2007 Method 9

Opacity

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

Opacity Monitor

CLIENT: UGI Development Company
PLANT: Hunlock Station

DATE: 4/18/07

Run 1	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	10.47	0.47
2	10	10	10	10	10.00	12.56	2.56
3	10	10	10	10	10.00	11.56	1.56
4	10	10	10	10	10.00	12.26	2.26
5	10	10	10	10	10.00	12.22	2.22
6	10	10	10	10	10.00	13.09	3.09
7	10	10	10	10	10.00	11.60	1.60
8	10	10	10	10	10.00	12.22	2.22
9	10	10	10	10	10.00	10.50	0.50
10	10	10	10	10	10.00	11.32	1.32
11	10	10	10	10	10.00	10.48	0.48
12	10	10	10	10	10.00	11.25	1.25
13	10	10	10	10	10.00	11.00	1.00
14	10	10	10	10	10.00	10.88	0.88
15	10	10	10	10	10.00	11.15	1.15
					AVG. ABS. DIFF		1.50

Run 2	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	11.38	1.38
2	10	10	10	10	10.00	14.07	4.07
3	10	10	10	10	10.00	15.79	5.79
4	10	10	10	10	10.00	10.84	0.84
5	10	10	10	10	10.00	10.68	0.68
6	10	10	10	10	10.00	10.56	0.56
7	10	10	10	10	10.00	10.91	0.91
8	10	10	10	10	10.00	10.78	0.78
9	10	10	10	10	10.00	11.69	1.69
10	10	10	10	10	10.00	11.69	1.69
11	10	10	10	10	10.00	12.25	2.25
12	10	10	10	10	10.00	10.69	0.69
13	10	10	10	10	10.00	11.99	1.99
14	10	10	10	10	10.00	10.46	0.46
15	10	10	10	10	10.00	10.80	0.80
					AVG. ABS. DIFF		1.64

Run 3	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	10.58	0.58
2	10	10	10	15	11.25	11.55	0.30
3	10	10	10	10	10.00	11.36	1.36
4	15	15	15	15	15.00	12.12	2.88
5	15	15	15	10	13.75	11.80	1.95
6	10	15	15	15	13.75	11.32	2.43
7	10	10	10	10	10.00	13.52	3.52
8	10	10	10	10	10.00	12.18	2.18
9	10	10	10	10	10.00	11.05	1.05
10	10	10	10	10	10.00	11.03	1.03
11	10	10	10	10	10.00	11.79	1.79
12	10	10	10	10	10.00	10.89	0.89
13	10	10	10	10	10.00	11.20	1.20
14	10	10	10	10	10.00	11.66	1.66
15	10	10	10	10	10.00	11.18	1.18
					AVG. ABS. DIFF		1.60

Run 4	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	11.73	1.73
2	15	15	15	20	16.25	16.94	0.69
3	10	10	10	10	10.00	11.56	1.56
4	10	10	10	10	10.00	11.00	1.00
5	10	10	10	10	10.00	10.67	0.67
6	10	10	10	10	10.00	10.46	0.46
7	10	10	10	10	10.00	11.26	1.26
8	10	10	10	10	10.00	11.05	1.05
9	10	10	10	10	10.00	12.34	2.34
10	10	10	10	10	10.00	11.69	1.69
11	10	10	10	10	10.00	14.24	4.24
12	10	10	10	10	10.00	10.46	0.46
13	10	10	10	10	10.00	11.09	1.09
14	10	10	10	10	10.00	11.34	1.34
15	10	10	10	10	10.00	11.40	1.40
					AVG. ABS. DIFF		1.40

Run 5	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	10.75	0.75
2	10	10	10	10	10.00	11.24	1.24
3	10	10	10	10	10.00	11.91	1.91
4	10	10	10	10	10.00	12.08	2.08
5	10	10	10	10	10.00	11.64	1.64
6	10	10	10	10	10.00	11.77	1.77
7	10	10	10	10	10.00	13.02	3.02
8	10	10	10	10	10.00	10.37	0.37
9	10	10	10	10	10.00	12.53	2.53
10	10	10	10	10	10.00	10.60	0.60
11	10	10	10	10	10.00	11.44	1.44
12	10	10	10	10	10.00	10.64	0.64
13	10	10	10	10	10.00	12.08	2.08
14	10	10	10	10	10.00	11.45	1.45
15	10	10	10	10	10.00	11.27	1.27
					AVG. ABS. DIFF		1.52

Run 6	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	11.95	1.95
2	10	10	10	10	10.00	11.94	1.94
3	10	10	10	10	10.00	12.98	2.98
4	10	10	10	10	10.00	13.50	3.50
5	10	10	10	10	10.00	10.94	0.94
6	10	10	10	10	10.00	10.37	0.37
7	10	10	10	10	10.00	10.65	0.65
8	10	10	10	10	10.00	10.82	0.82
9	10	10	10	10	10.00	11.71	1.71
10	10	10	10	10	10.00	11.21	1.21
11	10	10	10	10	10.00	13.18	3.18
12	10	10	10	10	10.00	11.25	1.25
13	10	10	10	10	10.00	11.24	1.24
14	10	10	10	10	10.00	12.52	2.52
15	10	10	10	10	10.00	10.59	0.59
					AVG. ABS. DIFF		1.66

Run 7	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	10.63	0.63
2	10	10	10	10	10.00	10.66	0.66
3	10	10	10	10	10.00	11.69	1.69
4	10	10	10	10	10.00	11.96	1.96
5	10	10	10	10	10.00	12.69	2.69
6	10	10	10	10	10.00	12.30	2.30
7	10	10	10	10	10.00	13.08	3.08
8	10	10	10	10	10.00	10.87	0.87
9	10	10	10	10	10.00	11.97	1.97
10	10	10	10	10	10.00	10.45	0.45
11	10	10	10	10	10.00	11.77	1.77
12	10	10	10	10	10.00	10.68	0.68
13	10	10	10	10	10.00	12.27	2.27
14	10	10	10	10	10.00	11.46	1.46
15	10	10	10	10	10.00	11.77	1.77
					AVG. ABS. DIFF		1.62

Run 8	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	10	10	10	10	10.00	13.70	3.70
2	10	10	10	10	10.00	12.30	2.30
3	10	10	10	10	10.00	10.42	0.42
4	10	10	10	10	10.00	10.55	0.55
5	10	10	10	10	10.00	10.44	0.44
6	15	10	10	15	12.50	10.93	1.57
7	10	15	15	10	12.50	11.46	1.04
8	15	15	15	15	15.00	11.39	3.61
9	15	15	15	15	15.00	12.50	2.50
10	15	15	15	15	15.00	10.97	4.03
11	15	15	15	15	15.00	10.73	4.27
12	15	15	15	15	15.00	11.92	3.08
13	15	15	15	15	15.00	10.55	4.45
14	15	15	10	15	13.75	10.59	3.16
15	10	10	15	15	12.50	10.90	1.60
					AVG. ABS. DIFF		2.45

Run 9	seconds				method 9		
min.	0	15	30	45	AVG.	CEMS	Diff.
1	15	10	10	10	11.25	11.38	0.13
2	10	10	10	10	10.00	12.95	2.95
3	10	10	10	10	10.00	12.00	2.00
4	10	10	10	10	10.00	10.70	0.70
5	10	10	10	10	10.00	10.62	0.62
6	10	10	10	10	10.00	10.65	0.65
7	10	10	10	10	10.00	10.77	0.77
8	10	10	10	10	10.00	10.78	0.78
9	10	10	10	10	10.00	11.41	1.41
10	10	10	15	15	12.50	13.90	1.40
11	10	10	10	10	10.00	10.78	0.78
12	10	10	10	10	10.00	10.83	0.83
13	10	10	10	10	10.00	10.47	0.47
14	10	10	10	10	10.00	11.28	1.28
15	10	10	10	10	10.00	10.96	0.96
					AVG. ABS. DIFF		1.05

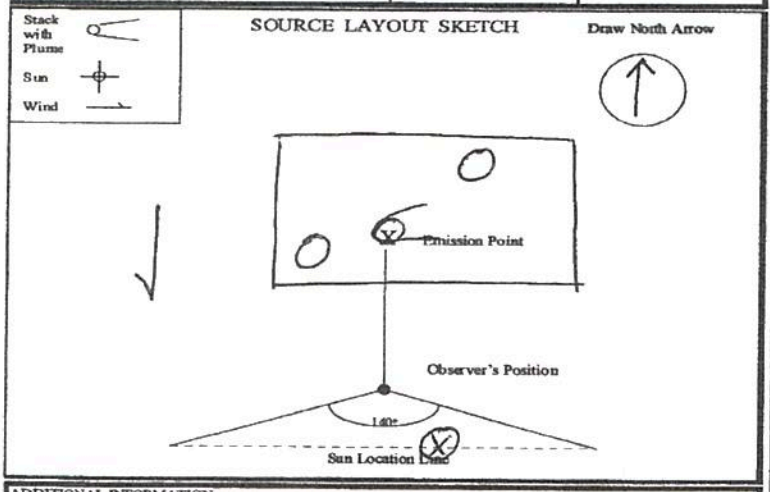
CATALYST AIR MANAGEMENT, INC. AIR QUALITY TESTING SERVICES

VISIBLE EMISSION OBSERVATION FORM

COMPANY NAME	CIGI
STREET ADDRESS	Route 11
CITY	Hawlock Creek
STATE	PA
ZIP	18621
PHONE (KEY CONTACT)	
SOURCE I.D. NUMBER	
PROCESS EQUIPMENT	6 Boiler
OPERATING MODE	Normal
CONTROL EQUIPMENT	ESP
OPERATING MODE	Normal
DESCRIBE EMISSION POINT	Middle of three stacks facing South side of building / smallest of three stacks
HEIGHT ABOVE GROUND LEVEL	150'
HEIGHT RELATIVE TO OBSERVER	Start 150' End 150'
DISTANCE FROM OBSERVER	300
DIRECTION FROM OBSERVER	Start NNW End NNW
DESCRIBE EMISSIONS	Start Coming End Same
EMISSION COLOR	Start Black End Same
IF WATER DROPLET PLUME	Attached NA Detached
POINT IN THE PLUME AT WHICH OPACITY WAS DETERMINED	Start Top of Stack End Top of Stack
DESCRIBE PLUME BACKGROUND	Start Sky End Same
BACKGROUND COLOR	Start Blue End Same
SKY CONDITIONS	Start Cloudy End Same
WIND SPEED	Start 3-5 mph End Same
WIND DIRECTION	Start South End Same
AMBIENT TEMP.	Start 105 End 70
WET BULB TEMP	
RH, percent	

SOURCE LAYOUT SKETCH

Draw North Arrow



ADDITIONAL INFORMATION

Opacity Audit

OBSERVATION DATE	START TIME (CEM time)	END TIME
4-18-07	1030	1044

	0	15	30	45	COMMENTS
1	10	10	10	10	
2	10	10	10	10	
3	10	10	10	10	
4	10	10	10	10	
5	10	10	10	10	
6	10	10	10	10	
7	10	10	10	10	
8	10	10	10	10	
9	10	10	10	10	
10	10	10	10	10	
11	10	10	10	10	
12	10	10	10	10	
13	10	10	10	10	
14	10	10	10	10	
15	10	10	10	10	Run 1 ↑
16	10	10	10	10	1045-1055
17	10	10	10	10	Run 2
18	10	10	10	10	
19	10	10	10	10	
20	10	10	10	10	
21	10	10	10	10	
22	10	10	10	10	
23	10	10	10	10	
24	10	10	10	10	
25	10	10	10	10	
26	10	10	10	10	
27	10	10	10	10	
28	10	10	10	10	
29	10	10	10	10	
30	10	10	10	10	

OBSERVER'S NAME (PRINT)	Jonathan Robinette
OBSERVER'S SIGNATURE	Jonathan Robinette
DATE	4-18-07
ORGANIZATION	Catalyst
CERTIFIED BY	ETA
DATE	2-27-07
CONTINUED ON VEO FORM NUMBER	

CATALYST AIR MANAGEMENT, INC. AIR QUALITY TESTING SERVICES

VISIBLE EMISSION OBSERVATION FORM
(CONTINUED)

COMPANY NAME: UGI	TYPE OF FACILITY: Electric Utility
CITY: Hunlock Creek	EMISSION POINT: Stack
TEST NO.: 3-6 / PAGE 2 OF ___	OBSERVER: Jonathan Robinette

OBSERVATION DATE: 4-18-07 START TIME: 1100 END TIME: 1129

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

START TIME: 1130 END TIME: 1159

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

CATALYST AIR MANAGEMENT, INC. AIR QUALITY TESTING SERVICES

VISIBLE EMISSION OBSERVATION FORM
(CONTINUED)

COMPANY NAME: UGI	TYPE OF FACILITY: Electric Utility
CITY: Hunlock Creek	EMISSION POINT: Stack
TEST NO.: 7-9 / PAGE 3 OF 3	OBSERVER: Jonathan Robinette
OBSERVATION DATE: 4-18-07 / START TIME: 1200 / END TIME: 1214	START TIME: 1239 / END TIME: 1253

	0	15	30	45	COMMENTS	0	15	30	45	COMMENTS
1	10	10	10	10	Run 7	15	10	10	10	Run 9
2	10	10	10	10		10	10	10	10	
3	10	10	10	10		10	10	10	10	
4	10	10	10	10		10	10	10	10	
5	10	10	10	10		10	10	10	10	
6	10	10	10	10		10	10	10	10	
7	10	10	10	10		10	10	10	10	
8	10	10	10	10		10	10	10	10	
9	10	10	10	10		10	10	10	10	
10	10	10	10	10		10	10	15	15	
11	10	10	10	10		10	10	10	10	
12	10	10	10	10		10	10	10	10	
13	10	10	10	10		10	10	10	10	
14	10	10	10	10	↑	10	10	10	10	
15	10	10	10	10		10	10	10	10	
16	10	10	10	10	Run 8					
17	10	10	10	10	1217 - 1231					
18	10	10	10	10						
19	10	10	10	10						
20	10	10	10	10						
21	15	10	10	15						
22	10	15	15	10						
23	15	15	15	15						
24	15	15	15	15						
25	15	15	15	15						
26	15	15	15	15						
27	15	15	15	15						
28	15	15	15	15						
29	15	15	10	15						
30	10	10	15	15						