	4.7	23.0	93.6	0.56	-0.24	71	67	0.0	0.1	0.3	0.0	0.4	259	139	4.3	23.0	77.3	0.42	9.59
10/04/1999 10:08	280	148	6.0	21.5	83.4	0.48	0.079	265	146	4.8	23.0	93.1	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.3	22.0	79.6	0.42	8.18
10/04/1999 10:09	280	148	6.4	21.7	87.8	0.48	0.079	265	146	4.6	23.1	92.6	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	21.3	82.8	0.43	9.01
10/04/1999 10:10	280	149	6.2	21.6	87.6	0.48	0.079	265	146	4.8	23.1	93.0	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.3	21.2	81.1	0.43	8.97
10/04/1999 10:11	280	149	6.4	21.6	84.7	0.48	0.079	265	146	4.6	23.2	93.2	0.54	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.3	21.3	81.2	0.42	9.15
10/04/1999 10:12	281	149	6.3	21.5	79.5	0.48	0.079	266	146	4.9	23.1	93.2	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.4	22.0	81.5	0.42	8.83
10/04/1999 10:13	281	149	6.3	21.6	78.3	0.48	0.079	265	146	4.6	23.2	92.8	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.3	21.1	83.2	0.43	9.10
10/04/1999 10:14	281	150	6.4	21.6	77.3	0.48	0.079	266	146	4.8	23.2	92.4	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	260	140	4.4	20.9	82.7	0.43	9.17

Craig 3 Scrubber Data																											
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/04/1999 10:15	281	150	6.1	21.6	80.3	0.48	0.079	265	146	4.6	23.2	93.1	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	259	140	4.3	21.8	82.3	0.42	9.30
10/04/1999 10:16	281	150	6.5	21.5	86.0	0.48	0.079	266	147	4.8	23.1	92.4	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	260	140	4.4	22.3	80.1	0.43	9.14
10/04/1999 10:17	281	150	6.1	21.7	87.3	0.48	0.079	266	147	4.7	23.2	92.3	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	260	140	4.3	21.3	84.1	0.43	8.54
10/04/1999 10:18	281	150	6.5	21.6	90.3	0.48	0.079	266	147	4.8	23.1	92.7	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	260	140	4.3	22.3	82.0	0.43	9.73
10/04/1999 10:19	281	150	6.1	21.6	90.9	0.48	0.079	266	147	4.7	23.2	93.4	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	260	140	4.3	21.6	80.9	0.43	8.59
10/04/1999 10:20	281	149	6.4	21.7	87.6	0.48	0.079	266	147	4.7	23.4	92.5	0.55	-0.26	72	67	0.0	0.1	0.3	0.0	0.4	260	140	4.3	20.8	84.8	0.43	9.22
10/04/1999 10:21	281	149	6.1	21.6	89.4	0.48	0.079	266	147	4.7	23.4	92.9	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	260	140	4.3	21.8	83.7	0.43	9.16
10/04/1999 10:22	282	150	6.5	22.3	86.3	0.48	0.079	267	147	4.7	23.6	92.8	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	260	140	4.3	7.6	86.3	0.43	8.48
10/04/1999 10:23	282	151	6.1	23.3	78.2	0.48	0.079	267	148	4.8	24.4	89.3	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	260	142	4.4	7.0	108.7	0.43	6.70
10/04/1999 10:24	282	151	6.3	23.0	77.5	0.48	0.079	267	148	4.6	24.4	90.2	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	260	138	4.2	10.7	103.7	0.43	11.65
10/04/1999 10:25	282	152	6.2	22.3	83.1	0.48	0.079	266	148	4.8	24.0	91.8	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	261	139	4.3	9.4	89.0	0.43	10.01
10/04/1999 10:26	282	151	6.2	22.7	86.6	0.48	0.079	267	148	4.6	24.1	90.8	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	260	140	4.3	8.0	98.4	0.43	8.01
10/04/1999 10:27	282	151	6.4	22.8	86.7	0.48	0.079	267	149	4.8	24.2	90.9	0.55	-0.24	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.4	7.2	100.1	0.43	8.24
10/04/1999 10:28	282	152	6.2	22.9	86.7	0.48	0.079	267	149	4.6	24.3	90.8	0.55	-0.24	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.3	7.1	100.7	0.43	8.43
10/04/1999 10:29	282	151	6.5	22.9	86.5	0.48	0.079	268	149	4.9	24.5	90.2	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.4	7.1	101.8	0.42	8.37
10/04/1999 10:30	283	152	6.1	22.9	89.2	0.48	0.079	267	150	4.6	24.6	90.1	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.3	7.5	102.0	0.42	8.87
10/04/1999 10:31	283	152	6.5	22.7	89.9	0.48	0.079	268	150	4.9	24.5	90.1	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.4	7.4	99.0	0.42	9.18
10/04/1999 10:32	282	152	6.2	22.9	89.0	0.48	0.079	268	150	4.7	24.4	90.4	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.3	7.2	100.9	0.42	8.34
10/04/1999 10:33	283	153	6.5	22.9	86.7	0.48	0.079	268	150	4.8	24.4	90.5	0.54	-0.24	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.4	8.6	102.0	0.42	8.96
10/04/1999 10:34	283	153	6.0	22.6	87.8	0.48	0.079	268	150	4.7	24.3	91.0	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.3	9.3	98.1	0.42	8.98
10/04/1999 10:35	283	152	6.6	22.5	88.1	0.48	0.079	268	150	4.8	24.2	91.1	0.55	-0.23	71	67	0.0	0.1	0.3	0.0	0.4	261	140	4.3	10.0	95.0	0.42	7.87
10/04/1999 10:36	283	153	6.0	22.7	84.9	0.48	0.079	268	150	4.8	24.3	91.0	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	261	140	4.3	10.9	99.5	0.42	7.91
10/04/1999 10:37	283	152	6.7	22.6	81.3	0.48	0.079	268	150	4.7	24.2	90.9	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	262	140	4.3	11.4	97.3	0.42	8.94
10/04/1999 10:38	283	153	6.1	22.4	84.9	0.48	0.079	268	150	4.9	24.0	90.6	0.55	-0.25	71	67	0.0	0.1	0.3	0.0	0.4	262	141	4.4	11.6	93.9	0.42	8.02
10/04/1999 10:39	283	153	6.4	22.6	75.6	0.48	0.079	268	150	4.6	24.3	90.4	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	262	141	4.3	11.6	98.0	0.43	8.05
10/04/1999 10:40	284	153	6.4	22.5	70.9	0.48	0.079	269	151	4.9	24.3	91.3	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	262	140	4.4	12.9	96.4	0.43	8.49
10/04/1999 10:41	284	153	6.3	22.4	78.6	0.48	0.079	268	150	4.7	24.1	91.1	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	262	140	4.3	13.2	93.6	0.43	8.22
10/04/1999 10:42	284	153	6.7	22.4	81.7	0.48	0.079	269	150	4.9	24.1	90.7	0.56	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	262	141	4.4	13.7	95.8	0.43	8.27
10/04/1999 10:43	283	154	6.2	22.3	81.4	0.48	0.079	269	151	4.8	24.1	90.8	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	262	140	4.4	14.4	95.8	0.43	8.26
10/04/1999 10:44	284	154	6.4	22.2	85.7	0.48	0.079	269	151	4.7	24.1	91.4	0.55	-0.26	72	67	0.0	0.1	0.3	0.0	0.4	262	140	4.3	15.3	92.3	0.43	9.10
10/04/1999 10:45	283	153	6.4	22.2	80.9	0.48	0.079	269	151	4.8	24.0	91.8	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	263	141	4.4	15.4	90.9	0.43	8.57
10/04/1999 10:46	284	154	6.3	22.2	79.6	0.48	0.079	269	151	4.8	24.0	91.3	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	263	141	4.4	15.6	92.4	0.43	8.08
10/04/1999 10:47	284	154	6.5	22.2	73.4	0.48	0.079	269	151	4.8	24.0	91.4	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	263	140	4.4	16.1	93.5	0.43	8.80
10/04/1999 10:48	284	154	6.3	22.1	75.4	0.48	0.079	269	151	4.8	23.8	91.7	0.55	-0.24	72	67	0.0	0.1	0.3	0.0	0.4	263	140	4.4	16.9	90.8	0.42	8.39
10/04/1999 10:49	284	154	6.6	22.1	47.6	0.48	0.079	269	151	4.8	23.8	92.0	0.54	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	263	141	4.4	17.5	90.4	0.42	8.20
10/04/1999 10:50	284	154	6.1	22.1	64.5	0.48	0.079	270	151	4.9	23.7	91.4	0.54	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	264	141	4.4	18.3	92.1	0.42	7.87
10/04/1999 10:51	285	154	6.6	22.0	35.0	0.48	0.079	270	152	4.7	23.7	91.5	0.56	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	263	140	4.4	17.6	90.9	0.42	9.02
10/04/1999 10:52	285	155	6.1	22.0	48.3	0.48	0.079	270	152	4.9	23.5	92.1	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	264	141	4.4	18.1	88.9	0.42	7.85
10/04/1999 10:53	285	155	6.6	22.0	78.1	0.48	0.079	270	151	4.7	23.6	91.7	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	264	141	4.3	18.2	91.5	0.42	8.25
10/04/1999 10:54	285	155	6.2	22.0	78.0	0.48	0.079	270	152	4.9	23.7	91.9	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	264	141	4.4	17.6	90.5	0.42	8.16
10/04/1999 10:55	285	156	6.3	28.6	49.5	0.48	0.079	270	152	4.7	22.6	96.7	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	264	141	4.3	17.3	92.9	0.42	8.31
10/04/1999 10:56	285	162	6.3	22.4	87.8	0.48	0.079	271	151	4.9	22.5	92.4	0.55	-0.26	72	67	0.0	0.1	0.3	0.0	0.4	264	141	4.4	18.1	88.4	0.42	8.06
10/04/1999 10:57	285	159	6.3	22.2	91.3	0.48	0.079	270	151	4.6	23.6	92.0	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	264	141	4.3	16.7	93.2	0.42	8.10
10/04/1999 10:58	286	158	6.4	22.1	91.3	0.48	0.079	271	152	4.9	23.6	91.5	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	265	141	4.4	19.2	91.5	0.42	8.39
10/04/1999 10:59	286	157	6.3	21.8	91.5	0.48	0.079	270	152	4.7	23.5	92.4	0.54	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	264	140	4.3	20.1	86.2	0.41	8.10
10/04/1999 11:00	286	156	6.5	22.0	91.3	0.48	0.079	271	152	4.8	23.5	92.6	0.54	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	265	142	4.4	17.9	88.6	0.41	6.98
10/04/1999 11:01	286	156	6.2	22.3	90.6	0.48	0.079	271	153	4.8	23.8	90.8	0.54	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	265	141	4.4	17.9	95.9	0.41	7.51
10/04/1999 11:02	286	156	6.5	22.1	90.6	0.48	0.079	271	153	4.8	23.7	91.9	0.55	-0.24	72	67	0.0	0.1	0.3	0.0	0.4	265	140	4.4	19.0	92.5	0.41	8.80
10/04/1999 11:03	286	156	6.3	21.7	91.5	0.48	0.079	271	153	4.8	23.4	92.9	0.55	-0.24	72	67	0.0	0.1	0.3	0.0	0.4	265	141	4.4	21.0	86.0	0.41	8.28
10/04/1999 11:04	286	156	6.6	21.7	91.3	0.48	0.079	272	153	4.8	23.4	92.4	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	265	141	4.4	21.9	86.3	0.41	7.57
10/04/1999 11:05	286	156	6.3	21.9	90.6	0.48	0.079	272	154	4.9	23.5	92.2	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	265	141	4.4	20.7	89.6	0.41	7.48
10/04/1999 11:06	286	156	6.5	22.0	89.4	0.48	0.079	272	153	4.7	23.6	91.7	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	265	141	4.4	20.4	90.8	0.41	8.23
10/04/1999 11:07	287	156	6.4	17.8	91.4	0.48	0.079	272	154	4.8	22.2	92.5	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	265	141	4.4	20.1	90.5	0.41	8.27
10/04/1999 11:08	286	156	6.3	21.8	92.5	0.48	0.079	272	154	4.7	23.2	92.3	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	266	141	4.3	24.1	87.2	0.41	8.16

Craig 3 Scrubber Data																													
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/04/1999 11:09	287	156	6.5	21.3	94.1	0.48	0.079	272	154	4.8	23.4	93.0	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	266	141	4.4	26.4	79.1	0.41	8.31
10/04/1999 11:10	286	156	6.1	21.8	92.8	0.48	0.079	272	154	4.8	23.6	92.0	0.55	-0.25	72	67	0.0	0.1	0.3	0.0	0.4	266	142	4.4	21.6	85.3	0.40	6.83
10/04/1999 11:11	287	156	6.5	22.2	91.8	0.48	0.079	272	154	4.7	24.0	91.3	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	266	142	4.4	20.2	93.1	0.40	7.39
10/04/1999 11:12	287	156	6.4	22.1	91.8	0.48	0.079	273	154	4.8	23.9	92.0	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	266	141	4.4	21.2	92.0	0.40	8.39
10/04/1999 11:13	287	157	6.3	21.9	92.9	0.48	0.079	273	154	4.7	23.9	92.0	0.56	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	266	141	4.3	21.8	87.1	0.41	8.48
10/04/1999 11:14	287	156	6.6	21.6	92.8	0.48	0.079	273	154	4.8	24.1	92.8	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	266	141	4.4	22.1	84.5	0.41	7.63
10/04/1999 11:15	287	156	6.1	21.9	91.5	0.48	0.079	273	154	4.8	24.8	91.1	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	266	142	4.4	21.1	90.9	0.41	6.89
10/04/1999 11:16	287	156	6.6	21.9	92.2	0.48	0.079	273	154	4.7	25.0	91.0	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	267	141	4.4	21.6	91.4	0.41	8.15
10/04/1999 11:17	288	156	6.3	21.7	93.2	0.48	0.079	273	154	4.9	24.9	91.8	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	267	141	4.4	21.8	86.6	0.41	7.62
10/04/1999 11:18	287	156	6.4	22.2	93.3	0.48	0.079	273	154	4.7	23.1	94.0	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	267	141	4.3	21.3	88.3	0.41	7.16
10/04/1999 11:19	288	157	6.5	23.4	90.1	0.48	0.079	273	156	4.8	6.2	100.4	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	267	142	4.4	20.8	90.8	0.42	7.04
10/04/1999 11:20	288	157	6.2	22.5	89.2	0.48	0.079	274	158	4.7	13.5	94.6	0.54	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	267	141	4.4	21.5	92.5	0.42	7.50
10/04/1999 11:21	288	157	6.7	21.5	89.8	0.48	0.079	274	157	4.8	29.4	90.0	0.54	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	267	141	4.5	21.9	88.5	0.41	8.33
10/04/1999 11:22	288	161	6.1	31.8	36.7	0.48	0.079	274	156	4.9	23.8	100.2	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	267	141	4.4	20.4	92.3	0.41	7.31
10/04/1999 11:23	288	180	6.6	35.9	17.3	0.48	0.080	274	153	4.8	20.9	103.6	0.56	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	267	141	4.4	21.6	87.8	0.41	7.62
10/04/1999 11:24	288	185	6.2	30.9	44.3	0.48	0.080	274	151	4.8	23.6	98.6	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	268	142	4.4	21.4	90.1	0.41	6.53
10/04/1999 11:25	288	180	6.5	19.5	92.0	0.48	0.081	274	151	4.7	27.2	90.2	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	268	141	4.4	20.7	90.8	0.41	7.15
10/04/1999 11:26	289	172	6.4	20.2	92.4	0.48	0.082	275	152	4.9	26.9	90.3	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	268	141	4.5	20.7	92.0	0.41	6.90
10/04/1999 11:27	289	168	6.5	20.3	90.9	0.48	0.083	275	153	4.6	24.2	90.8	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	268	141	4.4	21.5	92.2	0.41	7.50
10/04/1999 11:28	289	166	6.5	20.2	88.0	0.48	0.084	275	154	4.8	23.6	91.4	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	268	141	4.4	22.7	90.3	0.41	7.58
10/04/1999 11:29	289	164	6.3	20.1	87.6	0.48	0.085	275	155	4.8	23.4	92.9	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	268	142	4.4	21.7	87.1	0.41	7.39
10/04/1999 11:30	289	163	6.5	20.3	81.9	0.48	0.086	275	155	4.7	23.5	91.7	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	268	142	4.4	20.8	91.7	0.41	6.80
10/04/1999 11:31	289	162	6.4	20.3	85.0	0.48	0.087	275	156	4.8	23.7	91.3	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	268	142	4.4	21.4	93.5	0.41	7.06
10/04/1999 11:32	289	161	6.5	20.3	85.8	0.48	0.088	275	156	4.8	23.7	91.1	0.55	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	269	141	4.4	21.9	92.7	0.41	7.94
10/04/1999 11:33	290	161	6.5	20.1	91.8	0.48	0.089	275	157	4.9	23.6	92.0	0.55	-0.24	73	67	0.0	0.1	0.3	0.0	0.4	269	141	4.5	21.7	89.6	0.41	7.40
10/04/1999 11:34	289	161	6.4	20.3	90.7	0.48	0.090	275	157	4.7	23.6	91.3	0.54	-0.24	73	67	0.0	0.1	0.3	0.0	0.4	269	142	4.4	21.5	91.9	0.41	6.93
10/04/1999 11:35	290	161	6.6	20.3	87.4	0.48	0.090	275	157	4.8	23.7	91.9	0.54	-0.24	73	67	0.0	0.1	0.3	0.0	0.4	269	142	4.5	21.5	93.5	0.41	7.58
10/04/1999 11:36	290	161	6.3	20.2	87.1	0.48	0.091	276	157	4.8	23.7	91.8	0.54	-0.24	73	67	0.0	0.1	0.3	0.0	0.4	269	142	4.5	21.6	91.9	0.41	7.52
10/04/1999 11:37	290	160	6.4	20.2	89.6	0.48	0.092	275	157	4.6	23.7	91.5	0.54	-0.24	73	67	0.0	0.1	0.3	0.0	0.4	269	141	4.4	22.0	89.5	0.42	7.34
10/04/1999 11:38	290	160	6.4	20.2	88.2	0.47	0.093	276	157	4.8	23.5	91.5	0.54	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	269	142	4.4	22.1	88.9	0.42	6.91
10/04/1999 11:39	290	161	6.4	20.2	86.5	0.47	0.094	275	156	4.7	23.5	91.6	0.54	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	269	141	4.4	22.6	91.7	0.42	7.16
10/04/1999 11:40	290	161	6.5	20.2	88.3	0.47	0.095	276	157	4.8	23.5	91.7	0.54	-0.25	73	67	0.0	0.1	0.3	0.0	0.4	269	142	4.4	21.7	91.7	0.42	7.58
10/04/1999 11:41	290	161	6.4	20.2	87.5	0.48	0.096	276	157	4.8	23.5	91.7	0.54	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	142	4.4	21.0	90.8	0.42	7.11
10/04/1999 11:42	290	161	6.6	20.4	88.4	0.47	0.097	276	158	4.8	23.7	91.4	0.54	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	142	4.4	20.4	93.9	0.42	6.78
10/04/1999 11:43	290	161	6.3	20.4	89.3	0.46	0.098	276	158	4.9	23.8	91.4	0.54	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	142	4.5	21.0	95.6	0.42	7.40
10/04/1999 11:44	291	161	6.4	20.2	86.7	0.46	0.099	276	158	4.7	23.6	92.2	0.53	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	141	4.4	21.5	90.3	0.41	7.76
10/04/1999 11:45	291	161	6.5	20.2	90.2	0.45	0.100	276	158	4.8	23.6	92.1	0.53	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	142	4.4	20.8	90.0	0.41	6.56
10/04/1999 11:46	291	162	6.4	20.3	88.8	0.46	0.101	276	158	4.8	23.8	91.3	0.53	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	142	4.4	21.0	94.6	0.41	6.84
10/04/1999 11:47	291	162	6.5	20.3	88.2	0.46	0.101	276	158	4.8	23.9	91.3	0.53	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	141	4.4	21.6	93.9	0.41	7.39
10/04/1999 11:48	291	161	6.4	20.1	88.4	0.46	0.102	276	158	4.8	23.8	91.9	0.53	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	141	4.4	21.5	90.2	0.41	7.39
10/04/1999 11:49	291	161	6.4	20.1	88.1	0.45	0.103	276	158	4.8	24.0	91.5	0.53	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	142	4.4	21.2	90.6	0.41	6.43
10/04/1999 11:50	291	161	6.3	20.3	87.1	0.45	0.104	276	158	4.8	24.2	90.8	0.53	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	21.6	94.8	0.41	6.81
10/04/1999 11:51	291	161	6.5	20.3	87.2	0.45	0.105	276	158	4.8	24.2	91.4	0.53	-0.25	74	67	0.0	0.1	0.3	0.0	0.4	270	141	4.4	22.8	91.7	0.41	7.61
10/04/1999 11:52	291	161	6.5	20.1	80.1	0.45	0.106	276	158	4.8	24.0	91.7	0.53	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	22.1	87.7	0.41	6.65
10/04/1999 11:53	291	161	6.4	20.4	78.2	0.45	0.107	276	158	4.8	24.1	90.9	0.53	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	270	142	4.4	20.8	93.3	0.41	5.95
10/04/1999 11:54	291	161	6.3	20.5	68.9	0.45	0.108	277	158	4.8	24.2	90.8	0.53	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	21.0	96.0	0.41	7.01
10/04/1999 11:55	291	161	6.4	20.5	77.1	0.45	0.109	277	158	4.7	24.2	91.4	0.53	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	141	4.4	21.2	93.7	0.41	7.68
10/04/1999 11:56	291	161	6.3	20.3	83.4	0.45	0.110	277	158	4.8	24.4	90.9	0.54	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	141	4.4	21.8	90.9	0.41	7.03
10/04/1999 11:57	291	161	6.5	20.3	83.1	0.45	0.106	277	158	4.8	24.9	91.6	0.54	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	21.5	91.2	0.41	6.30
10/04/1999 11:58	292	161	6.3	20.4	81.0	0.45	0.102	277	158	4.8	25.2	90.7	0.54	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	21.2	93.2	0.41	6.16
10/04/1999 11:59	292	162	6.5	20.5	82.3	0.45	0.097	277	158	4.7	25.3	90.1	0.54	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	21.1	95.7	0.41	6.98
10/04/1999 12:00	292	162	6.4	22.4	70.8	0.45	0.103	277	158	4.9	25.2	92.4	0.55	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.5	21.2	95.5	0.41	7.41
10/04/1999 12:01	292	165	6.4	20.4	84.5	0.45	0.102	277	158	4.7	24.7	91.3	0.55	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	21.8	88.5	0.41	6.79
10/04/1999 12:02	292	164	6.5	20.3	86.1	0.45	0.102	277	158	4.7	25.5	90.5	0.55	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	21.3	94.5	0.41	6.34

Craig 3 Scrubber Data																												
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/04/1999 12:03	292	163	6.4	20.3	83.2	0.45	0.095	278	158	4.9	25.6	90.7	0.55	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	272	142	4.5	22.1	95.1	0.41	7.13
10/04/1999 12:04	292	163	6.3	20.2	88.6	0.45	0.096	277	158	4.8	25.6	90.9	0.56	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	22.0	92.4	0.41	7.30
10/04/1999 12:05	292	162	6.5	20.2	89.1	0.45	0.097	277	158	4.8	25.5	90.6	0.55	-0.26	74	67	0.0	0.1	0.3	0.0	0.4	271	142	4.4	21.5	90.5	0.41	6.40
10/04/1999 12:06	292	162	6.4	20.4	86.0	0.45	0.097	278	158	4.9	25.8	90.7	0.55	-0.27	74	67	0.0	0.1	0.3	0.0	0.4	272	143	4.4	20.7	94.9	0.41	5.84
10/04/1999 12:07	292	162	6.4	20.4	87.2	0.45	0.098	278	158	4.7	26.0	90.0	0.55	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	21.2	96.4	0.41	6.76
10/04/1999 12:08	292	163	6.4	20.2	85.6	0.45	0.099	278	158	4.8	25.9	90.3	0.54	-0.27	74	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	22.0	93.7	0.40	7.49
10/04/1999 12:09	292	162	6.4	20.1	82.6	0.45	0.100	278	158	4.8	25.6	91.2	0.54	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	21.6	90.2	0.40	6.86
10/04/1999 12:10	292	162	6.5	20.3	83.4	0.45	0.100	278	158	4.8	25.8	90.2	0.54	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	272	143	4.4	20.9	93.2	0.40	5.91
10/04/1999 12:11	293	163	6.5	20.5	80.6	0.45	0.101	278	158	4.8	26.0	90.0	0.53	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	21.0	96.8	0.40	6.40
10/04/1999 12:12	292	163	6.4	20.4	84.2	0.45	0.102	278	159	4.7	26.0	89.7	0.53	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	21.2	96.7	0.41	7.26
10/04/1999 12:13	293	163	6.5	20.2	84.1	0.45	0.103	278	159	4.8	25.8	90.5	0.53	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	21.5	92.5	0.42	7.20
10/04/1999 12:14	293	163	6.4	20.2	83.4	0.45	0.103	278	159	4.8	25.7	90.8	0.53	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.5	22.2	91.5	0.42	6.18
10/04/1999 12:15	292	162	6.4	20.3	88.4	0.45	0.104	278	159	4.8	25.7	90.1	0.54	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	21.4	95.8	0.41	6.23
10/04/1999 12:16	292	162	6.4	20.4	89.7	0.45	0.105	278	159	4.8	25.8	90.3	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	21.1	96.3	0.41	6.77
10/04/1999 12:17	293	163	6.6	20.4	87.0	0.45	0.106	278	159	4.9	25.7	90.3	0.55	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.5	21.4	95.9	0.41	7.03
10/04/1999 12:18	293	164	6.2	20.3	87.8	0.45	0.107	279	159	4.8	25.7	90.3	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	272	142	4.4	21.4	93.5	0.41	6.75
10/04/1999 12:19	292	163	6.6	20.3	85.2	0.45	0.107	279	159	4.7	25.5	90.3	0.54	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.4	21.2	92.7	0.41	6.56
10/04/1999 12:20	292	163	6.2	20.4	83.6	0.45	0.108	279	159	4.8	25.5	90.2	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	273	143	4.4	21.1	93.8	0.41	5.87
10/04/1999 12:21	293	163	6.5	20.4	80.3	0.45	0.109	279	159	4.7	25.7	90.4	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.4	20.9	95.9	0.41	6.44
10/04/1999 12:22	293	164	6.4	4.3	89.6	0.45	0.110	279	159	4.8	26.6	88.4	0.53	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.4	21.4	94.9	0.40	6.45
10/04/1999 12:23	293	166	6.6	6.4	98.9	0.45	0.110	279	160	4.9	27.0	88.2	0.54	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.5	21.0	95.5	0.40	6.27
10/04/1999 12:24	293	167	6.2	9.7	94.6	0.45	0.111	279	160	4.8	26.7	88.6	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.5	21.5	96.5	0.40	6.17
10/04/1999 12:25	293	167	6.6	11.3	90.6	0.45	0.112	279	160	4.7	26.6	89.1	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.4	21.9	95.6	0.40	7.08
10/04/1999 12:26	294	168	6.5	17.2	87.8	0.44	0.113	280	161	4.9	26.1	90.9	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.5	22.8	92.4	0.40	6.41
10/04/1999 12:27	293	167	6.3	17.8	87.6	0.44	0.113	279	160	4.7	25.9	90.3	0.54	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.4	21.7	93.2	0.40	5.99
10/04/1999 12:28	293	166	6.6	18.1	86.7	0.44	0.114	279	160	4.8	25.9	90.1	0.53	-0.26	76	67	0.0	0.1	0.3	0.0	0.4	273	142	4.4	21.0	95.8	0.40	6.14
10/04/1999 12:29	293	166	6.2	18.7	91.4	0.44	0.115	279	160	4.8	25.9	89.7	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	273	142	4.4	20.9	97.5	0.39	6.26
10/04/1999 12:30	293	165	6.6	18.6	86.8	0.44	0.116	279	160	4.7	25.9	89.9	0.54	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	274	142	4.4	21.5	96.0	0.40	7.20
10/04/1999 12:31	293	165	6.4	18.5	91.1	0.44	0.117	279	160	4.9	25.9	90.1	0.53	-0.26	75	67	0.0	0.1	0.3	0.0	0.4	274	142	4.5	21.4	92.8	0.39	6.08
10/04/1999 12:32	293	164	6.4	18.6	91.3	0.44	0.117	279	160	4.7	25.9	90.0	0.53	-0.26	76	67	0.0	0.1	0.3	0.0	0.4	273	142	4.3	20.9	94.7	0.39	5.94
10/04/1999 12:33	293	164	6.6	18.7	92.0	0.44	0.118	280	160	4.9	25.9	89.6	0.54	-0.27	75	67	0.0	0.1	0.3	0.0	0.4	274	143	4.5	20.8	96.8	0.39	6.17
Test 1 Average	***285.1***	***155.6***	***6.4***	***21.2***	***84.9***	***0.5***	***0.1***	***270.4***	***151.5***	***4.7***	***23.9***	***91.9***	***0.5***	***0.2***	***72.6***	***66.6***	***0.0***	***0.1***	***0.3***	***0.0***	***0.4***	***264.2***	***141.1***	***4.4***	***19.9***	***88.3***	***0.4***	***7.9***
10/04/1999 13:36	294	163	6.5	21.1	93.0	0.44	0.141	280	160	4.8	25.5	90.9	0.53	-0.30	77	67	0.0	0.1	0.3	0.0	0.4	274	142	4.4	22.1	92.8	0.36	6.25
10/04/1999 13:37	294	164	6.3	21.2	93.0	0.44	0.141	281	161	4.8	25.5	90.6	0.53	-0.30	77	67	0.0	0.1	0.3	0.0	0.4	274	143	4.4	20.9	94.3	0.36	5.39
10/04/1999 13:38	294	163	6.3	21.3	92.4	0.44	0.141	280	160	4.7	25.7	90.5	0.53	-0.30	77	67	0.0	0.1	0.3	0.0	0.4	274	143	4.4	21.1	97.9	0.37	6.10
10/04/1999 13:39	294	164	6.6	21.2	93.2	0.44	0.141	280	160	4.8	25.7	90.5	0.53	-0.31	77	67	0.0	0.1	0.3	0.0	0.4	274	142	4.4	21.6	94.7	0.36	6.36
10/04/1999 13:40	294	164	6.2	21.2	93.2	0.44	0.149	280	160	4.8	25.7	91.0	0.53	-0.31	77	67	0.0	0.1	0.3	0.0	0.4	274	143	4.4	21.1	95.3	0.36	5.83
10/04/1999 13:41	294	163	6.5	21.3	92.7	0.44	0.147	281	160	4.7	25.7	90.4	0.53	-0.31	77	67	0.0	0.1	0.3	0.0	0.4	274	142	4.3	20.6	96.4	0.36	6.14
10/04/1999 13:42	294	164	6.3	21.3	92.3	0.44	0.147	281	160	4.8	25.8	90.7	0.53	-0.31	77	67	0.0	0.1	0.3	0.0	0.4	274	143	4.4	20.4	97.7	0.37	6.24
10/04/1999 13:43	294	164	6.4	21.1	93.2	0.44	0.147	280	160	4.7	25.8	90.6	0.53	-0.31	77	67	0.0	0.1	0.3	0.0	0.4	274	142	4.3	20.3	97.2	0.37	6.63
10/04/1999 13:44	294	163	6.4	21.0	93.8	0.43	0.142	280	160	4.7	25.7	90.5	0.53	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	274	142	4.4	20.6	95.4	0.36	6.23
10/04/1999 13:45	294	163	6.3	21.1	92.6	0.43	0.143	280	160	4.7	25.8	90.3	0.53	-0.31	77	67	0.0	0.1	0.3	0.0	0.4	274	142	4.3	20.6	96.1	0.36	6.07
10/04/1999 13:46	294	163	6.6	21.0	93.8	0.43	0.144	280	160	4.8	25.7	90.2	0.54	-0.31	77	67	0.0	0.1	0.3	0.0	0.4	274	142	4.4	21.4	95.3	0.37	6.31
10/04/1999 13:47	294	163	6.3	21.0	93.2	0.43	0.145	280	160	4.7	25.7	90.6	0.53	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	274	142	4.4	20.9	95.1	0.36	6.00
10/04/1999 13:48	294	163	6.6	21.1	92.8	0.43	0.146	280	160	4.8	25.9	90.7	0.54	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	275	143	4.4	19.8	96.5	0.37	5.62
10/04/1999 13:49	294	163	6.2	21.3	92.8	0.43	0.147	280	160	4.8	25.9	89.9	0.53	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	275	143	4.4	20.6	99.2	0.37	5.87
10/04/1999 13:50	294	164	6.5	21.1	92.9	0.43	0.148	280	160	4.7	25.9	90.6	0.54	-0.30	78	67	0.0	0.1	0.3	0.0	0.4	274	142	4.3	20.9	97.5	0.36	6.91
10/04/1999 13:51	294	163	6.3	21.0	93.5	0.43	0.149	280	160	4.7	25.7	91.0	0.54	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	274	142	4.3	21.3	94.6	0.36	6.39
10/04/1999 13:52	294	163	6.5	21.1	92.6	0.43	0.151	280	160	4.7	25.8	90.1	0.53	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	274	142	4.3	21.2	95.1	0.36	6.16
10/04/1999 13:53	294	163	6.2	21.1	93.1	0.43	0.152	280	160	4.9	25.8	90.1	0.54	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	274	143	4.4	20.7	96.5	0.36	5.94
10/04/1999 13:54	294	164	6.4	21.1	92.9	0.43	0.153	280	160	4.7	25.8	90.9	0.54	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	274	142	4.3	20.4	97.2	0.37	6.42
10/04/1999 13:55	294	164	6.5	21.0	93.1	0.43	0.154	281	160	4.9	25.7	90.4	0.54	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	275	142	4.4	21.0	94.6	0.36	6.19
10/04/1999 13:56	294	164	6.4	21.1	92.8	0.43	0.155	281	160	4.8	25.8	90.2	0.54	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	274	143	4.4	20.6	95.8	0.37	5.64

Craig 3 Scrubber Data																													
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/04/1999 13:57	294	164	6.5	21.3	92.4	0.43	0.156	280	160	4.7	25.8	90.8	0.54	-0.31	78	67	0.0	0.1	0.3	0.0	0.4	275	142	4.4	20.1	97.7	0.37	6.12
10/04/1999 13:58	294	164	6.3	21.4	93.3	0.43	0.157	281	160	4.8	25.8	90.0	0.54	-0.32	78	67	0.0	0.1	0.3	0.0	0.4	274	142	4.4	20.3	97.8	0.36	6.10
10/04/1999 13:59	294	164	6.4	21.3	92.6	0.43	0.158	280	160	4.7	25.7	90.6	0.54	-0.32	78	67	0.0	0.1	0.3	0.0	0.4	275	142	4.3	21.0	95.4	0.37	6.37
10/04/1999 14:00	294	163	6.5	21.2	93.7	0.43	0.159	281	160	4.8	25.6	90.7	0.54	-0.32	78	67	0.0	0.1	0.3	0.0	0.4	275	143	4.4	21.9	93.7	0.37	5.68
10/04/1999 14:01	294	163	6.2	21.2	93.2	0.43	0.161	281	160	4.7	25.8	90.8	0.54	-0.32	78	67	0.0	0.1	0.3	0.0	0.4	275	143	4.3	21.1	95.8	0.36	5.60
10/04/1999 14:02	294	163	6.5	21.3	92.9	0.43	0.162	281	160	4.7	25.8	90.7	0.54	-0.32	78	67	0.0	0.1	0.3	0.0	0.4	275	142	4.3	20.9	95.7	0.36	6.24
10/04/1999 14:03	295	164	6.4	21.3	93.1	0.43	0.163	281	160	4.9	25.7	90.5	0.54	-0.32	78	67	0.0	0.1	0.3	0.0	0.4	275	143	4.4	20.5	95.6	0.37	5.43
10/04/1999 14:04	294	164	6.4	21.4	91.9	0.43	0.164	281	160	4.6	25.8	90.8	0.54	-0.32	78	67	0.0	0.1	0.3	0.0	0.4	275	143	4.3	20.5	98.3	0.37	5.73
10/04/1999 14:05	295	165	6.4	21.3	93.4	0.43	0.165	281	160	4.9	25.6	91.2	0.54	-0.33	78	67	0.0	0.1	0.3	0.0	0.4	275	143	4.5	21.1	96.2	0.37	5.83
10/04/1999 14:06	294	164	6.4	21.3	92.3	0.43	0.166	281	160	4.6	25.6	90.9	0.54	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	275	142	4.3	20.6	96.3	0.37	5.60
10/04/1999 14:07	295	164	6.5	17.8	94.4	0.43	0.167	282	160	4.9	23.9	91.5	0.54	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	275	143	4.4	20.1	96.1	0.37	5.63
10/04/1999 14:08	295	165	6.4	21.3	92.9	0.43	0.168	282	161	4.7	25.3	90.4	0.54	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.3	98.4	0.37	5.90
10/04/1999 14:09	295	164	6.6	21.3	93.8	0.43	0.170	281	161	4.9	25.5	89.8	0.54	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.8	97.3	0.37	6.11
10/04/1999 14:10	295	164	6.3	21.2	93.6	0.43	0.171	281	161	4.8	25.5	90.5	0.54	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	21.8	96.7	0.37	6.05
10/04/1999 14:11	295	164	6.6	21.1	93.5	0.43	0.166	282	161	4.8	25.3	91.0	0.53	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	276	142	4.4	21.6	94.7	0.37	6.33
10/04/1999 14:12	295	164	6.3	21.2	93.5	0.43	0.162	282	161	4.9	25.4	91.2	0.53	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.9	95.2	0.37	5.34
10/04/1999 14:13	295	163	6.5	21.3	92.6	0.43	0.157	282	161	4.7	25.5	90.9	0.53	-0.32	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.9	97.6	0.37	5.79
10/04/1999 14:14	295	163	6.5	21.2	92.4	0.43	0.159	281	160	4.8	25.4	90.5	0.53	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	276	142	4.4	20.9	97.0	0.36	6.13
10/04/1999 14:15	295	164	6.4	21.2	93.0	0.43	0.161	282	160	4.8	25.4	91.0	0.53	-0.32	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.5	95.8	0.36	5.87
10/04/1999 14:16	295	164	6.5	21.2	93.0	0.43	0.163	282	160	4.7	25.5	90.6	0.53	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.7	95.7	0.36	5.81
10/04/1999 14:17	295	164	6.5	21.3	92.8	0.43	0.165	282	160	4.8	25.5	90.4	0.53	-0.33	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.4	96.6	0.36	5.61
10/04/1999 14:18	296	164	6.3	21.4	92.5	0.43	0.167	282	160	4.8	25.5	90.4	0.53	-0.32	79	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.3	98.2	0.36	5.98
10/04/1999 14:19	295	163	6.4	21.4	92.6	0.43	0.169	282	160	4.7	25.5	91.0	0.53	-0.32	80	67	0.0	0.1	0.3	0.0	0.4	276	142	4.3	20.5	97.7	0.36	6.38
10/04/1999 14:20	295	163	6.5	21.1	93.6	0.43	0.049	282	160	4.8	25.3	91.8	0.53	-0.32	80	67	0.0	0.1	0.3	0.0	0.4	276	142	4.4	20.7	94.5	0.36	5.83
10/04/1999 14:21	296	163	6.3	21.1	94.9	0.43	-0.012	282	160	4.8	25.1	92.3	0.53	-0.33	80	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.5	96.7	0.36	5.17
10/04/1999 14:22	296	163	6.7	22.5	91.2	0.43	-0.011	282	161	4.8	5.8	102.5	0.53	-0.33	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	21.5	95.8	0.36	5.71
10/04/1999 14:23	296	164	6.2	22.2	91.4	0.43	-0.010	282	164	4.9	4.6	100.4	0.53	-0.33	80	67	0.0	0.1	0.3	0.0	0.4	276	143	4.4	20.9	97.1	0.36	5.69
10/04/1999 14:24	296	164	6.5	22.1	92.4	0.43	-0.010	282	165	4.7	8.5	99.1	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	142	4.4	20.7	96.7	0.36	6.11
10/04/1999 14:25	296	164	6.4	22.0	92.4	0.43	-0.009	282	166	4.8	8.7	100.6	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	21.0	94.7	0.36	5.87
10/04/1999 14:26	296	164	6.4	22.3	92.0	0.43	-0.009	282	166	4.7	8.6	99.6	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	20.7	95.3	0.36	5.48
10/04/1999 14:27	296	164	6.5	22.5	90.9	0.43	-0.008	282	166	4.9	8.5	98.6	0.53	-0.35	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	20.6	97.5	0.36	5.45
10/04/1999 14:28	296	164	6.3	22.4	91.2	0.42	-0.007	282	167	4.8	8.5	99.4	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	20.6	98.3	0.36	5.97
10/04/1999 14:29	296	164	6.6	22.3	92.0	0.42	-0.007	283	167	4.8	8.5	99.4	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	20.9	95.3	0.35	6.13
10/04/1999 14:30	296	164	6.2	22.4	91.7	0.42	-0.006	283	168	4.8	8.5	99.5	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	20.6	96.6	0.35	5.28
10/04/1999 14:31	296	164	6.6	22.4	92.0	0.42	-0.006	283	167	4.6	8.5	98.8	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	20.4	97.7	0.35	6.09
10/04/1999 14:32	296	165	6.4	22.4	91.6	0.42	-0.005	283	167	4.9	8.4	100.2	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	20.8	96.9	0.35	5.69
10/04/1999 14:33	296	164	6.4	22.3	91.8	0.42	-0.004	283	168	4.7	8.4	99.6	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	142	4.4	21.7	95.4	0.35	5.66
10/04/1999 14:34	296	164	6.6	22.3	92.3	0.42	-0.004	283	167	4.8	8.4	99.7	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	21.3	94.1	0.35	5.14
10/04/1999 14:35	296	165	6.3	22.4	91.6	0.42	-0.003	283	168	4.8	8.4	99.0	0.54	-0.33	80	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.4	98.6	0.35	4.73
10/04/1999 14:36	296	165	6.5	22.3	92.3	0.42	-0.002	283	168	4.7	8.4	99.2	0.53	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	142	4.4	20.5	98.6	0.35	5.89
10/04/1999 14:37	296	165	6.4	22.3	91.9	0.42	-0.002	283	168	4.9	8.3	100.2	0.52	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	20.7	96.5	0.35	5.72
10/04/1999 14:38	296	164	6.5	22.3	91.5	0.42	-0.001	283	167	4.8	8.4	99.9	0.51	-0.34	80	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	21.0	96.5	0.35	5.47
10/04/1999 14:39	296	164	6.5	22.4	91.7	0.42	-0.001	284	168	4.8	8.4	99.8	0.51	-0.34	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	21.0	97.0	0.35	5.21
10/04/1999 14:40	296	164	6.4	22.4	91.6	0.42	0.000	283	168	4.8	8.3	100.3	0.51	-0.34	81	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	21.1	98.3	0.35	5.76
10/04/1999 14:41	296	164	6.6	22.5	91.8	0.42	0.001	283	168	4.8	8.1	100.3	0.51	-0.34	81	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	21.3	96.7	0.35	5.92
10/04/1999 14:42	296	165	6.5	22.5	91.1	0.42	0.001	283	168	4.9	8.0	99.3	0.51	-0.34	81	67	0.0	0.1	0.3	0.0	0.4	277	143	4.5	20.1	96.3	0.35	5.03
10/04/1999 14:43	296	165	6.5	22.7	90.6	0.42	0.002	284	168	4.8	8.0	99.6	0.51	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	19.5	99.4	0.35	5.03
10/04/1999 14:44	296	165	6.6	22.7	91.0	0.42	0.002	284	169	4.8	8.0	99.0	0.51	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.6	100.5	0.35	5.68
10/04/1999 14:45	297	166	6.5	22.5	90.9	0.42	0.003	284	169	4.9	7.9	99.8	0.51	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	21.9	97.3	0.34	6.13
10/04/1999 14:46	296	165	6.4	22.4	91.3	0.42	0.004	284	169	4.8	7.9	99.7	0.51	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	21.8	95.3	0.34	5.65
10/04/1999 14:47	297	165	6.6	22.6	91.0	0.42	0.004	284	169	4.8	7.9	99.6	0.51	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.4	96.7	0.34	5.45
10/04/1999 14:48	296	164	6.3	22.7	90.6	0.42	0.005	284	169	4.8	7.9	100.0	0.51	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	20.3	99.3	0.34	5.66
10/04/1999 14:49	297	165	6.7	22.6	90.7	0.42	0.006	284	169	4.8	7.9	99.6	0.51	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.5	20.4	98.3	0.34	5.80
10/04/1999 14:50	296	165	6.3	22.6	91.1	0.42	0.006	284	169	4.8	7.9	99.7	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.5	97.2	0.34	5.49

Craig 3 Scrubber Data																												
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/04/1999 14:51	297	165	6.6	22.6	90.7	0.42	0.007	284	169	4.8	7.9	101.1	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.3	96.5	0.34	5.64
10/04/1999 14:52	296	165	6.3	22.6	90.7	0.42	0.007	284	169	4.8	7.9	99.1	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	19.8	98.2	0.35	5.08
10/04/1999 14:53	297	165	6.7	22.7	90.7	0.42	0.008	284	169	4.8	7.8	98.9	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.5	19.9	99.2	0.35	5.50
10/04/1999 14:54	297	165	6.2	22.7	91.2	0.42	0.009	284	169	4.8	7.8	99.0	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.5	98.6	0.35	5.59
10/04/1999 14:55	296	165	6.7	22.5	90.8	0.43	0.009	284	169	4.8	7.7	100.1	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	21.0	95.1	0.35	5.32
10/04/1999 14:56	297	165	6.2	22.7	90.7	0.43	0.010	284	169	4.8	7.8	99.1	0.52	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.8	98.3	0.36	4.77
10/04/1999 14:57	297	165	6.7	22.6	90.9	0.42	0.010	284	169	4.8	7.8	99.4	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	21.1	98.5	0.35	5.53
10/04/1999 14:58	297	165	6.1	22.5	91.5	0.43	0.011	284	169	4.9	7.8	98.8	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.8	98.1	0.35	5.45
10/04/1999 14:59	297	164	6.7	22.6	91.2	0.43	0.012	284	169	4.7	7.8	99.3	0.52	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.3	98.1	0.35	5.86
10/04/1999 15:00	297	165	6.1	22.6	90.6	0.43	0.012	284	169	4.8	7.8	99.2	0.52	-0.36	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.6	98.5	0.35	5.29
10/04/1999 15:01	297	165	6.7	22.6	90.5	0.43	0.013	284	169	4.7	7.9	100.2	0.52	-0.35	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.1	98.2	0.35	5.82
10/04/1999 15:02	297	165	6.1	22.5	90.4	0.43	0.014	284	169	4.9	7.9	99.9	0.52	-0.36	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.5	98.0	0.35	5.10
10/04/1999 15:03	297	164	6.8	22.5	90.9	0.42	0.014	284	169	4.7	7.9	99.9	0.52	-0.36	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.6	98.2	0.35	5.64
10/04/1999 15:04	297	166	6.2	22.5	90.8	0.43	0.015	284	170	4.9	7.9	99.5	0.52	-0.37	81	67	0.0	0.1	0.3	0.0	0.4	279	144	4.5	20.7	98.0	0.35	4.97
10/04/1999 15:05	297	166	6.7	22.6	91.1	0.43	0.015	284	169	4.7	7.9	100.3	0.52	-0.37	81	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.0	99.9	0.35	5.74
10/04/1999 15:06	297	166	6.3	22.6	90.5	0.43	0.016	284	170	5.0	8.2	99.3	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.5	20.3	99.5	0.35	5.51
10/04/1999 15:07	297	166	6.6	22.0	91.7	0.43	0.017	284	169	4.7	14.5	95.1	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	20.3	98.6	0.35	6.16
10/04/1999 15:08	297	166	6.4	21.8	91.7	0.42	0.017	284	168	4.9	16.8	95.3	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	20.8	96.7	0.35	5.23
10/04/1999 15:09	297	166	6.4	21.9	91.6	0.42	0.018	284	167	4.7	17.1	95.4	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.7	98.8	0.35	5.39
10/04/1999 15:10	297	166	6.6	21.9	92.5	0.42	0.018	284	167	4.8	17.5	95.0	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.2	99.1	0.35	5.28
10/04/1999 15:11	297	166	6.2	21.9	92.0	0.43	0.018	284	166	4.7	18.1	94.0	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.3	19.8	100.4	0.35	5.71
10/04/1999 15:12	298	166	6.8	21.8	91.7	0.43	0.018	285	166	4.8	18.5	94.7	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	19.9	99.1	0.35	5.91
10/04/1999 15:13	297	166	6.2	21.7	92.5	0.43	0.018	284	166	4.8	18.7	93.7	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	20.1	98.3	0.35	4.95
10/04/1999 15:14	298	165	6.8	21.8	92.0	0.43	0.018	285	166	4.8	18.8	94.1	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	20.3	99.6	0.36	5.49
10/04/1999 15:15	298	166	6.2	21.8	92.1	0.43	0.018	285	166	4.9	18.8	93.9	0.53	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	20.5	99.7	0.36	5.18
10/04/1999 15:16	298	166	6.8	21.8	92.6	0.43	0.018	285	166	4.8	18.8	94.2	0.53	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	20.4	98.6	0.35	5.86
10/04/1999 15:17	298	167	6.1	21.8	92.2	0.43	0.018	285	166	4.9	18.9	94.2	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	144	4.4	19.9	99.4	0.35	4.95
10/04/1999 15:18	299	167	7.0	21.9	92.2	0.43	0.018	286	166	4.8	19.0	94.0	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.5	20.3	100.4	0.35	5.24
10/04/1999 15:19	300	169	6.3	22.0	92.0	0.43	0.018	286	168	5.0	19.1	94.2	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	280	144	4.5	20.9	101.2	0.35	4.65
10/04/1999 15:20	301	168	6.9	21.9	92.0	0.43	0.018	286	168	4.8	19.2	93.4	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	280	143	4.5	21.1	101.0	0.35	5.75
10/04/1999 15:21	301	169	6.3	21.8	92.1	0.43	0.018	287	169	5.0	19.1	93.9	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	281	144	4.5	20.9	99.5	0.35	5.06
10/04/1999 15:22	300	169	6.5	21.8	92.4	0.43	0.018	287	168	4.7	19.1	94.0	0.52	-0.37	82	67	0.0	0.1	0.3	0.0	0.4	280	143	4.3	21.1	99.8	0.35	5.65
10/04/1999 15:23	300	168	6.5	21.7	92.3	0.43	0.018	286	168	4.8	19.1	93.9	0.52	-0.38	82	67	0.0	0.1	0.3	0.0	0.4	280	143	4.4	21.2	97.9	0.35	5.33
10/04/1999 15:24	299	168	6.4	21.8	91.9	0.43	0.018	286	167	4.6	19.0	93.8	0.52	-0.38	82	67	0.0	0.1	0.3	0.0	0.4	281	144	4.4	21.1	98.1	0.35	4.92
10/04/1999 15:25	299	168	6.5	21.8	92.1	0.43	0.024	286	167	4.8	19.1	94.1	0.51	-0.38	82	67	0.0	0.1	0.3	0.0	0.4	281	144	4.4	20.8	99.5	0.35	4.90
10/04/1999 15:26	299	167	6.2	21.9	92.3	0.43	0.023	286	167	4.8	19.1	93.5	0.52	-0.38	82	67	0.0	0.1	0.3	0.0	0.4	280	143	4.4	20.1	101.3	0.35	5.10
10/04/1999 15:27	298	166	6.4	21.9	92.5	0.43	0.019	285	166	4.7	19.1	94.1	0.52	-0.38	82	67	0.0	0.1	0.3	0.0	0.4	280	143	4.3	20.5	99.5	0.35	5.85
10/04/1999 15:28	298	166	6.4	21.7	92.3	0.43	0.021	285	166	4.8	18.9	94.0	0.52	-0.38	82	67	0.0	0.1	0.3	0.0	0.4	280	143	4.4	20.4	97.2	0.35	5.07
10/04/1999 15:29	298	166	6.3	21.9	92.4	0.43	0.022	285	166	4.6	18.9	93.8	0.51	-0.38	82	67	0.0	0.1	0.3	0.0	0.4	280	143	4.3	19.9	99.7	0.35	4.89
10/04/1999 15:30	297	165	6.6	21.8	91.9	0.43	0.023	284	165	4.7	19.0	94.3	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	20.5	98.5	0.35	5.50
10/04/1999 15:31	297	165	6.2	21.7	92.0	0.43	0.024	284	165	4.8	19.1	94.3	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	20.7	98.1	0.34	4.93
10/04/1999 15:32	296	164	6.4	21.8	92.5	0.43	0.025	284	165	4.6	19.1	94.3	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.3	20.9	98.0	0.34	5.39
10/04/1999 15:33	296	164	6.4	21.8	92.8	0.43	0.026	284	165	4.7	19.1	93.7	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.4	20.2	98.2	0.34	5.19
10/04/1999 15:34	296	164	6.3	21.9	92.0	0.43	0.028	284	164	4.7	19.0	94.3	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	20.1	98.7	0.34	5.43
10/04/1999 15:35	296	164	6.4	21.8	92.7	0.42	0.029	284	164	4.7	19.0	93.4	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.3	19.9	99.6	0.34	5.74
10/04/1999 15:36	296	163	6.2	21.7	92.3	0.42	0.030	283	164	4.7	18.9	94.3	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	19.9	97.2	0.35	5.49
10/04/1999 15:37	295	163	6.5	21.8	92.8	0.42	0.031	284	164	4.7	18.8	94.5	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	279	143	4.3	20.1	97.6	0.36	5.32
10/04/1999 15:38	295	163	6.2	21.8	91.9	0.42	0.032	283	164	4.8	18.8	94.6	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.3	98.9	0.36	5.26
10/04/1999 15:39	295	163	6.5	21.8	91.8	0.42	0.034	283	163	4.6	18.7	94.1	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	20.5	98.9	0.36	5.66
10/04/1999 15:40	295	163	6.4	21.8	92.5	0.42	0.035	283	164	4.9	18.7	94.2	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	19.6	97.6	0.35	4.65
10/04/1999 15:41	295	163	6.2	21.9	91.8	0.42	0.036	283	164	4.6	19.0	94.1	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	142	4.3	20.1	101.3	0.35	5.84
10/04/1999 15:42	295	163	6.5	21.6	92.7	0.42	0.037	283	163	4.8	19.0	94.6	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	142	4.4	20.8	95.6	0.35	6.08
10/04/1999 15:43	295	163	6.1	21.7	93.3	0.42	0.038	282	163	4.6	18.6	95.1	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	21.3	95.6	0.35	5.10
10/04/1999 15:44	294	162	6.6	21.8	92.4	0.42	0.040	283	163	4.7	18.3	94.4	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.2	96.8	0.35	5.49

Craig 3 Scrubber Data																												
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/04/1999 15:45	295	162	6.1	21.9	92.1	0.42	0.041	283	163	4.8	18.2	94.8	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	19.8	98.6	0.35	5.12
10/04/1999 15:46	294	163	6.6	23.5	84.8	0.42	0.042	282	163	4.6	18.9	88.9	0.51	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	19.9	96.6	0.35	5.60
10/04/1999 15:47	295	164	6.2	22.0	92.0	0.42	0.043	283	164	4.9	18.5	94.9	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	19.0	103.3	0.35	5.67
10/04/1999 15:48	294	164	6.3	21.8	92.1	0.42	0.044	282	164	4.6	17.6	95.4	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	142	4.3	19.7	98.4	0.35	6.37
10/04/1999 15:49	294	163	6.5	21.8	93.1	0.42	0.046	282	164	4.8	17.3	95.8	0.52	-0.39	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	19.4	96.6	0.35	5.23
10/04/1999 15:50	294	163	6.2	21.9	91.6	0.42	0.047	282	163	4.8	17.2	95.1	0.51	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	19.1	100.0	0.35	4.64
10/04/1999 15:51	294	162	6.5	21.7	92.5	0.42	0.048	282	163	4.7	17.3	95.5	0.52	-0.39	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	22.2	98.3	0.35	6.03
10/04/1999 15:52	294	162	6.2	20.7	93.1	0.42	0.049	282	163	4.8	17.9	95.7	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	20.5	94.1	0.35	5.80
10/04/1999 15:53	294	162	6.4	19.0	93.9	0.42	0.049	282	162	4.7	18.3	94.4	0.52	-0.39	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	17.0	98.8	0.35	4.57
10/04/1999 15:54	294	162	6.5	18.8	93.0	0.42	0.049	283	163	4.8	18.6	94.6	0.52	-0.39	82	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	16.0	104.4	0.35	4.82
10/04/1999 15:55	294	164	6.2	19.0	92.6	0.42	0.049	283	164	4.8	18.7	94.3	0.51	-0.39	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	15.8	105.1	0.35	5.83
10/04/1999 15:56	294	164	6.5	18.6	94.1	0.42	0.049	283	163	4.7	18.5	92.9	0.52	-0.39	83	67	0.0	0.1	0.3	0.0	0.4	277	142	4.3	16.4	102.3	0.35	6.44
10/04/1999 15:57	294	164	6.3	18.5	93.9	0.42	0.049	283	164	4.8	18.5	94.1	0.52	-0.39	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	16.6	99.2	0.35	5.08
10/04/1999 15:58	294	163	6.4	18.6	95.2	0.42	0.049	282	163	4.7	19.1	93.1	0.52	-0.39	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	16.1	102.0	0.35	4.77
10/04/1999 15:59	294	164	6.3	18.5	94.3	0.42	0.049	282	163	4.8	20.0	93.1	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	16.6	102.8	0.35	5.09
10/04/1999 16:00	294	163	6.4	18.6	94.3	0.42	0.049	282	163	4.7	20.1	92.1	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	17.0	102.2	0.35	5.92
10/04/1999 16:01	294	164	6.4	18.4	94.5	0.42	0.049	283	164	4.8	20.9	92.1	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.5	99.9	0.35	5.57
10/04/1999 16:02	294	164	6.2	17.9	91.4	0.42	0.049	282	163	4.6	21.1	92.7	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	17.5	100.3	0.34	5.34
10/04/1999 16:03	294	167	6.5	15.3	73.2	0.41	0.049	282	163	4.9	20.8	95.0	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.5	100.6	0.34	5.27
10/04/1999 16:04	294	175	6.3	17.3	82.3	0.41	0.049	282	162	4.7	20.6	93.6	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.6	99.7	0.34	4.86
10/04/1999 16:05	294	172	6.7	18.2	93.1	0.41	0.049	283	162	4.8	21.1	91.7	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.4	101.9	0.34	5.14
10/04/1999 16:06	294	169	6.2	18.2	92.0	0.41	0.049	283	163	4.9	21.2	91.8	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.2	103.5	0.34	5.36
10/04/1999 16:07	294	168	6.4	18.2	93.0	0.41	0.049	282	162	4.6	21.1	92.3	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	142	4.3	17.8	101.6	0.34	6.23
10/04/1999 16:08	294	167	6.3	18.0	92.9	0.41	0.049	283	162	4.8	21.0	93.4	0.52	-0.40	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	18.4	97.9	0.34	5.48
10/04/1999 16:09	294	167	6.3	18.1	92.8	0.41	0.049	283	162	4.7	21.1	92.7	0.52	-0.41	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	17.7	99.1	0.34	5.00
10/04/1999 16:10	294	166	6.4	18.2	92.9	0.41	0.050	283	162	4.8	21.4	92.2	0.52	-0.41	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.0	102.2	0.34	4.89
10/04/1999 16:11	294	166	6.4	18.2	92.7	0.41	0.051	283	162	4.7	21.7	91.8	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	16.8	102.8	0.35	5.60
10/04/1999 16:12	294	165	6.3	18.1	92.9	0.41	0.052	283	162	4.8	21.8	92.2	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	17.4	100.0	0.35	5.64
10/04/1999 16:13	294	166	6.5	18.1	93.0	0.41	0.054	283	162	4.8	21.8	91.6	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.3	99.8	0.35	4.93
10/04/1999 16:14	294	166	6.1	18.3	92.9	0.41	0.055	283	163	4.8	22.1	91.2	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	16.7	103.4	0.35	5.16
10/04/1999 16:15	294	166	6.6	18.2	92.7	0.41	0.056	283	163	4.7	22.0	91.3	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	277	142	4.3	16.9	102.0	0.35	5.99
10/04/1999 16:16	295	166	6.3	18.2	92.5	0.41	0.057	283	163	4.9	22.0	92.4	0.51	-0.41	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.1	100.3	0.35	5.26
10/04/1999 16:17	294	166	6.5	18.3	92.7	0.41	0.058	283	163	4.7	22.0	91.0	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	16.7	102.6	0.35	5.43
10/04/1999 16:18	295	167	6.3	18.3	92.0	0.41	0.059	283	163	4.9	22.1	91.3	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	16.6	102.5	0.35	5.53
10/04/1999 16:19	295	167	6.5	18.2	92.8	0.41	0.060	283	163	4.6	22.1	91.0	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	16.6	102.5	0.34	6.00
10/04/1999 16:20	294	167	6.3	18.1	92.7	0.41	0.061	283	163	4.9	22.0	91.5	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.0	100.4	0.34	5.25
10/04/1999 16:21	294	166	6.2	18.2	92.4	0.41	0.062	283	163	4.6	22.0	91.6	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	16.9	101.2	0.34	5.55
10/04/1999 16:22	294	166	6.4	18.2	93.0	0.41	0.063	283	163	4.8	21.9	91.5	0.52	-0.41	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.0	101.2	0.34	5.46
10/04/1999 16:23	294	166	6.3	18.2	92.4	0.41	0.064	283	163	4.7	21.8	91.5	0.52	-0.41	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	16.9	101.2	0.34	5.47
10/04/1999 16:24	295	166	6.4	18.2	92.6	0.41	0.065	283	163	4.8	21.9	91.7	0.52	-0.41	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	16.9	102.2	0.34	5.64
10/04/1999 16:25	294	166	6.2	18.1	92.4	0.41	0.066	283	163	4.6	21.9	91.7	0.52	-0.41	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	17.0	100.9	0.34	5.82
10/04/1999 16:26	295	167	6.5	18.2	93.4	0.41	0.067	283	163	4.8	22.0	91.6	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.0	100.7	0.34	5.57
10/04/1999 16:27	295	167	6.2	18.2	91.7	0.41	0.069	283	163	4.8	22.0	91.8	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	16.7	101.9	0.33	5.34
10/04/1999 16:28	295	166	6.6	18.2	92.2	0.41	0.070	283	163	4.8	22.0	91.8	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	16.6	102.3	0.33	5.64
10/04/1999 16:29	295	167	6.3	18.2	92.1	0.41	0.071	283	163	4.9	22.0	91.2	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.4	16.5	102.8	0.33	5.49
10/04/1999 16:30	295	166	6.3	18.2	91.9	0.41	0.072	283	163	4.7	22.0	90.9	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	277	142	4.3	16.5	102.4	0.33	6.11
10/04/1999 16:31	295	166	6.6	18.1	92.5	0.40	0.073	283	163	4.8	21.9	91.6	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	17.1	99.9	0.33	5.55
10/04/1999 16:32	295	166	6.1	18.2	92.2	0.40	0.074	283	163	4.7	21.9	91.2	0.52	-0.42	84	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	16.4	100.7	0.33	4.79
10/04/1999 16:33	294	165	6.6	18.3	92.0	0.40	0.075	283	163	4.7	22.0	91.9	0.52	-0.42	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.3	16.0	103.5	0.33	5.50
10/04/1999 16:34	295	166	6.2	18.2	92.9	0.40	0.076	283	163	4.9	22.0	92.0	0.52	-0.43	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	16.2	102.1	0.33	5.32
10/04/1999 16:35	295	166	6.5	18.2	91.9	0.40	0.077	283	163	4.7	22.0	91.6	0.52	-0.43	83	67	0.0	0.1	0.3	0.0	0.4	277	143	4.3	16.1	103.2	0.34	5.78
10/04/1999 16:36	295	166	6.5	18.2	92.4	0.40	0.078	283	163	4.9	22.0	91.7	0.52	-0.43	83	67	0.0	0.1	0.3	0.0	0.4	278	143	4.4	16.3	101.0	0.33	5.45
Test 2 Average	***295.5***	***164.8***	***6.4***	***20.9***	***92.1***	***0.4***	***0.1***	***282.8***	***164.1***	***4.8***	***18.4***	***94.2***	***0.5***	***-0.4***	***81.0***	***66.6***	***0.0***	***0.1***	***0.3***	***0.0***	***0.4***	***277.2***	***142.9***	***4.4***	***19.7***	***98.4***	***0.4***	***5.6***

Craig 3 Scrubber Data																													
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/05/1999 8:30	273	141	5.8	26.4	80.5	0.49	0.187	258	140	4.4	17.6	89.9	0.55	9.80	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	20.8	70.2	0.43	9.85
10/05/1999 8:31	272	142	5.7	25.0	83.4	0.49	0.187	257	141	4.2	17.4	91.0	0.55	9.11	73	67	0.0	0.1	0.3	0.0	0.4	250	140	3.9	20.9	68.4	0.43	10.16
10/05/1999 8:32	273	142	6.0	25.2	83.7	0.49	0.188	257	140	4.4	16.9	93.7	0.55	9.19	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.5	68.1	0.43	9.19
10/05/1999 8:33	272	142	5.8	24.8	83.6	0.49	0.188	257	140	4.3	17.1	93.7	0.55	10.11	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	20.3	71.5	0.43	9.74
10/05/1999 8:34	273	142	6.0	24.8	84.2	0.49	0.189	257	139	4.3	17.5	89.8	0.55	10.57	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.7	67.5	0.43	10.24
10/05/1999 8:35	273	142	5.6	24.4	82.6	0.49	0.189	257	140	4.3	16.7	87.3	0.55	8.47	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.5	69.0	0.43	9.64
10/05/1999 8:36	273	142	6.1	24.3	84.2	0.49	0.190	257	141	4.3	16.0	93.3	0.55	8.04	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	21.1	67.9	0.43	10.39
10/05/1999 8:37	273	143	5.5	24.8	83.1	0.49	0.190	256	139	4.3	15.8	95.2	0.55	9.67	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.8	67.0	0.43	8.90
10/05/1999 8:38	273	142	6.1	25.4	81.3	0.49	0.191	256	138	4.2	17.3	85.7	0.55	10.64	73	67	0.0	0.1	0.3	0.0	0.4	249	139	4.0	21.1	69.1	0.43	9.95
10/05/1999 8:39	272	143	5.6	25.9	78.8	0.49	0.191	256	141	4.3	17.9	85.2	0.55	6.96	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	22.3	63.9	0.43	10.13
10/05/1999 8:40	272	142	6.0	25.2	80.8	0.49	0.192	256	140	4.3	16.2	92.7	0.55	7.56	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	21.6	64.8	0.43	9.04
10/05/1999 8:41	272	142	5.4	24.7	82.2	0.49	0.192	256	139	4.3	16.0	92.8	0.55	9.65	73	67	0.0	0.1	0.3	0.0	0.4	249	140	3.9	21.6	68.1	0.43	9.69
10/05/1999 8:42	271	141	6.1	25.5	78.6	0.49	0.193	256	139	4.2	17.0	84.3	0.55	9.76	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	21.3	64.7	0.43	10.26
10/05/1999 8:43	271	142	5.7	24.9	78.4	0.49	0.193	256	141	4.4	17.1	85.1	0.55	6.67	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.7	67.4	0.43	9.02
10/05/1999 8:44	271	142	6.2	24.5	81.0	0.49	0.193	256	141	4.3	15.8	92.7	0.55	7.48	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.8	67.8	0.43	9.86
10/05/1999 8:45	271	142	5.8	24.5	82.3	0.49	0.194	257	140	4.4	15.6	93.5	0.55	8.75	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	21.0	66.5	0.43	9.31
10/05/1999 8:46	272	142	6.1	24.3	82.6	0.49	0.194	256	139	4.3	17.0	87.3	0.55	9.04	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	21.1	68.9	0.43	9.33
10/05/1999 8:47	272	143	5.8	24.4	80.5	0.49	0.195	256	140	4.4	17.1	86.2	0.55	7.64	74	67	0.0	0.1	0.3	0.0	0.4	249	139	4.0	21.8	66.4	0.43	10.00
10/05/1999 8:48	271	142	6.1	24.2	82.5	0.49	0.195	256	141	4.3	17.1	86.0	0.55	7.33	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	21.4	64.1	0.43	9.61
10/05/1999 8:49	271	142	5.8	24.6	81.7	0.49	0.196	256	141	4.4	16.8	90.7	0.55	7.24	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.8	67.2	0.43	9.35
10/05/1999 8:50	271	142	5.9	24.2	83.3	0.49	0.196	256	139	4.2	16.8	90.7	0.55	9.63	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.7	66.7	0.43	9.95
10/05/1999 8:51	271	141	5.9	25.3	79.2	0.49	0.197	256	139	4.4	17.5	82.3	0.55	9.13	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.8	65.4	0.43	10.13
10/05/1999 8:52	271	142	5.7	24.6	78.2	0.49	0.197	255	141	4.2	17.1	84.2	0.55	6.83	74	67	0.0	0.1	0.3	0.0	0.4	249	140	3.9	21.2	65.2	0.43	9.95
10/05/1999 8:53	271	142	6.0	24.4	80.5	0.49	0.198	256	140	4.3	15.9	90.4	0.55	8.00	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	21.2	63.5	0.43	9.81
10/05/1999 8:54	271	141	5.8	25.1	77.1	0.49	0.198	256	139	4.4	15.9	88.0	0.55	8.84	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.7	66.5	0.43	9.26
10/05/1999 8:55	271	142	6.1	24.7	78.5	0.49	0.199	256	140	4.4	16.9	81.7	0.55	7.54	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.8	66.4	0.43	10.35
10/05/1999 8:56	271	142	6.0	24.6	78.9	0.49	0.199	256	141	4.5	16.4	88.6	0.55	5.97	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	21.0	63.6	0.43	10.34
10/05/1999 8:57	271	142	6.0	24.3	80.8	0.49	0.199	256	140	4.4	15.9	90.7	0.55	8.23	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.6	63.9	0.43	9.65
10/05/1999 8:58	271	142	6.0	23.8	80.0	0.49	0.200	256	139	4.5	16.7	83.5	0.55	8.00	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.4	66.0	0.43	9.84
10/05/1999 8:59	272	142	6.1	23.9	78.5	0.49	0.200	256	141	4.4	16.9	84.8	0.55	6.50	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.6	64.4	0.42	10.09
10/05/1999 9:00	272	144	6.3	23.4	83.7	0.49	0.201	258	142	4.6	16.2	92.0	0.55	6.56	74	67	0.0	0.1	0.3	0.0	0.4	251	141	4.2	20.3	67.0	0.42	9.55
10/05/1999 9:01	273	143	5.9	23.3	87.2	0.49	0.201	259	142	4.4	16.2	92.2	0.55	8.04	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	21.0	70.2	0.42	10.31
10/05/1999 9:02	273	142	6.3	23.8	87.7	0.49	0.195	259	141	4.4	16.2	92.7	0.55	9.68	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	21.3	63.7	0.42	10.77
10/05/1999 9:03	273	141	5.8	25.3	82.6	0.49	0.195	259	141	4.5	16.5	92.3	0.55	9.79	73	67	0.0	0.1	0.3	0.0	0.4	252	140	4.0	20.8	68.9	0.42	9.57
10/05/1999 9:04	272	141	6.0	25.9	74.7	0.49	0.192	258	139	4.3	16.8	89.3	0.55	11.06	73	67	0.0	0.1	0.3	0.0	0.4	251	139	3.9	21.4	65.9	0.42	11.03
10/05/1999 9:05	273	143	5.9	25.1	77.2	0.49	0.196	258	140	4.5	18.2	80.1	0.55	8.61	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	21.1	62.4	0.42	9.85
10/05/1999 9:06	273	143	5.9	24.0	82.5	0.49	0.193	257	141	4.4	17.3	88.1	0.55	6.93	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	20.3	66.0	0.42	9.46
10/05/1999 9:07	272	141	6.0	24.6	81.4	0.49	0.193	258	140	4.4	16.6	89.4	0.55	8.81	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	20.0	67.8	0.42	9.79
10/05/1999 9:08	272	142	5.8	25.0	76.3	0.49	0.196	257	139	4.4	17.0	83.5	0.55	8.65	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	20.4	64.3	0.42	9.90
10/05/1999 9:09	272	142	6.1	23.8	76.1	0.49	0.192	257	140	4.3	16.7	82.2	0.55	6.88	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.3	64.9	0.42	9.40
10/05/1999 9:10	272	143	6.1	22.9	79.5	0.49	0.196	257	141	4.4	15.3	88.8	0.55	5.97	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.1	66.5	0.42	9.71
10/05/1999 9:11	272	143	5.9	22.7	83.6	0.49	0.194	257	140	4.4	15.4	90.3	0.55	7.86	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	20.3	65.9	0.42	9.66
10/05/1999 9:12	272	141	6.1	24.4	80.9	0.49	0.193	257	139	4.4	16.2	86.8	0.55	9.20	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.4	66.2	0.42	10.15
10/05/1999 9:13	271	141	5.8	25.2	75.5	0.49	0.195	257	140	4.4	16.9	82.7	0.55	7.92	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.7	63.3	0.42	9.92
10/05/1999 9:14	272	142	6.2	25.3	73.0	0.49	0.189	256	140	4.3	17.0	82.0	0.55	7.18	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.9	62.5	0.42	9.74
10/05/1999 9:15	272	143	5.9	24.4	79.0	0.49	0.187	257	142	4.5	16.6	86.1	0.55	5.86	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	21.2	64.0	0.42	8.78
10/05/1999 9:16	272	142	6.0	24.6	79.5	0.49	0.188	258	140	4.3	15.7	92.4	0.55	8.34	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	21.8	64.2	0.42	10.01
10/05/1999 9:17	272	141	6.0	25.8	73.0	0.49	0.189	257	138	4.4	16.5	83.0	0.55	9.80	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	21.5	60.7	0.42	9.55
10/05/1999 9:18	271	142	6.0	25.4	73.0	0.49	0.190	257	140	4.4	17.6	78.3	0.55	6.90	73	67	0.0	0.1	0.3	0.0	0.4	250	141	4.1	21.1	64.5	0.42	9.59
10/05/1999 9:19	272	143	6.1	24.7	76.8	0.49	0.190	257	141	4.5	16.9	86.9	0.55	5.72	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	21.2	63.9	0.42	9.67
10/05/1999 9:20	272	142	6.2	24.8	79.2	0.49	0.191	258	140	4.5	16.5	88.8	0.55	7.21	73	67	0.0	0.1	0.3	0.0	0.4	251	141	4.1	21.8	53.2	0.42	8.68
10/05/1999 9:21	272	142	6.3	24.7	76.2	0.49	0.192	258	140	4.5	17.2	82.2	0.55	7.68	73	67	0.0	0.1	0.3	0.0	0.4	251	146	4.2	21.6	45.2	0.43	2.52
10/05/1999 9:22	272	143	6.0	23.7	79.4	0.49	0.193	257	141	4.5	16.9	87.4	0.55	6.17	73	67	0.0	0.1	0.3	0.0	0.4	251	145	4.2	19.1	77.7	0.43	3.02
10/05/1999 9:23	272	141	6.1	24.1	79.8	0.49	0.194	257	138	4.4	16.3	89.3	0.55	9.35	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.9	67.9	0.43	9.94

Craig 3 Scrubber Data																												
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/05/1999 9:24	272	141	5.9	25.2	73.2	0.49	0.194	257	139	4.5	17.9	73.9	0.55	7.63	73	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.9	61.6	0.43	10.01
10/05/1999 9:25	272	142	6.0	24.9	72.2	0.49	0.195	256	141	4.4	17.2	83.1	0.55	4.10	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.6	63.2	0.43	9.69
10/05/1999 9:26	271	143	6.0	24.4	75.8	0.49	0.196	256	139	4.4	16.5	85.7	0.55	5.99	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.5	63.0	0.43	9.40
10/05/1999 9:27	271	142	6.1	24.6	76.6	0.49	0.197	257	139	4.3	17.6	75.5	0.55	5.21	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.0	20.4	62.4	0.43	9.48
10/05/1999 9:28	271	142	6.0	25.1	73.8	0.49	0.197	256	141	4.5	17.0	80.1	0.55	1.98	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.6	62.4	0.43	9.81
10/05/1999 9:29	271	142	6.0	24.8	76.0	0.48	0.198	256	140	4.4	16.3	84.7	0.55	2.35	73	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.7	62.0	0.43	9.57
10/05/1999 9:30	271	141	6.0	25.3	73.6	0.48	0.199	256	139	4.4	17.0	79.2	0.55	3.89	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.6	60.4	0.43	9.60
10/05/1999 9:31	271	142	6.1	25.5	72.0	0.48	0.200	256	140	4.4	17.7	75.2	0.55	1.39	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.6	60.9	0.43	9.01
10/05/1999 9:32	271	142	6.0	25.2	71.7	0.48	0.201	256	142	4.4	16.8	83.1	0.55	0.06	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.5	63.6	0.43	9.42
10/05/1999 9:33	270	142	6.0	23.0	75.6	0.48	0.201	255	139	4.4	16.2	82.3	0.54	1.84	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.7	61.0	0.43	9.60
10/05/1999 9:34	271	142	6.2	22.6	77.5	0.48	0.192	256	141	4.5	16.2	76.7	0.55	0.19	73	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.2	61.0	0.43	8.89
10/05/1999 9:35	271	142	5.8	23.3	77.2	0.48	0.188	256	141	4.5	14.9	88.2	0.55	0.40	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	19.6	64.2	0.42	9.05
10/05/1999 9:36	271	141	6.1	23.8	74.1	0.48	0.191	256	139	4.4	15.9	80.0	0.55	3.01	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.0	20.4	61.2	0.42	9.63
10/05/1999 9:37	271	142	6.0	24.2	73.0	0.48	0.193	256	141	4.5	16.3	78.1	0.55	0.18	74	67	0.0	0.1	0.3	0.0	0.4	250	141	4.1	20.3	61.6	0.42	8.68
10/05/1999 9:38	271	142	6.0	24.1	74.6	0.48	0.195	257	141	4.4	15.3	87.6	0.55	0.79	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.5	65.7	0.42	9.61
10/05/1999 9:39	271	142	6.2	24.3	74.5	0.48	0.198	257	140	4.5	15.8	83.8	0.55	2.92	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.9	62.2	0.42	9.77
10/05/1999 9:40	270	142	5.8	24.0	75.0	0.48	0.200	257	140	4.4	16.7	79.3	0.55	2.11	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	20.6	63.1	0.42	9.35
10/05/1999 9:41	270	141	6.1	24.9	70.7	0.48	0.191	257	140	4.4	16.7	79.9	0.55	0.92	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.7	63.8	0.42	9.82
10/05/1999 9:42	270	142	5.9	24.3	74.7	0.48	0.187	257	140	4.5	16.4	81.6	0.55	0.06	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	20.9	60.7	0.42	9.73
10/05/1999 9:43	271	142	6.1	24.3	74.1	0.48	0.187	256	139	4.4	16.1	83.2	0.55	0.83	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.6	63.7	0.42	9.82
10/05/1999 9:44	271	142	6.0	23.6	77.2	0.48	0.187	257	140	4.5	16.7	76.7	0.55	0.16	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.9	61.0	0.42	9.52
10/05/1999 9:45	271	142	6.0	22.5	74.8	0.48	0.188	256	141	4.4	16.2	83.3	0.55	-0.29	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.5	64.3	0.42	9.43
10/05/1999 9:46	271	141	6.0	23.4	76.4	0.48	0.188	256	139	4.5	16.0	79.3	0.55	0.78	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.7	61.0	0.43	9.51
10/05/1999 9:47	271	142	6.2	24.6	69.3	0.48	0.188	257	142	4.4	16.4	80.1	0.55	-0.34	74	67	0.0	0.1	0.3	0.0	0.4	251	141	4.1	20.4	64.1	0.43	8.44
10/05/1999 9:48	271	143	6.0	24.0	74.8	0.48	0.189	257	140	4.5	15.5	88.4	0.55	1.07	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.5	64.1	0.43	9.60
10/05/1999 9:49	270	141	6.1	24.5	73.5	0.48	0.189	257	139	4.4	16.8	77.1	0.55	2.36	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.5	63.9	0.43	9.43
10/05/1999 9:50	271	142	5.9	25.0	70.8	0.48	0.189	257	141	4.5	17.4	78.6	0.55	-0.08	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.9	62.3	0.43	9.39
10/05/1999 9:51	271	143	6.1	24.4	74.9	0.48	0.190	257	141	4.4	16.6	84.6	0.55	0.23	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	21.6	62.6	0.43	10.03
10/05/1999 9:52	272	143	6.0	23.8	81.5	0.48	0.190	258	140	4.5	17.5	86.2	0.55	2.12	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	21.5	60.7	0.43	9.30
10/05/1999 9:53	272	141	6.1	24.8	77.8	0.48	0.190	258	139	4.4	20.5	80.1	0.55	4.81	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.0	21.1	64.2	0.43	9.46
10/05/1999 9:54	272	141	6.0	25.4	72.2	0.48	0.191	257	140	4.4	22.6	72.7	0.55	3.29	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	21.2	60.1	0.43	9.33
10/05/1999 9:55	272	142	5.9	24.4	75.5	0.48	0.191	257	141	4.5	22.7	78.1	0.55	0.65	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.3	65.4	0.43	9.23
10/05/1999 9:56	272	142	6.1	23.5	73.8	0.48	0.191	258	140	4.4	21.7	82.4	0.55	2.07	74	67	0.0	0.1	0.3	0.0	0.4	252	140	4.1	20.1	64.2	0.43	9.54
10/05/1999 9:57	271	141	6.0	23.4	75.4	0.48	0.191	258	140	4.5	21.7	79.3	0.55	3.23	74	67	0.0	0.1	0.3	0.0	0.4	253	140	4.1	19.9	68.5	0.43	9.90
10/05/1999 9:58	271	142	6.2	24.4	72.8	0.48	0.192	257	140	4.4	22.3	76.3	0.55	2.57	74	67	0.0	0.1	0.3	0.0	0.4	252	140	4.1	20.6	62.5	0.43	9.85
10/05/1999 9:59	271	142	6.0	23.9	75.2	0.48	0.192	257	140	4.5	22.4	78.6	0.55	1.73	74	67	0.0	0.1	0.3	0.0	0.4	252	140	4.1	20.6	66.0	0.42	9.43
10/05/1999 10:00	270	141	5.9	24.2	74.3	0.48	0.192	257	139	4.4	22.4	77.2	0.55	3.31	74	67	0.0	0.1	0.3	0.0	0.4	251	139	4.0	20.7	62.6	0.42	10.35
10/05/1999 10:01	271	142	6.1	24.5	71.7	0.48	0.193	257	140	4.4	23.7	69.9	0.55	0.97	74	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.1	62.4	0.42	9.33
10/05/1999 10:02	270	142	5.8	24.0	74.4	0.48	0.193	256	140	4.5	22.8	77.0	0.55	0.05	75	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	20.6	64.9	0.42	9.31
10/05/1999 10:03	270	141	6.3	24.5	72.9	0.48	0.193	256	139	4.3	22.9	73.9	0.55	0.57	74	67	0.0	0.1	0.3	0.0	0.4	250	139	4.1	20.9	60.1	0.42	9.83
10/05/1999 10:04	270	141	5.9	25.2	68.8	0.48	0.194	256	141	4.6	23.5	72.8	0.55	-0.13	74	67	0.0	0.1	0.3	0.0	0.4	250	141	4.1	20.8	62.6	0.42	8.66
10/05/1999 10:05	270	142	6.1	24.0	74.8	0.48	0.194	256	140	4.3	22.3	80.3	0.55	0.56	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.9	62.4	0.42	9.83
10/05/1999 10:06	270	142	6.1	24.7	72.2	0.48	0.194	256	139	4.5	22.9	73.2	0.55	0.96	75	67	0.0	0.1	0.3	0.0	0.4	250	140	4.2	20.6	62.6	0.42	9.35
10/05/1999 10:07	270	142	5.9	24.0	74.4	0.48	0.195	256	141	4.4	23.3	74.2	0.54	-0.32	75	67	0.0	0.1	0.3	0.0	0.4	249	139	4.1	20.5	61.5	0.42	9.75
10/05/1999 10:08	270	141	6.1	23.4	72.3	0.48	0.195	256	139	4.4	22.8	77.6	0.55	0.00	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.7	61.6	0.42	9.05
10/05/1999 10:09	270	142	6.0	23.0	75.8	0.48	0.195	256	140	4.5	23.4	72.0	0.55	-0.16	75	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.6	61.8	0.42	9.86
10/05/1999 10:10	270	141	6.1	24.3	72.4	0.48	0.196	255	140	4.4	22.6	80.2	0.55	0.09	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.5	61.9	0.42	9.49
10/05/1999 10:11	269	141	6.1	24.7	71.0	0.48	0.196	256	139	4.4	22.9	72.6	0.55	0.85	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.9	61.4	0.42	9.75
10/05/1999 10:12	270	142	6.1	24.3	73.2	0.48	0.196	256	141	4.5	23.2	74.5	0.55	-0.31	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.8	62.0	0.42	9.06
10/05/1999 10:13	270	142	6.1	24.0	75.1	0.48	0.197	256	140	4.5	22.5	78.8	0.55	0.08	74	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.8	61.5	0.41	9.75
10/05/1999 10:14	270	142	6.0	24.4	71.7	0.48	0.197	256	139	4.5	22.9	75.4	0.55	0.72	75	67	0.0	0.1	0.3	0.0	0.4	249	140	4.1	20.6	64.3	0.41	9.67
10/05/1999 10:15	270	142	6.1	24.2	74.8	0.48	0.197	256	140	4.5	23.7	70.9	0.55	0.00	75	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.8	61.6	0.41	9.50
10/05/1999 10:16	271	143	6.1	23.8	76.4	0.48	0.197	256	141	4.5	22.3	82.0	0.55	-0.10	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.2	20.6	64.5	0.41	9.54
10/05/1999 10:17	271	142	6.1	23.6	79.7	0.48	0.198	257	140	4.5	21.7	81.5	0.55	1.48	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.6	63.4	0.41	9.71

Craig 3 Scrubber Data																												
	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/05/1999 10:18	271	142	6.1	24.0	76.1	0.48	0.198	257	140	4.5	22.3	78.1	0.55	1.66	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	20.0	65.1	0.41	9.62
10/05/1999 10:19	271	142	6.1	22.9	77.8	0.48	0.198	257	140	4.5	22.2	80.0	0.56	1.25	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.2	19.8	63.0	0.41	9.58
10/05/1999 10:20	271	142	6.0	23.1	77.9	0.48	0.199	257	139	4.4	22.3	78.7	0.55	1.81	74	67	0.0	0.1	0.3	0.0	0.4	250	141	4.0	6.6	73.3	0.41	8.48
10/05/1999 10:21	271	142	6.1	23.3	77.9	0.48	0.199	257	140	4.5	23.1	72.4	0.55	0.85	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	10.3	84.3	0.41	8.94
10/05/1999 10:22	271	142	5.9	23.8	76.3	0.48	0.199	257	141	4.4	22.2	80.1	0.55	0.21	74	67	0.0	0.1	0.3	0.0	0.4	250	138	4.0	12.4	65.6	0.41	11.12
10/05/1999 10:23	272	142	6.2	24.2	74.3	0.48	0.200	257	139	4.5	22.1	79.1	0.54	0.76	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.2	10.2	73.0	0.41	8.31
10/05/1999 10:24	271	142	5.9	23.7	78.5	0.48	0.200	257	141	4.5	23.0	74.4	0.55	-0.20	74	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	9.5	78.0	0.41	9.19
10/05/1999 10:25	271	142	6.1	24.0	75.2	0.48	0.200	257	140	4.4	22.2	81.2	0.56	0.37	75	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	9.7	73.7	0.41	9.86
10/05/1999 10:26	271	142	6.1	24.1	74.9	0.48	0.201	257	139	4.5	22.4	80.5	0.55	1.66	75	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	9.5	75.9	0.41	9.10
10/05/1999 10:27	272	143	6.1	23.9	78.3	0.48	0.201	257	140	4.5	22.9	75.8	0.55	1.37	75	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	9.7	74.8	0.41	8.89
10/05/1999 10:28	272	142	5.9	23.6	80.2	0.48	0.201	258	141	4.4	22.8	81.0	0.55	-0.01	75	67	0.0	0.1	0.3	0.0	0.4	250	140	4.1	10.9	75.7	0.40	9.38
10/05/1999 10:29	272	142	6.1	24.1	77.5	0.48	0.202	258	139	4.4	22.4	80.9	0.55	2.49	75	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	12.0	70.6	0.40	9.19
10/05/1999 10:30	272	142	6.0	23.2	78.3	0.48	0.202	258	140	4.5	23.5	74.0	0.54	1.21	75	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	13.4	74.3	0.40	9.11
10/05/1999 10:31	271	141	6.1	23.0	78.3	0.48	0.202	258	141	4.4	22.6	82.9	0.55	0.32	75	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	14.8	69.5	0.40	9.63
10/05/1999 10:32	272	142	6.2	23.6	77.0	0.48	0.203	258	139	4.4	22.5	78.4	0.55	2.18	75	67	0.0	0.1	0.3	0.0	0.4	251	140	4.1	15.6	70.7	0.41	9.16
10/05/1999 10:33	272	142	6.2	23.9	77.6	0.48	0.203	258	141	4.6	23.0	78.4	0.55	0.21	75	67	0.0	0.1	0.3	0.0	0.4	252	140	4.2	16.6	71.3	0.41	9.57
10/05/1999 10:34	272	143	6.2	23.7	81.9	0.48	0.203	258	141	4.6	21.7	87.7	0.55	0.81	75	67	0.0	0.1	0.3	0.0	0.4	252	140	4.2	18.0	68.4	0.41	9.35
10/05/1999 10:35	271	141	6.1	23.7	81.9	0.48	0.203	258	139	4.5	21.6	83.7	0.55	4.23	74	67	0.0	0.1	0.3	0.0	0.4	252	140	4.1	18.5	70.1	0.42	9.63
10/05/1999 10:36	272	142	6.2	24.5	76.9	0.48	0.204	258	140	4.5	23.3	73.7	0.54	3.03	75	67	0.0	0.1	0.3	0.0	0.4	252	140	4.2	20.2	66.5	0.41	10.16
10/05/1999 10:37	271	142	6.1	24.8	77.1	0.48	0.204	258	141	4.5	22.2	83.5	0.55	1.20	75	67	0.0	0.1	0.3	0.0	0.4	252	140	4.2	21.0	63.5	0.41	9.38
10/05/1999 10:38	271	142	6.2	24.7	76.2	0.48	0.204	258	140	4.5	21.9	82.5	0.56	3.07	75	67	0.0	0.1	0.3	0.0	0.4	252	140	4.2	20.2	68.4	0.41	8.90
10/05/1999 10:39	271	141	6.0	24.1	80.0	0.48	0.205	258	140	4.5	22.7	78.4	0.56	2.72	75	67	0.0	0.1	0.3	0.0	0.4	252	140	4.1	20.3	68.1	0.41	9.97
10/05/1999 10:40	271	141	6.2	24.9	74.2	0.48	0.205	258	140	4.4	23.1	75.2	0.55	1.71	75	67	0.0	0.1	0.3	0.0	0.4	253	140	4.2	20.5	64.1	0.42	9.44
10/05/1999 10:41	272	143	6.1	24.3	77.8	0.48	0.205	258	141	4.6	22.1	82.1	0.55	-0.05	75	67	0.0	0.1	0.3	0.0	0.4	253	141	4.2	20.6	69.4	0.41	8.64
10/05/1999 10:42	271	142	6.1	23.3	81.3	0.48	0.206	258	139	4.4	20.7	86.6	0.55	1.83	75	67	0.0	0.1	0.3	0.0	0.4	252	139	4.1	21.1	66.8	0.41	10.06
10/05/1999 10:43	272	141	6.2	24.0	76.0	0.48	0.206	258	139	4.5	22.1	77.0	0.55	2.81	75	67	0.0	0.1	0.3	0.0	0.4	253	140	4.1	21.1	64.9	0.41	9.23
10/05/1999 10:44	271	142	6.0	24.1	76.3	0.48	0.206	258	141	4.5	23.0	77.8	0.55	0.34	76	67	0.0	0.1	0.3	0.0	0.4	253	140	4.1	20.6	68.5	0.41	9.19
10/05/1999 10:45	272	142	6.3	24.0	78.4	0.48	0.207	259	141	4.5	21.8	85.3	0.55	0.76	75	67	0.0	0.1	0.3	0.0	0.4	253	140	4.2	20.8	67.5	0.41	9.77
10/05/1999 10:46	271	142	5.9	23.9	79.9	0.48	0.207	259	139	4.6	21.5	84.6	0.55	2.65	75	67	0.0	0.1	0.3	0.0	0.4	254	140	4.1	20.9	66.0	0.41	8.98
10/05/1999 10:47	271	141	6.2	24.6	76.8	0.48	0.207	258	140	4.4	22.7	76.3	0.55	1.93	75	67	0.0	0.1	0.3	0.0	0.4	253	140	4.1	20.6	69.3	0.41	9.47
10/05/1999 10:48	271	142	6.1	25.0	75.9	0.48	0.208	259	141	4.6	22.6	80.0	0.55	0.02	75	67	0.0	0.1	0.3	0.0	0.4	254	140	4.2	21.8	66.2	0.41	9.58
10/05/1999 10:49	272	142	6.1	24.4	79.4	0.48	0.208	259	140	4.5	21.2	86.4	0.55	0.55	76	67	0.0	0.1	0.3	0.0	0.4	254	141	4.2	21.3	68.1	0.41	9.00
10/05/1999 10:50	272	142	6.1	24.6	78.2	0.48	0.208	259	139	4.5	21.4	83.3	0.55	2.61	75	67	0.0	0.1	0.3	0.0	0.4	254	140	4.1	21.0	67.9	0.41	9.70
10/05/1999 10:51	271	141	6.1	25.3	74.9	0.48	0.209	259	140	4.5	22.5	76.5	0.55	1.06	75	67	0.0	0.1	0.3	0.0	0.4	254	140	4.2	21.4	68.1	0.41	9.09
10/05/1999 10:52	272	142	6.2	25.2	76.0	0.47	0.209	259	141	4.6	21.6	84.8	0.54	0.09	75	67	0.0	0.1	0.3	0.0	0.4	254	140	4.2	21.7	68.5	0.41	9.52
10/05/1999 10:53	272	143	6.1	24.1	79.2	0.48	0.209	259	140	4.6	21.3	87.3	0.54	1.53	75	67	0.0	0.1	0.3	0.0	0.4	254	140	4.2	21.2	68.2	0.42	9.81
10/05/1999 10:54	272	142	6.1	23.6	80.9	0.48	0.209	259	139	4.5	21.9	80.7	0.54	3.23	76	67	0.0	0.1	0.3	0.0	0.4	254	140	4.2	20.9	68.5	0.42	9.71
10/05/1999 10:55	272	142	6.2	24.6	78.9	0.48	0.210	260	141	4.5	22.5	79.9	0.55	1.36	76	67	0.0	0.1	0.3	0.0	0.4	254	140	4.2	21.6	67.3	0.42	9.79
10/05/1999 10:56	273	142	6.2	25.5	76.9	0.47	0.210	260	141	4.6	21.2	88.5	0.56	1.54	76	67	0.0	0.1	0.3	0.0	0.4	255	140	4.2	22.1	68.9	0.42	9.07
10/05/1999 10:57	273	143	6.0	25.0	78.8	0.48	0.210	260	139	4.5	21.1	85.7	0.55	3.44	76	67	0.0	0.1	0.3	0.0	0.4	255	140	4.2	21.8	69.3	0.42	9.75
10/05/1999 10:58	272	142	6.2	24.9	80.2	0.48	0.211	260	140	4.5	22.4	78.5	0.55	3.25	76	67	0.0	0.1	0.3	0.0	0.4	255	140	4.1	21.5	67.4	0.42	9.58
10/05/1999 10:59	273	142	6.1	25.8	75.6	0.48	0.211	260	141	4.6	21.4	87.2	0.55	1.79	76	67	0.0	0.1	0.3	0.0	0.4	255	140	4.2	21.7	70.1	0.42	9.48
10/05/1999 11:00	273	142	6.2	24.6	80.3	0.47	0.211	261	139	4.5	21.0	86.7	0.55	4.29	76	67	0.0	0.1	0.3	0.0	0.4	255	140	4.2	21.7	68.0	0.42	9.43
10/05/1999 11:01	273	142	6.1	24.9	78.3	0.47	0.212	261	140	4.6	22.2	80.2	0.54	3.65	76	67	0.0	0.1	0.3	0.0	0.4	256	141	4.2	20.8	70.3	0.42	8.80
10/05/1999 11:02	273	143	6.1	24.5	81.5	0.47	0.212	261	141	4.5	21.8	85.9	0.55	1.77	76	67	0.0	0.1	0.3	0.0	0.4	256	140	4.1	21.8	71.6	0.42	9.92
10/05/1999 11:03	273	141	6.2	25.9	78.2	0.47	0.212	261	140	4.5	20.9	87.8	0.56	3.63	76	67	0.0	0.1	0.3	0.0	0.4	256	140	4.2	22.7	64.4	0.41	9.83
10/05/1999 11:04	274	142	6.1	25.7	76.1	0.46	0.213	261	140	4.6	22.0	80.1	0.56	3.36	76	67	0.0	0.1	0.3	0.0	0.4	256	141	4.2	21.4	71.5	0.41	8.40
10/05/1999 11:05	274	143	6.0	22.9	83.0	0.45	0.213	261	141	4.5	21.4	85.4	0.55	1.49	76	67	0.0	0.1	0.3	0.0	0.4	256	140	4.1	21.6	71.3	0.41	9.94
10/05/1999 11:06	274	142	6.2	22.9	84.2	0.45	0.213	262	140	4.5	19.4	88.7	0.55	2.43	76	67	0.0	0.1	0.3	0.0	0.4	256	140	4.2	21.8	67.3	0.41	9.61
10/05/1999 11:07	275	142	6.1	27.3	79.3	0.46	0.214	262	139	4.5	20.6	87.0	0.55	3.29	76	67	0.0	0.1	0.3	0.0	0.4	256	140	4.2	25.2	68.8	0.41	9.33
10/05/1999 11:08	275	142	6.2	28.5	75.9	0.45	0.214	262	140	4.5	21.4	82.4	0.55	2.48	76	67	0.0	0.1	0.3	0.0	0.4	256	140	4.2	24.8	61.8	0.41	9.83
10/05/1999 11:09	276	143	6.0	24.9	77.5	0.45	0.214	263	142	4.6	21.4	85.5	0.55	0.27	76	67	0.0	0.1	0.3	0.0	0.4	257	141	4.2	19.9	72.2	0.41	8.12
10/05/1999 11:10	276	143	6.2	23.1	85.2	0.45	0.215	262	140	4.4	20.4	90.9	0.55	2.27	76	67	0.0	0.1	0.3	0.0	0.4	256	140	4.1	19.9	75.5	0.41	9.85
10/05/1999 11:11	276	142	6.3	26.1	81.7	0.45	0.215	262	139	4.5	20.9	83.8	0.55	3.25	76	67	0.0	0.1	0.3	0.0	0.4	257	139	4.2	23.7	68.3	0.41	10.48

Craig 3 Scrubber Data	3A RX IN TEMP	3A RX OUT TEMP	3A RX DP	3A LIME SLURRY FLOW	3A ASH SLURRY FLOW	3A SOFT WATER FLOW	3A RH BYPASS DMPR POSIT	3B RX IN TEMP	3B RX OUT TEMP	3B RX DP	3B LIME SLURRY FLOW	3B ASH SLURRY FLOW	3B SOFT WATER FLOW	3B RH BYPASS DMPR POSIT	3C RX IN TEMP	3C RX OUT TEMP	3C RX DP	3C LIME SLURRY FLOW	3C ASH SLURRY FLOW	3C SOFT WATER FLOW	3C RH BYPASS DMPR POSIT	3D RX IN TEMP	3D RX OUT TEMP	3D RX DP	3D LIME SLURRY FLOW	3D ASH SLURRY FLOW	3D SOFT WATER FLOW	3D RH BYPASS DMPR POSIT
10/05/1999 11:12	277	143	6.1	25.7	78.6	0.45	0.215	263	141	4.6	21.4	83.7	0.55	0.35	76	67	0.0	0.1	0.3	0.0	0.4	257	140	4.2	21.3	67.5	0.41	8.95
10/05/1999 11:13	276	143	6.1	23.7	82.1	0.45	0.215	263	141	4.5	20.6	90.7	0.55	0.85	76	67	0.0	0.1	0.3	0.0	0.4	257	140	4.2	20.0	74.5	0.41	8.95
10/05/1999 11:14	277	143	6.2	23.7	83.9	0.45	0.216	263	140	4.6	21.4	86.5	0.55	2.34	76	67	0.0	0.1	0.3	0.0	0.4	257	140	4.2	20.2	72.9	0.41	9.84
10/05/1999 11:15	277	143	6.1	24.8	80.9	0.45	0.216	263	141	4.5	22.5	83.0	0.55	0.65	76	67	0.0	0.1	0.3	0.0	0.4	257	140	4.2	21.4	70.2	0.41	9.31
10/05/1999 11:16	277	143	6.3	24.5	81.9	0.45	0.216	264	141	4.6	22.2	86.2	0.55	-0.17	77	67	0.0	0.1	0.3	0.0	0.4	257	140	4.2	21.0	72.0	0.41	9.15
10/05/1999 11:17	277	143	6.1	23.6	85.6	0.45	0.217	264	141	4.6	21.8	88.3	0.54	0.13	76	67	0.0	0.1	0.3	0.0	0.4	257	140	4.3	21.2	73.4	0.41	9.46
10/05/1999 11:18	277	143	6.2	23.6	86.2	0.45	0.215	264	140	4.5	21.8	88.5	0.54	0.69	76	67	0.0	0.1	0.3	0.0	0.4	258	140	4.2	21.7	70.7	0.41	9.84
10/05/1999 11:19	278	143	6.2	24.3	85.3	0.45	0.210	264	140	4.6	22.3	85.1	0.54	0.72	76	67	0.0	0.1	0.3	0.0	0.4	257	140	4.2	21.5	71.3	0.41	9.01
10/05/1999 11:20	278	147	6.0	28.4	30.8	0.45	0.205	264	141	4.6	22.0	88.4	0.54	0.04	76	67	0.0	0.1	0.3	0.0	0.4	258	140	4.2	21.3	74.3	0.41	9.47
10/05/1999 11:21	278	165	6.3	26.1	24.9	0.45	0.208	264	141	4.5	22.5	84.0	0.55	-0.09	77	67	0.0	0.1	0.3	0.0	0.4	258	140	4.2	20.8	69.2	0.41	9.27
10/05/1999 11:22	278	167	6.1	21.7	83.9	0.45	0.208	264	142	4.6	22.2	89.5	0.56	-0.38	76	67	0.0	0.1	0.3	0.0	0.4	258	140	4.2	21.8	74.3	0.41	8.63
10/05/1999 11:23	278	157	6.2	22.5	93.8	0.45	0.211	265	140	4.5	21.5	91.9	0.55	0.54	76	67	0.0	0.1	0.3	0.0	0.4	258	140	4.2	22.7	71.6	0.41	9.57
10/05/1999 11:24	278	150	6.3	23.0	94.4	0.45	0.202	265	140	4.5	22.6	83.8	0.55	0.43	77	67	0.0	0.1	0.3	0.0	0.4	258	140	4.2	21.9	69.2	0.41	8.77
10/05/1999 11:25	279	145	6.1	25.2	88.5	0.45	0.203	265	141	4.6	23.0	84.3	0.55	-0.13	77	67	0.0	0.1	0.3	0.0	0.4	258	140	4.2	21.6	75.6	0.41	8.85
10/05/1999 11:26	279	145	6.3	25.7	81.2	0.45	0.205	265	141	4.5	21.7	90.3	0.55	-0.11	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	21.6	71.6	0.41	9.50
10/05/1999 11:27	279	145	6.1	24.5	86.1	0.45	0.206	266	141	4.6	21.7	90.1	0.55	0.22	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	21.6	72.7	0.41	8.52
10/05/1999 11:28	279	143	6.1	24.1	88.8	0.45	0.207	265	140	4.5	21.7	89.7	0.55	0.86	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	21.4	74.7	0.41	9.44
10/05/1999 11:29	279	143	6.3	24.5	84.9	0.45	0.208	266	140	4.5	22.3	86.6	0.55	1.24	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	21.5	72.5	0.41	9.32
10/05/1999 11:30	280	144	6.1	25.5	84.1	0.45	0.209	266	142	4.6	22.4	86.5	0.55	-0.14	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	23.0	72.3	0.41	8.93
10/05/1999 11:31	279	143	6.2	25.2	85.7	0.45	0.210	266	141	4.5	21.3	92.4	0.54	0.05	77	67	0.0	0.1	0.3	0.0	0.4	260	140	4.2	22.2	72.8	0.41	9.07
10/05/1999 11:32	280	143	6.0	24.5	87.2	0.45	0.211	266	140	4.5	21.3	90.6	0.54	0.78	77	67	0.0	0.1	0.3	0.0	0.4	260	140	4.2	21.5	75.0	0.41	9.36
10/05/1999 11:33	280	143	6.2	25.1	86.1	0.45	0.213	266	141	4.4	22.5	84.9	0.54	0.25	77	67	0.0	0.1	0.3	0.0	0.4	260	139	4.2	21.7	72.9	0.41	9.84
10/05/1999 11:34	280	143	6.2	25.7	82.5	0.45	0.214	266	142	4.7	22.3	88.4	0.54	0.00	77	67	0.0	0.1	0.3	0.0	0.4	260	140	4.2	21.8	72.5	0.40	8.67
10/05/1999 11:35	280	144	6.3	24.9	86.2	0.45	0.215	266	142	4.6	21.0	93.9	0.54	0.11	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	21.4	77.0	0.40	8.90
10/05/1999 11:36	280	144	6.3	24.0	89.3	0.45	0.216	267	141	4.6	20.7	94.5	0.54	1.25	77	67	0.0	0.1	0.3	0.0	0.4	260	140	4.3	21.6	74.9	0.40	9.39
10/05/1999 11:37	280	143	6.2	24.4	90.8	0.45	0.217	266	140	4.6	21.4	89.4	0.54	1.42	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	21.6	73.7	0.40	9.27
10/05/1999 11:38	280	142	6.3	26.0	83.7	0.45	0.218	266	141	4.6	22.1	87.0	0.53	-0.08	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.3	21.8	74.8	0.40	9.39
10/05/1999 11:39	280	144	6.2	25.4	82.6	0.45	0.219	266	142	4.6	21.3	92.3	0.53	0.06	77	67	0.0	0.1	0.3	0.0	0.4	258	139	4.2	21.6	73.7	0.40	9.70
10/05/1999 11:40	280	144	6.4	23.7	88.7	0.45	0.220	266	141	4.6	20.9	94.2	0.53	1.40	77	67	0.0	0.1	0.3	0.0	0.4	259	140	4.2	21.3	72.6	0.40	9.10
10/05/1999 11:41	281	144	6.2	22.9	91.4	0.45	0.222	266	140	4.6	21.6	88.8	0.53	1.51	77	67	0.0	0.1	0.3	0.0	0.4	258	140	4.3	21.4	76.9	0.41	9.11
10/05/1999 11:42	280	143	6.2	23.3	91.6	0.45	0.223	266	142	4.5	21.8	89.8	0.53	0.22	78	67	0.0	0.1	0.3	0.0	0.4	258	139	4.2	21.7	73.6	0.41	9.93
Test 3 Average	***272.8***	***142.5***	***6.1***	***24.4***	***78.3***	***0.5***	***0.2***	***258.6***	***140.2***	***4.5***	***19.7***	***83.8***	***0.5***	***3.3***	***74.6***	***66.6***	***0.0***	***0.1***	***0.3***	***0.0***	***0.4***	***252.3***	***140.1***	***4.1***	***20.3***	***67.1***	***0.4***	***9.4***

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 9:21	104.2	0.0	99.5	104.2	104.3	412.2	409.5
10/04/1999 9:22	109.0	0.0	104.1	109.1	108.9	431.2	408.3
10/04/1999 9:23	103.4	0.0	98.4	103.6	103.5	408.8	409.0
10/04/1999 9:24	108.0	0.0	103.0	107.9	107.9	426.8	408.6
10/04/1999 9:25	105.3	0.0	100.5	105.5	105.3	416.7	410.1
10/04/1999 9:26	106.6	0.0	101.6	106.2	106.3	420.7	408.8
10/04/1999 9:27	104.5	0.0	99.6	104.6	104.5	413.2	410.4
10/04/1999 9:28	103.0	0.0	98.3	102.7	102.9	406.9	410.0
10/04/1999 9:29	106.9	0.0	101.9	107.2	106.8	422.8	409.4
10/04/1999 9:30	104.0	0.0	99.2	103.5	103.9	410.6	408.1
10/04/1999 9:31	107.5	0.0	102.6	107.2	107.3	424.7	407.6
10/04/1999 9:32	104.5	0.0	99.6	104.2	104.6	413.0	408.8
10/04/1999 9:33	109.5	0.0	104.6	109.5	109.5	433.2	408.5
10/04/1999 9:34	103.1	0.0	98.2	103.0	103.1	407.5	409.4
10/04/1999 9:35	108.2	0.0	103.2	108.3	108.0	427.7	409.0
10/04/1999 9:36	101.5	0.0	96.6	101.3	101.5	400.9	410.4
10/04/1999 9:37	109.0	0.0	104.1	108.8	108.8	430.7	408.0
10/04/1999 9:38	101.2	0.0	96.4	101.4	101.5	400.5	411.0
10/04/1999 9:39	104.9	0.0	99.9	104.6	104.8	414.3	409.6
10/04/1999 9:40	100.8	0.0	95.8	100.9	100.8	398.3	411.4
10/04/1999 9:41	106.7	0.0	101.9	106.0	106.4	421.0	408.9
10/04/1999 9:42	103.5	0.0	98.8	103.4	103.5	409.3	409.8
10/04/1999 9:43	110.4	0.0	105.6	110.5	110.3	436.8	407.0
10/04/1999 9:44	102.6	0.0	97.7	102.6	102.7	405.5	409.2
10/04/1999 9:45	109.9	0.0	104.6	109.7	109.6	433.8	407.5
10/04/1999 9:46	108.0	0.0	102.8	107.9	107.9	426.6	408.3
10/04/1999 9:47	109.3	0.0	104.5	109.5	109.3	432.7	408.1
10/04/1999 9:48	101.1	0.0	96.0	100.8	101.0	398.9	410.2
10/04/1999 9:49	109.0	0.0	104.0	109.0	108.8	430.9	409.0
10/04/1999 9:50	99.8	0.0	95.0	99.8	100.0	394.6	410.8
10/04/1999 9:51	109.6	0.0	104.9	109.9	109.5	433.9	408.6
10/04/1999 9:52	104.7	0.0	99.9	104.8	104.9	414.4	409.9
10/04/1999 9:53	109.2	0.0	104.4	109.1	109.1	431.8	407.9
10/04/1999 9:54	101.6	0.0	96.5	101.6	101.6	401.3	410.5
10/04/1999 9:55	104.6	0.0	99.6	104.3	104.5	413.0	409.0
10/04/1999 9:56	108.1	0.0	103.1	108.3	108.0	427.5	408.6
10/04/1999 9:57	109.6	0.0	104.7	109.5	109.5	433.4	406.9
10/04/1999 9:58	109.5	0.0	104.8	109.7	109.6	433.7	407.6
10/04/1999 9:59	104.3	0.0	99.8	104.3	104.5	412.9	409.3
10/04/1999 10:00	106.7	0.0	101.8	106.6	106.7	421.9	408.8
10/04/1999 10:01	105.0	0.0	99.9	105.1	104.9	415.0	409.2
10/04/1999 10:02	106.8	0.0	101.9	106.7	106.7	422.1	408.7
10/04/1999 10:03	107.6	0.0	102.8	107.7	107.6	425.7	408.7
10/04/1999 10:04	104.0	0.0	99.2	103.8	104.1	411.1	408.8
10/04/1999 10:05	108.6	0.0	103.8	108.9	108.6	429.9	408.1

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 10:06	102.6	0.0	97.6	102.5	102.6	405.3	410.3
10/04/1999 10:07	106.3	0.0	101.5	106.4	106.3	420.4	409.8
10/04/1999 10:08	104.2	0.0	99.4	104.3	104.4	412.3	410.2
10/04/1999 10:09	111.9	0.0	106.9	111.8	111.7	442.4	406.9
10/04/1999 10:10	103.9	0.0	99.0	104.0	104.0	410.9	410.0
10/04/1999 10:11	106.5	0.0	101.8	106.1	106.4	420.9	407.6
10/04/1999 10:12	103.0	0.0	98.2	103.2	103.1	407.5	410.5
10/04/1999 10:13	106.7	0.0	101.7	106.5	106.6	421.5	408.7
10/04/1999 10:14	105.7	0.0	100.7	106.1	105.9	418.4	409.5
10/04/1999 10:15	105.5	0.0	100.6	105.2	105.5	416.8	408.7
10/04/1999 10:16	107.1	0.0	102.3	107.0	107.1	423.5	408.8
10/04/1999 10:17	103.7	0.0	98.9	103.4	103.7	409.6	409.6
10/04/1999 10:18	108.4	0.0	103.3	108.3	108.2	428.3	409.5
10/04/1999 10:19	103.1	0.0	98.1	102.8	103.2	407.2	409.6
10/04/1999 10:20	111.4	0.0	106.6	111.3	111.3	440.7	407.1
10/04/1999 10:21	103.9	0.0	99.1	103.8	104.0	410.8	408.9
10/04/1999 10:22	108.9	0.0	104.1	108.9	108.8	430.7	408.7
10/04/1999 10:23	102.2	0.0	97.2	101.9	102.2	403.6	409.8
10/04/1999 10:24	106.2	0.0	101.2	106.2	106.0	419.6	409.5
10/04/1999 10:25	103.8	0.0	98.9	103.6	103.7	409.9	409.6
10/04/1999 10:26	109.5	0.0	104.7	109.6	109.5	433.3	409.0
10/04/1999 10:27	102.6	0.0	97.8	102.9	102.8	406.2	410.5
10/04/1999 10:28	102.4	0.0	97.5	102.1	102.4	404.5	410.8
10/04/1999 10:29	104.8	0.0	99.6	104.8	104.7	413.9	410.9
10/04/1999 10:30	104.1	0.0	99.1	103.7	103.9	410.8	409.8
10/04/1999 10:31	106.8	0.0	102.0	106.6	106.7	422.1	409.3
10/04/1999 10:32	102.9	0.0	98.3	102.6	102.9	406.7	409.9
10/04/1999 10:33	108.2	0.0	103.5	108.4	108.1	428.3	409.4
10/04/1999 10:34	99.8	0.0	94.9	99.7	100.0	394.5	411.1
10/04/1999 10:35	108.6	0.0	103.8	108.8	108.6	429.8	409.7
10/04/1999 10:36	104.1	0.0	99.3	103.8	104.1	411.3	410.1
10/04/1999 10:37	108.1	0.0	103.5	108.2	108.2	428.0	408.4
10/04/1999 10:38	100.2	0.0	95.4	100.1	100.4	396.1	410.6
10/04/1999 10:39	106.9	0.0	102.1	107.0	106.9	422.9	408.4
10/04/1999 10:40	101.7	0.0	96.9	101.8	101.9	402.3	410.2
10/04/1999 10:41	107.6	0.0	102.9	107.6	107.6	425.8	408.8
10/04/1999 10:42	105.6	0.0	101.0	105.9	105.7	418.2	410.1
10/04/1999 10:43	105.1	0.0	100.2	104.7	105.1	415.1	408.4
10/04/1999 10:44	109.5	0.0	104.8	109.9	109.6	433.8	407.6
10/04/1999 10:45	104.7	0.0	99.9	104.4	104.8	413.9	407.8
10/04/1999 10:46	107.9	0.0	103.1	107.8	108.0	426.9	407.7
10/04/1999 10:47	103.7	0.0	98.8	103.8	103.9	410.2	409.3
10/04/1999 10:48	103.7	0.0	98.9	103.5	103.7	409.9	409.1
10/04/1999 10:49	106.2	0.0	101.3	106.2	106.2	419.8	408.8
10/04/1999 10:50	106.2	0.0	101.5	106.1	106.1	419.9	409.3

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 10:51	108.3	0.0	103.4	108.3	108.2	428.3	407.9
10/04/1999 10:52	105.1	0.0	100.4	105.1	105.2	415.9	408.3
10/04/1999 10:53	110.9	0.0	105.9	110.8	110.7	438.3	406.8
10/04/1999 10:54	105.7	0.0	100.7	105.9	105.8	418.2	409.2
10/04/1999 10:55	106.1	0.0	101.2	105.7	106.0	419.0	408.6
10/04/1999 10:56	103.1	0.0	98.5	103.2	103.2	408.1	409.8
10/04/1999 10:57	106.8	0.0	102.1	106.7	106.8	422.5	408.1
10/04/1999 10:58	106.2	0.0	101.2	106.5	106.2	420.1	409.0
10/04/1999 10:59	104.5	0.0	99.7	104.1	104.5	412.8	409.0
10/04/1999 11:00	106.0	0.0	101.3	106.4	106.1	419.9	411.1
10/04/1999 11:01	102.8	0.0	98.1	103.0	102.9	406.8	411.0
10/04/1999 11:02	109.3	0.0	104.7	109.3	109.2	432.6	408.9
10/04/1999 11:03	106.0	0.0	101.4	106.0	106.1	419.5	408.7
10/04/1999 11:04	109.1	0.0	104.5	109.1	109.1	431.9	408.5
10/04/1999 11:05	104.8	0.0	99.9	104.7	104.8	414.3	410.3
10/04/1999 11:06	107.2	0.0	102.3	107.3	107.3	424.2	409.5
10/04/1999 11:07	104.8	0.0	99.9	104.8	104.9	414.5	410.0
10/04/1999 11:08	109.9	0.0	105.1	110.1	109.7	434.9	408.5
10/04/1999 11:09	105.4	0.0	100.5	105.5	105.4	416.8	409.5
10/04/1999 11:10	104.9	0.0	100.0	104.6	104.9	414.4	409.3
10/04/1999 11:11	106.7	0.0	102.0	106.8	106.7	422.2	410.1
10/04/1999 11:12	104.6	0.0	99.6	104.7	104.7	413.7	410.0
10/04/1999 11:13	108.6	0.0	103.6	108.8	108.5	429.5	408.7
10/04/1999 11:14	103.5	0.0	98.8	103.4	103.6	409.3	409.8
10/04/1999 11:15	107.0	0.0	102.5	106.8	106.9	423.3	409.4
10/04/1999 11:16	107.1	0.0	102.4	107.0	107.1	423.7	409.6
10/04/1999 11:17	102.5	0.0	97.8	102.3	102.5	405.1	410.5
10/04/1999 11:18	110.2	0.0	105.6	110.2	109.9	436.0	408.4
10/04/1999 11:19	104.1	0.0	99.1	104.2	104.3	411.7	410.1
10/04/1999 11:20	106.2	0.0	101.3	105.9	106.2	419.5	409.0
10/04/1999 11:21	105.5	0.0	100.9	105.6	105.6	417.6	409.5
10/04/1999 11:22	104.8	0.0	99.9	104.6	104.8	414.2	408.5
10/04/1999 11:23	107.3	0.0	102.4	107.5	107.3	424.4	409.2
10/04/1999 11:24	104.2	0.0	99.3	104.1	104.2	411.8	409.4
10/04/1999 11:25	111.0	0.0	106.2	111.0	111.0	439.2	408.0
10/04/1999 11:26	103.7	0.0	98.9	103.8	103.8	410.2	409.7
10/04/1999 11:27	107.1	0.0	102.5	107.1	107.1	423.7	408.6
10/04/1999 11:28	103.6	0.0	98.6	103.9	103.7	409.9	409.3
10/04/1999 11:29	108.5	0.0	103.7	108.3	108.4	428.9	407.1
10/04/1999 11:30	109.3	0.0	104.5	109.6	109.6	433.0	408.4
10/04/1999 11:31	105.4	0.0	100.4	105.2	105.4	416.4	409.4
10/04/1999 11:32	105.3	0.0	100.2	105.4	105.1	416.1	409.4
10/04/1999 11:33	103.4	0.0	98.6	103.5	103.4	409.1	410.7
10/04/1999 11:34	108.5	0.0	103.4	108.4	108.3	428.7	408.8
10/04/1999 11:35	106.9	0.0	101.4	107.0	107.0	422.4	408.6

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 11:36	108.0	0.0	103.1	107.8	108.0	426.8	408.3
10/04/1999 11:37	108.1	0.0	103.1	108.3	108.1	427.7	409.1
10/04/1999 11:38	104.3	0.0	99.2	104.2	104.2	411.9	409.2
10/04/1999 11:39	107.9	0.0	102.6	108.0	107.8	426.4	409.1
10/04/1999 11:40	103.7	0.0	98.9	103.9	103.8	410.4	410.4
10/04/1999 11:41	103.6	0.0	98.5	103.4	103.5	409.0	411.1
10/04/1999 11:42	106.5	0.0	101.6	106.6	106.4	421.2	410.1
10/04/1999 11:43	107.2	0.0	102.3	107.4	107.2	424.1	408.9
10/04/1999 11:44	108.7	0.0	104.0	108.7	108.7	430.2	408.8
10/04/1999 11:45	105.2	0.0	100.3	105.0	105.3	415.8	409.4
10/04/1999 11:46	105.7	0.0	100.9	105.7	105.8	418.2	409.7
10/04/1999 11:47	105.0	0.0	100.2	105.2	105.0	415.5	410.5
10/04/1999 11:48	106.0	0.0	101.0	105.9	106.0	419.0	410.5
10/04/1999 11:49	105.7	0.0	100.8	105.7	105.8	418.2	409.3
10/04/1999 11:50	106.2	0.0	101.1	106.0	106.0	419.4	409.2
10/04/1999 11:51	106.4	0.0	101.3	106.5	106.3	420.5	408.8
10/04/1999 11:52	107.3	0.0	102.4	107.3	107.3	424.3	409.0
10/04/1999 11:53	106.5	0.0	101.8	106.6	106.6	421.6	409.1
10/04/1999 11:54	103.9	0.0	98.9	103.6	103.9	410.4	410.7
10/04/1999 11:55	107.0	0.0	102.1	107.0	107.0	423.1	410.1
10/04/1999 11:56	108.2	0.0	103.2	108.4	108.1	427.9	408.4
10/04/1999 11:57	105.6	0.0	100.6	105.7	105.6	417.5	409.5
10/04/1999 11:58	104.2	0.0	99.2	103.9	104.0	411.4	410.1
10/04/1999 11:59	105.1	0.0	100.1	105.1	105.1	415.4	409.6
10/04/1999 12:00	106.0	0.0	101.1	106.0	105.9	418.9	409.8
10/04/1999 12:01	107.5	0.0	102.8	107.6	107.5	425.4	409.5
10/04/1999 12:02	102.6	0.0	97.6	102.5	102.6	405.3	410.3
10/04/1999 12:03	106.4	0.0	101.8	106.4	106.3	421.0	409.2
10/04/1999 12:04	107.1	0.0	102.4	107.3	107.3	424.2	409.4
10/04/1999 12:05	104.6	0.0	99.9	104.7	104.8	414.0	410.6
10/04/1999 12:06	106.9	0.0	101.9	106.9	106.8	422.4	408.6
10/04/1999 12:07	108.7	0.0	103.8	108.9	108.6	429.9	407.2
10/04/1999 12:08	105.2	0.0	100.3	105.2	105.3	416.1	408.5
10/04/1999 12:09	105.3	0.0	100.6	105.2	105.3	416.4	409.3
10/04/1999 12:10	105.7	0.0	100.6	105.6	105.6	417.5	409.3
10/04/1999 12:11	104.9	0.0	100.0	105.1	104.9	414.8	409.2
10/04/1999 12:12	104.7	0.0	99.8	104.7	104.9	414.3	409.5
10/04/1999 12:13	106.6	0.0	101.5	106.6	106.7	421.5	408.8
10/04/1999 12:14	107.2	0.0	102.2	107.4	107.2	424.0	408.0
10/04/1999 12:15	105.4	0.0	100.5	105.7	105.5	417.1	409.2
10/04/1999 12:16	103.1	0.0	98.1	103.2	103.1	407.5	409.7
10/04/1999 12:17	105.6	0.0	100.7	105.7	105.5	417.4	410.2
10/04/1999 12:18	107.7	0.0	102.7	107.6	107.6	425.6	408.2
10/04/1999 12:19	107.3	0.0	102.3	107.2	107.3	424.2	407.5
10/04/1999 12:20	106.3	0.0	101.4	106.3	106.3	420.4	408.3

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 12:21	106.9	0.0	102.1	106.9	106.8	422.7	409.1
10/04/1999 12:22	100.7	0.0	95.7	100.7	100.7	397.8	411.3
10/04/1999 12:23	103.7	0.0	98.7	103.6	103.6	409.6	410.6
10/04/1999 12:24	105.4	0.0	100.3	105.3	105.2	416.2	409.0
10/04/1999 12:25	107.1	0.0	102.1	107.0	107.0	423.2	408.1
10/04/1999 12:26	106.3	0.0	100.6	106.2	106.2	419.4	409.0
10/04/1999 12:27	109.4	0.0	104.7	109.4	109.5	433.0	407.4
10/04/1999 12:28	105.1	0.0	100.2	105.4	105.3	416.1	407.9
10/04/1999 12:29	106.5	0.0	101.6	106.3	106.4	420.9	407.2
10/04/1999 12:30	107.0	0.0	102.0	107.1	107.0	423.1	408.6
10/04/1999 12:31	103.2	0.0	97.6	103.2	103.2	407.3	410.0
10/04/1999 12:32	106.8	0.0	101.9	106.9	106.7	422.3	409.1
10/04/1999 12:33	103.3	0.0	98.5	103.3	103.3	408.4	409.3
Test 1 Average	***105.9***	***0.0***	***101.0***	***105.9***	***105.9***	***418.6***	***409.2***
10/04/1999 13:36	102.0	0.0	97.2	102.0	102.1	403.3	408.0
10/04/1999 13:37	106.7	0.0	101.8	106.7	106.6	421.9	406.9
10/04/1999 13:38	104.3	0.0	99.4	104.5	104.4	412.7	408.1
10/04/1999 13:39	102.4	0.0	97.9	102.4	102.5	405.3	408.3
10/04/1999 13:40	105.9	0.0	100.7	106.0	105.8	418.4	407.6
10/04/1999 13:41	104.7	0.0	99.8	104.9	104.7	414.2	407.9
10/04/1999 13:42	102.4	0.0	97.4	102.2	102.4	404.4	407.9
10/04/1999 13:43	108.8	0.0	103.9	108.8	108.7	430.3	405.6
10/04/1999 13:44	104.7	0.0	99.9	104.8	104.7	414.1	406.0
10/04/1999 13:45	104.7	0.0	100.0	104.7	104.7	414.1	405.9
10/04/1999 13:46	103.6	0.0	98.9	103.6	103.7	409.8	407.3
10/04/1999 13:47	105.5	0.0	100.8	105.6	105.6	417.5	406.4
10/04/1999 13:48	104.0	0.0	99.1	104.1	104.1	411.2	407.3
10/04/1999 13:49	101.8	0.0	97.1	101.7	102.0	402.7	407.4
10/04/1999 13:50	108.4	0.0	103.4	108.4	108.2	428.4	406.6
10/04/1999 13:51	105.4	0.0	100.0	105.3	105.3	416.0	405.9
10/04/1999 13:52	109.4	0.0	104.7	109.5	109.3	433.0	404.9
10/04/1999 13:53	103.0	0.0	98.3	103.0	103.1	407.4	407.1
10/04/1999 13:54	104.1	0.0	98.8	104.0	104.1	411.1	407.0
10/04/1999 13:55	101.9	0.0	97.2	102.1	102.0	403.2	408.4
10/04/1999 13:56	107.1	0.0	102.2	106.7	106.8	422.8	406.8
10/04/1999 13:57	105.2	0.0	100.3	105.3	105.2	416.1	407.2
10/04/1999 13:58	104.4	0.0	99.5	104.2	104.3	412.4	406.8
10/04/1999 13:59	108.1	0.0	103.1	108.3	108.1	427.7	406.7
10/04/1999 14:00	104.5	0.0	99.7	104.7	104.6	413.5	406.9
10/04/1999 14:01	104.2	0.0	99.3	103.9	104.1	411.6	407.4
10/04/1999 14:02	103.6	0.0	98.9	103.7	103.7	410.0	408.8
10/04/1999 14:03	103.4	0.0	98.6	103.1	103.4	408.6	408.6
10/04/1999 14:04	107.2	0.0	102.3	107.4	107.2	424.2	407.5
10/04/1999 14:05	101.3	0.0	96.4	101.5	101.5	400.7	409.3

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 14:06	104.8	0.0	100.0	104.4	104.7	414.0	407.8
10/04/1999 14:07	108.7	0.0	104.1	109.1	108.7	430.6	408.3
10/04/1999 14:08	103.3	0.0	98.5	103.1	103.4	408.3	407.8
10/04/1999 14:09	105.4	0.0	100.8	105.6	105.4	417.2	408.4
10/04/1999 14:10	101.0	0.0	96.2	100.8	101.2	399.3	408.4
10/04/1999 14:11	108.9	0.0	104.0	109.4	108.7	431.1	407.5
10/04/1999 14:12	105.7	0.0	100.8	105.5	105.6	417.6	407.8
10/04/1999 14:13	108.4	0.0	103.6	108.4	108.4	428.8	407.1
10/04/1999 14:14	101.9	0.0	97.1	101.8	102.0	402.8	408.2
10/04/1999 14:15	106.7	0.0	102.0	106.9	106.7	422.4	407.9
10/04/1999 14:16	105.3	0.0	100.6	105.6	105.4	416.9	408.5
10/04/1999 14:17	103.4	0.0	98.7	103.3	103.4	408.7	408.9
10/04/1999 14:18	106.1	0.0	101.1	106.1	106.0	419.4	408.3
10/04/1999 14:19	104.3	0.0	99.0	104.4	104.4	412.2	408.2
10/04/1999 14:20	105.2	0.0	100.6	105.2	105.3	416.3	408.0
10/04/1999 14:21	105.5	0.0	100.5	105.5	105.4	417.0	408.5
10/04/1999 14:22	102.7	0.0	97.8	102.8	102.7	406.0	409.5
10/04/1999 14:23	102.6	0.0	97.6	102.3	102.5	405.1	409.0
10/04/1999 14:24	107.4	0.0	102.4	107.5	107.2	424.6	408.3
10/04/1999 14:25	104.9	0.0	100.0	104.7	104.8	414.6	408.2
10/04/1999 14:26	109.7	0.0	104.8	109.6	109.6	433.7	407.0
10/04/1999 14:27	104.0	0.0	99.4	104.3	104.2	411.9	408.9
10/04/1999 14:28	103.5	0.0	98.7	103.6	103.4	409.3	409.1
10/04/1999 14:29	102.4	0.0	97.6	102.3	102.3	404.6	410.4
10/04/1999 14:30	103.6	0.0	98.8	103.6	103.7	409.7	409.5
10/04/1999 14:31	108.3	0.0	103.4	108.3	108.2	428.2	408.6
10/04/1999 14:32	103.0	0.0	98.4	103.1	103.2	407.8	408.9
10/04/1999 14:33	107.7	0.0	103.1	107.9	107.8	426.5	407.7
10/04/1999 14:34	101.5	0.0	96.8	102.0	101.8	402.2	410.0
10/04/1999 14:35	103.3	0.0	98.5	103.1	103.2	408.2	409.5
10/04/1999 14:36	105.0	0.0	100.1	105.3	105.0	415.5	409.4
10/04/1999 14:37	103.7	0.0	99.0	103.7	103.8	410.2	409.6
10/04/1999 14:38	109.0	0.0	104.3	109.1	109.0	431.5	407.8
10/04/1999 14:39	103.6	0.0	99.2	103.8	103.8	410.4	409.4
10/04/1999 14:40	103.0	0.0	98.3	102.8	103.0	407.2	410.1
10/04/1999 14:41	105.4	0.0	100.6	105.3	105.3	416.7	409.7
10/04/1999 14:42	107.0	0.0	102.2	107.0	106.9	423.2	408.7
10/04/1999 14:43	105.0	0.0	100.5	105.0	105.0	415.5	409.8
10/04/1999 14:44	102.2	0.0	97.5	102.1	102.3	404.3	410.0
10/04/1999 14:45	105.8	0.0	101.1	105.7	105.7	418.3	409.1
10/04/1999 14:46	107.1	0.0	102.4	107.2	107.2	424.0	408.6
10/04/1999 14:47	107.6	0.0	102.7	107.7	107.6	425.5	408.1
10/04/1999 14:48	106.0	0.0	101.2	106.2	106.2	419.6	408.7
10/04/1999 14:49	103.5	0.0	98.5	103.3	103.4	408.7	409.9
10/04/1999 14:50	102.1	0.0	97.3	101.9	102.0	403.4	409.8

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 14:51	106.5	0.0	101.7	106.8	106.5	421.5	409.3
10/04/1999 14:52	102.1	0.0	97.3	102.1	102.2	403.7	410.0
10/04/1999 14:53	109.5	0.0	104.8	109.7	109.4	433.5	408.4
10/04/1999 14:54	103.1	0.0	98.3	103.0	103.2	407.7	408.9
10/04/1999 14:55	107.0	0.0	102.1	107.0	107.0	423.2	408.9
10/04/1999 14:56	100.9	0.0	96.1	100.7	101.1	398.9	410.0
10/04/1999 14:57	107.3	0.0	102.6	107.5	107.3	424.7	409.2
10/04/1999 14:58	101.2	0.0	96.3	101.0	101.2	399.8	410.6
10/04/1999 14:59	109.6	0.0	104.8	109.7	109.6	433.8	408.9
10/04/1999 15:00	102.4	0.0	97.6	102.5	102.6	405.1	410.6
10/04/1999 15:01	106.7	0.0	101.8	106.6	106.6	421.7	408.8
10/04/1999 15:02	100.3	0.0	95.6	100.4	100.5	396.9	410.5
10/04/1999 15:03	106.9	0.0	101.9	106.7	106.7	422.3	408.7
10/04/1999 15:04	100.8	0.0	95.6	101.1	100.8	398.4	411.1
10/04/1999 15:05	105.9	0.0	101.1	105.7	105.8	418.6	409.7
10/04/1999 15:06	100.5	0.0	95.8	100.5	100.6	397.4	411.1
10/04/1999 15:07	107.0	0.0	102.2	106.6	106.8	422.7	409.0
10/04/1999 15:08	105.1	0.0	100.4	105.6	105.3	416.4	410.2
10/04/1999 15:09	106.6	0.0	101.9	106.2	106.5	421.2	408.1
10/04/1999 15:10	105.8	0.0	101.3	106.4	105.9	419.5	409.2
10/04/1999 15:11	103.8	0.0	99.0	103.5	103.7	410.0	408.6
10/04/1999 15:12	103.7	0.0	98.8	103.7	103.6	409.9	409.9
10/04/1999 15:13	101.9	0.0	97.1	101.6	101.9	402.5	410.5
10/04/1999 15:14	105.8	0.0	101.2	106.0	105.9	418.9	409.7
10/04/1999 15:15	99.9	0.0	95.3	99.8	100.1	395.2	410.9
10/04/1999 15:16	108.6	0.0	104.0	108.8	108.6	430.0	409.2
10/04/1999 15:17	102.4	0.0	97.6	102.5	102.5	405.0	409.7
10/04/1999 15:18	108.4	0.0	103.4	108.2	108.3	428.3	408.9
10/04/1999 15:19	102.4	0.0	97.6	102.3	102.5	404.9	410.3
10/04/1999 15:20	108.9	0.0	104.1	108.7	108.7	430.5	408.8
10/04/1999 15:21	100.7	0.0	96.1	100.8	100.8	398.3	411.4
10/04/1999 15:22	104.9	0.0	100.3	104.7	104.8	414.8	410.0
10/04/1999 15:23	100.6	0.0	95.6	100.5	100.7	397.5	411.8
10/04/1999 15:24	106.2	0.0	101.5	106.0	106.1	419.9	409.0
10/04/1999 15:25	103.7	0.0	98.9	104.1	103.8	410.5	410.1
10/04/1999 15:26	100.5	0.0	95.6	100.1	100.4	396.7	409.8
10/04/1999 15:27	102.9	0.0	98.0	102.9	102.8	406.6	409.3
10/04/1999 15:28	101.9	0.0	97.1	101.6	101.8	402.5	408.7
10/04/1999 15:29	105.4	0.0	100.6	105.4	105.4	416.8	408.3
10/04/1999 15:30	101.4	0.0	96.7	101.5	101.6	401.2	409.1
10/04/1999 15:31	104.3	0.0	99.4	104.1	104.1	411.9	407.4
10/04/1999 15:32	105.1	0.0	100.1	105.2	105.1	415.6	406.7
10/04/1999 15:33	99.7	0.0	94.9	99.4	99.8	393.9	407.3
10/04/1999 15:34	104.9	0.0	100.2	104.6	104.7	414.3	406.4
10/04/1999 15:35	103.4	0.0	98.4	103.5	103.4	408.7	406.8

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 15:36	102.6	0.0	97.7	102.7	102.6	405.7	407.5
10/04/1999 15:37	103.5	0.0	98.5	103.5	103.3	408.9	406.9
10/04/1999 15:38	102.7	0.0	97.9	102.5	102.6	405.7	406.1
10/04/1999 15:39	104.2	0.0	99.4	104.1	104.1	411.8	406.3
10/04/1999 15:40	100.7	0.0	95.9	100.5	100.6	397.8	407.1
10/04/1999 15:41	106.1	0.0	101.3	105.9	105.9	419.3	405.0
10/04/1999 15:42	102.7	0.0	97.9	102.8	102.6	406.0	406.0
10/04/1999 15:43	103.2	0.0	98.3	102.7	103.0	407.2	405.5
10/04/1999 15:44	105.2	0.0	100.3	105.3	105.1	415.9	405.6
10/04/1999 15:45	97.8	0.0	93.1	97.7	97.8	386.5	406.4
10/04/1999 15:46	105.1	0.0	100.2	105.2	105.0	415.6	405.8
10/04/1999 15:47	98.4	0.0	93.5	98.2	98.5	388.7	407.2
10/04/1999 15:48	106.1	0.0	101.1	105.9	105.9	419.1	404.8
10/04/1999 15:49	102.4	0.0	97.5	102.5	102.4	404.9	406.1
10/04/1999 15:50	103.3	0.0	98.6	103.1	103.3	408.3	405.0
10/04/1999 15:51	104.0	0.0	99.0	104.1	104.0	411.1	404.9
10/04/1999 15:52	103.0	0.0	98.2	102.8	102.9	407.0	405.2
10/04/1999 15:53	105.7	0.0	101.0	105.7	105.6	418.0	405.0
10/04/1999 15:54	99.0	0.0	94.2	98.9	99.1	391.3	406.4
10/04/1999 15:55	102.1	0.0	97.4	102.0	102.0	403.6	405.8
10/04/1999 15:56	102.4	0.0	97.7	102.4	102.4	405.0	406.4
10/04/1999 15:57	103.8	0.0	98.9	103.7	103.7	410.1	404.9
10/04/1999 15:58	105.4	0.0	100.5	105.3	105.5	416.8	404.4
10/04/1999 15:59	101.4	0.0	96.7	101.3	101.3	400.7	405.6
10/04/1999 16:00	103.8	0.0	99.0	103.6	103.6	410.0	404.8
10/04/1999 16:01	103.1	0.0	98.2	103.1	102.9	407.4	405.1
10/04/1999 16:02	104.4	0.0	99.5	104.4	104.3	412.7	404.8
10/04/1999 16:03	101.7	0.0	96.9	101.7	101.7	402.0	406.0
10/04/1999 16:04	101.2	0.0	96.4	101.0	101.2	399.8	405.0
10/04/1999 16:05	104.2	0.0	99.3	104.7	104.1	412.4	405.0
10/04/1999 16:06	99.1	0.0	94.4	98.9	99.1	391.5	405.7
10/04/1999 16:07	106.6	0.0	101.9	106.6	106.5	421.7	405.0
10/04/1999 16:08	102.1	0.0	97.3	102.0	102.1	403.6	405.4
10/04/1999 16:09	105.9	0.0	101.0	105.5	105.8	418.3	404.1
10/04/1999 16:10	101.2	0.0	96.4	101.4	101.2	400.2	406.1
10/04/1999 16:11	102.4	0.0	96.9	102.3	102.3	404.0	405.2
10/04/1999 16:12	103.1	0.0	98.6	103.1	103.1	407.9	405.4
10/04/1999 16:13	102.2	0.0	97.8	102.1	102.3	404.4	405.5
10/04/1999 16:14	103.0	0.0	98.3	103.3	103.1	407.7	406.1
10/04/1999 16:15	100.5	0.0	95.7	100.4	100.5	397.1	406.8
10/04/1999 16:16	101.3	0.0	96.5	101.3	101.3	400.5	406.3
10/04/1999 16:17	106.0	0.0	101.2	106.2	105.9	419.4	404.5
10/04/1999 16:18	100.9	0.0	96.5	100.9	101.0	399.3	405.7
10/04/1999 16:19	106.3	0.0	101.6	106.1	106.2	420.3	404.2
10/04/1999 16:20	103.7	0.0	99.0	103.9	103.7	410.4	405.3

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/04/1999 16:21	103.1	0.0	98.3	102.8	103.0	407.3	404.0
10/04/1999 16:22	103.9	0.0	99.1	104.2	103.9	411.1	405.3
10/04/1999 16:23	101.8	0.0	97.0	101.3	101.7	401.8	405.1
10/04/1999 16:24	102.6	0.0	98.0	102.9	102.6	406.1	406.2
10/04/1999 16:25	98.0	0.0	93.3	97.8	98.2	387.3	406.3
10/04/1999 16:26	104.8	0.0	100.0	105.0	104.7	414.5	406.2
10/04/1999 16:27	101.7	0.0	96.9	101.4	101.7	401.7	405.1
10/04/1999 16:28	107.1	0.0	102.2	107.2	106.9	423.4	404.5
10/04/1999 16:29	99.9	0.0	95.3	99.6	100.1	394.9	405.1
10/04/1999 16:30	106.3	0.0	101.5	106.1	106.2	420.2	404.2
10/04/1999 16:31	104.0	0.0	99.1	103.8	103.9	410.8	405.2
10/04/1999 16:32	105.9	0.0	101.3	105.9	105.9	419.0	404.3
10/04/1999 16:33	103.2	0.0	98.7	103.4	103.4	408.8	405.1
10/04/1999 16:34	100.7	0.0	96.3	100.5	100.8	398.4	405.9
10/04/1999 16:35	105.0	0.0	100.4	105.3	105.0	415.7	405.1
10/04/1999 16:36	99.0	0.0	94.1	99.1	99.0	391.3	406.5
Test 2 Average	***105.0***	***0.0***	***100.2***	***105.0***	***105.0***	***415.3***	***408.3***

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/05/1999 8:30	101.9	0.0	97.0	102.0	101.9	402.8	410.5
10/05/1999 8:31	101.1	0.0	96.5	101.0	101.3	399.9	410.6
10/05/1999 8:32	101.6	0.0	97.1	101.9	101.7	402.4	411.0
10/05/1999 8:33	102.4	0.0	97.6	102.1	102.3	404.5	409.6
10/05/1999 8:34	104.7	0.0	99.9	104.8	104.6	414.1	408.5
10/05/1999 8:35	101.1	0.0	96.4	100.9	101.1	399.6	407.8
10/05/1999 8:36	107.0	0.0	102.1	107.1	106.9	423.2	406.5
10/05/1999 8:37	102.0	0.0	97.1	101.9	102.0	403.0	407.9
10/05/1999 8:38	106.8	0.0	102.0	107.0	106.7	422.5	407.2
10/05/1999 8:39	99.4	0.0	94.7	99.5	99.7	393.3	408.6
10/05/1999 8:40	105.2	0.0	100.3	105.0	105.1	415.7	407.1
10/05/1999 8:41	98.1	0.0	93.2	98.1	98.1	387.6	408.4
10/05/1999 8:42	104.8	0.0	100.1	104.9	104.6	414.3	407.5
10/05/1999 8:43	99.7	0.0	95.0	99.8	99.8	394.3	408.3
10/05/1999 8:44	104.8	0.0	100.0	104.8	104.6	414.1	406.9
10/05/1999 8:45	99.2	0.0	94.3	99.1	99.1	391.7	407.7
10/05/1999 8:46	102.4	0.0	97.3	102.1	102.1	403.9	406.1
10/05/1999 8:47	103.3	0.0	98.5	103.3	103.4	408.5	405.4
10/05/1999 8:48	107.7	0.0	103.0	107.7	107.6	426.0	404.4
10/05/1999 8:49	103.4	0.0	98.6	103.3	103.4	408.7	405.7
10/05/1999 8:50	106.2	0.0	101.5	106.3	106.2	420.3	404.7
10/05/1999 8:51	101.8	0.0	97.1	101.9	101.9	402.8	406.3
10/05/1999 8:52	105.1	0.0	100.4	105.1	105.1	415.8	406.6
10/05/1999 8:53	102.4	0.0	97.5	102.7	102.5	405.1	407.6
10/05/1999 8:54	102.2	0.0	97.4	101.9	102.2	403.7	406.8
10/05/1999 8:55	106.0	0.0	101.3	106.4	106.0	419.7	406.5
10/05/1999 8:56	101.8	0.0	97.3	101.7	101.9	402.8	406.7
10/05/1999 8:57	103.9	0.0	99.4	104.0	103.9	411.3	405.9
10/05/1999 8:58	104.3	0.0	99.9	104.3	104.3	412.9	405.3
10/05/1999 8:59	107.3	0.0	102.6	107.5	107.4	424.8	405.1
10/05/1999 9:00	103.0	0.0	98.2	103.0	103.1	407.3	405.9
10/05/1999 9:01	104.1	0.0	99.2	104.0	104.0	411.4	405.7
10/05/1999 9:02	106.4	0.0	101.7	106.8	106.4	421.4	406.0
10/05/1999 9:03	102.0	0.0	97.4	102.1	102.3	403.8	406.1
10/05/1999 9:04	106.0	0.0	101.2	106.1	106.0	419.4	406.1
10/05/1999 9:05	99.7	0.0	95.0	99.4	99.8	394.0	407.4
10/05/1999 9:06	107.4	0.0	102.6	107.3	107.2	424.5	406.5
10/05/1999 9:07	104.2	0.0	99.6	104.4	104.2	412.5	407.9
10/05/1999 9:08	105.1	0.0	100.2	104.9	104.9	415.2	407.8
10/05/1999 9:09	104.5	0.0	99.5	104.6	104.4	413.0	409.3
10/05/1999 9:10	103.8	0.0	99.0	103.6	103.7	410.1	409.6
10/05/1999 9:11	105.2	0.0	100.6	105.3	105.2	416.4	409.2
10/05/1999 9:12	104.3	0.0	99.5	104.3	104.3	412.5	409.8
10/05/1999 9:13	104.7	0.0	99.5	104.6	104.5	413.4	410.1
10/05/1999 9:14	105.2	0.0	100.4	105.2	105.2	416.0	409.3

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/05/1999 9:15	101.3	0.0	96.5	101.2	101.2	400.2	410.7
10/05/1999 9:16	104.4	0.0	99.6	104.4	104.3	412.7	409.9
10/05/1999 9:17	103.0	0.0	98.0	103.0	103.2	407.1	410.2
10/05/1999 9:18	105.6	0.0	101.0	105.4	105.5	417.5	409.3
10/05/1999 9:19	105.1	0.0	100.4	105.3	105.2	416.1	409.6
10/05/1999 9:20	102.4	0.0	98.0	102.5	102.5	405.5	410.0
10/05/1999 9:21	103.9	0.0	99.2	103.9	103.7	410.7	410.8
10/05/1999 9:22	107.3	0.0	102.6	107.4	107.2	424.6	409.4
10/05/1999 9:23	105.9	0.0	101.2	106.0	106.0	419.1	409.3
10/05/1999 9:24	107.3	0.0	102.7	107.4	107.3	424.7	409.0
10/05/1999 9:25	106.0	0.0	101.4	106.2	106.2	419.8	409.6
10/05/1999 9:26	101.0	0.0	96.3	101.0	101.2	399.5	411.6
10/05/1999 9:27	104.8	0.0	100.0	104.7	104.7	414.3	410.7
10/05/1999 9:28	105.5	0.0	100.9	105.5	105.5	417.5	410.4
10/05/1999 9:29	105.7	0.0	101.4	106.0	105.9	419.0	409.7
10/05/1999 9:30	104.6	0.0	99.8	104.7	104.6	413.7	410.6
10/05/1999 9:31	103.8	0.0	99.2	103.8	103.8	410.6	411.1
10/05/1999 9:32	104.3	0.0	99.6	104.6	104.4	412.8	410.9
10/05/1999 9:33	105.7	0.0	100.8	105.7	105.7	418.0	410.0
10/05/1999 9:34	105.6	0.0	100.6	105.4	105.5	417.1	410.0
10/05/1999 9:35	105.9	0.0	101.0	105.7	105.8	418.6	409.3
10/05/1999 9:36	104.6	0.0	99.7	104.7	104.4	413.3	410.9
10/05/1999 9:37	102.4	0.0	97.6	102.3	102.4	404.8	411.8
10/05/1999 9:38	106.8	0.0	101.9	106.8	106.7	422.2	410.5
10/05/1999 9:39	102.9	0.0	98.0	102.8	102.9	406.7	412.0
10/05/1999 9:40	105.6	0.0	101.0	105.2	105.5	417.3	410.4
10/05/1999 9:41	104.1	0.0	99.6	104.4	104.1	412.3	411.8
10/05/1999 9:42	102.4	0.0	96.9	101.9	102.2	403.4	411.7
10/05/1999 9:43	105.5	0.0	100.5	105.5	105.3	416.9	411.3
10/05/1999 9:44	101.4	0.0	96.5	101.2	101.3	400.5	412.6
10/05/1999 9:45	106.9	0.0	101.9	106.7	106.6	422.1	410.2
10/05/1999 9:46	106.0	0.0	101.0	106.0	106.0	419.1	410.7
10/05/1999 9:47	105.8	0.0	101.1	105.6	105.8	418.3	409.3
10/05/1999 9:48	105.3	0.0	100.4	105.5	105.4	416.6	410.9
10/05/1999 9:49	103.2	0.0	98.4	103.2	103.4	408.2	411.3
10/05/1999 9:50	103.8	0.0	99.0	103.8	104.0	410.6	410.3
10/05/1999 9:51	103.0	0.0	98.2	103.0	103.0	407.3	412.0
10/05/1999 9:52	102.3	0.0	97.6	102.4	102.5	404.9	412.2
10/05/1999 9:53	103.4	0.0	98.9	103.4	103.4	409.2	411.5
10/05/1999 9:54	103.5	0.0	99.2	103.6	103.6	410.0	410.7
10/05/1999 9:55	105.9	0.0	101.2	106.1	105.9	419.1	410.5
10/05/1999 9:56	104.1	0.0	99.3	104.1	104.3	411.8	410.5
10/05/1999 9:57	104.1	0.0	99.4	104.1	104.3	411.9	410.6
10/05/1999 9:58	103.9	0.0	99.2	104.0	103.9	411.0	410.9
10/05/1999 9:59	101.6	0.0	96.7	101.5	101.7	401.6	411.2

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/05/1999 10:00	102.5	0.0	97.8	102.4	102.5	405.3	411.5
10/05/1999 10:01	102.9	0.0	98.2	103.0	102.9	407.0	411.8
10/05/1999 10:02	105.3	0.0	100.6	105.4	105.2	416.6	410.3
10/05/1999 10:03	104.1	0.0	99.2	104.2	104.2	411.7	410.9
10/05/1999 10:04	101.6	0.0	96.7	101.4	101.6	401.3	411.3
10/05/1999 10:05	104.1	0.0	99.4	104.3	104.1	411.9	410.9
10/05/1999 10:06	102.4	0.0	97.5	102.2	102.4	404.6	410.6
10/05/1999 10:07	106.5	0.0	101.7	106.4	106.3	421.0	409.5
10/05/1999 10:08	103.9	0.0	99.2	104.1	104.0	411.4	409.9
10/05/1999 10:09	101.6	0.0	96.8	101.4	101.8	401.7	410.5
10/05/1999 10:10	106.0	0.0	101.2	106.1	106.0	419.5	409.0
10/05/1999 10:11	103.0	0.0	97.9	102.9	103.0	406.8	410.9
10/05/1999 10:12	103.3	0.0	98.7	103.1	103.3	408.4	409.6
10/05/1999 10:13	103.9	0.0	99.1	103.6	103.8	410.4	410.2
10/05/1999 10:14	104.4	0.0	98.8	104.4	104.4	412.1	410.2
10/05/1999 10:15	103.5	0.0	98.8	103.5	103.5	409.4	410.3
10/05/1999 10:16	103.3	0.0	98.8	103.2	103.2	408.6	410.3
10/05/1999 10:17	104.3	0.0	99.5	104.2	104.2	412.2	409.8
10/05/1999 10:18	105.5	0.0	100.6	105.4	105.5	417.0	409.4
10/05/1999 10:19	105.7	0.0	100.7	105.8	105.7	418.0	409.6
10/05/1999 10:20	104.1	0.0	99.2	104.0	104.0	411.3	409.4
10/05/1999 10:21	101.9	0.0	97.1	101.7	101.9	402.6	410.7
10/05/1999 10:22	102.4	0.0	97.6	102.1	102.4	404.6	410.9
10/05/1999 10:23	104.7	0.0	99.9	104.8	104.7	414.1	409.5
10/05/1999 10:24	104.0	0.0	99.3	103.8	104.0	411.2	409.5
10/05/1999 10:25	106.6	0.0	101.2	106.9	106.5	421.2	409.3
10/05/1999 10:26	101.5	0.0	97.0	101.4	101.6	401.6	410.8
10/05/1999 10:27	107.0	0.0	102.3	106.8	106.9	423.0	408.7
10/05/1999 10:28	103.7	0.0	98.8	103.7	103.8	410.0	410.6
10/05/1999 10:29	101.3	0.0	96.5	101.4	101.4	400.7	411.1
10/05/1999 10:30	102.2	0.0	97.4	102.2	102.2	404.1	411.1
10/05/1999 10:31	103.5	0.0	98.6	103.5	103.4	409.0	410.3
10/05/1999 10:32	103.1	0.0	98.4	103.3	103.1	407.8	411.2
10/05/1999 10:33	104.3	0.0	99.3	104.1	104.1	411.8	409.8
10/05/1999 10:34	105.0	0.0	100.1	104.9	105.0	415.0	409.3
10/05/1999 10:35	103.6	0.0	98.7	103.6	103.6	409.5	410.8
10/05/1999 10:36	104.2	0.0	99.5	104.3	104.4	412.5	410.0
10/05/1999 10:37	108.3	0.0	103.4	108.3	108.2	428.3	408.5
10/05/1999 10:38	104.2	0.0	99.4	104.2	104.2	411.9	410.6
10/05/1999 10:39	99.9	0.0	95.0	99.6	100.0	394.5	411.8
10/05/1999 10:40	105.2	0.0	99.9	105.3	105.2	415.6	410.3
10/05/1999 10:41	104.2	0.0	99.5	104.3	104.2	412.2	410.7
10/05/1999 10:42	102.2	0.0	97.4	102.5	102.3	404.4	411.2
10/05/1999 10:43	101.8	0.0	97.0	102.0	101.8	402.7	411.2
10/05/1999 10:44	108.5	0.0	103.6	108.5	108.4	428.9	409.2

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/05/1999 10:45	104.4	0.0	99.5	104.6	104.6	413.1	410.6
10/05/1999 10:46	100.3	0.0	95.5	100.4	100.5	396.8	411.6
10/05/1999 10:47	102.7	0.0	97.9	102.6	102.6	405.9	410.6
10/05/1999 10:48	105.0	0.0	100.1	105.0	104.9	414.9	410.2
10/05/1999 10:49	107.0	0.0	102.4	107.2	107.1	423.7	409.5
10/05/1999 10:50	100.2	0.0	95.2	100.2	100.5	396.2	412.7
10/05/1999 10:51	103.7	0.0	99.0	103.4	103.5	409.6	410.2
10/05/1999 10:52	107.4	0.0	102.5	107.6	107.2	424.8	410.3
10/05/1999 10:53	103.2	0.0	98.2	103.4	103.2	408.0	411.0
10/05/1999 10:54	101.9	0.0	97.0	101.8	101.9	402.5	411.8
10/05/1999 10:55	105.7	0.0	101.1	106.0	105.7	418.5	409.6
10/05/1999 10:56	107.4	0.0	102.6	107.6	107.4	425.0	408.9
10/05/1999 10:57	101.5	0.0	96.6	101.5	101.5	401.1	410.9
10/05/1999 10:58	102.2	0.0	97.3	102.0	102.1	403.6	411.5
10/05/1999 10:59	107.3	0.0	102.4	107.1	107.0	423.9	409.0
10/05/1999 11:00	109.4	0.0	104.4	109.4	109.2	432.4	408.2
10/05/1999 11:01	103.5	0.0	98.6	103.5	103.5	409.1	410.1
10/05/1999 11:02	101.8	0.0	96.8	101.3	101.5	401.3	410.6
10/05/1999 11:03	106.6	0.0	101.7	106.5	106.5	421.4	409.2
10/05/1999 11:04	106.4	0.0	101.5	106.4	106.4	420.8	409.3
10/05/1999 11:05	102.9	0.0	98.0	103.0	102.8	406.7	410.4
10/05/1999 11:06	101.8	0.0	96.5	101.5	101.5	401.4	411.1
10/05/1999 11:07	106.6	0.0	101.7	106.5	106.4	421.3	409.0
10/05/1999 11:08	106.1	0.0	101.1	106.4	106.0	419.7	409.6
10/05/1999 11:09	100.1	0.0	95.1	99.6	100.0	394.9	411.5
10/05/1999 11:10	103.7	0.0	99.0	103.5	103.5	409.6	410.6
10/05/1999 11:11	106.9	0.0	102.0	106.9	106.8	422.6	409.9
10/05/1999 11:12	106.5	0.0	101.4	106.4	106.5	420.8	409.3
10/05/1999 11:13	102.2	0.0	97.3	102.3	102.2	404.0	410.4
10/05/1999 11:14	103.9	0.0	99.1	103.6	103.8	410.5	410.0
10/05/1999 11:15	108.2	0.0	103.3	108.1	108.1	427.7	408.1
10/05/1999 11:16	105.4	0.0	100.7	105.6	105.5	417.3	409.4
10/05/1999 11:17	101.7	0.0	96.6	101.5	101.7	401.6	411.2
10/05/1999 11:18	108.1	0.0	103.3	108.1	107.9	427.4	409.4
10/05/1999 11:19	107.2	0.0	102.1	107.4	107.4	424.0	408.2
10/05/1999 11:20	107.0	0.0	102.4	107.0	107.1	423.6	408.6
10/05/1999 11:21	105.9	0.0	101.1	106.0	105.9	418.8	408.9
10/05/1999 11:22	106.0	0.0	101.1	106.0	106.1	419.3	409.0
10/05/1999 11:23	104.1	0.0	99.2	104.2	104.1	411.6	410.5
10/05/1999 11:24	101.8	0.0	97.0	101.7	101.9	402.3	411.2
10/05/1999 11:25	105.1	0.0	100.4	105.1	105.1	415.7	410.1
10/05/1999 11:26	107.1	0.0	102.5	107.5	107.2	424.4	409.7
10/05/1999 11:27	104.5	0.0	99.8	104.6	104.7	413.6	409.7
10/05/1999 11:28	105.0	0.0	100.3	105.1	105.1	415.6	409.7
10/05/1999 11:29	106.3	0.0	101.4	106.5	106.4	420.5	408.7

Craig 3 Turbine/Coal Flow Data							
	A Coal Feeder Flow	B Coal Feeder Flow	C Coal Feeder Flow	D Coal Feeder Flow	E Coal Feeder Flow	Total Coal Flow, klb/hr	Net Generation
10/05/1999 11:30	106.3	0.0	101.4	106.2	106.3	420.2	410.4
10/05/1999 11:31	104.1	0.0	99.3	104.1	104.2	411.8	411.7
10/05/1999 11:32	102.4	0.0	97.5	102.3	102.3	404.6	411.5
10/05/1999 11:33	107.0	0.0	102.4	106.7	106.9	423.0	409.7
10/05/1999 11:34	107.3	0.0	102.7	107.2	107.2	424.3	409.7
10/05/1999 11:35	102.9	0.0	98.0	102.8	102.9	406.8	411.0
10/05/1999 11:36	99.7	0.0	94.6	99.4	99.6	393.3	412.8
10/05/1999 11:37	106.0	0.0	101.3	105.8	105.8	419.0	410.8
10/05/1999 11:38	106.5	0.0	101.5	106.6	106.4	421.1	409.6
10/05/1999 11:39	105.6	0.0	100.5	105.5	105.4	417.0	409.6
10/05/1999 11:40	105.2	0.0	100.2	105.2	105.1	415.6	409.9
10/05/1999 11:41	103.7	0.0	98.7	103.6	103.7	409.7	410.7
10/05/1999 11:42	103.7	0.0	98.6	103.5	103.5	409.3	411.1
Test 3 Average	***104.2***	***0.0***	***99.4***	***104.2***	***104.2***	***411.9***	***409.7***

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Craig Unit 3 UNIT 3 TEST NO FB-Inlet-Hg METHOD OH PAGE 1 OF 1
SAMPLE LOCATION Inlet TEST CONDITION Field Blank AMBIENT TEMPERATURE
OPERATOR/ASSISTANT METER VOLUME START/END / DATE 10-7-99

PRE-TEST DATA:	EQUIPMENT INFO:
Barometric Pressure, In.Hg	Meter No. #1 FERC
Assumed Stack Pressure, iwg	Meter Yd 1.001
Assumed Moisture, %	ΔH @ 2.000
Assumed Molecular Weight	Pitot ID, Cp 131.84
Assumed Stack Temperature	O_2/CO_2 Method
Assumed Meter Temperature	Teflon connecting line? (Y/N) Y
Average ΔP	Probe material Teflon
Stack diameter/area	Probe length 10'
Sample time, min/point	Nozzle material Glass
ΔH = _____ x ΔP	Nozzle diameter, in. .163
	Filter No. QT-33
	Filter material quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	✓	-	600.3	=	
2	KCl	✓	-	588.8	=	
3	KCl	✓	-	714.2	=	
4	HNO_3/H_2O_2	✓	-	686.9	=	
5	$KMnO_4$	✓	-	615.9	=	
6	$KMnO_4$	✓	-	576.3	=	
7	$KMnO_4$	✓	-	704.4	=	
8	SG	✓	-	879.0	=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.007	11"	OK	✓
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	ΔH	Meter Reading	Meter In/Out
Start				/___
Stop				/___
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft^3	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: in	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
															Impingers Loaded ✓
Start	7:15														Impingers Recovered ✓
End	9:30														Filter Loaded ✓
															Filter Recovered ✓
															Probe Wash (FH) ✓
															TEST AVERAGES/TOTALS
															Calculated by:
															Checked by:
															Δ P, iwg
															Δ H, iwg
															Sample vol, acf
															Stack temp, F
															Meter temp, F
															Static press, iwg
															Water collected, g
															O_2, %
															Sample time, min

FOSSIL ENERGY RESEARCH CORPORATION
Ontario Hydro Mercury Speciation Sampling Data Sheet

FACILITY Crang Unit 3 UNIT 3 TEST NO FB-Inlet-Hg METHOD OH PAGE 1 OF 1
SAMPLE LOCATION Inlet TEST CONDITION Field Blank AMBIENT TEMPERATURE
OPERATOR/ASSISTANT METER VOLUME START/END / DATE 10-7-99

PRE-TEST DATA:

Barometric Pressure, In.Hg	
Assumed Stack Pressure, iwg	
Assumed Moisture, %	
Assumed Molecular Weight	
Assumed Stack Temperature	
Assumed Meter Temperature	
Average ΔP	
Stack diameter/area	
Sample time, min/point	
ΔH = _____ x ΔP	

EQUIPMENT INFO:

Meter No.	#1 FE14C
Meter Yd	1.001
Δ H @	2.000
Pitot ID, Cp	131.84
O_2/CO_2 Method	
Teflon connecting line? (Y/N)	Y
Probe material	Teflon
Probe length	10'
Nozzle material	Glass
Nozzle diameter, in.	.153
Filter No.	QT-33
Filter material	quartz

IMPINGER WEIGHTS:

Imp #	Contents	Wt (end)		Wt (start)		Wt gain
1	KCl	✓	-	600.3	=	
2	KCl	✓	-	588.8	=	
3	KCl	✓	-	714.2	=	
4	HNO_3/H_2O_2	✓	-	686.9	=	
5	$KMnO_4$	✓	-	615.9	=	
6	$KMnO_4$	✓	-	576.3	=	
7	$KMnO_4$	✓	-	704.4	=	
8	SG	✓	-	829.0	=	
					Total	

COMMENTS:

LEAK CHECKS:

	CFM	Vacuum	Pitot	Initial
Pre-test	.007	11"	OK	GJ
Post-test				

PRE-TEST METER CALIBRATION CHECK:

	Time	Δ H	Meter Reading	Meter In/Out
Start				/
Stop				/
Avg/total				

SAMPLE POINT	TIME (clock)	METER VOLUME ft^3	ΔP iwg	ΔH iwg	TEMPERATURES, F: STACK	PROBE	FILTER	METER: In	METER: out	IMP OUT		O_2	VAC.	STATIC PRESS. iwg	CHAIN OF CUSTODY INFORMATION
															Impingers Loaded ✓
Start	7:15														Impingers Recovered ✓
End	9:30														Filter Loaded ✓
															Filter Recovered ✓
															Probe Wash (Fr) ✓
															TEST AVERAGES/TOTALS
															Calculated by:
															Checked by:
															Δ P, iwg
															Δ H, iwg
															Sample vol, acf
															Stack temp, F
															Meter temp, F
															Static press, iwg
															Water collected, g
															O_2, %
															Sample time, min