3. RAW DATA

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053684	SAMI	MB R456	Mercury -	PV	-0.010	-99999.0	0.094	94.	0.095	95.	99/10/09	2GFL	99/10/09	MG01	25.	17.	
053685	SAMI	Neal Stn U4 Blank	Mercury -	PV	-0.010						99/10/09	2GFL	99/10/09	MG01	25.	17.	
053690	SAMI	Neal Stn U4 Stack-FB	Mercury -	PV	0.029						99/10/09	2GFL	99/10/09	MG01	26.	17.	
053691	SAMI	Neal Stn U4 Stack-R1	Mercury -	PV	0.046						99/10/09	2GFL	99/10/09	MG01	25.	17.	
BL1009	INTERNAL		Mercury -	PV	-0.010	-99999.0	0.094	94.	0.095	95.	99/10/09	2GFL	99/10/09	MG01	$$$	$$$	

5 Tests for OHFLT with an MDL of 0.010 ug Validated By CMS Control Chart Updated N/A IO Requirements met N/A

00014

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053692	SAMI	Neal Stn U4 Stack-R2	Mercury -	PV	0.089						99/10/09	3GFL	99/10/09	MG01	25.	17.	
053693	SAMI	Neal Stn U4 Stack-R3	Mercury -	PV	0.043	0.042	0.138	95.	0.139	96.	99/10/09	3GFL	99/10/09	MG01	25.	17.	*PDS*
BL1009	INTERNAL		Mercury -	PV	-0.010	-99999.0	0.095	95.	0.094	94.	99/10/09	3GFL	99/10/09	MG01	$$$	$$$	

3 Tests for OHFLT with an MDL of 0.010 ug Validated By CMB Control Chart Updated N/A IO Requirements met N/A

00015

LDC AUTOSAMPLER RUN LOG (MERCURY)

(1)

Date: 99.10.09(WA) Run Code: MG01 Matrix: IMP.

Analyst: MG Units: µg (see comments) MDL: 0.01

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12			BL1009	16 FL		
13			"			
14			BL1009 S			
15			"			
16			BL1009 DS			
17			"			
18			53139			
19			"			
20			53139 D			
21			"			
22			53139 S			
23			"			
24			53139 DS			
25			"			
26		1/10	51662			
27		↓	"			
28	"		51663			
29			"			
30			51664			
31			"			
32			CCV			
33			B			
34			D4			
35			53129 a			
36			"			
37			53129 b			
38			"			
39			53129 c			
40			"			

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
41			53130			
42			"			
43			53138			
44			"			
45			53140			
46			"			
47			53141			
48			"			
49			53142			
50			"			
51			BL1009	2G FL		
52			"			
53			BL1009 S			
54			"			
55			CCV			
56			B			
57			D4			
58			BL1009 DS			
59			"			
60			53164			
61			"			
62			53164 D			
63			"			
64			53164 S			
65			"			
66			53164 DS			
67			"			
68			53143 a			
69			"			
70			53143 b			
71			"			
72			53143 c			
73			"			
74			53144			
75			"			
76			53149			
77			"			
78			CCV			
79			B			
80			D4			

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

00017 (2)

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 99.10.09 Run Code: MG01 Matrix: IMP.

Analyst: MG Units: ug (see comments) MDL: 0.01

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12						
13						
14						
15						
16						
17						
18						
19						
20						
21		1/10	53150			
22			"			
23			53151			
24			"			
25			53165			
26			"			
27			53685 a			
28			"			
29			53685 b			
30			"			
31			53685 c			
32			"			
33			53690			
34			"			
35			53691			
36			"			
37			BL1009	3GFL		
38			"			
39			BL1009 S			
40			"			

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
41			CCV			
42			B			
43			D4			
44			BL1009 DS			
45			"			
46			53693			
47			"			
48			53693 D			
49			"			
50			53693 S			
51			"			
52			53693 DS			
53			"			
54			53692			
55			"			
56			47503			
57			"			
58			51449 a			
59			"			
60			51449 b			
61			"			
62			51449 c			
63			"			
64			CCV			
65			B			
66			D4			
67			51450			
68			" 51459 "			
69		1/10	51460			
70			"			
71			51461			
72			"			
73			42246 a			
74			"			
75			42246 b			
76			"			
77			42246 c			
78			"			
79			42265			
80			"			

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

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CHART SPEED: 30
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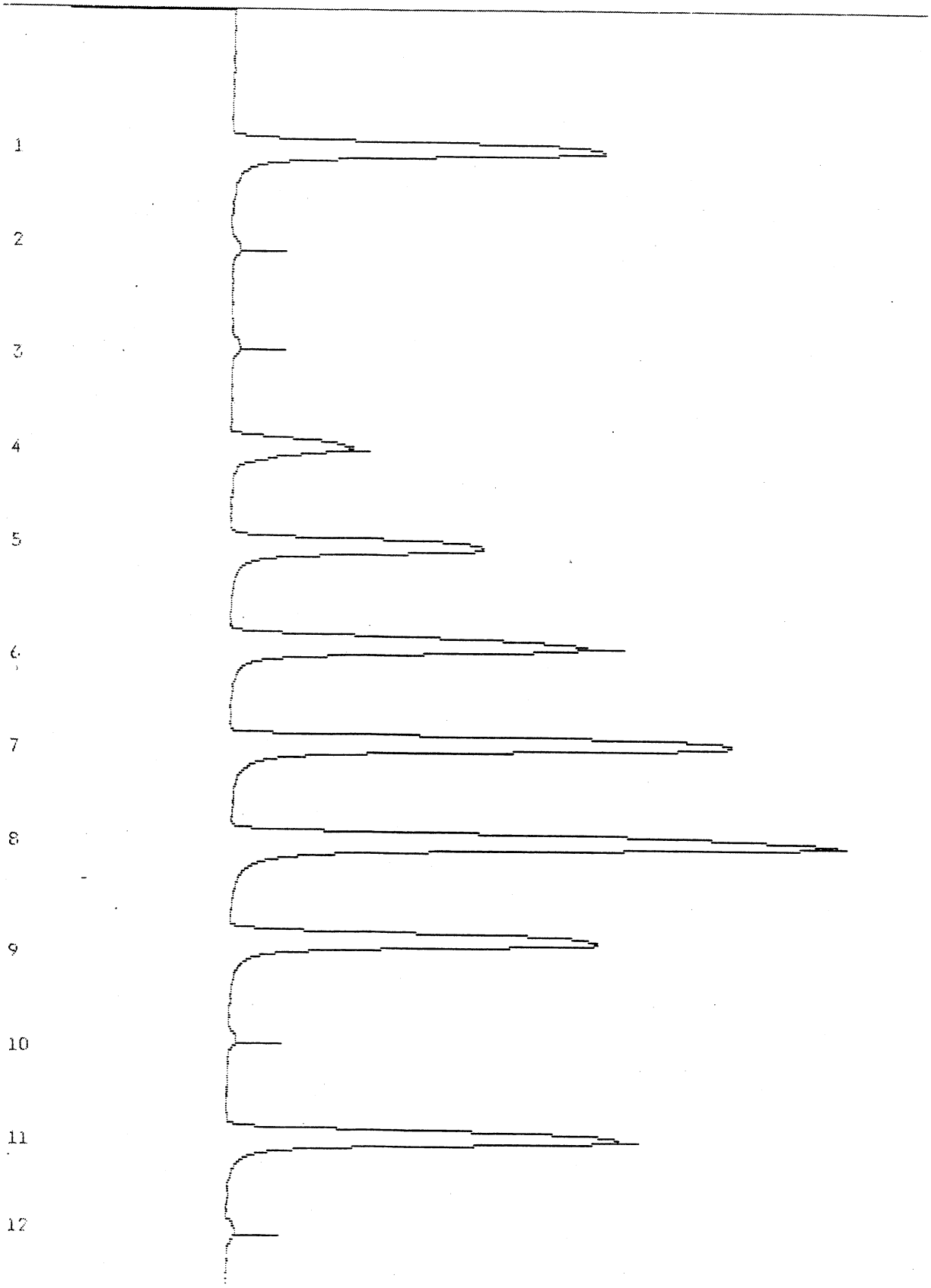

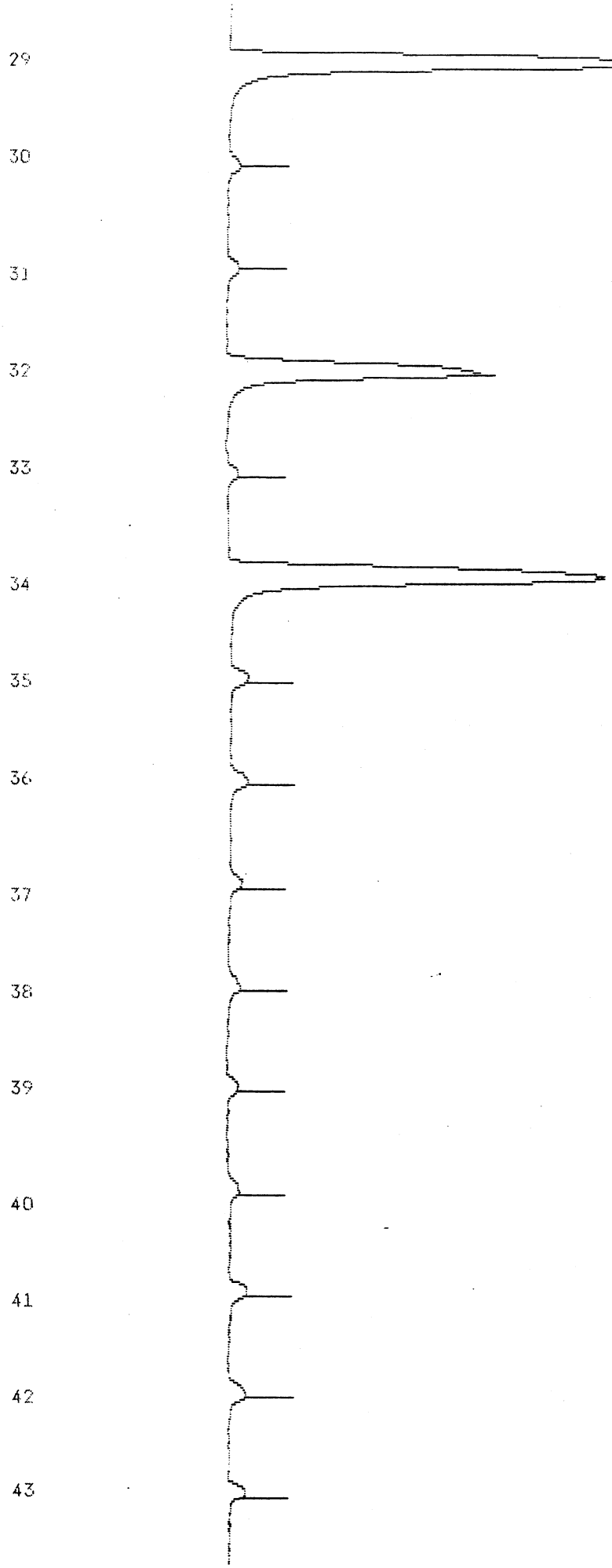
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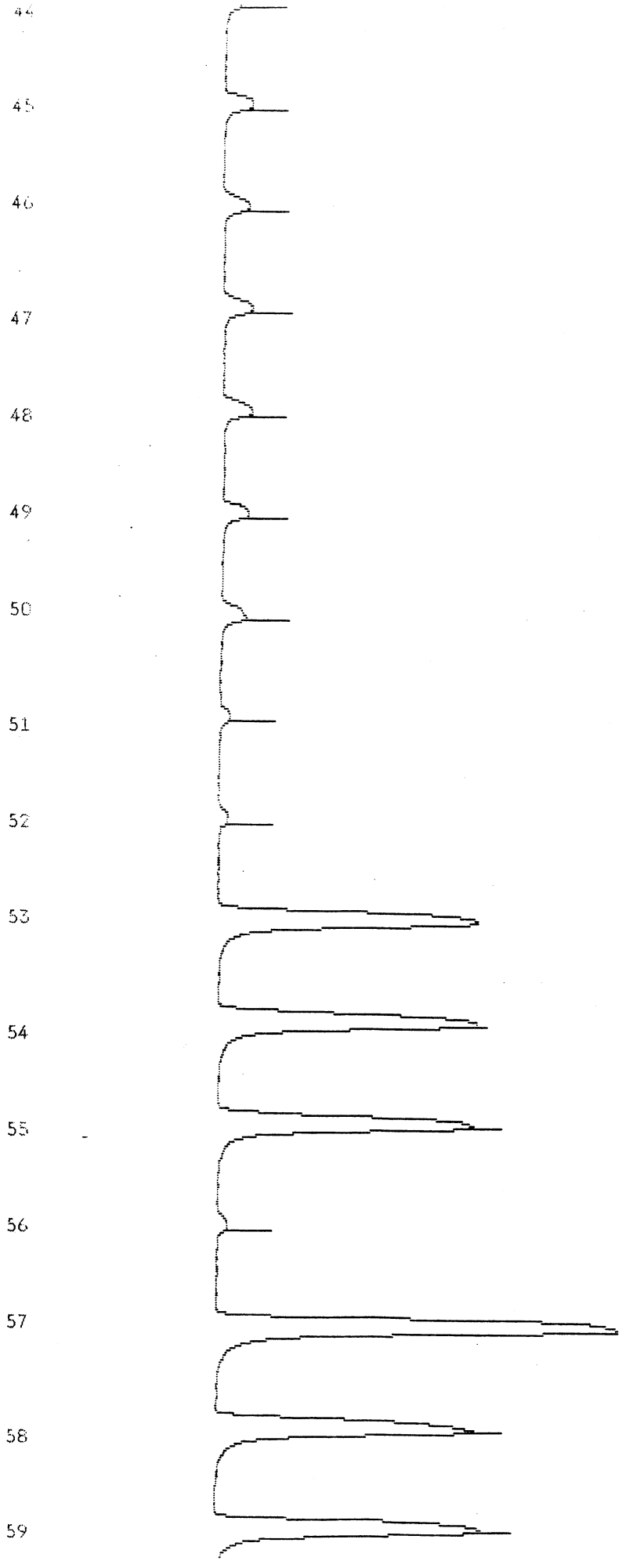
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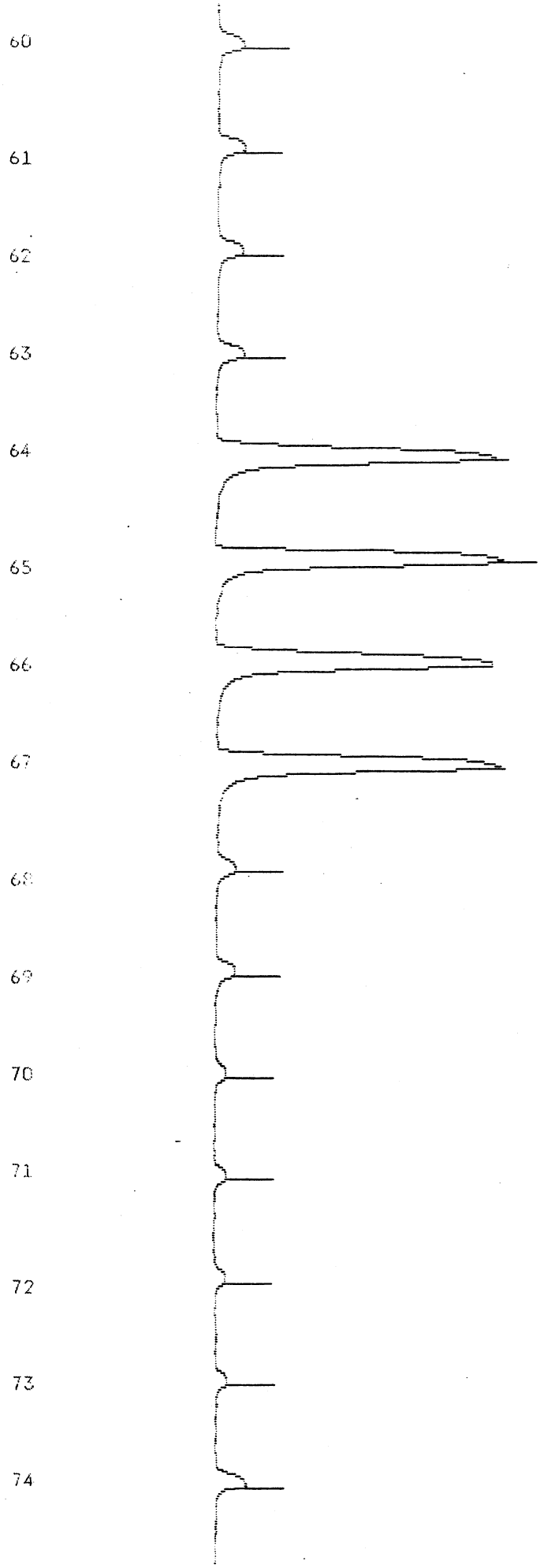
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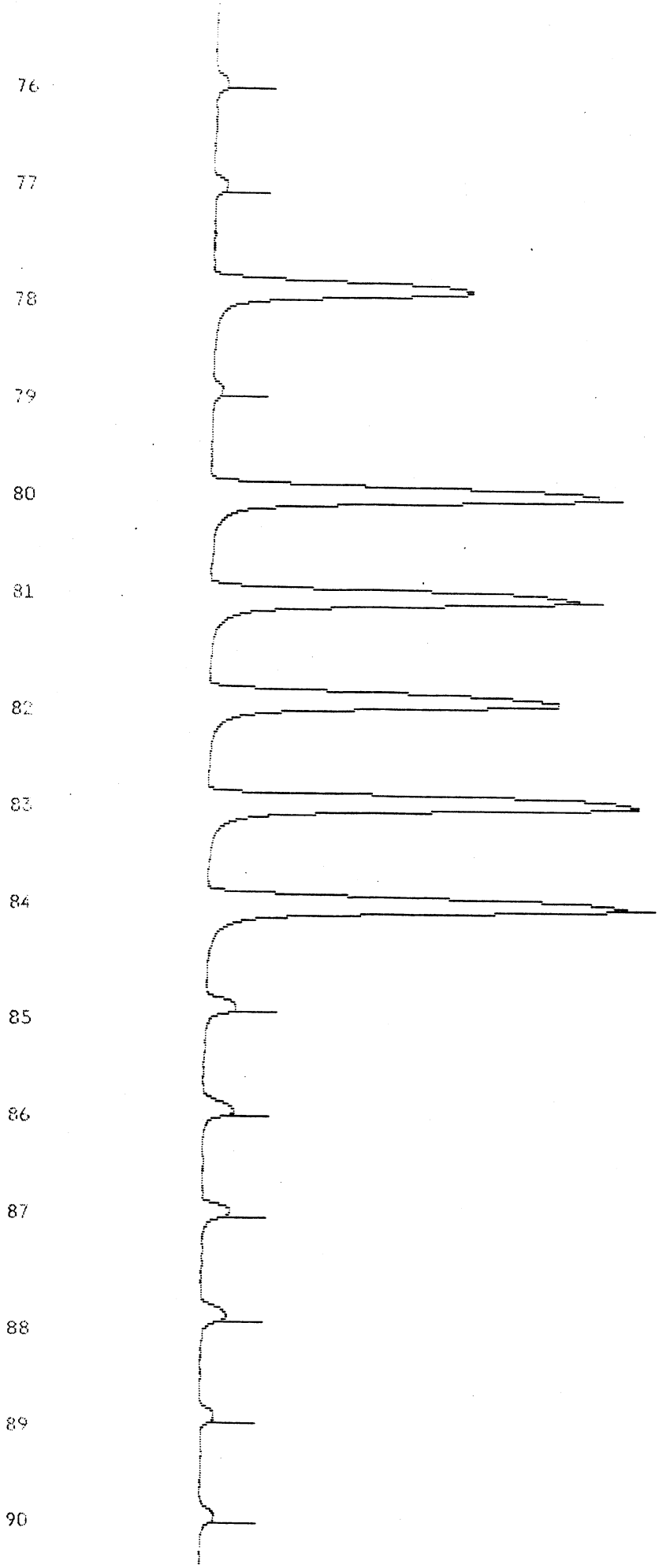
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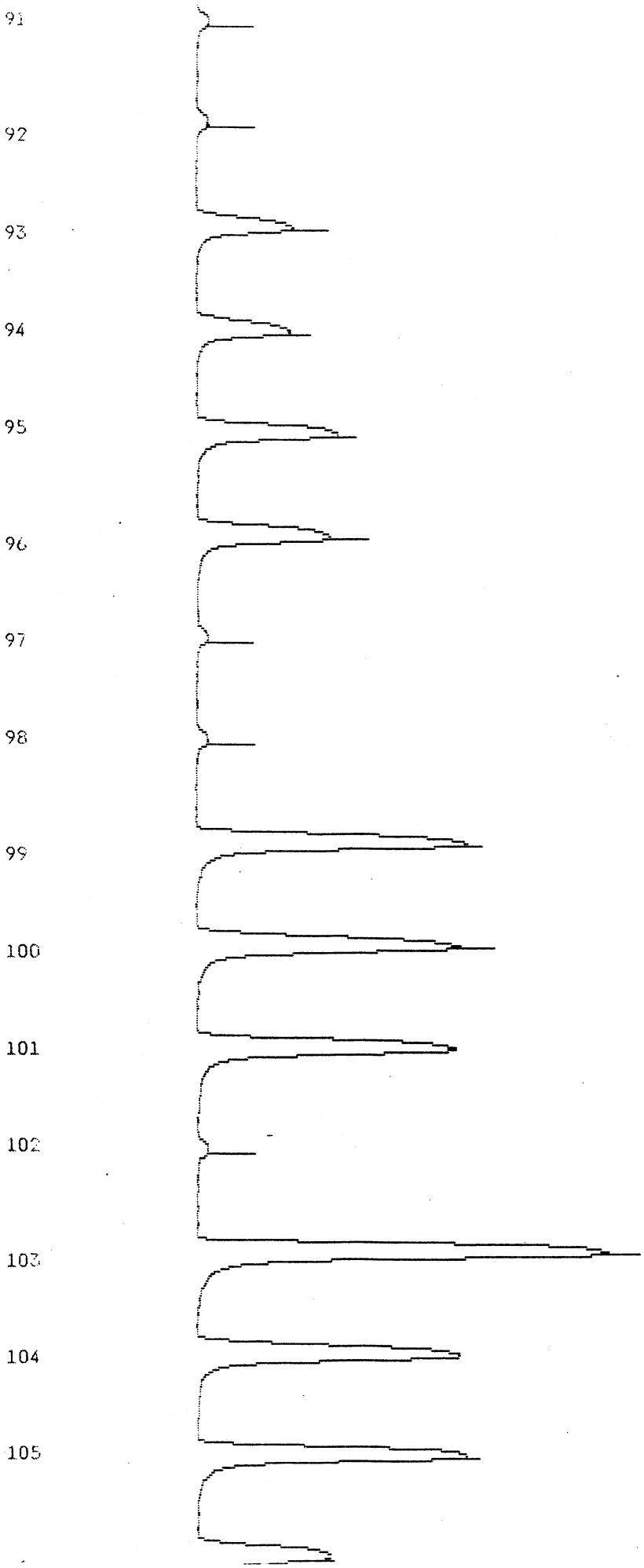
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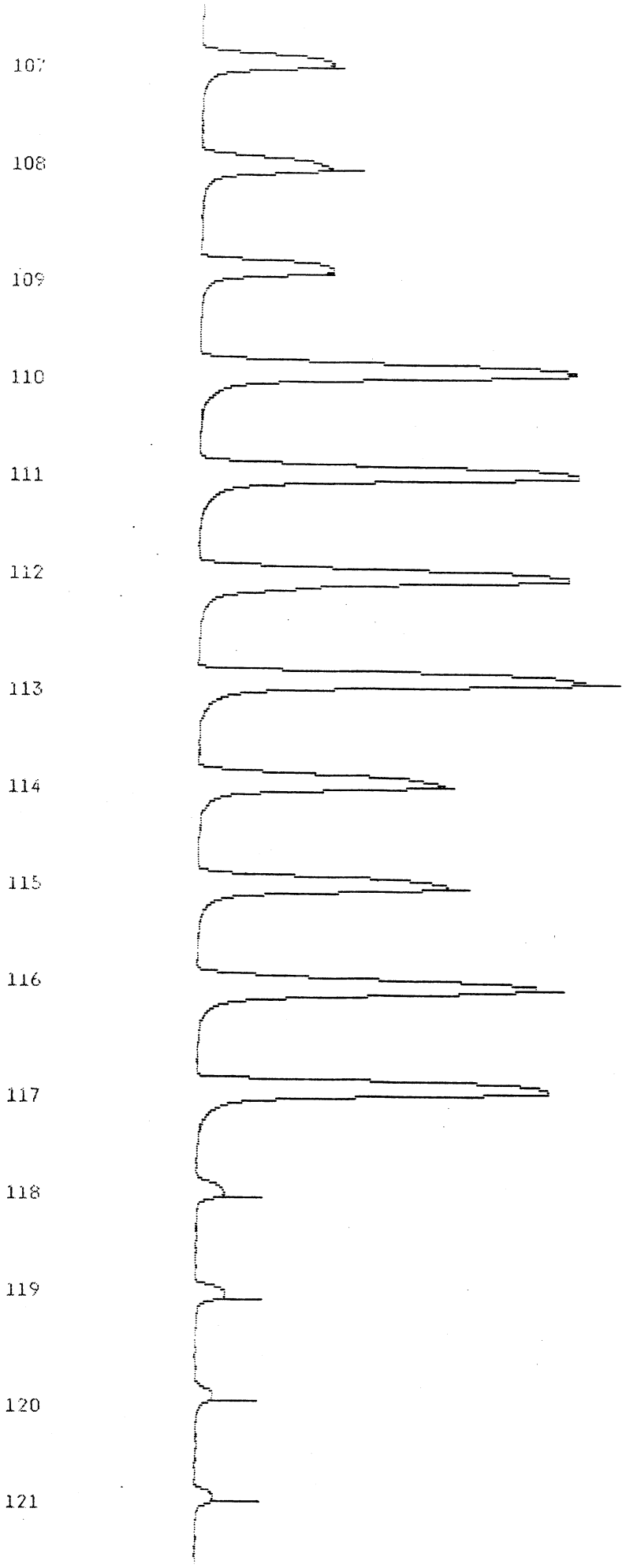
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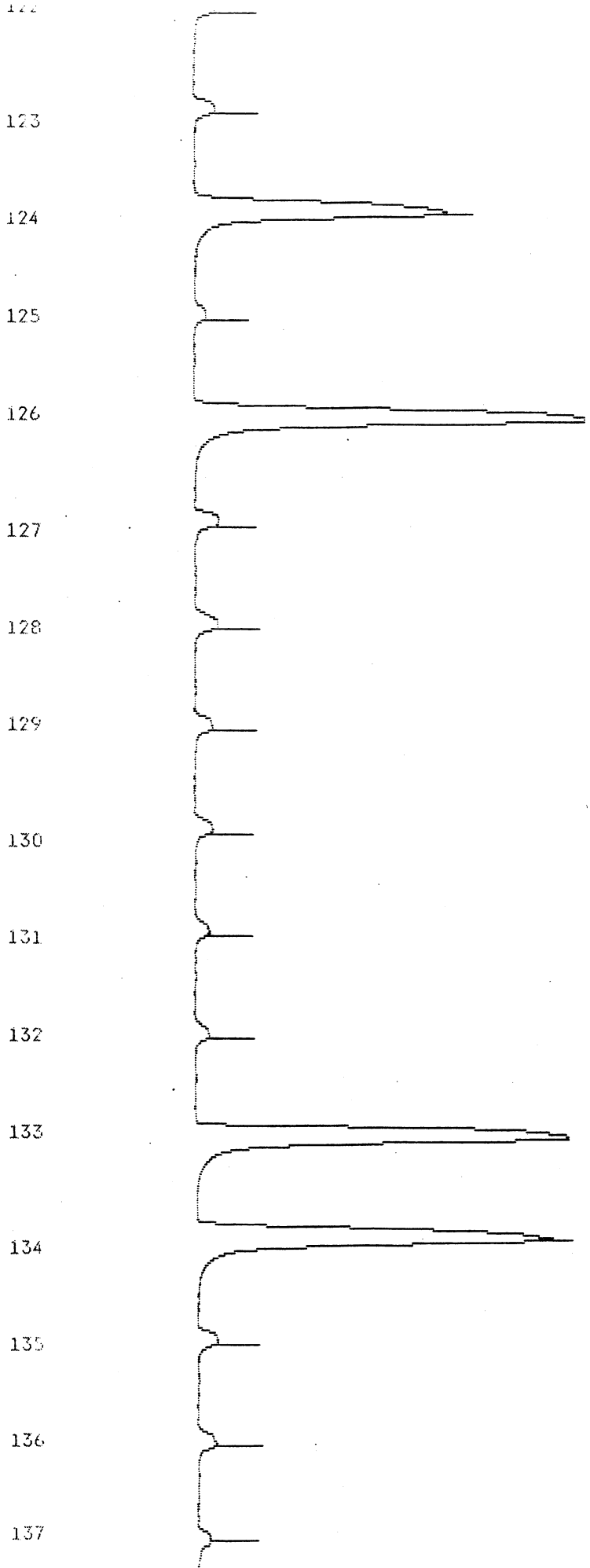
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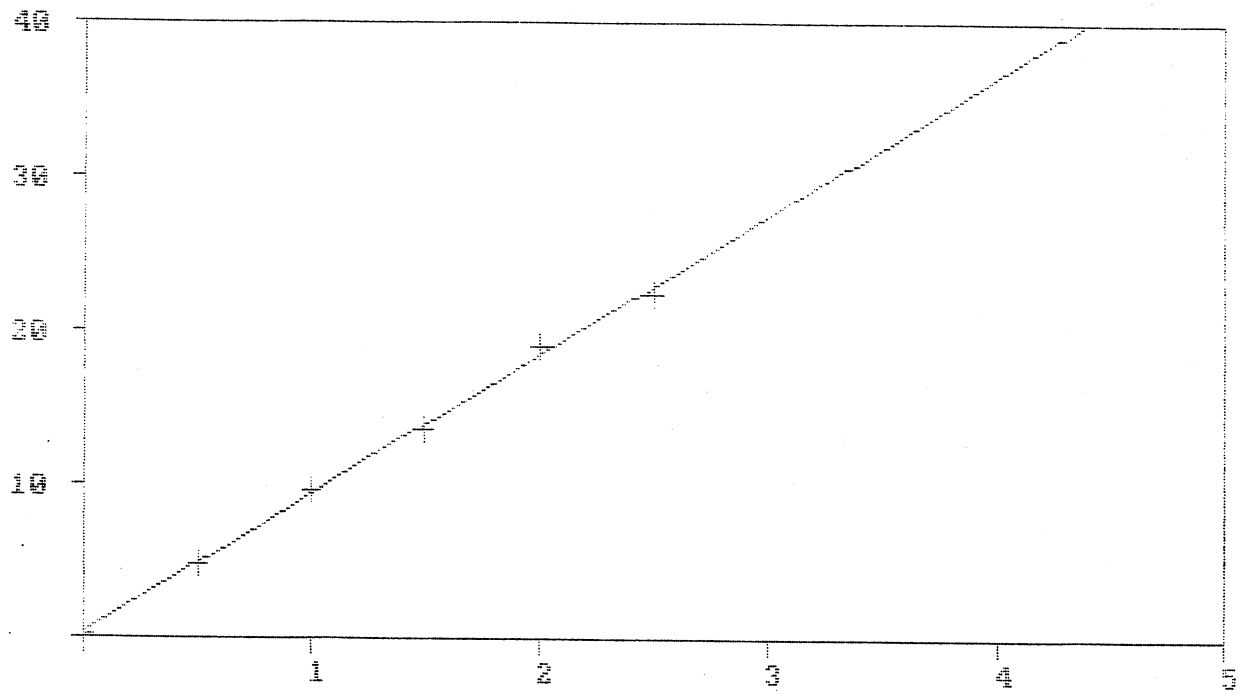
00026

CHANNEL NAME: LDC
RUN NAME: 991009WA



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INTERCEPT = 0.33

CALIBRATION ORDER: 1
SLOPE = 9.024245

CORRELATION: .9991148

CHANNEL NAME: LDC
RUN DATE: 10-09-1999
SAMPLE TABLE NAME: 991009WA
METHOD NAME: HGWATER

ppb

CUP#	SAMPLE ID	DIL	WGT	HEIGHT/AREA		CONCENTRATION	EF
1	PRIMER	1	1	14.5		1.571	s
2	DUMMY	1	1	0.2		-0.015	I
3	S1: 0	1	1	0.2		-0.015	I
4	S2: .5	1	1	4.7		0.486	
5	S3: 1	1	1	9.7		1.038	
6	S4: 1.5	1	1	13.7		1.481	
7	S5: 2	1	1	18.9		2.058	
8	S6: 2.5	1	1	22.5		2.453	
9	ICV	1	1	13.4	TUG	1.446	96%
10	8	1	1	0.0		-0.037	b
11	04	1	1	13.7		1.481	d
12	BL1009-1GFL 53128	1	1	0.0	<0.01	-0.037	I
13	BL1009-1GFL	1	1	0.0		-0.037	I
14	BL1009S	1	1	8.8	0.095	0.935	95%
15	BL1009S	1	1	9.0		0.956	
16	BL1009DS	1	1	8.8	0.095	0.940	98%
17	BL1009DS	1	1	8.9		0.954	
18	53139	1	1	0.5	<0.01	0.020	I
19	53139	1	1	0.6		0.026	I
20	53139D	1	1	0.5	<0.01	0.015	
21	53139D	1	1	0.4		0.012	
22	53139S	1	1	9.6	0.104	1.024	102%
23	53139S	1	1	9.8		1.054	
24	53139DS	1	1	9.7	0.103	1.038	101%

26	51662	10	1	14.3	1.545	15.382	
27	51662	10	1	14.3	00027	15.517	
28	51663	10	1	13.4	1.532	14.489	
29	51663	10	1	14.9		16.140	
30	51664	1	1	0.0	<0.01	-0.034	I
31	51664	1	1	0.0		-0.034	s
32	CCV	1	1	9.3		0.989	99%
33	B	1	1	0.0		-0.037	b
34	D4	1	1	13.7		1.481	d
35	53129 A	1	1	0.2	<0.01	-0.015	I
36	53129 A	1	1	0.2		-0.010	I
37	53129 B	1	1	0.0	<0.01	-0.034	I
38	53129 B	1	1	0.1		-0.026	I
39	53129 C	1	1	0.0	<0.01	-0.031	I
40	53129 C	1	1	0.0		-0.037	I
41	53130	1	1	0.2	<0.01	-0.010	I
42	53130	1	1	0.2		-0.012	I
43	53138	1	1	0.2	<0.01	-0.015	I
44	53138	1	1	0.2		-0.018	I
45	53140	1	1	0.7	<0.01	0.039	
46	53140	1	1	0.6		0.028	s
47	53141	1	1	0.7	<0.01	0.039	
48	53141	1	1	0.6		0.034	
49	53142	1	1	0.5	<0.01	0.023	
50	53142	1	1	0.5		0.020	I
51	BL1009-2GFL 53684	1	1	0.0	<0.01	-0.037	I
52	BL1009-2GFL	1	1	0.0		-0.037	I
53	BL1009S	1	1	8.9	0.094	0.948	94%
54	BL1009S	1	1	8.8		0.935	
55	CCV	1	1	8.6		0.921	92%
56	B	1	1	0.0		-0.037	b
57	D4	1	1	13.7		1.481	d
58	BL1009DS	1	1	8.8	0.095	0.937	95%
59	BL1009DS	1	1	8.9		0.954	
60	53164	1	1	0.6	<0.01	0.028	I
61	53164	1	1	0.6		0.034	s
62	53164D	1	1	0.5	<0.01	0.020	
63	53164D	1	1	0.6		0.031	
64	53164S	1	1	9.5	0.103	1.013	100%
65	53164S	1	1	9.8		1.046	
66	53164DS	1	1	9.5	0.103	1.016	100%
67	53164DS	1	1	9.7		1.038	
68	53143 A	1	1	0.3	<0.01	0.001	I
69	53143 A	1	1	0.3		-0.002	I
70	53143 B	1	1	0.0	<0.01	-0.031	I
71	53143 B	1	1	0.1		-0.026	I
72	53143 C	1	1	0.0	<0.01	-0.031	I
73	53143 C	1	1	0.0		-0.031	I
74	53144	1	1	0.7	<0.01	0.044	
75	53144	1	1	0.7		0.042	
76	53149	1	1	0.1	<0.01	-0.026	s
77	53149	1	1	0.1		-0.023	I
78	CCV	1	1	9.1		0.970	97%
79	B	1	1	0.0		-0.037	b
80	D4	1	1	13.7		1.481	d
81	53150	10	1	13.1	1.370	14.110	
82	53150	10	1	12.3		13.298	
83	53151	10	1	15.1	1.613	16.410	
84	53151	10	1	14.6		15.842	
85	53165	1	1	0.7	<0.01	0.042	
86	53165	1	1	0.7		0.042	I
87	53685 A	1	1	0.6	<0.01	0.031	
88	53685 A	1	1	0.6		0.028	
89	53685 B	1	1	0.1	<0.01	-0.023	I
90	53685 B	1	1	0.2		-0.018	I

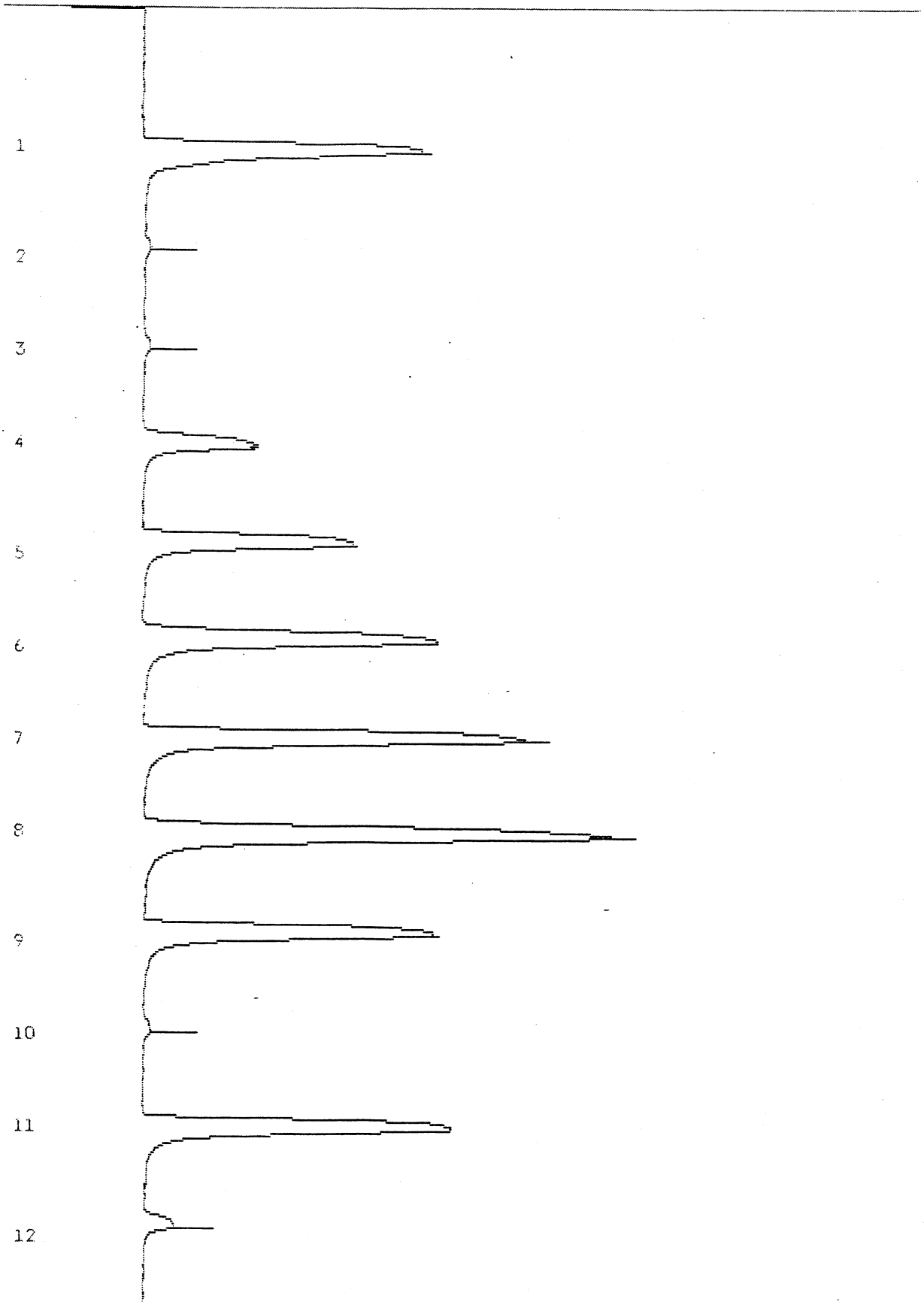
92	53685 C	1	1	0.0		-0.031	I
93	53690	1	1	3.0	0.0928	0.299	
94	53690	1	1	2.9		0.288	
95	53691	1	1	4.6	0.0460	0.472	
96	53691	1	1	4.3		0.440	
97	BL1009-3GFL 42245,	1	1	0.0	<0.01	-0.031	I
98	BL1009-3GFL 51448,	1	1	0.0		-0.034	I
99	BL1009S	1	1	9.0	0.095	0.965	95%
100	BL1009S	1	1	8.7		0.929	
101	CCV	1	1	8.5		0.910	91%
102	B	1	1	0.0		-0.037	b
103	D4	1	1	13.7		1.481	d
104	BL1009DS	1	1	8.6	0.094	0.921	93%
105	BL1009DS	1	1	8.9		0.948	
106	53693	1	1	4.2	0.0433	0.431	s
107	53693	1	1	4.2		0.434	
108	53693D	1	1	4.1	0.0424	0.418	
109	53693D	1	1	4.2		0.429	
110	53693S	1	1	12.7	0.138	1.373	95%
111	53693S	1	1	12.9		1.395	
112	53693DS	1	1	12.6	0.139	1.365	96%
113	53693DS	1	1	13.1		1.419	
114	53692	1	1	8.3	0.089	0.881	
115	53692	1	1	8.4		0.900	
116	47503	1	1	11.6	0.128	1.254	
117	47503	1	1	12.1		1.305	
118	51449 A	1	1	0.6	<0.01	0.028	I
119	51449 A	1	1	0.7		0.036	
120	51449 B	1	1	0.2	<0.01	-0.015	I
121	51449 B	1	1	0.3		-0.007	s
122	51449 C	1	1	0.3	<0.01	0.001	I
123	51449 C	1	1	0.4		0.004	
124	CCV	1	1	8.6		0.921	92%
125	B	1	1	0.0		-0.037	b
126	D4	1	1	13.7		1.481	d
127	51450	1	1	0.4	<0.01	0.012	
128	51450	1	1	0.4		0.012	I
129	51459	1	1	0.3	<0.01	-0.007	I
130	51459	1	1	0.2		-0.010	I
131	51460 VOID	10	1	0.1		-0.205	I RERUN ON 1x DIL.
132	51460	10	1	0.1		-0.232	I ON 99/10/11.
133	51461	10	1	12.9	1.358	13.921	
134	51461	10	1	12.3		13.244	
135	42246 A	1	1	0.3	<0.01	0.001	I
136	42246 A	1	1	0.2		-0.012	s
137	42246 B	1	1	0.0	<0.01	-0.037	I
138	42246 B	1	1	0.1		-0.029	I
139	42246 C	1	1	0.3	<0.01	-0.007	R
140	42246 C	1	1	0.2		-0.012	I
141	42265	1	1	0.8	<0.01	0.055	
142	42265	1	1	0.8		0.050	
143	BL1009-4GFL 42724,	1	1	0.0	<0.01	-0.031	I
144	BL1009-4GFL 43188	1	1	0.0		-0.034	I
145	BL1009S	1	1	9.3	0.098	0.992	98%
146	BL1009S	1	1	9.0		0.959	
147	BL1009DS	1	1	9.2	0.097	0.978	97%
148	BL1009DS	1	1	9.1		0.970	
149	CCV	1	1	8.9		0.946	95%
150	B	1	1	0.0		-0.037	b
151	D4	1	1	13.7		1.481	s
152	42266	1	1	3.6	0.037	0.364	
153	42266	1	1	3.7		0.372	
154	42266D	1	1	3.6	0.037	0.361	
155	42266D	1	1	3.7		0.375	
156	42267S	1	1	12.3	1.321	1.322	97%

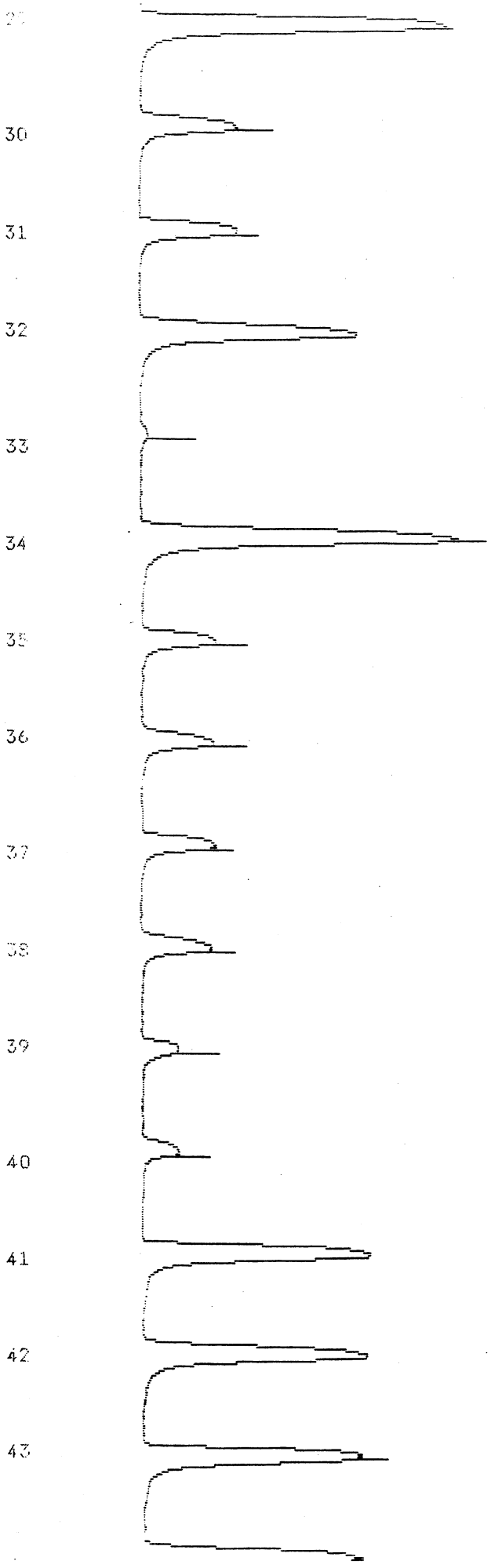
Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053684	SAMI	MB R456	Mercury -	PV	-0.010	-99999.0	0.105	105.	0.100	100.	99/11/17	MGF1	99/11/17	MG01	64.	56.	*BLKIMP*
053685	SAMI	Neal Stn U4 Blank	Mercury -	PV	-0.050						99/11/17	MGF1	99/11/17	MG01	64.	56.	
053687	SAMI	Neal Stn U4 Inlet-R1	Mercury -	PV	0.236	0.235	0.690	91.	0.683	90.	99/11/17	MGF1	99/11/17	MG01	64.	56.	*POST SPIKED*
BL1117	INTERNAL		Mercury -	PV	-0.010	-99999.0	0.105	105.	0.100	100.	99/11/17	MGF1	99/11/17	MG01	$$$	$$$	*BLKIMP*

4 Tests for OHFLTB with an MDL of 0.010 ug Validated By CMB Control Chart Updated N/A IO Requirements met N/A

000029

RUN DATE: 11-17-1999 CHART DATE: 11-17-1999
CHART SPEED: 30
DATA FILE NAME: C:\OP4\DATA\991117W.DAT

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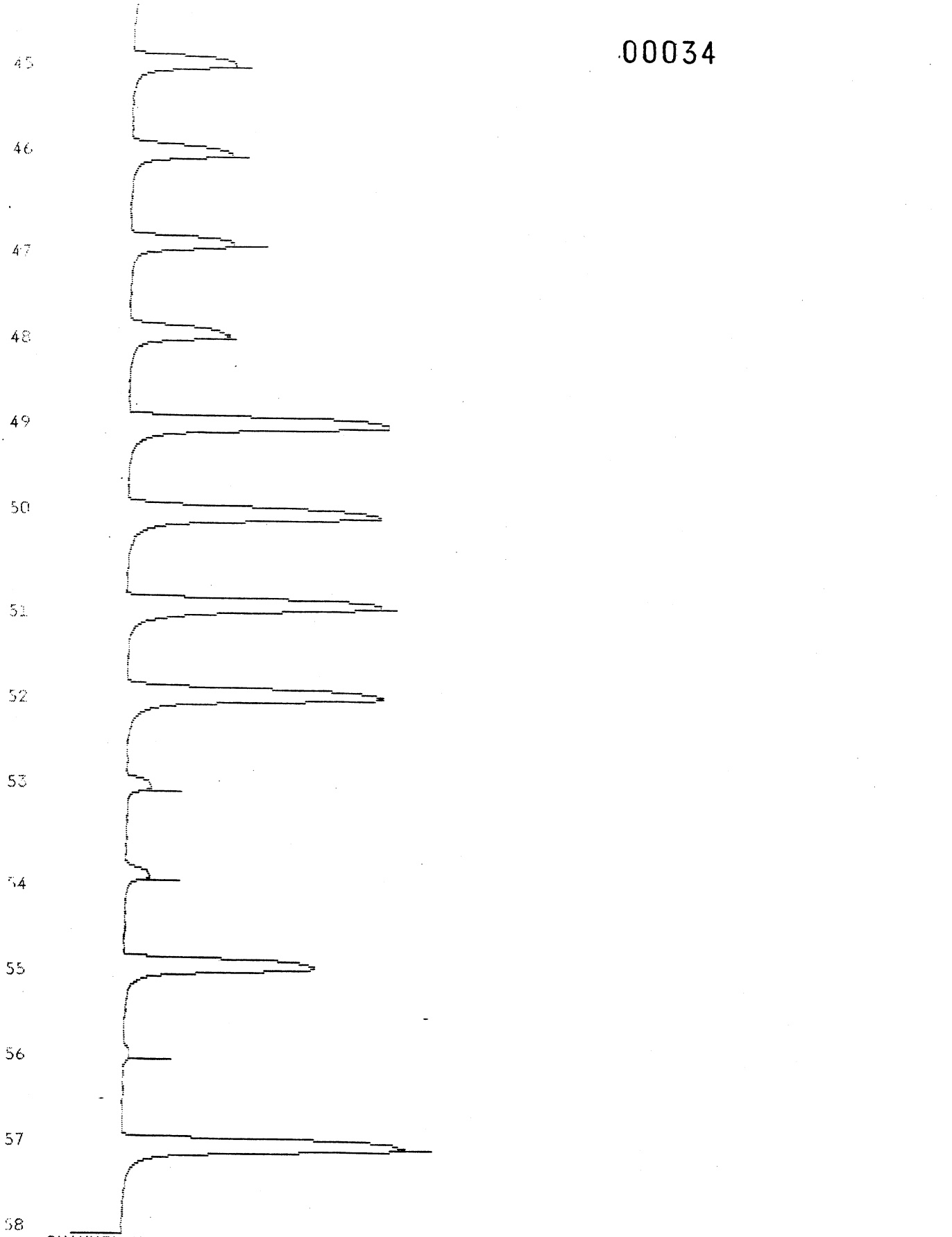
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CHANNEL NAME: LDC
RUN NAME: 991117W
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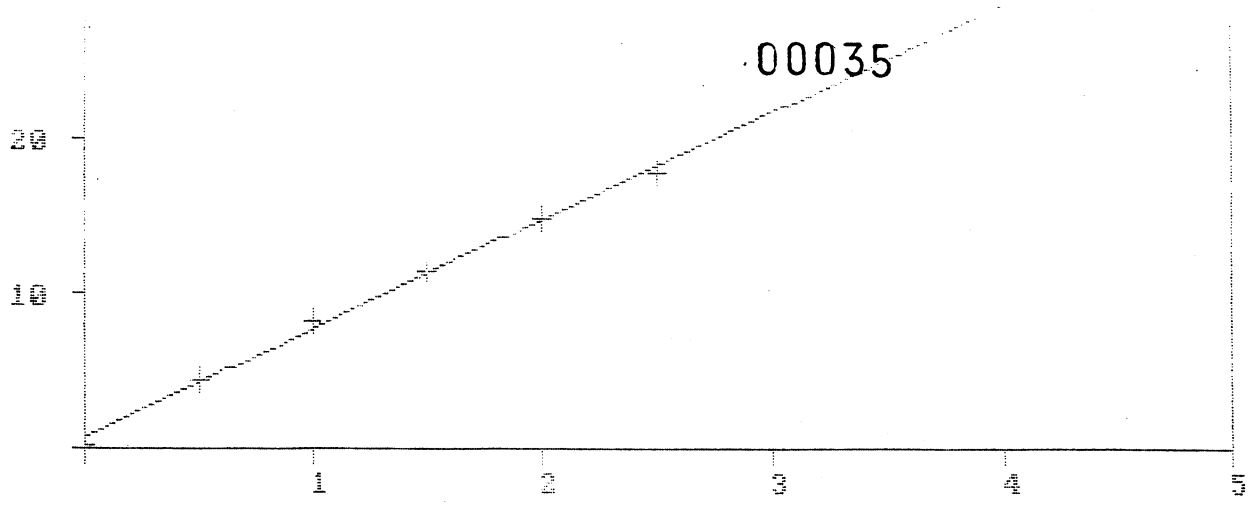

DATA TYPE: FIA CALIBRATION ORDER: 1
INTERCEPT = 0.67 SLOPE = 7.017617

CORRELATION: .9981868

CHANNEL NAME: LDC
RUN DATE: 11-17-1999
SAMPLE TABLE NAME: 991117W
METHOD NAME: HGWATER

CUP#	SAMPLE ID	DIL	WGT	HEIGHT/AREA		CONCENTRATION µg/L	EF
1	PRIMER	1	1	11.0		1.471	s
2	DUMMY	1	1	0.1		-0.078	i
3	S1: 0	1	1	0.1		-0.078	i
4	S2: .5	1	1	4.4		0.528	
5	S3: 1	1	1	8.1		1.064	
6	S4: 1.5	1	1	11.5		1.541	
7	S5: 2	1	1	14.7		2.003	
8	S6: 2.5	1	1	17.8		2.442	
9	ICV	1	1	10.8		1.450	97%
10	B	1	1	0.0	Tot. µg	-0.095	b
11	D4	1	1	11.5		1.541	d
12	BL1117-1GFT 57930	1	1	0.8	<0.01	0.020	
13	BL1117-1GFT	1	1	0.8		0.020	
14	BL1117S	1	1	7.8	0.103	1.015	
15	BL1117S	1	1	8.0		1.046	
16	57933	2	1	7.9	2.125	2.051	s
17	57933	2	1	7.9		2.058	
18	57933D	2	1	7.8	2.122	2.044	
19	57933D	2	1	7.9		2.058	
20	57933S	2	1	14.2	4.015	3.847	95%
21	57933S	2	1	14.4		3.916	
22	57933DS	2	1	14.2	3.933	3.847	91%
23	57933DS	2	1	13.8		3.756	
24	57931 MS	1	1	1.6	0.013	0.128	
25	57931 MS	1	1	1.6		0.135	
26	57934	1	1	15.5	3.033	2.108	
27	57934	1	1	15.6		2.125	
28	57935	1	1	10.9	2.240	1.457	
29	57935	1	1	11.1		1.488	
30	57936	1	1	3.3	0.038	0.375	
31	57936	1	1	3.3		0.378	s
32	CCV	1	1	7.9		1.029	108%
33	B	1	1	0.0		-0.095	b
34	D4	1	1	11.5		1.541	d

36	57937	1	1	2.4		0.248	
37	57938	1	1	2.4		0.246	
38	57938	1	1	2.3	0.0836	0.237	
39	BL1117-2CFT	1	1	1.1	<0.01	0.055	
40	BL1117-2CFT	1	1	1.1		0.055	
41	BL1117S	1	1	8.1	0.105	1.060	105%
42	BL1117S	1	1	8.0		1.046	
43	BL1117DS	1	1	7.7	0.100	1.001	100%
44	BL1117DS	1	1	7.7		1.005	
45	53687	1	1	4.0	0.236	0.476	
46	53687	1	1	4.0		0.469	a
47	57687D	1	1	4.0	0.235	0.476	
48	57687D	1	1	3.9		0.462	
49	53687S	1	1	10.5	0.690	1.405	91%
50	53687S	1	1	10.2		1.353	
51	53687DS	1	1	10.2	0.683	1.363	90%
52	53687DS	1	1	10.3		1.370	
53	53685 A	1	1	0.8	<0.05	0.016	
54	53685 A	1	1	0.7		0.009	1
55	CCV	1	1	7.5		0.973	97%
56	B	1	1	0.0		-0.095	b
57	D4	1	1	11.5		1.541	d

INTERCEPT: 0.67 LINEAR COEF. 7.017617

CORRELATION COEF: .9981868

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053686	SAMI	Neal Stn U4 Inlet-FB	Mercury -	PV	-0.050						99/11/17	MGF1	99/11/18	MG02	64.	56.	
053688	SAMI	Neal Stn U4 Inlet-R2	Mercury -	PV	0.094						99/11/17	MGF1	99/11/18	MG02	64.	56.	
053689	SAMI	Neal Stn U4 Inlet-R3	Mercury -	PV	-0.050						99/11/17	MGF1	99/11/18	MG02	64.	56.	
BL1117	INTERNAL		Mercury -	PV	-0.010	-99999.0	0.107	107.	0.104	104.	99/11/17	MGF1	99/11/18	MG02	$$$	$$$	*BLKIMP*

4 Tests for OHFLTB with an MDL of 0.010 ug Validated By CMB Control Chart Updated N/A IO Requirements met N/A

00037

00038

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 99.11.18 Run Code: MG01 Matrix: IMP.

Analyst: MG Units: ug (see comments) MDL: 0.01

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	%R
1			Primer (ICV)			
2			Dummy (Blk)	BLK CHECK		
3			Std 1 (S1)	0.0 BLK CHECK		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV	S1 BLK	MK	
10			B (Std 1)			
11			D4 (Std 4)			
12			BL1118			
13			"			
14			BL1118 S			
15			"			
16			BL1118 DS			
17			"			
18			53685 b			
19			"			
20			53685 C			
21			"			
22			53686			
23			"			
24			53688			
25			"			
26			53689			
27			"			
28	"		CCV			
29			B			
30			D4			
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	%R
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42						
43						
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45						
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Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

EPA 7470 WATER PREPARATION LOG - MERCURY

00039 DG7470HG
DGHGLEACH, DG29HG***

Calibration Solutions:

#	I.D.	*Conc.	Spike	**Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	0.33	200 ul of 0.05 ppm IV working standard	0.5
4	Standard 3	0.67	400 ul of 0.05 ppm IV working standard	1.0
5	Standard 4	1.0	600 ul of 0.05 ppm IV working standard	1.5
6	Standard 4	1.0	600 ul of 0.05 ppm IV working standard	1.5
7	Standard 5	1.33	800 ul of 0.05 ppm IV working standard	2.0
7	Standard 6	1.67	1000 ul of 0.05 ppm IV working standard	2.5

Check List
- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added
- Samples bulked and mixed
- Rack order checked

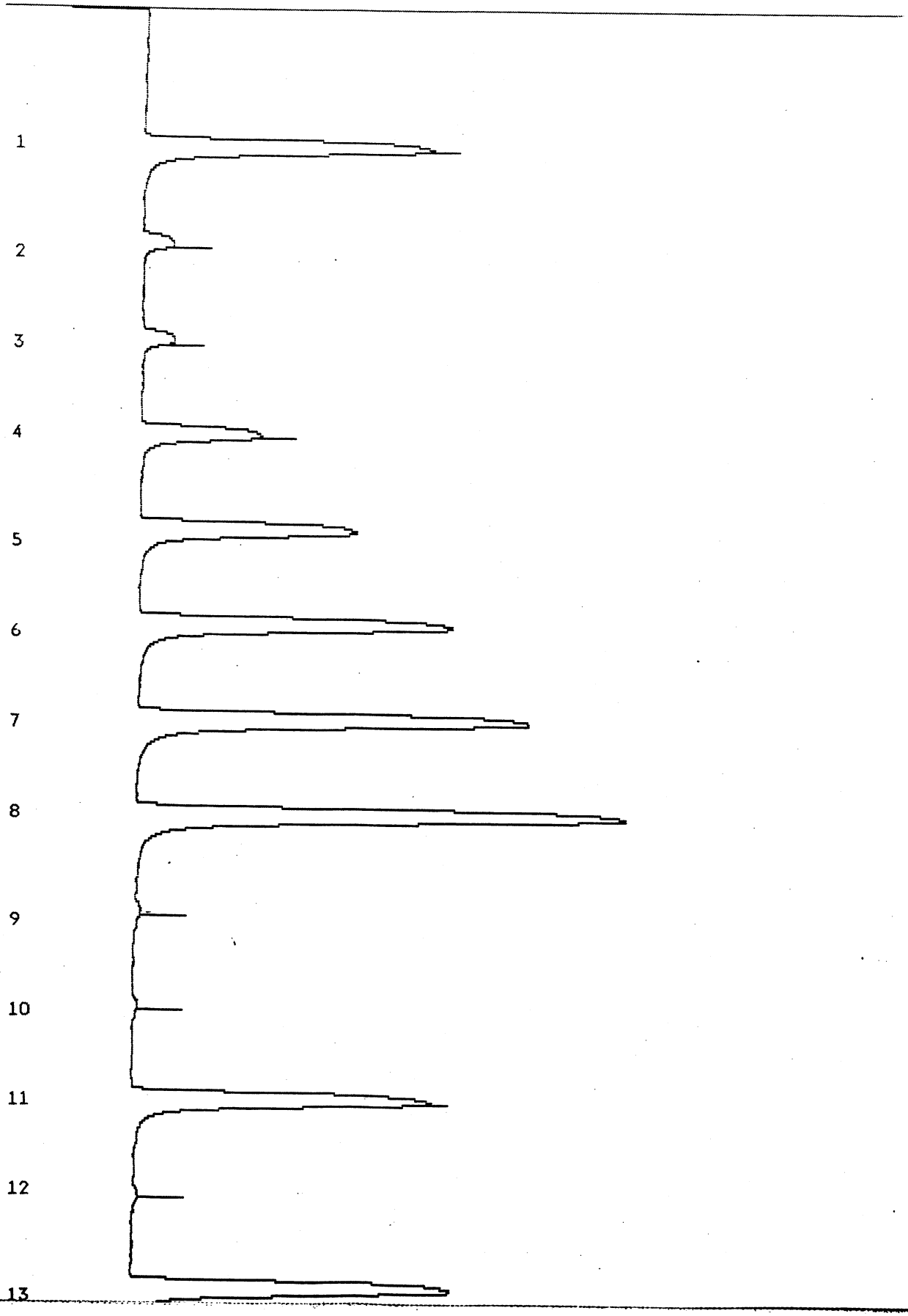
	#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
	9	ICV (Cert. Comp. Verif.)	15F1	20 ml	30 ml	1 X	1.5 ppb = 600 ul. of 0.05 ppm HP MESS-ZENO 30/QCA Std.
	10	BL [illegible]	"	"	"	"	(Processed Blank)
	11	BL [illegible] S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
* 1	12	57933	"	"	"	"	F. Volume : 100 ml
1	13	[illegible] D	"	"	"	"	(Duplicate sample)
1	14	[illegible] S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	15	[illegible] DS	"	"	"	"	(Duplicate Spiked sample)
2	16	57391	"	"	"	"	
* 3	17	57959	"	"	"	"	
* 4	18	[illegible] 35	"	"	"	"	
5	19	[illegible] 36	"	"	"	"	
6	20	[illegible] 37	"	"	"	"	
7	21	[illegible] 38	"	"	"	"	
8	22		"	"	"	"	
9	23		"	"	"	"	
10	24		"	"	"	"	
	25	ICV (Cert. Comp. Verif.)	15F1	20 ml	30 ml	1 X	1.0 ppb = 400 ul. of 0.05 ppm HP MESS-ZENO 30/QCA Std.
	26	BL [illegible]	"	"	"	"	(Processed Blank)
	27	BL [illegible] S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	28	[illegible]	"	"	"	"	F. Volume : 500 ml
1	29	[illegible] D	"	"	"	"	(Duplicate sample)
1	30	[illegible] S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	31	[illegible] DS	"	"	"	"	(Duplicate Spiked sample)
2	32	[illegible]	"	"	"	"	
3	33	[illegible]	"	"	"	"	
4	34	[illegible]	"	"	"	"	
5	35	[illegible]	"	"	"	"	
6	36	[illegible]	"	"	"	"	
7	37	[illegible]	"	"	"	"	
8	38		"	"	"	"	
9	39		"	"	"	"	
10	40		"	"	"	"	

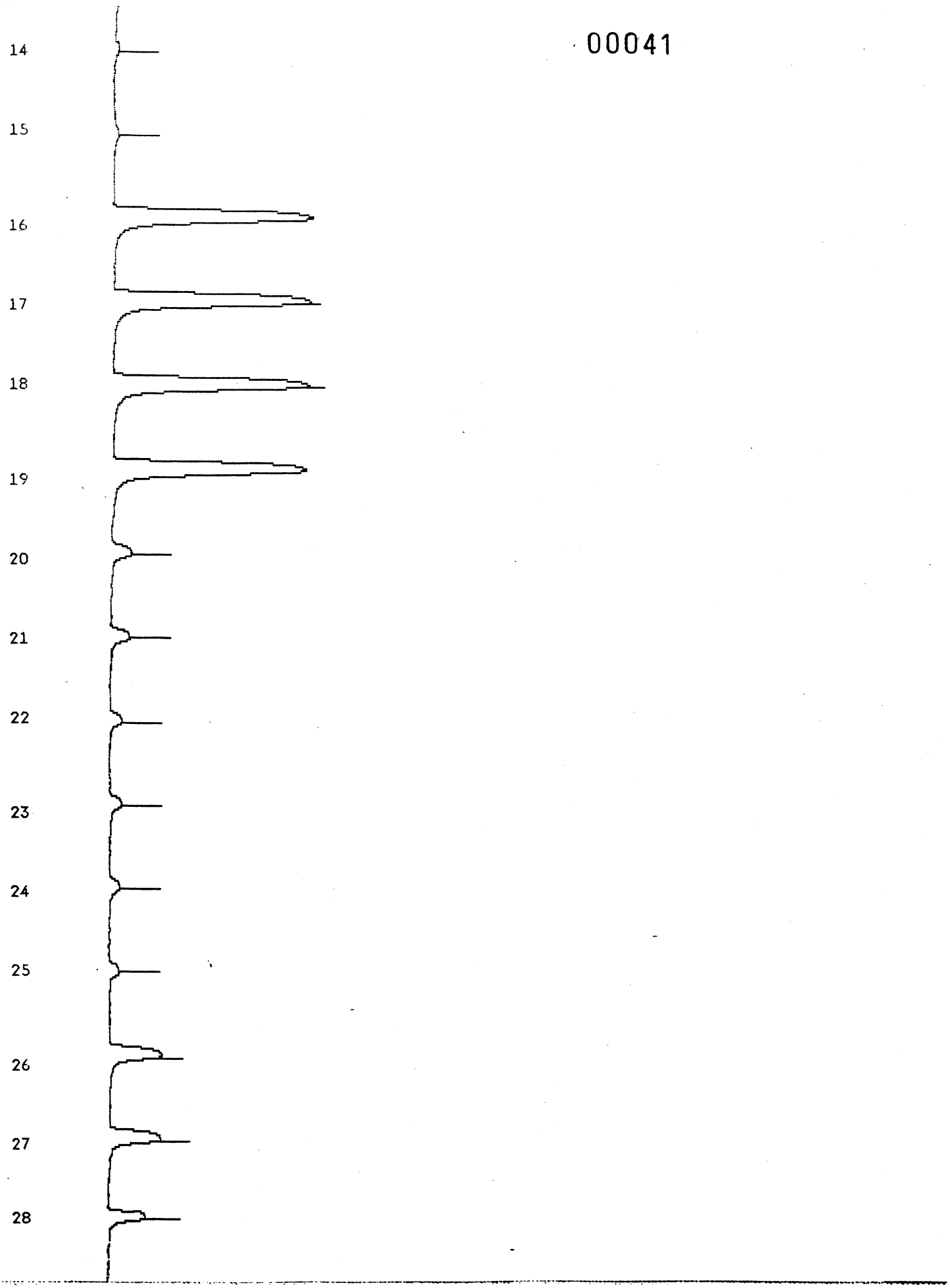
Notes: Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C
DG29HGI, DG29HGF, DG101AA1, DG101AA2

Include External Reference Material (EPA WS 378 or SPEX CertiPrep TM - WS) per run — **Prepare 0.05 ppm standards daily**

HNO3 Lot No: N/A	H2SO4 Lot No: N/A	Bath Temps: 10/21 °C
Prepared By: [illegible]	Date: 9-11-17	Checked by: [illegible]

RUN DATE: 11-18-1999 CHART DATE: 11-18-1999 00040
CHART SPEED: 30
DATA FILE NAME: C:\DP4\DATA\991118W.DAT

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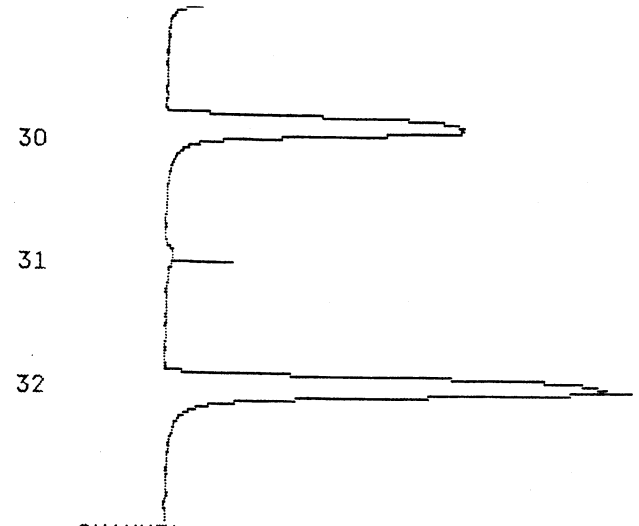
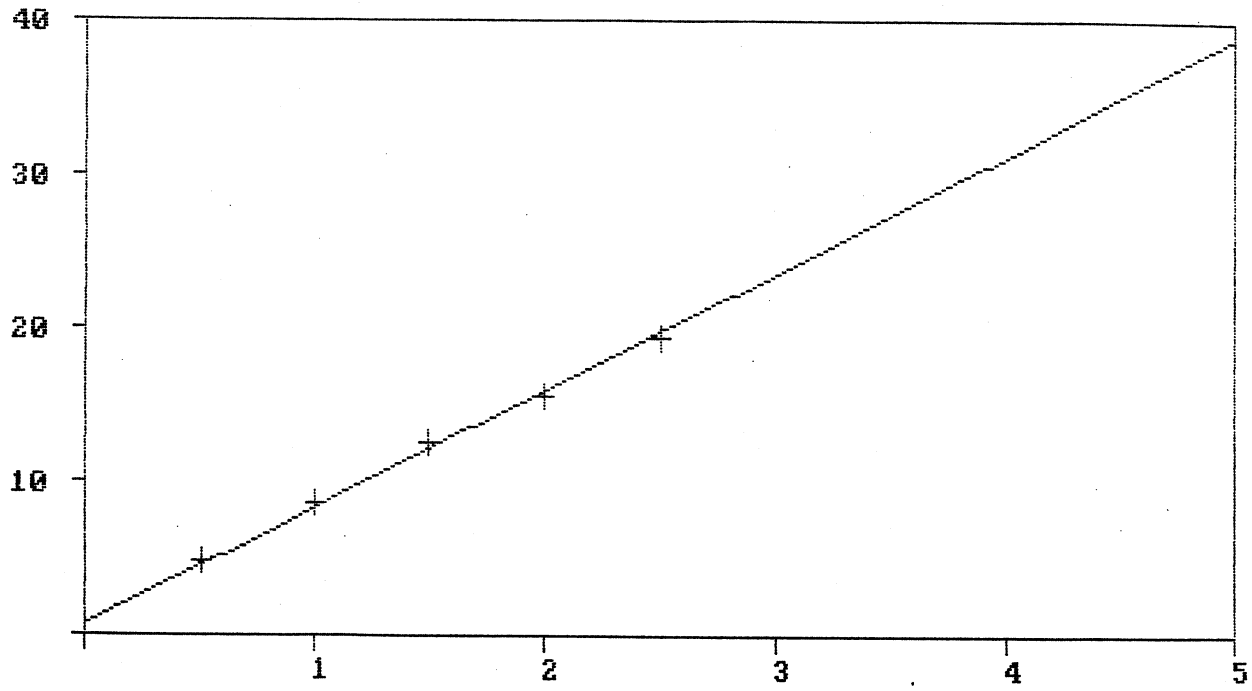


CHANNEL NAME: LDC
RUN NAME: 991118W



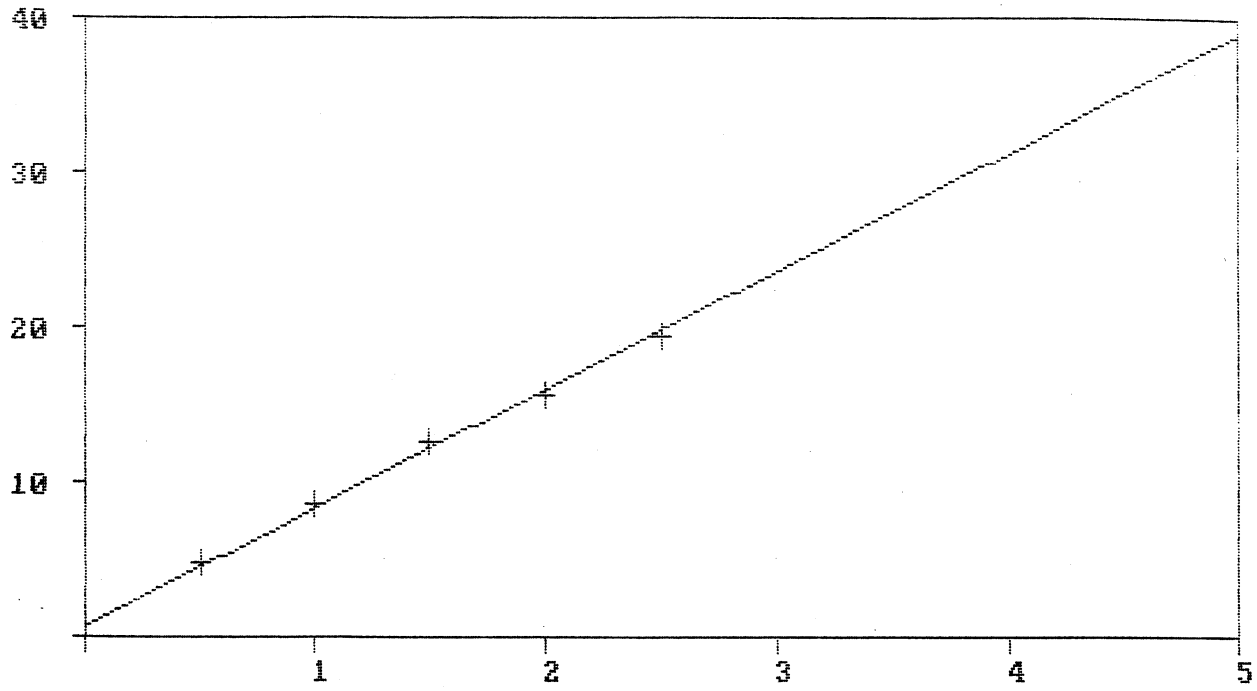
DATA TYPE: FIA
CALIBRATION ORDER: 1
INTERCEPT = 0.64
SLOPE = 7.634397

CORRELATION: .9978657

CHANNEL NAME: LDC
RUN DATE: 11-18-1999
SAMPLE TABLE NAME: 991118W
METHOD NAME: HGWATER

CUP#	SAMPLE ID	DIL	WGT	HEIGHT/AREA	CONCENTRATION ug/L	EF
1	PRIMER	1	1	11.7	1.452	s
2	BLK CHK	1	1	1.1	0.067	
3	BLK CHK	1	1	1.2	0.070	
4	S2: .5	1	1	4.7	0.537	
5	S3: 1	1	1	8.7	1.052	
6	S4: 1.5	1	1	12.6	1.570	
7	S5: 2	1	1	15.6	1.954	
8	S6: 2.5	1	1	19.5	2.466	
9	DUMMY	1	1	0.1	-0.074	I

CHANNEL NAME: LDC
RUN NAME: 991118W



DATA TYPE: FIA
CALIBRATION ORDER: 1
INTERCEPT = 0.64
SLOPE = 7.634397

CORRELATION: .9978657

CHANNEL NAME: LDC
RUN DATE: 11-18-1999
SAMPLE TABLE NAME: 991118W
METHOD NAME: HGWATER

CUP#	SAMPLE ID	DIL	WGT	HEIGHT/AREA	CONCENTRATION µg/L	EF
1	PRIMER	1	1	11.7	1.452	s
2	BLK CHK	1	1	1.1	0.067	
3	BLK CHK	1	1	1.2	0.070	
4	S2: .5	1	1	4.7	0.537	
5	S3: 1	1	1	8.7	1.052	
6	S4: 1.5	1	1	12.6	1.570	
7	S5: 2	1	1	15.6	1.954	
8	S6: 2.5	1	1	19.5	2.466	
9	DUMMY	1	1	0.1	-0.074	I
10	S1: 0	1	1	0.0	-0.080	I
11	ICV	1	1	11.8	1.462 98%	
12	B	1	1	0.0	-0.083	b
13	D4	1	1	12.6	1.570	d
14	BL1117-MGF1	1	1	0.0	-0.077	I
15	BL1117-MGF1	1	1	0.1	-0.074	I
16	BL1117S	1	1	8.9	1.078	
17	BL1117S	1	1	8.7	1.059	
18	BL1117DS	1	1	8.7	1.052	
19	BL1117DS	1	1	8.5	1.027	
20	53685 B	1	1	0.6	-0.000	R
21	53685 B	1	1	0.6	-0.007	R
22	53685 C	1	1	0.3	-0.042	I

TUG
0.107 → 1.078 107%
0.104 → 1.052 104%
<0.05 → -0.000
<0.05 → -0.042

25	53686	1	1	0.2	-0.058	I
26	53688	1	1	2.1	0.195	
27	53688	1	1	2.0	0.182	
28	53689	1	1	1.3	0.089	
29	53689	1	1	1.3	0.086	
30	CCV	1	1	8.4	1.017	101%
31	B	1	1	0.0	-0.083	b
32	D4	1	1	12.6	1.570	d

INTERCEPT: 0.64 LINEAR COEF: 7.634397
CORRELATION COEF: .9978657

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053684	SAMI	MB R456	Mercury -	PV	-0.010	-99999.0	0.100	101.	0.101	101.	99/10/01	MGHY	99/10/01	MG02	17.	9.	*BLKIMP*
053685	SAMI	Neal Stn U4 Blank	Mercury -	PV	-0.010						99/10/01	MGHY	99/10/01	MG02	17.	9.	
BL1001	INTERNAL		Mercury -	PV	-0.010	-99999.0	0.100	100.	0.101	101.	99/10/01	MGHY	99/10/01	MG02	$$$	$$$	*BLKIMP*

3 Tests for OHHYX with an MDL of 0.010 ug Validated By CMB Control Chart Updated N/A IO Requirements met N/A

00045

00046

1 of 3

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 99.10.01 Run Code: MG02 Matrix: IMP

Analyst: MG Units: µg (see comments) MDL: 0.005

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12			WS 378			
13			ORG. REF.			
14			BL1001	1B1B		
15			~~XXXXXX~~ NO CUP			
16			BL1001 S			
17			"			
18			BL1001 DS			
19			"			
20	10		50091			
21			"			
22			50091 D			
23			"			
24			50091 S			
25			"			
26			50091 DS			
27			"			
28	"		50089			
29			"			
30			50090			
31			"			
32			50092			
33			"			
34			CCV			
35			B			
36			D4			
37			50093			
38			"			
39			50094			
40			"			

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
41			BL1001	1N2B		
42			"			
43			BL1001 S			
44			"			
45			BL1001 DS			
46			"			
47	10		42257			
48			"			
49			42257 D			
50			"			
51			42257 S			
52			"			
53			42257 DS			
54			"			
55			42256			
56			"			
57			CCV			
58			B			
59			D4			
60	10		42258			
61			"			
62			42259			
63			"			
64			42272			
65			"			
66			42273			
67			"			
68			42274			
69			"			
70			42275			
71			"			
72			42280			
73			"			
74			BL1001	2N2B		
75			"			
76			BL1001 S			
77			"			
78			BL1001 DS			
79			"			
80			CCV			

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 991080l Run Code: MG02 Matrix: IMP

Analyst: MG Units: ug (see comments) MDL:

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12						
13						
14						
15						
16						
17						
18						
19						
20						
41			BL1001	4N2B		
22			"			
23			BL1001S			
24			"			
25			BL1001 DS			
26			"			
27	10		42745			
28	↓		"			
29			CCV			
30			B			
31			D4			
32	10		42745 D			
33			"			
34			42745 S			
35			"			
36			42745 DS			
37			"			
38			42743			
39			"			
40	↓		42744			

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
41	10		42744 (Cup Missed)			
42			42746			
43			"			
44			42747			
45			"			
46			42748			
47			"			
48			42749			
49			"			
50			42750			
51	↓		"			
52			CCV			
53			B			
54			D4			
55	10		42751			
56	↓		"			
57			42282	HYDR.		
58			"	HYX		
59			42497			
60			"			
61			43224			
62			"			
63			42760			
64			"			
65			44796			
66			"			
67			47489			
68			"			
69			53129			
70			"			
71			53143			
72			"			
73			53685			
74			"			
75			WS 378			
76			ORO REF			
77			CCV			
78			B			
79			D4			
80						

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

00048 NOT DIGESTED

EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG
DGHGLEACH, DG29HG***

Calibration Solutions:

#	I.D.	*Conc.	Spike	**Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	0.33	200 ul of 0.05 ppm IV working standard	0.5
4	Standard 3	0.67	400 ul of 0.05 ppm IV working standard	1.0
5	Standard 4	1.0	600 ul of 0.05 ppm IV working standard	1.5
6	Standard 4	1.0	600 ul of 0.05 ppm IV working standard	1.5
7	Standard 5	1.33	800 ul of 0.05 ppm IV working standard	2.0
7	Standard 6	1.67	1000 ul of 0.05 ppm IV working standard	2.5

Check List
- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added
- Samples bulked and mixed
- Rack order checked

	#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
	9	ICV (Init. Calib. Verif.)	HGHY	20 ml	30 ml	1 X	1.5 ppb = 600 ul. of 0.05 ppm HP MESS-ZENO 30/QCA Std.
	10	BL 100	"	"	"	"	(Processed Blank)
	11	BL 100 S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	12	422832	"	"	"	"	90 ml
1	13	D	"	"	"	"	(Duplicate sample)
1	14	S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	15	DS	"	"	"	"	(Duplicate Spiked sample)
2	16	424497	"	"	"	"	50 ml
3	17	432247	"	"	"	"	84 ml
4	18	427600	"	"	"	"	90 ml
5	19	424498	"	"	"	"	50 ml
6	20	447960	"	"	"	"	110 ml
7	21	447459	"	"	"	"	100 ml
8	22	531297	"	"	"	"	48 ml
9	23	531443	"	"	"	"	74 ml
10	24	53685	"	"	"	"	50 ml
	25	CCV (Cont. Calib. Verif.)		20 ml	30 ml	1 X	1.0 ppb = 400 ul. of 0.05 ppm HP MESS-ZENO 30/QCA Std.
	26	BL	"	"	"	"	(Processed Blank)
	27	BL S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	28		"	"	"	"	
1	29	D	"	"	"	"	(Duplicate sample)
1	30	S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	31	DS	"	"	"	"	(Duplicate Spiked sample)
2	32		"	"	"	"	
3	33		"	"	"	"	
4	34		"	"	"	"	
5	35		"	"	"	"	
6	36		"	"	"	"	
7	37		"	"	"	"	
8	38		"	"	"	"	
9	39		"	"	"	"	
10	40		"	"	"	"	

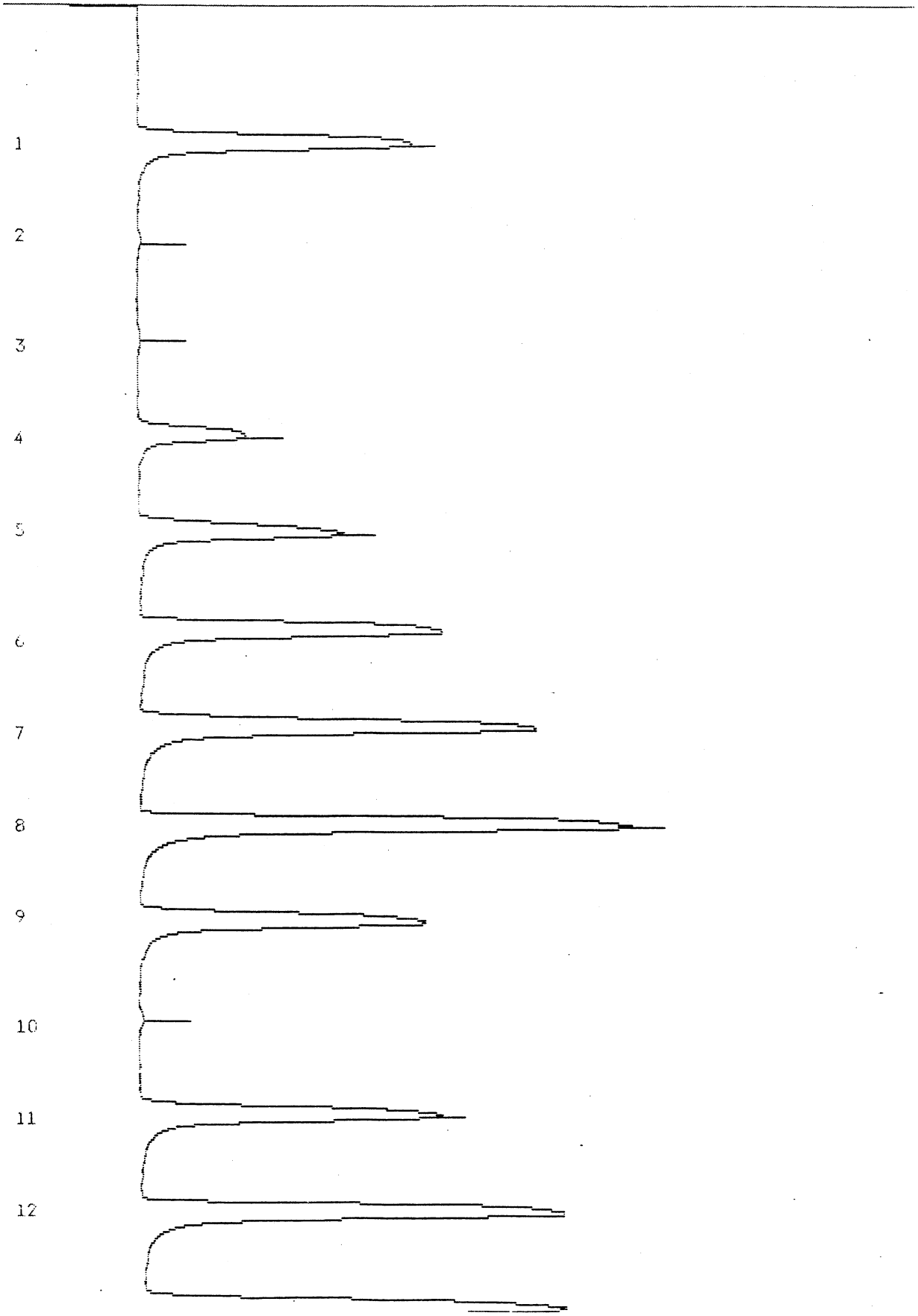
Notes: Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C
DG29HGI, DG29HGF, DG101AA1, DG101AA2

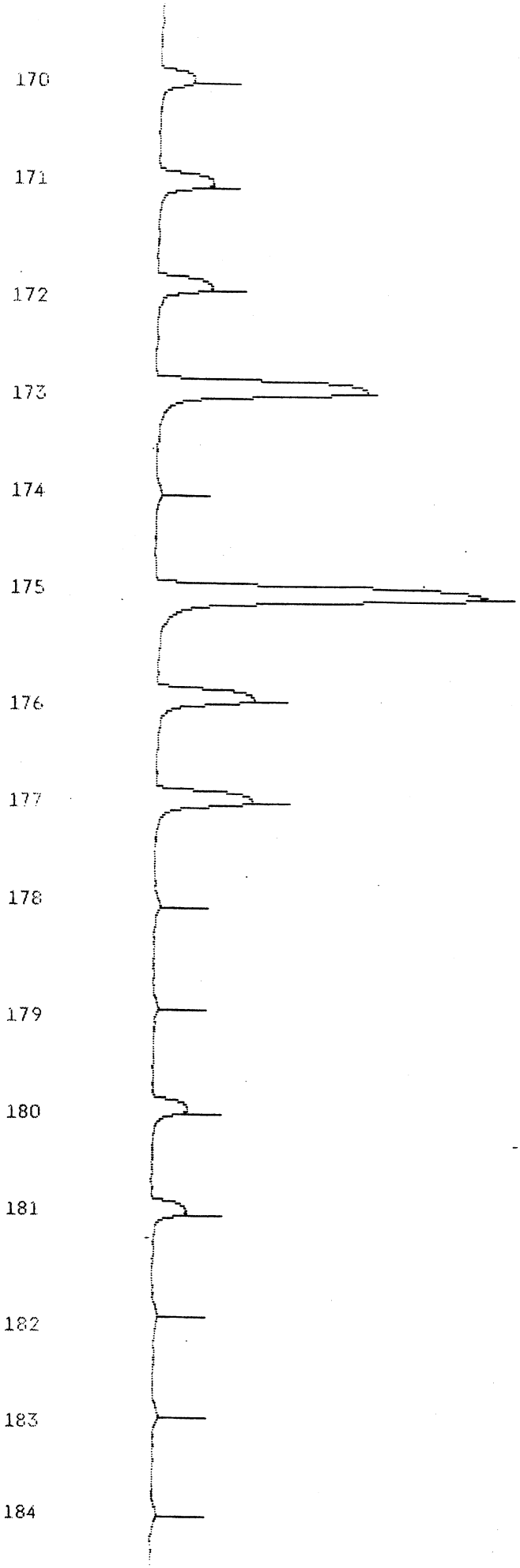
Include External Reference Material (EPA WS 378 or SPEX CertiPrep TM - WS) per run — Prepare 0.05 ppm standards daily

HNO3 Lot. No. | H2SO4 Lot. No. | Bath Temps. / / °C

Prepared By: CMB Date: 4/9/2010 Checked by: CMB

RUN DATE: 10-01-1999 CHART DATE: 10-02-1999
CHART SPEED: 30
DATA FILE NAME: C:\DP4\DATA\991001W.DAT

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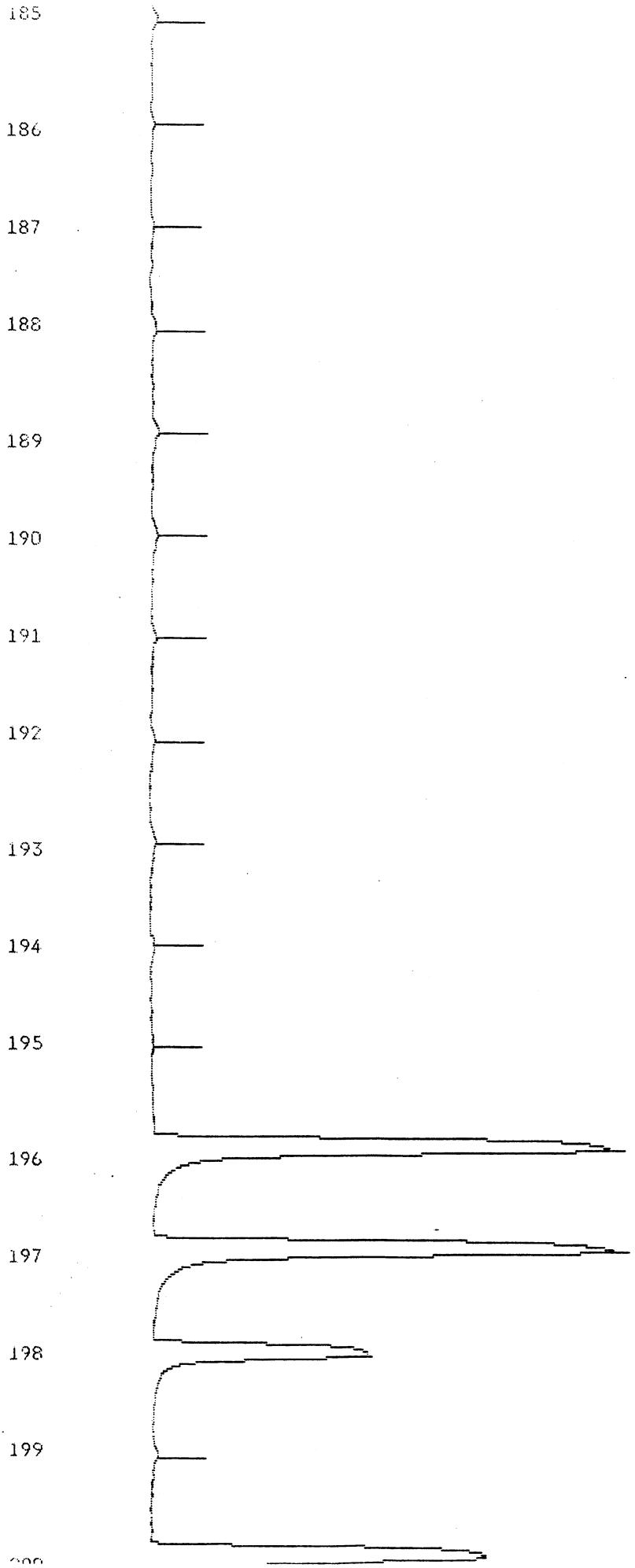
185
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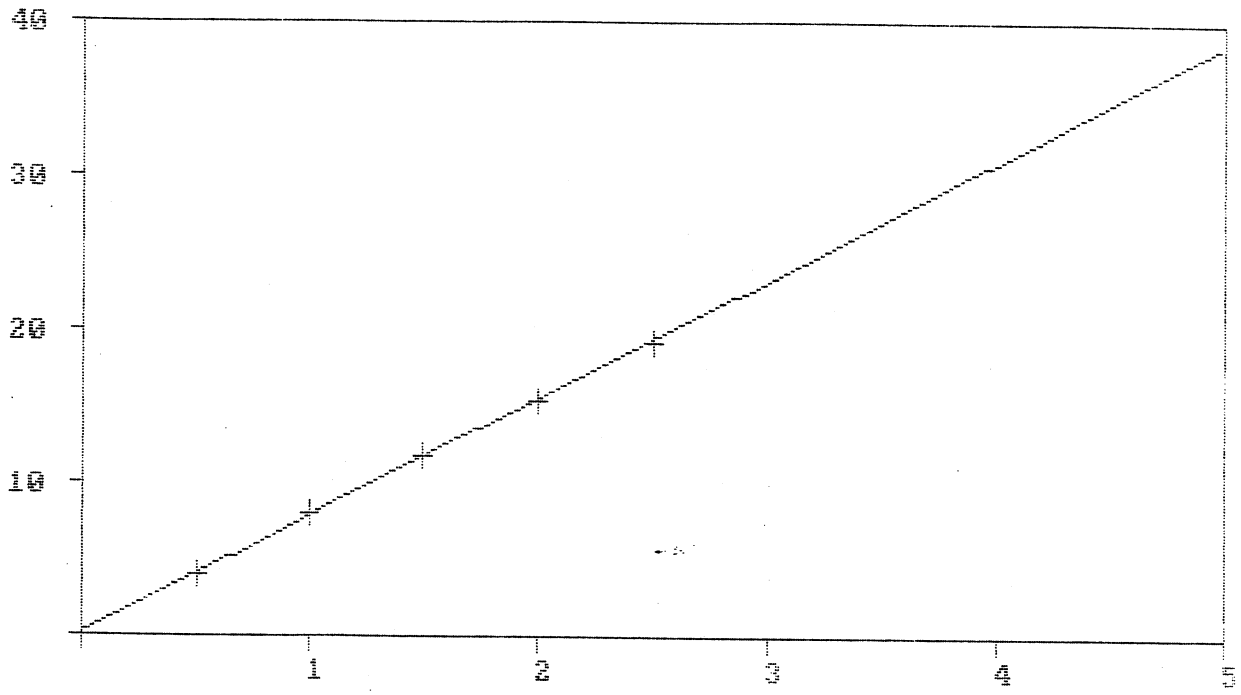
201

00052

CHANNEL NAME: LDC
RUN NAME: 991001W



DATA TYPE: FIA
INTERCEPT = 0.20

CALIBRATION ORDER: 1
SLOPE = 7.65812

CORRELATION: .9997931

CHANNEL NAME: LDC
RUN DATE: 10-01-1999
SAMPLE TABLE NAME: 991001W
METHOD NAME: HGWATER

CUP#	SAMPLE ID	DIL	WGT	HEIGHT/AREA	CONCENTRATION (ppb)	EF
1	PRIMER	1	1	10.8	1.383	s
2	DUMMY	1	1	0.0	-0.020	I
3	S1: 0	1	1	0.0	-0.023	I
4	S2: .5	1	1	4.1	0.506	
5	S3: 1	1	1	8.0	1.019	
6	S4: 1.5	1	1	11.9	1.523	
7	S5: 2	1	1	15.4	1.989	
8	S6: 2.5	1	1	19.2	2.486	
9	ICV	1	1	11.2	1.440	96%
10	B	1	1	0.0	-0.027	b
11	D4	1	1	11.9	1.523	d
12	WS 378	1	1	16.6	2.139	107%
13	ORG REF	1	1	16.5	2.132	107%
14	BL1001-1B18 50089	1	1	0.0	-0.027	I
15	BL1001-1B18	1	1	0.0	-0.027	I
16	BL10013	1	1	7.8	0.987	99%

Tug
<0.03
0.296

150	CCV	1	1	7.5		0.956	95%
151	B	1	1	0.0	.00053	-0.027	b
152	D4	1	1	11.9		1.523	d
153	42745D	10	1	0.5	<0.250	0.372	I
154	42745D	10	1	0.5		0.436	I
155	42545S	10	1	8.4	2.676	10.640	101%
156	42545S	10	1	8.4		10.767	
157	42545DS	10	1	7.9	2.568	10.098	97%
158	42545DS	10	1	8.2		10.449	
159	42743	10	1	0.5	<0.250	0.404	I
160	42743	10	1	0.3		0.085	I
161	42744	10	1	0.2	<0.250	-0.043	I
162	42744	10	1	0.0		-0.266	I
163	42746	10	1	3.5	1.090	4.294	
164	42746	10	1	3.6		4.422	
165	42747	10	1	0.4	<0.250	0.276	I
166	42747	10	1	0.4		0.276	s
167	42748	10	1	0.1	<0.250	-0.170	I
168	42748	10	1	0.1		-0.138	I
169	42749	10	1	1.1	0.264	1.105	
170	42749	10	1	1.0		1.010	
171	42750	10	1	1.8	0.520	2.094	
172	42750	10	1	1.8		2.062	
173	CCV	1	1	7.5		0.956	95%
174	B	1	1	0.0		-0.027	b
175	D4	1	1	11.9		1.523	d
176	42751	10	1	3.3	1.018	4.071	
177	42751	10	1	3.3		4.071	
178	42282-HYX -MGHYX	1	1	0.0		-0.023	I
179	42282-HYX	1	1	0.0		-0.027	I
180	42497	1	1	1.1		0.111	
181	42497	1	1	1.1		0.114	s
182	43224	1	1	0.0		-0.027	I
183	43224	1	1	0.0		-0.027	I
184	42760	1	1	0.0		-0.020	I
185	42760	1	1	0.0		-0.020	I
186	44796	1	1	0.0		-0.027	I
187	44796	1	1	0.0		-0.027	I
188	47489	1	1	0.0		-0.027	I
189	47489	1	1	0.1		-0.017	I
190	53129	1	1	0.1		-0.017	I
191	53129	1	1	0.0		-0.027	I
192	53143	1	1	0.0		-0.027	I
193	53143	1	1	0.0		-0.027	I
194	53685	1	1	0.0		-0.027	I
195	53685	1	1	0.0		-0.027	I
196	WS 378	1	1	16.1		2.075	103%
197	ORG REF	1	1	16.2		2.084	104%
198	CCV	1	1	7.5		0.952	95%
199	B	1	1	0.0		-0.027	b
200	D4	1	1	11.9		1.523	d

INTERCEPT: 0.20 LINEAR COEF: 7.65812
CORRELATION COEF: .9997931

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053691	SAMI	Neal Stn U4 Stack-R1	Mercury -	PV	13.722	13.612	28.535	99.	28.617	99.	99/10/04	7GKC	99/10/04	MG01	20.	12.	*PDS*
053692	SAMI	Neal Stn U4 Stack-R2	Mercury -	PV	15.059						99/10/04	7GKC	99/10/04	MG01	20.	12.	
053693	SAMI	Neal Stn U4 Stack-R3	Mercury -	PV	13.409						99/10/04	7GKC	99/10/04	MG01	20.	12.	
BL1004	INTERNAL		Mercury -	PV	-0.030	-99999.0	0.275	91.	0.314	105.	99/10/04	7GKC	99/10/04	MG01	$$$	$$$	

4 Tests for OHKCL with an MDL of 0.030 ug Validated By CMB Control Chart Updated N/A IO Requirements met N/A

00054

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053684	SAMI	MB R456	Mercury -	PV	-0.030	-99999.0	0.342	114.	0.342	114.	99/10/04	3GKC	99/10/04	MG01	20.	12.	
053685	SAMI	Neal Stn U4 Blank	Mercury -	PV	-0.030						99/10/04	3GKC	99/10/04	MG01	20.	12.	
053686	SAMI	Neal Stn U4 Inlet-FB	Mercury -	PV	0.139						99/10/04	3GKC	99/10/04	MG01	20.	12.	
053687	SAMI	Neal Stn U4 Inlet-R1	Mercury -	PV	14.991						99/10/04	3GKC	99/10/04	MG01	20.	12.	
053688	SAMI	Neal Stn U4 Inlet-R2	Mercury -	PV	12.945						99/10/04	3GKC	99/10/04	MG01	20.	12.	
053689	SAMI	Neal Stn U4 Inlet-R3	Mercury -	PV	10.216						99/10/04	3GKC	99/10/04	MG01	20.	12.	
053690	SAMI	Neal Stn U4 Stack-FB	Mercury -	PV	0.390						99/10/04	3GKC	99/10/04	MG01	21.	12.	
BL1004	INTERNAL		Mercury -	PV	-0.030	-99999.0	0.343	114.	0.342	114.	99/10/04	3GKC	99/10/04	MG01	$$$	$$$	

8 Tests for OHKCL with an MDL of 0.030 ug Validated By CMB Control Chart Updated N/A IO Requirements met N/A

(1)

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 991004 Run Code: KB01/MG01 Matrix: IMP. (KCl)

Analyst: KB Units: µg (see comments) MDL: 0.015

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12			WS378			
13			ORGREF			
14			BL1003	1GKC		
15			"			
16			BL1003S			
17			"			
18			BL1003ds			
19			"			
20	1.5		53132			
21			"			
22			53132d			
23			"			
24			53132s			
25			"			
26			53132ds			
27			"			
28	"		53130			
29			"			
30		½	53131			
31		↓	"			
32			53133			
33			"			
34			CCV			
35			B			
36			D4			
37	1.5		53134			
38			"			
39			53135			
40	↓		"			

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
41	1.5		53136			
42			"			
43			53137			
44			"			
45			53138			
46			"			
47			53139			
48	↓		"			
49			WS378BL1003	2GKC		
50			"			
51			BL1003S			
52			"			
53			BL1003ds			
54			"			
55	1.5		53140			
56	↓		"			
57			CCV			
58			B			
59			D4			
60	1.5		53140d			
61			53140d			
62			53140s			
63			"			
64			53140ds			
65			"			
66			53141			
67			"			
68			53142			
69			"			
70			53143			
71			"			
72			53144			
73			"			
74		⅕	53145			
75		↓	"			
76		⅕	53146			
77		↓	"			
78		⅕	53147			
79	↓	↓	"			
80			CCV			

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

(2)

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 991004 Run Code: MG01 Matrix: sump (KCl)

Analyst: KB/MG Units: ug (see comments) MDL: 0.015

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12						
13						
14						
15						
16						
17						
18						
19						
20						
81 21			B			
22			D4			
23	1.5	1/5	53148			
24		↓	"			
25			53149			
26	↓		"			
27			BL1003I	3GKC		
28	"		"			
29			BL1003S			
30			"			
31			BL1003DS			
32			"			
33	1.5		53164			
34			"			
35			53164D			
36			"			
37			53164S			
38			"			
39			53164DS			
40	↓		"			

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
41	1.5		53165			
42	↓		"			
43			~~CCV~~ #(NO Cup)		KB	
44			B			
45			~~BK~~ CCV	1.5		
46	1.5	1/5	53150			
47	↓	↓	"			
48		1/5	53151			
49		↓	"			
50			53685			
51			"			
52			53686			
53			"			
54		1/5	53687			
55		↓	"			
56		1/5	53688			
57		↓	"			
58		1/5	53689			
59		↓	"			
60		~~BK~~ 1/5	53690			
61	↓	↓	"			
62			WS378			
63			ORG REF			
64			CCV			
65			B			
66		NB	~~CCV~~ D4			
67		NB	~~B~~ BL1003I 4GKC			
68			~~D4~~ "			
69			BL1003S			
70			"			
71			BL1003DS			
72			"			
73	1/5	1/25	53745			
74	↓	↓	"			
75			53745D			
76			"			
77			53745S			
78			"			
79			53745DS			
80	↓	↓	"			

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

(4)

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 99.10.04 Run Code: MG Matrix: IMP (KCl)

Analyst: MG Units: ug (see comments) MDL: 0.015

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12						
13						
14						
15						
16						
17						
18						
19						
20						
21	1.5	1/5	51457			
22		↓	51458			
23		↓	"			
24			51459			
25			"			
26		1/10	51460			
27		↓	"			
28	"	1/5	51461			
29		↓	"			
30		1/2	51462			
31			"			
32		↓	51463			
33		↓	"			
34			53129			
35	↓		"			
36			CCV			
37			B			
38			D4			
39			BL1004			
40			"			

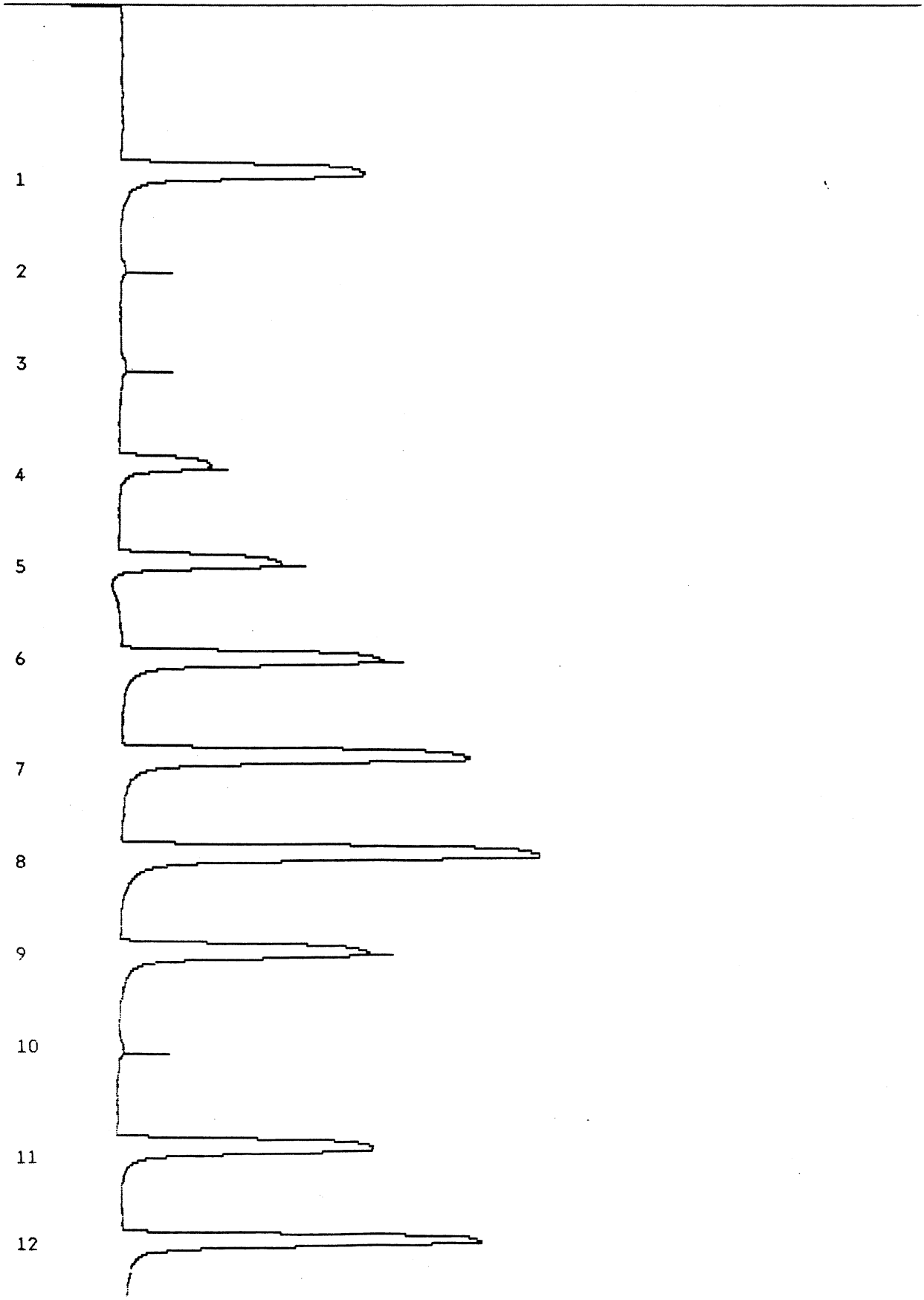
Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
41			BL1004S			
42			"			
43			BL1004DS			
44			"			
45	1.5	1/10	53691			
46	↓	↓	"			
47			53691D			
48			"			
49			53691S			
50			"			
51			53691DS			
52		↓	"			
53		1/5	53692			
54		↓	"			
55			53693			
56		↓	"			
57			53205			
58	↓		"			
59			CCV			
60			B			
61			D4			
62	1.5		53164			
63	↓		"			
64			53164D			
65			"			
66			53164S			
67			"			
68			53164DS			
69			"			
70			42498	44%		
71			"			
72			53164D			
73	↓		"			
74			WS 378			
75			ORG. REF.			
76			CCV			
77			B			
78			D4			
79						
80						

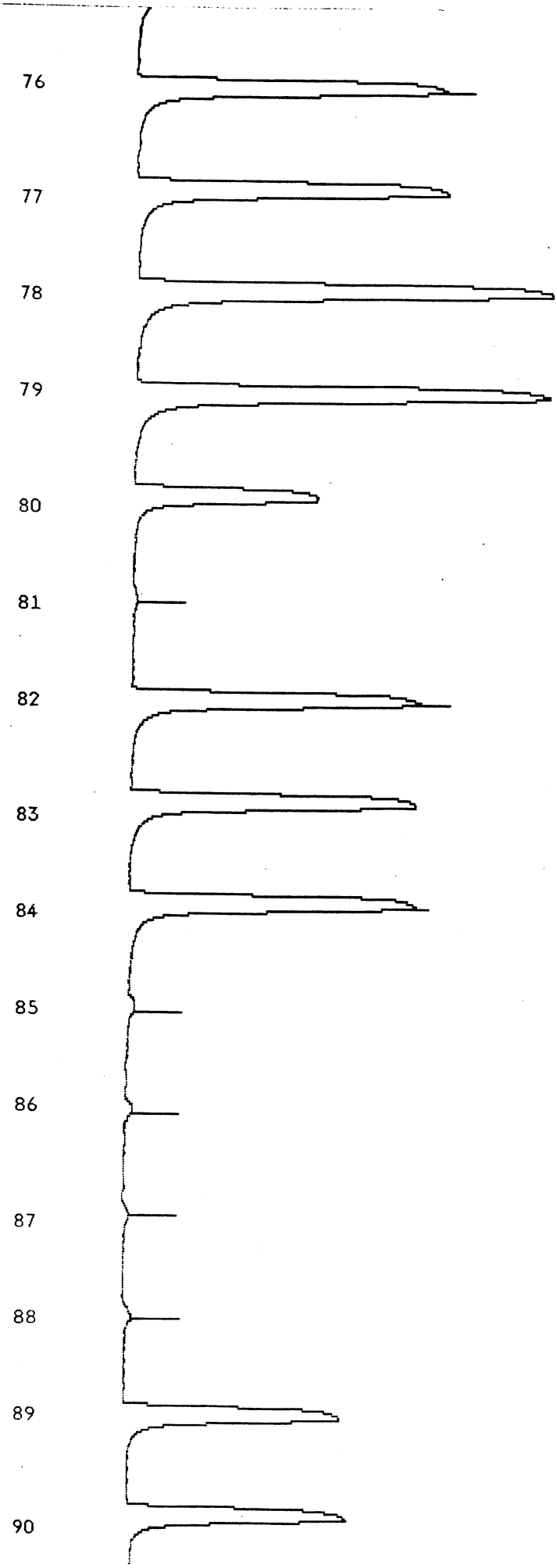
Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

RUN DATE: 10-04-1999 CHART DATE: 10-04-1999
CHART SPEED: 30
DATA FILE NAME: C:\DP4\DATA\991004W.DAT

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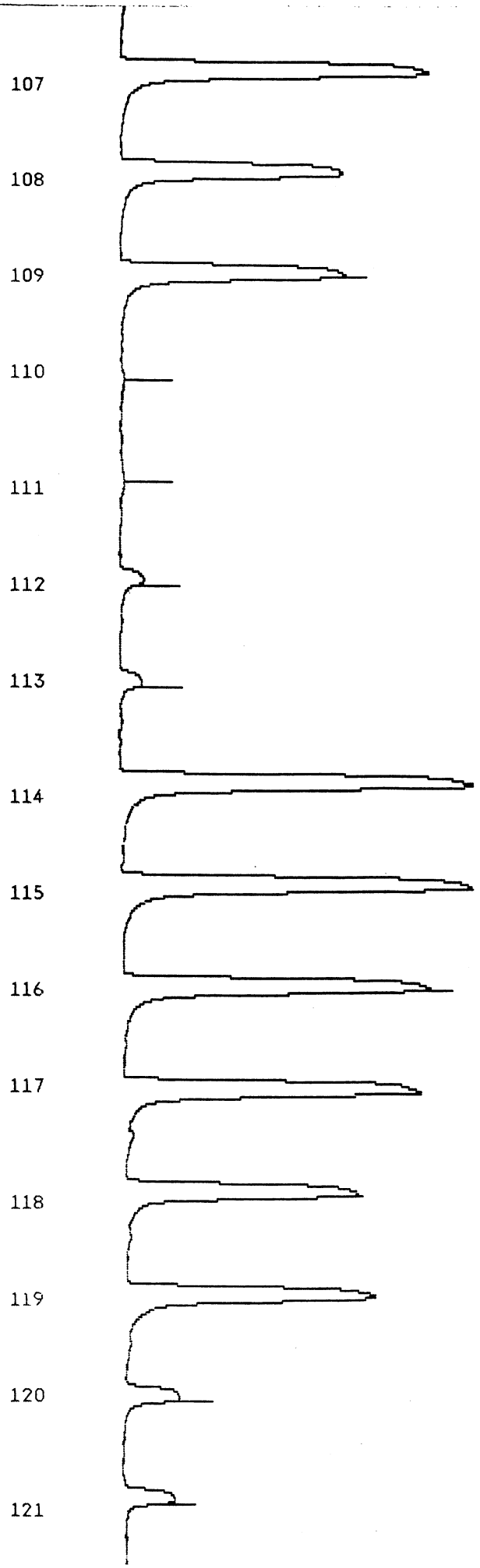

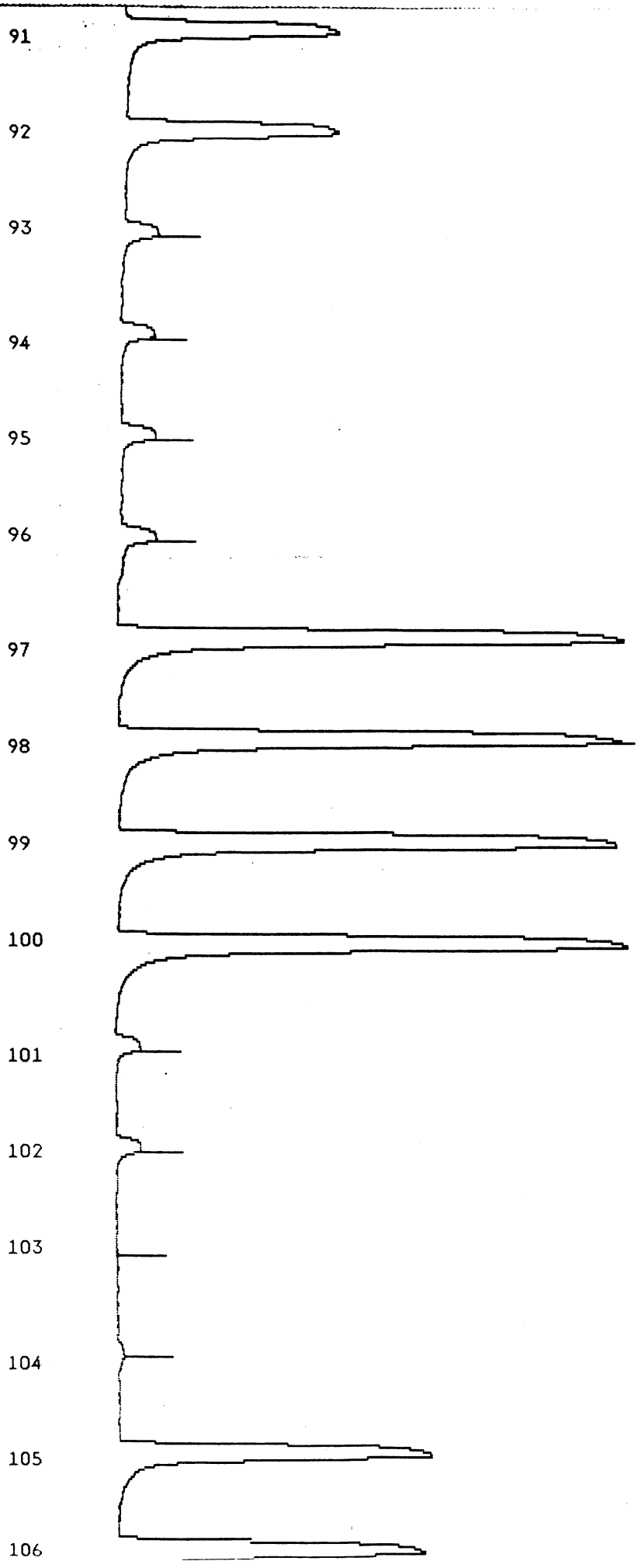
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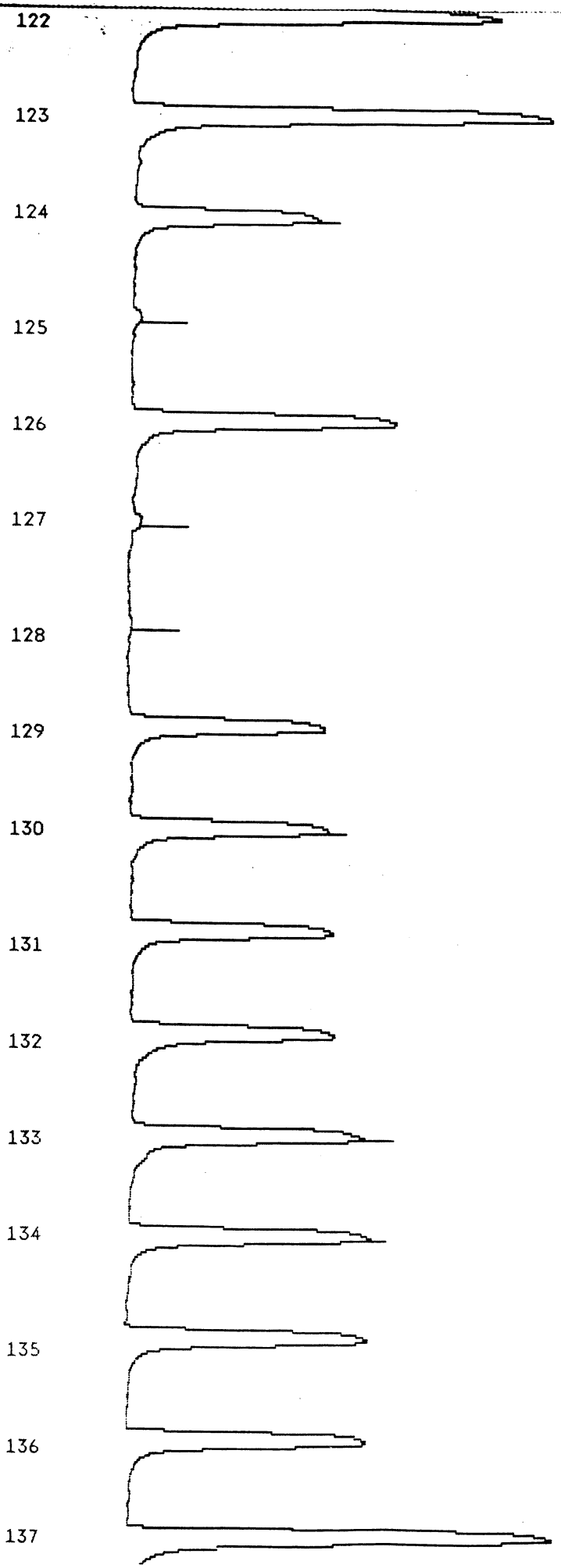
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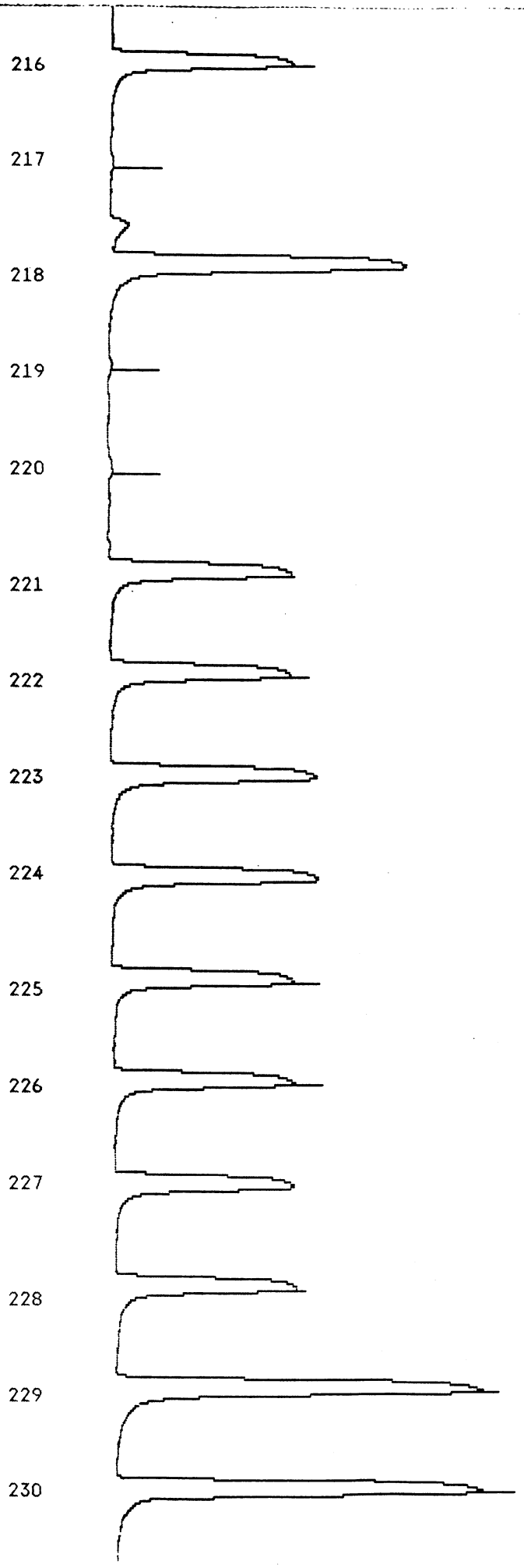
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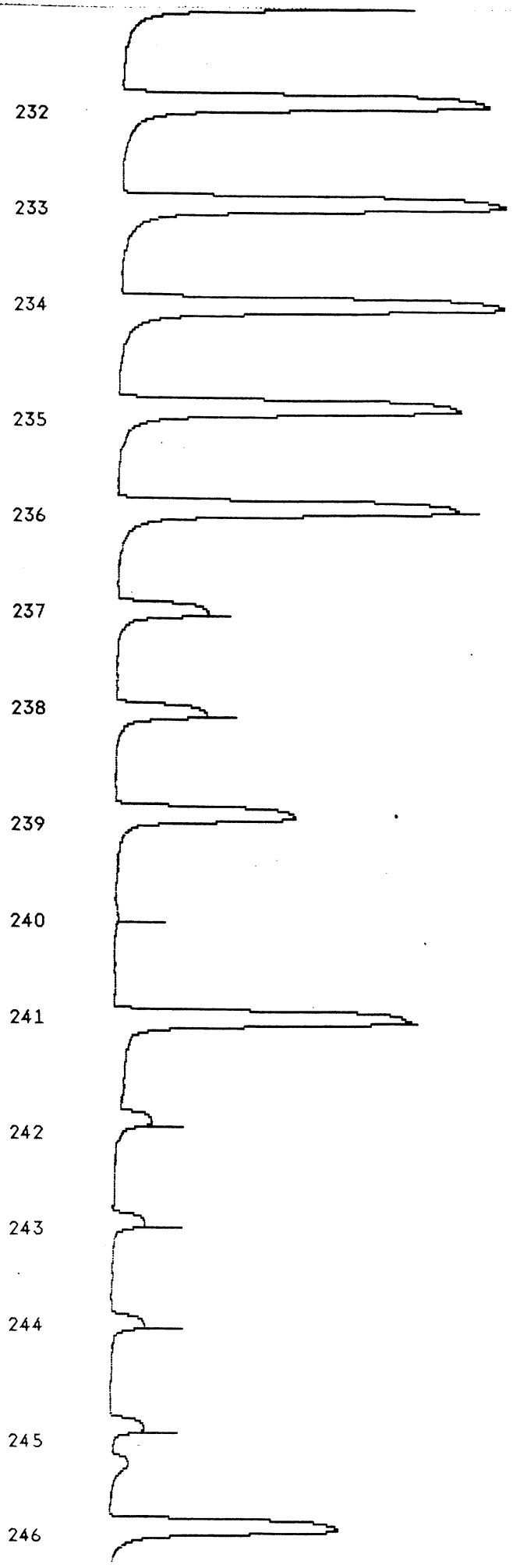
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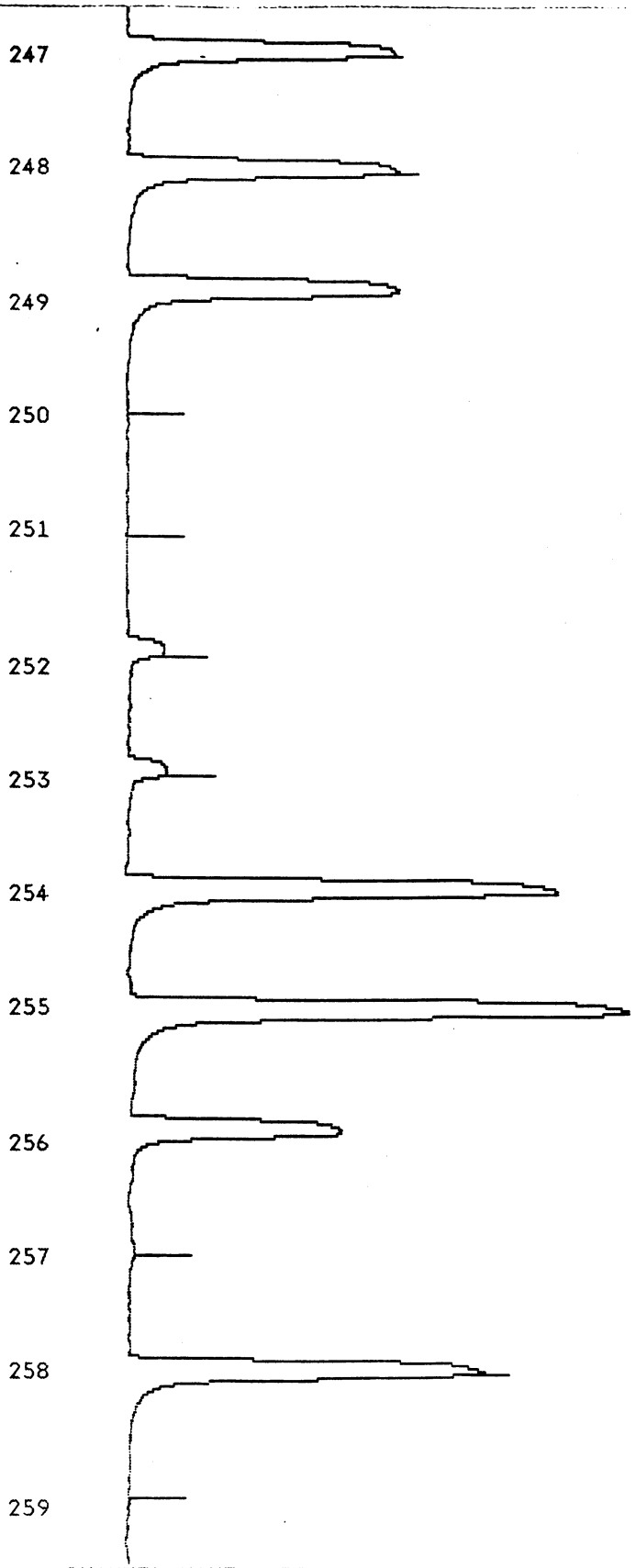

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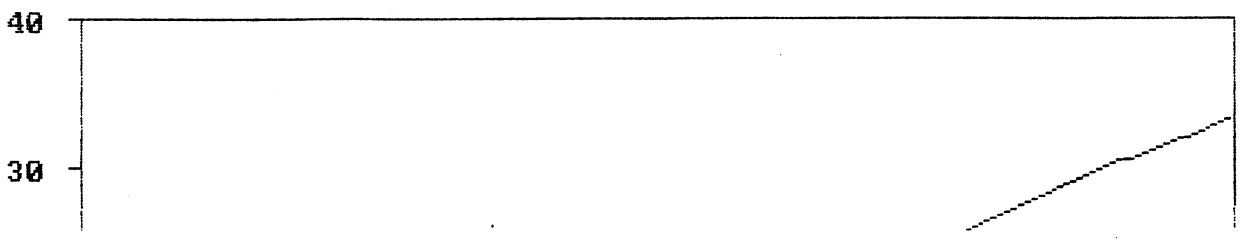
RUN NAME: 991004W



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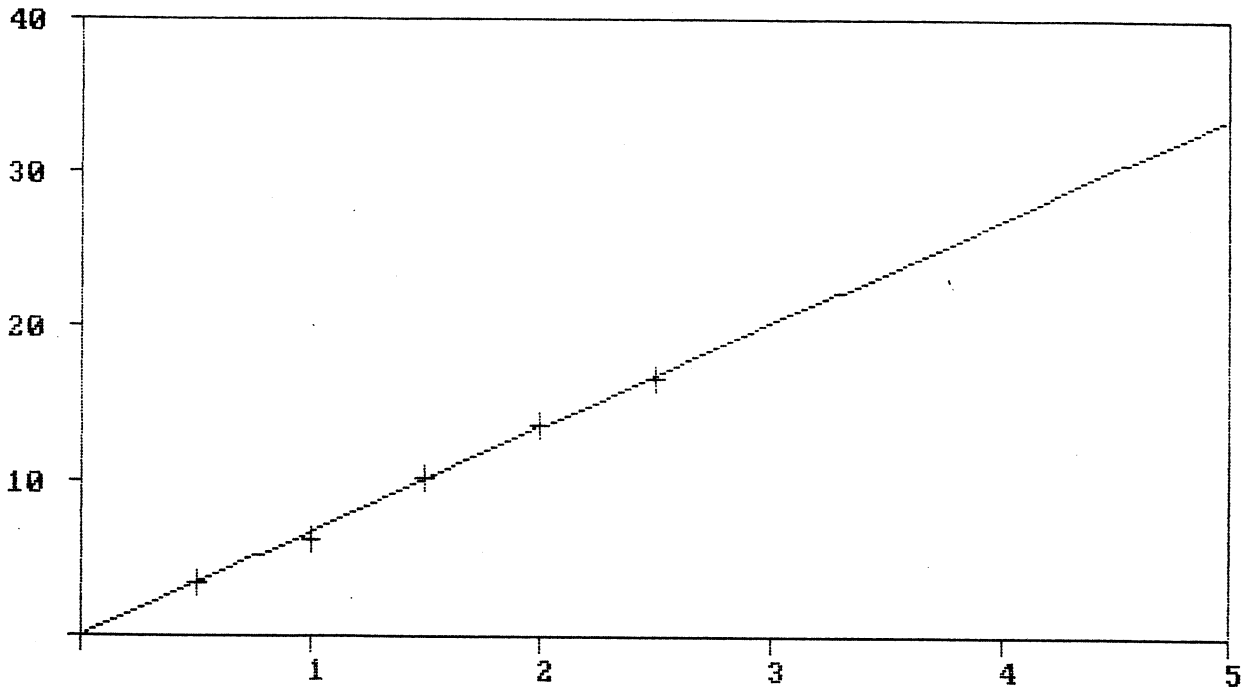
RUN NAME: 991004W



DATA TYPE: FIA
CALIBRATION ORDER: 1
INTERCEPT = -1.16
SLOPE = 6.713413

CORRELATION: .9991758

CHANNEL NAME: LDC
RUN DATE: 10-04-1999
SAMPLE TABLE NAME: 991004W
METHOD NAME: HGWATER

CUP#	SAMPLE ID	DIL	WGT	HEIGHT/AREA	CONCENTRATION (ppb)	EF
1	PRIMER	1	1	9.6	1.428	s
2	DUMMY	1	1	0.1	0.013	I
3	S1: 0	1	1	0.1	0.013	I
4	S2: .5	1	1	3.4	0.507	
5	S3: 1	1	1	6.3	0.937	
6	S4: 1.5	1	1	10.3	1.529	
7	S5: 2	1	1	13.7	2.039 101%	
8	S6: 2.5	1	1	16.6	2.475 123%	
9	ICV	1	1	9.8	1.460 97%	
10	B	1	1	0.0	0.002	b
11	D4	1	1	10.3	1.529	d
12	WS378	1	1	14.4	2.141	
13	ORG REF	1	1	16.2	2.410	
14	BL1004-1GKC	1	1	0.0	0.002	I
15	BL1004-1GKC	1	1	0.0	0.002	s
16	BL1004S	1	1	6.8	1.013	
17	BL1004S	1	1	6.8	1.020	
18	BL1004DS	1	1	6.7	1.002	
19	BL1004DS	1	1	6.7	1.006	
20	53132	1.5	1	6.3	1.405	
21	53132	1.5	1	6.2	1.394	

23	53132D	1.5	1	6.2	1.388	
24	53132S	1.5	1	13.2	2.954	
25	53132S	1.5	1	13.1	2.933	
26	53132DS	1.5	1	13.2	2.949	
27	53132DS	1.5	1	13.2	2.949	
28	53130	1.5	1	0.0	0.014	I
29	53130	1.5	1	0.1	0.030	I
30	53131	3	1	9.0	4.032	s
31	53131	3	1	9.0	4.010	
32	53133	1.5	1	2.6	0.581	
33	53133	1.5	1	2.6	0.576	
34	CCV	1	1	6.6	0.991	99%
35	B	1	1	0.0	0.002	b
36	D4	1	1	10.3	1.529	d
37	53134	1.5	1	5.7	1.268	
38	53134	1.5	1	5.6	1.263	
39	53135	1.5	1	7.8	1.738	
40	53135	1.5	1	7.8	1.743	
41	53136	1.5	1	1.8	0.412	
42	53136	1.5	1	1.8	0.412	
43	53137	1.5	1	1.0	0.215	
44	53137	1.5	1	1.0	0.215	
45	53138	1.5	1	0.0	0.003	s
46	53138	1.5	1	0.0	0.003	I
47	53139	1.5	1	0.9	0.204	
48	53139	1.5	1	1.0	0.232	
49	BL1004-2GKC	1	1	0.0	0.002	I
50	BL1004-2GKC	1	1	0.0	0.002	I
51	BL1004S	1	1	7.4	1.097	
52	BL1004S	1	1	7.4	1.104	
53	BL1004DS	1	1	6.5	0.977	
54	BL1004DS	1	1	6.7	0.995	
55	53140	1.5	1	0.7	0.166	
56	53140	1.5	1	0.8	0.188	
57	CCV	1	1	6.3	0.947	95%
58	B	1	1	0.0	0.002	b
59	D4	1	1	10.3	1.529	d
60	53140D	1.5	1	0.9	0.194	
61	53140D	1.5	1	0.9	0.199	s
62	53140S	1.5	1	7.9	1.776	
63	53140S	1.5	1	7.8	1.743	
64	53140DS	1.5	1	7.9	1.765	
65	53140DS	1.5	1	7.8	1.754	
66	53141	1.5	1	1.2	0.281	
67	53141	1.5	1	1.3	0.292	
68	53142	1.5	1	0.7	0.155	I
69	53142	1.5	1	0.7	0.150	
70	53143	1.5	1	0.0	0.008	I
71	53143	1.5	1	0.0	0.003	I
72	53144	1.5	1	0.1	0.024	I
73	53144	1.5	1	0.2	0.046	I
74	53145	7.5	1	8.3	9.234	
75	53145	7.5	1	8.3	9.289	
76	53146	7.5	1	11.0	12.262	s
77	53146	7.5	1	11.0	12.317	
78	53147	7.5	1	14.7	16.409	
79	53147	7.5	1	14.6	16.300	
80	CCV	1	1	6.4	0.955	95%
81	B	1	1	0.0	0.002	b
82	D4	1	1	10.3	1.529	d
83	53148	7.5	1	10.2	11.362	
84	53148	7.5	1	10.2	11.417	
85	53149	1.5	1	0.1	0.019	I
86	53149	1.5	1	0.1	0.030	I
87	BL1004-3GKC	1	1	0.1	0.013	I

89	BL1004S	1	1	7.6	1.137	
90	BL1004S	1	1	7.7	1.148	
91	BL1004DS	1	1	7.6	1.140	s
92	BL1004DS	1	1	7.6	1.140	
93	53164	1.5	1	1.1	0.243	
94	53164	1.5	1	1.1	0.254	
95	53164D	1.5	1	1.1	0.248	
96	53164D	1.5	1	1.1	0.254	
97	53164S	1.5	1	18.6	4.149	R } VOID DOUBLE SPIKED.
98	53164S	1.5	1	18.5	4.128	R } REPEAT @ END MA
99	53164DS	1.5	1	18.4	4.117	R }
100	53164DS	1.5	1	18.8	4.209	R }
101	53165	1.5	1	0.7	0.155	
102	53165	1.5	1	0.7	0.161	
103	NO CUP	1	1	0.0	0.002	I
104	B	1	1	0.0	0.002	b
105	CCV	1	1	11.7	1.744	116%
106	53150	7.5	1	11.5	12.835	s
107	53150	7.5	1	11.5	12.862	
108	53151	7.5	1	8.2	9.207	
109	53151	7.5	1	8.3	9.316	
110	53685	1.5	1	0.0	0.003	I
111	53685	1.5	1	0.0	0.003	I
112	53686	1.5	1	0.6	0.139	
113	53686	1.5	1	0.5	0.117	
114	53687	7.5	1	13.5	15.072	
115	53687	7.5	1	13.3	14.909	
116	53688	7.5	1	11.7	13.108	
117	53688	7.5	1	11.4	12.781	
118	53689	7.5	1	8.7	9.752	
119	53689	7.5	1	9.5	10.680	
120	53690	1.5	1	1.8	0.401	
121	53690	1.5	1	1.7	0.379	s
122	WS378	1	1	14.4	2.151	
123	ORG REF	1	1	16.5	2.457	
124	CCV	1	1	7.0	1.049	105%
125	B	1	1	0.0	0.002	b
126	D4	1	1	10.3	1.529	d
127	BL1004-4GKC	1	1	0.1	0.013	I
128	BL1004-4GKC	1	1	0.0	0.002	I
129	BL1004S	1	1	7.3	1.089	
130	BL1004S	1	1	7.4	1.104	
131	BL1004DS	1	1	7.6	1.129	
132	BL1004DS	1	1	7.5	1.126	
133	53745	37.5	1	8.7	48.898	
134	53745	37.5	1	9.0	50.399	
135	53745D	37.5	1	8.9	49.990	
136	53745D	37.5	1	8.8	49.035	s
137	53745S	37.5	1	15.8	88.047	
138	53745S	37.5	1	15.7	87.501	
139	53745DS	37.5	1	15.7	87.911	
140	53745DS	37.5	1	15.5	86.683	
141	53745DS	187.5	1	3.1	86.943	
142	53745DS	187.5	1	3.0	83.533	
143	BL1004-5GKC	1	1	0.0	0.002	I
144	BL1004-5GKC	1	1	0.0	0.002	I
145	BL1004S	1	1	7.2	1.071	
146	BL1004S	1	1	7.1	1.060	
147	CCV	1	1	6.2	0.929	93%
148	B	1	1	0.0	0.002	b
149	D4	1	1	10.3	1.529	d
150	BL1004DS	1	1	6.1	0.907	
151	BL1004DS	1	1	6.9	1.024	s
152	43202	1.5	1	6.7	1.492	
153	43202	1.5	1	6.7	1.492	

155	43202D	1.5	1	6.6	1.476	
156	43202S	1.5	1	13.2	2.960	
157	43202S	1.5	1	13.0	2.900	
158	43202DS	1.5	1	13.0	2.911	
159	43202DS	1.5	1	12.8	2.873	
160	43203	7.5	1	5.3	5.906	
161	43203	7.5	1	5.4	6.015	
162	43204	1.5	1	6.9	1.547	
163	43204	1.5	1	6.9	1.541	
164	43205	1.5	1	3.9	0.881	
165	43205	1.5	1	3.0	0.674	
166	51449	1.5	1	0.0	0.003	s
167	51449	1.5	1	0.0	0.008	I
168	51450	1.5	1	0.1	0.024	I
169	51450	1.5	1	0.0	0.014	I
170	CCV	1	1	6.2	0.929	93%
171	B	1	1	0.0	0.002	b
172	D4	1	1	10.3	1.529	d
173	51451	7.5	1	12.6	14.063	
174	51451	7.5	1	12.6	14.145	
175	51452	15	1	10.0	22.342	
176	51452	15	1	10.1	22.615	
177	51453	7.5	1	11.2	12.535	
178	51453	7.5	1	11.2	12.508	
179	51454	7.5	1	12.5	13.954	
180	51454	7.5	1	12.5	13.981	
181	BL1004-6GKC	1	1	0.0	0.002	s
182	BL1004-6GKC	1	1	0.0	0.009	I
183	BL1004S	1	1	6.1	0.907	
184	BL1004S	1	1	6.1	0.911	
185	BL1004DS	1	1	6.1	0.915	
186	BL1004DS	1	1	6.1	0.915	
187	51455	15	1	6.1	13.721	
188	51455	15	1	6.1	13.667	
189	51455D	15	1	6.1	13.721	
190	51455D	15	1	6.1	13.721	
191	51455S	15	1	12.5	28.017	
192	51455S	15	1	12.6	28.071	
193	CCV	1	1	6.3	0.933	93%
194	B	1	1	0.0	0.002	b
195	D4	1	1	10.3	1.529	d
196	51455DS	15	1	12.5	27.962	s
197	51455DS	15	1	12.5	27.962	
198	51456	7.5	1	14.0	15.700	
199	51456	7.5	1	14.0	15.645	
200	51457	7.5	1	12.0	13.381	
201	51457	7.5	1	12.0	13.381	
202	51458	7.5	1	12.7	14.199	
203	51458	7.5	1	12.7	14.199	
204	51459	1.5	1	0.1	0.019	I
205	51459	1.5	1	0.1	0.035	I
206	51460	15	1	10.3	23.051	
207	51460	15	1	10.3	23.051	
208	51461	7.5	1	14.0	15.618	
209	51461	7.5	1	14.0	15.672	
210	51462	7.5	1	11.7	13.135	
211	51462	7.5	1	11.9	13.272	s
212	51463	7.5	1	11.0	12.317	
213	51463	7.5	1	11.0	12.262	
214	53129	1.5	1	0.0	0.003	I
215	53129	1.5	1	0.0	0.003	I
216	CCV	1	1	6.2	0.918	91%
217	B	1	1	0.0	0.002	b
218	D4	1	1	10.3	1.529	d
219	BL1004-7GKC	1	1	0.0	0.005	I

L REPEAT @ END #s

221	BL1004S	1	1	6.2	0.926	
222	BL1004S	1	1	6.1	0.907	
223	BL1004DS	1	1	7.0	1.046	
224	BL1004DS	1	1	7.0	1.049	
225	53691	15	1	6.2	13.776	
226	53691	15	1	6.1	13.667	s
227	53691D	15	1	6.0	13.503	
228	53691D	15	1	6.1	13.721	
229	53691S	15	1	12.8	28.617	
230	53691S	15	1	12.7	28.453	
231	53691DS	15	1	12.7	28.453	
232	53691DS	15	1	12.9	28.780	
233	53692	7.5	1	13.5	15.072	
234	53692	7.5	1	13.5	15.045	
235	53693	7.5	1	12.0	13.463	
236	53693	7.5	1	11.9	13.354	
237	43205	1.5	1	3.1	0.685	
238	43205	1.5	1	3.1	0.690	
239	CCV	1	1	6.2	0.922	92%
240	B	1	1	0.0	0.002	b
241	D4	1	1	10.3	1.529	s
242	53164	1.5	1	1.0	0.232	
243	53164	1.5	1	1.0	0.232	
244	53164D	1.5	1	1.1	0.237	
245	53164D	1.5	1	1.1	0.237	
246	53164S	1.5	1	7.8	1.749	
247	53164S	1.5	1	7.7	1.732	
248	53164DS	1.5	1	7.9	1.765	
249	53164DS	1.5	1	7.8	1.749	
250	42498-HYX	1.5	1	0.0	0.003	I
251	42498-HYX	1.5	1	0.0	0.003	I
252	53164D	1.5	1	1.0	0.215	
253	53164D	1.5	1	1.0	0.215	
254	WS 378	1	1	12.5	1.864	93%
255	ORG REF	1	1	14.4	2.151	107%
256	CCV	1	1	6.0	0.889	89%
257	B	1	1	0.0	0.002	b
258	D4	1	1	10.3	1.529	d

INTERCEPT: -0.01 LINEAR COEF: 6.713413
CORRELATION COEF: .9991758

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053685	SAMI	Neal Stn U4 Blank	Mercury -	PV	-0.030						99/10/05	3GMN	99/10/05	MG02	21.	13.	
053686	SAMI	Neal Stn U4 Inlet-FB	Mercury -	PV	-0.030						99/10/05	3GMN	99/10/05	MG02	21.	13.	
BL1005	INTERNAL		Mercury -	PV	-0.030	-99999.0	0.307	102.	0.290	97.	99/10/05	3GMN	99/10/05	MG02	$$$	$$$	

3 Tests for OHMN4 with an MDL of 0.030 ug Validated By _____ Control Chart Updated N/A IO Requirements met N/A

00071

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053687	SAMI	Neal Stn U4 Inlet-R1	Mercury -	PV	19.797	20.064	48.567	96.	48.300	95.	99/10/05	4GMN	99/10/05	MG02	21.	13.	*BLKIMP*
053688	SAMI	Neal Stn U4 Inlet-R2	Mercury -	PV	24.654						99/10/05	4GMN	99/10/05	MG02	21.	13.	
053689	SAMI	Neal Stn U4 Inlet-R3	Mercury -	PV	10.860						99/10/05	4GMN	99/10/05	MG02	21.	13.	
053690	SAMI	Neal Stn U4 Stack-FB	Mercury -	PV	0.075						99/10/05	4GMN	99/10/05	MG02	22.	13.	
053691	SAMI	Neal Stn U4 Stack-R1	Mercury -	PV	18.357						99/10/05	4GMN	99/10/05	MG02	21.	13.	
053692	SAMI	Neal Stn U4 Stack-R2	Mercury -	PV	23.214						99/10/05	4GMN	99/10/05	MG02	21.	13.	
053693	SAMI	Neal Stn U4 Stack-R3	Mercury -	PV	18.250						99/10/05	4GMN	99/10/05	MG02	21.	13.	
BL1005	INTERNAL		Mercury -	PV	-0.030	-99999.0	0.301	100.	0.300	100.	99/10/05	4GMN	99/10/05	MG02	$$$	$$$	

8 Tests for OHMN4 with an MDL of 0.030 ug Validated By _____ Control Chart Updated N/A IO Requirements met N/A

00072

Run Date: 99/10/05 **Matrix:** IMP(KMnO4)
Run Code MG02

Batch	Sample #	Result (ug/L)	Average (ug/L)	Volume (L)	Result (total ug)	% Rec.
3GMN	BL1004	-0.011	0.016	0.300	0.0048	
	BL1004	0.043				
	BL1004S	1.053	1.023	0.300	0.3069	102.3
	BL1004S	0.993				
	BL1004D	0.993	0.966	0.300	0.2898	96.6
	BL1004D	0.939				
	43217	13.715	13.608	0.5	6.804	
	43217	13.501				
	43217D	13.662	13.662	0.5	6.831	
	43217D	13.662				
	43217S	27.913	27.726	0.5	13.863	93.94
	43217S	27.539				
	43217DS	27.966	27.911	0.5	13.9555	95.17
	43217DS	27.856				
	43216	1.27	1.3315	0.5	0.66575	
	43216	1.393				
	43218	9.765	9.7385	0.5	4.86925	
	43218	9.712				
	43219	11.097	10.99	0.5	5.495	
	43219	10.883				
	43220	1.019	1.035	0.5	0.5175	
	43220	1.051				
	43221	35.436	36.0765	0.5	18.03825	
	43221	36.717				
	43222	38.745	39.0655	0.5	19.53275	
	43222	39.386				
	43223	34.689	34.849	0.5	17.4245	
	43223	35.009				
	53685	-0.016	-0.016	1	-0.016	
	53685	-0.016				
	53686	0.021	0.0025	1	0.0025	
	53686	-0.016				

Run Date: 99/10/05 **Matrix:** IMP(KMnO4)
Run Code MG02

Batch	Sample #	Result (ug/L)	Average (ug/L)	Volume (L)	Result (total ug)	% Rec.
4GMN	BL1004	-0.011	-0.011	0.300	-0.0033	
	BL1004	-0.011				
	BL1004S	0.996	1.005	0.300	0.3015	100.5
	BL1004S	1.014				
	BL1004D	0.996	0.9995	0.300	0.29985	99.95
	BL1004D	1.003				
	53687	19.53	19.797	1	19.797	
	53687	20.064				
	53687D	20.064	20.064	1	20.064	
	53687D	20.064				
	53687S	48.673	48.5665	1	48.5665	95.45
	53687S	48.46				
	53687DS	48.353	48.2995	1	48.2995	94.56
	53687DS	48.246				
	53688	24.654	24.654	1	24.654	
	53688	24.654				
	53689	10.833	10.8595	1	10.8595	
	53689	10.886				
	53690	0.037	0.0745	1	0.0745	
	53690	0.112				
	53691	18.57	18.3565	1	18.3565	
	53691	18.143				
	53692	23.267	23.2135	1	23.2135	
	53692	23.16				
	53693	18.143	18.2495	1	18.2495	
	53693	18.356				

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 09.10.05(W) Run Code: MG02 Matrix: IMP. (KMNO4)

Analyst: MG Units: ug (see comments) MDL: 0.03

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12			WS 378			
13			ORG. REF.			
14			BL1005	1GMN		
15			"			
16			BL1005 S			
17			"			
18			BL1005 S			
19			"			
20	1.5	1/20	53747			
21			"			
22			53747 D			
23			"			
24			53747 S			
25			"			
26			53747 DS			
27			"			
28		1/100	53747 DS			
29			"			
30			53750			
31			"			
32			53750 D			
33			"			
34			CCV			
35			B			
36			D4			
37	1.5		53750 S			
38			"			
39			53750 DS			
40			"			
41	1.5		42277			
42			"			
43			42277 D			
44			"			
45			42277 S			
46			"			
47			42277 DS			
48			"			
49			42260			
50			"			
51		1/40	42261			
52			"			
53			42262			
54			"			
55			42263			
56			"			
57			CCV			
58			B			
59			D4			
60	1.5		42276			
61			"			
62		1/20	42278			
63			"			
64			42279			
65			"			
66			BL1005	2GMN		
67			"			
68			BL1005 S			
69			"			
70			BL1005 DS			
71			"			
72	1.5	1/20	42754			
73			"			
74			42754 D			
75			"			
76			42754 S			
77			"			
78			42754 DS			
79			"			
80			CCV			

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 99.10.05 Run Code: MG02 Matrix: IMP. (MNO4)

Analyst: MG Units: ug (see comments) MDL: 0.03

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12						
13						
14						
15						
16						
17						
18						
19						
20						
21			B			
22			D4			
23	1.5	1/100	42754 DS			
24	↓	↓	"			
25			42281			
26			"			
27			42752			
28	"		"			
29			42753			
30			"			
31		1/20	42755			
32		↓	"			
33			42756			
34			"			
35			42757			
36			"			
37		1/20	42758			
38		↓	"			
39			42759			
40	↓	↓	"			
41	1.5		43215			
42	↓		"			
43			CCV			
44			B			
45			D4			
46			BL1005	36 MN		
47			"			
48			BL1005 S			
49			"			
50			BL1005 S			
51			"			
52	1.5	1/10	43217			
53	↓	↓	"			
54			43217 D			
55			"			
56			43217 S			
57			"			
58			43217 DS			
59		↓	"			
60			43216			
61			"			
62		1/10	43218			
63		↓	"			
64		1/20	43219			
65	↓	↓	"			
66			CCV			
67			B			
68			D4			
69	1.5	1/10	43220			
70	1.5		"			
71		1/20	43221			
72			"			
73			43222			
74			"			
75			43223			
76		↓	"			
77			53685			
78			"			
79			53686			
80	↓		"			

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 99.10.05 Run Code: MG02 Matrix: IMP-

Analyst: _____ Units: µg (see comments) MDL: 0.03

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.6		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.6		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.6		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12						
13						
14						
15						
16						
17						
18						
19						
20						
21			BL1005			
22			"			
23			BL1005 S			
24			"			
25			BL1005 DS			
26			"			
27	1.5	1/20	53687			
28	↓	↓	"			
29			CCV			
30			B			
31			D4			
32	1.5	1/20	53687 D			
33			"			
34			53687 S			
35			"			
36			53687 DS			
37			"			
38		1/20	53688			
39		↓	"			
40		1/10	53689			
41	1.5	1/10	53689			
42			53690			
43			"			
44		1/20	53691			
45			"			
46			53692			
47			"			
48			53693			
49			"			
50			53147			
51			"			
52			WS 378			
53			ORG. REF			
54			QCV			
55			B			
56			D4			
57						
58						
59						
60						
61						
62						
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75						
76						
77						
78						
79						
80						

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

RUN DATE: 10-06-1999 CHART DATE: 10-06-1999
CHART SPEED: 30
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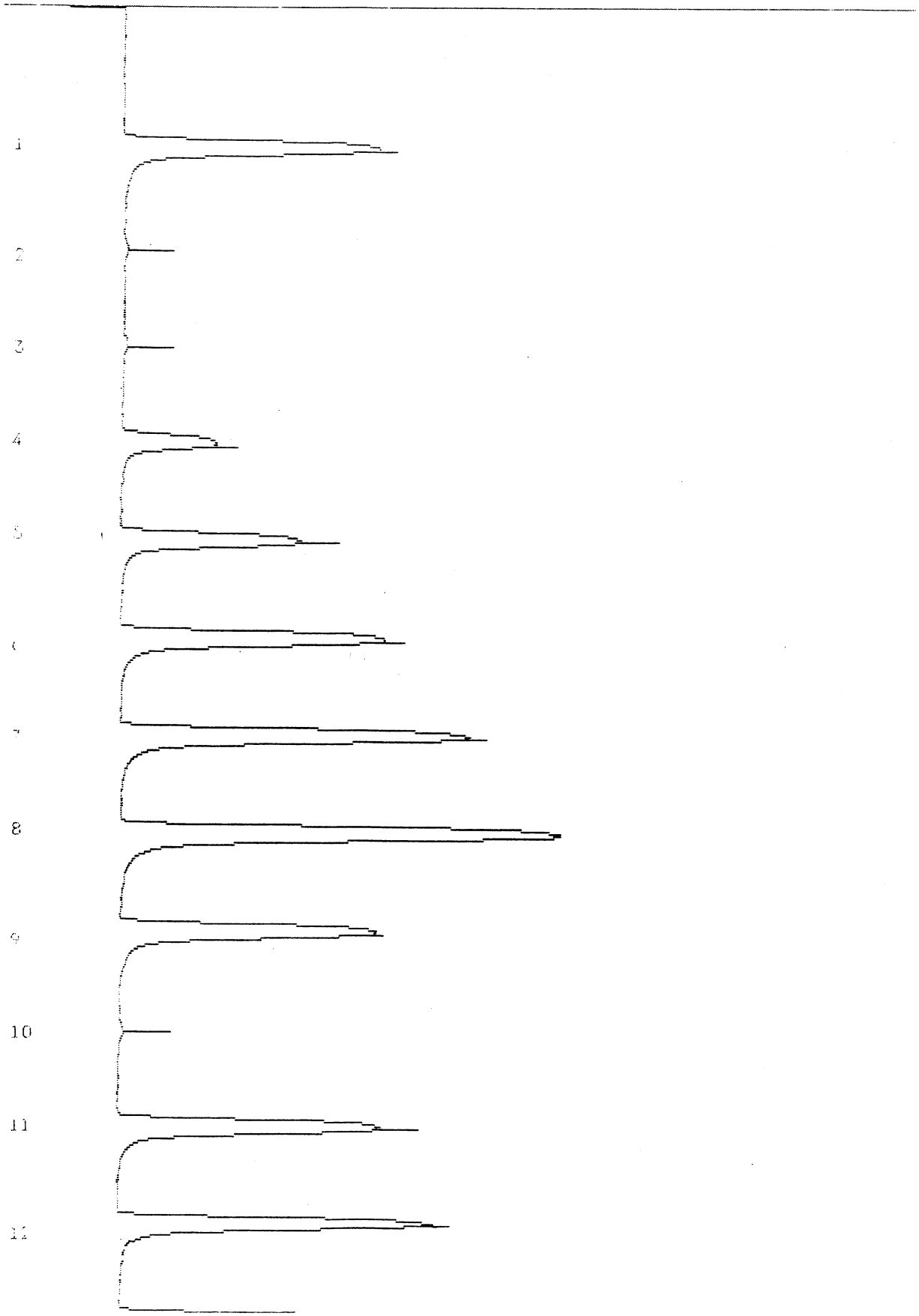

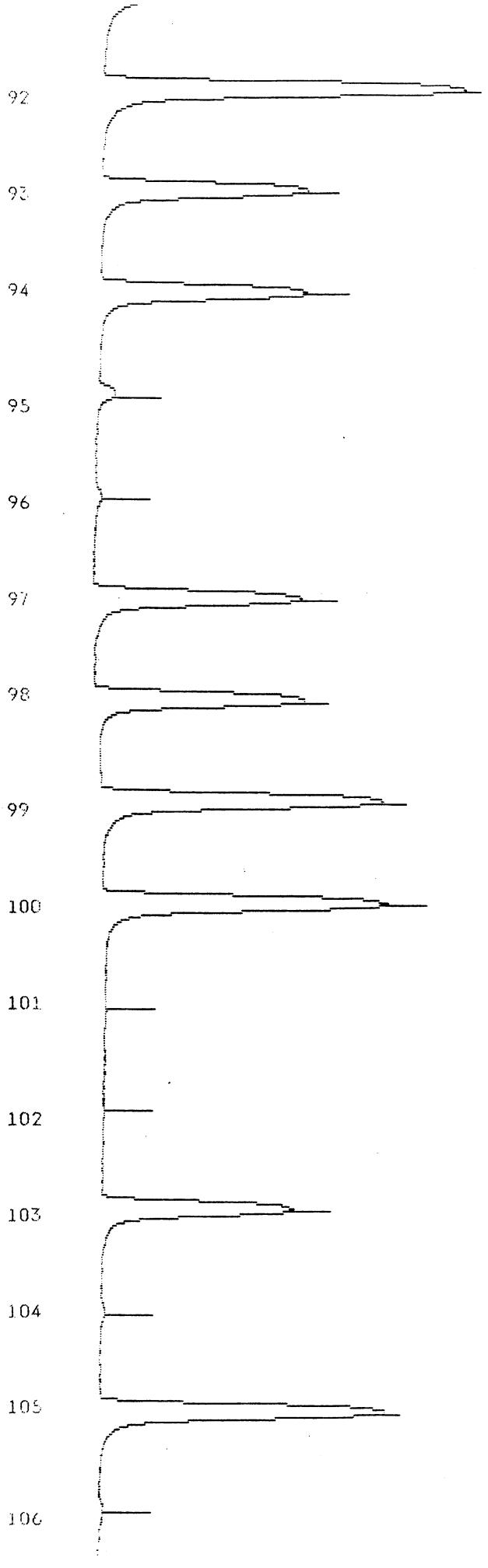
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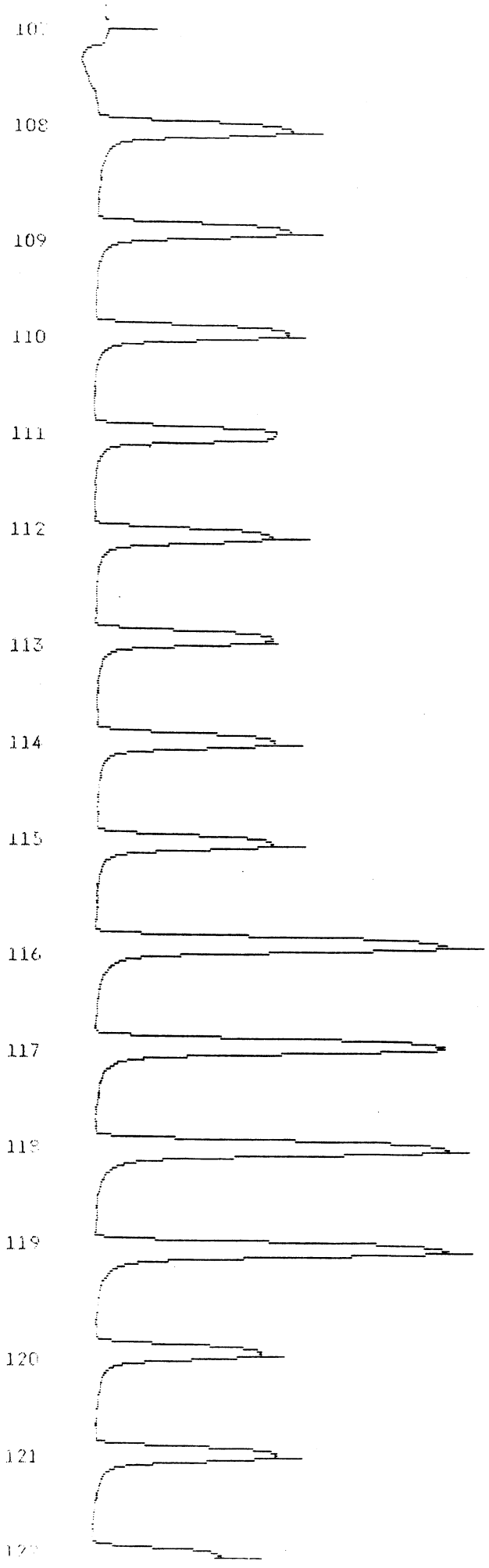
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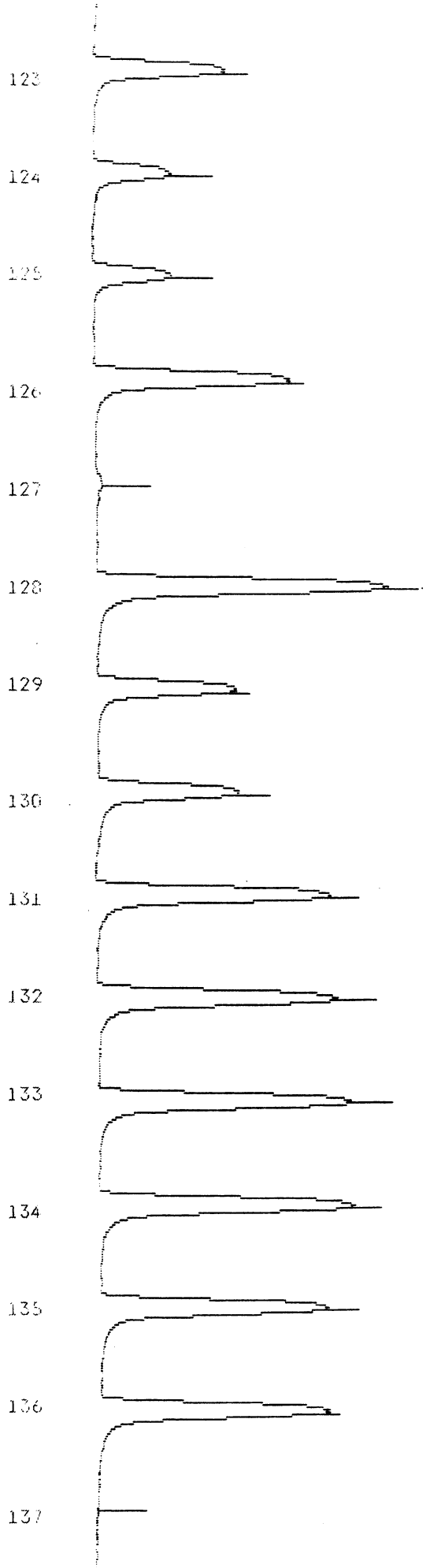
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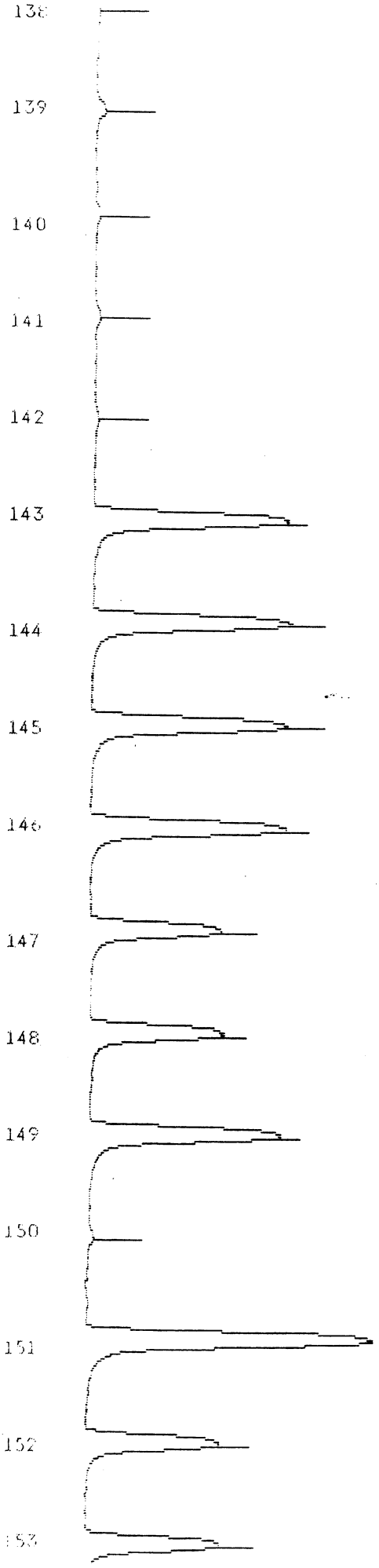
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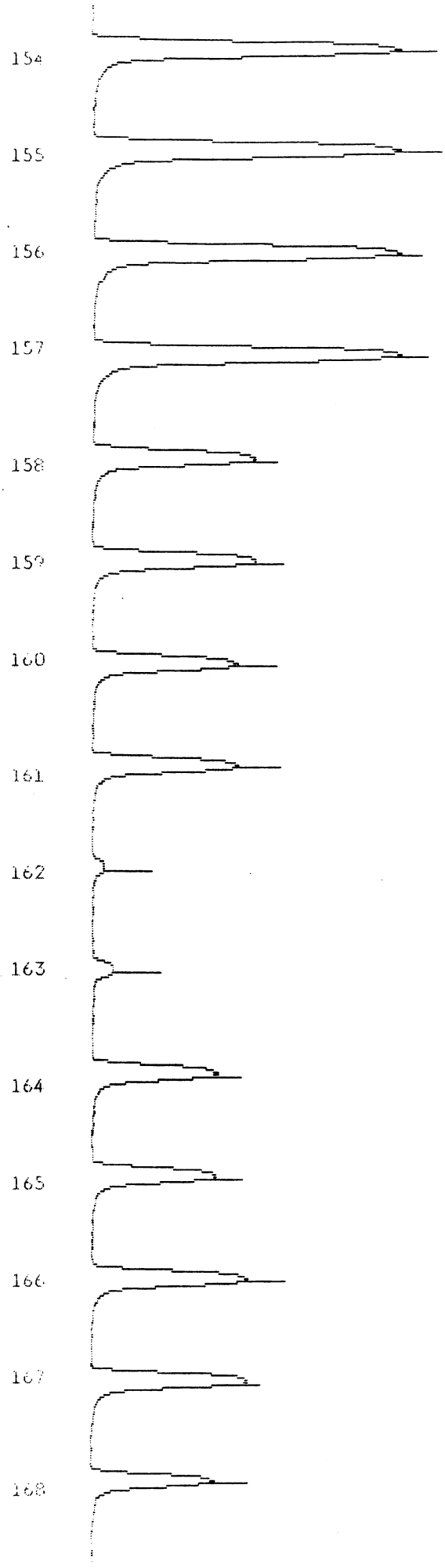
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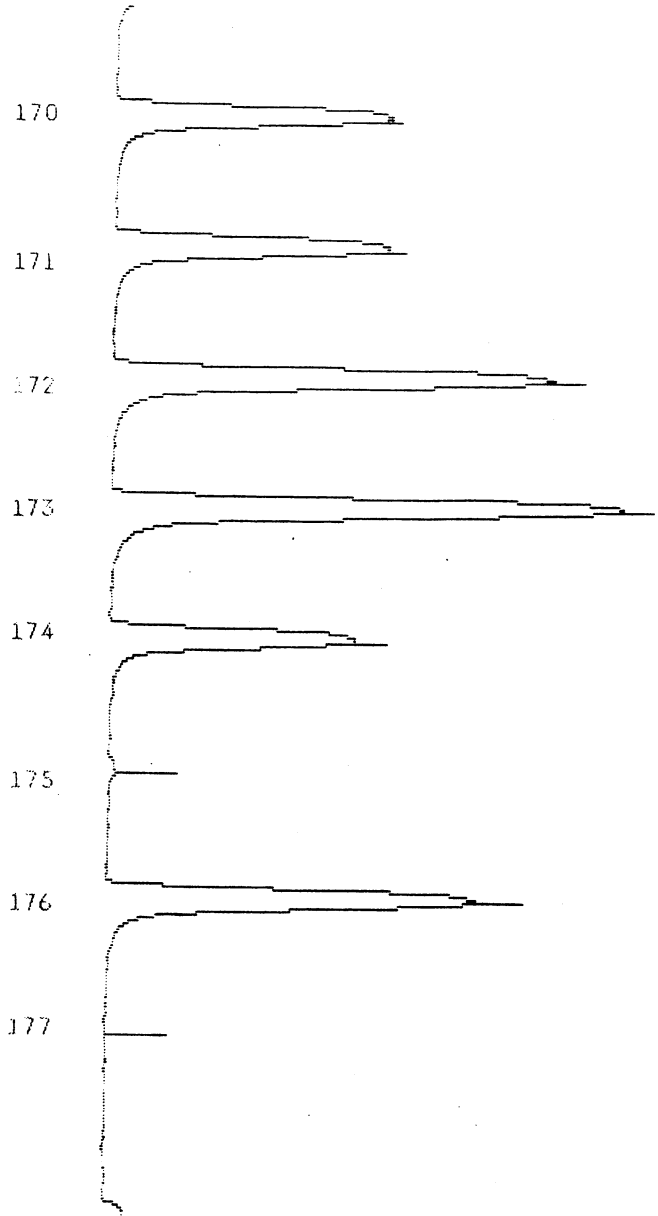
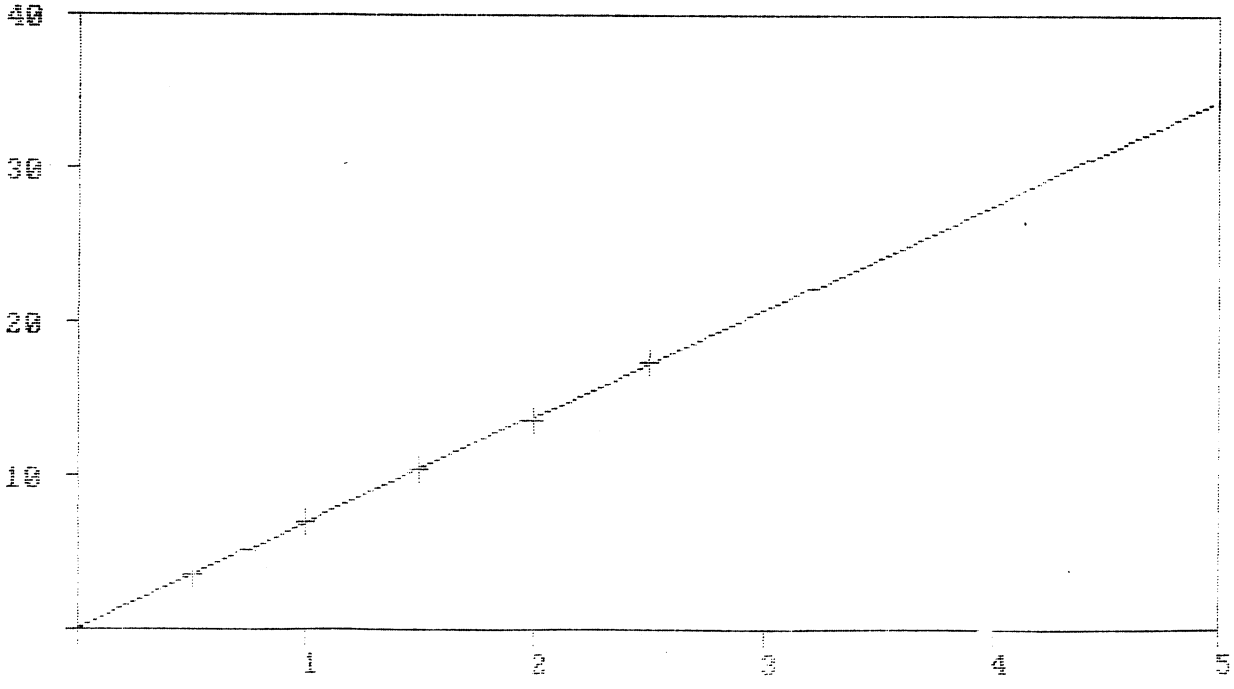
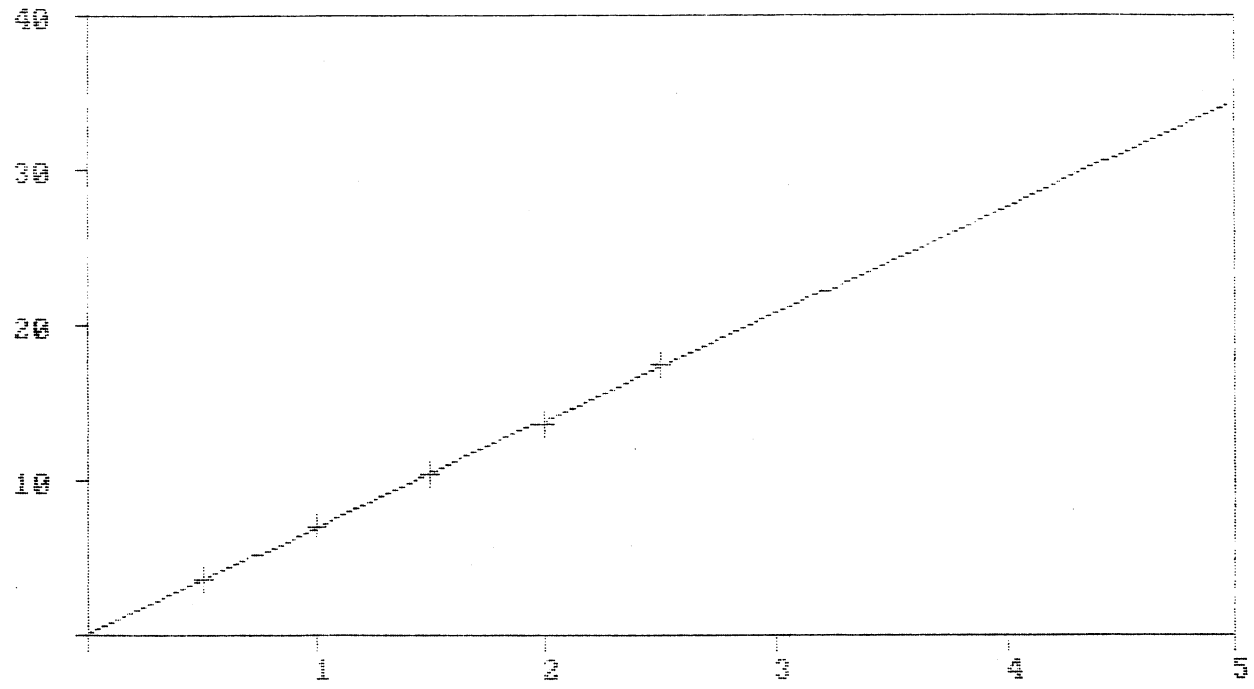


CHANNEL NAME: LDC
RUN NAME: 991005W



CHANNEL NAME: LDC
RUN NAME: 991005W



DATA TYPE: F1A
CALIBRATION ORDER: 1
INTERCEPT = -7.44
SLOPE = 6.862724

CORRELATION: .9999237

CHANNEL NAME: LDC
RUN DATE: 10-06-1999
SAMPLE TABLE NAME: 991005W
METHOD NAME: HGWATER

CUP#	SAMPLE ID	DIL	WGT	HEIGHT/AREA	CONCENTRATION (PPB)	EF
1	PRIMER	1	1	10.1	1.466	s
2	DUMMY	1	1	0.0	-0.004	I
3	S1: 0	1	1	0.1	-0.000	I
4	S2: .5	1	1	3.6	0.509	
5	S3: 1	1	1	6.9	0.996	
6	S4: 1.5	1	1	10.4	1.498	
7	S5: 2	1	1	13.7	1.982	
8	S6: 2.5	1	1	17.3	2.516	
9	ICV	1	1	10.1	1.462 97%	
10	B	1	1	0.0	-0.011	b
11	D4	1	1	10.4	1.498	d
12	WS 378	1	1	12.6 TUG	1.818 91%	
13	ORG REF	1	1	11.9	1.719 86%	
14	BL1005-1GMN	1	1	0.0 <0.03	-0.011	I
15	BL1005-1GMN	1	1	0.0	-0.011	I
16	BL1005S	1	1	6.9	0.996	s
17	BL1005S	1	1	6.9	0.993	
18	BL1005DS	1	1	6.9	1.000	
19	BL1005DS	1	1	6.9	0.989	
20	53747 > REPEATED @ END TO CHECK. MA	30	1	7.9	34.369	
21	53747	30	1	7.8	33.621	
22	53747D	30	1	7.8	33.835	

00086

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	s
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]	42756	30	1	[illegible]	31.807	
[illegible]	42756	30	1	7.4	32.234	
95	42757	1.5	1	0.4	0.080	I
96	42757	1.5	1	0.1	0.005	I
97	42758	30	1	7.4	32.127	
98	42758	30	1	7.4	32.234	
[illegible]	42759	30	1	10.2	44.403	
100	42759	30	1	10.4	45.044	
101	43215	1.5	1	0.0	-0.016	I
102	43215	1.5	1	0.0	-0.016	I
103	CCV	1	1	6.8	0.975 98%	
104	B	1	1	0.0	-0.011	b
105	D4	1	1	10.4	1.498	d
106	BL1005-3GMN	1	1	0.0	-0.011	s
107	BL1005-3GMN	1	1	0.3	0.039	I
108	BL1005S	1	1	7.3	1.053	
109	BL1005S	1	1	6.9	0.993	
110	BL1005DS	1	1	6.9	0.993	
111	BL1005DS	1	1	6.5	0.939	
112	43217	15	1	6.3	13.715	
113	43217	15	1	6.3	13.501	
114	43217D	15	1	6.3	13.662	
115	43217D	15	1	6.3	13.662	
116	43217S	15	1	12.8	27.913	
117	43217S	15	1	12.7	27.539	
118	43217DS	15	1	12.9	27.966	
119	43217DS	15	1	12.8	27.859	
120	43216	1.5	1	5.9	1.270	
121	43216	1.5	1	6.4	1.393	s
122	43218	15	1	4.5	9.765	
123	43218	15	1	4.5	9.712	
124	43219	30	1	2.6	11.097	
125	43219	30	1	2.6	10.883	
126	CCV	1	1	6.8	0.975 98%	
127	B	1	1	0.0	-0.011	b
128	D4	1	1	10.4	1.498	d
129	43220	1.5	1	4.7	1.019	
130	43220	1.5	1	4.9	1.051	
131	43221	30	1	8.2	35.436	
132	43221	30	1	8.5	36.717	
133	43222	30	1	8.9	38.745	
134	43222	30	1	9.1	39.386	
135	43223	30	1	8.0	34.689	
136	43223	30	1	8.1	35.009	s
137	53685	1.5	1	0.0	-0.016	I
138	53685	1.5	1	0.0	-0.016	I
139	53686	1.5	1	0.2	0.021	I
140	53686	1.5	1	0.0	-0.016	I
141	BL1005-4GMN	1	1	0.0	-0.011	I
142	BL1005-4GMN	1	1	0.0	-0.011	I
143	BL1005S	1	1	6.9	0.996	
144	BL1005S	1	1	7.0	1.014	
145	BL1005DS	1	1	6.9	0.996	
146	BL1005DS	1	1	7.0	1.003	
147	53687	30	1	4.5	19.530	
148	53687	30	1	4.7	20.064	
149	CCV	1	1	6.7	0.968 97%	
150	B	1	1	0.0	-0.011	b
151	D4	1	1	10.4	1.498	s
152	53687D	30	1	4.7	20.064	
153	53687D	30	1	4.7	20.064	
154	53687S	30	1	11.2	48.673	

157	53687	30	1	11.1	48.246	
158	53688	30	1	5..	24.654	
159	53688	30	1	5.7	24.654	
160	53689	15	1	2.0	10.833	
161	53689	15	1	2.1	10.886	
162	53690	1.5	1	0.2	0.037	I
163	53690	1.5	1	0.6	0.112	I
164	53691	30	1	4.3	18.570	
165	53691	30	1	4.2	18.143	
166	53692	30	1	5.4	23.267	s
167	53692	30	1	5.4	23.160	
168	53693	30	1	4.2	18.143	
169	53693	30	1	4.3	18.356	
170	53747	30	1	7.7	33.301	
171	53747	30	1	7.6	33.088	
172	WS 378	1	1	12.4	1.793	90%
173	ORG. REF	1	1	14.4	2.081	104%
174	CCV	1	1	6.8	0.975	98%
175	B	1	1	0.0	-0.011	b
176	04	1	1	10.4	1.498	d

INTERCEPT: 0.07 LINEAR COEF: 6.862724
CORRELATION COEF: .9999237

Zenon Number	Client	Client ID	Parameter	TS	Result	Dup.	Spike	% Rec.	Dup. Spk	% Rec.	Batch Date	Batch Code	Run Date	Run Code	Day Old	Day In	Analyst's Comments
053684	SAMI	MB R456	Mercury -	PV	-0.0050	-99999.0	0.0500	99.	0.0500	100.	99/10/01	5B2B	99/10/02	MG01	17.	9.	*BLKIMP*
053685	SAMI	Neal Stn U4 Blank	Mercury -	PV	-0.2500						99/10/01	5B2B	99/10/02	MG01	17.	9.	*DDL*
053686	SAMI	Neal Stn U4 Inlet-FB	Mercury -	PV	-0.2500						99/10/01	5B2B	99/10/02	MG01	17.	9.	*DDL*
053687	SAMI	Neal Stn U4 Inlet-R1	Mercury -	PV	-0.2500	-0.2500	2.6280	103.	2.4960	97.	99/10/01	5B2B	99/10/02	MG01	17.	9.	*PDS*
053688	SAMI	Neal Stn U4 Inlet-R2	Mercury -	PV	-0.2500						99/10/01	5B2B	99/10/02	MG01	17.	9.	*DDL*
053689	SAMI	Neal Stn U4 Inlet-R3	Mercury -	PV	-0.2500						99/10/01	5B2B	99/10/02	MG01	17.	9.	*DDL*
053690	SAMI	Neal Stn U4 Stack-FB	Mercury -	PV	-0.2500						99/10/01	5B2B	99/10/02	MG01	18.	9.	*DDL*
053691	SAMI	Neal Stn U4 Stack-R1	Mercury -	PV	-0.2500						99/10/01	5B2B	99/10/02	MG01	17.	9.	*DDL*
053692	SAMI	Neal Stn U4 Stack-R2	Mercury -	PV	-0.2500						99/10/01	5B2B	99/10/02	MG01	17.	9.	*DDL*
053693	SAMI	Neal Stn U4 Stack-R3	Mercury -	PV	-0.2500						99/10/01	5B2B	99/10/02	MG01	17.	9.	*DDL*
BL1001	INTERNAL		Mercury -	PV	-0.0050	-99999.0	0.0500	99.	0.0500	100.	99/10/01	5B2B	99/10/02	MG01	$$$	$$$	*BLKIMP*

11 Tests for OHPOX with an MDL of 0.010 ug Validated By CMH Control Chart Updated N/A IO Requirements met N/A

88000

LDC AUTOSAMPLER RUN LOG (MERCURY)

Date: 99.10.02 Run Code: MG01 Matrix: MP

Analyst: MG Units: µg (see comments) MDL: _____

Cup	Dig. F.	Dil. F.	Zenon ID	Init. Conc.	F. Conc.	% R
1			Primer (ICV)			
2			Dummy (Blk)			
3			Std 1 (S1)	0.0		
4			Std 2 (S2)	0.5		
5			Std 3 (S3)	1.0		
6			Std 4 (S4)	1.5		
7			Std 5 (S5)	2.0		
8			Std 6 (S6)	2.5		
9			ICV			
10			B (Std 1)			
11			D4 (Std 4)			
12			WS 378			
13			ORG. REF			
14			BL1001	5B2B		
15			"			
16			BL1001 S			
17			"			
18			BL1001 DS			
19			"			
20	10		53687			
21			"			
22			53687 D			
23			"			
24			53687S			
25			"			
26			53687 DS			
27			"			
28	"		53685			
29			"			
30			53686			
31			"			
32			53688			
33	↓		"			
34			CCV			
35			B			
36			D4			
37	10		53689			
38			"			
39			53690			
40	↓		"			
41	10		53691			
42			"			
43			53692			
44			"			
45			53693			
46	↓		"			
47			BL1001	MN2B		
48			"			
49			BL1001 S			
50			"			
51			BL1001 DS			
52			"			
53	10		43207			
54			"			
55			43207 D			
56	↓		"			
57			CCV			
58			B			
59			D4			
60	10		43207S			
61			"			
62			43207DS			
63			"			
64			43206			
65			"			
66			43208			
67			"			
68			43209			
69			"			
70			43210			
71			"			
72			43211			
73			"			
74			43212			
75			"			
76			43213			
77			"			
78			43214			
79	↓		"			
80			CCV			

Comments: *** "HG-347" and "MISA12" units are expressed in mg/L not ug/L

ICV = 1.5 ug/L, CCV = 1.0 ug/L, Blank Spike = 1.0 ug/L for liquid samples.

ICV = 1.5 mg/kg, CCV = 1.0 mg/kg, Blank Spike = 1.0 mg/kg for solid samples.

00090

EPA 7470 WATER PREPARATION LOG - MERCURY

DG7470HG
DGHGLEACH, DG29HG***

Calibration Solutions:

#	I.D.	*Conc.	Spike	**Conc. Entered
1	Blank/Dummy	0 ppb	None	0.0
2	Standard 1	0 ppb	None	0.0
3	Standard 2	0.33	200 ul of 0.05 ppm IV working standard	0.5
4	Standard 3	0.67	400 ul of 0.05 ppm IV working standard	1.0
5	Standard 4	1.0	600 ul of 0.05 ppm IV working standard	1.5
6	Standard 4	1.0	600 ul of 0.05 ppm IV working standard	1.5
7	Standard 5	1.33	800 ul of 0.05 ppm IV working standard	2.0
7	Standard 6	1.67	1000 ul of 0.05 ppm IV working standard	2.5

Check List
- Digest Code/labels
- Samples poured out
- Acids added
- Reagents added
- Samples spiked
- Bath at 95 degrees C
- Samples digested
- Hydroxylamine HCl added
- Samples bulked and mixed
- Rack order checked

	#	Sample I.D.	B.Code	Init.Vol.	F. Vol.	Dil	Comment
	9	ICV (Init. Calib. Verif.) 4B	4B2B	20 ml	30 ml	1 X	1.5 ppb = 600 ul. of 0.05 ppm HP MESS-ZENO 30/QCA Std.
	10	BL 1001	4B2B	"	"	"	(Processed Blank)
	11	BL 1001 S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	12	53145	"	"	"	10X	
1	13	D	"	"	"	"	(Duplicate sample)
1	14	S	"	"	"	"	1 ppb = ~~400~~ 200 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	15	DS	"	"	"	"	(Duplicate Spiked sample)
2	16	53144	"	"	"	"	
3	17	146	"	"	"	"	
4	18	147	"	"	"	"	
5	19	148	"	"	"	"	
6	20	149	"	"	"	"	
7	21	150	"	"	"	"	
8	22	151	"	"	"	"	
9	23	53164	"	"	"	"	
10	24	53165	"	"	"	"	
	25	CCV (Cont. Calib. Verif.)	5B2B	20 ml	30 ml	1 X	1.0 ppb = 400 ul. of 0.05 ppm HP MESS-ZENO 30/QCA Std.
	26	BL 1001	"	"	"	"	(Processed Blank) 53684
	27	BL 1001 S	"	"	"	"	1 ppb = 400 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	28	53687	"	"	"	10X	
1	29	D	"	"	"	"	(Duplicate sample)
1	30	S	"	"	"	"	1 ppb = ~~400~~ 200 ul. of 0.05 ppm Inorganic Ventures Std Interm.
1	31	DS	"	"	"	"	(Duplicate Spiked sample)
2	32	53685	"	"	"	"	
3	33	86	"	"	"	"	
4	34	88	"	"	"	"	
5	35	89	"	"	"	"	
6	36	90	"	"	"	"	
7	37	91	"	"	"	"	
8	38	92	"	"	"	"	
9	39	93	"	"	"	"	
10	40		"	"	"	"	

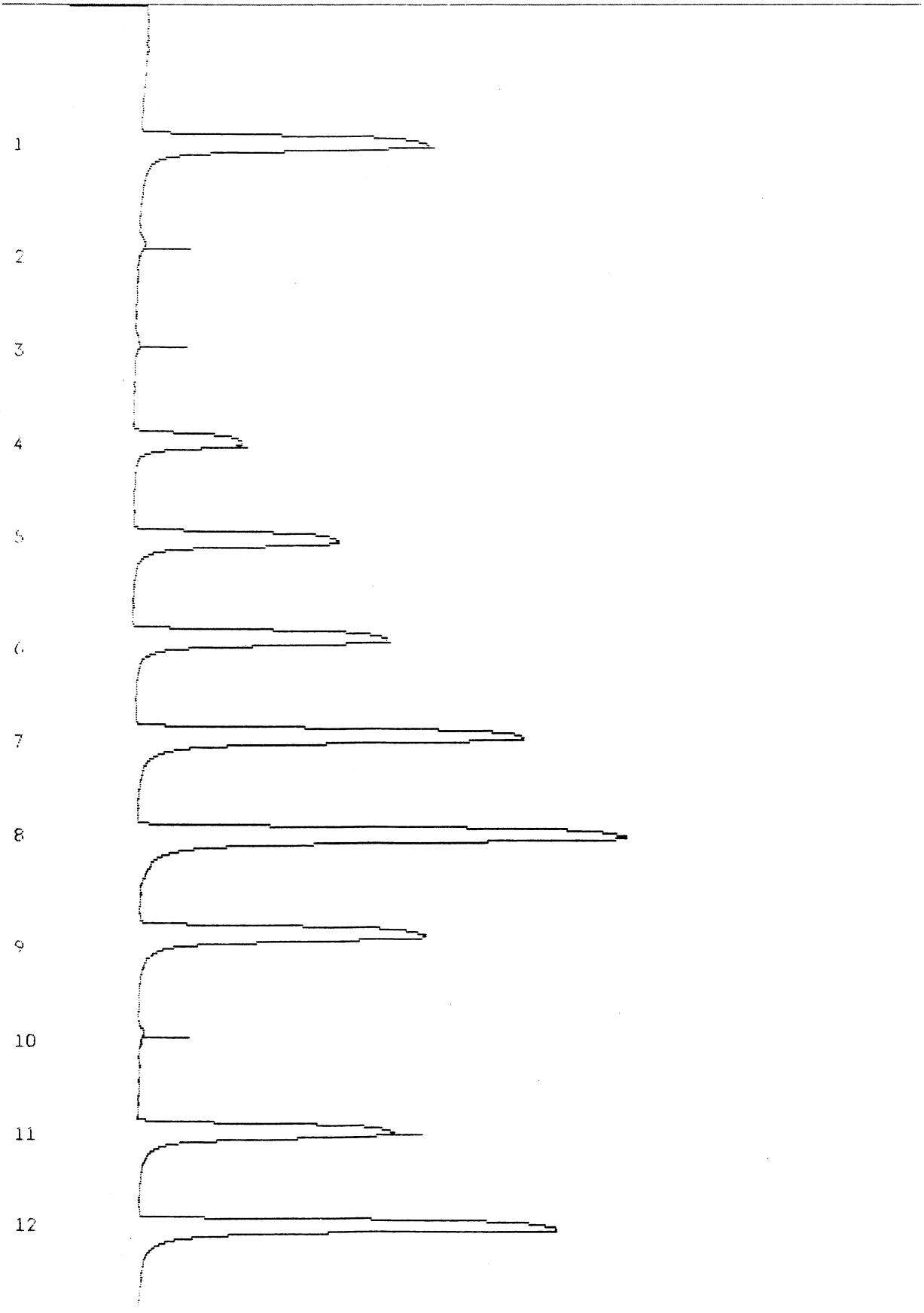
Notes: Other Applicable Test Codes: DG29HG-1B, DG29HG-2B, DG29HG-3A, DG29HG-3B, DG29HG-3C
DG29HGI, DG29HGF, DG101AA1, DG101AA2

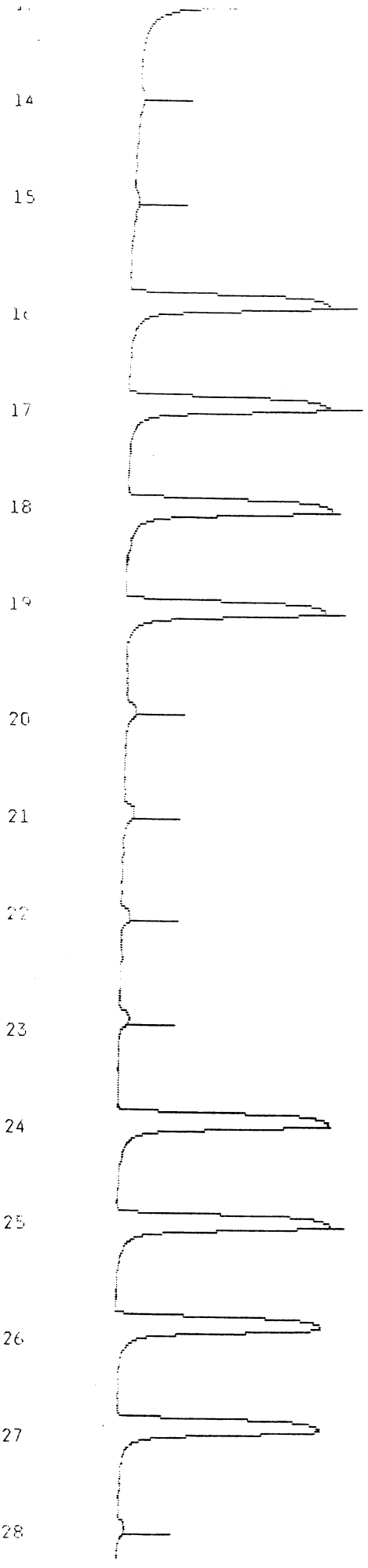
Include External Reference Material (EPA WS 378 or SPEX CertiPrep TM - WS) per run — Prepare 0.05 ppm standards daily

HNO3 Lot. No. | H2SO4 Lot. No. | Bath Temps. / / °C

Prepared By: | Date: | Checked by:

RUN DATE: 10-02-1999 CHART DATE: 10-03-1999
CHART SPEED: 30
DATA FILE NAME: C:\DP4\DATA\991002W.DAT

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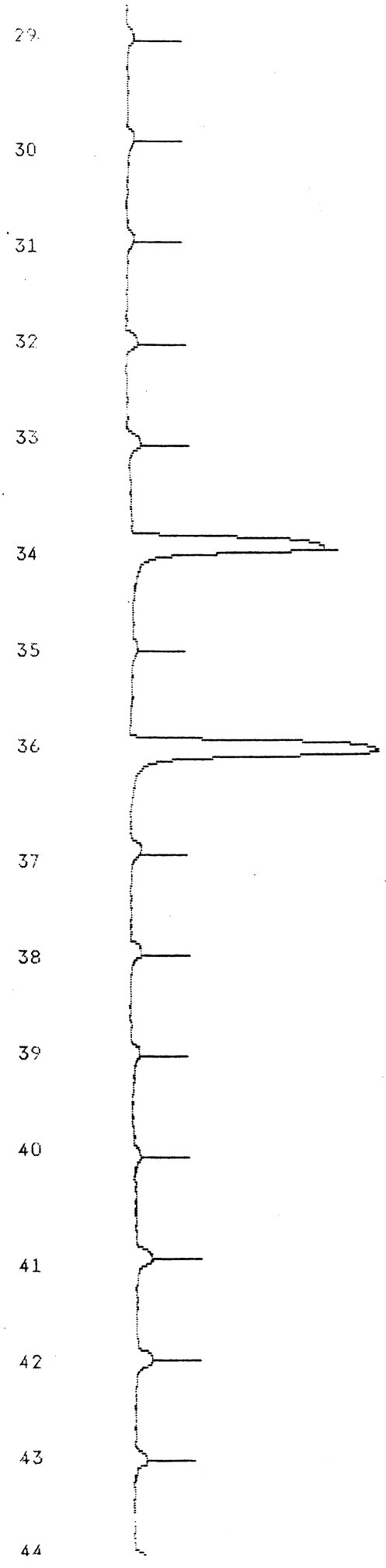
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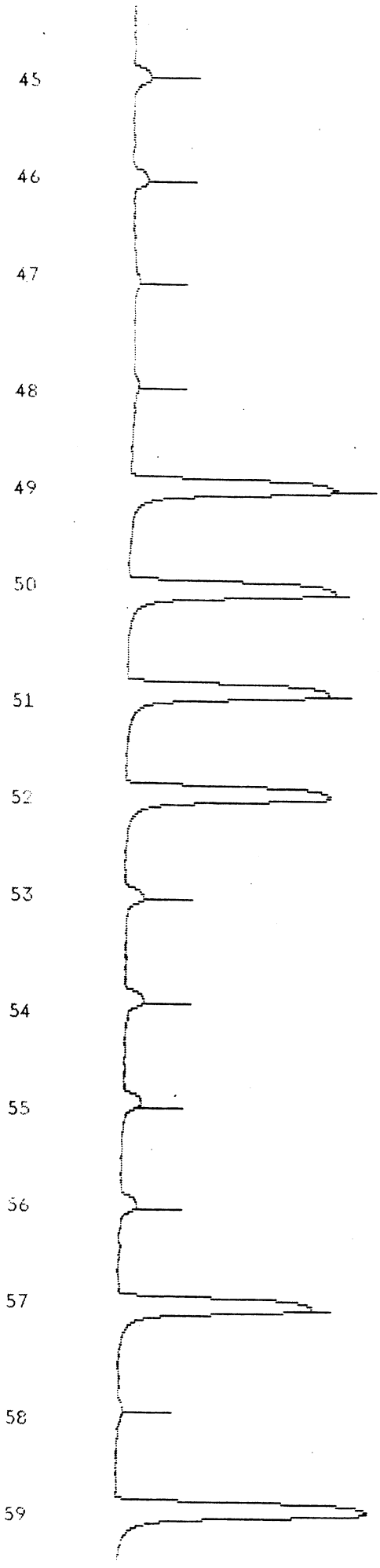
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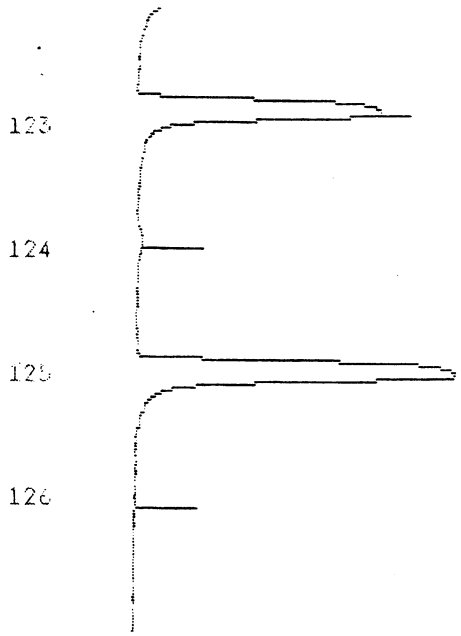
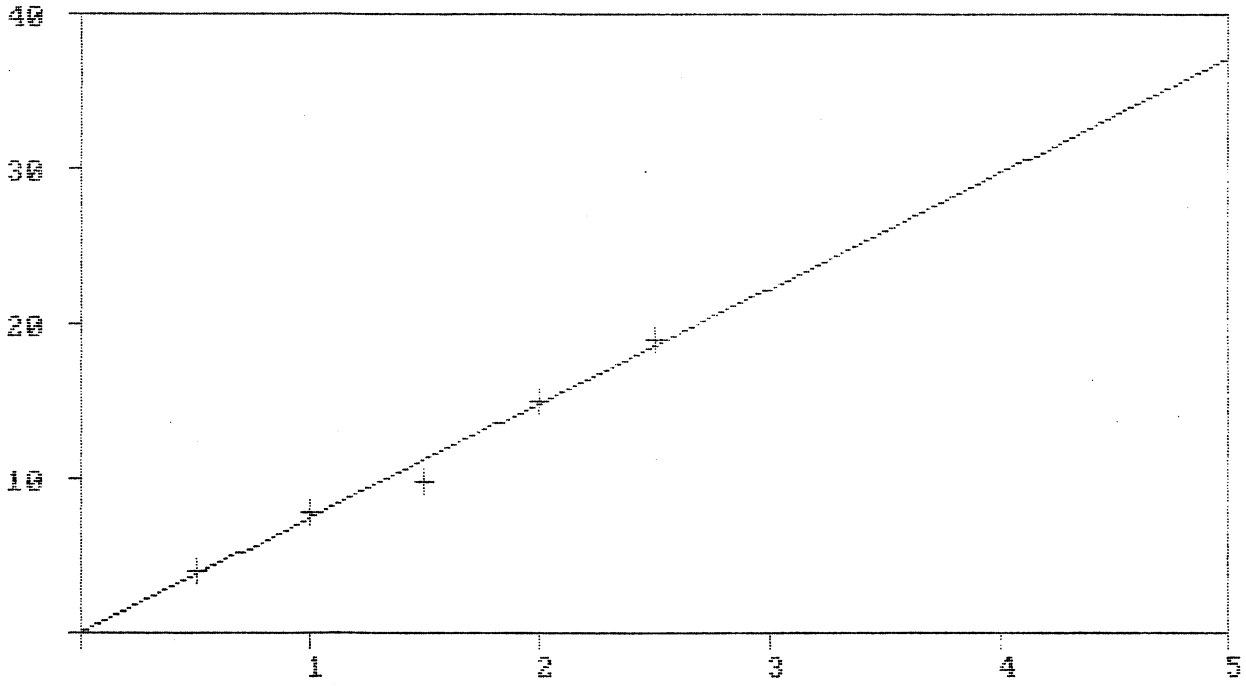


CHANNEL NAME: LDC
RUN NAME: 991002W



DATA TYPE: FIA CALIBRATION ORDER: 1
INTERCEPT = -1.86 SLOPE = 7.405547

CORRELATION: .9959481

CHANNEL NAME: LDC
RUN DATE: 10-02-1999
SAMPLE TABLE NAME: 991002W
METHOD NAME: HGWATER

PPb

CUP#	SAMPLE ID	DIL	WGT	HEIGHT/AREA	CONCENTRATION	EF
1	PRIMER	1	1	11.2	1.504	S
2	DUMMY	1	1	0.1	0.007	I
3	S1: 0	1	1	0.0	0.001	I
4	S2: .5	1	1	4.0	0.538	
5	S3: 1	1	1	7.8	1.053	

8	061 2.5	1	1	10.9		2.956		
9	ICV	1	1	11.0	.00096	2.488	99%	
10	B	1	1	0.0		-0.003	b	
11	STD4	1	1	9.9		1.330		
12	WS 378	1	1	16.2		2.187	109%	
13	ORG REF	1	1	16.2		2.180	109%	
14	BL1001-SB2B 53684	1	1	0.0	<0.005	-0.003	I	
15	BL1001-SB2B	1	1	0.0		-0.003	I	
16	BL1001S	1	1	7.3	0.050	0.987	99%	
17	BL1001S	1	1	7.4		0.997		
18	BL1001DS	1	1	7.5	0.050	1.016	100%	
19	BL1001DS	1	1	7.3		0.980		
20	53687	10	1	0.2	<0.250	0.272	I	
21	53687	10	1	0.2		0.239	I	
22	53687D	10	1	0.1	<0.250	0.173	I	
23	53687D	10	1	0.2		0.239	I	
24	53687S	10	1	7.7	2.628	10.428	103%	
25	53687S	10	1	7.9		10.593		
26	53687DS	10	1	7.5	2.496	10.065	97%	
27	53687DS	10	1	7.4		9.900		
28	53685	10	1	0.1	<0.250	0.140	I	
29	53685	10	1	0.1		0.107	I	
30	53686	10	1	0.1	<0.250	0.074	I	
31	53686	10	1	0.1		0.140	s	
32	53688	10	1	0.3	<0.250	0.338	I	
33	53688	10	1	0.3		0.437	I	
34	CCV	1	1	7.1		0.957	95%	
35	B	1	1	0.0		-0.003	b	
36	STD4	1	1	9.3		1.247		
37	53689	10	1	0.2	<0.250	0.272	I	
38	53689	10	1	0.2		0.305	I	
39	53690	10	1	0.1	<0.250	0.140	I	
40	53690	10	1	0.1		0.107	I	
41	53691	10	1	0.4	<0.250	0.535	I	
42	53691	10	1	0.4		0.535	I	
43	53692	10	1	0.2	<0.250	0.305	I	
44	53692	10	1	0.2		0.305	I	
45	53693	10	1	0.3	<0.250	0.437	I	
46	53693	10	1	0.4		0.502	s	
47	BL1001-MN2B 43184	1	1	0.0	<0.005	0.001	I	
48	BL1001-MN2B	1	1	0.0		-0.003	I	
49	BL1001S	1	1	7.6	0.051	1.023	103%	
50	BL1001S	1	1	7.6		1.026		
51	BL1001DS	1	1	7.4	0.050	0.993	101%	
52	BL1001DS	1	1	7.5		1.016		
53	43207	10	1	0.4	<0.250	0.470		
54	43207	10	1	0.4		0.470	I	
55	43207D	10	1	0.5	<0.250	0.601	I	
56	43207D	10	1	0.4		0.502	I	
57	CCV	1	1	7.0		0.944	94%	
58	B	1	1	0.0		-0.003	b	
59	STD4	1	1	9.3		1.247		
60	43207S	10	1	8.0	2.698	10.791	103%	
61	43207S	10	1	8.0		10.791	s	
62	43207DS	10	1	7.8	2.644	10.560	101%	
63	43207DS	10	1	7.9		10.593		
64	43206	10	1	0.1	<0.250	0.140	I	
65	43206	10	1	0.1		0.140	I	
66	43208	10	1	0.1	<0.250	0.140	I	
67	43208	10	1	0.2		0.272	I	
68	43209	10	1	0.3	<0.250	0.437	I	
69	43209	10	1	0.3		0.371	I	
70	43210	10	1	0.3	<0.250	0.371	I	
71	43210	10	1	0.3		0.404	I	

NOMENCLATURE

acf = actual cubic feet

acfm = actual cubic feet per minute

A = effective area of flue in square feet

acm = actual cubic meters

acmm = actual cubic meters per minute

A_n = inside area of sampling nozzle in square feet

B_{ws} = water vapor in gas stream, proportion by volume

%C = percent carbon by weight, dry basis

%CO = percent carbon monoxide by volume, dry basis

$\%CO_2$ = percent carbon dioxide by volume, dry basis

C_p = pitot tube coefficient

D_I = dust loading per heat input in pounds (grams) per million Btu (calories) per Fr constant

D_I' = dust loading per heat input in pounds (grams) per million Btu (calories) per Fr calculated

dscf = dry standard cubic feet

dscfh = dry standard cubic feet per hour

dscm = dry standard cubic meters

dscmh = dry standard cubic meters per hour

fps = feet per second

F_r = ratio factor of dry flue gas volume to heat value of combusted fuel in dry standard cubic feet (meters) per million Btu (calories)

gms = grams

gm-mole = gram-mole

grs = grains

ΔH = orifice pressure drop in inches water, average

%H = percent hydrogen by weight, dry basis

H_c = heat of combustion in Btu per pound, dry basis

hr = hour

%I = percent isokinetic

in. Hg = inches mercury

lbs = pounds

lb-mole = pound-mole

%M = percent moisture by volume

mmBtu = million Btu

mmcal = million calories

mm Hg = millimeters mercury

mps = meters per second

M_s = molecular weight in pound (gram) per pound (gram) mole (wet basis)

%N = percent nitrogen by weight, dry basis

$\%N_2$ = percent nitrogen by difference, dry basis

%O = percent oxygen by difference, dry basis

$\%O_2$ = percent oxygen by volume, dry basis

P_b = barometric pressure in inches mercury

P_{std} = standard absolute pressure (29.92 in Hg)

P_s = absolute pressure in flue in inches (millimeters) mercury

P_f = static pressure in flue in inches water, average

$\sqrt{\Delta P}$ = square root of velocity head in inches water, average

%S = percent sulfur by weight, dry basis

scf = standard cubic feet

scm = standard cubic meters

T_{std} = absolute temperature of air in degrees Rankine at standard conditions (528 degrees)

T_s = absolute temperature of flue gas in degrees Rankine, average

T_m = absolute temperature at meter in degrees Rankine, average

V_s = velocity of flue gas in feet (meters) per second

V_l = volume of condensate through the impingers in milliliters

V_{lc} = volume of liquid collected in condenser in milliliters plus weight of liquid absorbed in silica gel in grams indicated as milliliters

V_m = volume of metered gas measured at meter conditions in cubic feet

V_{ms} = volume of metered gas corrected to dry standard conditions in cubic feet (meters)

V_o = volume of flue gas at actual conditions in cubic feet (meters) per minute

Q_{sd} = volume of flue gas corrected to dry standard conditions in cubic feet (meters) per hour

V_t = total volume of flue gas sampled at actual conditions in cubic feet (meters)

V_w = volume of water vapor in metered gas corrected to standard conditions in cubic feet (meters)

V_{wc} = volume of water condensed in impingers corrected to standard conditions

V_{wsg} = volume of water collected in silica gel corrected to standard conditions

W_a = total weight of dust collected per unit volume in grains (grams) per actual cubic feet (meters)

W_d = total weight of dust collected per unit volume in pounds (grams) per dry standard cubic feet (meters)

W_g = total weight of dust collected in grams

W_h = total weight of dust collected per unit volume in pounds (grams) per hour, dry basis

W_p = total weight of dust collected in pounds

W_s = total weight of dust collected per unit volume in grains (grams) per dry standard cubic feet (meters)

W_{sg} = impinger silica gel weight gain in grams

Y = metered gas volume correction factor

Θ = total elapsed sampling time in minutes

SAMPLE CALCUATION - INLET RUN 1

1. ABSOLUTE FLUE PRESSURE (in. Hg)

$P_S = (\pm P_f \div 13.6) + P_b$
$27.76 = (-18.9 \div 13.6) + 29.15$

2. WATER VAPOR VOLUME IN METERED GAS CORRECTED TO STANDARD CONDITIONS (scf)

$V_W = V_l * .0471$
$.55 = 181.5 * .0471$

3. METERED GAS VOLUME CORRECTED TO STANDARD CONDITIONS (scf)

$$V_{ms} = 17.64 \times Y \times V_m \frac{P_b + (\Delta H/13.6)}{T_m}$$

$$57.535 = 17.64 \times 0.997 \times 60.111 \frac{29.15 + (0.874/13.6)}{536.8}$$

4. PERCENT MOISTURE IN FLUE GAS

$$B_{ws} = \frac{V_w}{(V_{ws} + V_w)} \qquad \%M = B_{ws} \times 100$$

$$0.129 = \frac{8.55}{(57.535 + 8.55)} \qquad 12.94 = 0.129 \times 100$$

5. AVERAGE RESULTS OF FLUE GAS ANALYSIS

$\%N_2$ dry $= 100 - (\%CO_2 + \%O_2 + \%CO)$
$81.0 = 100 - (13.5 + 5.5 + \%CO)$

6. APPROXIMATE MOLECULAR WEIGHT OF FLUE GAS (WET BASIS) (lb/lb-mole)

$M_S = (18 \times B_{ws}) + ((.440\ (\%CO_2) + .320\ (\%O_2) + .280\ (\%N_2 + \%CO)) \times (1-B_{ws})$
$28.78 = (18 \times 0.129) + ((.440\ (13.5) + .320\ (5.5) + .280\ (81.0 + \%CO)) \times (1-0.129)$

7. GAS VELOCITY IN FLUE (fps)

$$V_s = 85.49 \times C_p \left(\sqrt{\Delta P}\right)_{avg.} \sqrt{\frac{T_s}{P_s \times M_s}}$$

$$66.05 = 85.49 \times 0.83 \times (.954)_{avg.} \sqrt{\frac{760.5}{27.76 \times 28.78}}$$

8. FLUE GAS VOLUME AT ACTUAL CONDITIONS (acfm)

$Vo = V_S \times A \times 60$

$1{,}381{,}414 = 66.05 \times 348.60 \times 60$

9. FLUE GAS VOLUME CORRECTED TO DRY STANDARD CONDITIONS (dscfh)

$$Q_{sd} = \frac{T_{std}}{29.92} \times \frac{P_s}{T_s} \times V_o \times (1 - B_{ws}) \times 60$$

$$46{,}492{,}461 = \frac{528}{29.92} \times \frac{27.76}{760.5} \times 1{,}381{,}414 \times (1 - 0.129) \times 60$$

SAMPLE CALCULATION - INLET RUN 1

PBM	Particle Bound Mercury (lb/hr)
FA	front half analysis (μg)
FB	front half blank (μg)
Vm	volume metered-standard conditions
dscfh	dry standard cubic feet per hour
KCLA	Potassium Chloride analysis (μg)
KCLB	Potassium Chloride blank (μg)
OM	oxidized Mercury (lb/hr)
H_2O_2A	acified Hydrogen Peroxide solutions analysis (μg)
H_2O_2B	acified Hydrogen Peroxide solutions blank (μg)
Km_nO_4A	Potassium permanganate solution analysis (μg)
Km_nO_4B	Potassium permanganate solution blank (μg)
EM	Elemental Mercury
TM	Total Mercury

Particle Bound Mercury

$PBM = (((FA - FB) / V_m) * dscfh) / 453,590,000$

$0.000333 = (((0.240 - 0.05) / 57.535) * 46,492,461) / 453,590,000$

Oxidized Mercury

$OM = (((KCLA - KCLB) / V_m)\ dscfh) / 453,590,000$

$0.0119 = (((6.70 - 0.03) / 57.535)\ \ 46,492,461) / 453,590,000$

Elemental Mercury

$EM = ((((H_2O_2A - H_2O_2B) + (Km_nO_4A - Km_nO_4B)) / V_m)\ \ dscfh) / 453,590,000$

$0.0158 = ((((0.25 - 0.25) + (8.90 - 0.04)) / 57.535)\ \ 46,492,461) / 453,590,000$

Total Mercury

$TM = PBM + OM + EM$

$0.0280 = 0.000338 + 0.01188 + 0.01578$

AIR QUALITY CONTROL DIVISION
TESTING FORM

Particulate Field Data Sheet

060293 Form AQD-(T-S)-5

Burns & McDonnell

Client: MID-America		Date: 9/14/99	Page 1 Of 2
Project No.: 99-343-3	Operator: Kyle Blanz		
Sampling Location: Unit 4 Inlet Duct	Run No.: 1		
Filter No.: 1	Acetone No.:	Condensate: ~~185~~ 191.5	
Barometric Pressure: 29.15	Static Pressure: -18.9	Probe Number:	
Nozzle Diameter: .193	Nozzle Number: S 187	Pitot Coefficient: .83	Pitot Number: K-1
Meter Corr. Factor: .997	Meter-Orifice: 790.1		
Sample Pt. Time: 5 min	Assumed % Moisture: 8	Leak Test: Before .003 @ 15"	After .011 @ 18" Hg

Orsat Analysis

CO_2	$+O_2$	O_2	CO
13.5		5.5	

Sample Point	ΔP	√ΔP	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr. (In. HG)	Dry Gas Meter Reading in Cu. Ft.
start @		1005									971.908
A1	.60	.775	.57	291	241	41		69	70	4	973.97
2	.60	.775	.56	297	253	41		70	71	4	976.00
3	.60	.775	.56	298	259	41		71	72	4	978.01
B1	.65	.8062	.61	294	261	43		72	72	5	980.09
2	.75	.866	.71	298	262	44		72	73	5	982.35
3	.80	.894	.75	300	257	44		73	73	5	984.68
C1	.70	.837	.66	292	260	44		74	74	5	986.86
2	.95	.975	.90	299	255	45		75	75	6	989.42
3	.90	.949	.85	303	253	45		76	75	6	991.90
D1	.85	.922	.81	295	256	45		77	76	6	994.35
2	~~.95~~	.975	.90	302	259	45		78	76	6	996.89
3	~~1.00~~	1.000	.95	303	254	46		78	76	6	999.51
E1	.85	.922	.81	297	252	46		79	77	7	1001.96
2	1.00	1.000	.95	303	250	46		79	77	7	1004.58
3	1.00	1.000	.94	306	256	46		80	78	7	1007.00
F1	.85	.922	.80	300	256	47		81	78	7	1009.62
2	1.35	1.162	1.29	304	254	47		81	79	8	1012.67
3	1.20	1.095	1.14	305	259	47		82	79	8	1015.57
G1	.95	.975	.90	302	260	47		82	79	8	1018.14
2	1.10	1.049	1.05	304	262	47		82	78	8	1020.89
3	1.35	1.162	1.29	306	260	47		81	78	9	1023.93
H1	.85	.922	.80	301	258	48		82	79	9	1026.36
2	1.20	1.095	1.14	305	254	48		83	80	9	1029.22
3	1.10	1.049	1.04	306	250	48		84	81	9	1032.019
stop @		1206									
		.954	.874	300.5				76.8			60.111

Pitot Tube Leak Check: Before _____ After _____

Integrated Bag Leak Check: Before _____ After _____

AIR QUALITY CONTROL DIVISION
TESTING FORM

Particulate Field Data Sheet

060293 Form AQD-(T-S)-5

Burns & McDonnell

Client: Mid-America				Date: 9/14/99	Page 1 Of 2
Project No.: 99-343-3	Operator: Kyle Blanz			Orsat Analysis	
Sampling Location: Unit 4 Inlet Duct		Run No.: 2		CO_2: 13.05	$+O_2$:	O_2: 6.2	CO:
Filter No.: 2	Acetone No.:	Condensate: 182.5					
Barometric Pressure: 29.14	Static Pressure: -19.2	Probe Number:					
Nozzle Diameter: .193	Nozzle Number: S187	Pitot Coefficient: .83	Pitot Number: 12[illegible]				
Meter Corr. Factor: .997	Meter-Orifice: 790.1						
Sample Pt. Time: 5 min	Assumed % Moisture: 10	Leak Test: Before .010 @ 16" Hg	After .007 @ 18" Hg				

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr. (In. HG)	Dry Gas Meter Reading in Cu. Ft.
start @ 1400											33.043
A1	.55	.742	.51	302	248	50		89	88	5	35.01
2	.55	.742	.51	306	252	50		89	87	5	36.97
3	.60	.775	.56	305	256	50		89	88	5	38.97
B1	.70	.837	.64	302	259	50		92	86	5	41.15
2	.75	.866	.68	305	262	51		92	86	5	43.36
3	.80	.894	.73	309	260	51		92	85	5	45.68
C1	.85	.922	.78	303	255	51		93	85	6	48.08
2	.90	.949	.82	307	253	51		93	85	6	50.53
3	.95	.975	.87	309	250	52		93	85	6	53.04
D1	1.00	1.000	.92	302	256	52		93	85	6	55.65
2	1.00	1.000	.92	307	259	52		94	85	7	58.27
3	1.20	1.095	1.10	311	262	53		92	84	7	61.07
E1	1.00	1.000	.92	304	261	53		91	83	7	63.66
2	1.05	1.025	.96	309	254	52		92	84	7	66.29
3	1.20	1.095	1.10	312	253	53		93	86	7	69.10
F1	1.15	1.072	1.07	304	250	54		94	86	7	71.86
2	1.30	1.140	1.20	311	252	54		94	86	8	74.80
3	1.25	1.118	1.15	311	259	54		94	85	8	77.68
G1	1.20	1.095	1.11	308	260	54		93	84	8	80.52
2	1.30	1.140	1.20	311	262	54		93	84	9	83.48
3	1.30	1.140	1.20	313	256	54		93	85	9	86.41
H1	.90	.949	.82	308	257	54		93	85	9	88.86
2	1.10	1.049	1.01	311	256	54		94	85	10	91.55
3	1.15	1.072	1.05	312	254	54		94	85	10	94.305
stop @ 1601											
		.987		307.6				88.9			61.262
			.909								

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

AIR QUALITY CONTROL DIVISION
TESTING FORM

Particulate Field Data Sheet

060293 Form AQD-(T-S)-5

Burns & McDonnell

Client: MID-AMERICA			Date: 9/14/99 — Page 1 Of 2
Project No.	Operator: Kyle Blanz		
Sampling Location: Unit 4 Inlet Duct		Run No. 3	
Filter No.	Acetone No.	Condensate: 176.1	
Barometric Pressure: 29.14	Static Pressure: -19.1	Probe Number	
Nozzle Diameter: .193	Nozzle Number: S-187	Pitot Coefficient: .83	Pitot Number: K1..
Meter Corr. Factor: .997	Meter-Orifice: 790.1		
Sample Pt. Time: 5 min.	Assumed % Moisture: 10	Leak Test: Before .012 @ 18" Hg	After .010 @ 18" Hg

Orsat Analysis

CO_2	$+O_2$	O_2	CO
12.46		6.8	

Sample Point	ΔP	√ΔP	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr. (In. HG)	Dry Gas Meter Reading in Cu. Ft.
start		1739									95.335
A1	.55	.742	.49	304	241	49		82	79	5	97.24
2	.60	.775	.53	310	253	49		82	78	4	99.23
3	.70	.837	.62	311	258	49		81	78	4	101.36
B1	.65	.806	.58	302	261	49		82	77	5	103.41
2	.90	.949	.81	309	257	49		81	77	5	105.81
3	.85	.922	.76	310	254	48		81	77	5	108.17
C1	.70	.837	.61	306	250	48		79	76	5	110.29
2	.90	.949	.79	309	251	48		79	75	6	112.71
3	.95	.975	.83	311	256	48		78	75	6	115.19
D1	.80	.894	.70	308	254	48		77	74	6	117.47
2	1.00	1.000	.88	310	260	48		76	74	7	119.99
3	1.05	1.025	.92	311	263	48		75	73	7	122.55
E1	.90	.949	.79	306	258	49		75	73	7	125.01
2	1.10	1.049	.97	309	255	49		73	72	8	127.65
3	1.05	1.025	.92	312	253	49		73	72	8	130.22
F1	1.10	1.049	.98	306	249	49		72	71	8	132.90
2	1.15	1.072	1.01	312	247	50		71	71	9	135.61
3	1.20	1.095	1.06	312	250	50		71	71	9	138.35
G1	1.05	1.025	.93	307	251	50		71	70	9	140.95
2	1.15	1.072	1.02	310	253	50		70	70	10	143.66
3	1.35	1.162	1.20	311	255	50		70	69	10	146.57
H1	.90	.949	.79	310	260	50		69	70	10	148.99
2	1.25	1.118	1.11	312	258	50		69	69	10	151.80
3	1.30	1.140	1.15	313	261	50		69	69	11	154.668
stop		1938									
		.976	.852	309.2				74.3			59.333

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

AIR QUALITY CONTROL DIVISION
TESTING FORM

65

Particulate Field Data Sheet

060293 Form AQD-(T-S)-5

Burns & McDonnell

Client: MID AMERICAN - NEAL SOUTH				Date: 9/14/99	Page 1 Of 2
Project No.: 99-343-3	Operator: B. BOWLING				
Sampling Location: UNIT 4 STACK			Run No.: 1		
Filter No.: 11	Acetone No.:	Condensate: ~~1865~~ 177.2			
Barometric Pressure: 28.95	Static Pressure: -.9	Probe Number:			
Nozzle Diameter: .193	Nozzle Number: H187	Pitot Coefficient: .83	Pitot Number: A10.		
Meter Corr. Factor: 1.008	Meter-Orifice: 663.1				
Sample Pt. Time: 10 MIN	Assumed % Moisture: 8%	Leak Test	Before: .011 @ 18"	After: .007 @ 18"	

Orsat Analysis

CO_2	$+O_2$	O_2	CO
12.4		6.8	

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Sample ~~Oven~~ Line	Meter In	Meter Out	Vac. Pr. (In. HG)	Dry Gas Meter Reading in Cu. Ft.
	START @	9:15									256.342
STOPPED @ 9:18 PROBLEM ON INLET RESUMED @ 10:34 A 1	1.28	1.131	2.05	276	241	49	238	60	62	2	
2	1.25	1.118	1.99	279	273	49	240	63	64	2	262.30
3	1.10	1.049	1.75	279	266	48	237	63	65	2	268.16
											273.585
B 1	1.27	1.127	2.03	278	251	57	242	62	65	2	279.498
2	1.20	1.095	1.91	280	274	58	239	65	65	2	285.24
3	1.08	1.039	1.72	279	257	58	236	66	67	3	290.697
C 1	1.25	1.118	1.99	279	270	59	238	67	66	3	296.56
2	1.23	1.109	1.95	282	277	56	240	68	67	3	302.36
3	1.00	1.000	1.58	282	274	55	240	67	67	3	307.590
D 1	1.33	1.153	2.13	278	268	57	236	67	67	4	313.62
2	1.17	1.082	1.85	283	279	56	237	68	69	4	319.26
3	1.01	1.005	1.60	281	270	56	237	70	69	4	324.510
		1.086	1.88	~~280~~ 279.7				65.8			68.168
	STOP @	12:18									

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

AIR QUALITY CONTROL DIVISION
TESTING FORM

Burns & McDonnell

Particulate Field Data Sheet

060293 Form AQD-(T-S)-5

Client: MID-AMERICAN - NEAL SOUTH				Date: 9/14/99	Page 1 Of 2
Project No.: 99-345-3	Operator: B. BOWLING				
Sampling Location: UNIT 4 STACK			Run No.: 2		
Filter No.: 12	Acetone No.:	Condensate: 185.0			
Barometric Pressure: 28.94	Static Pressure: -.9	Probe Number:			
Nozzle Diameter: .193	Nozzle Number: H187	Pitot Coefficient: .83	Pitot Number: A10		
Meter Corr. Factor: 1.008	Meter-Orifice: 663.1				
Sample Pt. Time: 10 MIN	Assumed % Moisture: 10%	Leak Test	Before: .013 @ 19"	After: .007 @ 18"	

Orsat Analysis

CO_2	$+O_2$	O_2	CO
12.33		7.0	

Sample Point	ΔP	$\sqrt{\Delta P}$	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr. (In. HG)	Dry Gas Meter Reading in Cu. Ft.
	START @	1400									328.318
D1	1.22	1.105	1.92	287	260	~~235~~ 52	235	73	72	3	334.07
2	1.17	1.082	1.84	287	279	54	241	75	72	3	339.71
3	1.05	1.025	1.66	283	276	55	243	75	73	3	345.093
C1	1.26	1.122	1.98	287	263	57	242	74	73	3	350.94
2	1.20	1.095	1.89	288	277	56	243	75	73	3	356.64
3	1.13	1.063	1.77	288	273	57	243	74	73	3	362.179
B1	1.24	1.114	1.95	287	261	58	239	75	73	3	367.95
2	1.19	1.091	1.86	290	279	59	241	76	73	3	373.62
3	1.12	1.058	1.76	288	279	61	240	75	74	3	379.133
A1	1.29	1.136	2.03	289	263	63	239	74	74	3	385.04
2	1.18	1.086	1.85	288	277	62	242	76	75	4	390.70
3	1.25	1.118	1.96	289	270	62	245	77	77	4	396.621
		1.091	1.87	287.6				74.2			68.303
	STOP	@ 16	:09								

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

AIR QUALITY CONTROL DIVISION
TESTING FORM

Particulate Field Data Sheet

060293 Form AQD-(T-S)-5

Burns & McDonnell

Client: MID AMERICAN - NEAL SOUTH				Date: 9/14/99	Page 1 Of 2
Project No.: 99-343-3	Operator: D. BOWLING			Orsat Analysis	
Sampling Location: UNIT 4 STACK		Run No.: 3		CO_2: 11.10	$+O_2$:	O_2: 8.6	CO:
Filter No.: 13	Acetone No.:	Condensate:					
Barometric Pressure: 28.94	Static Pressure: -.9	Probe Number:					
Nozzle Diameter: .193	Nozzle Number: H187	Pitot Coefficient: .83	Pitot Number: A10.				
Meter Corr. Factor: 1.008	Meter-Orifice: 663.1						
Sample Pt. Time: 10 min	Assumed % Moisture: 10%	Leak Test	Before: .006 @ 18"	After: .008 @ 18"			

Sample Point	ΔP	√ΔP	ΔH	Temperature °F: Stack	Probe	Imp. Out	Oven	Meter In	Meter Out	Vac. Pr. (In. HG)	Dry Gas Meter Reading in Cu. Ft.
	START @ 17:36										401.178
A1	1.28	1.131	1.97	291	266	55	244	70	70	3	407.01
2	1.13	1.063	1.74	292	288	61	240	71	70	3	412.50
3	1.07	1.034	1.65	291	280	63	245	70	70	3	417.840
B1	1.15	1.072	1.77	291	261	57	244	70	70	3	423.37
2	1.22	1.105	1.88	292	283	61	241	70	70	3	429.06
3	1.09	1.044	1.67	292	273	61	241	70	70	3	434.431
C1	1.27	1.127	1.96	291	261	63	245	70	69	3	440.24
2	1.20	1.095	1.85	292	289	59	246	70	69	3	445.89
3	1.17	1.082	1.80	292	292	60	241	69	69	4	451.46
D1	1.23	1.109	1.90	289	259	58	244	68	68	4	457.19
2	1.10	1.049	1.69	292	289	56	240	68	68	4	462.60
3	1.00	1.000	1.54	288	263	52	242	68	68	4	467.703
		1.076	1.79	291.1				69.38			66.525
	STOP @ 19:48										

Pitot Tube Leak Check: Before OK After OK

Integrated Bag Leak Check: Before OK After OK

MOISTURE GAIN FROM IMPINGER TRAIN

Client MID AMERICAN Station NEAL

Project No. 99-343-3 Performed By JRI + RDF Date 9-14-99

Location INLET UNIT 4 Run No. 1

Impinger Number	Pretest Weight	Postest Weight	Weight Gain
KCl			
1	632.1	764.1	132.0
2	726.9	746.9	20.0
3	684.9	689.8	4.9
HNO3/H2O2			
4	729.8	733.4	3.6
H2SO4/KMnO4			
5	734.2	742.2	8.0
6	593.2	593.6	0.4
7	735.0	734.5	-0.5
SELICA GEL			
8	802.9	816.0	13.1

Total Weight Gain 181.5 grams

MOISTURE GAIN FROM IMPINGER TRAIN

Client MIDAMERICAN Station NEAL

Project No. 99-343-3 Performed By JRI/RDF Date 9-14-99

Location INLET Run No. Run 2

Impinger Number	Pretest Weight	Postest Weight	Weight Gain
KCl			
1	629.5	764.3	134.8
2	725.8	746.5	20.7
3	729.1	736.2	7.1
HNO3/H2O2			
4	684.6	686.6	2.0
H2SO4/KMnO4			
5	594.4	597.4	3.0
6	734.3	735.4	1.1
7	740.6	740.5	-0.1
SELICA GEL			
8	752.7	766.6	13.9

Total Weight Gain 182.5 grams

MOISTURE GAIN FROM IMPINGER TRAIN

Client Mid American Station Neal Station - Unit 4

Project No. 99-343-3 Performed By JRV/RDF Date 9/14/99

Location Inlet Run No. Run 3

Impinger Number	Pretest Weight	Postest Weight	Weight Gain
KCl			
1	632.1	757.4	125.3
2	725.0	744.0	19.0
3	683.5	693.4	9.9
HNO3/H2O2			
4	728.2	732.5	4.3
H2SO4/KMnO4			
5	594.2	596.2	2.0
6	735.7	737.8	2.1
7	740.0	742.3	2.3
SELICA GEL			
8	758.6	769.8	11.2

Total Weight Gain 176.1 grams

MOISTURE GAIN FROM IMPINGER TRAIN

Client MID AMERICAN Station NEAL

Project No. 99-343-3 Performed By JR/RF Date 9-14-99

Location STACK UNIT 4 Run No. 1

Impinger Number	Pretest Weight	Postest Weight	Weight Gain
KCl			
1	726.6	860.5	133.9
2	604.5	628.7	24.2
3	603.9	609.2	5.3
HNO3/H2O2			
4	586.7	589.0	2.3
H2SO4/KMnO4			
5	699.8	699.1	-0.7
6	625.9	626.3	0.4
7	725.8	725.3	-0.5
SELICA GEL			
8	690.8	703.1	12.3

Total Weight Gain 177.2 grams

MOISTURE GAIN FROM IMPINGER TRAIN

Client Mid American Station Neal Station - Unit 4

Project No. 99-343-3 Performed By JRI/RDF Date 9/14/99

Location Stack Run No. Run 2

Impinger Number	Pretest Weight	Postest Weight	Weight Gain
KCl			
1	730.6	864.3	133.7
2	600.0	626.8	26.8
3	603.0	608.8	5.8
HNO3/H2O2			
4	587.3	591.5	4.2
H2SO4/KMnO4			
5	701.0	699.5	-1.5
6	621.3	622.6	1.3
7	717.8	719.5	1.7
SELICA GEL			
8	703.0	716.0	13.0
		Total Weight Gain	185.0 grams

MOISTURE GAIN FROM IMPINGER TRAIN

Client Mid American Station Neal Station Unit 4

Project No. 99-343-3 Performed By JRI/RDF Date 9/14/99

Location Stack Run No. Run 3

Impinger Number	Pretest Weight	Postest Weight	Weight Gain
KCl			
1	730.7	854.6	123.9
2	604.8	629.4	24.6
3	603.4	608.7	5.3
HNO3/H2O2			
4	587.5	589.3	1.8
H2SO4/KMnO4			
5	701.3	700.0	-1.3
6	625.6	626.4	0.8
7	727.4	727.1	-0.3
SELICA GEL			
8	690.7	704.2	13.5

Total Weight Gain 168.3 grams

Dry Gas Meter Calibration Sheet

N ule 663
Orifice small

Run By Kyle Blanz
Date 8/16/99
Barometric Press 29.36

Delta H in H20	Vw Initial	Vw final	Vw ft.3	Vd initial	Vd final	Vd ft.3	tw o F	tdi oF	tdo oF	Pw in. H2O	Time/ Min.
.5	4165	4170	5	308.932	313.943	5.011	75	84	79	-2.80	14.9
1.0	4170	4175	5	313.978	318.975	4.997	75	82	79	-2.90	10.6
2.0	4175	4180	5	319.074	324.024	4.950	75	84	79	-3.00	7.6
4.0	4180	4190	10	324.148	333.986	9.838	75	89	79	-3.40	10.6
5.0	4190	4200	10	334.114	343.990	9.876	75	92	80	-3.60	9.5

Delta H	Delta H / 13.6	Meter Correction: Vw (Pb+Delta H /13.6) (td+460) / Vd (Pb+Pw/13.6) (tw+460)	Delta H@: .0319 Delta H Pb(td+460)	(tw+460)T Vw	2
.5	0.0368	1.002	2.55		
1.0	0.0737	1.001	2.59		
2.0	0.1470	1.010	2.65		
4.0	0.2940	1.015	2.57		
5.0	0.3676	1.011	3.08		
Average		1.008	2.69		

Delta H = Orifice Setting
Vw = Volume of Gas of Wet Test Meter
Vd = Volume of Gas of Dry Gas Meter
Pw = Pressure of Wet Test Meter
tw = Temp of Fluid in Wet Test Meter
tdi = Inlet Temp of Dry Gas Meter
tdo = Outlet Temp of Dry Gas Meter
td = Average Temp of Dry Gas Meter
T = Time in Minutes

Magnehelic Calibration

Test Location Burns & McDonnell
Test Module 663

Run By Kyle Blanz
Date 8/16/99

Magnehelic Range: 0" - 5"

Reading No.	Inclined Draft Gauge	Magnehelic	Pass Range
1	0.00	0.00	0.000
2	5.00	4.95	4.750 - 5.250
3	4.00	3.95	3.800 - 4.200
4	3.00	2.95	2.850 - 3.150
5	2.00	2.00	1.900 - 2.100
6	1.00	1.00	.950 - 1.050

Magnehelic Range: 0" - 0.5"

Reading No.	Inclined Draft Gauge	Magnehelic	Pass Range
1	0.00	0.00	0.000
2	0.50	0.510	0.475 - 0.525
3	0.40	0.410	0.380 - 0.420
4	0.30	0.310	0.285 - 0.315
5	0.20	0.200	0.190 - 0.210
6	0.10	0.100	0.095 - 0.105

Magnehelic Range: 0" - 4"

Reading No.	Inclined Draft Gauge	Magnehelic	Pass Range
1	0.00	0.00	0.000
2	4.00	3.95	3.800 - 4.200
3	3.50	3.45	3.325 - 3.675
4	3.00	3.00	2.850 - 3.150
5	2.50	2.50	2.375 - 2.625
6	2.00	2.00	1.900 - 2.100
7	1.00	1.05	0.950 - 1.050

Meter	Thermometer ASTM #192808	Trendicator	** Pass Range
IN		74.0	
OUT	75.0	74.0	73.875 - 76.125

** Trendicators are calibrated to within +/- 1.5% of the thermometer.

Note: Magnehelics are calibrated to within +/- 5% of the Inclined Draft Gauge individual reading.

Dry Gas Meter Calibration Sheet

Meter ule 790
Orifice small

Run By Kyle Blanz
Date 7/23/99
Barometric Press 29.23

Delta H in H20	Vw Initial	Vw final	Vw ft.3	Vd initial	Vd final	Vd ft.3	tw o F	tdi oF	tdo oF	Pw in. H2O	Time/ Min.
.5	4990	4995	5	466.540	471.534	4.994	77	79	80	-2.90	13.5
1.0	4995	5000	5	471.634	476.610	4.976	77	79	79	-3.00	8.9
2.0	5000	5005	5	476.783	481.771	4.988	77	79	80	-3.30	6.2
4.0	5005	5015	10	481.902	491.825	9.923	77	79	84	-3.80	8.8
6.0	5015	5025	10	491.964	501.808	9.844	77	79	84	-4.30	7.3

Delta H	Delta H / 13.6	Meter Correction Vw (Pb+Delta H /13.6) (td+460) / Vd (Pb+Pw/13.6) (tw+460)	Delta H@ .0319 Delta H Pb(td+460)	(tw+460)T Vw	2
.5	0.0368	0.997	2.13		
1.0	0.0737	0.998	1.85		
2.0	0.1470	0.994	1.79		
4.0	0.2940	0.996	1.80		
6.0	0.4410	0.998	1.86		
Average		0.997	1.89		

Delta H = Orifice Setting
Vw = Volume of Gas of Wet Test Meter
Vd = Volume of Gas of Dry Gas Meter
Pw = Pressure of Wet Test Meter
tw = Temp of Fluid in Wet Test Meter
tdi = Inlet Temp of Dry Gas Meter
tdo = Outlet Temp of Dry Gas Meter
td = Average Temp of Dry Gas Meter
T = Time in Minutes

Magnehelic Calibration

Test Location Burns & McDonnell
Test Module 790

Run By Kyle Blanz
Date 7/23/99

Magnehelic Range: 0" - 6"

Reading No.	Inclined Draft Gauge	Magnehelic	Pass Range
1	0.00	0.00	0.000
2	6.00	6.00	5.700 - 6.300
3	5.00	5.05	4.750 - 5.250
4	4.00	4.05	3.800 - 4.200
5	3.00	3.10	2.850 - 3.150
6	2.00	2.10	1.900 - 2.100
7	1.00	1.05	0.950 - 1.050

Magnehelic Range: 0" - 0.5"

Reading No.	Inclined Draft Gauge	Magnehelic	Pass Range
1	0.00	0.00	0.000
2	0.50	0.490	0.475 - 0.525
3	0.40	0.400	0.380 - 0.420
4	0.30	0.310	0.285 - 0.315
5	0.20	0.200	0.190 - 0.210
6	0.10	0.100	0.095 - 0.105

Magnehelic Range: 0" - 3"

Reading No.	Inclined Draft Gauge	Magnehelic	Pass Range
1	0.00	0.00	0.000
2	3.00	2.90	2.850 - 3.150
3	2.50	2.50	2.375 - 2.625
4	2.00	2.05	1.900 - 2.100
5	1.50	1.50	1.425 - 1.575
6	1.00	1.05	0.950 - 1.050

Meter	Thermometer ASTM #192808	Trendicator	** Pass Range
IN	77.0	77.0	71.905 - 74.095
OUT		77.0	

** Trendicators are calibrated to within +/- 1.5% of the thermometer.

Note: Magnehelics are calibrated to within +/- 5% of the Inclined Draft Gauge individual reading.

AIR QUALITY CONTROL DIVISION
TESTING FORM

Pitot Calibration Form

Client _____
Project No. _____
Test Location Burns & McDonnell Lab

Run By N. Linhardt / K. Blanz
Date 9/2/99
Pitot No. A-10

	● "A" Side Calibration			
Run No.	Δ P std cm H_2O (in. H_2O)	Δ P (s) cm H_2O (in. H_2O)	$C_p(s)$	Deviation $C_p(s) - \bar{C}_p(A)$
1	.61	.87	.83	
2	.61	.87	.83	
3	.61	.88	.82	
Average		$\bar{C}_p$ (Side A)	.83	

	●● "B" Side Calibration			
Run No.	Δ P std cm H_2O (in. H_2O)	Δ P (s) cm H_2O (in. H_2O)	$C_p(s)$	Deviation $C_p(s) - \bar{C}_p(B)$
1	.62	.88	.83	
2	.62	.88	.83	
3	.62	.88	.83	
Average		$\bar{C}_p$ (Side B)	.83	

Calculations:

$$C_p\,(s) = 0.99 \sqrt{\frac{\Delta P\ (\text{standard})}{\Delta P\ (s)}}$$

Deviation = $C_{p(s)} = \bar{C}_p$ (A or B)

$$\text{Average Deviation} = \sigma(\text{A or B}) = \frac{\sum_{1}^{3} |C_p(s) - \bar{C}_p(\text{A or B})|}{3}$$

$|\bar{C}_p(\text{Side A}) - \bar{C}_p(\text{Side B})| =$ 0.00

Nozzle size used for Calibrations (inches) _____

Intercomponent Spacings During Calibrations:

Pitot - Nozzle: _____

Pitot - Thermocouple: _____

Pitot - Probe Sheath: _____

AIR QUALITY CONTROL DIVISION
TESTING FORM

Pitot Calibration Form

Client _____ Run By N. Linhardt / K. Blanz

Project No. _____ Date 9/2/99

Test Location Burns & McDonnell Pitot No. K-1

	● "A" Side Calibration			
Run No.	Δ P std cm H_2O (in. H_2O)	Δ P (s) cm H_2O (in. H_2O)	$C_p(s)$	Deviation $C_p(s) - \bar{C}_p(A)$
1	.61	.87	.83	
2	.61	.86	.83	
3	.61	.86	.83	
	Average	$\bar{C}_p$ (Side A)	.83	

	●● "B" Side Calibration			
Run No.	Δ P std cm H_2O (in. H_2O)	Δ P (s) cm H_2O (in. H_2O)	$C_p(s)$	Deviation $C_p(s) - \bar{C}_p(B)$
1	.61	.87	.83	
2	.61	.86	.83	
3	.61	.86	.83	
	Average	$\bar{C}_p$ (Side B)	.83	

Calculations:

$$C_p\,(s) = 0.99 \sqrt{\frac{\Delta P\ (\text{standard})}{\Delta P\ (s)}}$$

Deviation = $C_{p(s)} = \bar{C}_p$ (A or B)

$$\text{Average Deviation} = \sigma(\text{A or B}) = \frac{\sum_{1}^{3} |C_p(s) - \bar{C}_p(\text{A or B})|}{3}$$

$|\bar{C}_p(\text{Side A}) - \bar{C}_p(\text{Side B})| =$ 0.00

Nozzle size used for Calibrations (inches) _____

Intercomponent Spacings During Calibrations:

Pitot - Nozzle: _____

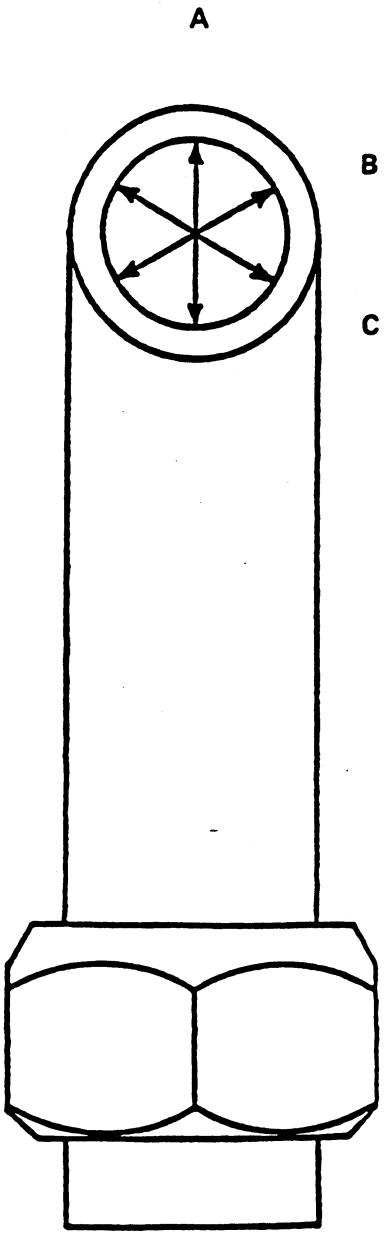
Pitot - Thermocouple: _____

Pitot - Probe Sheath: _____

Glass Nozzle Calibration

Sized By Kyle Blanz

Date	Nozzle	Dimensions			Difference	Avg. Diameter
		A	B	C		
09/07/99	B - 187	0.196	0.197	0.196	0.001	0.196
09/07/99	C - 187	0.195	0.197	0.196	0.002	0.196
09/07/99	H - 187	0.193	0.193	0.193	0.000	0.193
09/07/99	I - 187	0.193	0.193	0.193	0.000	0.193
09/07/99	J - 187	0.193	0.193	0.193	0.000	0.193
09/07/99	K - 187	0.193	0.192	0.193	0.001	0.193
09/07/99	C - 250	0.258	0.259	0.258	0.001	0.258
09/07/99	H - 250	0.252	0.251	0.251	0.001	0.251
09/07/99	I - 250	0.253	0.254	0.254	0.001	0.254
09/07/99	J - 250	0.252	0.253	0.254	0.002	0.253
09/07/99	K - 250	0.252	0.253	0.254	0.002	0.253
09/07/99	L - 250	0.253	0.254	0.255	0.002	0.254
09/07/99	A - 312	0.313	0.314	0.311	0.003	0.313
09/07/99	B - 312	0.310	0.309	0.310	0.001	0.310
09/07/99	D - 312	0.309	0.310	0.312	0.003	0.310
09/07/99	E - 312	0.311	0.313	0.312	0.002	0.312
09/07/99	H - 312	0.310	0.313	0.313	0.003	0.312
09/07/99	I - 312	0.312	0.312	0.312	0.000	0.312
09/07/99	J - 312	0.312	0.312	0.313	0.001	0.312
09/07/99	A - 375	0.382	0.382	0.383	0.001	0.382
09/07/99	B - 375	0.380	0.380	0.381	0.001	0.380
09/07/99	C - 375	0.369	0.372	0.372	0.003	0.371
09/07/99	H - 375	0.377	0.378	0.377	0.001	0.377
09/07/99	I - 375	0.376	0.377	0.376	0.001	0.376
09/07/99	J - 375	0.376	0.377	0.377	0.001	0.377
09/07/99	A - 437	0.430	0.428	0.428	0.002	0.429
09/07/99	B - 437	0.428	0.431	0.429	0.003	0.429
09/07/99	D - 437	0.428	0.431	0.430	0.003	0.430
09/07/99	H - 437	0.432	0.432	0.432	0.000	0.432
09/07/99	I - 437	0.432	0.432	0.432	0.000	0.432
09/07/99	J - 437	0.431	0.430	0.432	0.002	0.431
09/07/99	A - 500	0.499	0.500	0.498	0.002	0.499
09/07/99	B - 500	0.495	0.499	0.498	0.004	0.497
09/07/99	C - 500	0.498	0.499	0.499	0.001	0.499
09/07/99	H - 500	0.501	0.502	0.502	0.001	0.502
09/07/99	I - 500	0.500	0.503	0.500	0.003	0.501
09/07/99	J - 500	0.501	0.502	0.504	0.003	0.502



All Dimensions are in Inches.

BAROMETRIC PRESSURE
ANEROID CALIBRATION

DATE	MERRIAM MODEL 311EG10WM MERCURY	OAKTON MODEL 03316-70 ANEROID SERIAL #37053	CALIBRATED BY
6-30-97	29.23	29.23	[illegible]
7-8-97	29.30	29.25	Scott Ratliff
7-29-97	29.47	29.49	[illegible]
8-1-97	29.45	29.45	Kyle Blaney
8/14/97	29.29	29.29	Kyle Blaney
9/5/97	29.50	29.50	Kyle Blaney
9-15-97	29.38	29.37	Scott Ratliff
10-3-97	29.12	29.18	
10-9-97	29.45	29.47	Scott M. Ratliff
10/31/97	29.00	29.02	Kyle Blaney
11/25/97	29.26	29.28	Kyle Blaney
1/8/98	28.90	28.91	Kyle Blaney
2/19/98	29.17	29.18	Kyle Blaney
4/24/98	29.21	29.23	Kyle Blaney
6/8/98	29.19	29.22	Kyle Blaney
7/9/98	29.26	29.28	Kyle Blaney
7/17/98	29.31	29.32	Kyle Blaney
7/29/98	29.27	29.25	Kyle Blaney
10/05/98	28.98	29.02	[illegible]
10/23/98	29.58	29.60	Kyle Blaney
11/12/98	29.41	29.40	Kyle Blaney
12/4/98	29.01	29.03	Kyle Blaney
1/20/			
5/27/99	29.39	29.41	Kyle Blaney
9/10/99	29.19	29.22	[illegible]

BAROMETR.SHT

THERMOCOUPLE CALIBRATION

Test Location Burns+McDonnell Lab Run By: N. Linhardt

Thermocouple 10' Stack Thermocouple Date 9/10/99

Thermocouple	Thermometer ASTM#:1928085
71°F	70°F
261°F	260°F

THERMOCOUPLE CALIBRATION

Test Location Burns & McDonnell Lab Run By: N Linhardt

Thermocouple 20' Stack Thermocouple Date 9/10/99

Thermocouple	Thermometer ASTM#:1928085
72°F	72°F
251°F	252°F

THERMOCOUPLE CALIBRATION

Test Location Burns & McDonnell Lab Run By: N. Linhardt

Thermocouple 663 Stack Line Trendicator Date 9/9/99

Thermocouple	Thermometer ASTM#:1928085
72°F	71°F
250°F	249°F

THERMOCOUPLE CALIBRATION

Test Location Burns & McDonnell Lab Run By: N. Linhardt

Thermocouple 790 Stack Line Trendicator Date 9/9/99

Thermocouple	Thermometer ASTM#:1928085
71°F	70°F
252°F	250°F

THERMOCOUPLE CALIBRATION

Test Location Burns & McDonnell Lab Run By: N. Linhardt

Thermocouple 20' Probe Heater Date 9/9/99

Thermocouple	Thermometer ASTM#:1928085
72°F	70°F
249°F	251°F

THERMOCOUPLE CALIBRATION

Test Location Burns & McDonnell Lab Run By: N. Linhardt

Thermocouple 10' Probe Heater Date 9/9/99

Thermocouple	Thermometer ASTM#:1928085
71°F	72°F
251°F	249°F

THERMOCOUPLE CALIBRATION

Test Location Burns & McDonnell Lab Run By: N. Linhardt

Thermocouple 15' H.S. Line Date 9/10/99

Thermocouple	Thermometer ASTM#:1928085
71°F	71°F
255°F	254°F

THERMOCOUPLE CALIBRATION

Test Location Burns & McDonnell Lab Run By: N. Linhardt

Thermocouple 20' H.S. Line Date 9/10/99

Thermocouple	Thermometer ASTM#:1928085
73°F	72°F
259°F	260°F

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	09:15	647.86	618.83	970.72	2304.45	-24.00	-23.83	1687.50	294.78	229.45	12.38	2.21
09/14/99	09:16	648.64	619.33	971.07	2306.26	-23.84	-23.66	1688.20	291.18	235.48	12.28	2.71
09/14/99	09:17	648.48	619.33	969.41	2305.11	-23.82	-23.67	1687.80	290.45	231.13	12.23	2.37
09/14/99	09:18	650.01	620.33	969.78	2310.13	-23.94	-23.77	1695.70	291.97	229.87	12.28	2.34
09/14/99	09:19	651.71	622.50	971.77	2314.56	-23.60	-23.45	1705.80	288.88	242.85	12.19	2.78
09/14/99	09:20	653.00	623.50	971.71	2317.67	-23.46	-23.26	1705.00	288.42	244.12	12.08	2.40
09/14/99	09:21	652.75	624.17	968.89	2318.33	-23.08	-22.88	1712.10	294.28	214.97	12.28	2.65
09/14/99	09:22	653.05	624.67	967.50	2318.29	-23.03	-22.90	1712.10	295.30	217.25	12.32	2.12
09/14/99	09:23	653.00	624.17	967.89	2318.22	-23.31	-23.14	1710.90	290.47	230.03	12.23	1.59
09/14/99	09:24	653.50	624.50	967.80	2320.03	-23.35	-23.20	1712.10	291.45	220.97	12.23	2.40
09/14/99	09:25	653.22	624.17	966.80	2318.85	-23.40	-23.27	1712.10	297.35	208.57	12.35	2.62
09/14/99	09:26	653.47	624.00	966.62	2320.05	-23.73	-23.57	1709.70	298.87	205.93	12.39	2.59
09/14/99	09:27	653.83	625.00	967.76	2322.17	-23.62	-23.46	1709.70	295.72	214.60	12.35	2.56
09/14/99	09:28	652.40	624.17	966.27	2318.83	-23.50	-23.33	1707.80	295.57	214.83	12.31	2.90
09/14/99	09:29	650.67	621.83	963.93	2314.46	-23.34	-23.20	1705.40	296.67	206.98	12.32	2.25
09/14/99	09:30	650.29	621.33	963.85	2314.21	-23.49	-23.35	1705.40	293.22	222.53	12.25	3.59
09/14/99	09:31	650.68	621.67	967.32	2315.89	-23.52	-23.40	1702.30	288.05	236.02	12.08	2.37
09/14/99	09:32	651.32	622.67	970.70	2321.02	-23.58	-23.43	1702.30	289.42	234.38	12.08	2.40
09/14/99	09:33	651.65	622.17	972.39	2323.62	-23.44	-23.29	1701.50	297.25	206.10	12.27	2.93
09/14/99	09:34	651.31	622.33	972.07	2323.86	-23.39	-23.24	1701.10	298.47	200.80	12.35	2.06
09/14/99	09:35	652.01	622.83	972.42	2328.92	-23.37	-23.21	1704.60	296.67	206.18	12.31	1.93
09/14/99	09:36	652.83	624.33	973.10	2331.78	-23.31	-23.15	1707.00	294.98	215.95	12.27	2.25
09/14/99	09:37	652.46	624.00	971.96	2329.72	-23.27	-23.12	1707.00	293.65	215.20	12.19	2.21
09/14/99	09:38	651.78	622.67	970.96	2326.93	-23.23	-23.05	1705.00	297.92	198.93	12.32	2.28
09/14/99	09:39	651.10	622.17	970.50	2324.80	-23.08	-22.92	1705.00	296.23	202.15	12.31	2.62
09/14/99	09:40	650.69	622.33	970.25	2322.66	-22.81	-22.66	1699.60	293.03	201.68	12.24	2.12
09/14/99	09:41	650.66	622.00	971.26	2322.97	-23.10	-22.96	1698.40	294.20	205.50	12.25	2.06
09/14/99	09:42	652.23	623.50	974.30	2327.77	-23.17	-23.00	1698.40	295.67	203.70	12.27	1.78
09/14/99	09:43	652.75	624.00	974.10	2329.36	-23.03	-22.88	1697.60	294.47	205.95	12.29	2.03
09/14/99	09:44	652.87	624.33	971.32	2329.68	-23.28	-23.13	1697.20	300.83	185.43	12.44	2.31
09/14/99	09:45	652.63	624.00	969.48	2328.48	-23.17	-23.02	1696.00	300.67	191.15	12.47	1.93
09/14/99	09:46	650.91	622.17	965.02	2323.04	-23.27	-23.13	1697.60	294.23	213.63	12.29	2.31
09/14/99	09:47	650.54	621.83	963.56	2321.52	-23.38	-23.27	1696.80	296.73	205.58	12.28	2.21
09/14/99	09:48	650.86	621.50	965.40	2322.95	-23.36	-23.20	1696.00	290.37	228.92	12.20	2.62
09/14/99	09:49	650.41	621.50	966.00	2320.26	-23.35	-23.20	1695.30	290.72	226.92	12.11	2.46
09/14/99	09:50	650.31	622.00	966.79	2319.11	-23.51	-23.37	1695.30	294.38	211.63	12.28	2.25
09/14/99	09:51	651.31	622.33	968.31	2321.84	-23.51	-23.35	1698.40	295.55	215.73	12.32	2.12
09/14/99	09:52	652.63	624.00	969.86	2325.94	-23.39	-23.25	1698.40	293.75	217.62	12.24	1.75
09/14/99	09:53	653.10	624.17	969.52	2326.57	-23.36	-23.21	1698.80	295.80	210.27	12.29	1.87
09/14/99	09:54	652.88	623.67	968.55	2326.25	-23.46	-23.31	1699.20	299.33	204.22	12.38	2.40
09/14/99	09:55	652.49	623.83	967.25	2324.26	-23.56	-23.40	1696.80	296.95	207.43	12.34	2.28
09/14/99	09:56	653.19	624.50	966.71	2326.42	-23.50	-23.34	1696.80	293.93	214.37	12.26	2.06
09/14/99	09:57	654.16	625.33	967.78	2329.47	-23.44	-23.29	1696.00	294.00	210.17	12.29	2.09
09/14/99	09:58	654.29	625.00	967.88	2328.94	-23.49	-23.33	1694.90	293.65	212.73	12.23	2.21
09/14/99	09:59	654.22	624.50	967.56	2328.02	-23.68	-23.52	1694.50	296.77	203.77	12.32	2.93
09/14/99	10:00	654.15	624.67	967.43	2328.90	-23.72	-23.55	1694.50	297.32	208.62	12.37	2.43
09/14/99	10:01	654.89	626.17	968.06	2331.95	-23.80	-23.63	1694.50	292.25	217.78	12.27	3.12
09/14/99	10:02	655.48	626.00	968.55	2332.58	-23.72	-23.55	1697.60	294.45	214.07	12.28	2.65

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	10:03	654.14	624.50	966.50	2328.21	-23.72	-23.57	1697.60	295.47	214.83	12.29	2.93
09/14/99	10:04	653.26	623.67	965.11	2325.81	-23.89	-23.71	1700.70	295.13	212.20	12.33	3.09
09/14/99	10:05	653.83	624.17	965.92	2328.58	-23.81	-23.64	1708.50	291.15	227.28	12.23	3.50
09/14/99	10:06	653.85	624.83	966.83	2328.92	-23.75	-23.57	1708.50	289.68	233.85	12.12	3.03
09/14/99	10:07	652.58	623.67	965.80	2326.40	-23.32	-23.16	1707.80	291.37	224.27	12.18	2.84
09/14/99	10:08	651.16	622.17	964.44	2321.86	-23.41	-23.26	1707.80	295.58	217.57	12.28	3.37
09/14/99	10:09	650.91	621.83	966.29	2323.27	-23.56	-23.40	1711.70	287.77	227.80	12.21	2.59
09/14/99	10:10	651.70	622.83	969.42	2325.03	-23.41	-23.27	1711.70	289.27	232.20	12.08	2.62
09/14/99	10:11	651.06	622.17	969.03	2322.26	-23.42	-23.26	1711.70	293.72	216.18	12.18	3.31
09/14/99	10:12	649.59	620.50	966.83	2318.22	-23.39	-23.25	1711.30	301.30	191.23	12.40	3.43
09/14/99	10:13	649.49	620.00	966.01	2319.29	-23.65	-23.49	1713.60	296.37	211.02	12.36	3.75
09/14/99	10:14	650.31	621.50	967.98	2320.62	-23.60	-23.44	1713.60	290.10	222.88	12.21	3.53
09/14/99	10:15	650.58	621.67	970.78	2320.09	-23.71	-23.55	1714.00	285.98	226.67	12.11	3.71
09/14/99	10:16	650.48	621.67	972.78	2319.67	-23.64	-23.49	1711.70	294.47	209.58	12.28	3.90
09/14/99	10:17	650.07	620.67	973.68	2318.03	-23.66	-23.53	1711.70	295.02	214.30	12.34	4.18
09/14/99	10:18	650.70	621.83	975.04	2321.38	-23.79	-23.62	1711.70	291.37	218.17	12.30	4.78
09/14/99	10:19	651.43	622.67	976.17	2322.43	-23.43	-23.29	1713.20	288.88	221.78	12.23	3.78
09/14/99	10:20	650.93	622.67	974.52	2320.66	-23.35	-23.18	1708.90	290.65	219.80	12.20	4.43
09/14/99	10:21	650.37	622.17	974.01	2317.72	-23.40	-23.25	1708.90	293.80	206.58	12.32	6.31
09/14/99	10:22	650.44	621.50	974.72	2317.23	-23.48	-23.32	1708.90	291.77	226.58	12.25	5.43
09/14/99	10:23	650.68	621.67	975.99	2318.07	-23.60	-23.45	1702.70	291.33	221.32	12.19	5.93
09/14/99	10:24	652.04	623.00	977.41	2321.98	-23.49	-23.33	1702.70	294.05	213.02	12.28	4.90
09/14/99	10:25	653.36	624.33	977.52	2325.43	-23.49	-23.36	1702.30	293.40	210.55	12.30	6.34
09/14/99	10:26	654.81	625.25	977.82	2329.26	-23.58	-23.41	1703.50	293.11	210.49	12.32	4.93
09/14/99	10:27	654.76	626.17	975.62	2330.20	-23.36	-23.23	1703.90	292.82	210.43	12.34	5.21
09/14/99	10:28	654.52	626.17	973.50	2330.65	-23.30	-23.16	1703.90	295.55	212.37	12.33	5.40
09/14/99	10:29	654.77	625.50	972.15	2331.13	-23.29	-23.16	1703.90	293.12	222.13	12.29	5.18
09/14/99	10:30	655.89	627.67	973.26	2335.86	-23.45	-23.31	1696.80	291.23	228.23	12.16	3.93
09/14/99	10:31	657.38	627.83	974.77	2340.36	-23.49	-23.33	1696.80	292.18	220.83	12.22	4.50
09/14/99	10:32	658.29	629.33	975.20	2344.64	-23.40	-23.25	1696.80	296.40	211.95	12.28	4.87
09/14/99	10:33	658.98	630.50	975.22	2348.07	-23.13	-22.97	1696.00	301.68	203.67	12.43	5.59
09/14/99	10:34	656.83	628.50	970.89	2339.81	-22.85	-22.70	1698.80	300.20	206.08	12.41	5.75
09/14/99	10:35	654.10	625.67	965.55	2332.01	-22.93	-22.81	1699.20	300.00	202.57	12.39	5.78
09/14/99	10:36	652.69	625.00	965.03	2328.90	-23.18	-23.04	1696.80	296.08	212.28	12.34	5.40
09/14/99	10:37	652.10	623.33	966.55	2326.63	-23.20	-23.08	1696.80	289.08	233.65	12.11	5.68
09/14/99	10:38	651.25	621.67	967.19	2323.92	-23.30	-23.16	1691.40	293.07	216.58	12.19	5.15
09/14/99	10:39	650.75	622.33	968.32	2323.22	-23.56	-23.41	1691.40	299.07	203.77	12.36	5.93
09/14/99	10:40	651.00	621.67	970.20	2323.44	-23.51	-23.37	1692.10	295.85	208.83	12.35	5.03
09/14/99	10:41	650.33	621.83	969.81	2321.67	-23.45	-23.32	1692.10	293.22	221.20	12.26	6.43
09/14/99	10:42	651.13	622.67	970.54	2323.86	-23.51	-23.38	1696.00	294.50	219.33	12.29	5.09
09/14/99	10:43	652.70	623.00	972.82	2328.27	-23.44	-23.29	1695.70	293.67	230.00	12.24	6.18
09/14/99	10:44	653.75	624.67	973.53	2330.20	-23.45	-23.31	1699.60	292.77	231.72	12.20	5.25
09/14/99	10:45	653.80	625.17	973.12	2330.29	-23.33	-23.19	1705.80	298.10	213.93	12.32	5.25
09/14/99	10:46	653.29	624.33	970.73	2326.63	-23.37	-23.22	1702.30	298.30	211.20	12.37	6.03
09/14/99	10:47	652.42	623.00	970.52	2326.13	-23.32	-23.18	1701.90	297.17	209.15	12.31	6.18
09/14/99	10:48	653.61	624.17	973.21	2331.74	-23.43	-23.29	1704.20	293.73	218.78	12.25	5.78
09/14/99	10:49	654.03	624.67	975.06	2330.46	-23.43	-23.29	1704.60	292.15	223.72	12.18	5.59
09/14/99	10:50	653.50	624.50	974.81	2329.17	-23.41	-23.28	1704.60	301.12	207.82	12.28	4.90

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	10:51	652.88	623.50	973.81	2326.15	-23.29	-23.15	1706.20	304.57	194.75	12.46	5.09
09/14/99	10:52	651.98	623.00	972.79	2326.17	-23.48	-23.36	1707.40	300.68	211.07	12.35	5.75
09/14/99	10:53	651.92	622.50	974.02	2326.67	-23.52	-23.40	1707.80	299.13	215.43	12.25	5.18
09/14/99	10:54	650.54	621.50	973.55	2321.56	-23.51	-23.37	1708.90	295.85	228.13	12.20	5.03
09/14/99	10:55	649.51	620.67	971.91	2317.13	-23.46	-23.32	1709.30	297.15	217.40	12.23	4.31
09/14/99	10:56	649.51	620.33	971.32	2318.22	-23.68	-23.53	1709.30	298.88	220.45	12.29	4.87
09/14/99	10:57	651.12	621.83	973.61	2322.76	-23.67	-23.51	1709.70	291.87	234.85	12.14	5.25
09/14/99	10:58	651.82	622.33	974.61	2324.11	-23.61	-23.46	1709.30	294.35	229.20	12.13	5.12
09/14/99	10:59	652.83	624.00	975.02	2327.91	-23.63	-23.48	1709.30	300.07	220.12	12.24	6.12
09/14/99	11:00	653.76	624.17	974.70	2329.60	-23.52	-23.37	1709.30	300.07	221.22	12.32	4.81
09/14/99	11:01	653.37	624.17	973.16	2329.22	-23.24	-23.10	1706.60	300.23	221.92	12.26	4.87
09/14/99	11:02	653.45	624.50	971.96	2331.13	-23.18	-23.04	1706.60	301.18	216.03	12.29	4.40
09/14/99	11:03	653.22	624.50	971.25	2330.50	-22.97	-22.84	1706.60	298.05	219.55	12.27	4.56
09/14/99	11:04	652.15	623.17	968.33	2325.52	-23.06	-22.90	1701.90	293.13	223.60	12.20	5.12
09/14/99	11:05	650.82	621.83	966.54	2320.45	-23.14	-22.99	1696.80	300.02	209.70	12.29	3.90
09/14/99	11:06	650.06	621.17	967.14	2318.43	-23.33	-23.21	1696.00	298.15	218.35	12.27	4.40
09/14/99	11:07	650.53	621.50	970.09	2319.48	-23.68	-23.53	1695.70	294.98	221.15	12.21	4.28
09/14/99	11:08	651.33	621.83	973.05	2321.06	-23.71	-23.56	1695.70	296.02	218.05	12.25	4.90
09/14/99	11:09	652.05	622.50	973.21	2321.90	-23.72	-23.59	1694.10	300.42	208.58	12.35	4.21
09/14/99	11:10	652.92	623.17	973.31	2327.09	-23.83	-23.67	1694.10	301.45	206.05	12.39	4.18
09/14/99	11:11	653.75	624.83	973.01	2330.14	-23.65	-23.50	1694.10	298.42	217.42	12.28	5.03
09/14/99	11:12	653.31	624.17	970.24	2330.39	-23.41	-23.27	1693.70	296.40	223.32	12.22	3.68
09/14/99	11:13	652.45	623.83	967.07	2329.34	-23.30	-23.15	1694.10	299.32	220.92	12.28	3.75
09/14/99	11:14	652.20	623.17	966.80	2329.01	-23.38	-23.24	1698.40	296.00	229.82	12.22	3.56
09/14/99	11:15	652.18	623.00	968.10	2329.09	-23.44	-23.31	1698.40	290.68	230.88	12.13	3.25
09/14/99	11:16	651.64	622.83	967.93	2328.67	-23.44	-23.31	1698.40	297.08	216.77	12.22	3.87
09/14/99	11:17	652.00	623.00	968.65	2331.40	-23.46	-23.31	1695.70	301.80	205.23	12.35	3.71
09/14/99	11:18	651.57	622.33	968.25	2328.48	-23.27	-23.13	1697.20	302.22	213.15	12.36	3.81
09/14/99	11:19	651.05	621.67	967.04	2327.18	-23.59	-23.45	1697.20	298.70	226.25	12.24	4.25
09/14/99	11:20	651.67	622.83	969.11	2329.62	-23.59	-23.43	1696.80	299.83	210.80	12.35	3.75
09/14/99	11:21	651.81	622.33	970.82	2329.05	-23.53	-23.38	1694.10	296.97	229.13	12.23	3.65
09/14/99	11:22	651.99	622.83	971.65	2329.55	-23.50	-23.37	1693.30	301.30	211.53	12.29	3.34
09/14/99	11:23	652.13	623.17	971.79	2329.30	-23.54	-23.40	1692.90	304.53	203.30	12.37	3.28
09/14/99	11:24	650.94	621.33	970.17	2324.80	-23.44	-23.29	1697.20	300.77	210.63	12.31	3.87
09/14/99	11:25	648.43	618.83	966.82	2317.40	-23.48	-23.33	1695.30	300.35	211.92	12.29	3.90
09/14/99	11:26	648.80	619.33	967.25	2320.58	-23.66	-23.50	1695.70	297.60	217.33	12.26	3.65
09/14/99	11:27	650.74	621.33	970.81	2325.77	-23.68	-23.54	1695.70	292.38	235.15	12.13	3.34
09/14/99	11:28	651.30	621.50	971.62	2325.43	-23.74	-23.59	1701.50	292.58	239.58	12.06	3.31
09/14/99	11:29	651.57	622.67	970.72	2325.22	-23.81	-23.69	1701.90	303.67	204.40	12.36	3.62
09/14/99	11:30	652.87	623.67	971.33	2328.80	-23.72	-23.56	1702.30	301.97	217.20	12.39	3.78
09/14/99	11:31	653.26	624.50	971.25	2330.22	-23.54	-23.38	1706.20	297.22	226.05	12.23	3.62
09/14/99	11:32	653.87	624.83	969.96	2331.82	-23.56	-23.41	1706.20	298.58	224.12	12.23	3.81
09/14/99	11:33	654.48	625.67	970.46	2333.31	-23.57	-23.41	1706.60	299.43	220.13	12.29	3.78
09/14/99	11:34	654.59	625.67	970.12	2333.97	-23.55	-23.42	1706.20	295.77	238.97	12.22	4.62
09/14/99	11:35	654.24	625.67	969.52	2332.94	-23.54	-23.38	1703.10	298.77	223.40	12.30	3.18
09/14/99	11:36	655.07	626.17	969.37	2334.75	-23.49	-23.33	1703.50	298.05	216.77	12.32	3.15
09/14/99	11:37	655.01	625.50	969.53	2332.14	-23.28	-23.13	1703.10	298.35	212.62	12.30	4.00
09/14/99	11:38	653.40	624.17	967.21	2327.93	-23.37	-23.24	1699.60	296.97	220.42	12.25	4.15

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	11:39	653.24	623.83	967.53	2328.44	-23.51	-23.37	1701.50	303.05	216.37	12.36	3.34
09/14/99	11:40	653.22	624.50	968.92	2328.08	-23.46	-23.32	1701.10	296.60	229.88	12.26	3.68
09/14/99	11:41	652.21	622.67	968.66	2323.67	-23.34	-23.21	1701.90	297.00	225.60	12.18	4.12
09/14/99	11:42	650.76	621.67	967.56	2319.59	-23.58	-23.44	1703.10	302.13	213.15	12.36	2.40
09/14/99	11:43	650.74	622.00	968.67	2321.73	-23.78	-23.64	1703.10	299.70	222.72	12.34	4.96
09/14/99	11:44	651.45	622.50	970.72	2322.76	-23.84	-23.65	1706.20	295.03	231.62	12.20	3.65
09/14/99	11:45	651.07	622.50	970.52	2319.92	-23.67	-23.51	1706.20	298.38	222.62	12.24	4.53
09/14/99	11:46	651.10	622.83	970.19	2319.17	-23.82	-23.66	1708.90	302.43	215.73	12.36	4.43
09/14/99	11:47	651.84	621.67	970.59	2319.40	-23.75	-23.61	1708.90	298.98	221.10	12.32	3.53
09/14/99	11:48	651.09	622.33	970.60	2318.29	-23.79	-23.64	1709.30	295.02	231.83	12.18	4.90
09/14/99	11:49	651.11	622.17	970.83	2318.05	-23.79	-23.63	1708.50	300.90	219.12	12.26	3.62
09/14/99	11:50	652.18	622.67	972.96	2320.96	-23.97	-23.82	1707.80	296.98	226.35	12.26	3.75
09/14/99	11:51	652.69	623.00	974.51	2322.05	-23.80	-23.63	1707.80	295.40	234.82	12.18	4.00
09/14/99	11:52	652.39	621.67	973.21	2319.27	-23.71	-23.54	1709.30	299.15	224.30	12.24	4.15
09/14/99	11:53	652.41	622.83	972.50	2318.79	-23.78	-23.64	1710.50	303.47	207.00	12.35	4.62
09/14/99	11:54	652.72	623.83	974.47	2319.73	-23.59	-23.43	1710.10	298.25	225.05	12.26	5.93
09/14/99	11:55	651.29	622.17	974.12	2315.57	-23.47	-23.32	1710.50	296.22	236.87	12.14	5.34
09/14/99	11:56	650.62	621.50	973.79	2315.19	-23.57	-23.41	1709.70	300.90	215.33	12.27	5.21
09/14/99	11:57	650.78	621.83	975.37	2316.23	-23.38	-23.24	1710.10	298.92	225.72	12.27	5.40
09/14/99	11:58	650.52	621.50	975.89	2316.18	-23.40	-23.26	1709.70	296.97	234.72	12.16	4.40
09/14/99	11:59	651.11	621.33	977.08	2317.59	-23.44	-23.31	1712.10	301.07	220.67	12.22	6.71
09/14/99	12:00	651.97	622.17	978.98	2321.06	-23.59	-23.44	1712.10	300.85	221.20	12.32	4.50
09/14/99	12:01	652.68	623.17	979.20	2323.02	-23.48	-23.34	1712.50	301.65	220.55	12.27	4.56
09/14/99	12:02	652.09	623.00	976.67	2322.64	-23.48	-23.33	1711.70	305.82	205.45	12.38	3.84
09/14/99	12:03	653.07	623.17	975.46	2326.08	-23.48	-23.32	1711.70	303.63	208.70	12.39	3.59
09/14/99	12:04	653.41	624.50	974.45	2326.23	-23.35	-23.19	1711.70	300.10	220.85	12.27	4.28
09/14/99	12:05	652.98	623.50	972.14	2324.05	-23.38	-23.24	1711.70	300.13	222.17	12.22	4.15
09/14/99	12:06	653.95	625.00	972.24	2328.25	-23.55	-23.41	1704.60	302.20	212.95	12.34	4.25
09/14/99	12:07	655.60	626.33	973.25	2333.97	-23.46	-23.31	1705.00	298.53	227.38	12.27	3.87
09/14/99	12:08	656.84	627.50	972.57	2336.91	-23.49	-23.35	1705.00	300.05	222.97	12.23	4.65
09/14/99	12:09	658.59	629.50	974.24	2342.69	-23.59	-23.43	1699.20	304.52	208.53	12.38	4.03
09/14/99	12:10	657.43	628.33	971.24	2337.98	-23.29	-23.16	1699.20	304.32	213.93	12.38	3.93
09/14/99	12:11	655.80	627.17	966.94	2334.26	-23.53	-23.38	1699.20	306.72	206.63	12.40	3.62
09/14/99	12:12	654.33	625.67	964.38	2330.12	-23.44	-23.31	1699.20	305.53	210.95	12.46	3.90
09/14/99	12:13	652.85	623.83	963.31	2325.56	-23.74	-23.60	1694.50	296.48	239.85	12.17	3.68
09/14/99	12:14	651.88	623.17	965.31	2323.12	-23.94	-23.79	1694.50	298.08	226.28	12.18	3.84
09/14/99	12:15	651.64	622.33	968.92	2323.12	-24.17	-24.01	1694.90	296.55	230.27	12.19	5.09
09/14/99	12:16	652.33	623.83	973.98	2326.57	-24.03	-23.86	1694.50	298.72	222.62	12.22	4.09
09/14/99	12:17	650.96	622.50	975.05	2322.53	-23.81	-23.65	1703.10	298.80	224.88	12.23	4.53
09/14/99	12:18	649.74	620.50	974.60	2319.63	-23.88	-23.72	1705.00	300.50	218.03	12.26	4.81
09/14/99	12:19	649.15	619.83	976.02	2318.05	-23.86	-23.68	1705.00	303.52	226.02	12.30	3.93
09/14/99	12:20	647.76	619.00	977.32	2314.27	-23.78	-23.62	1706.20	296.18	243.43	12.10	4.12

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
09:15	114.00	126.00	126.00	0.00	126.00	120.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:16	114.00	132.00	126.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:17	114.00	120.00	126.00	0.00	120.00	120.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:18	114.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:19	108.00	126.00	132.00	0.00	114.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:20	108.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:21	114.00	120.00	120.00	0.00	120.00	114.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:22	108.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:23	108.00	120.00	126.00	0.00	114.00	114.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:24	114.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:25	114.00	126.00	120.00	0.00	120.00	114.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:26	108.00	120.00	126.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:27	120.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:28	108.00	120.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:29	114.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:30	114.00	120.00	132.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:31	114.00	126.00	120.00	0.00	120.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:32	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:33	114.00	120.00	126.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:34	108.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:35	114.00	120.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:36	114.00	120.00	120.00	0.00	114.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:37	114.00	120.00	126.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:38	108.00	126.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:39	108.00	120.00	120.00	0.00	114.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:40	120.00	120.00	120.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:41	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:42	108.00	120.00	120.00	0.00	114.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:43	114.00	126.00	120.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:44	108.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:45	114.00	120.00	126.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:46	114.00	120.00	120.00	0.00	108.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:47	108.00	126.00	120.00	0.00	120.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:48	120.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:49	108.00	120.00	126.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:50	114.00	120.00	126.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:51	120.00	132.00	126.00	0.00	120.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:52	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:53	120.00	120.00	126.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:54	108.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:55	120.00	126.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:56	108.00	120.00	126.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:57	114.00	126.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:58	108.00	126.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
09:59	114.00	120.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:00	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:01	108.00	120.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:02	114.00	126.00	120.00	0.00	114.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
10:03	114.00	120.00	126.00	0.00	114.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:04	114.00	120.00	126.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:05	114.00	120.00	120.00	0.00	120.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:06	114.00	120.00	126.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:07	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:08	114.00	126.00	120.00	0.00	108.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:09	114.00	120.00	126.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:10	114.00	126.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:11	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:12	120.00	120.00	132.00	0.00	120.00	114.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:13	108.00	126.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:14	120.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:15	108.00	120.00	126.00	0.00	120.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:16	114.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:17	108.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:18	114.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:19	114.00	120.00	126.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:20	108.00	120.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:21	114.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:22	114.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:23	114.00	126.00	132.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:24	108.00	126.00	120.00	0.00	114.00	120.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:25	120.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:26	108.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:27	120.00	120.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:28	108.00	120.00	120.00	0.00	114.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:29	114.00	126.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:30	114.00	120.00	126.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:31	114.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:32	108.00	114.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:33	120.00	120.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:34	108.00	120.00	120.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:35	114.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:36	108.00	120.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:37	114.00	132.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:38	114.00	120.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:39	108.00	120.00	126.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:40	120.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:41	108.00	126.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:42	114.00	120.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:43	114.00	126.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:44	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:45	108.00	120.00	114.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:46	114.00	120.00	114.00	0.00	120.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:47	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:48	108.00	120.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:49	114.00	120.00	120.00	0.00	120.00	114.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:50	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
10:51	114.00	126.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:52	108.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:53	120.00	120.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:54	108.00	126.00	114.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:55	108.00	126.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:56	114.00	126.00	120.00	0.00	120.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:57	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:58	108.00	120.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
10:59	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:00	120.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:01	108.00	120.00	108.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:02	108.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:03	108.00	120.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:04	114.00	120.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:05	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:06	108.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:07	120.00	126.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:08	108.00	120.00	114.00	0.00	120.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:09	108.00	126.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:10	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:11	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:12	108.00	120.00	108.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:13	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:14	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:15	108.00	120.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:16	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:17	114.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:18	114.00	126.00	120.00	0.00	114.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:19	108.00	120.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:20	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:21	114.00	126.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:22	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:23	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:24	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:25	114.00	120.00	126.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:26	114.00	126.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:27	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:28	114.00	120.00	126.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:29	108.00	126.00	126.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:30	108.00	126.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:31	114.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:32	108.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:33	108.00	120.00	114.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:34	114.00	126.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:35	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:36	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:37	108.00	120.00	114.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:38	114.00	114.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
11:39	108.00	132.00	120.00	0.00	126.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:40	114.00	114.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:41	114.00	120.00	120.00	0.00	120.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:42	108.00	126.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:43	114.00	120.00	126.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:44	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:45	114.00	126.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:46	108.00	120.00	114.00	0.00	114.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:47	114.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:48	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:49	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:50	108.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:51	120.00	120.00	120.00	0.00	126.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:52	108.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:53	120.00	120.00	114.00	0.00	114.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:54	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:55	114.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:56	114.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:57	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:58	108.00	120.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
11:59	120.00	126.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:00	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:01	114.00	120.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:02	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:03	108.00	120.00	120.00	0.00	108.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:04	114.00	120.00	120.00	0.00	120.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:05	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:06	108.00	120.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:07	114.00	114.00	120.00	0.00	114.00	114.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:08	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:09	108.00	120.00	114.00	0.00	120.00	102.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:10	114.00	120.00	114.00	0.00	114.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:11	108.00	120.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:12	120.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:13	108.00	120.00	120.00	0.00	120.00	114.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:14	114.00	126.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:15	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:16	114.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:17	108.00	132.00	120.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:18	120.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:19	114.00	120.00	120.00	0.00	120.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
12:20	114.00	126.00	120.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	14:00	648.10	619.17	981.26	2315.20	-23.89	-23.72	1681.60	309.18	210.53	12.29	3.31
09/14/99	14:01	649.27	620.17	982.39	2319.04	-23.96	-23.78	1682.00	309.07	215.72	12.34	3.34
09/14/99	14:02	650.48	621.67	984.21	2322.57	-23.53	-23.36	1681.60	304.37	228.77	12.22	2.59
09/14/99	14:03	650.60	622.33	983.16	2322.09	-23.48	-23.32	1694.50	302.83	228.42	12.13	2.50
09/14/99	14:04	651.23	623.17	982.16	2322.95	-23.19	-23.03	1694.50	309.88	208.72	12.28	3.00
09/14/99	14:05	650.69	621.83	980.26	2320.60	-23.20	-23.04	1694.50	309.12	214.73	12.30	2.53
09/14/99	14:06	649.68	621.50	978.06	2316.43	-23.05	-22.89	1695.30	306.05	218.93	12.24	2.12
09/14/99	14:07	648.50	620.17	976.28	2313.51	-23.21	-23.05	1695.30	307.00	212.72	12.26	2.84
09/14/99	14:08	649.26	620.50	978.62	2316.37	-23.42	-23.25	1695.30	305.50	220.82	12.23	2.25
09/14/99	14:09	650.59	622.17	981.37	2319.55	-23.26	-23.10	1695.30	303.22	231.93	12.19	2.21
09/14/99	14:10	652.76	624.00	983.45	2325.47	-23.41	-23.26	1693.70	308.53	215.33	12.27	2.81
09/14/99	14:11	654.61	625.00	983.77	2328.63	-23.31	-23.15	1693.70	313.80	202.58	12.44	2.12
09/14/99	14:12	655.24	627.00	980.52	2328.25	-23.31	-23.16	1693.70	314.17	206.40	12.44	2.00
09/14/99	14:13	656.17	627.67	978.85	2331.40	-23.29	-23.13	1693.70	314.73	204.38	12.49	2.53
09/14/99	14:14	654.94	626.50	974.70	2328.02	-23.17	-23.00	1693.70	305.38	221.55	12.32	2.46
09/14/99	14:15	652.78	624.33	969.76	2323.23	-23.21	-23.05	1693.70	305.57	217.08	12.24	1.21
09/14/99	14:16	652.39	624.00	969.72	2322.01	-23.19	-23.02	1696.00	306.07	211.73	12.33	2.50
09/14/99	14:17	651.74	623.50	970.57	2318.75	-23.23	-23.07	1696.00	300.98	232.55	12.14	1.81
09/14/99	14:18	651.61	622.50	971.87	2319.10	-23.45	-23.32	1696.00	303.82	218.07	12.18	2.09
09/14/99	14:19	653.01	624.00	974.26	2323.43	-23.60	-23.44	1690.60	308.65	207.47	12.34	2.09
09/14/99	14:20	652.65	624.33	974.29	2322.19	-23.47	-23.31	1690.20	306.18	213.53	12.29	2.31
09/14/99	14:21	651.97	623.00	972.11	2318.75	-23.44	-23.30	1690.20	311.87	207.42	12.36	2.59
09/14/99	14:22	650.74	621.50	970.97	2314.46	-23.47	-23.31	1693.70	309.37	210.13	12.38	4.12
09/14/99	14:23	650.37	621.33	970.85	2314.96	-23.57	-23.41	1696.40	302.02	232.25	12.20	3.25
09/14/99	14:24	650.58	622.00	972.76	2314.82	-23.49	-23.35	1696.80	301.28	232.65	12.14	2.43
09/14/99	14:25	650.92	622.00	974.98	2316.54	-23.46	-23.32	1693.30	302.95	233.55	12.16	1.87
09/14/99	14:26	651.46	622.67	976.72	2317.36	-23.37	-23.23	1693.70	305.02	218.20	12.25	2.31
09/14/99	14:27	653.44	624.50	979.14	2324.05	-23.54	-23.41	1693.70	305.93	218.47	12.29	2.28
09/14/99	14:28	656.07	627.67	981.56	2331.11	-23.53	-23.38	1693.70	306.92	215.05	12.28	2.56
09/14/99	14:29	658.34	629.67	982.02	2338.70	-23.44	-23.27	1693.30	308.10	211.35	12.31	2.43
09/14/99	14:30	659.71	630.50	980.67	2342.99	-23.29	-23.15	1692.90	316.08	194.53	12.47	2.34
09/14/99	14:31	659.52	629.50	976.29	2342.08	-23.34	-23.20	1692.90	315.42	198.25	12.50	2.18
09/14/99	14:32	658.32	630.17	971.40	2337.29	-23.27	-23.11	1688.20	311.05	208.48	12.43	2.12
09/14/99	14:33	655.43	627.00	966.89	2328.54	-23.31	-23.18	1689.40	307.55	216.72	12.33	2.43
09/14/99	14:34	653.08	624.33	964.73	2320.83	-23.46	-23.30	1689.80	305.13	221.30	12.23	2.09
09/14/99	14:35	651.64	622.33	966.08	2316.29	-23.66	-23.50	1694.50	301.58	227.70	12.19	2.00
09/14/99	14:36	651.04	622.17	968.56	2315.49	-23.73	-23.56	1696.40	301.83	230.18	12.13	2.31
09/14/99	14:37	651.20	622.67	971.21	2316.75	-23.88	-23.70	1696.40	303.18	220.87	12.19	2.09
09/14/99	14:38	650.89	621.33	972.08	2314.80	-23.99	-23.80	1696.80	306.58	216.42	12.25	2.15
09/14/99	14:39	649.94	620.50	971.92	2311.52	-23.94	-23.80	1703.90	307.35	213.13	12.27	3.50
09/14/99	14:40	650.07	621.17	973.57	2311.45	-24.07	-23.91	1703.90	306.55	216.80	12.27	3.43
09/14/99	14:41	650.73	621.50	975.97	2313.32	-23.95	-23.78	1704.20	303.03	226.80	12.20	3.62
09/14/99	14:42	650.20	620.67	975.80	2311.54	-23.81	-23.65	1703.90	300.48	231.13	12.17	2.81
09/14/99	14:43	650.08	620.50	975.48	2312.34	-23.93	-23.78	1709.30	308.03	224.20	12.23	2.96
09/14/99	14:44	649.82	620.67	976.80	2311.92	-23.65	-23.47	1709.30	306.13	235.53	12.20	3.00
09/14/99	14:45	647.80	618.67	975.49	2306.07	-23.44	-23.29	1708.90	302.87	245.22	12.08	4.37
09/14/99	14:46	648.18	619.50	977.28	2306.34	-23.61	-23.44	1706.60	303.20	230.82	12.15	3.50
09/14/99	14:47	649.42	620.17	980.61	2308.11	-23.60	-23.45	1705.80	303.67	236.33	12.12	3.43

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	14:48	650.56	621.33	981.71	2310.40	-23.54	-23.38	1706.60	304.88	228.97	12.11	2.93
09/14/99	14:49	651.78	622.50	983.85	2313.28	-23.72	-23.53	1707.00	313.65	205.80	12.33	2.93
09/14/99	14:50	654.75	625.67	985.83	2322.60	-23.40	-23.23	1700.30	311.73	215.90	12.32	3.62
09/14/99	14:51	655.11	626.67	983.55	2322.09	-23.21	-23.06	1700.70	310.42	211.62	12.29	3.25
09/14/99	14:52	654.32	625.83	979.72	2323.62	-23.32	-23.16	1700.70	314.12	205.07	12.36	3.18
09/14/99	14:53	654.22	625.17	977.64	2324.09	-23.24	-23.08	1693.70	312.22	212.78	12.40	2.75
09/14/99	14:54	653.57	624.83	974.89	2320.49	-23.40	-23.24	1694.50	305.27	230.33	12.23	2.25
09/14/99	14:55	653.40	624.33	973.00	2322.34	-23.50	-23.37	1694.10	307.20	218.98	12.25	2.62
09/14/99	14:56	654.40	626.00	973.53	2326.08	-23.66	-23.50	1694.50	308.47	217.18	12.30	2.50
09/14/99	14:57	654.75	626.17	972.82	2326.90	-23.51	-23.35	1694.50	307.68	222.62	12.21	2.37
09/14/99	14:58	655.19	626.33	971.51	2330.90	-23.59	-23.42	1694.10	311.63	206.28	12.31	2.28
09/14/99	14:59	655.13	626.17	969.83	2330.81	-23.42	-23.28	1694.50	311.98	203.95	12.36	1.81
09/14/99	15:00	654.49	625.67	967.28	2328.98	-23.51	-23.36	1690.60	310.37	216.48	12.27	2.46
09/14/99	15:01	653.77	624.33	966.47	2327.16	-23.62	-23.46	1690.20	309.02	210.42	12.29	2.87
09/14/99	15:02	653.63	624.83	967.70	2327.75	-23.93	-23.76	1690.60	308.65	224.42	12.27	2.71
09/14/99	15:03	653.45	625.00	970.76	2326.40	-23.80	-23.63	1694.90	306.67	222.05	12.23	2.43
09/14/99	15:04	652.46	622.67	971.78	2323.94	-23.96	-23.82	1696.00	309.78	215.88	12.28	3.00
09/14/99	15:05	652.80	623.67	974.66	2325.10	-24.03	-23.85	1695.70	313.62	206.97	12.34	3.87
09/14/99	15:06	652.83	623.67	975.97	2324.59	-23.80	-23.61	1695.70	310.63	217.98	12.25	2.62
09/14/99	15:07	651.69	623.00	976.09	2323.69	-23.76	-23.59	1700.30	311.55	211.67	12.22	2.62
09/14/99	15:08	650.95	622.50	976.26	2322.51	-23.71	-23.52	1700.30	309.65	211.47	12.30	2.81
09/14/99	15:09	649.57	620.83	976.14	2317.05	-23.50	-23.34	1700.30	305.15	224.23	12.19	3.31
09/14/99	15:10	647.32	618.33	974.91	2311.47	-23.64	-23.49	1700.30	306.78	221.52	12.18	2.40
09/14/99	15:11	647.86	619.50	976.99	2312.59	-23.59	-23.44	1700.00	305.62	219.90	12.19	2.96
09/14/99	15:12	647.93	619.33	978.85	2311.79	-23.57	-23.41	1702.70	303.70	230.18	12.14	2.62
09/14/99	15:13	649.02	619.67	981.29	2314.80	-23.66	-23.49	1701.90	307.58	223.08	12.15	2.68
09/14/99	15:14	649.77	620.83	982.44	2314.59	-23.54	-23.39	1703.10	311.13	212.47	12.29	2.81
09/14/99	15:15	649.55	620.67	980.56	2312.78	-23.63	-23.47	1701.50	310.18	214.57	12.29	3.25
09/14/99	15:16	650.15	621.00	981.16	2314.86	-23.80	-23.62	1702.70	313.65	204.18	12.36	2.56
09/14/99	15:17	650.82	621.50	982.52	2317.36	-23.65	-23.46	1699.20	305.70	226.30	12.24	1.75
09/14/99	15:18	649.72	619.83	981.70	2313.85	-23.58	-23.41	1699.60	306.22	217.70	12.18	2.90
09/14/99	15:19	648.60	619.00	981.42	2311.70	-23.82	-23.64	1698.80	310.85	208.67	12.30	2.96
09/14/99	15:20	649.65	620.00	982.83	2312.94	-23.76	-23.57	1698.80	305.80	219.30	12.26	2.75
09/14/99	15:21	649.79	621.00	983.20	2311.85	-23.57	-23.40	1696.00	304.67	227.25	12.16	2.71
09/14/99	15:22	650.38	621.33	983.79	2313.55	-23.74	-23.55	1698.40	308.92	209.27	12.24	2.93
09/14/99	15:23	652.36	624.67	986.53	2318.94	-23.66	-23.46	1698.40	307.97	206.67	12.27	2.84
09/14/99	15:24	653.84	625.17	986.59	2322.34	-23.52	-23.34	1698.80	306.33	218.00	12.22	3.87
09/14/99	15:25	654.54	625.17	985.16	2324.74	-23.55	-23.37	1698.40	313.37	201.82	12.35	2.75
09/14/99	15:26	654.28	625.67	981.76	2323.58	-23.22	-23.06	1698.00	312.32	205.32	12.39	2.84
09/14/99	15:27	652.75	623.83	977.24	2318.68	-23.36	-23.19	1698.40	309.28	214.78	12.30	2.71
09/14/99	15:28	653.30	624.17	976.28	2319.74	-23.50	-23.32	1696.80	309.67	215.12	12.28	2.87
09/14/99	15:29	654.11	625.33	977.86	2321.92	-23.46	-23.28	1700.70	303.63	230.60	12.17	2.56
09/14/99	15:30	653.90	625.50	978.79	2321.10	-23.51	-23.35	1700.70	306.37	224.10	12.16	2.46
09/14/99	15:31	653.65	625.00	978.20	2320.91	-23.53	-23.35	1700.00	311.98	208.98	12.33	2.71
09/14/99	15:32	653.18	624.00	977.40	2320.28	-23.64	-23.46	1699.20	312.12	203.22	12.43	3.00
09/14/99	15:33	653.36	624.33	976.07	2320.32	-23.74	-23.59	1697.20	309.43	213.32	12.30	2.81
09/14/99	15:34	653.62	624.67	975.76	2323.27	-23.79	-23.60	1697.20	307.78	213.35	12.26	3.03
09/14/99	15:35	653.03	624.33	974.03	2320.53	-23.66	-23.47	1695.70	307.58	220.85	12.26	2.87

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	15:36	652.66	623.33	972.80	2320.83	-23.74	-23.57	1695.30	307.65	222.43	12.23	2.65
09/14/99	15:37	653.60	624.50	974.27	2325.14	-23.87	-23.70	1695.70	307.28	226.60	12.25	2.12
09/14/99	15:38	654.36	625.33	976.07	2326.53	-23.85	-23.69	1695.30	302.57	226.78	12.16	3.31
09/14/99	15:39	654.62	625.67	976.55	2327.74	-23.92	-23.74	1700.70	309.35	205.33	12.27	3.21
09/14/99	15:40	654.34	625.67	975.07	2326.88	-23.62	-23.44	1703.50	313.53	196.35	12.40	4.03
09/14/99	15:41	654.44	625.83	973.84	2326.67	-23.68	-23.50	1703.90	309.72	206.98	12.37	5.00
09/14/99	15:42	654.04	624.83	971.95	2325.89	-23.54	-23.39	1704.60	305.28	217.97	12.25	4.15
09/14/99	15:43	653.14	624.33	970.31	2322.43	-23.67	-23.48	1701.50	306.78	221.15	12.22	4.84
09/14/99	15:44	651.08	622.33	967.50	2315.72	-23.56	-23.38	1701.50	306.52	221.40	12.25	5.00
09/14/99	15:45	649.89	620.67	966.41	2310.95	-23.66	-23.50	1707.00	305.80	228.37	12.23	4.18
09/14/99	15:46	650.54	621.67	969.54	2312.19	-24.01	-23.83	1707.40	302.40	230.70	12.17	4.00
09/14/99	15:47	651.85	622.83	972.95	2315.64	-23.81	-23.63	1707.40	300.92	236.35	12.10	4.25
09/14/99	15:48	652.21	622.67	974.51	2317.63	-23.83	-23.64	1707.40	307.30	220.28	12.23	3.87
09/14/99	15:49	653.25	624.00	973.58	2319.17	-23.66	-23.47	1706.20	310.73	207.98	12.39	4.65
09/14/99	15:50	653.64	624.50	971.96	2317.89	-23.65	-23.48	1702.30	306.90	216.52	12.35	4.75
09/14/99	15:51	653.43	624.50	971.35	2317.97	-23.73	-23.56	1702.30	306.82	217.82	12.27	3.50
09/14/99	15:52	653.11	624.00	971.13	2317.95	-23.67	-23.49	1702.30	304.05	222.45	12.23	3.90
09/14/99	15:53	653.70	624.83	970.75	2319.99	-23.70	-23.53	1701.50	304.75	221.10	12.26	3.96
09/14/99	15:54	655.10	626.33	971.07	2324.26	-23.63	-23.44	1701.50	306.08	218.68	12.27	4.59
09/14/99	15:55	655.03	626.00	970.24	2325.35	-23.55	-23.37	1701.50	306.13	222.15	12.25	3.87
09/14/99	15:56	654.50	625.67	968.20	2324.87	-23.48	-23.32	1697.20	305.92	215.03	12.29	3.87
09/14/99	15:57	653.95	624.50	967.88	2322.41	-23.71	-23.52	1696.00	309.90	211.20	12.32	3.68
09/14/99	15:58	653.86	625.00	969.69	2324.67	-23.83	-23.65	1696.00	306.25	217.38	12.27	4.68
09/14/99	15:59	653.28	624.33	971.15	2323.94	-23.56	-23.40	1696.00	304.75	216.05	12.26	4.78
09/14/99	16:00	651.49	622.33	970.14	2319.92	-23.57	-23.39	1692.90	310.48	214.12	12.29	4.46
09/14/99	16:01	651.83	622.67	973.07	2321.25	-23.80	-23.64	1692.90	312.12	215.83	12.31	4.31
09/14/99	16:02	653.18	624.33	977.82	2326.10	-23.69	-23.52	1692.90	306.23	233.03	12.17	4.31
09/14/99	16:03	653.00	624.17	978.66	2325.70	-23.50	-23.34	1692.90	307.35	217.22	12.15	3.65
09/14/99	16:04	652.33	623.17	977.23	2323.44	-23.63	-23.46	1690.20	316.57	189.53	12.40	4.28
09/14/99	16:05	652.90	623.83	978.41	2326.11	-23.61	-23.43	1690.20	314.78	205.10	12.40	4.18
09/14/99	16:06	652.60	623.33	978.34	2325.33	-23.49	-23.32	1690.60	306.22	224.02	12.19	4.37
09/14/99	16:07	652.30	623.33	976.55	2325.01	-23.54	-23.39	1689.80	306.67	213.08	12.23	4.12
09/14/99	16:08	652.43	623.33	975.40	2325.14	-23.56	-23.40	1690.60	310.70	210.78	12.31	4.21
09/14/99	16:09	653.65	624.67	975.92	2327.68	-23.61	-23.44	1690.20	304.45	216.12	12.20	4.28

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
14:00	114.00	120.00	120.00	0.00	108.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:01	114.00	120.00	126.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:02	114.00	108.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:03	108.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:04	108.00	120.00	114.00	0.00	120.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:05	114.00	114.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:06	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:07	108.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:08	114.00	108.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:09	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:10	120.00	120.00	120.00	0.00	114.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:11	108.00	114.00	108.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:12	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:13	114.00	114.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:14	108.00	114.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:15	114.00	120.00	108.00	0.00	108.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:16	114.00	114.00	120.00	0.00	120.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:17	108.00	114.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:18	120.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:19	108.00	114.00	114.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:20	114.00	120.00	120.00	0.00	108.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:21	108.00	120.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:22	108.00	108.00	120.00	0.00	108.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:23	120.00	120.00	120.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:24	108.00	114.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:25	108.00	114.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:26	114.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:27	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:28	114.00	108.00	120.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:29	108.00	120.00	114.00	0.00	114.00	96.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:30	108.00	114.00	120.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:31	114.00	114.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:32	108.00	114.00	126.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:33	108.00	114.00	120.00	0.00	114.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:34	108.00	114.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:35	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:36	120.00	120.00	126.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:37	108.00	108.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:38	108.00	120.00	132.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:39	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:40	108.00	114.00	126.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:41	114.00	114.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:42	114.00	114.00	120.00	0.00	120.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:43	108.00	120.00	132.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:44	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:45	114.00	114.00	114.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:46	108.00	114.00	120.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:47	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
14:48	114.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:49	114.00	114.00	120.00	0.00	108.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:50	108.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:51	108.00	120.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:52	108.00	108.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:53	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:54	108.00	108.00	120.00	0.00	114.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:55	108.00	120.00	114.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:56	120.00	114.00	120.00	0.00	120.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:57	108.00	108.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:58	108.00	120.00	120.00	0.00	114.00	102.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
14:59	108.00	120.00	108.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:00	114.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:01	108.00	120.00	120.00	0.00	114.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:02	108.00	114.00	120.00	0.00	120.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:03	120.00	114.00	114.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:04	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:05	108.00	120.00	120.00	0.00	108.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:06	114.00	114.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:07	114.00	114.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:08	114.00	120.00	120.00	0.00	114.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:09	108.00	114.00	114.00	0.00	114.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:10	108.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:11	120.00	108.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:12	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:13	114.00	114.00	120.00	0.00	114.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:14	108.00	114.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:15	108.00	114.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:16	120.00	114.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:17	108.00	114.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:18	108.00	114.00	114.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:19	114.00	114.00	114.00	0.00	108.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:20	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:21	108.00	108.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:22	120.00	120.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:23	108.00	108.00	114.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:24	108.00	114.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:25	108.00	120.00	114.00	0.00	120.00	102.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:26	108.00	108.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:27	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:28	108.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:29	108.00	114.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:30	114.00	120.00	120.00	0.00	114.00	96.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:31	114.00	114.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:32	108.00	108.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:33	114.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:34	108.00	114.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:35	108.00	114.00	120.00	0.00	114.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
15:36	108.00	114.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:37	108.00	114.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:38	114.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:39	108.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:40	108.00	108.00	114.00	0.00	108.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:41	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:42	108.00	108.00	120.00	0.00	108.00	102.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:43	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:44	114.00	114.00	108.00	0.00	108.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:45	114.00	114.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:46	114.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:47	108.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:48	108.00	108.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:49	120.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:50	108.00	114.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:51	108.00	120.00	114.00	0.00	114.00	102.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:52	114.00	108.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:53	108.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:54	120.00	108.00	114.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:55	108.00	120.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:56	108.00	108.00	114.00	0.00	114.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:57	120.00	114.00	114.00	0.00	108.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:58	108.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
15:59	114.00	108.00	114.00	0.00	114.00	96.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:00	108.00	120.00	120.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:01	108.00	120.00	108.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:02	108.00	108.00	120.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:03	114.00	114.00	114.00	0.00	120.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:04	108.00	120.00	108.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:05	114.00	114.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:06	114.00	114.00	114.00	0.00	108.00	96.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:07	108.00	108.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:08	108.00	120.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
16:09	120.00	120.00	114.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	17:35	652.80	623.67	980.00	2321.88	-23.37	-23.20	1693.70	311.52	204.37	12.30	3.09
09/14/99	17:36	652.76	623.50	979.39	2322.47	-23.46	-23.30	1695.30	310.13	207.23	12.35	3.84
09/14/99	17:37	653.29	624.33	978.99	2324.19	-23.43	-23.26	1691.40	308.13	216.22	12.26	2.75
09/14/99	17:38	653.50	624.33	977.32	2325.03	-23.45	-23.29	1691.40	309.37	212.00	12.33	3.50
09/14/99	17:39	654.29	625.17	976.24	2328.40	-23.57	-23.39	1691.40	310.17	205.87	12.33	4.71
09/14/99	17:40	653.59	624.33	975.59	2325.81	-23.54	-23.35	1686.30	308.42	213.35	12.32	3.25
09/14/99	17:41	651.77	622.33	972.51	2321.17	-23.62	-23.44	1686.30	310.40	214.23	12.30	3.56
09/14/99	17:42	651.49	622.17	971.29	2321.63	-23.79	-23.62	1685.90	311.82	206.43	12.36	3.71
09/14/99	17:43	651.95	622.50	973.07	2323.52	-24.21	-24.04	1686.70	305.18	227.65	12.23	4.50
09/14/99	17:44	653.37	623.83	976.55	2327.49	-24.20	-24.01	1689.40	302.62	231.32	12.12	3.50
09/14/99	17:45	653.38	623.83	978.00	2326.80	-24.14	-23.96	1689.00	306.57	221.18	12.21	3.59
09/14/99	17:46	653.08	623.67	977.88	2326.46	-24.02	-23.84	1689.40	310.98	211.98	12.31	3.15
09/14/99	17:47	652.90	623.67	977.39	2325.62	-24.04	-23.87	1700.70	309.22	220.23	12.28	4.50
09/14/99	17:48	651.28	622.00	976.70	2321.08	-23.82	-23.63	1701.10	304.92	227.82	12.14	3.56
09/14/99	17:49	649.49	619.67	974.79	2315.76	-23.89	-23.74	1701.10	304.88	228.22	12.13	3.43
09/14/99	17:50	650.34	620.50	977.22	2318.83	-23.96	-23.77	1705.40	304.85	224.90	12.14	4.09
09/14/99	17:51	652.12	623.00	981.40	2323.37	-23.87	-23.69	1705.80	301.02	236.42	12.08	2.75
09/14/99	17:52	654.42	624.50	983.75	2329.60	-23.84	-23.66	1705.40	303.90	230.27	12.09	3.31
09/14/99	17:53	656.60	627.00	985.21	2336.43	-23.95	-23.75	1707.80	309.97	204.57	12.33	2.75
09/14/99	17:54	658.08	629.50	983.54	2339.18	-23.81	-23.62	1706.20	313.22	212.88	12.38	3.06
09/14/99	17:55	657.74	627.00	979.26	2337.54	-23.60	-23.43	1705.80	312.05	212.95	12.40	2.28
09/14/99	17:56	657.28	626.83	975.34	2335.54	-23.76	-23.60	1706.20	311.07	213.37	12.40	2.68
09/14/99	17:57	657.24	627.83	973.90	2334.95	-23.74	-23.57	1701.90	304.50	228.53	12.23	2.90
09/14/99	17:58	656.24	627.00	973.18	2331.30	-23.68	-23.51	1702.30	302.02	230.28	12.12	2.18
09/14/99	17:59	654.97	626.17	972.17	2326.99	-23.70	-23.52	1701.90	305.75	219.68	12.18	1.90
09/14/99	18:00	654.24	624.83	972.05	2325.62	-23.81	-23.64	1701.50	307.35	220.08	12.26	2.68
09/14/99	18:01	654.37	624.83	974.36	2325.50	-24.00	-23.81	1704.60	303.80	226.85	12.19	2.96
09/14/99	18:02	654.03	624.50	975.41	2323.64	-23.93	-23.77	1704.60	301.32	233.20	12.15	3.31
09/14/99	18:03	654.32	624.67	976.41	2325.75	-24.14	-23.97	1704.60	308.17	218.05	12.25	3.06
09/14/99	18:04	654.86	625.17	976.77	2327.26	-23.97	-23.79	1702.70	308.52	220.22	12.31	3.62
09/14/99	18:05	654.30	624.83	975.23	2325.70	-23.97	-23.80	1702.30	303.85	229.43	12.22	3.43
09/14/99	18:06	654.15	624.00	974.54	2324.74	-24.13	-23.97	1702.70	304.42	226.08	12.22	3.56
09/14/99	18:07	653.75	624.83	975.26	2322.53	-24.09	-23.92	1700.70	301.02	233.93	12.17	2.81
09/14/99	18:08	653.51	624.33	974.99	2321.00	-24.13	-23.94	1700.70	301.15	235.58	12.12	3.93
09/14/99	18:09	654.87	625.17	976.66	2325.49	-24.09	-23.89	1700.70	303.92	226.93	12.19	3.00
09/14/99	18:10	655.51	625.83	977.63	2326.82	-24.15	-23.96	1701.10	301.52	241.97	12.16	2.59
09/14/99	18:11	654.90	625.50	976.34	2325.50	-24.10	-23.92	1701.50	301.03	230.57	12.15	3.68
09/14/99	18:12	654.62	625.00	975.32	2324.47	-24.10	-23.91	1703.90	307.63	217.92	12.30	3.25
09/14/99	18:13	654.25	624.17	974.71	2322.57	-24.09	-23.89	1704.20	303.73	227.98	12.22	3.37
09/14/99	18:14	654.41	624.67	976.07	2322.87	-23.96	-23.76	1703.90	301.48	236.08	12.13	3.31
09/14/99	18:15	653.87	624.00	975.32	2321.00	-24.00	-23.83	1703.90	302.47	238.82	12.15	2.90
09/14/99	18:16	653.98	624.33	977.09	2321.54	-23.95	-23.75	1701.90	303.97	233.82	12.18	3.31
09/14/99	18:17	652.81	623.00	976.92	2317.46	-23.90	-23.71	1701.10	303.65	230.45	12.21	2.59
09/14/99	18:18	651.92	622.50	976.74	2314.38	-23.82	-23.65	1700.70	304.22	224.52	12.20	2.93
09/14/99	18:19	651.19	621.33	977.35	2311.83	-24.02	-23.84	1701.50	304.35	218.50	12.26	3.75
09/14/99	18:20	651.07	621.67	978.68	2311.08	-24.11	-23.96	1705.80	299.95	226.55	12.14	3.21
09/14/99	18:21	651.93	622.00	983.01	2313.07	-24.17	-23.97	1705.40	302.53	223.42	12.16	3.25
09/14/99	18:22	653.84	624.17	986.59	2320.79	-24.09	-23.90	1705.40	306.22	221.97	12.23	2.31

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	18:23	655.14	626.00	986.94	2323.44	-23.74	-23.56	1708.90	308.47	216.25	12.26	3.50
09/14/99	18:24	655.58	626.17	985.47	2326.36	-23.97	-23.79	1708.20	309.40	217.13	12.33	3.71
09/14/99	18:25	656.23	626.83	986.07	2328.67	-23.76	-23.58	1708.90	307.98	216.93	12.31	2.87
09/14/99	18:26	654.67	625.67	982.79	2323.14	-23.78	-23.61	1708.20	305.30	231.87	12.21	3.50
09/14/99	18:27	655.47	626.50	982.98	2326.63	-23.94	-23.75	1708.20	309.38	217.03	12.27	2.81
09/14/99	18:28	655.53	626.67	982.98	2325.22	-23.75	-23.57	1708.20	304.33	232.00	12.25	2.81
09/14/99	18:29	654.32	625.00	980.78	2322.24	-23.75	-23.55	1708.20	303.35	231.65	12.12	2.59
09/14/99	18:30	654.06	624.50	979.27	2321.80	-23.95	-23.77	1704.20	307.48	213.33	12.32	2.68
09/14/99	18:31	655.43	625.67	980.35	2326.76	-23.95	-23.77	1704.20	300.48	237.03	12.16	3.31
09/14/99	18:32	656.21	627.00	980.45	2328.25	-23.79	-23.62	1702.30	301.98	231.27	12.15	3.87
09/14/99	18:33	656.58	627.33	980.34	2329.68	-23.82	-23.63	1700.00	306.25	216.08	12.26	3.34
09/14/99	18:34	656.95	628.33	979.60	2329.81	-23.73	-23.55	1700.00	308.37	218.57	12.35	10.59
09/14/99	18:35	657.09	627.67	977.94	2330.83	-23.77	-23.58	1700.30	304.25	225.83	12.28	4.31
09/14/99	18:36	657.21	628.00	977.21	2331.25	-23.74	-23.54	1700.70	306.20	226.15	12.30	4.59
09/14/99	18:37	657.20	628.17	976.76	2331.89	-23.65	-23.48	1700.30	303.32	231.38	12.23	3.84
09/14/99	18:38	657.29	628.17	976.90	2331.80	-23.76	-23.56	1700.30	304.72	218.53	12.25	2.87
09/14/99	18:39	656.68	627.67	977.00	2330.88	-23.91	-23.72	1700.70	305.00	222.72	12.28	3.62
09/14/99	18:40	655.90	626.00	977.07	2330.18	-23.83	-23.65	1697.60	307.72	224.97	12.30	3.37
09/14/99	18:41	655.64	626.50	978.86	2331.26	-24.06	-23.88	1697.60	306.62	222.05	12.29	4.09
09/14/99	18:42	656.64	627.83	982.17	2333.44	-24.07	-23.87	1697.60	305.58	226.33	12.24	2.68
09/14/99	18:43	656.02	625.67	983.14	2332.31	-24.01	-23.83	1700.70	305.93	226.65	12.20	2.87
09/14/99	18:44	654.70	625.67	981.93	2329.17	-24.02	-23.84	1701.50	311.55	212.83	12.33	3.84
09/14/99	18:45	654.51	624.83	983.51	2327.41	-23.98	-23.79	1701.50	309.12	215.53	12.33	3.43
09/14/99	18:46	653.89	624.50	985.29	2324.89	-23.90	-23.72	1703.90	302.82	233.52	12.16	3.59
09/14/99	18:47	651.82	622.33	984.62	2318.56	-23.93	-23.76	1701.50	305.68	225.48	12.17	2.93
09/14/99	18:48	651.44	621.83	983.92	2318.41	-24.24	-24.06	1700.70	306.97	223.60	12.26	2.53
09/14/99	18:49	650.88	621.00	984.37	2315.74	-24.27	-24.09	1701.10	305.10	229.25	12.20	3.00
09/14/99	18:50	651.31	621.67	983.48	2316.04	-24.20	-24.00	1710.10	299.43	240.62	12.05	3.90
09/14/99	18:51	651.56	621.83	984.75	2315.41	-24.16	-23.97	1710.10	304.55	222.88	12.19	3.68
09/14/99	18:52	651.54	622.33	983.95	2313.83	-24.07	-23.88	1710.10	300.62	242.87	12.11	3.62
09/14/99	18:53	652.51	622.83	984.28	2316.16	-24.16	-23.96	1709.70	303.82	231.67	12.16	3.31
09/14/99	18:54	653.87	624.33	986.43	2320.03	-23.92	-23.71	1712.80	301.45	236.35	12.17	2.65
09/14/99	18:55	655.36	625.67	987.47	2324.68	-23.97	-23.79	1712.10	300.20	238.13	12.09	0.71
09/14/99	18:56	656.48	627.00	988.86	2327.79	-23.78	-23.58	1713.20	305.28	220.98	12.23	0.65
09/14/99	18:57	656.43	627.17	987.24	2327.53	-23.75	-23.56	1714.80	306.78	218.80	12.29	44.62
09/14/99	18:58	657.46	628.33	987.43	2331.47	-23.70	-23.51	1714.80	308.20	214.55	12.30	44.62
09/14/99	18:59	658.36	629.83	987.74	2333.44	-23.50	-23.33	1712.80	303.50	223.15	12.24	44.62
09/14/99	19:00	658.14	629.00	986.19	2332.14	-23.56	-23.40	1705.80	306.53	214.65	12.19	0.06
09/14/99	19:01	658.23	628.83	985.53	2332.62	-23.61	-23.45	1705.40	310.77	202.92	12.35	0.09
09/14/99	19:02	656.95	628.17	984.16	2329.32	-23.64	-23.46	1705.40	306.83	216.93	12.32	2.50
09/14/99	19:03	654.87	625.50	980.78	2324.21	-23.74	-23.56	1699.60	306.47	220.25	12.25	2.50
09/14/99	19:04	655.13	625.83	980.62	2324.65	-23.62	-23.43	1700.00	308.57	215.45	12.31	2.56
09/14/99	19:05	655.28	626.33	981.49	2323.50	-23.67	-23.49	1699.20	302.22	237.28	12.19	2.34
09/14/99	19:06	655.18	626.67	982.16	2321.48	-23.72	-23.53	1695.70	302.90	237.10	12.13	1.93
09/14/99	19:07	654.80	625.17	982.07	2320.16	-23.72	-23.54	1695.30	305.78	223.05	12.28	2.15
09/14/99	19:08	655.14	626.00	982.07	2320.89	-23.85	-23.66	1696.00	307.80	217.38	12.35	1.78
09/14/99	19:09	656.59	627.00	982.77	2323.18	-23.73	-23.54	1694.90	303.63	218.97	12.26	3.06
09/14/99	19:10	656.97	627.67	982.48	2323.62	-24.06	-23.88	1695.30	301.48	222.62	12.22	2.65

Date	Time	GENERATOR GROSS LOAD MWS	GENERATOR NET LOAD MWS	THROTTLE STM TEMP DEG F	THROTTLE STM PRESS PSIG	IDF A SUCT PRESS INW	IDF B SUCT PRESS INW	STACK FLOW AVERAGE (BIASED) KSCFM	SO2 (BIASED) PPM	NOX (BIASED) PPM	CO2 (BIASED) PERCNT	OPACITY (BIASED) PERCNT
09/14/99	19:11	658.05	628.17	982.57	2329.17	-24.19	-24.01	1694.90	305.02	216.25	12.26	3.25
09/14/99	19:12	658.89	629.33	980.84	2331.46	-24.01	-23.83	1692.50	306.05	218.10	12.31	2.31
09/14/99	19:13	657.81	628.17	976.32	2328.23	-23.99	-23.80	1693.30	307.05	213.58	12.29	3.15
09/14/99	19:14	657.27	627.17	973.33	2326.02	-24.15	-24.00	1692.50	309.62	214.83	12.30	2.68
09/14/99	19:15	657.61	627.83	973.85	2327.85	-24.36	-24.16	1693.30	299.98	243.35	12.13	2.93
09/14/99	19:16	656.63	627.33	973.24	2324.97	-24.27	-24.09	1697.20	299.48	244.28	12.02	3.18
09/14/99	19:17	655.69	626.17	971.80	2323.77	-24.38	-24.20	1697.20	305.27	229.18	12.11	3.31
09/14/99	19:18	655.19	625.17	972.31	2321.44	-24.37	-24.20	1699.20	306.03	226.33	12.21	3.50
09/14/99	19:19	653.68	624.00	972.05	2315.26	-24.34	-24.16	1700.70	298.08	246.22	12.04	2.75
09/14/99	19:20	651.76	622.33	970.96	2308.01	-24.12	-23.92	1700.70	298.33	240.85	12.07	3.34
09/14/99	19:21	648.24	618.50	968.79	2298.99	-24.24	-24.06	1707.40	297.75	248.18	12.07	3.31
09/14/99	19:22	648.61	618.67	971.48	2302.62	-24.25	-24.09	1713.20	294.27	257.85	11.98	3.43
09/14/99	19:23	650.84	621.33	977.86	2309.08	-24.33	-24.14	1713.20	289.92	271.38	11.86	2.65
09/14/99	19:24	651.84	622.50	980.90	2311.01	-24.18	-23.99	1713.20	293.60	256.97	11.89	2.87
09/14/99	19:25	653.35	624.33	982.49	2315.59	-24.13	-23.95	1718.30	305.85	222.12	12.23	3.43
09/14/99	19:26	655.13	625.50	983.56	2321.48	-23.98	-23.78	1712.10	306.05	222.57	12.34	3.50
09/14/99	19:27	654.87	625.67	980.44	2318.85	-23.72	-23.53	1712.10	301.57	235.65	12.16	3.12
09/14/99	19:28	654.21	625.00	977.69	2316.77	-23.70	-23.50	1712.50	302.92	227.67	12.20	2.40
09/14/99	19:29	654.06	625.00	976.74	2316.65	-23.74	-23.55	1714.40	299.83	240.42	12.16	3.25
09/14/99	19:30	655.14	626.17	978.58	2319.50	-23.80	-23.59	1714.80	297.23	254.38	12.05	2.75
09/14/99	19:31	654.70	625.50	978.47	2316.52	-23.67	-23.47	1714.80	299.15	238.05	12.12	3.00
09/14/99	19:32	653.68	624.00	977.27	2315.87	-23.86	-23.66	1711.70	304.38	222.07	12.23	4.40
09/14/99	19:33	654.22	624.83	977.95	2316.69	-23.95	-23.76	1710.10	304.52	220.97	12.32	3.43
09/14/99	19:34	654.45	625.17	978.20	2316.46	-23.89	-23.71	1710.10	299.43	240.83	12.14	3.37
09/14/99	19:35	654.20	624.83	977.14	2315.68	-23.86	-23.69	1708.20	299.73	233.12	12.17	3.31
09/14/99	19:36	654.29	624.67	976.62	2316.64	-24.11	-23.92	1712.50	302.52	225.82	12.27	4.65
09/14/99	19:37	655.11	625.00	978.79	2318.43	-24.27	-24.07	1712.80	300.30	228.78	12.18	3.68
09/14/99	19:38	654.50	625.33	978.89	2317.23	-24.31	-24.12	1711.30	298.18	231.12	12.14	5.00
09/14/99	19:39	655.23	626.00	979.91	2321.35	-24.25	-24.05	1710.90	303.40	218.55	12.22	4.62
09/14/99	19:40	654.48	624.50	979.65	2319.50	-24.12	-23.91	1707.80	303.50	230.07	12.22	3.78
09/14/99	19:41	653.07	623.67	978.74	2319.32	-24.08	-23.88	1708.20	300.12	246.97	12.07	5.43
09/14/99	19:42	653.60	624.00	981.50	2322.60	-24.03	-23.82	1707.80	300.00	235.55	12.14	3.50
09/14/99	19:43	654.92	625.50	983.96	2325.22	-23.90	-23.72	1711.30	296.75	250.20	11.97	4.09
09/14/99	19:44	654.48	624.83	984.61	2324.40	-23.78	-23.58	1710.90	301.92	228.43	12.07	4.00
09/14/99	19:45	653.85	624.50	984.34	2323.69	-23.66	-23.45	1707.00	305.92	222.00	12.25	3.50
09/14/99	19:46	651.76	622.67	982.25	2316.64	-23.53	-23.36	1708.20	303.68	232.88	12.21	44.25
09/14/99	19:47	651.47	621.67	981.37	2316.29	-23.77	-23.59	1703.10	301.10	235.77	12.14	44.25
09/14/99	19:48	652.19	623.17	983.04	2318.37	-23.65	-23.45	1702.70	300.30	237.03	12.14	44.21

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
17:35	108.00	114.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:36	108.00	120.00	120.00	0.00	108.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:37	108.00	108.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:38	120.00	120.00	120.00	0.00	108.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:39	108.00	120.00	114.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:40	114.00	114.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:41	108.00	120.00	120.00	0.00	108.00	96.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:42	108.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:43	120.00	108.00	120.00	0.00	114.00	108.00	96.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:44	108.00	120.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:45	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:46	114.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:47	114.00	114.00	120.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:48	108.00	120.00	120.00	0.00	108.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:49	120.00	120.00	120.00	0.00	120.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:50	108.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:51	114.00	120.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:52	114.00	114.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:53	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:54	108.00	108.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:55	108.00	120.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:56	114.00	120.00	108.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:57	108.00	120.00	120.00	0.00	114.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:58	108.00	114.00	114.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
17:59	114.00	120.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:00	108.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:01	114.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:02	114.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:03	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:04	108.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:05	108.00	126.00	120.00	0.00	114.00	102.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:06	114.00	120.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:07	108.00	120.00	126.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:08	114.00	120.00	120.00	0.00	120.00	108.00	120.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:09	114.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:10	108.00	120.00	126.00	0.00	120.00	114.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:11	108.00	120.00	120.00	0.00	108.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:12	114.00	120.00	132.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:13	108.00	126.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:14	114.00	120.00	126.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:15	114.00	120.00	126.00	0.00	108.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:16	108.00	120.00	120.00	0.00	108.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:17	108.00	120.00	126.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:18	114.00	132.00	120.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:19	108.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:20	114.00	114.00	132.00	0.00	108.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:21	114.00	120.00	120.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:22	108.00	120.00	126.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
18:23	108.00	120.00	120.00	0.00	108.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:24	114.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:25	108.00	108.00	120.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:26	114.00	126.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:27	108.00	120.00	120.00	0.00	108.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:28	114.00	120.00	120.00	0.00	120.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:29	108.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:30	108.00	120.00	120.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:31	114.00	120.00	120.00	0.00	108.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:32	108.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:33	108.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:34	108.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:35	108.00	126.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:36	108.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:37	114.00	108.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:38	114.00	120.00	126.00	0.00	108.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:39	108.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:40	114.00	126.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:41	108.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:42	108.00	120.00	120.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:43	114.00	120.00	114.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:44	114.00	120.00	120.00	0.00	108.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:45	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:46	108.00	114.00	120.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:47	120.00	126.00	120.00	0.00	108.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:48	108.00	120.00	120.00	0.00	120.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:49	114.00	120.00	120.00	0.00	108.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:50	108.00	126.00	126.00	0.00	120.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:51	114.00	120.00	120.00	0.00	108.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:52	102.00	120.00	114.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:53	114.00	120.00	120.00	0.00	108.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:54	114.00	132.00	120.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:55	108.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:56	108.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:57	108.00	126.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:58	114.00	120.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
18:59	108.00	120.00	120.00	0.00	114.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:00	108.00	120.00	108.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:01	108.00	120.00	108.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:02	114.00	120.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:03	114.00	126.00	114.00	0.00	114.00	108.00	102.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:04	108.00	120.00	120.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:05	114.00	120.00	108.00	0.00	120.00	114.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:06	108.00	120.00	120.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:07	114.00	132.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:08	114.00	120.00	114.00	0.00	120.00	114.00	120.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:09	108.00	126.00	114.00	0.00	120.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:10	108.00	126.00	120.00	0.00	108.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

Time	FEEDER A TOTAL COAL FLOW RATE KPPH	FEEDER B TOTAL COAL FLOW RATE KPPH	FEEDER C TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER D TOTAL COAL FLOW RATE KPPH	FEEDER E TOTAL COAL FLOW RATE KPPH	FEEDER F TOTAL COAL FLOW RATE KPPH	MILL A MOTOR 1=ON 0=OFF	MILL B MOTOR 1=ON 0=OFF	MILL C MOTOR 1=ON 0=OFF	MILL D MOTOR 1=ON 0=OFF	MILL E MOTOR 1=ON 0=OFF	MILL F MOTOR 1=ON 0=OFF	MILL G MOTOR 1=ON 0=OFF
19:11	114.00	126.00	114.00	0.00	120.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:12	108.00	120.00	114.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:13	108.00	132.00	120.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:14	114.00	120.00	114.00	0.00	120.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:15	114.00	120.00	114.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:16	108.00	126.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:17	114.00	120.00	114.00	0.00	120.00	120.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:18	108.00	126.00	114.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:19	120.00	126.00	114.00	0.00	120.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:20	108.00	120.00	114.00	0.00	120.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:21	114.00	132.00	114.00	0.00	120.00	114.00	120.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:22	114.00	126.00	120.00	0.00	120.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:23	114.00	126.00	108.00	0.00	120.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:24	120.00	126.00	108.00	0.00	120.00	120.00	120.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:25	108.00	120.00	120.00	0.00	108.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:26	114.00	120.00	108.00	0.00	120.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:27	108.00	120.00	102.00	0.00	108.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:28	114.00	120.00	108.00	0.00	108.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:29	114.00	120.00	120.00	0.00	120.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:30	108.00	120.00	108.00	0.00	108.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:31	120.00	120.00	108.00	0.00	120.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:32	108.00	120.00	114.00	0.00	108.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:33	120.00	126.00	108.00	0.00	120.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:34	114.00	120.00	114.00	0.00	120.00	120.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:35	114.00	120.00	114.00	0.00	114.00	108.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:36	114.00	132.00	114.00	0.00	114.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:37	108.00	120.00	114.00	0.00	120.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:38	108.00	120.00	114.00	0.00	114.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:39	120.00	126.00	108.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:40	108.00	120.00	114.00	0.00	114.00	120.00	108.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:41	114.00	120.00	114.00	0.00	114.00	108.00	120.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:42	108.00	120.00	108.00	0.00	114.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:43	120.00	132.00	114.00	0.00	114.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:44	108.00	120.00	108.00	0.00	114.00	114.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:45	114.00	132.00	114.00	0.00	114.00	120.00	120.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:46	114.00	126.00	114.00	0.00	114.00	108.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:47	108.00	132.00	108.00	0.00	120.00	120.00	114.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
19:48	114.00	120.00	114.00	0.00	120.00	114.00	120.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00

SEP 14 1999

MidAmerican Energy Company
George Neal South
Mercury Emissions Testing
September 14, 1999
ID Fan Motor Current and Inlet Vane Position

Run No. 1

Time					
0915	ID Fan A	Amps	.76	Vane Position	56 %
	ID Fan B	Amps	.74	Vane Position	68 %
1015	ID Fan A	Amps	.75	Vane Position	54 %
	ID Fan B	Amps	.72	Vane Position	67 %
1115	ID Fan A	Amps	.74	Vane Position	56 %
	ID Fan B	Amps	.72	Vane Position	66 %

Run No. 2

Time					
1400	ID Fan A	Amps	.76	Vane Position	56 %
	ID Fan B	Amps	.74	Vane Position	68 %
1500	ID Fan A	Amps	.78	Vane Position	57 %
	ID Fan B	Amps	.76	Vane Position	70 %
1600	ID Fan A	Amps	.76	Vane Position	56 %
	ID Fan B	Amps	.74	Vane Position	68 %

Run No. 3

Time					
1736	ID Fan A	Amps	.74	Vane Position	56 %
	ID Fan B	Amps	.74	Vane Position	68 %
1836	ID Fan A	Amps	.75	Vane Position	57 %
	ID Fan B	Amps	.77	Vane Position	69 %
1936	ID Fan A	Amps	.79	Vane Position	.59 %
	ID Fan B	Amps	.79	Vane Position	.70 %

DLM

MidAmerican Energy Company
George Neal South
Mercury Emissions Testing
September 14, 1999
SO3 Injection Rate

Run No. 1

Time	9:15	10:15	10:20	11:55
SO3 Injection Rate	82%	0%	84%	82%

Run No. 2

Time	14:06	14:56	15:59
SO3 Injection Rate	82%	82%	82%

Run No. 3

Time	17:39	18:33	19:35
SO3 Injection Rate	82%	82%	82%

SO_3 system Tripped off 9:50
Back on at 10:20 18%
Tripped off 10:30
Back on at 10:40
10:50 85%

DEM

MidAmerican Energy Company
George Neal South
Mercury Emissions Testing
September 14, 1999
Precipitator T-R Set Voltage and Current

Run No. 1 Time 1115

4C Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.01	VMA 31	AMB 0.03	VMB 35	PAM 12	PVM 230
Field 3 Cabinet 6	AMA 0.16	VMA 40	AMB 0.2	VMB 40	PAM 65	PVM 430
Field 5 Cabinet 10	AMA 0.02	VMA 35	AMB 0.16	VMB 35	PAM 50	PVM 390
Field 7 Cabinet 14	AMA 0.16	VMA 28	AMB 0.18	VMB 28	PAM 70	PVM 325
Field 9 Cabinet 18	AMA OFF	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 11 Cabinet 22	AMA 0.17	VMA 26	AMB 0.19	VMB 23	PAM 70	PVM 280
Field 1 Cabinet 1	AMA OFF	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 3 Cabinet 5	AMA 0.02	VMA 40	AMB 0.05	VMB 33	PAM 10	PVM 200
Field 5 Cabinet 9	AMA OFF	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 7 Cabinet 13	AMA OFF	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0

Run No. 1 Time 1115

4C Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.15	VMA 25	AMB 0.14	VMB 29	PAM 50	PVM 300
Field 11 Cabinet 21	AMA 0.32	VMA 28	AMB 0.08	VMB 23	PAM 55	PVM 295
Field 12 Cabinet 23	AMA 0.2	VMA 24	AMB 0.2	VMB 22	PAM 70	PVM 280
Field 10 Cabinet 19	AMA 0.55	VMA 35	AMB 0.58	VMB 37	PAM 150	PVM 440
Field 8 Cabinet 15	AMA 0.42	VMA 38	AMB 0.37	VMB 38	PAM 125	PVM 475
Field 6 Cabinet 11	AMA 0.02	VMA 32	AMB 0	VMB 35	PAM 0	PVM 210
Field 4 Cabinet 7	AMA 0.1	VMA 40	AMB 0.11	VMB 38	PAM 49	PVM 400
Field 12 Cabinet 24	AMA 0.14	VMA 29	AMB 0.18	VMB 24	PAM 60	PVM 255
Field 10 Cabinet 20	AMA 0.17	VMA 24	AMB 0.16	VMB 28	PAM 70	PVM 295
Field 8 Cabinet 16	AMA 0.17	VMA 22	AMB 0.17	VMB 26	PAM 10	PVM 200
Field 6 Cabinet 12	AMA 0.17	VMA 32	AMB 0.16	VMB 33	PAM 60	PVM 350
Field 4 Cabinet 8	AMA 0.19	VMA 35	AMB 0.2	VMB 38	PAM 75	PVM 360

MidAmerican Energy Company
George Neal South
Mercury Emissions Testing
September 14, 1999
Precipitator T-R Set Voltage and Current

Run No. 1 Time 1115

4D Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.02	VMA 44	AMB 0.02	VMB 44	PAM 10	PVM 255
Field 3 Cabinet 6	AMA 0.04	VMA 39	AMB 0.06	VMB 43	PAM 10	PVM 325
Field 5 Cabinet 10	AMA 0.04	VMA 39	AMB 0.01	VMB 39	PAM 10	PVM 320
Field 7 Cabinet 14	AMA OFF	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 9 Cabinet 18	AMA 0.2	VMA 28	AMB 0.18	VMB 28	PAM 65	PVM 300
Field 11 Cabinet 22	AMA 0.15	VMA 24	AMB 0.13	VMB 24	PAM 50	PVM 255
Field 1 Cabinet 1	AMA 0	VMA 31	AMB 0.02	VMB 31	PAM 0	PVM 200
Field 3 Cabinet 5	AMA 0.01	VMA 40	AMB 0.02	VMB 42	PAM 15	PVM 350
Field 5 Cabinet 9	AMA 0.02	VMA 30	AMB 0.02	VMB 31	PAM 10	PVM 180
Field 7 Cabinet 13	AMA 0.18	VMA 35	AMB 0.15	VMB 40	PAM 55	PVM 345

Run No. 1 Time 1115

4D Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.2	VMA 31	AMB 0.17	VMB 39	PAM 70	PVM 325
Field 11 Cabinet 21	AMA 0.16	VMA 25	AMB 0.18	VMB 24	PAM 70	PVM 280
Field 12 Cabinet 23	AMA 0.2	VMA 30	AMB 0.21	VMB 24	PAM 80	PVM 300
Field 10 Cabinet 19	AMA 0.12	VMA 25	AMB 0.15	VMB 25	PAM 60	PVM 260
Field 8 Cabinet 15	AMA 0.52	VMA 39	AMB 0.5	VMB 43	PAM 175	PVM 455
Field 6 Cabinet 11	AMA 0	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 4 Cabinet 7	AMA 0.14	VMA 39	AMB 0.16	VMB 39	PAM 51	PVM 390
Field 12 Cabinet 24	AMA 0.19	VMA 22	AMB 0.19	VMB 21	PAM 60	PVM 270
Field 10 Cabinet 20	AMA 0.18	VMA 24	AMB 0.11	VMB 24	PAM 65	PVM 275
Field 8 Cabinet 16	AMA 0	VMA 46	AMB 0	VMB 40	PAM 0	PVM 255
Field 6 Cabinet 12	AMA 0.15	VMA 37	AMB 0.11	VMB 37	PAM 49	PVM 360
Field 4 Cabinet 8	AMA 0.01	VMA 36	AMB 0.03	VMB 31	PAM 10	PVM 290

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Run No. 2 Time 1404

4A Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA .02	VMA 39	AMB .03	VMB 38	PAM 10	PVM 260
Field 3 Cabinet 6	AMA 0	VMA 24	AMB 0	VMB 21	PAM 0	PVM 100
Field 5 Cabinet 10	AMA .11	VMA 40	AMB .09	VMB 44	PAM 20	PVM 420
Field 7 Cabinet 14	AMA .05	VMA 37	AMB 0	VMB 54	PAM 0	PVM 400
Field 9 Cabinet 18	AMA .15	VMA 30	AMB .15	VMB 33	PAM 60	PVM 335
Field 11 Cabinet 22	AMA .17	VMA 26	AMB .13	VMB 30	PAM 55	PVM 290
Field 1 Cabinet 1	AMA .20	VMA 40	AMB .20	VMB 47	PAM 75	PVM 440
Field 3 Cabinet 5	AMA .26	VMA 32	AMB .26	VMB 38	PAM 85	PVM 420
Field 5 Cabinet 9	AMA .22	VMA 39	AMB .26	VMB 40	PAM 85	PVM 370
Field 7 Cabinet 13	AMA .18	VMA 0	AMB .18	VMB 38	PAM 65	PVM 315

Run No. 2 Time 1409

4A Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .18	VMA 28	AMB .16	VMB 28	PAM 55	PVM 250
Field 11 Cabinet 21	AMA .08	VMA 19	AMB .06	VMB 19	PAM 15	PVM 210
Field 12 Cabinet 23	AMA .28	VMA 20	AMB .16	VMB 24	PAM 70	PVM 290
Field 10 Cabinet 19	AMA .17	VMA 27	AMB .18	VMB 24	PAM 60	PVM 260
Field 8 Cabinet 15	AMA .18	VMA 26	AMB .17	VMB 26	PAM 65	PVM 300
Field 6 Cabinet 11	AMA off	VMA	AMB	VMB	PAM	PVM
Field 1 Cabinet 7	AMA .13	VMA 35	AMB .15	VMB 35	PAM 60	PVM 300
Field 12 Cabinet 24	AMA .18	VMA 22	AMB .18	VMB 24	PAM 55	PVM 290
Field 10 Cabinet 20	AMA off	VMA	AMB	VMB	PAM	PVM
Field 8 Cabinet 16	AMA .18	VMA 35	AMB .21	VMB 34	PAM 65	PVM 370
Field 6 Cabinet 12	AMA .04	VMA 54	AMB .02	VMB 42	PAM 20	PVM 385
Field 4 Cabinet 8	AMA off	VMA	AMB	VMB	PAM	PVM

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Run No. 2 Time 1414

4B Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0	VMA 33	AMB 0	VMB 32	PAM 0	PVM 180
Field 3 Cabinet 6	AMA .02	VMA 43	AMB .02	VMB 37	PAM 15	PVM 240
Field 5 Cabinet 10	AMA .02	VMA 37	AMB .02	VMB 38	PAM 0	PVM 255
Field 7 Cabinet 14	AMA .09	VMA 33	AMB .08	VMB 36	PAM 35	PVM 320
Field 9 Cabinet 18	AMA .17	VMA 30	AMB .12	VMB 30	PAM 55	PVM 320
Field 11 Cabinet 22	AMA .26	VMA 29	AMB .28	VMB 26	PAM 100	PVM 340
Field 1 Cabinet 1	AMA .03	VMA 38	AMB 0	VMB 35	PAM 0	PVM 240
Field 3 Cabinet 5	AMA .10	VMA 43	AMB .08	VMB 40	PAM 0	PVM 350
Field 5 Cabinet 9	AMA .10	VMA 36	AMB .10	VMB 38	PAM 50	PVM 350
Field 7 Cabinet 13	AMA off	VMA	AMB	VMB	PAM	PVM

Run No. 2 Time 1418

4B Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .12	VMA 29	AMB .14	VMB 28	PAM 55	PVM 310
Field 11 Cabinet 21	AMA .19	VMA 27	AMB .18	VMB 25	PAM 75	PVM 325
Field 12 Cabinet 23	AMA .16	VMA 19	AMB .15	VMB 20	PAM 65	PVM 260
Field 10 Cabinet 19	AMA .14	VMA 24	AMB .13	VMB 25	PAM 55	PVM 270
Field 8 Cabinet 15	AMA off	VMA	AMB	VMB	PAM	PVM
Field 6 Cabinet 11	AMA .13	VMA 34	AMB .16	VMB 29	PAM 55	PVM 360
Field 1 Cabinet 7	AMA .10	VMA 36	AMB .12	VMB 35	PAM 40	PVM 370
Field 12 Cabinet 24	AMA .18	VMA 24	AMB .18	VMB 23	PAM 65	PVM 280
Field 10 Cabinet 20	AMA .20	VMA 27	AMB .17	VMB 24	PAM 60	PVM 285
Field 8 Cabinet 16	AMA .10	VMA 33	AMB .10	VMB 32	PAM 50	PVM 340
Field 6 Cabinet 12	AMA .04	VMA 35	AMB .04	VMB 33	PAM 0	PVM 250
Field 4 Cabinet 8	AMA .06	VMA 39	AMB .06	VMB 38	PAM 20	PVM 330

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Run No. 2 Time 1400

4C Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.05	VMA 40	AMB 0.06	VMB 43	PAM 30	PVM 360
Field 3 Cabinet 6	AMA 0.2	VMA 38	AMB 0.23	VMB 38	PAM 75	PVM 425
Field 5 Cabinet 10	AMA 0.03	VMA 34	AMB 0.16	VMB 34	PAM 50	PVM 390
Field 7 Cabinet 14	AMA 0.16	VMA 28	AMB 0.18	VMB 28	PAM 70	PVM 340
Field 9 Cabinet 18	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 11 Cabinet 22	AMA 0.16	VMA 28	AMB 0.2	VMB 23	PAM 70	PVM 285
Field 1 Cabinet 1	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 3 Cabinet 5	AMA 0.01	VMA 44	AMB 0.06	VMB 37	PAM 10	PVM 260
Field 5 Cabinet 9	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 7 Cabinet 13	AMA OFF	VMA	AMB	VMB	PAM	PVM

Run No. 2 Time 1400

4C Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.15	VMA 26	AMB 0.12	VMB 29	PAM 50	PVM 300
Field 11 Cabinet 21	AMA 0.32	VMA 28	AMB 0.08	VMB 22	PAM 60	PVM 295
Field 12 Cabinet 23	AMA 0.2	VMA 23	AMB 0.2	VMB 23	PAM 70	PVM 280
Field 10 Cabinet 19	AMA 0.55	VMA 35	AMB 0.58	VMB 37	PAM 150	PVM 430
Field 8 Cabinet 15	AMA 0.38	VMA 37	AMB 0.34	VMB 38	PAM 125	PVM 460
Field 6 Cabinet 11	AMA 0.01	VMA 35	AMB 0	VMB 36	PAM 0	PVM 210
Field 4 Cabinet 7	AMA 0.1	VMA 41	AMB 0.1	VMB 39	PAM 25	PVM 390
Field 12 Cabinet 24	AMA 0.14	VMA 30	AMB 0.18	VMB 23	PAM 60	PVM 255
Field 10 Cabinet 20	AMA 0.18	VMA 23	AMB 0.15	VMB 29	PAM 70	PVM 290
Field 8 Cabinet 16	AMA 0.05	VMA 20	AMB 0.05	VMB 23	PAM 0	PVM 210
Field 6 Cabinet 12	AMA 0.18	VMA 32	AMB 0.17	VMB 32	PAM 60	PVM 350
Field 4 Cabinet 8	AMA 0.2	VMA 35	AMB 0.2	VMB 37	PAM 75	PVM 350

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Run No. 2 Time 1400

4D Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.02	VMA 44	AMB 0.01	VMB 43	PAM 10	PVM 260
Field 3 Cabinet 6	AMA 0.05	VMA 39	AMB 0.07	VMB 45	PAM 10	PVM 350
Field 5 Cabinet 10	AMA 0.05	VMA 40	AMB 0.01	VMB 39	PAM 10	PVM 320
Field 7 Cabinet 14	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 9 Cabinet 18	AMA 0.2	VMA 28	AMB 0.18	VMB 28	PAM 60	PVM 300
Field 11 Cabinet 22	AMA 0.17	VMA 24	AMB 0.13	VMB 24	PAM 50	PVM 255
Field 1 Cabinet 1	AMA 0.04	VMA 40	AMB 0.04	VMB 38	PAM 0	PVM 275
Field 3 Cabinet 5	AMA 0.02	VMA 39	AMB 0.01	VMB 42	PAM 10	PVM 345
Field 5 Cabinet 9	AMA 0.04	VMA 34	AMB 0.04	VMB 35	PAM 10	PVM 255
Field 7 Cabinet 13	AMA 0.18	VMA 35	AMB 0.17	VMB 40	PAM 55	PVM 340

Run No. 2 Time 1400

4D Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.2	VMA 31	AMB 0.18	VMB 38	PAM 70	PVM 325
Field 11 Cabinet 21	AMA 0.17	VMA 25	AMB 0.18	VMB 23	PAM 65	PVM 275
Field 12 Cabinet 23	AMA 0.21	VMA 30	AMB 0.22	VMB 33	PAM 70	PVM 300
Field 10 Cabinet 19	AMA 0.14	VMA 25	AMB 0.15	VMB 25	PAM 65	PVM 270
Field 8 Cabinet 15	AMA 0.52	VMA 39	AMB 0.52	VMB 43	PAM 140	PVM 460
Field 6 Cabinet 11	AMA 0	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
~~Field 1~~ 4 Cabinet 7	AMA 0.18	VMA 38	AMB 0.18	VMB 38	PAM 60	PVM 390
Field 12 Cabinet 24	AMA 0.18	VMA 22	AMB 0.18	VMB 21	PAM 60	PVM 270
Field 10 Cabinet 20	AMA 0.2	VMA 24	AMB 0.11	VMB 25	PAM 60	PVM 275
Field 8 Cabinet 16	AMA 0	VMA 44	AMB 0	VMB 38	PAM 0	PVM 250
Field 6 Cabinet 12	AMA 0.13	VMA 36	AMB 0.1	VMB 36	PAM 48	PVM 355
Field 4 Cabinet 8	AMA 0.02	VMA 38	AMB 0.02	VMB 32	PAM 10	PVM 280

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Run No. 2 Time 1504

4A Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA .02	VMA 40	AMB .02	VMB 38	PAM 30	PVM 250
Field 3 Cabinet 6	AMA 0	VMA 25	AMB 0	VMB 21	PAM 0	PVM 100
Field 5 Cabinet 10	AMA .1	VMA 40	AMB .09	VMB 43	PAM 35	PVM 420
Field 7 Cabinet 14	AMA .04	VMA 33	AMB 0	VMB 51	PAM 0	PVM 315
Field 9 Cabinet 18	AMA .15	VMA 30	AMB .14	VMB 32	PAM 60	PVM 330
Field 11 Cabinet 22	AMA .17	VMA 26	AMB .13	VMB 30	PAM 55	PVM 285
Field 1 Cabinet 1	AMA .18	VMA 42	AMB .23	VMB 47	PAM 60	PVM 420
Field 3 Cabinet 5	AMA .25	VMA 31	AMB .25	VMB 37	PAM 80	PVM 420
Field 5 Cabinet 9	AMA .22	VMA 39	AMB .26	VMB 40	PAM 85	PVM 370
Field 7 Cabinet 13	AMA .18	VMA 0	AMB .18	VMB 38	PAM 65	PVM 320

Run No. 2 Time 1509

4A Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .17	VMA 29	AMB .16	VMB 27	PAM 55	PVM 250
Field 11 Cabinet 21	AMA .07	VMA 19	AMB .06	VMB 19	PAM 30	PVM 210
Field 12 Cabinet 23	AMA .27	VMA 20	AMB .16	VMB 24	PAM 70	PVM 290
Field 10 Cabinet 19	AMA .17	VMA 27	AMB .18	VMB 24	PAM 60	PVM 260
Field 8 Cabinet 15	AMA .18	VMA 26	AMB .17	VMB 26	PAM 65	PVM 300
Field 6 Cabinet 11	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 1 Cabinet 7	AMA .13	VMA 35	AMB .15	VMB 34	PAM 60	PVM 290
Field 12 Cabinet 24	AMA .18	VMA 21	AMB .17	VMB 24	PAM 55	PVM 290
Field 10 Cabinet 20	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 8 Cabinet 16	AMA .18	VMA 35	AMB .22	VMB 34	PAM 65	PVM 380
Field 6 Cabinet 12	AMA .03	VMA 60	AMB .02	VMB 47	PAM 35	PVM 430
Field 4 Cabinet 8	AMA OFF	VMA	AMB	VMB	PAM	PVM

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Run No. 2 Time 1514

4B Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0	VMA 33	AMB 0	VMB 30	PAM 0	PVM 170
Field 3 Cabinet 6	AMA .02	VMA 43	AMB .02	VMB 38	PAM 30	PVM 220
Field 5 Cabinet 10	AMA .02	VMA 38	AMB .01	VMB 37	PAM 0	PVM 250
Field 7 Cabinet 14	AMA .09	VMA 33	AMB .07	VMB 34	PAM 40	PVM 280
Field 9 Cabinet 18	AMA .17	VMA 29	AMB .11	VMB 31	PAM 55	PVM 320
Field 11 Cabinet 22	AMA .26	VMA 29	AMB .27	VMB 26	PAM 95	PVM 340
Field 1 Cabinet 1	AMA .03	VMA 28	AMB 0	VMB 30	PAM 25	PVM 210
Field 3 Cabinet 5	AMA .17	VMA 42	AMB .05	VMB 40	PAM 25	PVM 350
Field 5 Cabinet 9	AMA .08	VMA 37	AMB .09	VMB 38	PAM 45	PVM 350
Field 7 Cabinet 13	AMA 0	VMA	AMB	VMB	PAM	PVM

Run No. 2 Time 1518

4B Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .13	VMA 28	AMB .13	VMB 27	PAM 55	PVM 300
Field 11 Cabinet 21	AMA .18	VMA 27	AMB .18	VMB 25	PAM 75	PVM 320
Field 12 Cabinet 23	AMA .16	VMA 19	AMB .15	VMB 21	PAM 65	PVM 250
Field 10 Cabinet 19	AMA .14	VMA 23	AMB .13	VMB 25	PAM 55	PVM 270
Field 8 Cabinet 15	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 6 Cabinet 11	AMA .13	VMA 35	AMB .15	VMB 30	PAM 50	PVM 360
Field 1 Cabinet 7	AMA .07	VMA 36	AMB .09	VMB 34	PAM 35	PVM 330
Field 12 Cabinet 24	AMA .18	VMA 24	AMB .18	VMB 23	PAM 65	PVM 280
Field 10 Cabinet 20	AMA .19	VMA 26	AMB .17	VMB 24	PAM 60	PVM 280
Field 8 Cabinet 16	AMA .13	VMA 33	AMB .08	VMB 33	PAM 50	PVM 350
Field 6 Cabinet 12	AMA .04	VMA 33	AMB .03	VMB 33	PAM 0	PVM 270
Field 4 Cabinet 8	AMA .06	VMA 40	AMB .04	VMB 37	PAM 35	PVM 350

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Run No. 2 Time 1500

4C Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.02	VMA 37	AMB 0.03	VMB 42	PAM 15	PVM 300
Field 3 Cabinet 6	AMA 0.25	VMA 42	AMB 0.27	VMB 42	PAM 80	PVM 450
Field 5 Cabinet 10	AMA 0.03	VMA 34	AMB 0.16	VMB 35	PAM 50	PVM 390
Field 7 Cabinet 14	AMA 0.17	VMA 28	AMB 0.18	VMB 28	PAM 70	PVM 330
Field 9 Cabinet 18	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 11 Cabinet 22	AMA 0.16	VMA 27	AMB 0.19	VMB 24	PAM 70	PVM 280
Field 1 Cabinet 1	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 3 Cabinet 5	AMA 0.03	VMA 42	AMB 0.06	VMB 37	PAM 10	PVM 255
Field 5 Cabinet 9	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 7 Cabinet 13	AMA OFF	VMA	AMB	VMB	PAM	PVM

Run No. 2 Time 1500

4C Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.15	VMA 25	AMB 0.13	VMB 29	PAM 50	PVM 300
Field 11 Cabinet 21	AMA 0.31	VMA 28	AMB 0.09	VMB 23	PAM 60	PVM 300
Field 12 Cabinet 23	AMA 0.2	VMA 24	AMB 0.2	VMB 22	PAM 70	PVM 275
Field 10 Cabinet 19	AMA 0.56	VMA 35	AMB 0.58	VMB 37	PAM 150	PVM 425
Field 8 Cabinet 15	AMA 0.43	VMA 40	AMB 0.37	VMB 39	PAM 120	PVM 475
Field 6 Cabinet 11	AMA 0.01	VMA 37	AMB 0	VMB 35	PAM 0	PVM 210
Field 4 Cabinet 7	AMA 0.08	VMA 40	AMB 0.08	VMB 38	PAM 15	PVM 355
Field 12 Cabinet 24	AMA 0.13	VMA 30	AMB 0.18	VMB 23	PAM 60	PVM 255
Field 10 Cabinet 20	AMA 0.17	VMA 24	AMB 0.16	VMB 29	PAM 65	PVM 295
Field 8 Cabinet 16	AMA 0.07	VMA 22	AMB 0.07	VMB 26	PAM 10	PVM 250
Field 6 Cabinet 12	AMA 0.18	VMA 32	AMB 0.15	VMB 33	PAM 60	PVM 350
Field 4 Cabinet 8	AMA 0.18	VMA 36	AMB 0.19	VMB 37	PAM 75	PVM 355

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Run No. 2 Time 1500

4D Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.01	VMA 40	AMB 0.01	VMB 38	PAM 0	PVM 210
Field 3 Cabinet 6	AMA 0.02	VMA 40	AMB 0.06	VMB 45	PAM 10	PVM 340
Field 5 Cabinet 10	AMA 0.04	VMA 38	AMB 0.01	VMB 39	PAM 10	PVM 310
Field 7 Cabinet 14	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 9 Cabinet 18	AMA 0.2	VMA 29	AMB 0.18	VMB 29	PAM 65	PVM 300
Field 11 Cabinet 22	AMA 0.15	VMA 23	AMB 0.13	VMB 24	PAM 50	PVM 260
Field 1 Cabinet 1	AMA 0.04	VMA 38	AMB 0.04	VMB 40	PAM 0	PVM 275
Field 3 Cabinet 5	AMA 0	VMA 36	AMB 0	VMB 37	PAM 12	PVM 305
Field 5 Cabinet 9	AMA 0.05	VMA 36	AMB 0.05	VMB 37	PAM 10	PVM 290
Field 7 Cabinet 13	AMA 0.18	VMA 34	AMB 0.115	VMB 40	PAM 60	PVM 340

Run No. 2 Time 1500

4D Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.2	VMA 31	AMB 0.17	VMB 38	PAM 70	PVM 325
Field 11 Cabinet 21	AMA 0.17	VMA 25	AMB 0.18	VMB 24	PAM 70	PVM 280
Field 12 Cabinet 23	AMA 0.21	VMA 30	AMB 0.22	VMB 24	PAM 80	PVM 300
Field 10 Cabinet 19	AMA 0.14	VMA 25	AMB 0.15	VMB 25	PAM 60	PVM 260
Field 8 Cabinet 15	AMA 0.52	VMA 39	AMB 0.52	VMB 43	PAM 140	PVM 455
Field 6 Cabinet 11	AMA 0	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 4 Cabinet 7	AMA 0.18	VMA 38	AMB 0.17	VMB 37	PAM 60	PVM 390
Field 12 Cabinet 24	AMA 0.18	VMA 22	AMB 0.18	VMB 21	PAM 60	PVM 280
Field 10 Cabinet 20	AMA 0.19	VMA 24	AMB 0.11	VMB 25	PAM 65	PVM 280
Field 8 Cabinet 16	AMA 0	VMA 46	AMB 0.01	VMB 38	PAM 0	PVM 250
Field 6 Cabinet 12	AMA 0.12	VMA 38	AMB 0.1	VMB 36	PAM 45	PVM 355
Field 4 Cabinet 8	AMA 0.02	VMA 37	AMB 0.02	VMB 32	PAM 10	PVM 250

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Run No. 2 Time 1604

4A Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA .02	VMA 37	AMB .02	VMB 36	PAM 30	PVM 210
Field 3 Cabinet 6	AMA 0	VMA 25	AMB 0	VMB 20	PAM 0	PVM 80
Field 5 Cabinet 10	AMA .09	VMA 39	AMB .1	VMB 43	PAM 30	PVM 40
Field 7 Cabinet 14	AMA .05	VMA 30	AMB 0	VMB 48	PAM 0	PVM 340
Field 9 Cabinet 18	AMA .15	VMA 31	AMB .14	VMB 32	PAM 60	PVM 330
Field 11 Cabinet 22	AMA .17	VMA 27	AMB .13	VMB 30	PAM 55	PVM 290
Field 1 Cabinet 1	AMA .17	VMA 41	AMB .19	VMB 47	PAM 65	PVM 420
Field 3 Cabinet 5	AMA .21	VMA 31	AMB .24	VMB 37	PAM 80	PVM 410
Field 5 Cabinet 9	AMA .22	VMA 39	AMB .26	VMB 40	PAM 85	PVM 370
Field 7 Cabinet 13	AMA .18	VMA 0	AMB .18	VMB 38	PAM 60	PVM 320

Run No. 2 Time 1607

4A Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .17	VMA 29	AMB .16	VMB 27	PAM 55	PVM 250
Field 11 Cabinet 21	AMA .07	VMA 19	AMB .06	VMB 19	PAM 35	PVM 210
Field 12 Cabinet 23	AMA .27	VMA 20	AMB .26	VMB 23	PAM 70	PVM 290
Field 10 Cabinet 19	AMA .17	VMA 27	AMB .18	VMB 24	PAM 60	PVM 260
Field 8 Cabinet 15	AMA .18	VMA 26	AMB .17	VMB 26	PAM 65	PVM 300
Field 6 Cabinet 11	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 1 Cabinet 7	AMA .13	VMA 35	AMB .15	VMB 34	PAM 60	PVM 290
Field 12 Cabinet 24	AMA .17	VMA 21	AMB .17	VMB 24	PAM 55	PVM 290
Field 10 Cabinet 20	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 8 Cabinet 16	AMA .18	VMA 34	AMB .20	VMB 35	PAM 60	PVM 380
Field 6 Cabinet 12	AMA .03	VMA 25	AMB .02	VMB 27	PAM 35	PVM 150
Field 4 Cabinet 8	AMA Off	VMA	AMB	VMB	PAM	PVM

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Run No. 2 Time 1611

4B Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 3 Cabinet 6	AMA 0	VMA 32	AMB .01	VMB 30	PAM 30	PVM 160
Field 5 Cabinet 10	AMA .02	VMA 38	AMB .01	VMB 37	PAM 0	PVM 230
Field 7 Cabinet 14	AMA .08	VMA 36	AMB .07	VMB 37	PAM 40	PVM 300
Field 9 Cabinet 18	AMA .16	VMA 31	AMB .11	VMB 33	PAM 55	PVM 320
Field 11 Cabinet 22	AMA .25	VMA 29	AMB .26	VMB 27	PAM 95	PVM 340
Field 1 Cabinet 1	AMA .03	VMA 34	AMB .01	VMB 31	PAM 25	PVM 200
Field 3 Cabinet 5	AMA .06	VMA 42	AMB .04	VMB 40	PAM 25	PVM 340
Field 5 Cabinet 9	AMA .09	VMA 35	AMB .08	VMB 38	PAM 45	PVM 330
Field 7 Cabinet 13	AMA Off	VMA	AMB	VMB	PAM	PVM

Run No. 2 Time 1615

4B Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .12	VMA 28	AMB .13	VMB 27	PAM 55	PVM 300
Field 11 Cabinet 21	AMA .18	VMA 27	AMB .18	VMB 25	PAM 15	PVM 320
Field 12 Cabinet 23	AMA .16	VMA 19	AMB .15	VMB 21	PAM 60	PVM 250
Field 10 Cabinet 19	AMA .15	VMA 23	AMB .13	VMB 25	PAM 55	PVM 270
Field 8 Cabinet 15	AMA off	VMA	AMB	VMB	PAM	PVM
Field 6 Cabinet 11	AMA .13	VMA 35	AMB .15	VMB 30	PAM 55	PVM 360
Field 1 Cabinet 7	AMA .06	VMA 36	AMB .09	VMB 35	PAM 35	PVM 360
Field 12 Cabinet 24	AMA .18	VMA 24	AMB .18	VMB 24	PAM 65	PVM 290
Field 10 Cabinet 20	AMA .19	VMA 28	AMB .17	VMB 26	PAM 60	PVM 280
Field 8 Cabinet 16	AMA .10	VMA 34	AMB .08	VMB 34	PAM 45	PVM 350
Field 6 Cabinet 12	AMA .03	VMA 36	AMB .03	VMB 33	PAM 0	PVM 240
Field 4 Cabinet 8	AMA .03	VMA 36	AMB .02	VMB 33	PAM 25	PVM 230

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Run No. 2 Time 1600

4C Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.02	VMA 38	AMB 0.04	VMB 42	PAM 15	PVM 325
Field 3 Cabinet 6	AMA 0.24	VMA 40	AMB 0.25	VMB 42	PAM 80	PVM 450
Field 5 Cabinet 10	AMA 0.04	VMA 34	AMB 0.16	VMB 34	PAM 49	PVM 390
Field 7 Cabinet 14	AMA 0.17	VMA 28	AMB 0.18	VMB 28	PAM 70	PVM 330
Field 9 Cabinet 18	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 11 Cabinet 22	AMA 0.16	VMA 24	AMB 0.19	VMB 24	PAM 70	PVM 280
Field 1 Cabinet 1	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 3 Cabinet 5	AMA 0.04	VMA 44	AMB 0.07	VMB 34	PAM 10	PVM 240
Field 5 Cabinet 9	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 7 Cabinet 13	AMA OFF	VMA	AMB	VMB	PAM	PVM

Run No. 2 Time 1600

4C Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.15	VMA 26	AMB 0.12	VMB 29	PAM 50	PVM 300
Field 11 Cabinet 21	AMA 0.32	VMA 28	AMB 0.08	VMB 23	PAM 60	PVM 290
Field 12 Cabinet 23	AMA 0.2	VMA 24	AMB 0.2	VMB 22	PAM 70	PVM 280
Field 10 Cabinet 19	AMA 0.56	VMA 35	AMB 0.58	VMB 36	PAM 150	PVM 440
Field 8 Cabinet 15	AMA 0.45	VMA 40	AMB 0.38	VMB 40	PAM 125	PVM 480
Field 6 Cabinet 11	AMA 0.01	VMA 35	AMB 0	VMB 36	PAM 0	PVM 210
Field 4 Cabinet 7	AMA 0.06	VMA 42	AMB 0.07	VMB 36	PAM 10	PVM 340
Field 12 Cabinet 24	AMA 0.14	VMA 30	AMB 0.18	VMB 24	PAM 100	PVM 255
Field 10 Cabinet 20	AMA 0.18	VMA 24	AMB 0.16	VMB 29	PAM 70	PVM 290
Field 8 Cabinet 16	AMA 0.05	VMA 20	AMB 0.05	VMB 25	PAM 0	PVM 230
Field 6 Cabinet 12	AMA 0.18	VMA 32	AMB 0.15	VMB 32	PAM 60	PVM 350
Field 4 Cabinet 8	AMA 0.18	VMA 35	AMB 0.2	VMB 37	PAM 75	PVM 350

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Run No. 2 Time 1600

4D Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.01	VMA 41	AMB 0.01	VMB 39	PAM 0	PVM 210
Field 3 Cabinet 6	AMA 0.02	VMA 39	AMB 0.04	VMB 43	PAM 10	PVM 330
Field 5 Cabinet 10	AMA 0.04	VMA 38	AMB 0	VMB 39	PAM 10	PVM 300
Field 7 Cabinet 14	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 9 Cabinet 18	AMA 0.2	VMA 28	AMB 0.18	VMB 28	PAM 65	PVM 300
Field 11 Cabinet 22	AMA 0.17	VMA 24	AMB 0.12	VMB 24	PAM 50	PVM 255
Field 1 Cabinet 1	AMA 0.01	VMA 37	AMB 0.01	VMB 38	PAM 0	PVM 250
Field 3 Cabinet 5	AMA 0.01	VMA 40	AMB 0.02	VMB 43	PAM 10	PVM 375
Field 5 Cabinet 9	AMA 0.08	VMA 38	AMB 0.08	VMB 40	PAM 15	PVM 330
Field 7 Cabinet 13	AMA 0.17	VMA 34	AMB 0.15	VMB 40	PAM 50	PVM 340

Run No. 2 Time 1600

4D Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.2	VMA 31	AMB 0.16	VMB 38	PAM 70	PVM 325
Field 11 Cabinet 21	AMA 0.15	VMA 25	AMB 0.18	VMB 24	PAM 65	PVM 280
Field 12 Cabinet 23	AMA 0.21	VMA 30	AMB 0.22	VMB 24	PAM 80	PVM 300
Field 10 Cabinet 19	AMA 0.13	VMA 25	AMB 0.15	VMB 25	PAM 60	PVM 280
Field 8 Cabinet 15	AMA 0.52	VMA 38	AMB 0.51	VMB 43	PAM 140	PVM 460
Field 6 Cabinet 11	AMA 0	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 4 Cabinet 7	AMA 0.15	VMA 38	AMB 0.17	VMB 39	PAM 55	PVM 395
Field 12 Cabinet 24	AMA 0.18	VMA 22	AMB 0.18	VMB 22	PAM 60	PVM 260
Field 10 Cabinet 20	AMA 0.19	VMA 24	AMB 0.11	VMB 24	PAM 60	PVM 275
Field 8 Cabinet 16	AMA 0	VMA 46	AMB 0	VMB 40	PAM 0	PVM 260
Field 6 Cabinet 12	AMA 0.12	VMA 37	AMB 0.1	VMB 38	PAM 45	PVM 360
Field 4 Cabinet 8	AMA 0.01	VMA 37	AMB 0.02	VMB 33	PAM 10	PVM 250

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Run No. 3 Time 1735

4A Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA .02	VMA 39	AMB .02	VMB 38	PAM 30	PVM 250
Field 3 Cabinet 6	AMA 0	VMA 25	AMB 0	VMB 21	PAM 0	PVM 100
Field 5 Cabinet 10	AMA .11	VMA 40	AMB .10	VMB 43	PAM 35	PVM 420
Field 7 Cabinet 14	AMA .05	VMA 34	AMB 0	VMB 53	PAM 0	PVM 370
Field 9 Cabinet 18	AMA .15	VMA 31	AMB .15	VMB 32	PAM 60	PVM 330
Field 11 Cabinet 22	AMA .17	VMA 26	AMB .13	VMB 30	PAM 55	PVM 280
Field 1 Cabinet 1	AMA .19	VMA 41	AMB .21	VMB 47	PAM 70	PVM 420
Field 3 Cabinet 5	AMA .19	VMA 32	AMB .21	VMB 37	PAM 70	PVM 390
Field 5 Cabinet 9	AMA .22	VMA 39	AMB .26	VMB 40	PAM 85	PVM 370
Field 7 Cabinet 13	AMA .18	VMA 0	AMB .18	VMB 38	PAM 60	PVM 320

Run No. 3 Time 1740

4A Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .17	VMA 29	AMB .16	VMB 27	PAM 55	PVM 250
Field 11 Cabinet 21	AMA .17	VMA 19	AMB .06	VMB 19	PAM 35	PVM 200
Field 12 Cabinet 23	AMA .27	VMA 20	AMB .26	VMB 23	PAM 70	PVM 290
Field 10 Cabinet 19	AMA .17	VMA 27	AMB .18	VMB 24	PAM 60	PVM 260
Field 8 Cabinet 15	AMA .18	VMA 26	AMB .17	VMB 26	PAM 65	PVM 300
Field 6 Cabinet 11	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 1 Cabinet 7	AMA .13	VMA 35	AMB .15	VMB 35	PAM 60	PVM 290
Field 12 Cabinet 24	AMA .18	VMA 21	AMB .17	VMB 24	PAM 55	PVM 290
Field 10 Cabinet 20	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 8 Cabinet 16	AMA .19	VMA 35	AMB .22	VMB 33	PAM 65	PVM 380
Field 6 Cabinet 12	AMA .03	VMA 58	AMB .02	VMB 45	PAM 35	PVM 410
Field 4 Cabinet 8	AMA Off	VMA	AMB	VMB	PAM	PVM

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Run No. 3 Time 1744

4B Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0	VMA 33	AMB 0	VMB 31	PAM 0	PVM 180
Field 3 Cabinet 6	AMA .03	VMA 41	AMB .02	VMB 39	PAM 30	PVM 220
Field 5 Cabinet 10	AMA .02	VMA 40	AMB .01	VMB 36	PAM 0	PVM 230
Field 7 Cabinet 14	AMA .07	VMA 34	AMB .06	VMB 36	PAM 40	PVM 310
Field 9 Cabinet 18	AMA .16	VMA 30	AMB .11	VMB 31	PAM 55	PVM 320
Field 11 Cabinet 22	AMA .24	VMA 29	AMB .27	VMB 29	PAM 95	PVM 340
Field 1 Cabinet 1	AMA .03	VMA 33	AMB .01	VMB 34	PAM 25	PVM 230
Field 3 Cabinet 5	AMA .08	VMA 43	AMB .07	VMB 39	PAM 30	PVM 360
Field 5 Cabinet 9	AMA .09	VMA 36	AMB .09	VMB 38	PAM 45	PVM 350
Field 7 Cabinet 13	AMA OFF	VMA	AMB	VMB	PAM	PVM

Run No. 3 Time 1748

4B Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .13	VMA 28	AMB .14	VMB 27	PAM 55	PVM 300
Field 11 Cabinet 21	AMA .18	VMA 27	AMB .17	VMB 25	PAM 75	PVM 320
Field 12 Cabinet 23	AMA .14	VMA 18	AMB .15	VMB 20	PAM 60	PVM 250
Field 10 Cabinet 19	AMA .14	VMA 23	AMB .13	VMB 25	PAM 55	PVM 270
Field 8 Cabinet 15	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 6 Cabinet 11	AMA .13	VMA 34	AMB .15	VMB 30	PAM 50	PVM 360
Field 1 Cabinet 7	AMA .08	VMA 36	AMB .11	VMB 35	PAM 40	PVM 350
Field 12 Cabinet 24	AMA .18	VMA 24	AMB .19	VMB 23	PAM 65	PVM 280
Field 10 Cabinet 20	AMA .19	VMA 27	AMB .16	VMB 24	PAM 60	PVM 280
Field 8 Cabinet 16	AMA .11	VMA 34	AMB .18	VMB 33	PAM 45	PVM 320
Field 6 Cabinet 12	AMA .03	VMA 35	AMB .03	VMB 31	PAM 0	PVM 240
Field 4 Cabinet 8	AMA .03	VMA 38	AMB .02	VMB 37	PAM 25	PVM 280

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Run No. 3 Time 1735

4C Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.03	VMA 37	AMB 0.05	VMB 41	PAM 15	PVM 325
Field 3 Cabinet 6	AMA 0.26	VMA 41	AMB 0.26	VMB 42	PAM 80	PVM 430
Field 5 Cabinet 10	AMA 0.04	VMA 35	AMB 0.16	VMB 35	PAM 49	PVM 390
Field 7 Cabinet 14	AMA 0.17	VMA 28	AMB 0.18	VMB 28	PAM 70	PVM 330
Field 9 Cabinet 18	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 11 Cabinet 22	AMA 0.16	VMA 28	AMB 0.18	VMB 24	PAM 70	PVM 280
Field 1 Cabinet 1	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 3 Cabinet 5	AMA 0.04	VMA 44	AMB 0.07	VMB 37	PAM 10	PVM 260
Field 5 Cabinet 9	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 7 Cabinet 13	AMA OFF	VMA	AMB	VMB	PAM	PVM

Run No. 3 Time 1735

4C Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.15	VMA 26	AMB 0.14	VMB 28	PAM 50	PVM 300
Field 11 Cabinet 21	AMA 0.32	VMA 28	AMB 0.08	VMB 23	PAM 55	PVM 300
Field 12 Cabinet 23	AMA 0.2	VMA 24	AMB 0.2	VMB 22	PAM 70	PVM 280
Field 10 Cabinet 19	AMA 0.56	VMA 34	AMB 0.58	VMB 37	PAM 150	PVM 440
Field 8 Cabinet 15	AMA 0.45	VMA 39	AMB 0.38	VMB 39	PAM 120	PVM 475
Field 6 Cabinet 11	AMA 0.02	VMA 34	AMB 0	VMB 36	PAM 0	PVM 210
Field 4 Cabinet 7	AMA 0.05	VMA 41	AMB 0.08	VMB 37	PAM 15	PVM 360
Field 12 Cabinet 24	AMA 0.14	VMA 30	AMB 0.17	VMB 24	PAM 60	PVM 255
Field 10 Cabinet 20	AMA 0.17	VMA 24	AMB 0.16	VMB 29	PAM 70	PVM 290
Field 8 Cabinet 16	AMA 0.04	VMA 20	AMB 0.05	VMB 24	PAM 0	PVM 220
Field 6 Cabinet 12	AMA 0.17	VMA 32	AMB 0.15	VMB 33	PAM 60	PVM 350
Field 4 Cabinet 8	AMA 0.19	VMA 36	AMB 0.2	VMB 37	PAM 75	PVM 355

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Run No. 3 Time 1735

4D Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.01	VMA 39	AMB 0.01	VMB 38	PAM 0	PVM 200
Field 3 Cabinet 6	AMA 0.02	VMA 41	AMB 0.05	VMB 44	PAM 10	PVM 325
Field 5 Cabinet 10	AMA 0.04	VMA 40	AMB 0.01	VMB 40	PAM 10	PVM 320
Field 7 Cabinet 14	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 9 Cabinet 18	AMA 0.2	VMA 29	AMB 0.18	VMB 29	PAM 65	PVM 300
Field 11 Cabinet 22	AMA 0.16	VMA 24	AMB 0.13	VMB 24	PAM 50	PVM 260
Field 1 Cabinet 1	AMA 0.02	VMA 35	AMB 0.03	VMB 36	PAM 0	PVM 250
Field 3 Cabinet 5	AMA 0	VMA 37	AMB 0	VMB 40	PAM 10	PVM 320
Field 5 Cabinet 9	AMA 0.1	VMA 39	AMB 0.1	VMB 37	PAM 10	PVM 325
Field 7 Cabinet 13	AMA 0.17	VMA 35	AMB 0.16	VMB 40	PAM 55	PVM 345

Run No. 3 Time 1735

4D Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.2	VMA 31	AMB 0.17	VMB 38	PAM 70	PVM 320
Field 11 Cabinet 21	AMA 0.16	VMA 25	AMB 0.18	VMB 24	PAM 65	PVM 280
Field 12 Cabinet 23	AMA 0.22	VMA 31	AMB 0.24	VMB 24	PAM 80	PVM 300
Field 10 Cabinet 19	AMA 0.13	VMA 25	AMB 0.15	VMB 25	PAM 60	PVM 260
Field 8 Cabinet 15	AMA 0.52	VMA 39	AMB 0.51	VMB 43	PAM 140	PVM 455
Field 6 Cabinet 11	AMA 0	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 4 Cabinet 7	AMA 0.15	VMA 40	AMB 0.17	VMB 39	PAM 60	PVM 380
Field 12 Cabinet 24	AMA 0.18	VMA 22	AMB 0.18	VMB 22	PAM 65	PVM 280
Field 10 Cabinet 20	AMA 0.18	VMA 24	AMB 0.11	VMB 25	PAM 65	PVM 280
Field 8 Cabinet 16	AMA 0	VMA 46	AMB 0	VMB 40	PAM 0	PVM 260
Field 6 Cabinet 12	AMA 0.12	VMA 37	AMB 0.1	VMB 37	PAM 40	PVM 355
Field 4 Cabinet 8	AMA 0.01	VMA 37	AMB 0.04	VMB 33	PAM 10	PVM 240

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Run No. 3 Time 1825

4A Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA .03	VMA 39	AMB .04	VMB 39	PAM 30	PVM 280
Field 3 Cabinet 6	AMA 0	VMA 26	AMB 0	VMB 21	PAM 0	PVM 100
Field 5 Cabinet 10	AMA .12	VMA 40	AMB .11	VMB 42	PAM 35	PVM 420
Field 7 Cabinet 14	AMA .05	VMA 33	AMB 0	VMB 52	PAM 0	PVM 370
Field 9 Cabinet 18	AMA .15	VMA 30	AMB .14	VMB 33	PAM 60	PVM 330
Field 11 Cabinet 22	AMA .17	VMA 27	AMB .13	VMB 30	PAM 55	PVM 290
Field 1 Cabinet 1	AMA .19	VMA 41	AMB .21	VMB 41	PAM 70	PVM 430
Field 3 Cabinet 5	AMA .22	VMA 33	AMB .22	VMB 37	PAM 75	PVM 400
Field 5 Cabinet 9	AMA .23	VMA 39	AMB .26	VMB 40	PAM 85	PVM 370
Field 7 Cabinet 13	AMA .18	VMA 0	AMB .18	VMB 38	PAM 60	PVM 320

Run No. 3 Time 1828

4A Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .17	VMA 29	AMB .18	VMB 27	PAM 55	PVM 250
Field 11 Cabinet 21	AMA .07	VMA 19	AMB .05	VMB 19	PAM 35	PVM 200
Field 12 Cabinet 23	AMA .23	VMA 20	AMB .16	VMB 23	PAM 70	PVM 290
Field 10 Cabinet 19	AMA .17	VMA 27	AMB .18	VMB 24	PAM 60	PVM 260
Field 8 Cabinet 15	AMA .18	VMA 26	AMB .17	VMB 26	PAM 65	PVM 300
Field 6 Cabinet 11	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 1 Cabinet 7	AMA .13	VMA 35	AMB .15	VMB 35	PAM 60	PVM 290
Field 12 Cabinet 24	AMA .17	VMA 21	AMB .17	VMB 24	PAM 55	PVM 290
Field 10 Cabinet 20	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 8 Cabinet 16	AMA .19	VMA 34	AMB .21	VMB 34	PAM 65	PVM 380
Field 6 Cabinet 12	AMA .03	VMA 58	AMB .02	VMB 46	PAM 35	PVM 410
Field 4 Cabinet 8	AMA OFF	VMA	AMB	VMB	PAM	PVM

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Run No. 3 Time 1832

4B Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0	VMA 33	AMB 0	VMB 31	PAM 0	PVM 180
Field 3 Cabinet 6	AMA .02	VMA 43	AMB .02	VMB 40	PAM 30	PVM 260
Field 5 Cabinet 10	AMA .02	VMA 39	AMB .01	VMB 37	PAM 0	PVM 240
Field 7 Cabinet 14	AMA .07	VMA 34	AMB .07	VMB 36	PAM 40	PVM 300
Field 9 Cabinet 18	AMA .17	VMA 30	AMB .11	VMB 32	PAM 55	PVM 320
Field 11 Cabinet 22	AMA .26	VMA 29	AMB .26	VMB 26	PAM 95	PVM 340
Field 1 Cabinet 1	AMA .03	VMA 37	AMB .01	VMB 35	PAM 25	PVM 240
Field 3 Cabinet 5	AMA .09	VMA 44	AMB .06	VMB 41	PAM 25	PVM 360
Field 5 Cabinet 9	AMA .08	VMA 35	AMB .08	VMB 37	PAM 45	PVM 350
Field 7 Cabinet 13	AMA Off	VMA	AMB	VMB	PAM	PVM

Run No. 3 Time 1835

4B Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .12	VMA 28	AMB .13	VMB 27	PAM 55	PVM 300
Field 11 Cabinet 21	AMA .18	VMA 28	AMB .17	VMB 25	PAM 75	PVM 330
Field 12 Cabinet 23	AMA .16	VMA 19	AMB .15	VMB 21	PAM 60	PVM 250
Field 10 Cabinet 19	AMA .14	VMA 23	AMB .13	VMB 25	PAM 55	PVM 270
Field 8 Cabinet 15	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 6 Cabinet 11	AMA .13	VMA 35	AMB .15	VMB 31	PAM 50	PVM 350
Field 1 Cabinet 7	AMA .05	VMA 35	AMB .06	VMB 33	PAM 30	PVM 330
Field 12 Cabinet 24	AMA .18	VMA 24	AMB .19	VMB 23	PAM 65	PVM 280
Field 10 Cabinet 20	AMA .19	VMA 27	AMB .17	VMB 24	PAM 60	PVM 270
Field 8 Cabinet 16	AMA .11	VMA 33	AMB .08	VMB 33	PAM 45	PVM 350
Field 6 Cabinet 12	AMA .03	VMA 34	AMB .03	VMB 33	PAM 0	PVM 220
Field 4 Cabinet 8	AMA .04	VMA 39	AMB .04	VMB 37	PAM 30	PVM 310

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Run No. 3 Time 1835

4C Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.04	VMA 38	AMB 0.06	VMB 42	PAM 20	PVM 360
Field 3 Cabinet 6	AMA 0.25	VMA 40	AMB 0.26	VMB 40	PAM 80	PVM 440
Field 5 Cabinet 10	AMA 0.04	VMA 34	AMB 0.06	VMB 35	PAM 50	PVM 390
Field 7 Cabinet 14	AMA 0.17	VMA 28	AMB 0.18	VMB 28	PAM 70	PVM 330
Field 9 Cabinet 18	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 11 Cabinet 22	AMA 0.16	VMA 27	AMB 0.19	VMB 23	PAM 70	PVM 280
Field 1 Cabinet 1	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 3 Cabinet 5	AMA 0.04	VMA 40	AMB 0.07	VMB 37	PAM 10	PVM 250
Field 5 Cabinet 9	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 7 Cabinet 13	AMA OFF	VMA	AMB	VMB	PAM	PVM

Run No. 3 Time 1835

4C Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.15	VMA 26	AMB 0.14	VMB 29	PAM 50	PVM 300
Field 11 Cabinet 21	AMA 0.32	VMA 28	AMB 0.08	VMB 23	PAM 60	PVM 300
Field 12 Cabinet 23	AMA 0.2	VMA 24	AMB 0.2	VMB 23	PAM 70	PVM 290
Field 10 Cabinet 19	AMA 0.56	VMA 35	AMB 0.58	VMB 36	PAM 150	PVM 440
Field 8 Cabinet 15	AMA 0.45	VMA 37	AMB 0.32	VMB 37	PAM 100	PVM 450
Field 6 Cabinet 11	AMA 0.01	VMA 36	AMB 0	VMB 37	PAM 0	PVM 220
Field 4 Cabinet 7	AMA 0.06	VMA 40	AMB 0.05	VMB 37	PAM 10	PVM 340
Field 12 Cabinet 24	AMA 0.14	VMA 30	AMB 0.18	VMB 24	PAM 60	PVM 255
Field 10 Cabinet 20	AMA 0.17	VMA 24	AMB 0.16	VMB 29	PAM 70	PVM 290
Field 8 Cabinet 16	AMA 0.08	VMA 20	AMB 0.05	VMB 24	PAM 0	PVM 210
Field 6 Cabinet 12	AMA 0.18	VMA 32	AMB 0.16	VMB 33	PAM 60	PVM 350
Field 4 Cabinet 8	AMA 0.19	VMA 35	AMB 0.2	VMB 37	PAM 75	PVM 355

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Run No. 3 Time 1835

4D Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.01	VMA 42	AMB 0	VMB 39	PAM 0	PVM 200
Field 3 Cabinet 6	AMA 0.05	VMA 43	AMB 0.07	VMB 45	PAM 10	PVM 350
Field 5 Cabinet 10	AMA 0.05	VMA 41	AMB 0	VMB 40	PAM 10	PVM 325
Field 7 Cabinet 14	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 9 Cabinet 18	AMA 0.2	VMA 29	AMB 0.18	VMB 28	PAM 65	PVM 300
Field 11 Cabinet 22	AMA 0.16	VMA 24	AMB 0.13	VMB 24	PAM 50	PVM 260
Field 1 Cabinet 1	AMA 0.01	VMA 35	AMB 0.02	VMB 37	PAM 0	PVM 245
Field 3 Cabinet 5	AMA 0.01	VMA 39	AMB 0.02	VMB 43	PAM 10	PVM 325
Field 5 Cabinet 9	AMA 0.08	VMA 39	AMB 0.08	VMB 36	PAM 10	PVM 300
Field 7 Cabinet 13	AMA 0.07	VMA 36	AMB 0.15	VMB 40	PAM 55	PVM 345

Run No. 3 Time 1835

4D Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.2	VMA 31	AMB 0.17	VMB 38	PAM 70	PVM 325
Field 11 Cabinet 21	AMA 0.15	VMA 25	AMB 0.18	VMB 24	PAM 65	PVM 280
Field 12 Cabinet 23	AMA 0.22	VMA 31	AMB 0.23	VMB 24	PAM 80	PVM 300
Field 10 Cabinet 19	AMA 0.13	VMA 25	AMB 0.15	VMB 25	PAM 60	PVM 260
Field 8 Cabinet 15	AMA 0.52	VMA 39	AMB 0.51	VMB 43	PAM 140	PVM 455
Field 6 Cabinet 11	AMA 0	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 4 Cabinet 7	AMA 0.15	VMA 39	AMB 0.16	VMB 39	PAM 55	PVM 355
Field 12 Cabinet 24	AMA 0.18	VMA 22	AMB 0.18	VMB 22	PAM 65	PVM 280
Field 10 Cabinet 20	AMA 0.18	VMA 24	AMB 0.12	VMB 25	PAM 65	PVM 280
Field 8 Cabinet 16	AMA 0	VMA 46	AMB 0	VMB 40	PAM 0	PVM 255
Field 6 Cabinet 12	AMA 0.12	VMA 38	AMB 0.1	VMB 38	PAM 40	PVM 355
Field 4 Cabinet 8	AMA 0.01	VMA 36	AMB 0.02	VMB 32	PAM 10	PVM 220

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Mercury Emissions Testing
September 14, 1999
Precipitator T-R Set Voltage and Current

Run No. 3 Time 1925

4A Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA .02	VMA 39	AMB .03	VMB 37	PAM 30	PVM 230
Field 3 Cabinet 6	AMA 0	VMA 25	AMB 0	VMB 22	PAM 0	PVM 100
Field 5 Cabinet 10	AMA .13	VMA 40	AMB .11	VMB 45	PAM 35	PVM 420
Field 7 Cabinet 14	AMA .05	VMA 34	AMB 0	VMB 53	PAM 0	PVM 360
Field 9 Cabinet 18	AMA .15	VMA 31	AMB .14	VMB 32	PAM 60	PVM 330
Field 11 Cabinet 22	AMA .17	VMA 27	AMB .13	VMB 30	PAM 55	PVM 290
Field 1 Cabinet 1	AMA .20	VMA 41	AMB .23	VMB 47	PAM 70	PVM 430
Field 3 Cabinet 5	AMA .23	VMA 32	AMB .23	VMB 31	PAM 75	PVM 400
Field 5 Cabinet 9	AMA .22	VMA 39	AMB .26	VMB 40	PAM 85	PVM 370
Field 7 Cabinet 13	AMA .18	VMA 0	AMB .18	VMB 38	PAM 60	PVM 320

Run No. 3 Time 1929

4A Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .17	VMA 29	AMB .18	VMB 27	PAM 55	PVM 250
Field 11 Cabinet 21	AMA .08	VMA 19	AMB .06	VMB 19	PAM 35	PVM 210
Field 12 Cabinet 23	AMA .27	VMA 20	AMB .16	VMB 24	PAM 70	PVM 290
Field 10 Cabinet 19	AMA .17	VMA 27	AMB .18	VMB 24	PAM 60	PVM 260
Field 8 Cabinet 15	AMA .18	VMA 26	AMB .17	VMB 26	PAM 65	PVM 300
Field 6 Cabinet 11	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 1 Cabinet 7	AMA .13	VMA 35	AMB .15	VMB 34	PAM 60	PVM 290
Field 12 Cabinet 24	AMA .17	VMA 21	AMB .17	VMB 24	PAM 55	PVM 290
Field 10 Cabinet 20	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 8 Cabinet 16	AMA .19	VMA 34	AMB .21	VMB 34	PAM 65	PVM 380
Field 6 Cabinet 12	AMA .03	VMA 59	AMB .02	VMB 45	PAM 35	PVM 410
Field 4 Cabinet 8	AMA Off	VMA	AMB	VMB	PAM	PVM

MidAmerican Energy Company
George Neal South
Mercury Emissions Testing
September 14, 1999
Precipitator T-R Set Voltage and Current

Run No. 3 Time 1933

4B Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0	VMA 33	AMB 0	VMB 31	PAM 0	PVM 180
Field 3 Cabinet 6	AMA .03	VMA 42	AMB .02	VMB 38	PAM 30	PVM 230
Field 5 Cabinet 10	AMA .02	VMA 37	AMB .01	VMB 36	PAM 0	PVM 230
Field 7 Cabinet 14	AMA .07	VMA 33	AMB .07	VMB 36	PAM 40	PVM 320
Field 9 Cabinet 18	AMA .19	VMA 29	AMB .12	VMB 31	PAM 55	PVM 320
Field 11 Cabinet 22	AMA .26	VMA 29	AMB .27	VMB 26	PAM 95	PVM 330
Field 1 Cabinet 1	AMA .03	VMA 34	AMB .01	VMB 33	PAM 25	PVM 230
Field 3 Cabinet 5	AMA .07	VMA 42	AMB .05	VMB 38	PAM 25	PVM 320
Field 5 Cabinet 9	AMA .09	VMA 36	AMB .08	VMB 37	PAM 45	PVM 340
Field 7 Cabinet 13	AMA off	VMA	AMB	VMB	PAM	PVM

Run No. 3 Time 1937

4B Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA .13	VMA 28	AMB .13	VMB 27	PAM 55	PVM 300
Field 11 Cabinet 21	AMA .18	VMA 27	AMB .18	VMB 25	PAM 75	PVM 320
Field 12 Cabinet 23	AMA .16	VMA 19	AMB .15	VMB 21	PAM 65	PVM 250
Field 10 Cabinet 19	AMA .14	VMA 23	AMB .13	VMB 25	PAM 55	PVM 270
Field 8 Cabinet 15	AMA Off	VMA	AMB	VMB	PAM	PVM
Field 6 Cabinet 11	AMA .13	VMA 35	AMB .15	VMB 31	PAM 50	PVM 360
Field 1 Cabinet 7	AMA .07	VMA 37	AMB .08	VMB 35	PAM 35	PVM 360
Field 12 Cabinet 24	AMA .18	VMA 24	AMB .19	VMB 23	PAM 65	PVM 280
Field 10 Cabinet 20	AMA .19	VMA 27	AMB .17	VMB 25	PAM 60	PVM 280
Field 8 Cabinet 16	AMA .12	VMA 34	AMB .08	VMB 33	PAM 45	PVM 350
Field 6 Cabinet 12	AMA .03	VMA 33	AMB .03	VMB 32	PAM 0	PVM 260
Field 4 Cabinet 8	AMA .04	VMA 40	AMB .03	VMB 37	PAM 30	PVM 320

MidAmerican Energy Company
George Neal South
Mercury Emissions Testing
September 14, 1999
Precipitator T-R Set Voltage and Current

Run No. 3 Time 1925

4C Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0.04	VMA 40	AMB 0.06	VMB 42	PAM 15	PVM 360
Field 3 Cabinet 6	AMA 0.25	VMA 40	AMB 0.26	VMB 40	PAM 60	PVM 440
Field 5 Cabinet 10	AMA 0.03	VMA 35	AMB 0.16	VMB 35	PAM 50	PVM 400
Field 7 Cabinet 14	AMA 0.16	VMA 28	AMB 0.17	VMB 28	PAM 70	PVM 330
Field 9 Cabinet 18	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 11 Cabinet 22	AMA 0.16	VMA 27	AMB 0.19	VMB 24	PAM 70	PVM 280
Field 1 Cabinet 1	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 3 Cabinet 5	AMA 0.04	VMA 44	AMB 0.08	VMB 38	PAM 10	PVM 260
Field 5 Cabinet 9	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 7 Cabinet 13	AMA OFF	VMA	AMB	VMB	PAM	PVM

Run No. 3 Time 1925

4C Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.15	VMA 26	AMB 0.14	VMB 29	PAM 50	PVM 300
Field 11 Cabinet 21	AMA 0.32	VMA 28	AMB 0.08	VMB 22	PAM 60	PVM 300
Field 12 Cabinet 23	AMA 0.2	VMA 24	AMB 0.2	VMB 24	PAM 70	PVM 280
Field 10 Cabinet 19	AMA 0.56	VMA 35	AMB 0.58	VMB 36	PAM 150	PVM 440
Field 8 Cabinet 15	AMA 0.42	VMA 38	AMB 0.35	VMB 38	PAM 120	PVM 450
Field 6 Cabinet 11	AMA 0	VMA 32	AMB 0	VMB 34	PAM 0	PVM 200
Field 4 Cabinet 7	AMA 0.06	VMA 41	AMB 0.08	VMB 38	PAM 10	PVM 360
Field 12 Cabinet 24	AMA 0.14	VMA 30	AMB 0.18	VMB 24	PAM 50	PVM 255
Field 10 Cabinet 20	AMA 0.17	VMA 23	AMB 0.16	VMB 30	PAM 70	PVM 295
Field 8 Cabinet 16	AMA 0.05	VMA 21	AMB 0.06	VMB 25	PAM 10	PVM 250
Field 6 Cabinet 12	AMA 0.18	VMA 32	AMB 0.15	VMB 32	PAM 60	PVM 350
Field 4 Cabinet 8	AMA 0.19	VMA 34	AMB 0.2	VMB 37	PAM 75	PVM 350

MidAmerican Energy Company
George Neal South
Mercury Emissions Testing
September 14, 1999
Precipitator T-R Set Voltage and Current

Run No. 3 Time 1925

4D Sheet 1	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 1 Cabinet 2	AMA 0	VMA 41	AMB 0	VMB 38	PAM 0	PVM 200
Field 3 Cabinet 6	AMA 0.02	VMA 41	AMB 0.05	VMB 45	PAM 10	PVM 330
Field 5 Cabinet 10	AMA 0.03	VMA 39	AMB 0	VMB 39	PAM 10	PVM 295
Field 7 Cabinet 14	AMA OFF	VMA	AMB	VMB	PAM	PVM
Field 9 Cabinet 18	AMA 0.2	VMA 29	AMB 0.17	VMB 28	PAM 65	PVM 300
Field 11 Cabinet 22	AMA 0.15	VMA 24	AMB 0.13	VMB 24	PAM 50	PVM 260
Field 1 Cabinet 1	AMA 0.01	VMA 34	AMB 0.01	VMB 41	PAM 0	PVM 280
Field 3 Cabinet 5	AMA 0	VMA 39	AMB 0	VMB 41	PAM 10	PVM 340
Field 5 Cabinet 9	AMA 0.1	VMA 38	AMB 0.1	VMB 40	PAM 50	PVM 400
Field 7 Cabinet 13	AMA 0.17	VMA 35	AMB 0.15	VMB 40	PAM 55	PVM 340

Run No. 3 Time 1925

4D Sheet 2	Amps	K-volts	Amps	K-volts	Amps	Volts
Field 9 Cabinet 17	AMA 0.2	VMA 31	AMB 0.17	VMB 38	PAM 70	PVM 325
Field 11 Cabinet 21	AMA 0.15	VMA 25	AMB 0.18	VMB 24	PAM 65	PVM 280
Field 12 Cabinet 23	AMA 0.21	VMA 31	AMB 0.22	VMB 34	PAM 80	PVM 300
Field 10 Cabinet 19	AMA 0.14	VMA 25	AMB 0.15	VMB 25	PAM 60	PVM 260
Field 8 Cabinet 15	AMA 0.52	VMA 39	AMB 0.5	VMB 43	PAM 140	PVM 455
Field 6 Cabinet 11	AMA 0	VMA 0	AMB 0	VMB 0	PAM 0	PVM 0
Field 4 Cabinet 7	AMA 0.16	VMA 39	AMB 0.17	VMB 39	PAM 60	PVM 390
Field 12 Cabinet 24	AMA 0.18	VMA 22	AMB 0.18	VMB 22	PAM 60	PVM 280
Field 10 Cabinet 20	AMA 0.18	VMA 24	AMB 0.12	VMB 25	PAM 60	PVM 280
Field 8 Cabinet 16	AMA 0	VMA 46	AMB 0	VMB 40	PAM 0	PVM 255
Field 6 Cabinet 12	AMA 0.14	VMA 38	AMB 0.1	VMB 38	PAM 40	PVM 355
Field 4 Cabinet 8	AMA 0.01	VMA 36	AMB 0.01	VMB 32	PAM 10	PVM 240

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114
Phone: (816) 333-9400 Fax: (816) 333-3690

Attention: Russell D. Fowler, Jr.

Project Number: 99-343-3

Laboratory: Commercial Testing + Engineering Co.
Address: 16130 Van Drunen Rd.
City/State/Zip: South Holland, IL 60473
Telephone: 708-331-2900

Project Name: MIDAM HG

Document Control No:

Lab. Reference No. or Episode No.:

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Grab	Fuel (Type)	Other	Analysis: ~~Proximate~~ D4239C	~~Hydrogen~~ D3286	D3174	D3684	D4208	D3302	Comments: ASTM Method 5
Run 1	C-1A	Feeders A, B, C, E, F, G	9/14/99		X			X	X					'A' samples - kept by
	C-1B	↓	↓		X			X	X	X	X	X	X	Burns + McDonnell
Run 2	C-2A				X			X	X					'B' samples - sent to
	C-2B				X			X	X	X	X	X	X	Lab for analysis
Run 3	C-3A				X			X	X					
	C-3B				X			X	X	X	X	X	X	
R1 71-102740 SP Hg, Cl	R2 71-102741 SP Hg, Cl	R3 71-102742 SP Hg Cl												

Sampler (signature): Donald C. Mohring
Sampler (signature):

Special Instructions:

Relinquished By:	Date/Time	Relinquished By:	Date/Time
1. Donald C. Mohring (signature):	9-16-99	J. Smith (signature):	9/17/99
2. (signature):		(signature):	

Condition of Shipping Container: Good [X] Fair [ ] Poor [ ]
Ice Present in Container: Yes [ ] No [X]
Comments:

050399 Form WCI-OP1A

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Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114
Phone: (816) 333-9400 Fax: (816) 333-3690

Laboratory Philip Analytical
Address 299 Cayuga Rd.
City/State/Zip Cheektowaga, NY 14225
Telephone 905-332-7591

Document Control No:

Lab. Reference No. or Episode No.:

Attention: Russell D. Fowler JR

Project Number: 99-343-3

Project Name: MIDAMHg

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Sample Type: Matrix: Grab	Sample Type: Fuel (Type)	Sample Type: Other	Analysis: Mercury						Comments
Solution Blanks	SB-7	N/A 150CG	9/14/99				X	X						Neal Station Unit 4 Blank
	SB-8						X	X						
	SB-9						X	X						
	SB-10						X	X						53685.
	SB-11						X	X						
Filter Blank	SB-I-12	500CG.					X	X						Filter Blank Inlet
	SB-S-12	250CG.					X	X						Filter Blank Stack

Sampler (signature):

Sampler (signature): Russell D Fowler JR

Special Instructions:

Relinquished By:	Date/Time	Relinquished By:	Date/Time	Condition of Shipping Container:	Ice Present in Container:
1. Russell D Fowler JR (signature):	9-16-99	(signature):		Good ☐ Fair ☐ Poor ☐	Yes ☐ No ☐
2. (signature):		~~Relinquished~~ received By: (signature): - PASC	990922 2:10	Comments:	

000098

050399 Form WCI-OP1A

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114
Phone: (816) 333-9400 Fax: (816) 333-3690

Laboratory Philip Analytical
Address 299 Cayuga Rd.
City/State/Zip Cheektowaga, NY 14225
Telephone 905-332-7591

Document Control No:

Lab. Reference No. or Episode No.:

Attention:

Project Number: 99-343-3
Project Name: MDAMHG

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Grab	Fuel (Type)	Other	Analysis: Mercury						Comments
Field Blank	I-FB-1	Inlet ✓	9/13/99	X				X			filter			150CG.
	I-FB-2	✓		X				X						150CG.
	I-FB-3	✓		X				X						1LCG 53686.
	I-FB-4	✓		X				X						500CG.
	I-FB-5	✓		X				X						1LCG.

66000

Sampler (signature):

Sampler (signature): [signature]

Special Instructions:

Relinquished By: 1. [signature] (signature): Date/Time 9-16-99

Relinquished By: (signature): Date/Time

Condition of Shipping Container: Good ☐ Fair ☐ Poor ☐

Ice Present in Container: Yes ☐ No ☐

Relinquished By: 2. (signature): Date/Time

~~Relinquished By:~~ received [signature] (signature): PPA Date/Time 990922 1:10

Comments:

050399 Form WCI-OP1A

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell 9400 Ward Parkway Kansas City, Missouri 64114 Phone: (816) 333-9400 Fax: (816) 333-3690	Laboratory: ~~Philip NA~~ Philip Analytical Address: 299 Cayuga Rd City/State/Zip: Cheektowaga, NY 14225 Telephone: 905-332-7591	Document Control No: Lab. Reference No. or Episode No.:
Attention: Russell D. Fowler, JR		

Project Number: 99-343-3 Project Name: MIDAMHG

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Matrix: Grab	Fuel (Type)	Other	Analysis	Comments
Run 1	I-1-1	Inlet	9/14/99	X				X	To be sent after filter has been weighed
	I-1-2 ✓			X				X	150CB
	I-1-3 ✓			X				X	1LCB
	I-1-4 ✓			X				X	500CB
	I-1-5 ✓			X				X	1LCB.

53687

00100

Sampler (signature):

Sampler (signature): Russell D Fowler JR

Special Instructions:

Relinquished By: 1. Russell D Fowler JR (signature):	Date/Time 9-16-99	Relinquished By: (signature):	Date/Time	Condition of Shipping Container: Good ☐ Fair ☐ Poor ☐	Ice Present in Container: Yes ☐ No ☐
Relinquished By: 2. (signature):	Date/Time	Relinquished By: recd (signature):	Date/Time 940922	Comments: 1:10	

050399 Form WCI-OP1A

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114
Phone: (816) 333-9400 Fax: (816) 333-3690

Laboratory: Philip Analytical
Address: 299 Cayuga Rd.
City/State/Zip: Cheektowaga, NY 14225
Attention: Russell D. Fowler, JR
Telephone: 905-332-7591

Document Control No:

Lab. Reference No. or Episode No.:

Project Number:

Project Name:

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Matrix: Grab	Fuel (Type)	Other	Analysis: Mercury	Comments
Run 2	I-2-1	Inlet ✓	9/14/99	X				X	To be sent after filter has been weighed
	I-2-2	✓		X				X	15DCG.
	I-2-3	✓		X				X	14CG. 53688
	I-2-4	✓		X				X	50DCG.
	I-2-5	✓		X				X	14CG.

Sampler (signature): Russell D. Fowler JR

Special Instructions:

Relinquished By: 1. (signature): Russell D. Fowler JR — Date/Time: 9-16-99

Relinquished By: (signature):

Relinquished By: 2. (signature):

Relinquished By: Rec'd (signature):

Date/Time: 9/16/99 7:10

Condition of Shipping Container: Good ☐ Fair ☐ Poor ☐

Ice Present in Container: Yes ☐ No ☐

Comments:

050399 Form WCI-OP1A

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell 9400 Ward Parkway Kansas City, Missouri 64114 Phone: (816) 333-9400 Fax: (816) 333-3690	Laboratory Philip Analytical Address 299 Cayuga Rd. City/State/Zip Cheektowaga, NY 14225	Document Control No:
Attention: Russell D. Fowler, Jr	Telephone 905-332-7591	Lab. Reference No. or Episode No.:

Project Number: 99-343-3 Project Name: MIDAMHg

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Matrix: Grab	Fuel (Type)	Other	Analysis: Mercury	Comments
Run3	~~I~~ I-3-1	Inlet	9/14/99	X				X	To be sent after filter has been weighed
	I-3-2			X				X	150CC.
	I-3-3			X				X	1LCG 53689.
	I-3-4			X				X	500CC
↓	I-3-5	↓	↓	X				X	1LCG.

Sampler (signature):

Sampler (signature): Russell D Fowler JR

Special Instructions:

Relinquished By: 1. Russell D Fowler JR (signature):	Date/Time 9-16-99	Relinquished By: (signature):	Date/Time	Condition of Shipping Container: Good ☐ Fair ☐ Poor ☐	Ice Present in Container: Yes ☐ No ☐
Relinquished By: 2. (signature):	Date/Time	~~Relinquished~~ Received By: (signature):	Date/Time 990922 1:10	Comments:	

050399 Form WCI-OP1A

00702

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114
Phone: (816) 333-9400 Fax: (816) 333-3690

Laboratory Philip Analytical
Address 299 Cayuga Rd
City/State/Zip Cheektowaga, NY 14225
Telephone 905-332-7591

Document Control No:

Lab. Reference No. or Episode No.:

Attention:

Project Number: 99-343-3
Project Name: MIDAMHG

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Sample Type: Matrix: Grab	Sample Type: Fuel (Type)	Sample Type: Other	Analysis: Mercury						Comments
Field Blank	S-FB-1	Stack	9/13/99	X	✓			X						250CG.
	S-FB-2			X	✓			X						150CG.
	S-FB-3			X	✓			X						1LCG.
	S-FB-4			X	✓			X						500CG
	S-FB-5			X	✓			X						1LCG.

53690

00103

Sampler (signature): [signature]
Sampler (signature): [signature]

Special Instructions:

Relinquished By:	Date/Time	Relinquished By:	Date/Time	Condition of Shipping Container:	Ice Present in Container:
1. [signature] (signature):	9-16-99	(signature):		Good ☐ Fair ☐ Poor ☐	Yes ☐ No ☐
2. (signature):		~~Relinquished~~ By: recd [signature] (signature):	990922	Comments: 1:10	

050399 Form WCI-OP1A

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell 9400 Ward Parkway Kansas City, Missouri 64114 Phone: (816) 333-9400 Fax: (816) 333-3690	Laboratory Philip Analytical Address 299 Cayuga Rd. City/State/Zip Cheektowaga, NY 14225	Document Control No:
Attention: Russell D. Fowler Jr	Telephone 905-332-7591	Lab. Reference No. or Episode No.:

Project Number: 99-343-3 Project Name: MIDAMHG

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Matrix: Grab	Fuel (Type)	Other	Analysis Requested	Comments
Run 1	S-1-5	Stack	9/14/99	X				X ✓	150CC.
	S-1-4			X				X ✓	1LCG
	S-1-3			X				X ✓	500CC 53691
	S-1-2			X				X ✓	1LCG.
↓	S-1-1	↓	↓	X				X	To be sent after filter has been weighed

Sampler (signature):

Sampler (signature): Russell D Fowler Jr

Special Instructions:

Relinquished By: 1. Russell D Fowler Jr (signature):	Date/Time 9-16-99	Relinquished By: (signature):	Date/Time	Condition of Shipping Container: Good ☐ Fair ☐ Poor ☐	Ice Present in Container: Yes ☐ No ☐
Relinquished By: 2. (signature):	Date/Time	~~Relinquished~~ By: rec'd (signature):	Date/Time 9/16/99 1:10	Comments:	

050399 Form WCI-OP1A

001104

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell 9400 Ward Parkway Kansas City, Missouri 64114 Phone: (816) 333-9400 Fax: (816) 333-3690	Laboratory Philip Analytical Address 209 Cayuga Rd. City/State/Zip Cheektowaga, NY 14225	Document Control No:
		Lab. Reference No. or Episode No.:
Attention: Russell D. Fowler, JR	Telephone 905-332-7591	
Project Number: 99-343-3	Project Name: MIDAMHG	

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Matrix: Grab	Fuel (Type)	Other	Analysis: Mercury	Comments
Run 2	S-2-1	Stack	9/14/99	X				X	To be sent after filter has been weighed
	S-2-2			X				X ✓	150cc.
	S-2-3			X				X ✓	1LCC. 53692.
	S-2-4			X				X ✓	500cc
↓	S-2-5	↓	↓	X				X ✓	1LCC.

00105

Sampler (signature):				Special Instructions:	
Sampler (signature): Russell D Fowler JR					
Relinquished By: 1. Russell D Fowler JR (signature):	Date/Time 9-16-99	Relinquished By: (signature):	Date/Time	Condition of Shipping Container: Good ☐ Fair ☐ Poor ☐	Ice Present in Container: Yes ☐ No ☐
Relinquished By: 2. (signature):	Date/Time	~~Relinquished~~ By: recd (signature):	Date/Time 9/10/99	Comments:	

050399 Form WCI-OP1A

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114
Phone: (816) 333-9400 Fax: (816) 333-3690

Laboratory Philip Analytical
Address 299 Cayuga Rd.
City/State/Zip Cheektowaga, NY 14225
Telephone 905-332-7591

Document Control No:

Lab. Reference No. or Episode No.:

Attention: Russell D. Fowler, Jr

Project Number: 99-343-3

Project Name: MIDAM

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Matrix: Grab	Fuel (Type)	Other	Analysis: MERCURY						Comments
Run 3	S-3-1	Stack	9/14/99	X				X	✓					To be sent after filter has been weighed
	S-3-2			X				X	✓					150CG.
	S-3-3			X				X	✓					1LCG. 53693
	S-3-4			X				X	✓					500CG
	S-3-5			X				X	✓					1LCG.

Sampler (signature):

Sampler (signature): Russell D Fowler, Jr

Special Instructions:

Relinquished By: 1. (signature): Russell D Fowler Jr	Date/Time 9-16-99	Relinquished By: (signature):	Date/Time	Condition of Shipping Container: Good ☐ Fair ☐ Poor ☐	Ice Present in Container: Yes ☐ No ☐
Relinquished By: 2. (signature):	Date/Time	~~Relinquished~~ Rec'd By: (signature):	Date/Time 990922	Comments: 1:10	

00106

050399 Form WCI-OP1A

MB-53684

10

OHHYX
OHHG-C

Request for Chemical Analysis and Chain of Custody Record

Burns & McDonnell
9400 Ward Parkway
Kansas City, Missouri 64114
Phone: (816) 333-9400 Fax: (816) 333-3690

Attention: Russell D. Fowler, Jr

Laboratory: Philip Analytical
Address: 299 Cayuga Rd.
City/State/Zip: Checktowga, NY 14225
Telephone:

Document Control No:

Lab. Reference No. or Episode No.:

Project Number: 99-343-3
Project Name: MIDAMHG

Run #	Sample ID	Sample Location	Sample Collected Date	Sample Type: Matrix: Composite	Sample Type: Matrix: Grab	Sample Type: Fuel (Type)	Sample Type: Other	Analysis: Mercury						Comments
Run 1	S-1-1	Stack	9/14/99	x	53691			x		250CG				Ontario Hydro
Run 1	I-1-1	Inlet	↓	x	53687			x		↓				method of
Run 2	S-2-1	Stack	↓	x	53692			x		↓				analysis
Run 2	I-2-1	Inlet	↓	x	53688			x		↓				
Run 3	S-3-1	Stack	↓	x	53693			x		↓				
Run 3	I-3-1	Inlet	↓	x	53689			x		↓				To be analyzed
														with previous
														samples that
														were sent

Sampler (signature):

Sampler (signature): Russell D Fowler Jr

Special Instructions:

Relinquished By: 1. Russell D Fowler Jr (signature): Date/Time 9/21/99

Relinquished By: (signature): Date/Time

Condition of Shipping Container: Good ☐ Fair ☐ Poor ☐

Ice Present in Container: Yes ☐ No ☐

Relinquished By: 2. (signature): Date/Time

~~Relinquished By:~~ received by (signature): ASC Date/Time 990922 2:10

Comments:

00107

050399 Form WCI-OP1A

00108

Page ___ of ___

US SAMPLE LOG IN SHEET

BURNS & McDONNELL

Lab Name: Philip Analytical Services Corporation, Burlington Laboratory

Received By (Print Name): K. Carauro

Received By (Signature):

Client Project ID:

REMARKS:		Condition of Samples/Sample Shipment:
Custody Seal(s)	Present ___ Absent ✓	Samples rec'd intact
Chain of Custody Records	Present ✓ Absent ___	
Airbill	Present ✓ Absent ___	
Airbill No.	4481 6018 8911	0°c
	4481 6018 8921	4°c
	4481 6018 8932	2°c
Does Information on Custody Records and Samples Agree?	Yes ✓ No ___	
Date Received at Lab	9 12 99	
Time Received	12:00	

Temperature of Coolers	
Cooler ID:	Temperature
3 COOLERS	0°c 4°c 2°c

Relinquished By: _____

Date: 9 12 99

Logbook No: _____

Logbook Page No. _____

00109

Page ___ of ___

US SAMPLE LOG IN SHEET

BURNS & McDONELL

Lab Name: Philip Analytical Services Corporation, Burlington Laboratory

Received By (Print Name): K. Carara

Received By (Signature):

Client Project ID:

REMARKS:		Condition of Samples/Sample Shipment:
Custody Seal(s)	Present ___ Absent ✓	filters rec'd intact.
Chain of Custody Records	Present ✓ Absent ___	
Airbill	Present ✓ Absent ___	
Airbill No.	4481 6019 1803	
Does Information on Custody Records and Samples Agree?	Yes ✓ No ___	
Date Received at Lab	9 22 99	
Time Received	1:10 pm.	

Temperature of Coolers

Cooler ID:	Temperature
1 Box	not taken

Relinquished By:

Date: 9 22 99

Logbook No: _____

Logbook Page No. _____

00110

** TX STATUS REPORT ** AS OF SEP 24 1999 09:10 PAGE.01

PHILIP ANALYTICAL

	DATE	TIME	TO/FROM	MODE	MIN/SEC	PGS	JOB#	STATUS
13	09/24	09:09	13307230645	EC--S	00'38"	001	036	OK

NOTICE OF SAMPLE RECEIPT-PHILIP ANALYTICAL SERVICES

Attention: Russell Fowler Jr. /Michelle
Client: Sampling & Analytical Mngmt
Re Client Project: 99-343-3
FAX #: 330-723-0645
Phone #: 330-723-0552

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

SAMPLE LISTING

Philip ID #	Sample ID	Date Sampled	Date Received
053685	Neal Stn U4 Blank	99/09/14	99/09/22
053686	Neal Stn U4 Inlet-FB	99/09/14	99/09/22
053687	Neal Stn U4 Inlet-R1	99/09/14	99/09/22
053688	Neal Stn U4 Inlet-R2	99/09/14	99/09/22
053689	Neal Stn U4 Inlet-R3	99/09/14	99/09/22
053690	Neal Stn U4 Stack-FB	99/09/13	99/09/22
053691	Neal Stn U4 Stack-R1	99/09/14	99/09/22
053692	Neal Stn U4 Stack-R2	99/09/14	99/09/22
053693	Neal Stn U4 Stack-R3	99/09/14	99/09/22

Comments: Please provide Po #

Rm

Date 99/09/24

NOTICE OF SAMPLE RECEIPT-PHILIP ANALYTICAL SERVICES

Attention: Russell Fowler Jr. /Michelle
Client: Sampling & Analytical Mngmt
Re Client Project: 99-343-3
FAX #: 330-723-0645
Phone #: 330-723-0552

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

SAMPLE LISTING

Philip ID #	Sample ID	Date Sampled	Date Received
053685	Neal Stn U4 Blank	99/09/14	99/09/22
053686	Neal Stn U4 Inlet-FB	99/09/14	99/09/22
053687	Neal Stn U4 Inlet-R1	99/09/14	99/09/22
053688	Neal Stn U4 Inlet-R2	99/09/14	99/09/22
053689	Neal Stn U4 Inlet-R3	99/09/14	99/09/22
053690	Neal Stn U4 Stack-FB	99/09/13	99/09/22
053691	Neal Stn U4 Stack-R1	99/09/14	99/09/22
053692	Neal Stn U4 Stack-R2	99/09/14	99/09/22
053693	Neal Stn U4 Stack-R3	99/09/14	99/09/22

Comments: Please provide PO #

Date 99/09/24

PHILIP SERVICES

INORGANIC DATA PACKAGE
FOR
SAMPLING & ANALYTICAL MANAGEMENT INC.
Project :99-343-3

Philip Analytical Services Corporation
5555 North Service Road
Burlington, ON L7L 5H7

Submission #9I0798

Prepared by: Janice Joseph - CSR Initial : _____
Approved by : Dr. Ron McLeod - Principal Scientist Initial : _____

1. CASE NARRATIVE

PROJECT NARRATIVE

PHILIP Analytical Services (Burlington ON)
Philip Project: AN991195
Philip Submission #:9I0798

Client: Sampling & Analytical Mngmt
Client Project: 99-343-3

I. SAMPLE RECEIPT/ANALYSIS

a) Sample Listing

Philip ID	Client Sample ID	Date Sampled	Date Received	Date Prepped	Run Date
Draft ASTM Mercury Speciation Method (September1, 1999 Revision)- Front Half					
053684 99	Method Blank	99/09/14	99/09/22	99/10/09	99/10/09
053685 99	Neal Stn U4 Blank	99/09/14	99/09/22	99/10/09	99/10/09
053690 99	Neal Stn U4 Stack-FB	99/09/13	99/09/22	99/10/09	99/10/09
053691 99	Neal Stn U4 Stack-R1	99/09/14	99/09/22	99/10/09	99/10/09
053692 99	Neal Stn U4 Stack-R2	99/09/14	99/09/22	99/10/09	99/10/09
053693 99	Neal Stn U4 Stack-R3	99/09/14	99/09/22	99/10/09	99/10/09
053684 99	Method Blank	99/09/14	99/09/22	99/11/17	99/11/17
053685 99	Neal Stn U4 Blank	99/09/14	99/09/22	99/11/17	99/11/17
053686 99	Neal Stn U4 Inlet-FB	99/09/14	99/09/22	99/11/17	99/11/18
053687 99	Neal Stn U4 Inlet-R1	99/09/14	99/09/22	99/11/17	99/11/17
053688 99	Neal Stn U4 Inlet-R2	99/09/14	99/09/22	99/11/17	99/11/18
053689 99	Neal Stn U4 Inlet-R3	99/09/14	99/09/22	99/11/17	99/11/18
Draft ASTM Mercury Speciation Method (September1, 1999 Revision)- Hydroxylamine					
053684 99	Method Blank	99/09/14	99/09/22	99/10/01	99/10/01
053685 99	Neal Stn U4 Blank	99/09/14	99/09/22	99/10/01	99/10/01
Draft ASTM Mercury Speciation Method (September1, 1999 Revision)- KCl Impingers/Rinses					
053684 99	Method Blank	99/09/14	99/09/22	99/10/04	99/10/04
053685 99	Neal Stn U4 Blank	99/09/14	99/09/22	99/10/04	99/10/04
053686 99	Neal Stn U4 Inlet-FB	99/09/14	99/09/22	99/10/04	99/10/04
053687 99	Neal Stn U4 Inlet-R1	99/09/14	99/09/22	99/10/04	99/10/04
053688 99	Neal Stn U4 Inlet-R2	99/09/14	99/09/22	99/10/04	99/10/04
053689 99	Neal Stn U4 Inlet-R3	99/09/14	99/09/22	99/10/04	99/10/04
053690 99	Neal Stn U4 Stack-FB	99/09/13	99/09/22	99/10/04	99/10/04
053691 99	Neal Stn U4 Stack-R1	99/09/14	99/09/22	99/10/04	99/10/04
053692 99	Neal Stn U4 Stack-R2	99/09/14	99/09/22	99/10/04	99/10/04
053693 99	Neal Stn U4 Stack-R3	99/09/14	99/09/22	99/10/04	99/10/04

Draft ASTM Mercury Speciation Method (September1, 1999 Revision)- KMNO4 Impingers/Rinses

053684 99	Method Blank	99/09/14	99/09/22	99/10/05	99/10/07
053685 99	Neal Stn U4 Blank	99/09/14	99/09/22	99/10/05	99/10/05
053686 99	Neal Stn U4 Inlet-FB	99/09/14	99/09/22	99/10/05	99/10/05
053687 99	Neal Stn U4 Inlet-R1	99/09/14	99/09/22	99/10/05	99/10/05
053688 99	Neal Stn U4 Inlet-R2	99/09/14	99/09/22	99/10/05	99/10/05
053689 99	Neal Stn U4 Inlet-R3	99/09/14	99/09/22	99/10/05	99/10/05
053690 99	Neal Stn U4 Stack-FB	99/09/13	99/09/22	99/10/05	99/10/05
053691 99	Neal Stn U4 Stack-R1	99/09/14	99/09/22	99/10/05	99/10/05
053692 99	Neal Stn U4 Stack-R2	99/09/14	99/09/22	99/10/05	99/10/05
053693 99	Neal Stn U4 Stack-R3	99/09/14	99/09/22	99/10/05	99/10/05

Draft ASTM Mercury Speciation Method (September1, 1999 Revision)- HNO3/H202 Impingers/Rinses

053684 99	Method Blank	99/09/14	99/09/22	99/10/01	99/10/02
053685 99	Neal Stn U4 Blank	99/09/14	99/09/22	99/10/01	99/10/02
053686 99	Neal Stn U4 Inlet-FB	99/09/14	99/09/22	99/10/01	99/10/02
053687 99	Neal Stn U4 Inlet-R1	99/09/14	99/09/22	99/10/01	99/10/02
053688 99	Neal Stn U4 Inlet-R2	99/09/14	99/09/22	99/10/01	99/10/02
053689 99	Neal Stn U4 Inlet-R3	99/09/14	99/09/22	99/10/01	99/10/02
053690 99	Neal Stn U4 Stack-FB	99/09/13	99/09/22	99/10/01	99/10/02
053691 99	Neal Stn U4 Stack-R1	99/09/14	99/09/22	99/10/01	99/10/02
053692 99	Neal Stn U4 Stack-R2	99/09/14	99/09/22	99/10/01	99/10/02
053693 99	Neal Stn U4 Stack-R3	99/09/14	99/09/22	99/10/01	99/10/02

Run Date is defined as the date of injection of the last calibration standard (12 hour or less) prior to the samples analyzed within that run sequence. Therefore the time of calibration injection that defines the run date is always within 12 hours of the time of sample injection.

b) Shipping Problems: none encountered

c) Documentation Problems: none encountered

II. SAMPLE PREP:

No problems encountered

III. SAMPLE ANALYSIS:

See also comments within the appropriate Certificate of Analysis.
There was an error initially on the data calculations relating to the dilution factors applied to the KCl and KMnO4 impinger data. The revised Certificate-of-Analysis has the corrected data however the raw data outputs and the corresponding validation sheets do not show the corrected values. The error was in the dilution factors and related to a dilution of the standards by a factor of 1.5 during their preparation. To compensate for these standard dilutions during prep, the corresponding sample dilution factor should have been 2/3. Instead, a 3/2 factor was applied. Therefore the final results show as being 9/4th of the actual value.
Again note that the data as reported in the Certifcate of Analysis has been corrected for this error.

a) Hold Times:
All impingers portions were analyzed within this recommended hold time of 45 days. The filter and rinses were analyzed 48-9 days following sampling while the ash portions were analyzed within the recommended hold times. Since the front half portions of the sample are within the 'heated zone' of the sampling train and since volatile mercury would have been stripped from this section, there should be no compromise to data quality for this exceedance. Note that it is concern for the 'volatile' Hg portions that the recommended hold time of 45 days was targeted. Fly ash is well known to provide Hg in a stable solid matrix. The solid NIST reference material 1633b is a fly ash and is recognized as stable to certified levels for periods of years.

b) Instrument Calibration: all within control limits

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above.
In addition, I certify, that to the best of my knowledge and belief, the data as reported are true and accurate.
Release of the data contained in this data package has been authorized by the cognizant laboratory official or his/her designee, as verified by this signature.

Ronald A. McLeod, Principal Sci., Ph.D.,C.Chem.

99 12 01
Date

2. ANALYTICAL DATA REPORT

PHILIP SERVICES

Certificate of Analysis

CLIENT INFORMATION

Attention:	Russell Fowler Jr.
Client Name:	Sampling & Analytical Mngmt
Project:	99-343-3
Project Desc:	MIDAM Hg
Address:	963 Concord Drive Medina, OH 44256
Fax Number:	330-723-0645
Phone Number:	330-723-0552

LABORATORY INFORMATION

Contact:	Ron McLeod
Project:	AN991195
Date Received:	99/09/22
Date Reported:	99/11/22
Submission No.:	9I0798
Sample No.:	053684-053693

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: Revision 99/12/01: KCl and KMnO4 Data

Certified by: R.A. McLeod

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

PASC - Certificate of Analysis

			Method Blank	Blank Spike #1	Blank Spike #1	Blank Spike #2	Blank Spike #2	Neal Stn U4 Blank	Neal Stn U4 Inlet-FB	Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R1
Client ID:											
Lab No.:			053684 99	053684 99	053684 99	053684 99	053684 99	053685 99	053686 99	053687 99	053687 99
Date Sampled:			-	-	-	-	-	99/09/14	99/09/14	99/09/14	99/09/14
Component	**MDL**	**Units**			% Recoveries		% Recoveries				Duplicate
Mercury - filter	0.010	ug	<	0.094	94	0.095	95	<	-	-	-
Mercury - filter - bulk	0.010	"	<	0.11	110	0.10	100	<0.050	<0.050	0.24	0.24
Mercury - hydroxylamine	0.010	"	<	0.10	100	0.10	100	<	-	-	-
Mercury - KCl	0.030	"	<	0.34	110	0.34	110	<	0.062	6.7	-
Mercury - KMnO4	0.030	"	<	0.31	100	0.29	97	<	<	8.8	8.9
Mercury - H202	0.010	"	<	0.050	99	0.050	100	<0.25	<0.25	<0.25	<0.25

00007

PASC - Certificate of Analysis

			Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R2	Neal Stn U4 Inlet-R3	Neal Stn U4 Stack-FB	Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R1
Client ID:			Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R1	Neal Stn U4 Inlet-R2	Neal Stn U4 Inlet-R3	Neal Stn U4 Stack-FB	Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R1
Lab No.:			053687 99	053687 99	053687 99	053687 99	053688 99	053689 99	053690 99	053691 99	053691 99
Date Sampled:			99/09/14	99/09/14	99/09/14	99/09/14	99/09/14	99/09/14	99/09/13	99/09/14	99/09/14
Component	**MDL**	**Units**	M. Spike	MS % Rec.	MS Dup	MSD % Rec.					Duplicate
Mercury - filter	0.010	ug	-	-	-	-	-	-	0.029	0.046	-
Mercury - filter - bulk	0.010	"	0.69	91	0.68	90	0.094	<0.050	-	-	-
Mercury - hydroxylamine	0.010	"	-	-	-	-	-	-	-	-	-
Mercury - KCl	0.030	"	-	-	-	-	5.8	4.5	0.17	6.1	6.1
Mercury - KMnO4	0.030	"	22	96	21	95	11	4.8	0.033	8.2	-
Mercury - H202	0.010	"	2.6	100	2.5	97	<0.25	<0.25	<0.25	<0.25	-

80008

			Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R2	Neal Stn U4 Stack-R3	Neal Stn U4 Stack-R3
Client ID:			Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R1	Neal Stn U4 Stack-R2	Neal Stn U4 Stack-R3	Neal Stn U4 Stack-R3
Lab No.:			053691 99	053691 99	053691 99	053691 99	053692 99	053693 99	053693 99
Date Sampled:			99/09/14	99/09/14	99/09/14	99/09/14	99/09/14	99/09/14	99/09/14
Component	**MDL**	**Units**	M. Spike	MS % Rec.	MS Dup	MSD % Rec.			Duplicate
Mercury - filter	0.010	ug	-	-	-	-	0.089	0.043	0.042
Mercury - filter - bulk	0.010	"	-	-	-	-	-	-	-
Mercury - hydroxylamine	0.010	"	-	-	-	-	-	-	-
Mercury - KCl	0.030	"	13	99	13	99	6.7	6.0	-
Mercury - KMnO4	0.030	"	-	-	-	-	10	8.1	-
Mercury - H202	0.010	"	-	-	-	-	<0.25	<0.25	-

60000

PASC - Certificate of Analysis

			Neal Stn U4 Stack-R3	Neal Stn U4 Stack-R3	Neal Stn U4 Stack-R3	Neal Stn U4 Stack-R3
	Client ID:					
	Lab No.:		053693 99	053693 99	053693 99	053693 99
	Date Sampled:		99/09/14	99/09/14	99/09/14	99/09/14
Component	**MDL**	**Units**	M. Spike	MS % Rec.	MS Dup	MSD % Rec.
Mercury - filter	0.010	ug	0.14	95	0.14	96
Mercury - filter - bulk	0.010	"	-	-	-	-
Mercury - hydroxylamine	0.010	"	-	-	-	-
Mercury - KCl	0.030	"	-	-	-	-
Mercury - KMnO4	0.030	"	-	-	-	-
Mercury - H202	0.010	"	-	-	-	-

Batch Code:	**10092GFL**	**10093GFL**	
Mercury - filter	053684 99	053692 99	
	053685 99	053693 99	
	053690 99		
	053691 99		
Run Date:	99/10/09	99/10/09	
Date of Sample Prep:	99/10/09	99/10/09	
Batch Code:	**1117MGF1**	**1117MGF1**	
Mercury - filter - bulk	053684 99	053686 99	
	053685 99	053688 99	
	053687 99	053689 99	
Run Date:	99/11/17	99/11/18	
Date of Sample Prep:	99/11/17	99/11/17	
Batch Code:	**1001MGHY**		
Mercury - hydroxylamine	053684 99		
	053685 99		
Run Date:	99/10/01		
Date of Sample Prep:	99/10/01		
Batch Code:	**10043GKC**	**10047GKC**	
Mercury - KCl	053684 99	053691 99	
	053685 99	053692 99	
	053686 99	053693 99	
	053687 99		
	053688 99		
	053689 99		
	053690 99		
Run Date:	99/10/04	99/10/04	
Date of Sample Prep:	99/10/04	99/10/04	
Batch Code:	**10053GMN**	**10053GMN**	**10054GMN**
Mercury - KMnO4	053684 99	053685 99	053687 99
		053686 99	053688 99
			053689 99
			053690 99
			053691 99
			053692 99
			053693 99
Run Date:	99/10/07	99/10/05	99/10/05
Date of Sample Prep:	99/10/05	99/10/05	99/10/05
Batch Code:	**10015B2B**		
Mercury - H202	053684 99		
	053685 99		
	053686 99		
	053687 99		
	053688 99		

	053689 99
	053690 99
	053691 99
	053692 99
	053693 99
Run Date:	99/10/02
Date of Sample Prep:	99/10/01

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9306

SINCE 1908®

SGS Member of the SGS Group (Société Générale de Surveillance)

ADDRESS ALL CORRESPONDENCE TO:
16130 VAN DRUNEN RD.
SOUTH HOLLAND, IL 60473
TEL: (708) 331-2900
FAX: (708) 333-3060

September 27, 1999

BURNS & McDONNELL ENGINEERING
9400 Ward Parkway
Kansas City, MO 64114
Attn: Russel D. Fowler, Jr.

Sample identification by
Burns & McDonnell

Kind of sample reported to us	Coal
Sample taken at	Run 1
Sample taken by	Feeder A,B,C,E,F,G
Date sampled	September 14, 1999
Date received	September 17, 1999

Sample ID: C-1B
Run: 1
Date: 9/14/99
Grab

P.O. No. 99-343-3

Analysis Report No. 71-102740

SHORT PROX & CHLORINE ANALYSIS

	As Received	Dry Basis	
% Moisture	27.89	xxxxx	
% Ash	5.48	7.60	
Btu/lb	8655	12003	MAF 12990
% Sulfur	0.30	0.42	
% CHLORINE	0.01	0.02	

METHODS
Moisture: ASTM D 3302; Ash: ASTM D 3174; Btu/lb: ASTM D 3286; Sulfur: ASTM D 4239 (Method C); Chlorine: ASTM D 4208

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

South Holland Laboratory

MEMBER ACIL

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9306

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ADDRESS ALL CORRESPONDENCE TO:
16130 VAN DRUNEN RD.
SOUTH HOLLAND, IL 60473
TEL: (708) 331-2900
FAX: (708) 333-3060

September 27, 1999

BURNS & McDONNELL ENGINEERING
9400 Ward Parkway
Kansas City, MO 64114
Attn: Russel D. Fowler, Jr.

Sample identification by
Burns & McDonnell

Kind of sample reported to us	Coal
Sample taken at	Run 1
Sample taken by	Feeder A,B,C,E,F,G
Date sampled	September 14, 1999
Date received	September 17, 1999

Sample ID: C-1B
Run: 1
Date: 9/14/99
Grab

P.O. No. 99-343-3

Analysis Report No. 71-102740

Dry Basis, ug/g

Mercury, Hg 0.09

	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.11

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

South Holland Laboratory

MEMBER ACIL

COMMERCIAL TESTING & ENGINEERING CO.

GENERAL OFFICES: 1919 SOUTH HIGHLAND AVE., SUITE 210-B, LOMBARD, ILLINOIS 60148 • TEL: 630-953-9300 FAX: 630-953-9306

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ADDRESS ALL CORRESPONDENCE TO:
16130 VAN DRUNEN RD.
SOUTH HOLLAND, IL 60473
TEL: (708) 331-2900
FAX: (708) 333-3060

September 27, 1999

BURNS & McDONNELL ENGINEERING
9400 Ward Parkway
Kansas City, MO 64114
Attn: Russel D. Fowler, Jr.

Sample identification by
Burns & McDonnell

Kind of sample reported to us: Coal

Sample taken at: Run 2

Sample taken by: Feeder A,B,C,E,F,G

Date sampled: September 14, 1999

Date received: September 17, 1999

Sample ID: C-2B
Run: 2
Date: 9/14/99
Grab

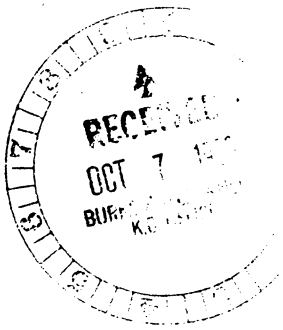
P.O. No. 99-343-3

Analysis Report No. 71-102741 Page 1 of 2

SHORT PROX & CHLORINE ANALYSIS

	As Received	Dry Basis	
% Moisture	28.31	xxxxx	
% Ash	5.46	7.61	
Btu/lb	8613	12014	MAF 13004
% Sulfur	0.32	0.44	
% CHLORINE	0.01	0.01	

METHODS
Moisture: ASTM D 3302; Ash: ASTM D 3174; Btu/lb: ASTM D 3286; Sulfur: ASTM D 4239 (Method C); Chlorine: ASTM D 4208



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September 27, 1999

BURNS & McDONNELL ENGINEERING
9400 Ward Parkway
Kansas City, MO 64114
Attn: Russel D. Fowler, Jr.

Sample identification by
Burns & McDonnell

Kind of sample reported to us	Coal
Sample taken at	Run 2
Sample taken by	Feeder A,B,C,E,F,G
Date sampled	September 14, 1999
Date received	September 17, 1999

Sample ID: C-2B
Run: 2
Date: 9/14/99
Grab

P.O. No. 99-343-3

Analysis Report No. 71-102741

Dry Basis, ug/g

Mercury, Hg 0.08

	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.11

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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FAX: (708) 333-3060

October 1, 1999

BURNS & McDONNELL ENGINEERING
9400 Ward Parkway
Kansas City, MO 64114
Attn: Russel D. Fowler, Jr.

Sample identification by
Burns & McDonnell

Kind of sample reported to us	Coal
Sample taken at	Run 3
Sample taken by	Feeder A,B,C,E,F,G
Date sampled	September 14, 1999
Date received	September 17, 1999

Sample ID: C-3B
Run: 3
Date: 9/14/99
Grab

P.O. No. 99-343-3

Analysis Report No. 71-102742

SHORT PROXIMATE ANALYSIS

	As Received	Dry Basis	
% Moisture	30.03	xxxxx	
% Ash	6.05	8.64	
Btu/lb	8327	11901	MAF 13026
% Sulfur	0.31	0.44	
Chlorine, ug/g	191	273	

METHODS

Moisture: ASTM D 3302; Ash: ASTM D 3174; Btu/lb: ASTM D 3286; Sulfur: ASTM D 4239 (Method C); Chlorine: ASTM D 4208

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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TERMS AND CONDITIONS ON REVERSE

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FAX: (708) 333-3060

October 1, 1999

BURNS & McDONNELL ENGINEERING
9400 Ward Parkway
Kansas City, MO 64114
Attn: Russel D. Fowler, Jr.

Sample identification by
Burns & McDonnell

Kind of sample reported to us	Coal
Sample taken at	Run 3
Sample taken by	Feeder A,B,C,E,F,G
Date sampled	September 14, 1999
Date received	September 17, 1999

Sample ID: C-3B
Run: 3
Date: 9/14/99
Grab

P.O. No. 99-343-3

Analysis Report No. 71-102742

	Dry Basis, ug/g	
Mercury, Hg	0.10	
	Expected	Observed
SARM 1157	0.05	0.05
NIST 1630A	0.11	0.11

METHOD
Mercury: ASTM D 3684

Respectfully submitted,
COMMERCIAL TESTING & ENGINEERING CO.

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TERMS AND CONDITIONS ON REVERSE