

Indeck Energy Alexandria REC Summary
2010

	NOx lb/mmbtu Average	NOx Mass (tons)	CO Mass (tons)	Wood Chips Burned (Tons)	Total Heat Input (MMBTU)
By Month					
January	0.069	6.136	30.829	16357.9	147221.1
February	0.081	3.8115	19.734	10009	90081.0
March	0.072	4.93	22.463	14681.2	132130.8
April	0.069	4.6	16.1	14530.0	130770.0
May	0.073	4.9	13.0	15322.0	137898.0
June	0.079	6.24	18.86	15221.5	136933.5
July	0.088	9.7	17.9	22574.0	203166.0
August	0.165	16.1	16.4	21085.1	189765.9
September	0.18	11.3	9.1	12339.9	111059.1
October	0.064	4.2	22.0	12616.4	113547.6
November	0.062	5.7	20.6	17141.7	154275.3
December	0.064	6.1	22.13	18419.7	165777.3
By Qtr	Average	Total	Total	Total	
1st	0.074	14.4	73.0	41048.100	
2nd	0.074	15.7	47.9	45073.500	
3rd	0.144	37.0	43.4	55999.000	
4th	0.063	16.0	64.7	48177.800	

Emission Factors	from AP-42 (lbs/mmbtu)	From testing (lb/mmbtu)
PM		0.01
SO2	0.0000035	0.006
Hg	195	
CO2	0.017	
VOC	4500	
Wood heat value	btu/lb	

Emissions in pounds per month

	Jan	Feb	Mar	April	May	June	July	August	September	October	November	December
PM	1472.2	900.81	1321.3	1307.7	1379.0	1369.9	2031.7	1897.7	1110.6	1135.5	1542.8	1657.8
SO2	883.3	540.486	792.8	784.6	827.4	822.0	1219.0	1138.6	666.4	681.3	925.7	994.7
Hg	0.5	0.3152835	0.5	0.5	0.5	0.5	0.7	0.7	0.4	0.4	0.5	0.6
CO2	28708114.5	17565795	25765506.0	25500150.0	26890110.0	26713732.5	39617370.0	37004350.5	21656524.5	22141782.0	30083683.5	32326573.5
VOC	2502.8	1531.377	2246.2	2223.1	2344.3	2328.9	3453.8	3226.0	1888.0	1930.3	2622.7	2818.2
NOx	12272	7623	9860	9120.0	9877.4	12481.0	19301.0	32160.0	22520	8340	11460	12193.8
CO	61658	39468	44926	32200	25907.0	37729.0	35761.0	32760.0	18280	43960	41190	44268

2. SUMMARY OF RESULTS

**TABLE 2-1
RELATIVE ACCURACY RESULTS**

RATA TEST DATA				RELATIVE ACCURACY		
Parameter	Average RM Value	Average Plant Value	Mean Difference	Actual (%)	Limit (%)	Result
CO ₂ (%wv)	10.90	11.63	0.73 (0.89 w/cc)	8.1 % RM	1 % ABS. DIFF.	PASS
CO (LB/HR)	64.0	61.2	2.8	8.4 % RM	20 RM 10 STD	PASS
NO _x (LB/MMBtu)	0.061	0.064	0.003	6.2 % RM	20 RM 10 STD	PASS
NO _x (LB/HR)	15.1	16.7	1.6	11.3 % RM	20 RM 10 STD	PASS
NH ₃ (PPM @ 11.3 % CO ₂)	3.0	1.5	1.5	9.1 % STD	20 RM 10 STD + 4 PPM	PASS
NO _x (PPMwv)	30.4	34.4	4.0	14.5 % RM	Informational only	N/A
CO (PPMwv)	211	203	8	5.2 % RM	Informational only	N/A
CO (LB/MMBtu)	0.262	0.234	0.028	11.8 % RM	Informational only	N/A
FLOW (WSCFM)	69130	67733	1397	3.4 % RM	Informational only	N/A

Note: RM is the relative accuracy calculated using the Reference Method
 STD is the relative accuracy calculated using the emission standard
 ABS. DIFF is the absolute mean difference in concentration

**TABLE 2-2
PARTICULATE AND AMMONIA RESULTS**

Run #	TIME	PM lb/MMBtu	PM lb/hr
1	0910-1017	0.002	0.54
2	1040-1147	0.002	0.54
3	1202-1308	0.002	0.44
Avg.		0.002	0.51
Limit		0.03	-
Result		Pass	