

Chicago – Mayfair R&P Sequential/Anderson Sequential Comparison

Background

- First prototype FRM received in 1998 was R&P Sequential sampler
- Installed at Chicago-Mayfair which was scheduled to be one of the everyday sampling CORE sites
- Final version FRMs received in 1998 were Anderson Sequential/Single Event samplers
- Installed Anderson Sequential sampler at Chicago-Mayfair since R&P unit was still prototype
- Operational problems with Anderson Sequential samplers in winter/spring 1999 indicated possible positive bias
- Retro-fit (final FRM design) R&P Sequential sampler received in fall 1999
- Re-installed at Chicago-Mayfair collocated with Anderson Sequential sampler and operated by Cook County Department of Environmental Control

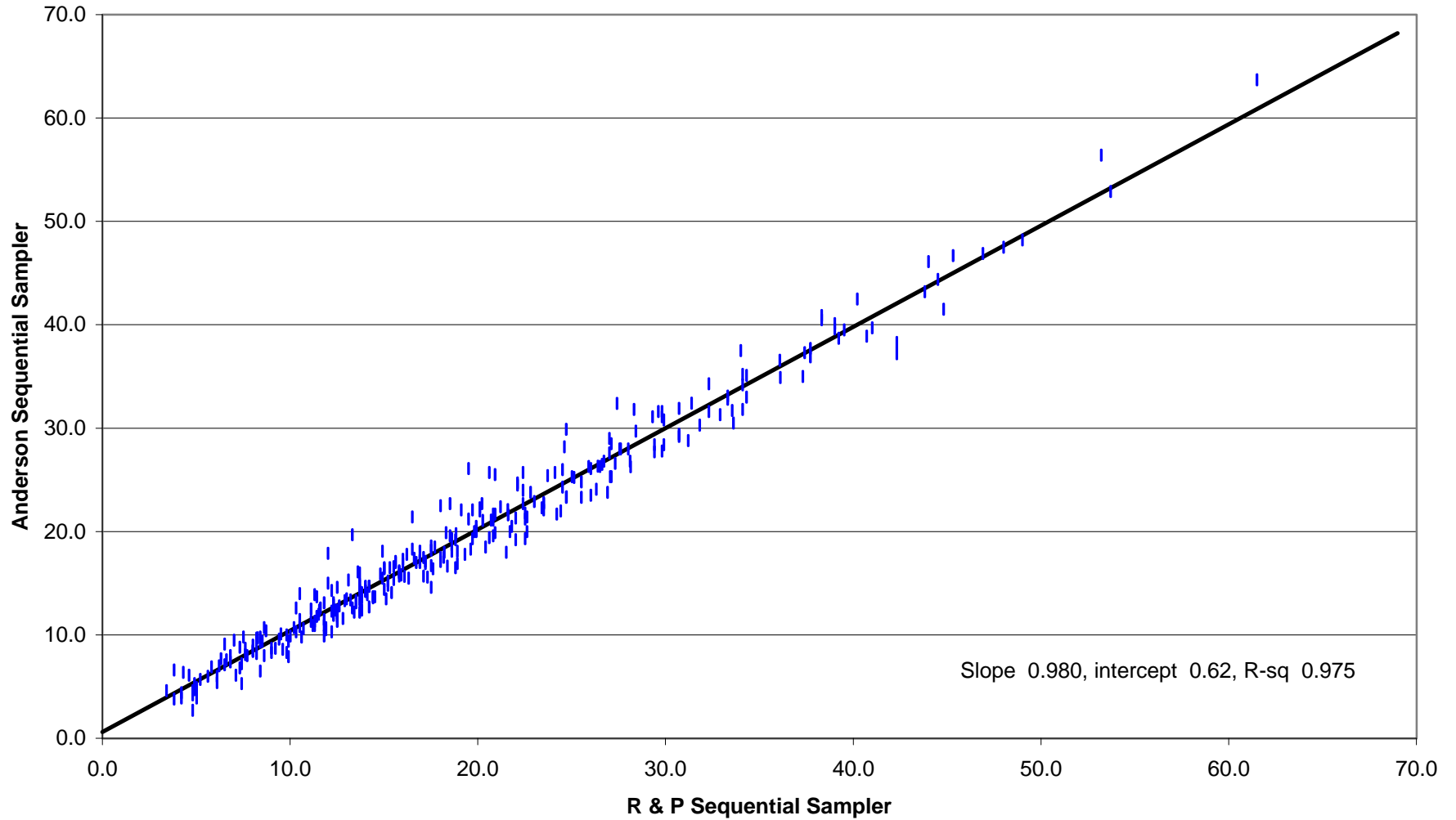
Results

- From October, 1999 through February, 2001 a total of 349 paired samples have been collected
- 14 of those were identified as outliers (greater than 50% difference in samples)
- Average of 335 remaining samples is 19.2 ug/m³ R&P and 19.5 ug/m³ Anderson. Difference in averages not statistically significant
- Linear regression slope 0.980, intercept 0.62 and R-squared 0.975.
- Pivot in the slope is around 30.0 ug/m³, i.e. below 30.0 Anderson values slightly higher than R&P, above 30.0 R&P values slightly higher than Anderson
- Outliers: 9 of the 14 have R&P values significantly lower than Anderson. Use other monitors in area as referee. In most cases referee value closer to Anderson value than R&P. In 3 cases referee was another R&P sampler that was closer to the Anderson

Conclusions

- There is no inherent bias between R&P and Anderson Sequential samplers
- On an every third day schedule there may be as many as 5 or 6 outlier values in a year that do not fit a pattern of other sites

**Comparison of PM2.5 Samplers
Chicago - Mayfair
October, 1999 - February, 2001**



Data With Outliers		
	Chicago-Mayfair	
Date	R & P	Anderson
10/2/1999	10.5	14.0
10/5/1999	13.8	13.6
10/9/1999	42.3	38.3
10/10/1999	21.5	18.0
10/11/1999	12.2	10.3
10/14/1999	9.0	8.3
10/15/1999	17.5	14.6
10/16/1999	28.1	26.8
10/17/1999	6.1	6.0
10/30/1999	30.7	29.2
10/31/1999	42.3	37.2
11/6/1999	12.4	12.4
11/8/1999	22.6	20.0
11/13/1999	41.0	39.7
11/14/1999	7.3	6.8
11/15/1999	8.2	8.2
11/16/1999	10.0	9.9
11/17/1999	16.2	17.8
11/18/1999	16.9	17.2
11/19/1999	20.9	21.7
11/20/1999	26.9	23.8
11/21/1999	39.0	40.1
11/23/1999	19.5	26.1
11/24/1999	22.5	21.2
11/26/1999	27.4	32.4
11/27/1999	13.7	16.0
11/28/1999	11.8	13.1
11/29/1999	11.4	11.8
11/30/1999	14.2	14.7
12/1/1999	19.3	17.8
12/3/1999	17.7	18.5
12/4/1999	26.6	26.5
12/5/1999	6.3	7.7
12/6/1999	12.5	14.6
12/7/1999	22.1	24.7
12/10/1999	14.9	15.5
12/11/1999	14.4	13.7
12/12/1999	22.8	23.8
12/13/1999	34.1	31.8
12/24/1999	21.2	22.4
12/26/1999	7.1	6.1
12/27/1999	10.6	9.8
12/28/1999	14.0	14.2
12/31/1999	18.0	17.1
1/1/2000	26.0	26.1
1/6/2000	24.5	24.3
1/7/2000	22.4	25.7
1/8/2000	16.0	17.3
1/9/2000	26.7	26.8
1/10/2000	15.6	17.0
1/11/2000	12.3	12.9
1/12/2000	11.3	11.3
1/13/2000	14.2	12.7
1/14/2000	20.1	22.3
1/15/2000	20.4	18.5

1/16/2000	11.2	10.9
1/17/2000	13.4	12.2
1/19/2000	29.9	28.4
1/20/2000	20.8	19.6
1/21/2000	33.3	32.8
1/22/2000	37.7	36.9
1/23/2000	19.9	20.1
1/24/2000	24.7	29.9
1/25/2000	16.5	18.3
1/26/2000	13.8	13.9
1/27/2000	17.5	16.7
1/28/2000	29.8	31.1
1/29/2000	15.6	17.1
1/30/2000	39.0	39.6
1/31/2000	34.0	37.5
2/1/2000	24.7	23.4
2/2/2000	33.5	31.7
2/3/2000	27.0	25.3
2/4/2000	18.4	16.7
2/5/2000	18.8	19.8
2/6/2000	36.1	36.6
2/7/2000	27.5	28.0
2/8/2000	31.4	32.4
2/9/2000	39.2	38.7
2/16/2000	15.5	15.4
2/17/2000	25.1	25.2
2/18/2000	18.2	17.5
2/19/2000	21.6	22.1
2/20/2000	26.4	26.3
2/21/2000	28.1	26.3
2/22/2000	20.3	21.1
2/26/2000	8.3	9.7
2/27/2000	4.3	6.4
2/28/2000	16.1	15.7
2/29/2000	11.5	12.4
3/1/2000	10.5	11.5
3/2/2000	11.8	9.9
3/3/2000	12.2	14.3
3/8/2000	23.4	22.3
3/16/2000	9.0	8.7
3/17/2000	7.5	9.8
3/18/2000	16.9	17.0
3/19/2000	19.9	20.5
3/20/2000	19.9	20.0
3/21/2000	40.7	38.9
3/22/2000	44.0	46.1
3/23/2000	49.0	48.2
3/24/2000	33.6	30.5
3/26/2000	8.0	9.0
3/29/2000	8.6	10.7
3/30/2000	19.6	18.3
3/31/2000	30.7	29.4
4/1/2000	27.1	28.5
4/2/2000	38.3	40.5
4/3/2000	31.2	28.8
4/4/2000	6.5	7.1
4/5/2000	17.2	17.1
4/8/2000	7.0	9.5

4/9/2000	12.0	15.0
4/10/2000	9.5	10.1
4/11/2000	16.9	18.1
4/12/2000	18.9	16.9
4/13/2000	20.6	25.7
4/14/2000	22.1	24.5
4/15/2000	23.5	22.1
4/16/2000	13.6	16.1
4/17/2000	17.6	16.4
4/18/2000	32.3	34.3
4/19/2000	45.3	46.7
4/20/2000	25.5	23.3
4/22/2000	17.5	18.2
4/23/2000	13.7	13.4
4/24/2000	11.9	10.5
4/25/2000	16.7	17.0
4/26/2000	11.1	12.5
4/27/2000	22.4	24.0
4/28/2000	13.7	14.9
4/29/2000	5.2	5.7
4/30/2000	13.1	15.3
5/2/2000	12.5	12.4
5/4/2000	15.9	15.8
5/5/2000	17.5	18.6
5/6/2000	13.2	13.4
5/7/2000	14.2	14.7
5/8/2000	24.7	23.3
5/9/2000	8.4	9.3
5/10/2000	8.6	8.0
5/11/2000	26.0	23.5
5/12/2000	20.9	25.5
5/13/2000	5.0	4.9
5/15/2000	12.0	17.9
5/17/2000	38.3	40.9
5/18/2000	14.5	13.7
5/19/2000	6.6	7.6
5/20/2000	8.2	9.7
5/21/2000	18.2	18.0
5/22/2000	17.1	15.7
5/24/2000	11.1	11.3
5/25/2000	8.2	9.1
5/26/2000	18.5	19.6
5/27/2000	23.7	25.4
6/1/2000	23.5	22.8
6/3/2000	4.8	2.7
6/5/2000	8.0	8.4
6/6/2000	9.9	9.4
6/13/2000	11.4	13.7
5/15/2000	8.4	9.8
6/16/2000	8.0	8.5
6/17/2000	4.2	3.9
6/18/2000	5.6	6.0
6/19/2000	15.0	16.5
6/20/2000	17.1	17.5
6/21/2000	6.8	7.4
6/22/2000	7.4	7.2
6/23/2000	16.6	17.4
6/24/2000	8.7	10.4

6/25/2000	15.8	16.2
6/26/2000	9.4	9.6
6/27/2000	7.6	8.7
6/28/2000	12.9	13.3
6/29/2000	11.8	10.9
6/30/2000	13.7	14.3
7/1/2000	18.3	19.9
7/2/2000	25.5	24.8
7/3/2000	11.6	12.6
7/4/2000	14.8	15.9
7/5/2000	15.5	16.6
7/6/2000	16.0	16.9
7/10/2000	10.7	10.6
7/11/2000	13.8	14.1
7/13/2000	14.9	18.1
7/16/2000	14.1	13.9
7/17/2000	13.8	12.4
7/18/2000	4.9	5.3
7/20/2000	10.5	10.8
7/21/2000	6.5	9.1
7/22/2000	5.8	6.9
7/23/2000	4.6	6.1
7/24/2000	11.5	12.0
7/25/2000	21.6	21.6
7/26/2000	25.9	26.3
7/27/2000	34.3	33.0
7/28/2000	20.7	21.1
7/29/2000	18.6	19.3
7/30/2000	25.0	25.3
7/31/2000	18.0	17.5
8/1/2000	15.2	15.2
8/2/2000	12.2	12.3
8/3/2000	3.8	3.8
8/4/2000	9.6	8.6
8/5/2000	18.6	18.1
8/6/2000	23.0	22.9
8/7/2000	12.6	12.8
8/8/2000	10.3	10.3
8/9/2000	13.5	13.1
8/10/2000	12.3	13.1
8/11/2000	12.5	11.8
8/12/2000	13.3	12.6
8/13/2000	14.0	14.3
8/14/2000	29.4	28.4
8/15/2000	27.0	29.0
8/16/2000	6.8	8.0
8/17/2000	14.4	13.6
8/18/2000	9.8	8.3
8/19/2000	7.4	5.3
8/20/2000	9.2	8.7
8/21/2000	22.0	21.3
8/22/2000	29.8	27.8
8/23/2000	29.4	27.7
8/24/2000	22.5	19.3
8/25/2000	27.1	25.3
8/26/2000	33.3	33.1
8/27/2000	16.3	15.5
8/28/2000	26.3	24.1

8/29/2000	37.3	35.0
8/30/2000	44.5	44.4
8/31/2000	36.1	34.9
9/1/2000	32.9	31.3
9/2/2000	17.3	15.6
9/3/2000	18.8	16.5
9/4/2000	4.8	4.2
9/5/2000	5.0	3.9
9/6/2000	12.3	11.9
9/13/2000	14.4	13.7
9/14/2000	9.9	7.9
9/15/2000	4.9	4.7
9/16/2000	6.2	7.0
9/17/2000	11.3	10.9
9/18/2000	21.8	20.5
9/19/2000	18.9	18.1
9/27/2000	10.2	10.7
9/28/2000	7.3	8.8
9/29/2000	12.8	11.6
10/3/2000	15.4	14.1
10/4/2000	6.1	5.4
10/5/2000	7.6	8.1
10/6/2000	7.7	8.0
10/7/2000	3.8	6.6
10/8/2000	3.4	4.6
10/9/2000	10.3	12.6
10/11/2000	16.5	21.4
10/12/2000	18.5	22.7
10/13/2000	19.7	19.3
10/14/2000	20.6	19.4
10/15/2000	11.8	11.5
10/16/2000	13.7	14.8
10/17/2000	22.4	22.7
10/18/2000	23.5	22.7
10/19/2000	15.8	15.7
10/21/2000	15.8	16.1
10/22/2000	29.8	31.6
10/23/2000	61.5	63.7
10/24/2000	34.1	34.2
10/25/2000	30.7	31.9
10/26/2000	43.8	43.2
10/27/2000	18.6	18.7
10/28/2000	4.8	4.6
10/29/2000	11.3	13.9
10/30/2000	13.3	19.7
10/31/2000	15.0	16.4
11/1/2000	19.8	20.0
11/2/2000	22.6	21.4
11/7/2000	13.7	12.2
11/8/2000	12.5	11.3
11/9/2000	8.5	9.4
11/10/2000	19.1	22.1
11/11/2000	17.2	16.9
11/12/2000	15.3	16.5
11/17/2000	15.2	14.8
11/18/2000	15.8	16.0
11/19/2000	11.9	10.7
11/20/2000	12.5	12.1

11/23/2000	18.0	22.5
11/24/2000	24.6	28.2
11/27/2000	44.8	41.5
11/28/2000	22.5	21.8
11/29/2000	24.2	21.7
11/30/2000	22.0	19.2
12/1/2000	4.2	4.4
12/2/2000	15.0	14.4
12/3/2000	21.7	20.0
12/5/2000	8.4	6.5
12/6/2000	20.9	19.9
12/14/2000	34.3	35.1
1/4/2001	27.0	27.6
1/5/2001	15.1	13.5
1/9/2001	24.5	26.0
1/10/2001	28.4	29.7
1/11/2001	40.2	42.5
1/12/2001	46.9	46.9
1/13/2001	37.7	37.7
1/14/2001	28.0	28.0
1/15/2001	18.8	19.2
1/16/2001	28.3	31.8
1/17/2001	32.3	31.6
1/20/2001	13.5	13.3
1/21/2001	29.9	30.8
1/22/2001	53.2	56.4
1/23/2001	53.7	52.9
1/24/2001	24.4	22.0
1/25/2001	20.2	22.7
1/26/2001	26.5	26.3
1/27/2001	13.0	13.5
1/28/2001	24.1	25.7
1/29/2001	31.8	30.3
1/30/2001	20.8	21.1
1/31/2001	29.3	31.1
2/1/2001	27.3	26.6
2/2/2001	20.1	22.0
2/3/2001	19.5	21.2
2/4/2001	27.6	28.0
2/5/2001	37.4	37.3
2/6/2001	34.1	35.2
2/7/2001	48.0	47.5
2/8/2001	39.5	39.5
2/9/2001	14.0	14.7
2/23/2001	20.8	21.7
2/24/2001	29.6	31.6
2/25/2001	9.8	10.0
2/26/2001	19.7	22.1
Average	19.2	19.5
Number	335	335
Slope	0.980	
Int	0.619	
R-sq	0.974	
St Dev	10.388	10.315
"t"	0.291	
Max	61.5	63.7
Min	3.4	2.7

Linear Regression		
0.6		0
68.2		69

Data Without Outliers			
	Chicago-Mayfair		Northbrook
Date	R & P	Anderson	
10/2/1999	10.5	14.0	
10/5/1999	13.8	13.6	
10/7/1999	9.5	18.3	14.2*
10/9/1999	42.3	38.3	
10/10/1999	21.5	18.0	
10/11/1999	12.2	10.3	
10/14/1999	9.0	8.3	
10/15/1999	17.5	14.6	
10/16/1999	28.1	26.8	
10/17/1999	6.1	6.0	
10/30/1999	30.7	29.2	
10/31/1999	42.3	37.2	
11/5/1999	9.5	23.4	17.4*
11/6/1999	12.4	12.4	
11/8/1999	22.6	20.0	
11/13/1999	41.0	39.7	
11/14/1999	7.3	6.8	
11/15/1999	8.2	8.2	
11/16/1999	10.0	9.9	
11/17/1999	16.2	17.8	
11/18/1999	16.9	17.2	
11/19/1999	20.9	21.7	
11/20/1999	26.9	23.8	
11/21/1999	39.0	40.1	
11/22/1999	16.9	36.6	30.3*
11/23/1999	19.5	26.1	19.2
11/24/1999	22.5	21.2	
11/26/1999	27.4	32.4	
11/27/1999	13.7	16.0	
11/28/1999	11.8	13.1	
11/29/1999	11.4	11.8	
11/30/1999	14.2	14.7	
12/1/1999	19.3	17.8	
12/3/1999	17.7	18.5	
12/4/1999	26.6	26.5	
12/5/1999	6.3	7.7	
12/6/1999	12.5	14.6	
12/7/1999	22.1	24.7	
12/10/1999	14.9	15.5	
12/11/1999	14.4	13.7	
12/12/1999	22.8	23.8	
12/13/1999	34.1	31.8	
12/24/1999	21.2	22.4	
12/25/1999	8.2	29.4	25.3*
12/26/1999	7.1	6.1	
12/27/1999	10.6	9.8	
12/28/1999	14.0	14.2	
12/31/1999	18.0	17.1	
1/1/2000	26.0	26.1	
1/2/2000	12.1	30.0	31.2 (SE)
1/6/2000	24.5	24.3	
1/7/2000	22.4	25.7	

1/8/2000	16.0	17.3
1/9/2000	26.7	26.8
1/10/2000	15.6	17.0
1/11/2000	12.3	12.9
1/12/2000	11.3	11.3
1/13/2000	14.2	12.7
1/14/2000	20.1	22.3
1/15/2000	20.4	18.5
1/16/2000	11.2	10.9
1/17/2000	13.4	12.2
1/19/2000	29.9	28.4
1/20/2000	20.8	19.6
1/21/2000	33.3	32.8
1/22/2000	37.7	36.9
1/23/2000	19.9	20.1
1/24/2000	24.7	29.9
1/25/2000	16.5	18.3
1/26/2000	13.8	13.9
1/27/2000	17.5	16.7
1/28/2000	29.8	31.1
1/29/2000	15.6	17.1
1/30/2000	39.0	39.6
1/31/2000	34.0	37.5
2/1/2000	24.7	23.4
2/2/2000	33.5	31.7
2/3/2000	27.0	25.3
2/4/2000	18.4	16.7
2/5/2000	18.8	19.8
2/6/2000	36.1	36.6
2/7/2000	27.5	28.0
2/8/2000	31.4	32.4
2/9/2000	39.2	38.7
2/16/2000	15.5	15.4
2/17/2000	25.1	25.2
2/18/2000	18.2	17.5
2/19/2000	21.6	22.1
2/20/2000	26.4	26.3
2/21/2000	28.1	26.3
2/22/2000	20.3	21.1
2/26/2000	8.3	9.7
2/27/2000	4.3	6.4
2/28/2000	16.1	15.7
2/29/2000	11.5	12.4
3/1/2000	10.5	11.5
3/2/2000	11.8	9.9
3/3/2000	12.2	14.3
3/8/2000	23.4	22.3
3/16/2000	9.0	8.7
3/17/2000	7.5	9.8
3/18/2000	16.9	17.0
3/19/2000	19.9	20.5
3/20/2000	19.9	20.0
3/21/2000	40.7	38.9
3/22/2000	44.0	46.1
3/23/2000	49.0	48.2

3/24/2000	33.6	30.5	
3/26/2000	8.0	9.0	
3/29/2000	8.6	10.7	
3/30/2000	19.6	18.3	
3/31/2000	30.7	29.4	
4/1/2000	27.1	28.5	
4/2/2000	38.3	40.5	
4/3/2000	31.2	28.8	
4/4/2000	6.5	7.1	
4/5/2000	17.2	17.1	
4/8/2000	7.0	9.5	
4/9/2000	12.0	15.0	
4/10/2000	9.5	10.1	
4/11/2000	16.9	18.1	
4/12/2000	18.9	16.9	
4/13/2000	20.6	25.7	
4/14/2000	22.1	24.5	
4/15/2000	23.5	22.1	
4/16/2000	13.6	16.1	
4/17/2000	17.6	16.4	
4/18/2000	32.3	34.3	
4/19/2000	45.3	46.7	
4/20/2000	25.5	23.3	
4/21/2000	11.3	23.5	6*
4/22/2000	17.5	18.2	
4/23/2000	13.7	13.4	
4/24/2000	11.9	10.5	
4/25/2000	16.7	17.0	
4/26/2000	11.1	12.5	
4/27/2000	22.4	24.0	
4/28/2000	13.7	14.9	
4/29/2000	5.2	5.7	
4/30/2000	13.1	15.3	
5/2/2000	12.5	12.4	
5/4/2000	15.9	15.8	
5/5/2000	17.5	18.6	
5/6/2000	13.2	13.4	
5/7/2000	14.2	14.7	
5/8/2000	24.7	23.3	
5/9/2000	8.4	9.3	
5/10/2000	8.6	8.0	
5/11/2000	26.0	23.5	
5/12/2000	20.9	25.5	
5/13/2000	5.0	4.9	
5/15/2000	12.0	17.9	
5/17/2000	38.3	40.9	
5/18/2000	14.5	13.7	
5/19/2000	6.6	7.6	
5/20/2000	8.2	9.7	
5/21/2000	18.2	18.0	
5/22/2000	17.1	15.7	
5/24/2000	11.1	11.3	
5/25/2000	8.2	9.1	
5/26/2000	18.5	19.6	
5/27/2000	23.7	25.4	

6/1/2000	23.5	22.8	
6/2/2000	27.8	10.3	6.7*
6/3/2000	4.8	2.7	
6/5/2000	8.0	8.4	
6/6/2000	9.9	9.4	
6/13/2000	11.4	13.7	
5/15/2000	8.4	9.8	
6/16/2000	8.0	8.5	
6/17/2000	4.2	3.9	
6/18/2000	5.6	6.0	
6/19/2000	15.0	16.5	
6/20/2000	17.1	17.5	
6/21/2000	6.8	7.4	
6/22/2000	7.4	7.2	
6/23/2000	16.6	17.4	
6/24/2000	8.7	10.4	
6/25/2000	15.8	16.2	
6/26/2000	9.4	9.6	
6/27/2000	7.6	8.7	
6/28/2000	12.9	13.3	
6/29/2000	11.8	10.9	
6/30/2000	13.7	14.3	
7/1/2000	18.3	19.9	
7/2/2000	25.5	24.8	
7/3/2000	11.6	12.6	
7/4/2000	14.8	15.9	
7/5/2000	15.5	16.6	
7/6/2000	16.0	16.9	
7/8/2000	6.5	18.3	16.5*
7/10/2000	10.7	10.6	
7/11/2000	13.8	14.1	
7/13/2000	14.9	18.1	
7/16/2000	14.1	13.9	
7/17/2000	13.8	12.4	
7/18/2000	4.9	5.3	
7/20/2000	10.5	10.8	
7/21/2000	6.5	9.1	
7/22/2000	5.8	6.9	
7/23/2000	4.6	6.1	
7/24/2000	11.5	12.0	
7/25/2000	21.6	21.6	
7/26/2000	25.9	26.3	
7/27/2000	34.3	33.0	
7/28/2000	20.7	21.1	
7/29/2000	18.6	19.3	
7/30/2000	25.0	25.3	
7/31/2000	18.0	17.5	
8/1/2000	15.2	15.2	
8/2/2000	12.2	12.3	
8/3/2000	3.8	3.8	
8/4/2000	9.6	8.6	
8/5/2000	18.6	18.1	
8/6/2000	23.0	22.9	
8/7/2000	12.6	12.8	
8/8/2000	10.3	10.3	

8/9/2000	13.5	13.1	
8/10/2000	12.3	13.1	
8/11/2000	12.5	11.8	
8/12/2000	13.3	12.6	
8/13/2000	14.0	14.3	
8/14/2000	29.4	28.4	
8/15/2000	27.0	29.0	
8/16/2000	6.8	8.0	
8/17/2000	14.4	13.6	
8/18/2000	9.8	8.3	
8/19/2000	7.4	5.3	
8/20/2000	9.2	8.7	
8/21/2000	22.0	21.3	
8/22/2000	29.8	27.8	
8/23/2000	29.4	27.7	
8/24/2000	22.5	19.3	
8/25/2000	27.1	25.3	
8/26/2000	33.3	33.1	
8/27/2000	16.3	15.5	
8/28/2000	26.3	24.1	
8/29/2000	37.3	35.0	
8/30/2000	44.5	44.4	
8/31/2000	36.1	34.9	
9/1/2000	32.9	31.3	
9/2/2000	17.3	15.6	
9/3/2000	18.8	16.5	
9/4/2000	4.8	4.2	
9/5/2000	5.0	3.9	
9/6/2000	12.3	11.9	
9/13/2000	14.4	13.7	
9/14/2000	9.9	7.9	
9/15/2000	4.9	4.7	
9/16/2000	6.2	7.0	
9/17/2000	11.3	10.9	
9/18/2000	21.8	20.5	
9/19/2000	18.9	18.1	
9/27/2000	10.2	10.7	
9/28/2000	7.3	8.8	
9/29/2000	12.8	11.6	
10/2/2000	9.4	17.6	16*
10/3/2000	15.4	14.1	
10/4/2000	6.1	5.4	
10/5/2000	7.6	8.1	
10/6/2000	7.7	8.0	
10/7/2000	3.8	6.6	
10/8/2000	3.4	4.6	
10/9/2000	10.3	12.6	
10/10/2000	11.1	17.4	*
10/11/2000	16.5	21.4	
10/12/2000	18.5	22.7	
10/13/2000	19.7	19.3	
10/14/2000	20.6	19.4	
10/15/2000	11.8	11.5	
10/16/2000	13.7	14.8	
10/17/2000	22.4	22.7	

10/18/2000	23.5	22.7	
10/19/2000	15.8	15.7	
10/21/2000	15.8	16.1	
10/22/2000	29.8	31.6	
10/23/2000	61.5	63.7	
10/24/2000	34.1	34.2	
10/25/2000	30.7	31.9	
10/26/2000	43.8	43.2	
10/27/2000	18.6	18.7	
10/28/2000	4.8	4.6	
10/29/2000	11.3	13.9	
10/30/2000	13.3	19.7	
10/31/2000	15.0	16.4	
11/1/2000	19.8	20.0	
11/2/2000	22.6	21.4	
11/7/2000	13.7	12.2	
11/8/2000	12.5	11.3	
11/9/2000	8.5	9.4	
11/10/2000	19.1	22.1	
11/11/2000	17.2	16.9	
11/12/2000	15.3	16.5	
11/16/2000	20.8	13.5	16.2*
11/17/2000	15.2	14.8	
11/18/2000	15.8	16.0	
11/19/2000	11.9	10.7	
11/20/2000	12.5	12.1	
11/23/2000	18.0	22.5	
11/24/2000	24.6	28.2	
11/26/2000	30.0	18.6	20*
11/27/2000	44.8	41.5	
11/28/2000	22.5	21.8	
11/29/2000	24.2	21.7	
11/30/2000	22.0	19.2	
12/1/2000	4.2	4.4	
12/2/2000	15.0	14.4	
12/3/2000	21.7	20.0	
12/5/2000	8.4	6.5	
12/6/2000	20.9	19.9	
12/14/2000	34.3	35.1	
1/2/2001	33.0	18.9	19.7*
1/4/2001	27.0	27.6	
1/5/2001	15.1	13.5	
1/9/2001	24.5	26.0	
1/10/2001	28.4	29.7	
1/11/2001	40.2	42.5	
1/12/2001	46.9	46.9	
1/13/2001	37.7	37.7	
1/14/2001	28.0	28.0	
1/15/2001	18.8	19.2	
1/16/2001	28.3	31.8	
1/17/2001	32.3	31.6	
1/19/2001	39.0	19.2	15.5*
1/20/2001	13.5	13.3	
1/21/2001	29.9	30.8	
1/22/2001	53.2	56.4	

1/23/2001	53.7	52.9	
1/24/2001	24.4	22.0	
1/25/2001	20.2	22.7	
1/26/2001	26.5	26.3	
1/27/2001	13.0	13.5	
1/28/2001	24.1	25.7	
1/29/2001	31.8	30.3	
1/30/2001	20.8	21.1	
1/31/2001	29.3	31.1	
2/1/2001	27.3	26.6	
2/2/2001	20.1	22.0	
2/3/2001	19.5	21.2	
2/4/2001	27.6	28.0	
2/5/2001	37.4	37.3	
2/6/2001	34.1	35.2	
2/7/2001	48.0	47.5	
2/8/2001	39.5	39.5	
2/9/2001	14.0	14.7	
2/23/2001	20.8	21.7	
2/24/2001	29.6	31.6	
2/25/2001	9.8	10.0	
2/26/2001	19.7	22.1	
Average	19.2	19.5	
Number	349	349	
R-sq	0.900		

Chicago - Mayfair PM2.5
Outlier Datapoint Comparison

Date	R&P	Anderson	Referee	%Difference
10/7/1999	9.5	18.3	14.2	-92.6%
11/5/1999	9.5	23.4	17.4	-146.3%
11/22/1999	16.9	36.6	30.3	-116.6%
12/25/1999	8.2	29.4	25.3	-258.5%
1/2/2000	12.1	30.0	31.2	-147.9%
4/21/2000	11.3	23.5	6.0	-108.0%
6/2/2000	27.8	10.3	6.7	-169.9%
7/8/2000	6.5	18.3	17.0*	-181.5%
10/2/2000	9.4	17.6	16.0	-87.2%
10/10/2000	11.1	17.4	-	-56.8%
11/16/2000	20.8	13.5	16.2	-54.1%
11/26/2000	30.0	18.6	20.5*	-61.3%
1/2/2001	33.0	18.9	19.7	-74.6%
1/19/2001	39.0	19.2	16.5*	-103.1%

* - comparison from Des Plaines R&P sampler