2008 Method 9

Opacity

CATALYST AIR MANAGEMENT, INC.
SUMMARY OF METHOD 9 VISIBLE EMISSIONS DATA

Opacity Monitor

CLIENT: UGI
PLANT: Hunlock Station

DATE: 4/30/2008

Run 1	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	15	11.25	10.10	1.15
2	10	10	10	10	10.00	10.64	0.64
3	10	10	15	10	11.25	11.74	0.49
4	10	10	5	10	8.75	12.22	3.47
5	15	10	5	10	10.00	11.99	1.99
6	10	20	10	20	15.00	18.46	3.46
7	10	5	10	10	8.75	9.05	0.30
8	10	5	5	10	7.50	8.66	1.16
9	10	15	5	10	10.00	8.31	1.69
10	10	5	10	10	8.75	8.41	0.34
11	5	10	5	10	7.50	8.40	0.90
12	10	10	10	15	11.25	9.59	1.66
13	15	10	10	10	11.25	9.21	2.04
14	10	10	10	5	8.75	9.89	1.14
15	10	5	10	10	8.75	10.11	1.36
			AVG.		9.92	10.45	0.54

Run 2	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	5	10	10	8.75	9.63	0.88
2	10	10	20	10	12.50	10.04	2.46
3	10	5	10	10	8.75	10.64	1.89
4	10	5	15	10	10.00	12.03	2.03
5	10	10	15	10	11.25	8.80	2.45
6	10	10	10	10	10.00	9.38	0.62
7	10	10	10	10	10.00	8.96	1.04
8	10	10	10	15	11.25	9.23	2.02
9	15	15	10	10	12.50	8.84	3.66
10	10	10	15	15	12.50	10.38	2.12
11	20	15	10	10	13.75	9.85	3.90
12	5	10	20	20	13.75	19.29	5.54
13	10	10	10	10	10.00	10.91	0.91
14	10	10	10	10	10.00	9.16	0.84
15	10	10	10	10	10.00	8.84	1.16
			AVG.		11.00	10.40	-0.60

Run 3	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	9.45	0.55
2	5	10	5	10	7.50	9.54	2.04
3	10	10	15	15	12.50	10.07	2.43
4	10	10	5	5	7.50	11.40	3.90
5	5	5	10	15	8.75	12.47	3.72
6	10	10	10	10	10.00	8.67	1.33
7	10	5	10	10	8.75	9.10	0.35
8	5	5	10	10	7.50	8.84	1.34
9	10	10	15	10	11.25	9.37	1.88
10	15	10	10	10	11.25	8.92	2.33
11	10	10	10	15	11.25	10.43	0.82
12	5	10	15	10	10.00	10.42	0.42
13	10	10	15	10	11.25	11.00	0.25
14	10	15	10	10	11.25	11.68	0.43
15	10	15	15	10	12.50	9.77	2.73
			AVG.		10.08	10.08	-0.01

Run 4	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	15	10	10	11.25	11.00	0.25
2	10	10	10	15	11.25	10.00	1.25
3	10	10	10	10	10.00	11.51	1.51
4	10	10	5	5	7.50	10.95	3.45
5	10	10	5	5	7.50	12.12	4.62
6	10	5	10	10	8.75	8.75	0.00
7	5	5	10	5	6.25	8.26	2.01
8	5	5	10	10	7.50	8.50	1.00
9	10	10	5	5	7.50	9.33	1.83
10	10	10	10	10	10.00	8.57	1.43
11	10	15	10	10	11.25	10.15	1.10
12	10	10	5	10	8.75	9.85	1.10
13	10	10	5	10	8.75	11.20	2.45
14	10	5	5	5	6.25	10.94	4.69
15	10	10	5	10	8.75	10.72	1.97
			AVG.		8.75	10.12	1.37

Run 5	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	15	10	11.25	13.05	1.80
2	5	10	5	5	6.25	12.67	6.42
3	5	10	10	10	8.75	13.62	4.87
4	10	10	10	15	11.25	11.51	0.26
5	10	10	15	10	11.25	12.10	0.85
6	10	5	5	10	7.50	13.93	6.43
7	5	5	5	5	5.00	11.10	6.10
8	5	10	5	5	6.25	9.18	2.93
9	5	10	10	10	8.75	8.89	0.14
10	10	10	5	10	8.75	9.54	0.79
11	10	10	10	10	10.00	9.87	0.13
12	15	15	10	10	12.50	10.06	2.44
13	10	10	10	10	10.00	10.73	0.73
14	15	10	15	10	12.50	10.98	1.52
15	10	10	10	15	11.25	11.21	0.04
			AVG.		9.42	11.23	1.81

Run 6	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	5	5	10	10	7.50	10.63	3.13
2	10	15	15	15	13.75	11.25	2.50
3	15	10	10	10	11.25	13.35	2.10
4	10	5	15	5	8.75	13.70	4.95
5	5	5	15	5	7.50	12.16	4.66
6	5	10	10	5	7.50	9.15	1.65
7	5	10	10	10	8.75	9.18	0.43
8	10	10	5	5	7.50	9.23	1.73
9	10	10	5	10	8.75	9.46	0.71
10	5	10	10	10	8.75	9.11	0.36
11	10	10	5	10	8.75	10.90	2.15
12	35	10	5	5	13.75	9.96	3.79
13	15	10	5	5	8.75	14.29	5.54
14	10	10	5	10	8.75	12.38	3.63
15	10	10	5	10	8.75	9.65	0.90
			AVG.		9.25	10.96	1.71

Run 7	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	5	10	10	10	8.75	9.85	1.10
2	10	10	10	10	10.00	10.15	0.15
3	5	10	10	10	8.75	9.59	0.84
4	10	15	10	5	10.00	11.17	1.17
5	5	10	5	10	7.50	10.86	3.36
6	5	10	10	15	10.00	12.03	2.03
7	10	10	5	5	7.50	12.00	4.50
8	10	5	10	10	8.75	11.64	2.89
9	10	10	10	15	11.25	9.29	1.96
10	10	10	10	10	10.00	10.16	0.16
11	10	15	10	10	11.25	9.24	2.01
12	10	10	10	10	10.00	10.93	0.93
13	10	10	10	10	10.00	9.75	0.25
14	10	10	10	10	10.00	9.85	0.15
15	10	10	10	10	10.00	11.01	1.01
			AVG.		9.58	10.50	0.92

Run'8	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	5	5	10	7.50	11.25	3.75
2	10	10	15	10	11.25	11.27	0.02
3	15	15	10	10	12.50	11.30	1.20
4	5	10	5	10	7.50	12.58	5.08
5	5	10	10	10	8.75	8.63	0.12
6	10	5	5	5	6.25	9.71	3.46
7	10	5	10	5	7.50	9.06	1.56
8	5	10	10	10	8.75	10.01	1.26
9	15	10	10	10	11.25	9.70	1.55
10	10	5	10	10	8.75	11.44	2.69
11	10	10	10	10	10.00	8.75	1.25
12	10	10	10	5	8.75	9.09	0.34
13	5	10	5	10	7.50	9.98	2.48
14	10	10	10	10	10.00	9.72	0.28
15	10	10	15	10	11.25	10.21	1.04
			AVG.		9.17	10.18	1.01

Run 9	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	5	10	10	5	7.50	10.76	3.26
2	10	10	10	10	10.00	9.07	0.93
3	10	10	10	15	11.25	9.43	1.82
4	10	10	5	10	8.75	8.79	0.04
5	10	10	10	10	10.00	9.19	0.81
6	15	10	5	10	10.00	8.93	1.07
7	10	10	5	10	8.75	9.83	1.08
8	5	15	15	10	11.25	9.78	1.47
9	10	15	10	10	11.25	11.23	0.02
10	10	15	15	10	12.50	10.97	1.53
11	10	10	5	10	8.75	12.98	4.23
12	5	5	10	5	6.25	11.29	5.04
13	5	10	10	10	8.75	9.49	0.74
14	10	10	10	10	10.00	9.28	0.72
15	10	10	5	10	8.75	9.67	0.92
			AVG.		9.58	10.05	0.46

CATALYST AIR MANAGEMENT, INC.

AIR QUALITY TESTING SERVICES

VISIBLE EMISSION OBSERVATION FORM

COMPANY NAME: JG-I

STREET ADDRESS: US Rt. 11

CITY: Hunlock Creek | STATE: PA | ZIP:

PHONE (KEY CONTACT): | SOURCE I.D. NUMBER:

PROCESS EQUIPMENT: Stoker Boiler | OPERATING MODE: Normal Load Control

CONTROL EQUIPMENT: ESP | OPERATING MODE: Normal

DESCRIBE EMISSION POINT: ~50' High steel stack ~10' ID

HEIGHT ABOVE GROUND LEVEL: 180 | HEIGHT RELATIVE TO OBSERVER: Start ~180' End Same

DISTANCE FROM OBSERVER: ~600' | DIRECTION FROM OBSERVER: Start NNW End Same

DESCRIBE EMISSIONS: Start Blue Plume End Blue Plume

EMISSION COLOR: Start Blue End Blue/Tan | IF WATER DROPLET PLUME: Attached N/A Detached

POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED: Start Top of Stack End Top of stack

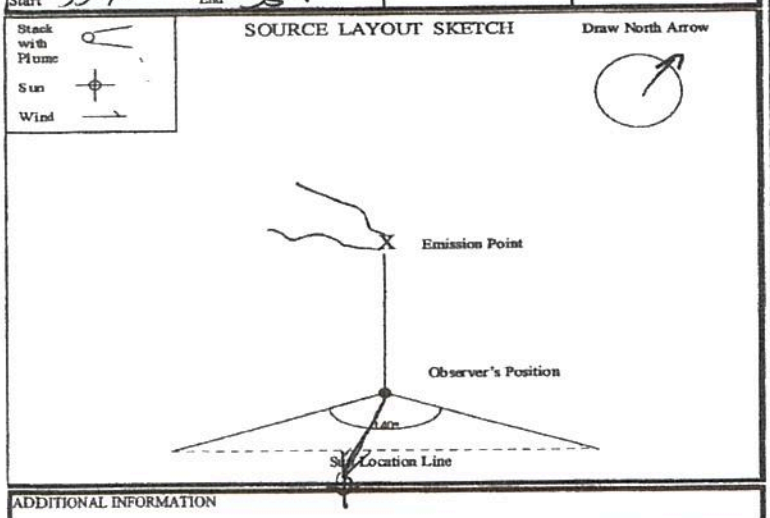
DESCRIBE PLUME BACKGROUND: Start Sky End Sky

BACKGROUND COLOR: Start Blue End Same | SKY CONDITIONS: Start Clear End 10% overcast

WIND SPEED: Start 0-10mph End 0-15mph | WIND DIRECTION: Start WSW var. End Same

AMBIENT TEMP.: Start 55°F End 56°F | WET BULB TEMP | RH, percent

SOURCE LAYOUT SKETCH



ADDITIONAL INFORMATION

Wind direction variable from calm vert. plume to both up & downstream (WSW, ENE) directions.

OBSERVATION DATE: 4/30/08 | START TIME: 1114 | END TIME: 1141

	0	15	30	45	COMMENTS
1	10	10	10	15	
2	10	10	10	10	
3	10	10	15	10	
4	10	10	5	10	
5	15	10	5	10	RATA Run #1
6	10	20	10	20	
7	10	5	10	10	
8	10	5	5	10	
9	10	15	5	10	
10	10	5	10	10	
11	5	10	5	10	
12	10	10	10	15	
13	15	10	10	10	
14	10	10	10	5	
15	10	5	10	10	End 11:28:59
16	10	5	10	10	Start 11:29
17	10	10	20	10	
18	10	5	10	10	
19	10	5	15	10	
20	10	10	15	10	RATA Run #2
21	10	10	10	10	
22	10	10	10	10	
23	10	10	10	15	
24	15	15	10	10	
25	10	10	15	15	
26	20	15	10	10	
27	5	10	20	20	
28	10	10	10	10	
29	15	10	10	10	
30	10	10	10	10	

OBSERVER'S NAME (PRINT): Scott Williams

OBSERVER'S SIGNATURE: [signature] | DATE: 4/30/08

ORGANIZATION: Catalyst Air Mgmt

CERTIFIED BY: PSU | DATE: 4/1/08

CONTINUED ON VEO FORM NUMBER

CATALYST AIR MANAGEMENT, INC. AIR QUALITY TESTING SERVICES

VISIBLE EMISSION OBSERVATION FORM
(CONTINUED)

COMPANY NAME: UGI	TYPE OF FACILITY: Elec. Utility
CITY: Hunlock Creek PA	EMISSION POINT: 10' I.D. Steel Stack
TEST NO.: Runs 3-6 '08 RATA / PAGE 2 OF 3	OBSERVER: Scott Williams

OBSERVATION DATE: 4/30/08 — START TIME: 1145 — END TIME: 1215

	0	15	30	45	COMMENTS
1	10	10	10	10	
2	5	10	5	10	
3	10	10	15	15	
4	10	10	5	5	
5	5	5	10	15	
6	10	10	10	10	
7	10	5	10	10	RATA R-3
8	5	5	10	10	
9	10	10	15	10	
10	15	10	10	10	
11	10	10	10	15	
12	5	10	15	10	
13	10	10	15	10	
14	10	15	10	10	
15	10	15	15	10	End 1200
16	10	15	10	10	Start 1200
17	10	10	10	15	
18	10	10	10	10	
19	10	10	5	5	
20	10	10	5	5	
21	10	5	10	10	
22	5	5	10	5	RATA R-4
23	5	5	10	10	
24	10	10	5	5	
25	10	10	10	10	
26	10	15	10	10	
27	10	10	5	10	
28	10	10	5	10	
29	10	5	5	5	
30	10	10	5	10	

START TIME: 1216 — END TIME: 1246

	0	15	30	45	COMMENTS
1	10	10	15	10	
2	5	10	5	5	
3	5	10	10	10	
4	10	10	10	15	
5	10	10	15	10	
6	10	5	5	10	
7	5	5	5	5	RATA R-5
8	5	10	5	5	
9	5	10	10	10	
10	10	10	5	10	
11	10	10	10	10	
12	15	15	10	10	
13	10	10	10	10	
14	15	10	5	10	
15	10	10	10	5	~~End 1230~~
16	5	5	10	10	1231
17	10	15	15	15	
18	15	10	10	10	
19	10	5	5	5	
20	5	5	15	15	
21	5	10	10	5	
22	5	10	10	10	RATA R-6
23	10	10	5	5	
24	10	10	5	10	
25	5	10	10	10	
26	10	10	5	10	
27	35	10	5	5	
28	15	10	5	5	
29	10	10	5	10	
30	10	10	5	10	1245

CATALYST AIR MANAGEMENT, INC.

AIR QUALITY TESTING SERVICES

VISIBLE EMISSION OBSERVATION FORM
(CONTINUED)

COMPANY NAME: UGI

CITY: Hunlock Creek PA

TEST NO.: '08 RATA Runs 7-10

PAGE 3 OF 3

TYPE OF FACILITY: Elec. Utility

EMISSION POINT: ~10' ID Steel Stack

OBSERVER: Scott Williams

OBSERVATION DATE: 4/30/08

START TIME: 1247 END TIME: 1317

	0	15	30	45	COMMENTS
1	5	10	10	10	
2	10	10	10	10	
3	5	10	10	10	
4	10	15	10	5	RATA R-7
5	5	10	5	10	
6	5	10	10	15	
7	10	10	5	5	
8	10	5	10	10	
9	10	10	10	15	
10	10	10	10	15	
11	10	15	10	10	
12	10	10	10	10	
13	10	10	10	10	
14	10	10	10	10	
15	10	10	10	10	1301
16	10	5	5	10	1302
17	10	10	15	10	
18	15	15	10	10	
19	5	10	5	10	RATA R-8
20	5	10	10	10	
21	10	5	5	5	
22	10	5	10	5	
23	5	10	10	10	
24	15	10	10	10	
25	10	5	10	10	
26	10	10	10	10	
27	10	10	10	5	
28	5	10	5	10	
29	10	10	10	10	
30	10	10	15	10	1310

START TIME: 1318 END TIME: 1348

	0	15	30	45	COMMENTS
1	5	10	10	5	
2	10	10	10	10	
3	10	10	10	15	
4	10	10	5	10	
5	10	10	10	10	
6	15	10	5	10	
7	10	10	5	10	
8	5	15	15	10	RATA R-9
9	10	15	10	10	
10	10	15	15	10	
11	10	10	5	10	
12	5	5	10	5	
13	5	10	10	10	
14	10	10	10	10	
15	10	10	5	10	1332
16	10	10	15	10	
17	5	10	10	10	
18	15	10	10	10	
19	5	10	20	15	
20	15	15	15	5	
21	10	15	10	5	RATA R-10
22	10	10	5	5	
23	10	10	5	10	
24	10	10	5	10	
25	10	10	10	5	
26	5	10	10	10	
27	10	15	10	15	
28	20	15	15	15	
29	10	10	10	10	
30	5	10	5	10	