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NCASI MACT III STUDY

DRAFT REPORT

WMU-II PILOT-SCALE PAPER MACHINE

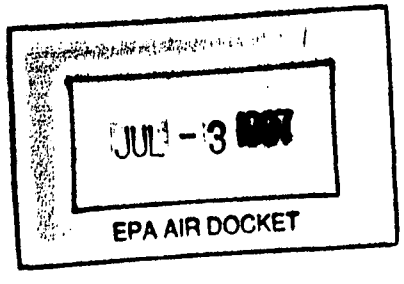


TABLE OF CONTENTS

1.0 Introduction

1.1 Background

From the early stages of the MACT III study planning, two studies were envisioned at the Western Michigan University (WMU) pilot-scale paper machine. The primary objective of the first study was to determine if the WMU pilot-scale machine could be used to determine the fate of 'hazardous air pollutant' (HAP) constitutents of full-scale paper machine additives. The primary means for doing this was to compare the methanol emissions versus white water concentration curves from the pilot-scale machine study to the similar curve obtained from the MACT I study of five full-scale machines. This comparison showed that the slope of the curve from the full-scale machines was about twice that from the pilot-scale machine. Analysis of the data indicated that a potential reason for this difference was that the full-scale machine white water temperatures were in the range of 130°F, whereas the pilot-scale machine white water temperature was about 68°F. Thus, the primary objective of the second pilot-scale paper machine study was to generate the methanol emissions versus white water concentration curve at a hotter white water temperature, similar to the full-scale temperature range.

Additional goals of the second pilot-scale machine study were: (1) determine material balances for nine HAP compounds at an elevated white water temperature, (2) determine the relationships between air emissions and white water concentrations for these compounds, and (3) determine the potential for methanol generation in the dryer section from 100% groundwood and 50% groundwood/50% OCC sheets.

1.2 Study Description

Nine HAP compounds were added to the white water system, either in various mixtures or individually. These compounds or mixtures of compounds were added at a known rate and, for most of the compounds, the amounts of these HAPs leaving the machine through the vent emissions and the white water system overflow were measured. In addition, the paper produced by the machine was analyzed for some of the compounds. The results were then used to determine the overall material balances and relationships between air emissions and white water concentrations.

In runs A and B, acetaldehyde, methyl ethyl ketone, methanol, methylene chloride, 2-butoxyethanol, 1,2-dimethoxyethane, ethylene glycol, and naphthalene were added to the white water system. In runs C-L, all of the above compounds were added except for naphthalene which was discontinued due to several problems associated with its presence in the spike solution. In runs M-P, the only chemical added was diethanolamine. These last four runs were conducted to determine the material balance around the machine for diethanolamine and to determine if methanol was being generated in the dryer section from the thermal hydrolysis of lignin in groundwood and groundwood/OCC pulp mixes.

Of the compounds used in this study, acetaldehyde, methanol, methyl ethyl ketone, methylene chloride, 1-2,dimethoxyethane, and 2-butoxyethanol were also used in the first pilot-scale paper machine study. With the exception of 2-butoxyethanol, they were included in this study primarily so that the air emissions versus white water concentration curves obtained a higher white water temperature could be compared to those obtained from the first pilot-scale paper machine study. 2-butoxyethanol was used in this study to determine if its material balance could be improved by analyzing the paper product. Naphthalene was added to the spike mixture for the first two runs, although the initial plan had been to add it to runs A-L. The use of naphthalene was attempted because it was believed to be a representative semi-volatile compound that may be present in machine process water. Ethylene glycol and diethanolamine were used because a Chemical Manufacture's Association survey indicated that they are commonly used in paper machine additives. Ethylene glycol was included in the chemical mixture used for runs A-L. Because of analysis method concerns, diethanolamine was added by itself to runs M-P. The relevant physical properties of the spike compounds are presented in Table 1.

The approximate spike levels in the white water system based on a zero volatilization rate are shown in Table 2. Since some volatilization should occur for most of these compounds, the actual white water concentration was lower. These levels were chosen to yield as much information as possible at low concentrations where most white water concentrations for non-chemical mill paper machines are expected to be, and still provide enough information for methanol at high concentrations to allow comparison to the chemical pulp mill paper machine data obtained in the MACT I study.

Figure 1 is a flow diagram showing the system for adding spike solution to the white water. The spike solution was contained in a 10L fluorinated high-density polyethylene carboy with a fluorinated polypropylene screw cap. For storage, a solid cap was used and the carboy was refrigerated. During use, a cap fitted with two openings was used, and the carboy was kept in an ice water bath. Check valves were used on both the suction and discharge ends of the Teflon transfer lines. A Teflon and alumina-ceramic piston metering pump was used to deliver from 2 mL/min to 30 mL/min of spike solution. For all spike levels, an undiluted mixture of the spike chemicals was used, except for the runs in which diethanolamine was the only spike compounds.

TABLE 1 SPIKE COMPOUND PHYSICAL PARAMETERS

ANALYTE	CAS NO.	MW (g/mole)	DENSITY (kg/L)	BP (C)	PHASE AT 20°C	VP mm Hg @ 25C	H_2O SOL. (g/L @ C)	SOLUBILITY
acetaldehyde	75-07-0	44.05	0.783	21	liquid	952	33.0/25	w,al,eth,ace,bz
methyl ethyl ketone	78-93-3	72.12	0.805	80	liquid	77.5	>100/19	w,al,eth,ace,bz
methanol	67-56-1	32	0.791	65	liquid	92	>100/21	w,al,eth,ace,bz,chl
methylene chloride	75-09-2	84.9	1.320	40	liquid	349	10-50/21	w,al,eth
2-butoxyethanol	111-76-2	118.18	0.903	171	liquid	0.8	soluble	w,al,eth
1,2-dimethoxyethane	110-71-4	90.12	0.867	85	liquid	40	soluble	w,al,eth,ace,bz
Naphthalene	91-20-3	128.16	1.162	218	solid	0.05	<1/22	al,eth,ace,bz
Ethylene Glycol	107-21-1	62.07	1.114	198	liquid	0.06	soluble	al, ace
Diethanolamine	111-42-2	105.1	1.088	269	liquid	0.01	soluble	al, ace, eth

TABLE 2 WMU-II STUDY APPROXIMATE SPIKE LEVELS

RUN	SPIKE LEVEL, mg/L			
	Naphthalene	Diethanolamine	Methanol	2-Butoxyethanol, 1,2-Dimethoxyethane, Acetaldehyde, MEK, Methylene Chloride, Ethylene Glycol
A	2		2	2
B	4		4	4
C			8	8
D			12	12
E			17	17
F			26	26
G			35	35
H			50	50
I			75	3
J			150	8
K			225	11
L			300	15
M		150		
N		113		
O		60		
P		20		

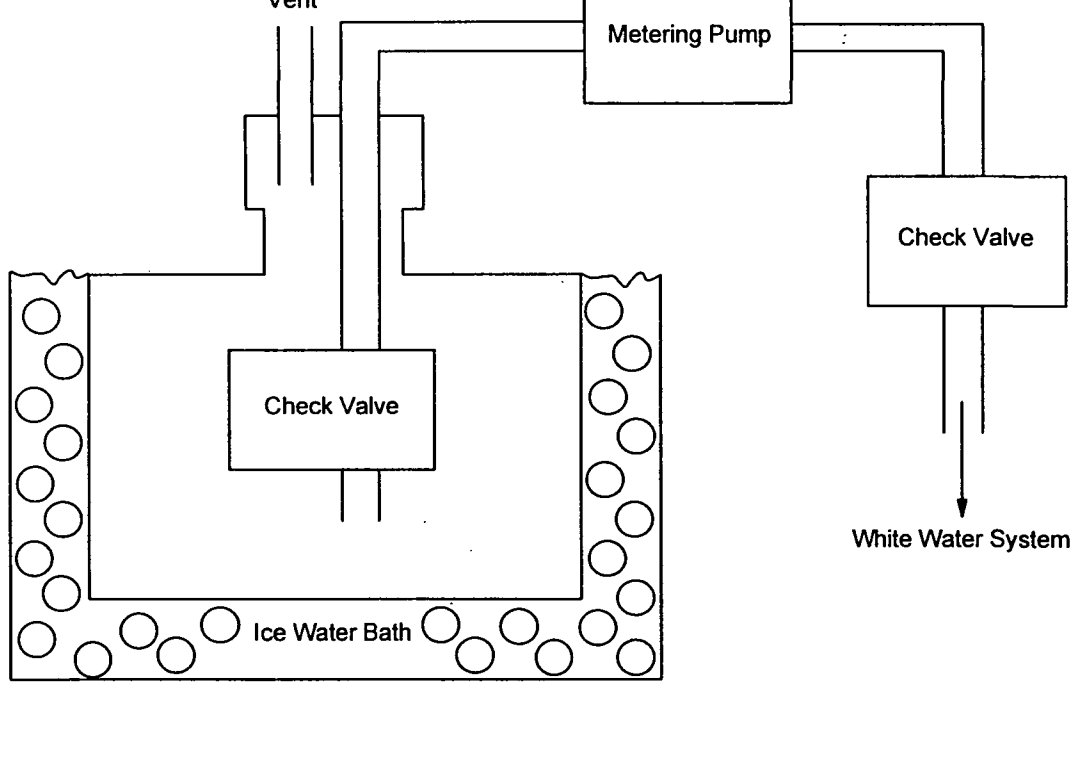


FIGURE 1 SPIKE ADDITION SYSTEM USED FOR THE WMU-II PILOT-SCALE PAPER MACHINE MATERIAL BALANCE STUDY

2.0 Machine Description and Operating Parameters

The pilot-scale paper machine at WMU, designed to mimic a full-scale paper machine, includes a conventional fourdrinier, a press section and a dryer section with 14 steam-heated cans. The fourdrinier wet end includes table rolls, drainage foils, suction flat boxes, suction couch, dandy roll and a totally closed white water system. Screening before the headbox is performed by a Finckh Screen. The press section consists of two plain presses and a smoothing press. A vertical size press is located between dryer sections. The sheet width is 24 inches. The total vent gas flow volume from the pilot-scale machine is ca. 9,000,000 ft^3/ton of production. For the four paper machines tested in the industry funded MACT I study, the total vent gas flow volumes ranged from 318,000 to 774,000 ft^3/ton of production and averaged 529,000 ft^3/ton of production. Thus, the pilot-scale paper machine total vent gas flow volume was ca. 17 times higher than the average of the MACT I study full-scale paper machine vent gas flow volumes.

The feedstock was made up with fresh water. Freshwater was used as makeup to the white water system. No chemicals, other than the test chemicals, were added to the feedstock or white water system. During this study, steam was added to the white water system to achieve the elevated white water temperature. The process operating conditions used for this study are listed in Table 3. The dryer configuration and the temperature of the dryer cans are shown in Figure 2.

As shown in Figure 3, there are four vents from the paper machine; one from the vacuum system (WMU4) and three from the dryer hood (WMU1, 2 and 3). All four of these vents were tested concurrently at each spike level. Process water samples were collected from the feedstock (to document that there was no background of the test chemicals) and from the white water system overflow (to develop the material balance). The process water sample collection locations and the spike addition locations are indicated on Figure 4.

TABLE 3 PROCESS OPERATING INFORMATION FOR THE SECOND STUDY AT THE WMU PILOT-SCALE PAPER MACHINE

PARAMETER	RUNS A-L	RUNS M-N	RUNS O-P
Feedstock	60% HW/40% SW***	100% Groundwood**	50% Groundwood 50% OCC
White Water Temperature °C	49	55	55
Freshwater Makeup to GW System, GPM	94	78	84
White Water Overflow, GPM	*	17.6, 16.3	19.1
White Water pH			
Headbox Consistency, %	0.4	0.5	0.4
Machine Feed Consistency, %	ca. 2	ca. 2	ca. 2
Consistency Into Dryer, %	42	38	39
Machine Speed, FPM	88.8	88.8	88.8
Production Rate, lb/hr	160	160	160
Sheet Basis Weight	40 lb/3000 ft^2	40 lb/3000 ft^2	40 lb/3000 ft^2

*Runs A-B: 23.1 GPM, Run C: 25.6 GPM, Runs D-J: 21.8 GPM, Runs K-L 22.8 GPM
**65% Spruce, 35% Balsam and Fir
***Bleached Chemical Pulp

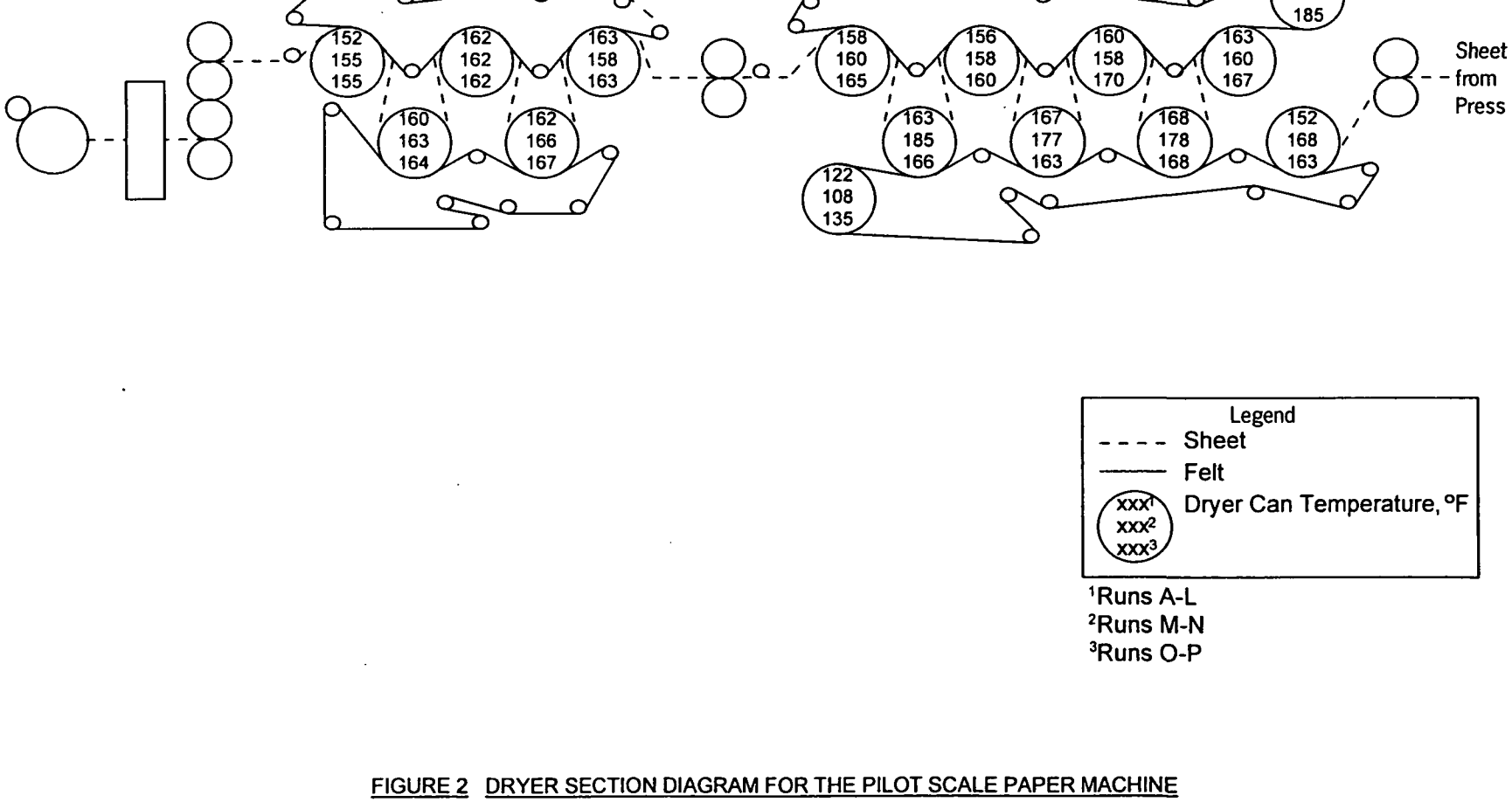


FIGURE 2 DRYER SECTION DIAGRAM FOR THE PILOT SCALE PAPER MACHINE

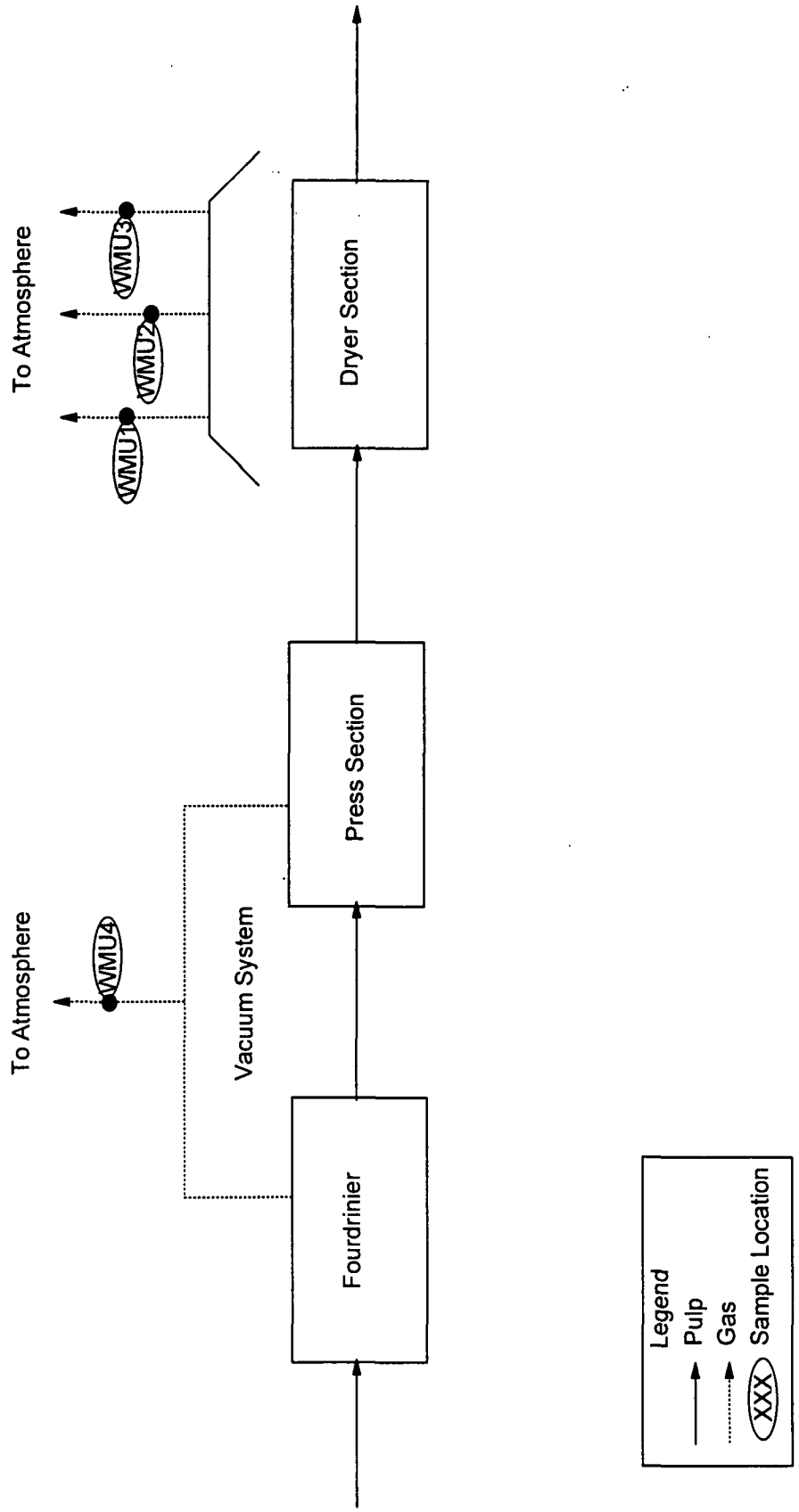


FIGURE 3 OVERALL PROCESS FLOW AND VENTING DIAGRAM FOR THE PILOT-SCALE PAPER MACHINE AT WMU

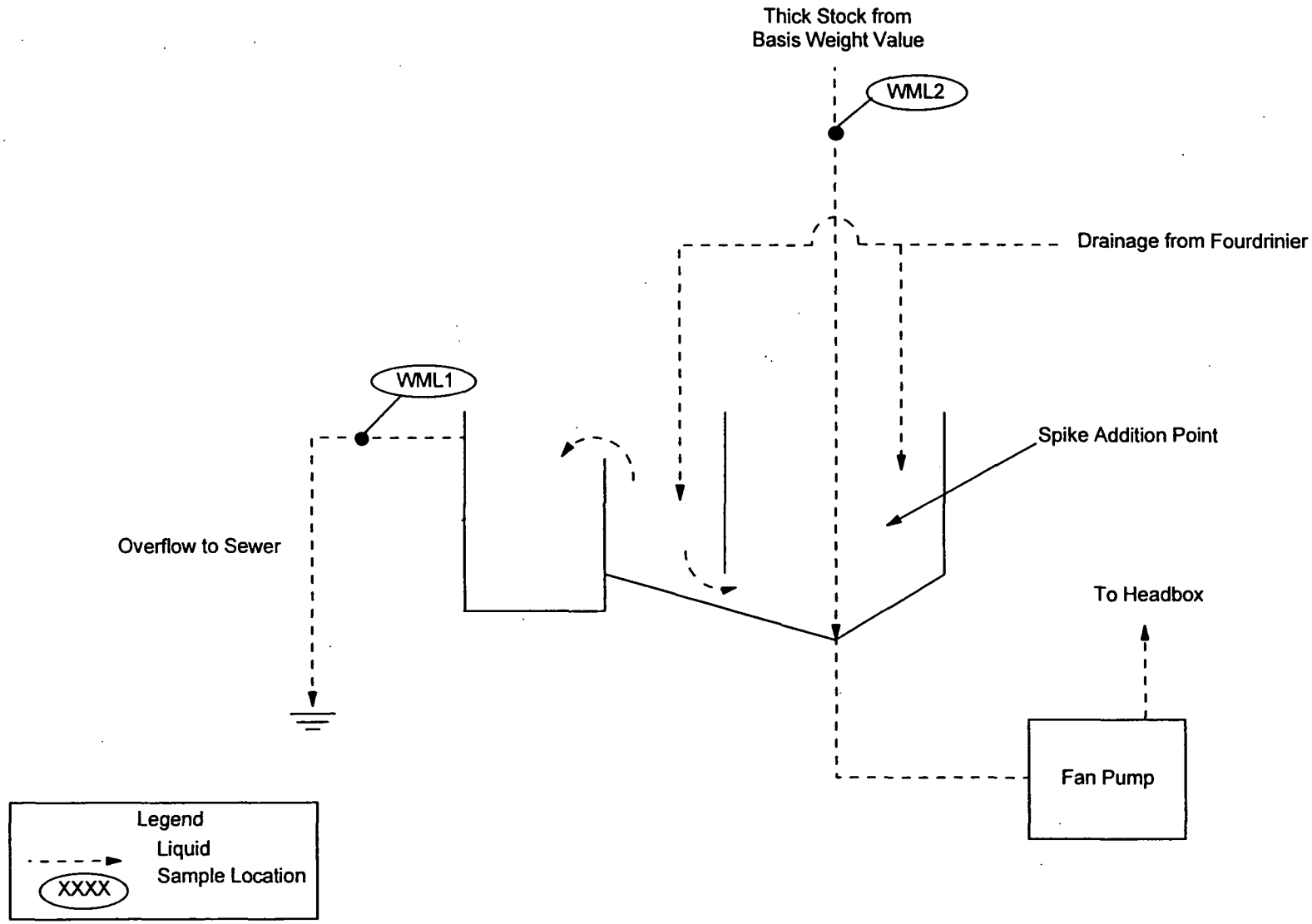


FIGURE 4 WHITE WATER SYSTEM FLOW DIAGRAM FOR THE PILOT-SCALE PAPER MACHINE AT WMU

3.0 Results and Discussion

The results of the study for each compound are presented in a table and two graphs, except for 2-butoxyethanol, naphthalene, ethylene glycol and diethanolamine which only has a table. In each material balance table, the "balance, lb/ton" column is the "WW overflow + Air" column minus the spike addition column. The "balance, %" column is the "WW + Air" column divided by the "spike addition" column with the result multiplied by 100. The two graphs for each compound show the total machine air emissions vs. white water concentration; one of which covers the whole concentration range and the other for the low end only. The results for each compound are contained in Sections 3.1-9. The methanol results for the groundwood and groundwood/OCC trials are contained in Section 3.10.

3.1 Results and Discussion for Acetaldehyde

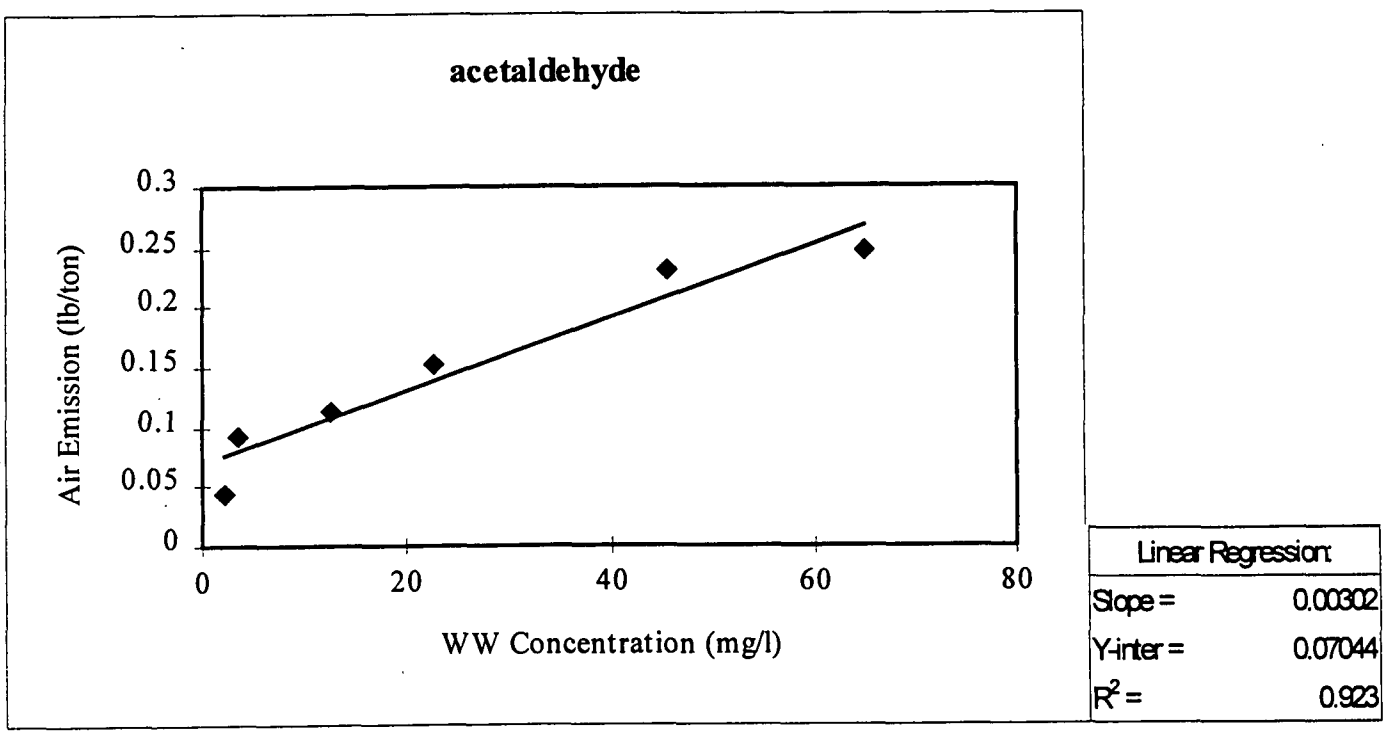
The results for acetaldehyde, presented in Table 4 and Figure 4 show an average balance over the 12 spike levels of 84 percent. The R^2 value of the least squares plot of total air emissions versus measured white water concentration was 0.92. The average amount of the total spike measured in the air emissions was 6.5 percent.

TABLE 4 PILOT-SCALE PAPER MACHINE STUDY RESULTS FOR ACETALDEHYDE

SPIKE LEVEL, mg/L	WW CONC., mg/L	SPIKE ADDITION, lb/ton	WW OVERFLOW, lb/ton	AIR EMISSION, lb/ton	WW+ AIR, lb/ton	BALANCE, lb/ton	BALANCE, %	PERCENTAGE OF SPIKE IN AIR EMISSIONS
2 (A)	ND(0.315)	0.328		0.0378				11.5
3 (I)	ND(0.315)	0.35		0.0400				11.4
4 (B)	2.12	0.706	0.294	0.0441	0.338	-0.368	48	6.3
8 (C)	ND(0.315)	1.03		0.0461				4.5
8 (J)	ND(0.315)	0.72		0.0605				8.4
11 (K)	ND(0.315)	1.04		0.081				7.8
12 (D)	3.46	1.82	0.452	0.093	0.546	-1.27	30	5.1
15 (L)	ND(0.315)	1.47		0.080				5.4
17 (E)	12.6	2.40	1.65	0.114	1.76	-0.64	73	4.7
26 (F)	22.7	3.2	2.97	0.153	3.12	-0.09	97	4.8
35 (G)	45.5	5.1	5.95	0.231	6.18	1.04	120	4.5
50 (H)	65.1	6.5	8.51	0.246	8.76	2.25	135	3.8
AVERAGE							84	6.5

ND(x.xxx) = Below Detection Limit of x.xxx mg/L

FIGURE 4 ACETALDEHYDE EMISSIONS VS WHITE WATER CONCENTRATION, WMU-II STUDY



3.2 Results and Discussion for MEK

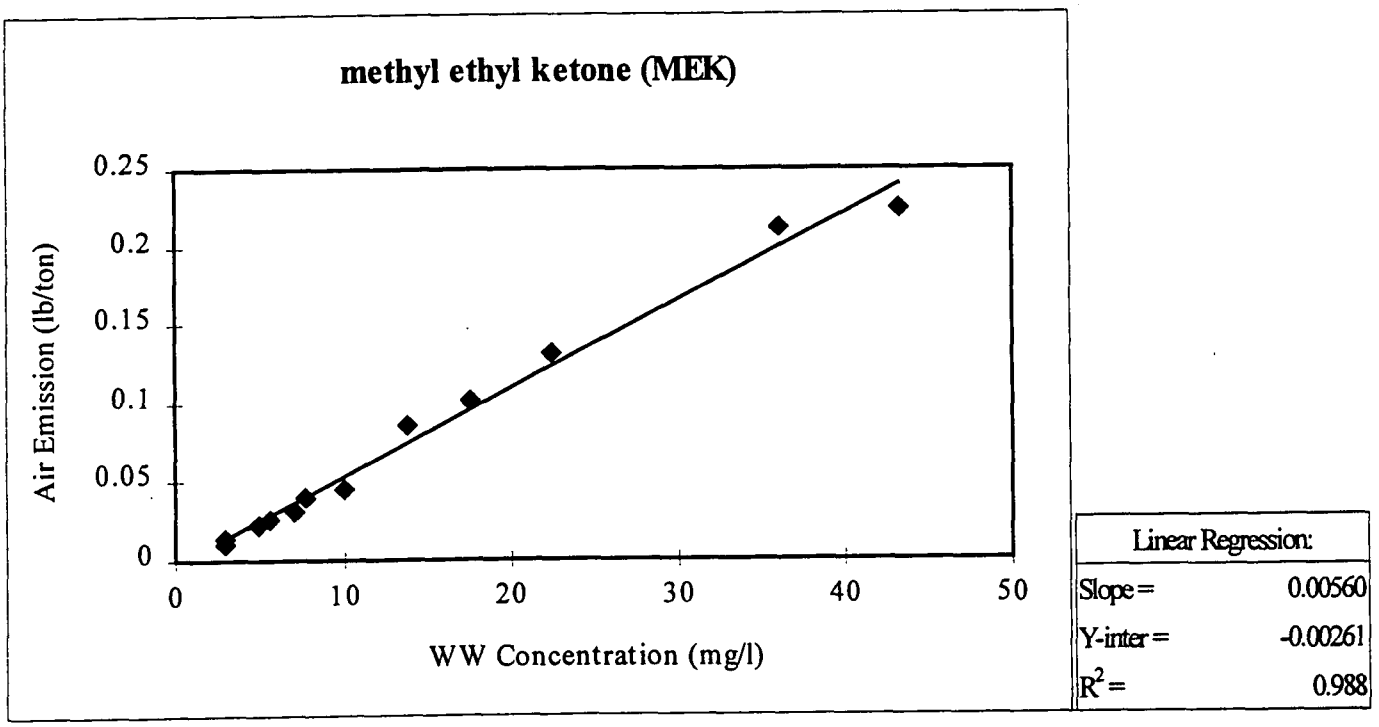
The results for MEK, presented in Table 5 and Figure 5, show an average balance over the 12 spike levels of 100 percent. The R^2 value of the least squares plot of total air emissions versus measured white water concentrations was 0.99. The average amount of the total spike measured in the air emissions was 3.6 percent.

TABLE 5 PILOT-SCALE PAPER MACHINE STUDY RESULTS FOR METHY ETHYL KETONE

SPIKE LEVEL, mg/L	WW CONC., mg/L	SPIKE ADDITION, lb/ton	WW OVERFLOW, lb/ton	AIR EMISSION, lb/ton	WW+ AIR, lb/ton	BALANCE, lb/ton	BALANCE, %	PERCENTAGE OF SPIKE IN AIR EMISSIONS
2 (A)	2.89	0.338	0.400	0.0102	0.411	0.07	122	3.0
3 (I)	2.99	0.36	0.391	0.0132	0.404	0.04	112	3.7
4 (B)	5.50	0.726	0.762	0.0270	0.789	0.06	109	3.7
8 (C)	7.71	1.06	1.18	0.0407	1.22	0.16	115	3.8
8 (J)	4.89	0.74	0.639	0.0226	0.662	-0.08	89	3.0
11 (K)	7.06	1.07	0.966	0.0322	1.00	-0.08	93	3.0
12 (D)	13.7	1.87	1.79	0.0848	1.88	0.01	100	4.5
15 (L)	9.97	1.51	1.36	0.0455	1.41	-0.10	93	3.0
17 (E)	17.6	2.47	2.30	0.102	2.40	-0.07	97	4.1
26 (F)	22.4	3.31	2.93	0.131	3.06	-0.24	93	4.0
35 (G)	36.0	5.3	4.71	0.211	4.92	-0.36	93	4.0
50 (H)	43.3	6.7	5.66	0.223	5.89	-0.80	88	3.3
AVERAGE							100	3.6

ND(x.xxx) = Below Detection Limit of x.xxx mg/L

FIGURE 5 METHYL ETHYL KETONE EMISSIONS VS WHITE WATER CONCENTRATION, WMU-II STUDY



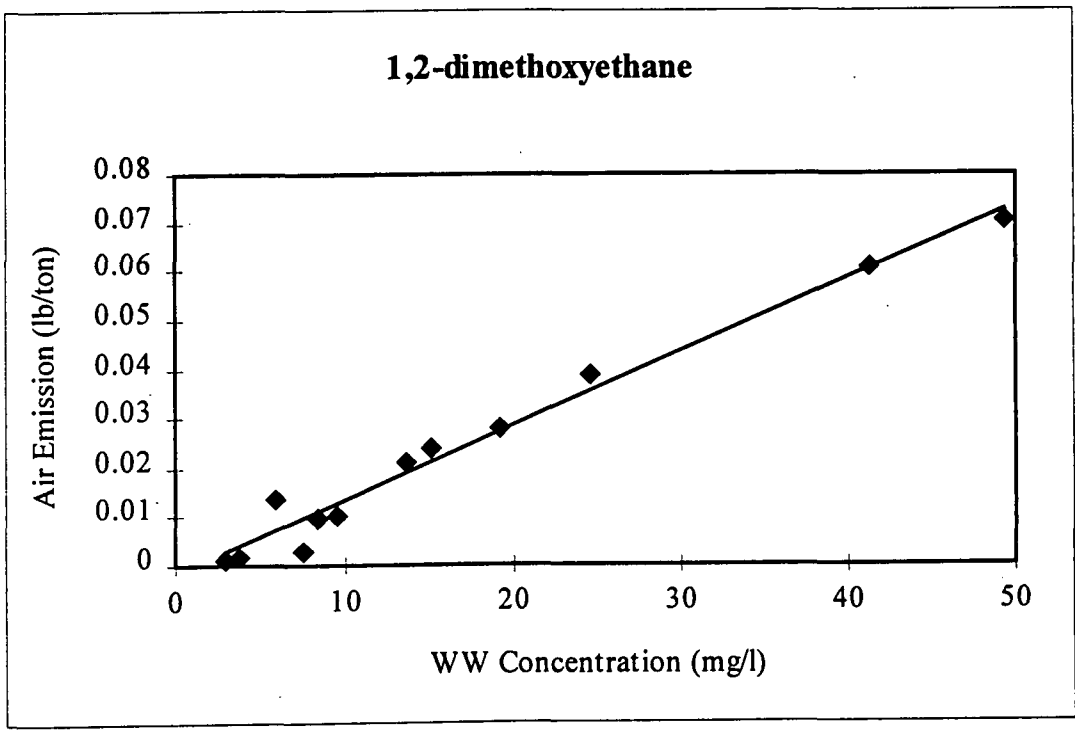
3.3 Results and Discussion for 1,2-Dimethoxyethane

The results for 1,2-dimethoxyethane, presented in Table 6 and Figure 6, show an average balance over the 12 spike levels of 107 percent. The R^2 value of the least squares plot of total air emissions versus measured white water concentrations was 0.98. The average amount of the total spike measured in the air emissions was 0.9 percent.

TABLE 6 PILOT-SCALE PAPER MACHINE STUDY RESULTS FOR 1,2-DIMETHOXYETHANE

SPIKE LEVEL, mg/L	WW CONC., mg/L	SPIKE ADDITION, lb/ton	WW OVERFLOW, lb/ton	AIR EMISSION, lb/ton	WW+ AIR, lb/ton	BALANCE, lb/ton	BALANCE, %	PERCENTAGE OF SPIKE IN AIR EMISSIONS
2 (A)	2.97	0.364	0.412	0.00105	0.413	0.05	113	0.3
3 (I)	3.83	0.39	0.501	0.00196	0.503	0.11	129	0.5
4 (B)	5.86	0.782	0.812	0.0134	0.825	0.04	106	1.7
8 (C)	8.37	1.15	1.285	0.0097	1.30	0.15	113	0.8
8 (J)	7.52	0.80	0.983	0.00285	0.986	0.19	123	0.4
11 (K)	9.47	1.16	1.30	0.0105	1.31	0.15	113	0.9
12 (D)	15.1	2.02	1.97	0.0238	2.00	-0.02	99	1.2
15 (L)	13.6	1.63	1.86	0.0209	1.88	0.26	116	1.3
17 (E)	19.2	2.66	2.51	0.0277	2.54	-0.12	95	1.0
26 (F)	24.6	3.56	3.22	0.0386	3.26	-0.30	91	1.1
35 (G)	41.3	5.7	5.40	0.0608	5.46	-0.23	96	1.1
50 (H)	49.3	7.2	6.45	0.0701	6.52	-0.69	90	1.0
AVERAGE							107	0.9

FIGURE 6 1,2-DIMETHOXYETHANE EMISSIONS VS WHITE WATER CONCENTRATION, WMU-11 STUDY



3.4 Results and Discussion for 2-Butoxyethanol

The results for 2-butoxyethanol, presented in Table 7, show an average balance of 83 percent. The paper produced by the machine was analyzed and found to be non-detect for 2-butoxyethanol.

TABLE 7 PILOT-SCALE PAPER MACHINE STUDY RESULTS FOR 2-BUTOXYETHANOL

SPIKE LEVEL, mg/L	WW CONC., mg/L	SPIKE ADDITION, lb/ton	WW OVERFLOW , lb/ton	AIR EMISSION, lb/ton	WW+ AIR, lb/ton	BALANCE, lb/ton	BALANCE, %
2 (A)	2.20	0.379	0.30485		0.3048	-0.07	81
3 (I)	2.80	0.406	0.36615		0.3662	-0.04	90
4 (B)	4.90	0.814	0.67898		0.6790	-0.14	83
8 (C)	6.80	1.19	1.04423		1.0442	-0.15	88
8 (J)	5.10	0.832	0.66692		0.667	-0.17	80
11 (K)	7.60	1.20	1.03943		1.04	-0.17	86
12 (D)	15.1	2.10	1.97461		1.97	-0.12	94
15 (L)	9.90	1.69	1.35400		1.354	-0.34	80
17 (E)	16.8	2.77	2.19692		2.20	-0.57	79
26 (F)	22.1	3.71	2.88999		2.9	-0.82	78
35 (G)	38.6	5.92	5.04768		5.0	-0.88	85
50 (H)	44.3	7.50	5.7931		5.8	-1.71	77
AVERAGE							83

NA = Not Applicable

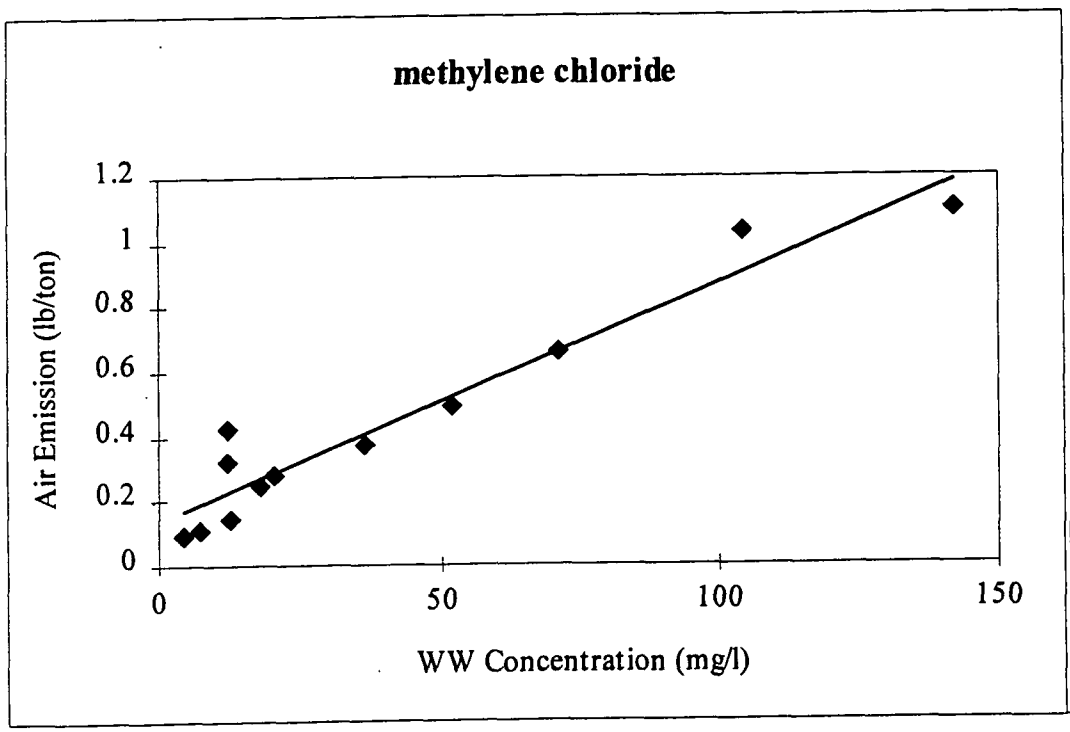
3.5 Results and Discussion for Methylene Chloride

The results for methylene chloride, presented in Table 8 and Figure 7, show an average balance over the 12 spike levels of 75 percent. The R^2 value of the least squares plot of total air emissions versus measured white water concentration was 0.92. The average amount of the total spike measured in the air emissions was 14.6 percent.

TABLE 8 PILOT-SCALE PAPER MACHINE STUDY RESULTS FOR METHYLENE CHLORIDE

SPIKE LEVEL, mg/L	WW CONC., mg/L	SPIKE ADDITION, lb/ton	WW OVERFLOW, lb/ton	AIR EMISSION, lb/ton	WW+ AIR, lb/ton	BALANCE, lb/ton	BALANCE, %	PERCENTAGE OF SPIKE IN AIR EMISSIONS
2 (A)	1.56	0.553	0.21616	0.0903	0.3065	-0.25	55	16.3
3 (I)	2.71	0.59	0.35438	0.1057	0.4601	-0.13	78	17.8
4 (B)	4.64	1.19	0.64295	0.1443	0.7872	-0.40	66	12.1
8 (C)	7.97	1.74	1.22390	0.2749	1.4988	-0.25	86	15.8
8 (J)	6.69	1.22	0.87484	0.2484	1.123	-0.09	92	20.4
11 (K)	4.46	1.76	0.60998	0.3220	0.93	-0.83	53	18.3
12 (D)	16.49	3.07	2.15638	0.4254	2.58	-0.49	84	13.9
15 (L)	13.51	2.47	1.84773	0.3712	2.219	-0.26	90	15.0
17 (E)	19.15	4.05	2.50423	0.4902	2.99	-1.06	74	12.1
26 (F)	26.14	5.4	3.41830	0.6568	4.1	-1.35	75	12.0
35 (G)	38.12	8.7	4.98491	1.0342	6.0	-2.64	70	11.9
50 (H)	53.14	11.0	6.9491	1.0954	8.0	-2.92	73	10.0
AVERAGE							75	14.6

FIGURE 7 METHYLENE CHLORIDE EMISSIONS VS WHITE WATER CONCENTRATION, WMU-II STUDY



3.6 Results and Discussion for Methanol

The results for methanol, presented in Table 9 and Figure 8, show an average balance over the 12 spike levels of 95 percent. The average amount of the total spike measured in the air emissions was 2.5 percent. The plot of total air emissions versus measured white water concentration has an R^2 values of 0.99.

The slopes, Y-intercepts, and R^2 values for the least squares lines from the WMU-II, WMU-I, and MACT I studies are listed in Table 10. In the industry-funded MACT I study, four paper machines and one pulp dryer were tested (1). The white water concentrations at these five machines ranged from 1.3 to 311 mg/L. In Figure 9, total methanol emissions vs. white water concentrations are plotted for the MACT I study and both sets of pilot-scale paper machine data. The MACT I study data is plotted for the entire machine emissions and the dryer emissions only. Inspection of the data shows that the results from both of the pilot-scale paper machine studies are very similar, despite the fact that the white water temperature was increased from 68°F in the first study to 120°F in the second study. Thus, increasing the pilot-scale paper machine white water temperature did not produce the expected effect of bringing the slope of the emissions versus white water concentration curve up to the same level as the curve from the MACT I study. Analysis of the data indicates that the primary reason for the differences between the full-scale and pilot-scale machine results is differences in the machine wet-ends. Data obtained from the five MACT I full-scale machine studies and the two WMU pilot-scale machine studies are compared in Table 11. Since it is assumed that the dryer hood fans are providing all of the venting from the pilot-scale machine area, the fourdrinier emissions should be vented along with the dry-end emissions, but the amount actually vented from the dryer hood was slightly less than the calculated amount of methanol entering the dryer section with the sheet, based on the measured white water methanol concentration and the measured consistency of the sheet. The wet-end emissions from the MACT I study of full-scale machines ranged from 24 to 142 percent of the theoretical dry-end emissions. Comparison of the WMU I and II study results indicates that the amount of methanol released from the fourdrinier increased by 8.3 percent in the second study. This was calculated by assuming the increase in emissions from the dryer hood vents in the second study was due to increased volatilization from the fourdrinier. The vapor pressure of methanol increased approximately 4 fold (100 to 400 mm Hg) from the WMU-I study white water temperature (68°F) to the WMU-II study temperature (120°F). This implies that if the fourdrinier methanol emissions are related to vapor pressure, then the amount of methanol released from the wet-end in the WMU-II study would be about 10% of the theoretical dryer emissions. Reasons that may account for higher volatilization from the full-scale wet-ends are: (1) full-scale headboxes tend to spray the slurry on the wire, whereas the slurry from the pilot-scale machine headbox flows onto the wire, (2) the speed of the pilot-scale machine is only about 1/25 of that for a typical full-scale machine, (3) the speed of full-scale machines allows the use of vacuum foils on the fourdrinier, which are not used on the pilot-scale machine.

In addition to lower than full-scale emissions from the pilot-scale fourdrinier, generally lower than full-scale emissions were observed from the pilot-scale vacuum system. The vacuum system emissions were 3 and 16 percent of the theoretical dryer emissions for the WMU-I and

WMU-II studies, respectively. Whereas, in the full-scale studies this ranged from 50 to 231 percent. This discrepency is probably due to the fact that at the WMU pilot-scale machine relatively large amounts of cold, fresh water are used for vacuum pump sealing. Thus, in effect the vacuum pumps are acting as wet scrubbers. Note that the vacuum system vent temperature is essentially the same for WMU-I and WMU-II despite the fact that the white water temperature increased from 68 to 120°F. This is probably also the case at Mill QQ where the vacuum system emissions are only 5 percent of the theoretical dryer emissions and the vacuum system vent gas is only 112°F as compared to the white water temperature of 139°F.

TABLE 9 PILOT-SCALE PAPER MACHINE STUDY RESULTS FOR METHANOL

SPIKE LEVEL, mg/L	WW CONC., mg/L	SPIKE ADDITION, lb/ton	WW OVERFLOW, lb/ton	AIR EMISSION, lb/ton	WW+ AIR, lb/ton	BALANCE, lb/ton	BALANCE, %	PERCENTAGE OF SPIKE IN AIR EMISSIONS
2 (A)	2.3	0.332	0.31870	0.0234	0.3421	0.01	103	7.1
4 (B)	4.96	0.713	0.64861	0.0183	0.6669	-0.05	94	2.6
8 (C)	7.23	1.05	1.00184	0.0233	1.0252	-0.02	98	2.2
12 (D)	13	1.84	1.99633	0.0414	2.0377	0.20	111	2.3
17 (E)	17.3	2.43	2.26230	0.0482	2.311	-0.12	95	2.0
26 (F)	22.5	3.25	3.07727	0.0897	3.17	-0.08	97	2.8
35 (G)	37.3	5.2	4.87768	0.1081	4.99	-0.20	96	2.1
50 (H)	44.4	6.6	6.07248	0.0977	6.170	-0.40	94	1.5
75 (I)	49.7	7.1	6.49922	0.1412	6.64	-0.47	93	2.0
150 (J)	92.1	14.6	12.04382	0.2579	12.3	-2.27	84	1.8
225 (K)	140	21.1	18.30765	0.3461	18.7	-2.46	88	1.6
300 (L)	201	29.7	26.2846	0.5621	26.8	-2.81	91	1.9
AVERAGE							95	2.5

FIGURE 8 METHANOL EMISSIONS VS WHITE WATER CONCENTRATION, WMU-II STUDY

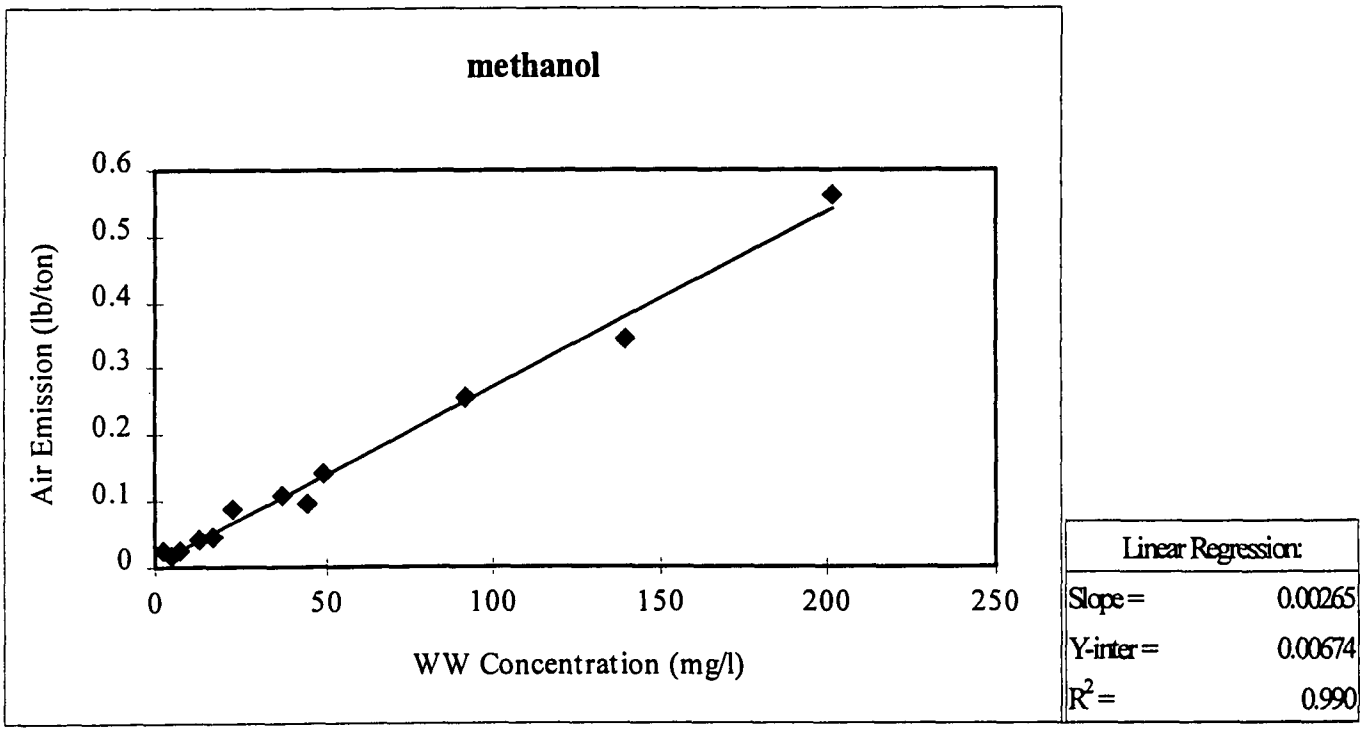


TABLE 10 STATISTICAL DATA FOR METHANOL EMISSIONS VERSUS WHITE WATER CONCENTRATION LEAST SQUARES LINES

LINE	NO. POINTS	SLOPE	Y-INTERCEPT	R^2
WMU-I	10	0.00240	0.03	0.087
WMU-II	12	0.00265	0.007	0.99
MACT-I (total)	5	0.00405	0.10	0.92
MACT-I (dryer only)	5	0.00185	-0.09	0.89

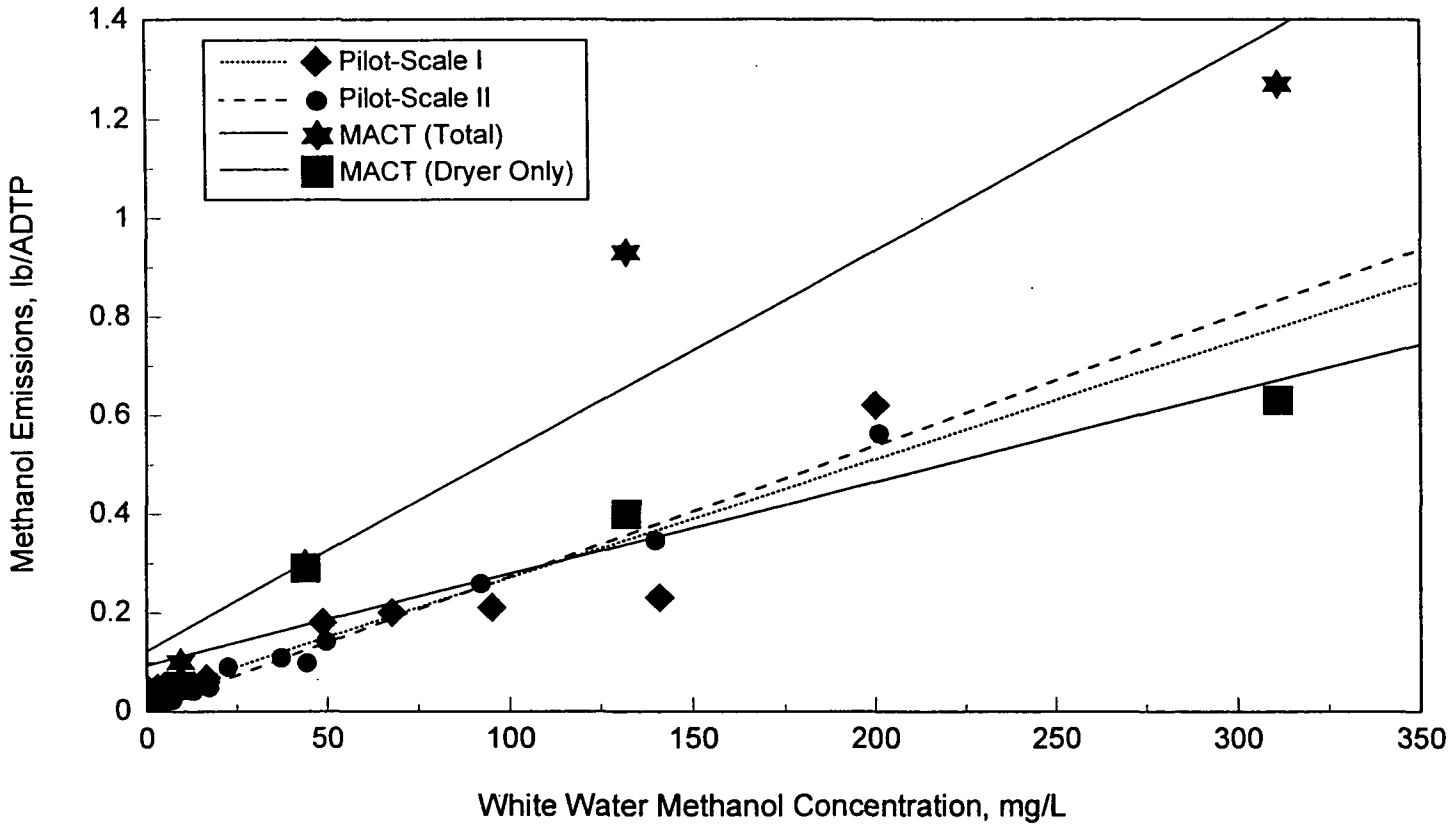


FIGURE 9 MACT I AND PILOT-SCALE PAPER MACHINE METHANOL RELATIONSHIPS

TABLE 11 COMPARATIVE DATA FROM THE WMU PILOT-SCALE STUDIES AND THE MACT I PAPER MACHINE STUDIES

MILL	WW CONC., mg/L	TEMP., °F		METHANOL EMISSIONS, lb/ton						
				THEORETICAL	MEASURED				PERCENT OF THEORETICAL TO DRYER	
		Vacuum System Emissions	WW	To Dryer	Dryer	Vacuum System	Fourdrinier/ Press	Total Wet-End	Vacuum System	Fourdrinier/ Press
G	311	145	145	0.86	0.63	0.43	0.21	0.74	50	24
H	132	131	134	0.36	0.40	0.16	0.37	0.53	44	103
K	1.3	117	124	0.0036	0.017	0.0083	0.0051	0.0134	231	142
N	9.4	261**	127	0.026	0.053	0.048	--	--	185	--
Q	44	112	139	0.12	0.29	0.0058	--	--	5	--
WMU-I	100	77	68	0.276	0.243 *	0.0082	--	--	3	2***
WMU-II	100	83	120	0.276	0.266 *	0.043	--	--	16	10***

*Calculated from the linear regression equation
**Centrifugal Exhauster Vacuum Pump
***Estimated
‡ 42% Consistency Sheet to Dryers Assumed for All

3.7 Results and Discussion for Naphthalene

The results from the two runs in which naphthalene was included in the spike solution are presented in Table 12. The use of naphthalene in the spike solution was discontinued after the first two runs because it was crystallizing in the suction line to the pump and it was crystallizing profusely on the end of the discharge line from the pump to the white water system. The results reflect the problem of getting the naphathene into the aqueous white water solution, since the balances were 58 and 43 percent for the approximately 2 and 4 mg/L spike levels, respectively. Note that the white water concentration did increase between runs A and B (0.99 to 1.25 mg/L), but not in proporation to the increase in spike addition (0.43 to 0.92 lb/ton). Relative to the percent of the total spike measured in the air emissions, it is interesting that this value was fairly constant between the two runs (26 and 24 percent), and this was the highest percent volatilization of any of the spike compounds. Methylene chloride had the next highest air emissions at 15 percent of the total spike addition. Since naphthalene and methylene chloride have the lowest water solubilities, these results indicate that volatilization rate may be more strongly related to water solubility than to vapor pressure.

TABLE 12 WMU-II PILOT-SCALE PAPER MACHINE STUDY RESULTS FOR NAPHTHALENE

SPIKE LEVEL, mg/L (approximate)	WW CONC., mg/L	SPIKE ADDITION, lb/ton	WW OVERFLOW, lb/ton	AIR EMISSIONS, lb/ton	WWT AIR, lb/ton	BALANCE, lb/ton	BALANCE, %	PERCENTAGE OF SPIKE IN AIR EMISSIONS
2 (A)	0.99	0.43	0.14	0.11	0.25	-0.18	58	26
4 (B)	1.25	0.92	0.18	0.22	0.40	-0.52	43	24

3.8 Results and Discussion for Ethylene Glycol

The results for ethylene glycol, presented in Table 13, show an average balance over the twelve spike levels of 107 percent.

TABLE 13 PILOT-SCALE PAPER MACHINE STUDY RESULTS FOR ETHYLENE GLYCOL

SPIKE LEVEL, mg/L	WW CONC., mg/L	SPIKE ADDITION, lb/ton	WW OVERFLOW , lb/ton	PAPER, lb/ton	WW+ AIR, lb/ton	BALANCE, lb/ton	BALANCE, %
2 (A)	ND (5.0)	0.467					
3 (I)	6.20	0.500	0.81077		0.8108	0.31	162
4 (B)	ND (5.0)	1.000					
8 (C)	12.00	1.47	1.84276		1.8428	0.37	125
8 (J)	8.10	1.030	1.05923		1.059	0.03	103
11 (K)	10.40	1.49	1.42238		1.42	-0.07	95
12 (D)	20.7	2.59	2.70692		2.71	0.12	105
15 (L)	13.20	2.09	1.80533		1.805	-0.28	86
17 (E)	28.4	3.42	3.71384		3.71	0.29	109
26 (F)	38.4	4.57	5.02153		5.0	0.45	110
35 (G)	49.8	7.31	6.51229		6.5	-0.80	89
50 (H)	61.7	9.25	8.0684		8.1	-1.18	87
AVERAGE							107

3.9 Results and Discussion for Diethanolamine

3.10 Results and Discussion for Methanol from the Groundwood and OCC/Groundwood Trials

The results from the four runs, in which 100% groundwood (runs M and N) or a 50% groundwood/50% OCC mix (runs O and P) were used to investigate the potential generation of methanol from the thermal hydrolysis of lignin in the dryer section, are presented in Table 14. The average total methanol emissions from the 100% groundwood and 50% groundwood/50% OCC trial were 0.06 and 0.03 lb/ton, respectively. The total methanol emissions from the unspiked 60% HW/40% SW chemical pulp mix used in the WMU-I study was 0.04 lb/ton. Thus, these results indicate that there was no significant methanol generation from thermal hydrolysis of lignin in the 100% groundwood or 50% groundwood/50% OCC pulp mixes.

TABLE 14 METHANOL GENERATION FROM THE GROUNDWOOD AND GROUNDWOOD/OCC TRIALS

RUN	FURNISH	TOTAL METHANOL EMISSIONS, lb/ton
M	100% GW	0.06
N	100% GW	0.05
O	50% GW/50% OCC	0.03
P	50% GW/50% OCC	0.03
Zero Spike*	60% HW/40% SW	0.04

*WMU-I Study

4.0 Literature References

(1) NCASI Technical Bulletin No. 681, "Volatile Organic Emissions from Pulp and Paper Mill Sources, Part VII - Pulp Dryers and Paper Machines at Integrated Chemical Pulp Mills."

TABLE A-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RAN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.5E-2	6.4E-4	8.0E-3	1.4E+1	6.0	91	43.00
biphenyl	(H)	ND 5.4E-2	ND 3.5E-3	ND 4.4E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 1.7E-2	ND 5.3E-4	ND 6.7E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	40.6	96	93.10
chloroform	(H)	ND 1.5E-2	ND 7.4E-4	ND 9.2E-3	ND 5.0E+0	16.7	99	82.95
cumene	(H)	ND 1.5E-2	ND 7.6E-4	ND 9.5E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 1.6E-2	ND 8.9E-4	ND 1.1E-2	ND 5.0E+0	41.8	91	119.15
1,2-dimethoxyethane	(H)	ND 1.2E-2	ND 4.5E-4	ND 5.7E-3	ND 5.0E+0	18.7	98	45.05
limonene		ND 1.5E-2	ND 8.6E-4	ND 1.1E-2	ND 5.0E+0	41.5	92	68.10
methanol	(H)	6.3E-2	8.5E-4	1.1E-2	2.2E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.5E-2	ND 4.7E-4	ND 5.8E-3	ND 5.0E+0	15.7	96	43.05
methylene chloride	(H)	5.3E-2	1.9E-3	2.4E-2	1.3E+1	11.3	95	49.00
naphthalene	(H)	1.1E-1	5.8E-3	7.3E-2	3.0E+1	49.8	100	128.05
phenol	(H)	ND 7.3E-1	ND 2.9E-2	ND 3.6E-1	ND 5.0E+1			
alpha-pinene		ND 2.0E-2	ND 1.2E-3	ND 1.5E-2	ND 5.0E+0	36.2	92	93.10
beta-pinene		ND 2.0E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	39.1	82	93.10
propionaldehyde	(H)	ND 1.8E-2	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.5E-2	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 4.7E-2	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			9.2E-3	1.1E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.5
Source Temp (C):	33.3
Sampling Date:	9/16/96
Sampling Start Time:	13:50
Sampling End Time:	14:20

TABLE A-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RANX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.1E-2	7.7E-4	9.6E-3	1.7E+1	6.0	98	43.00
biphenyl	(H)	ND 5.4E-2	ND 3.5E-3	ND 4.4E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 1.7E-2	ND 5.3E-4	ND 6.7E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	40.6	95	93.10
chloroform	(H)	ND 1.5E-2	ND 7.4E-4	ND 9.2E-3	ND 5.0E+0	16.7	98	82.95
cumene	(H)	ND 1.5E-2	ND 7.6E-4	ND 9.5E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 1.6E-2	ND 8.9E-4	ND 1.1E-2	ND 5.0E+0	41.8	90	119.15
1,2-dimethoxyethane	(H)	ND 1.2E-2	ND 4.5E-4	ND 5.7E-3	ND 5.0E+0	18.7	95	45.05
limonene		ND 1.5E-2	ND 8.6E-4	ND 1.1E-2	ND 5.0E+0	41.6	86	68.10
methanol	(H)	6.8E-2	9.1E-4	1.1E-2	2.4E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.5E-2	ND 4.7E-4	ND 5.8E-3	ND 5.0E+0	15.7	96	43.05
methylene chloride	(H)	5.3E-2	1.9E-3	2.4E-2	1.3E+1	11.3	95	49.00
naphthalene	(H)	1.1E-1	5.8E-3	7.3E-2	3.0E+1	49.8	100	128.05
phenol	(H)	ND 7.3E-1	ND 2.9E-2	ND 3.6E-1	ND 5.0E+1			
alpha-pinene		ND 2.0E-2	ND 1.2E-3	ND 1.5E-2	ND 5.0E+0	36.2	91	93.10
beta-pinene		ND 2.0E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	39.1	47	93.10
propionaldehyde	(H)	ND 1.8E-2	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.5E-2	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			9.4E-3	1.2E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.5
Source Temp (C):	33.3
Sampling Date:	9/16/96
Sampling Start Time:	13:50
Sampling End Time:	14:20

TABLE A-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RAN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.3E-2	1.2E-3	1.4E-2	2.8E+1	6.0	98	43.00
biphenyl	(H)	ND 2.5E-2	ND 3.1E-3	ND 3.9E-2	ND 5.0E+0	54.9	90	154.15
carbon disulfide	(H)	ND 7.8E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.8E-3	ND 9.5E-4	ND 1.2E-2	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 6.9E-3	ND 6.5E-4	ND 8.2E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 7.1E-3	ND 6.8E-4	ND 8.4E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 7.4E-3	ND 7.9E-4	ND 9.8E-3	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 5.6E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 7.0E-3	ND 7.6E-4	ND 9.5E-3	ND 5.0E+0	41.5	53	68.10
methanol	(H)	2.1E-2	5.3E-4	6.6E-3	1.6E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 7.2E-3	ND 4.1E-4	ND 5.2E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	1.6E-2	1.1E-3	1.4E-2	8.4E+0	11.3	95	49.00
naphthalene	(H)	1.7E-2	1.7E-3	2.1E-2	9.8E+0	49.8	100	128.05
phenol	(H)	ND 3.4E-1	ND 2.5E-2	ND 3.2E-1	ND 5.0E+1			
alpha-pinene		ND 9.6E-3	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	36.2	96	93.10
beta-pinene		ND 9.4E-3	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	39.0	47	93.10
propionaldehyde	(H)	ND 8.5E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 7.1E-3	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			4.5E-3	5.6E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	32.2
Sampling Date:	9/16/96
Sampling Start Time:	13:50
Sampling End Time:	14:20

TABLE A-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RAN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.2E-2	4.2E-4	5.3E-3	1.9E+1	5.5	63	43.00
biphenyl	(H)	ND 2.5E-2	ND 1.7E-3	ND 2.1E-2	ND 5.0E+0	54.9	94	154.15
carbon disulfide	(H)	ND 7.8E-3	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.9E-3	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 6.9E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 7.1E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	36.3	100	105.10
p-cymene		ND 7.4E-3	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	41.8	94	119.15
1,2-dimethoxyethane	(H)	ND 5.6E-3	ND 2.2E-4	ND 2.8E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 7.0E-3	ND 4.2E-4	ND 5.2E-3	ND 5.0E+0	41.6	10	68.10
methanol	(H)	2.4E-2	3.3E-4	4.1E-3	1.8E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 7.2E-3	ND 2.3E-4	ND 2.8E-3	ND 5.0E+0	15.7	90	43.05
methylene chloride	(H)	1.1E-2	4.0E-4	5.0E-3	5.6E+0	11.3	94	49.00
naphthalene	(H)	ND 8.6E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.4E-1	ND 1.4E-2	ND 1.8E-1	ND 5.0E+1			
alpha-pinene		ND 9.6E-3	ND 5.7E-4	ND 7.2E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 9.4E-3	ND 5.6E-4	ND 7.0E-3	ND 5.0E+0	39.1	0	93.10
propionaldehyde	(H)	ND 8.5E-3	ND 2.2E-4	ND 2.7E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 7.2E-3	ND 2.9E-4	ND 3.6E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	3.1E-2	4.1E-4	5.2E-3	7.9E+0			
THC (as C)								
Total HAPs			1.6E-3	2.0E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	36.1
Sampling Date:	9/16/96
Sampling Start Time:	13:50
Sampling End Time:	14:20

2/19/97
12:00 PM

TABLE A-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RAN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.9E-1	7.6E-4	9.5E-3	1.9E+2	6.0	99	43.00
biphenyl	(H)	ND 4.3E-2	ND 3.0E-4	ND 3.7E-3	ND 5.0E+0	54.9	99	154.15
carbon disulfide	(H)	ND 1.3E-2	ND 4.5E-5	ND 5.7E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.5E-2	ND 9.2E-5	ND 1.1E-3	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 1.2E-2	ND 6.3E-5	ND 7.9E-4	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.2E-2	ND 6.5E-5	ND 8.1E-4	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 1.3E-2	ND 7.5E-5	ND 9.4E-4	ND 5.0E+0	41.7	90	119.15
1,2-dimethoxyethane	(H)	2.3E-2	9.0E-5	1.1E-3	1.2E+1	18.7	97	45.05
limonene		ND 1.2E-2	ND 7.3E-5	ND 9.1E-4	ND 5.0E+0	41.5	89	68.10
methanol	(H)	1.1E-1	1.6E-4	2.0E-3	4.8E+1	6.9	0	31.15
methyl ethyl ketone (MEK)	(H)	2.6E-1	8.2E-4	1.0E-2	1.0E+2	15.7	97	43.05
methylene chloride	(H)	1.1E+0	4.0E-3	5.0E-2	3.2E+2	11.3	98	49.00
naphthalene	(H)	2.9E-1	1.6E-3	2.0E-2	9.7E+1	49.8	100	128.05
phenol	(H)	ND 5.9E-1	ND 2.4E-3	ND 3.1E-2	ND 5.0E+1	44.3	40	94.10
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.2E-3	ND 5.0E+0	36.2	91	93.10
beta-pinene		ND 1.6E-2	ND 9.8E-5	ND 1.2E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	4.5E-2	1.1E-4	1.4E-3	1.5E+1	9.6	46	58.10
toluene	(H)	ND 1.2E-2	ND 5.0E-5	ND 6.3E-4	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 3.8E-2	ND 5.0E-5	ND 6.3E-4	ND 5.0E+0			
THC (as C)								
Total HAPs			7.5E-3	9.4E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.7
Source Temp (C):	27.8
Sampling Date:	9/16/96
Sampling Start Time:	13:48
Sampling End Time:	14:18

TABLE A-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RAD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.7E-1	7.1E-4	8.9E-3	1.8E+2	6.0	100	43.00
biphenyl	(H)	ND 4.4E-2	ND 3.0E-4	ND 3.8E-3	ND 5.0E+0	54.9	90	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.6E-5	ND 5.8E-4	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.5E-2	ND 9.3E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.4E-5	ND 8.0E-4	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 1.2E-2	ND 6.6E-5	ND 8.3E-4	ND 5.0E+0	36.3	99	105.10
p-cymene		ND 1.3E-2	ND 7.7E-5	ND 9.6E-4	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	1.9E-2	7.7E-5	9.7E-4	9.8E+0	18.7	96	45.05
limonene		ND 1.2E-2	ND 7.4E-5	ND 9.3E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	7.2E-2	1.0E-4	1.3E-3	3.1E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	2.6E-1	8.2E-4	1.0E-2	1.0E+2	15.7	98	43.05
methylene chloride	(H)	9.9E-1	3.7E-3	4.7E-2	2.9E+2	11.3	98	49.00
naphthalene	(H)	2.7E-1	1.5E-3	1.9E-2	8.8E+1	49.8	100	128.05
phenol	(H)	ND 6.0E-1	ND 2.5E-3	ND 3.1E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 1.6E-2	ND 9.9E-5	ND 1.2E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	2.0E-2	5.0E-5	6.3E-4	6.6E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.1E-5	ND 6.4E-4	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)	ND 3.9E-2	ND 5.1E-5	ND 6.4E-4	ND 5.0E+0			
THC (as C)								
Total HAPs			7.0E-3	8.7E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.7
Source Temp (C):	27.8
Sampling Date:	9/16/96
Sampling Start Time:	13:50
Sampling End Time:	14:20

2/19/97
12:00 PM

TABLE B-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RBN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.3E-2	8.0E-4	1.0E-2	1.8E+1	6.0	98	43.00
biphenyl	(H)	7.3E-2	4.7E-3	5.9E-2	7.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 1.6E-2	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.8E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 1.4E-2	ND 7.2E-4	ND 9.0E-3	ND 5.0E+0	16.7	99	82.95
cumene	(H)	ND 1.5E-2	ND 7.4E-4	ND 9.3E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 1.5E-2	ND 8.6E-4	ND 1.1E-2	ND 5.0E+0	41.8	92	119.15
1,2-dimethoxyethane	(H)	2.0E-2	7.7E-4	9.7E-3	8.7E+0	18.7	97	45.05
limonene		ND 1.5E-2	ND 8.4E-4	ND 1.0E-2	ND 5.0E+0	41.6	90	68.10
methanol	(H)	7.4E-2	1.0E-3	1.2E-2	2.6E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-2	4.8E-4	5.9E-3	5.2E+0	15.7	96	43.05
methylene chloride	(H)	8.4E-2	3.0E-3	3.8E-2	2.1E+1	11.3	95	49.00
naphthalene	(H)	1.9E-1	1.0E-2	1.3E-1	5.4E+1	49.8	100	128.05
phenol	(H)	ND 7.1E-1	ND 2.8E-2	ND 3.5E-1	ND 5.0E+1			
alpha-pinene		ND 2.0E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 2.0E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.8E-2	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.5E-2	ND 5.7E-4	ND 7.2E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 4.7E-2	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			2.1E-2	2.6E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.5
Source Temp (C):	33.3
Sampling Date:	9/16/96
Sampling Start Time:	14:40
Sampling End Time:	15:10

2/19/97
12:00 PM

TABLE B-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RBD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.0E-2	1.0E-3	1.3E-2	2.7E+1	6.0	91	43.00
biphenyl	(H)	ND 2.4E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+0	54.9	96	154.15
carbon disulfide	(H)	ND 7.3E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.3E-3	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.5E-3	ND 6.1E-4	ND 7.7E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.9E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 6.9E-3	ND 7.4E-4	ND 9.2E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 5.3E-3	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.6E-3	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	ND 7.6E-3	ND 1.9E-4	ND 2.4E-3	ND 6.0E+0	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.8E-3	ND 3.9E-4	ND 4.8E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	2.1E-2	1.4E-3	1.8E-2	1.2E+1	11.3	96	49.00
naphthalene	(H)	3.6E-2	3.7E-3	4.6E-2	2.2E+1	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.0E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.8E-3	ND 9.5E-4	ND 1.2E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	1.1E-2	4.9E-4	6.1E-3	6.6E+0	9.6	46	58.10
toluene	(H)	ND 6.7E-3	ND 4.9E-4	ND 6.1E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			6.6E-3	8.3E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	32.2
Sampling Date:	9/16/96
Sampling Start Time:	14:40
Sampling End Time:	15:10

2/19/97
12:00 PM

TABLE B-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RBN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.2E-2	7.6E-4	9.5E-3	2.0E+1	6.0	91	43.00
biphenyl	(H)	9.8E-2	1.2E-2	1.5E-1	2.1E+1	54.9	98	154.15
carbon disulfide	(H)	ND 7.3E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.3E-3	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.5E-3	ND 6.1E-4	ND 7.7E-3	ND 5.0E+0	16.6	97	82.95
cumene	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.9E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 6.9E-3	ND 7.4E-4	ND 9.2E-3	ND 5.0E+0	41.7	91	119.15
1,2-dimethoxyethane	(H)	ND 5.3E-3	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	18.7	93	45.05
limonene		ND 6.6E-3	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.5	89	68.10
methanol	(H)	ND 7.6E-3	ND 1.9E-4	ND 2.4E-3	ND 6.0E+0	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.8E-3	ND 3.9E-4	ND 4.8E-3	ND 5.0E+0	15.7	92	43.05
methylene chloride	(H)	2.1E-2	1.4E-3	1.8E-2	1.2E+1	11.3	96	49.00
naphthalene	(H)	5.3E-2	5.4E-3	6.7E-2	3.3E+1	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 9.0E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.8E-3	ND 9.5E-4	ND 1.2E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 8.0E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.7E-3	ND 4.9E-4	ND 6.1E-3	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			2.0E-2	2.4E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	32.2
Sampling Date:	9/16/96
Sampling Start Time:	14:40
Sampling End Time:	15:10

TABLE B-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RBNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.2E-2	7.7E-4	9.6E-3	2.0E+1	6.0	85	43.00
biphenyl	(H)	8.8E-2	1.1E-2	1.3E-1	1.9E+1	54.9	99	154.15
carbon disulfide	(H)	ND 7.3E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.3E-3	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.5E-3	ND 6.1E-4	ND 7.7E-3	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.9E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 6.9E-3	ND 7.4E-4	ND 9.2E-3	ND 5.0E+0	41.7	91	119.15
1,2-dimethoxyethane	(H)	6.0E-3	4.3E-4	5.3E-3	5.6E+0	18.7	94	45.05
limonene		ND 6.6E-3	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.5	88	68.10
methanol	(H)	9.1E-3	2.3E-4	2.9E-3	7.2E+0	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.8E-3	ND 3.9E-4	ND 4.8E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	2.1E-2	1.4E-3	1.8E-2	1.2E+1	11.3	97	49.00
naphthalene	(H)	5.2E-2	5.3E-3	6.6E-2	3.2E+1	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1	44.3	40	94.10
alpha-pinene		ND 9.0E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.8E-3	ND 9.5E-4	ND 1.2E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 8.0E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.7E-3	ND 4.9E-4	ND 6.1E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.9E-2	2.4E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	32.2
Sampling Date:	9/16/96
Sampling Start Time:	14:40
Sampling End Time:	15:10

TABLE B-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RBN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.2E-2	2.4E-4	3.0E-3	1.2E+1	5.5	93	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.6E-3	ND 1.9E-2	ND 5.0E+0	54.9	97	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.1E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 6.4E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.7	96	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.3E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.8E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 5.2E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.5E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.6	0	68.10
methanol	(H)	1.8E-2	2.5E-4	3.1E-3	1.5E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.6E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	90	43.05
methylene chloride	(H)	1.1E-2	4.2E-4	5.3E-3	6.4E+0	11.3	94	49.00
naphthalene	(H)	ND 7.9E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.8E-3	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	36.2	95	93.10
beta-pinene		ND 8.6E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	39.1	47	93.10
propionaldehyde	(H)	ND 7.8E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.6E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)	ND 2.0E-2	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			9.1E-4	1.1E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	36.1
Sampling Date:	9/16/96
Sampling Start Time:	14:40
Sampling End Time:	15:10

TABLE B-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RBN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	8.1E-1	1.6E-3	2.0E-2	4.1E+2	6.0	99	43.00
biphenyl	(H)	ND 4.4E-2	ND 3.0E-4	ND 3.7E-3	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.3E-2	ND 4.5E-5	ND 5.7E-4	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.5E-2	ND 9.2E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.3E-5	ND 7.9E-4	ND 5.0E+0	16.7	99	82.95
cumene	(H)	ND 1.2E-2	ND 6.5E-5	ND 8.1E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.6E-5	ND 9.5E-4	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	4.8E-2	1.9E-4	2.4E-3	2.5E+1	18.7	99	45.05
limonene		ND 1.2E-2	ND 7.3E-5	ND 9.2E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	1.1E-1	1.6E-4	2.0E-3	4.8E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	5.3E-1	1.7E-3	2.1E-2	2.1E+2	15.7	98	43.05
methylene chloride	(H)	1.8E+0	6.7E-3	8.3E-2	5.3E+2	11.3	99	49.00
naphthalene	(H)	5.3E-1	3.0E-3	3.8E-2	1.8E+2	49.9	100	128.05
phenol	(H)	ND 5.9E-1	ND 2.5E-3	ND 3.1E-2	ND 5.0E+1			
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.6E-2	ND 9.8E-5	ND 1.2E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	2.2E-2	5.8E-5	7.2E-4	7.6E+0	9.6	46	58.10
toluene	(H)	ND 1.2E-2	ND 5.0E-5	ND 6.3E-4	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)	ND 3.8E-2	ND 5.0E-5	ND 6.3E-4	ND 5.0E+0			
THC (as C)								
Total HAPs			1.3E-2	1.7E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.7
Source Temp (C):	27.8
Sampling Date:	9/16/96
Sampling Start Time:	14:38
Sampling End Time:	15:08

TABLE C-1 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

WMU1RCN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.1E-2	9.4E-4	1.2E-2	2.3E+1	6.0	92	43.00
biphenyl	(H)	ND 4.8E-2	ND 3.1E-3	ND 3.9E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0	40.6	26	93.10
chloroform	(H)	ND 1.3E-2	ND 6.6E-4	ND 8.2E-3	ND 5.0E+0	16.7	99	82.95
cumene	(H)	ND 1.3E-2	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0			
p-cymene		ND 1.4E-2	ND 7.9E-4	ND 9.8E-3	ND 5.0E+0	41.7	92	119.15
1,2-dimethoxyethane	(H)	1.2E-2	4.7E-4	5.9E-3	5.8E+0	18.7	98	45.05
limonene		ND 1.3E-2	ND 7.6E-4	ND 9.5E-3	ND 5.0E+0	41.5	89	68.10
methanol	(H)	7.8E-2	1.0E-3	1.3E-2	3.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	2.4E-2	7.2E-4	8.9E-3	8.6E+0	15.7	96	43.05
methylene chloride	(H)	1.4E-1	5.0E-3	6.3E-2	3.9E+1	11.3	96	49.00
naphthalene	(H)	ND 1.6E-2	ND 8.7E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.5E-1	ND 2.6E-2	ND 3.2E-1	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.6E-2	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 4.3E-2	ND 5.5E-4	ND 6.8E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			8.2E-3	1.0E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.0
Source Temp (C):	40.0
Sampling Date:	9/17/96
Sampling Start Time:	8:42
Sampling End Time:	9:12

TABLE C-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RCN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.3E-2	8.1E-4	1.0E-2	2.2E+1	6.0	94	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+0	54.9	96	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.2E-3	ND 8.8E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.4E-3	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.8E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.8E-3	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 5.2E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.5E-3	ND 7.0E-4	ND 8.8E-3	ND 5.0E+0	41.5	10	68.10
methanol	(H)	1.4E-2	3.6E-4	4.5E-3	1.1E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.7E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	3.3E-2	2.2E-3	2.8E-2	1.9E+1	11.3	95	49.00
naphthalene	(H)	ND 7.9E-3	ND 8.1E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 8.9E-3	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.7E-3	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 7.9E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.6E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			3.4E-3	4.3E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	32.2
Sampling Date:	9/17/96
Sampling Start Time:	8:42
Sampling End Time:	9:12

TABLE C-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RCD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.7E-2	3.2E-4	4.0E-3	1.5E+1	6.0	95	43.00
biphenyl	(H)	ND 2.4E-2	ND 1.6E-3	ND 2.0E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.3E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.3E-3	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0			
chloroform	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.2E-3	ND 5.0E+0	16.7	18	82.95
cumene	(H)	ND 6.6E-3	ND 3.5E-4	ND 4.4E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.9E-3	ND 4.0E-4	ND 5.1E-3	ND 5.0E+0			
1,2-dimethoxyethane	(H)	ND 5.3E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0			
limonene		ND 6.6E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0			
methanol	(H)	1.4E-2	1.9E-4	2.4E-3	1.1E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.8E-3	ND 2.1E-4	ND 2.7E-3	ND 5.0E+0	15.7	90	43.05
methylene chloride	(H)	1.7E-2	6.4E-4	8.0E-3	9.5E+0	11.4	93	49.00
naphthalene	(H)	ND 8.0E-3	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 9.0E-3	ND 5.4E-4	ND 6.7E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.8E-3	ND 5.2E-4	ND 6.6E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 8.0E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.7E-3	ND 2.7E-4	ND 3.4E-3	ND 5.0E+0	25.6	98	91.10
formaldehyde	(H)	ND 2.0E-2	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			1.1E-3	1.4E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	35.0
Sampling Date:	9/17/96
Sampling Start Time:	8:42
Sampling End Time:	9:12

TABLE C-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RCN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.3E-2	2.5E-4	3.1E-3	1.2E+1	6.0	84	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 7.0E-3	ND 2.3E-4	ND 2.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.0E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	40.6	26	93.10
chloroform	(H)	ND 6.2E-3	ND 3.2E-4	ND 4.1E-3	ND 5.0E+0	16.7	18	82.95
cumene	(H)	ND 6.4E-3	ND 3.3E-4	ND 4.2E-3	ND 5.0E+0	36.3	99	105.10
p-cymene		ND 6.6E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	41.8	91	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.3E-3	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	41.6	89	68.10
methanol	(H)	1.5E-2	2.1E-4	2.6E-3	1.2E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.5E-3	ND 2.0E-4	ND 2.6E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	2.0E-2	7.2E-4	9.0E-3	1.1E+1	11.3	95	49.00
naphthalene	(H)	ND 7.7E-3	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.7E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	36.2	95	93.10
beta-pinene		ND 8.5E-3	ND 5.0E-4	ND 6.3E-3	ND 5.0E+0	39.1	80	93.10
propionaldehyde	(H)	ND 7.7E-3	ND 1.9E-4	ND 2.4E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.4E-3	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			1.2E-3	1.5E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	35.0
Sampling Date:	9/17/96
Sampling Start Time:	8:42
Sampling End Time:	9:12

2/19/97
12:00 PM

TABLE D-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RDN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.1E-1	2.0E-3	2.5E-2	4.6E+1	6.0	87	43.00
biphenyl	(H)	ND 5.2E-2	ND 3.3E-3	ND 4.2E-2	ND 5.0E+0	54.9	92	154.15
carbon disulfide	(H)	ND 1.6E-2	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
chloroform	(H)	ND 1.4E-2	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	16.6	18	82.95
cumene	(H)	ND 1.4E-2	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0			
p-cymene		ND 1.5E-2	ND 8.5E-4	ND 1.1E-2	ND 5.0E+0	41.8	0	119.15
1,2-dimethoxyethane	(H)	3.5E-2	1.3E-3	1.6E-2	1.5E+1	18.7	98	45.05
limonene		ND 1.4E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0	41.5	0	68.10
methanol	(H)	1.6E-1	2.1E-3	2.6E-2	5.7E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	4.5E-2	1.4E-3	1.7E-2	1.5E+1	15.7	95	43.05
methylene chloride	(H)	2.2E-1	7.9E-3	9.9E-2	5.6E+1	11.3	97	49.00
naphthalene	(H)	ND 1.8E-2	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 7.0E-1	ND 2.8E-2	ND 3.5E-1	ND 5.0E+1			
alpha-pinene		ND 2.0E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	39.1	0	93.10
propionaldehyde	(H)	2.2E-2	5.4E-4	6.8E-3	6.4E+0	9.6	46	58.10
toluene	(H)	ND 1.5E-2	ND 5.6E-4	ND 7.1E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.5E-2	1.9E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.1
Source Temp (C):	38.9
Sampling Date:	9/17/96
Sampling Start Time:	9:50
Sampling End Time:	10:23

TABLE D-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RDD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.1E-1	2.0E-3	2.5E-2	4.5E+1	6.0	95	43.00
biphenyl	(H)	ND 5.1E-2	ND 3.3E-3	ND 4.1E-2	ND 5.0E+0	55.0	35	154.15
carbon disulfide	(H)	ND 1.6E-2	ND 5.0E-4	ND 6.3E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
chloroform	(H)	ND 1.4E-2	ND 7.0E-4	ND 8.7E-3	ND 5.0E+0	16.6	18	82.95
cumene	(H)	ND 1.4E-2	ND 7.2E-4	ND 9.0E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.5E-2	ND 8.4E-4	ND 1.0E-2	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	3.1E-2	1.2E-3	1.5E-2	1.4E+1	18.7	98	45.05
limonene		ND 1.4E-2	ND 8.1E-4	ND 1.0E-2	ND 5.0E+0	41.5	0	68.10
methanol	(H)	1.7E-1	2.2E-3	2.8E-2	6.1E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	4.3E-2	1.3E-3	1.6E-2	1.5E+1	15.7	95	43.05
methylene chloride	(H)	2.1E-1	7.3E-3	9.2E-2	5.3E+1	11.3	96	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.3E-4	ND 1.2E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.9E-1	ND 2.7E-2	ND 3.4E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	39.1	0	93.10
propionaldehyde	(H)	2.3E-2	5.5E-4	6.9E-3	6.6E+0	9.6	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.6E-4	ND 7.0E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.5E-2	1.8E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.1
Source Temp (C):	38.9
Sampling Date:	9/17/96
Sampling Start Time:	9:50
Sampling End Time:	10:23

TABLE D-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RDN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.0E-2	1.1E-3	1.3E-2	2.9E+1	5.5	84	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.8E-3	ND 3.5E-2	ND 5.0E+0	54.9	86	154.15
carbon disulfide	(H)	ND 7.1E-3	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.0E-3	ND 8.7E-4	ND 1.1E-2	ND 5.0E+0	40.4	0	93.10
chloroform	(H)	ND 6.3E-3	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0	16.7	18	82.95
cumene	(H)	ND 6.4E-3	ND 6.1E-4	ND 7.7E-3	ND 5.0E+0			
p-cymene		ND 6.7E-3	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.7	94	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.4E-3	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	41.5	88	68.10
methanol	(H)	1.4E-2	3.6E-4	4.5E-3	1.2E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.5E-3	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	4.6E-2	3.1E-3	3.9E-2	2.6E+1	11.3	95	49.00
naphthalene	(H)	ND 7.8E-3	ND 7.9E-4	ND 9.9E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 2.3E-2	ND 2.9E-1	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 8.7E-3	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.5E-3	ND 9.2E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 7.7E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.5E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			4.5E-3	5.7E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	1.0
Source Temp (C):	32.2
Sampling Date:	9/17/96
Sampling Start Time:	9:50
Sampling End Time:	10:23

2/19/97
12:00 PM

TABLE D-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RDN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.2E-2	4.3E-4	5.4E-3	2.2E+1	6.0	99	43.00
biphenyl	(H)	ND 2.2E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 6.9E-3	ND 2.3E-4	ND 2.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 7.8E-3	ND 4.7E-4	ND 5.8E-3	ND 5.0E+0	40.6	26	93.10
chloroform	(H)	ND 6.1E-3	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	16.7	18	82.95
cumene	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	36.3	98	105.10
p-cymene		ND 6.5E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.8	91	119.15
1,2-dimethoxyethane	(H)	ND 5.0E-3	ND 2.0E-4	ND 2.4E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.2E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	41.5	89	68.10
methanol	(H)	2.2E-2	3.1E-4	3.8E-3	1.8E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.4E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	2.7E-2	9.9E-4	1.2E-2	1.6E+1	11.3	94	49.00
naphthalene	(H)	ND 7.6E-3	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.0E-1	ND 1.2E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.5E-3	ND 5.1E-4	ND 6.3E-3	ND 5.0E+0	36.2	96	93.10
beta-pinene		ND 8.3E-3	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0	39.1	81	93.10
propionaldehyde	(H)	7.8E-3	2.0E-4	2.5E-3	5.2E+0	9.7	46	58.10
toluene	(H)	ND 6.3E-3	ND 2.5E-4	ND 3.2E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.9E-3	2.4E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	35.6
Sampling Date:	9/17/96
Sampling Start Time:	9:50
Sampling End Time:	10:23

2/19/97
12:00 PM

TABLE D-5 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 4

WMU4RDN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.1E+0	4.0E-3	5.0E-2	1.0E+3	6.0	99	43.00
biphenyl	(H)	ND 4.3E-2	ND 2.9E-4	ND 3.7E-3	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.3E-2	ND 4.5E-5	ND 5.6E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.5E-2	ND 9.1E-5	ND 1.1E-3	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.2E-5	ND 7.8E-4	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.2E-2	ND 6.4E-5	ND 8.0E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.5E-5	ND 9.4E-4	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	1.7E-1	6.7E-4	8.4E-3	8.7E+1	18.6	100	45.05
limonene		ND 1.2E-2	ND 7.2E-5	ND 9.1E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.2E-1	4.5E-4	5.7E-3	1.4E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.7E+0	5.5E-3	6.8E-2	6.9E+2	15.7	98	43.05
methylene chloride	(H)	6.0E+0	2.2E-2	2.8E-1	1.8E+3	11.3	99	49.00
naphthalene	(H)	1.5E-2	8.5E-5	1.1E-3	5.1E+0	49.8	100	128.05
phenol	(H)	ND 5.8E-1	ND 2.4E-3	ND 3.0E-2	ND 5.0E+1			
alpha-pinene		ND 1.6E-2	ND 9.9E-5	ND 1.2E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.6E-2	ND 9.7E-5	ND 1.2E-3	ND 5.0E+0			
propionaldehyde	(H)	1.6E-2	4.2E-5	5.2E-4	5.6E+0	9.6	46	58.10
toluene	(H)	ND 1.2E-2	ND 5.0E-5	ND 6.2E-4	ND 5.0E+0	25.6	97	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.3E-2	4.1E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.9
Source Temp (C):	28.9
Sampling Date:	9/17/96
Sampling Start Time:	9:48
Sampling End Time:	10:20

2/19/97
12:00 PM

TABLE D-6 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 4

WMU4RDNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.0E+0	3.9E-3	4.9E-2	1.0E+3	6.0	99	43.00
biphenyl	(H)	ND 4.3E-2	ND 2.9E-4	ND 3.7E-3	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.3E-2	ND 4.5E-5	ND 5.6E-4	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.5E-2	ND 9.1E-5	ND 1.1E-3	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.2E-5	ND 7.8E-4	ND 5.0E+0	16.7	99	82.95
cumene	(H)	ND 1.2E-2	ND 6.4E-5	ND 8.0E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.5E-5	ND 9.4E-4	ND 5.0E+0			
1,2-dimethoxyethane	(H)	1.6E-1	6.5E-4	8.1E-3	8.4E+1	18.6	100	45.05
limonene		ND 1.2E-2	ND 7.2E-5	ND 9.1E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.4E-1	4.8E-4	5.9E-3	1.5E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.7E+0	5.5E-3	6.8E-2	7.0E+2	15.7	98	43.05
methylene chloride	(H)	5.9E+0	2.2E-2	2.8E-1	1.8E+3	11.3	99	49.00
naphthalene	(H)	ND 1.5E-2	ND 8.3E-5	ND 1.0E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 5.8E-1	ND 2.4E-3	ND 3.0E-2	ND 5.0E+1			
alpha-pinene		ND 1.6E-2	ND 9.9E-5	ND 1.2E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.6E-2	ND 9.7E-5	ND 1.2E-3	ND 5.0E+0			
propionaldehyde	(H)	1.6E-2	4.2E-5	5.2E-4	5.6E+0	9.7	46	58.10
toluene	(H)	ND 1.2E-2	ND 5.0E-5	ND 6.2E-4	ND 5.0E+0	25.6	98	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.3E-2	4.1E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.9
Source Temp (C):	28.9
Sampling Date:	9/17/96
Sampling Start Time:	9:48
Sampling End Time:	10:20

TABLE E-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1REN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.2E-1	2.2E-3	2.8E-2	5.2E+1	6.0	97	43.00
biphenyl	(H)	ND 5.0E-2	ND 3.2E-3	ND 4.1E-2	ND 5.0E+0	55.0	35	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
chloroform	(H)	ND 1.4E-2	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.4E-2	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0			
p-cymene		ND 1.5E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0			
1,2-dimethoxyethane	(H)	3.7E-2	1.4E-3	1.8E-2	1.7E+1	18.7	98	45.05
limonene		ND 1.4E-2	ND 8.0E-4	ND 1.0E-2	ND 5.0E+0	41.6	0	68.10
methanol	(H)	1.7E-1	2.3E-3	2.9E-2	6.5E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	5.1E-2	1.5E-3	1.9E-2	1.8E+1	15.7	95	43.05
methylene chloride	(H)	2.6E-1	9.2E-3	1.1E-1	6.7E+1	11.3	97	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.8E-1	ND 2.7E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 1.7E-2	ND 4.1E-4	ND 5.1E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.5E-4	ND 6.8E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.7E-2	2.1E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.3
Source Temp (C):	41.7
Sampling Date:	9/17/96
Sampling Start Time:	11:00
Sampling End Time:	11:30

TABLE E-2 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

WMU1RENX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.3E-1	2.3E-3	2.9E-2	5.4E+1	6.0	100	43.00
biphenyl	(H)	ND 5.0E-2	ND 3.2E-3	ND 4.1E-2	ND 5.0E+0	55.0	35	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.7E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
chloroform	(H)	ND 1.4E-2	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 1.4E-2	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0			
p-cymene		ND 1.5E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0			
1,2-dimethoxyethane	(H)	3.4E-2	1.3E-3	1.6E-2	1.5E+1	18.7	98	45.05
limonene		ND 1.4E-2	ND 8.0E-4	ND 1.0E-2	ND 5.0E+0	41.6	0	68.10
methanol	(H)	2.1E-1	2.9E-3	3.6E-2	8.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	5.1E-2	1.5E-3	1.9E-2	1.8E+1	15.7	96	43.05
methylene chloride	(H)	2.6E-1	9.3E-3	1.2E-1	6.8E+1	11.3	97	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.8E-1	ND 2.7E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.7E-2	ND 4.1E-4	ND 5.1E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.5E-4	ND 6.8E-3	ND 5.0E+0	25.6	98	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.7E-2	2.2E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.3
Source Temp (C):	41.7
Sampling Date:	9/17/96
Sampling Start Time:	11:00
Sampling End Time:	11:30

TABLE E-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2REN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.8E-2	9.7E-4	1.2E-2	2.6E+1	6.0	83	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.2E-3	ND 8.9E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.4E-3	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0	16.6	96	82.95
cumene	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.8E-3	ND 5.0E+0			
p-cymene		ND 6.8E-3	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.7	93	119.15
1,2-dimethoxyethane	(H)	ND 5.2E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.5E-3	ND 7.0E-4	ND 8.8E-3	ND 5.0E+0	41.5	56	68.10
methanol	(H)	1.5E-2	3.9E-4	4.9E-3	1.2E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.7E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	15.7	94	43.05
methylene chloride	(H)	5.1E-2	3.5E-3	4.3E-2	2.9E+1	11.3	96	49.00
naphthalene	(H)	ND 7.9E-3	ND 8.1E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 8.9E-3	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.7E-3	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 7.9E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.6E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			4.8E-3	6.0E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	33.9
Sampling Date:	9/17/96
Sampling Start Time:	11:00
Sampling End Time:	11:30

2/19/97
12:00 PM

TABLE E-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3REN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.8E-2	3.4E-4	4.2E-3	1.7E+1	6.0	76	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.1E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.0E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
chloroform	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.2E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.7E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0			
limonene		ND 6.4E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	2.4E-2	3.4E-4	4.2E-3	2.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.6E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	90	43.05
methylene chloride	(H)	2.5E-2	9.4E-4	1.2E-2	1.4E+1	11.3	96	49.00
naphthalene	(H)	ND 7.8E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.8E-3	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.6E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 7.7E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.5E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.6E-3	2.0E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	36.1
Sampling Date:	9/17/96
Sampling Start Time:	11:00
Sampling End Time:	11:30

TABLE E-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RED

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.6E+0	5.1E-3	6.4E-2	1.2E+3	5.9	98	43.00
biphenyl	(H)	ND 4.6E-2	ND 3.1E-4	ND 3.9E-3	ND 5.0E+0	54.9	85	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.8E-5	ND 6.0E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.7E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.6E-5	ND 8.3E-4	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 1.3E-2	ND 6.9E-5	ND 8.6E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 8.0E-5	ND 1.0E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	2.3E-1	9.1E-4	1.1E-2	1.1E+2	18.6	100	45.05
limonene		ND 1.3E-2	ND 7.7E-5	ND 9.6E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.7E-1	5.3E-4	6.6E-3	1.5E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	2.0E+0	6.4E-3	8.0E-2	7.6E+2	15.7	98	43.05
methylene chloride	(H)	6.6E+0	2.5E-2	3.1E-1	1.9E+3	11.3	99	49.00
naphthalene	(H)	ND 1.6E-2	ND 8.9E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.2E-1	ND 2.6E-3	ND 3.2E-2	ND 5.0E+1			
alpha-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	2.0E-2	5.2E-5	6.5E-4	6.5E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.3E-5	ND 6.6E-4	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.8E-2	4.7E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.9
Source Temp (C):	28.9
Sampling Date:	9/17/96
Sampling Start Time:	11:00
Sampling End Time:	11:30

TABLE E-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4REN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.0E+0	5.9E-3	7.4E-2	1.4E+3	6.0	98	43.00
biphenyl	(H)	ND 4.7E-2	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-5	ND 6.1E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.9E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.8E-5	ND 8.5E-4	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 1.3E-2	ND 7.0E-5	ND 8.8E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.4E-2	ND 8.2E-5	ND 1.0E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	2.0E-1	8.2E-4	1.0E-2	9.8E+1	18.6	100	45.05
limonene		ND 1.3E-2	ND 7.9E-5	ND 9.9E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.9E-1	5.5E-4	6.8E-3	1.5E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	2.1E+0	6.8E-3	8.5E-2	7.9E+2	15.7	99	43.05
methylene chloride	(H)	7.1E+0	2.7E-2	3.3E-1	2.0E+3	11.3	99	49.00
naphthalene	(H)	ND 1.6E-2	ND 9.1E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.4E-1	ND 2.6E-3	ND 3.3E-2	ND 5.0E+1	44.3	40	94.10
alpha-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.6E-2	ND 4.1E-5	ND 5.1E-4	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.4E-5	ND 6.8E-4	ND 5.0E+0	25.6	98	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			4.1E-2	5.1E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.9
Source Temp (C):	28.9
Sampling Date:	9/17/96
Sampling Start Time:	10:58
Sampling End Time:	11:28

TABLE F-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RFN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.6E-1	2.9E-3	3.7E-2	6.9E+1	6.0	94	43.00
biphenyl	(H)	ND 5.0E-2	ND 3.2E-3	ND 4.1E-2	ND 5.0E+0	55.0	35	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 5.0E-4	ND 6.2E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
chloroform	(H)	ND 1.4E-2	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	16.6	96	82.95
cumene	(H)	ND 1.4E-2	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0			
p-cymene		ND 1.5E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0			
1,2-dimethoxyethane	(H)	5.0E-2	1.9E-3	2.4E-2	2.3E+1	18.7	98	45.05
limonene		ND 1.4E-2	ND 8.0E-4	ND 1.0E-2	ND 5.0E+0	41.5	0	68.10
methanol	(H)	2.9E-1	3.8E-3	4.8E-2	1.1E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	6.9E-2	2.1E-3	2.6E-2	2.4E+1	15.7	96	43.05
methylene chloride	(H)	3.5E-1	1.3E-2	1.6E-1	9.3E+1	11.3	97	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.2E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.8E-1	ND 2.7E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 1.7E-2	ND 4.1E-4	ND 5.1E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.5E-4	ND 6.8E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.3E-2	2.9E-1				

ND x.xEx = Below Detection Limit of x.xEx

** = Below Calibration Limit; value estimated*

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.1
Source Temp (C):	41.7
Sampling Date:	9/17/96
Sampling Start Time:	12:20
Sampling End Time:	12:50

TABLE F-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RFN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.2E-2	1.5E-3	1.9E-2	3.9E+1	6.0	83	43.00
biphenyl	(H)	ND 2.4E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+0	54.9	87	154.15
carbon disulfide	(H)	ND 7.4E-3	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.3E-3	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.5E-3	ND 6.2E-4	ND 7.7E-3	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 6.7E-3	ND 6.4E-4	ND 8.0E-3	ND 5.0E+0			
p-cymene		ND 7.0E-3	ND 7.4E-4	ND 9.3E-3	ND 5.0E+0	41.7	92	119.15
1,2-dimethoxyethane	(H)	ND 5.3E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.6E-3	ND 7.2E-4	ND 9.0E-3	ND 5.0E+0	41.5	89	68.10
methanol	(H)	6.9E-2	1.7E-3	2.2E-2	5.4E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.1E-2	6.2E-4	7.7E-3	7.9E+0	15.7	93	43.05
methylene chloride	(H)	8.4E-2	5.7E-3	7.1E-2	4.6E+1	11.3	96	49.00
naphthalene	(H)	ND 8.1E-3	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.1E-3	ND 9.8E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.9E-3	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 8.0E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.7E-3	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			9.5E-3	1.2E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	1.8
Source Temp (C):	32.8
Sampling Date:	9/17/96
Sampling Start Time:	12:20
Sampling End Time:	12:50

TABLE F-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RFNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.2E-2	1.5E-3	1.8E-2	3.8E+1	6.0	93	43.00
biphenyl	(H)	ND 2.4E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+0	54.9	90	154.15
carbon disulfide	(H)	ND 7.4E-3	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.3E-3	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.5E-3	ND 6.2E-4	ND 7.7E-3	ND 5.0E+0	16.7	96	82.95
cumene	(H)	ND 6.7E-3	ND 6.4E-4	ND 8.0E-3	ND 5.0E+0			
p-cymene		ND 7.0E-3	ND 7.4E-4	ND 9.3E-3	ND 5.0E+0	41.8	93	119.15
1,2-dimethoxyethane	(H)	ND 5.3E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.6E-3	ND 7.2E-4	ND 9.0E-3	ND 5.0E+0	41.5	89	68.10
methanol	(H)	1.8E-2	4.6E-4	5.7E-3	1.4E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.1E-2	6.2E-4	7.7E-3	1.9E+0	15.7	95	43.05
methylene chloride	(H)	8.5E-2	5.7E-3	7.2E-2	4.1E+1	11.3	96	49.00
naphthalene	(H)	ND 8.1E-3	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.1E-3	ND 9.8E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.9E-3	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 8.0E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.7E-3	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			8.3E-3	1.0E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	1.8
Source Temp (C):	32.8
Sampling Date:	9/17/96
Sampling Start Time:	12:20
Sampling End Time:	12:50

TABLE F-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RFD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.5E-2	2.8E-4	3.5E-3	1.4E+1	6.0	97	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	90	154.15
carbon disulfide	(H)	ND 7.1E-3	ND 2.3E-4	ND 2.9E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.0E-3	ND 4.8E-4	ND 5.9E-3	ND 5.0E+0			
chloroform	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.4E-3	ND 3.4E-4	ND 4.2E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 6.7E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	41.7	90	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.4E-3	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	1.1E-1	1.5E-3	1.9E-2	9.1E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.5E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	4.1E-2	1.5E-3	1.9E-2	2.4E+1	11.3	97	49.00
naphthalene	(H)	ND 7.8E-3	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.7E-3	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.5E-3	ND 5.1E-4	ND 6.3E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 7.7E-3	ND 1.9E-4	ND 2.4E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.5E-3	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.4E-3	4.2E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	36.1
Sampling Date:	9/17/96
Sampling Start Time:	12:20
Sampling End Time:	12:50

TABLE F-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RFN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.5E-2	2.9E-4	3.7E-3	1.4E+1	6.0	93	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.6E-3	ND 2.0E-2	ND 5.0E+0	54.9	99	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.1E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	40.6	95	93.10
chloroform	(H)	ND 6.4E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	96	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.3E-3	ND 5.0E+0	36.3	98	105.10
p-cymene		ND 6.8E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	41.7	92	119.15
1,2-dimethoxyethane	(H)	ND 5.2E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.5E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.5	91	68.10
methanol	(H)	1.0E-1	1.4E-3	1.7E-2	8.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.6E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	4.6E-2	1.7E-3	2.1E-2	2.6E+1	11.3	97	49.00
naphthalene	(H)	ND 7.9E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.9E-3	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	36.2	94	93.10
beta-pinene		ND 8.7E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	39.0	90	93.10
propionaldehyde	(H)	ND 7.8E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.6E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.4E-3	4.3E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	36.1
Sampling Date:	9/17/96
Sampling Start Time:	12:20
Sampling End Time:	12:50

TABLE F-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RFN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.9E+0	7.5E-3	9.4E-2	1.8E+3	6.0	98	43.00
biphenyl	(H)	ND 4.6E-2	ND 3.1E-4	ND 3.9E-3	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.8E-5	ND 5.9E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.6E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.6E-5	ND 8.3E-4	ND 5.0E+0	16.7	99	82.95
cumene	(H)	ND 1.3E-2	ND 6.8E-5	ND 8.5E-4	ND 5.0E+0			
p-cymene		ND 1.3E-2	ND 7.9E-5	ND 9.9E-4	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	2.9E-1	1.2E-3	1.5E-2	1.4E+2	18.6	100	45.05
limonene		ND 1.3E-2	ND 7.7E-5	ND 9.6E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	5.4E-1	7.6E-4	9.5E-3	2.2E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	2.4E+0	7.8E-3	9.8E-2	9.4E+2	15.8	99	43.05
methylene chloride	(H)	8.7E+0	3.3E-2	4.1E-1	2.5E+3	11.4	97	49.00
naphthalene	(H)	ND 1.6E-2	ND 8.8E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.2E-1	ND 2.6E-3	ND 3.2E-2	ND 5.0E+1			
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	2.0E-2	5.1E-5	6.4E-4	6.4E+0	9.7	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.3E-5	ND 6.6E-4	ND 5.0E+0	25.6	97	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			5.0E-2	6.2E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	4.1
Source Temp (C):	29.4
Sampling Date:	9/17/96
Sampling Start Time:	12:18
Sampling End Time:	12:48

TABLE G-1 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

WMU1RGN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.7E-1	5.1E-3	6.3E-2	1.2E+2	6.0	97	43.00
biphenyl	(H)	ND 5.0E-2	ND 3.2E-3	ND 4.0E-2	ND 5.0E+0	54.9	96	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-4	ND 6.1E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 9.9E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 1.4E-2	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0	16.7	95	82.95
cumene	(H)	ND 1.4E-2	ND 7.0E-4	ND 8.8E-3	ND 5.0E+0			
p-cymene		ND 1.4E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0	41.7	93	119.15
1,2-dimethoxyethane	(H)	8.2E-2	3.1E-3	3.9E-2	3.7E+1	18.6	99	45.05
limonene		ND 1.4E-2	ND 7.9E-4	ND 9.9E-3	ND 5.0E+0	41.5	90	68.10
methanol	(H)	4.8E-1	6.5E-3	8.1E-2	1.8E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.2E-1	3.6E-3	4.5E-2	4.2E+1	15.7	95	43.05
methylene chloride	(H)	5.4E-1	1.9E-2	2.4E-1	1.4E+2	11.3	97	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.7E-1	ND 2.7E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0			
beta-pinene		ND 1.8E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0			
propionaldehyde	(H)	4.4E-2	1.1E-3	1.3E-2	1.3E+1	9.6	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.4E-4	ND 6.8E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.9E-2	4.8E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.0
Source Temp (C):	42.8
Sampling Date:	9/17/96
Sampling Start Time:	13:30
Sampling End Time:	14:00

TABLE G-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RGN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.0E-2	1.7E-3	2.2E-2	4.7E+1	6.0	87	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.8E-3	ND 3.5E-2	ND 5.0E+0	54.9	86	154.15
carbon disulfide	(H)	ND 7.1E-3	ND 4.3E-4	ND 5.3E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.0E-3	ND 8.6E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.3E-3	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 6.4E-3	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0			
p-cymene		ND 6.7E-3	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.8	93	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 3.6E-4	ND 4.6E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.4E-3	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	2.6E-2	6.7E-4	8.4E-3	2.2E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.8E-2	1.0E-3	1.3E-2	1.4E+1	15.7	94	43.05
methylene chloride	(H)	9.7E-2	6.6E-3	8.2E-2	5.6E+1	11.3	96	49.00
naphthalene	(H)	ND 7.7E-3	ND 7.9E-4	ND 9.9E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 2.3E-2	ND 2.9E-1	ND 5.0E+1			
alpha-pinene		ND 8.7E-3	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.5E-3	ND 9.2E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 7.7E-3	ND 3.5E-4	ND 4.4E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.5E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.0E-2	1.3E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	33.9
Sampling Date:	9/17/96
Sampling Start Time:	13:30
Sampling End Time:	14:00

TABLE G-3 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 2

WMU2RGD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.6E-2	1.3E-3	1.6E-2	3.5E+1	6.0	96	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.8E-3	ND 3.5E-2	ND 5.0E+0	54.9	99	154.15
carbon disulfide	(H)	ND 7.0E-3	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 7.9E-3	ND 8.6E-4	ND 1.1E-2	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 6.2E-3	ND 5.9E-4	ND 7.3E-3	ND 5.0E+0	16.7	98	82.95
cumene	(H)	ND 6.4E-3	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.6E-3	ND 7.1E-4	ND 8.8E-3	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 5.0E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.3E-3	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0	41.6	0	68.10
methanol	(H)	2.8E-2	7.2E-4	9.0E-3	2.3E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.4E-2	8.1E-4	1.0E-2	1.1E+1	15.7	94	43.05
methylene chloride	(H)	7.2E-2	4.9E-3	6.1E-2	4.2E+1	11.3	97	49.00
naphthalene	(H)	ND 7.7E-3	ND 7.8E-4	ND 9.8E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 2.3E-2	ND 2.9E-1	ND 5.0E+1			
alpha-pinene		ND 8.6E-3	ND 9.3E-4	ND 1.2E-2	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.4E-3	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0	39.1	0	93.10
propionaldehyde	(H)	ND 7.6E-3	ND 3.5E-4	ND 4.4E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.4E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.6E-3	9.6E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	1.7
Source Temp (C):	38.3
Sampling Date:	9/17/96
Sampling Start Time:	13:30
Sampling End Time:	14:00

TABLE G-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RGN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.0E-2	5.8E-4	7.3E-3	2.9E+1	6.0	88	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	91	154.15
carbon disulfide	(H)	ND 7.1E-3	ND 2.3E-4	ND 2.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.0E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	40.6	97	93.10
chloroform	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 6.4E-3	ND 3.4E-4	ND 4.2E-3	ND 5.0E+0	36.3	97	105.10
p-cymene		ND 6.7E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	41.7	93	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.4E-3	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	41.5	89	68.10
methanol	(H)	2.4E-2	3.4E-4	4.2E-3	2.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.5E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	94	43.05
methylene chloride	(H)	3.5E-2	1.3E-3	1.6E-2	2.0E+1	11.3	94	49.00
naphthalene	(H)	ND 7.7E-3	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.7E-3	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	36.2	95	93.10
beta-pinene		ND 8.5E-3	ND 5.1E-4	ND 6.3E-3	ND 5.0E+0	39.0	89	93.10
propionaldehyde	(H)	7.9E-3	2.0E-4	2.5E-3	5.2E+0	9.6	46	58.10
toluene	(H)	ND 6.5E-3	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.4E-3	3.0E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.7
Source Temp (C):	38.3
Sampling Date:	9/17/96
Sampling Start Time:	13:30
Sampling End Time:	14:00

TABLE G-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RGNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.1E-2	5.9E-4	7.4E-3	2.9E+1	6.0	94	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	89	154.15
carbon disulfide	(H)	ND 7.1E-3	ND 2.3E-4	ND 2.9E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.0E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	40.6	97	93.10
chloroform	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 6.4E-3	ND 3.4E-4	ND 4.2E-3	ND 5.0E+0	36.3	98	105.10
p-cymene		ND 6.7E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	41.7	94	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.4E-3	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	41.5	91	68.10
methanol	(H)	2.4E-2	3.4E-4	4.3E-3	2.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.5E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	3.5E-2	1.3E-3	1.6E-2	2.0E+1	11.3	94	49.00
naphthalene	(H)	ND 7.7E-3	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.7E-3	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	36.2	94	93.10
beta-pinene		ND 8.5E-3	ND 5.1E-4	ND 6.3E-3	ND 5.0E+0	39.0	88	93.10
propionaldehyde	(H)	8.0E-3	2.0E-4	2.5E-3	5.2E+0	9.6	46	58.10
toluene	(H)	ND 6.5E-3	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.4E-3	3.0E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.7
Source Temp (C):	38.3
Sampling Date:	9/17/96
Sampling Start Time:	13:30
Sampling End Time:	14:00

2/19/97
12:00 PM

TABLE G-6 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 4

WMU4RGN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.8E+0	1.1E-2	1.4E-1	2.7E+3	6.0	98	43.00
biphenyl	(H)	ND 4.7E-2	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	54.9	92	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-5	ND 6.2E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.7E-2	ND 1.0E-4	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.8E-5	ND 8.5E-4	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 1.3E-2	ND 7.0E-5	ND 8.8E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.4E-2	ND 8.2E-5	ND 1.0E-3	ND 5.0E+0			
1,2-dimethoxyethane	(H)	4.4E-1	1.8E-3	2.2E-2	2.1E+2	18.6	100	45.05
limonene		ND 1.3E-2	ND 7.9E-5	ND 9.9E-4	ND 5.0E+0			
methanol	(H)	8.1E-1	1.1E-3	1.4E-2	3.2E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	3.9E+0	1.2E-2	1.5E-1	1.4E+3	15.8	99	43.05
methylene chloride	(H)	1.5E+1	5.6E-2	7.1E-1	4.2E+3	11.4	19	49.00
naphthalene	(H)	ND 1.6E-2	ND 9.1E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.4E-1	ND 2.7E-3	ND 3.3E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.4E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	ND 1.6E-2	ND 4.1E-5	ND 5.1E-4	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.4E-5	ND 6.8E-4	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			8.3E-2	1.0E+0				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	4.1
Source Temp (C):	29.4
Sampling Date:	9/17/96
Sampling Start Time:	13:28
Sampling End Time:	13:58

TABLE H-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RHN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.0E-1	3.7E-3	4.6E-2	9.9E+1	6.0	98	43.00
biphenyl	(H)	ND 4.4E-2	ND 2.8E-3	ND 3.5E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.5E-2	ND 8.8E-4	ND 1.1E-2	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 1.2E-2	ND 6.0E-4	ND 7.5E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.2E-2	ND 6.2E-4	ND 7.8E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 1.3E-2	ND 7.2E-4	ND 9.0E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	7.3E-2	2.8E-3	3.5E-2	3.7E+1	18.6	99	45.05
limonene		ND 1.2E-2	ND 7.0E-4	ND 8.7E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.8E-1	5.1E-3	6.4E-2	1.6E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.0E-1	3.0E-3	3.8E-2	4.0E+1	15.7	96	43.05
methylene chloride	(H)	4.1E-1	1.5E-2	1.8E-1	1.2E+2	11.3	97	49.00
naphthalene	(H)	ND 1.5E-2	ND 8.0E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 5.9E-1	ND 2.3E-2	ND 2.9E-1	ND 5.0E+1			
alpha-pinene		ND 1.7E-2	ND 9.5E-4	ND 1.2E-2	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 1.6E-2	ND 9.3E-4	ND 1.2E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.5E-2	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.2E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.9E-2	3.6E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.0
Source Temp (C):	43.3
Sampling Date:	9/17/96
Sampling Start Time:	14:30
Sampling End Time:	15:00

2/19/97
12:00 PM

TABLE H-2 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

WMU1RHD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.5E-1	4.6E-3	5.8E-2	1.2E+2	6.0	98	43.00
biphenyl	(H)	ND 4.5E-2	ND 2.9E-3	ND 3.7E-2	ND 5.0E+0	54.9	96	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.2E-4	ND 7.8E-3	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 1.3E-2	ND 6.4E-4	ND 8.1E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.5E-4	ND 9.4E-3	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	9.7E-2	3.7E-3	4.6E-2	4.8E+1	18.6	99	45.05
limonene		ND 1.3E-2	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	4.2E-1	5.7E-3	7.1E-2	1.7E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.1E-1	3.5E-3	4.3E-2	4.4E+1	15.7	96	43.05
methylene chloride	(H)	4.5E-1	1.6E-2	2.0E-1	1.3E+2	11.3	97	49.00
naphthalene	(H)	ND 1.5E-2	ND 8.3E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.1E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 1.7E-2	ND 9.9E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0	39.1	0	93.10
propionaldehyde	(H)	ND 1.5E-2	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.0E-4	ND 6.2E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.4E-2	4.2E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.0
Source Temp (C):	43.3
Sampling Date:	9/17/96
Sampling Start Time:	14:30
Sampling End Time:	15:00

TABLE H-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RHN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.8E-2	1.3E-3	1.7E-2	3.5E+1	6.0	95	43.00
biphenyl	(H)	ND 2.4E-2	ND 2.9E-3	ND 3.7E-2	ND 5.0E+0	54.9	89	154.15
carbon disulfide	(H)	ND 7.4E-3	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.4E-3	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.6E-3	ND 6.2E-4	ND 7.8E-3	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 6.7E-3	ND 6.4E-4	ND 8.0E-3	ND 5.0E+0			
p-cymene		ND 7.0E-3	ND 7.5E-4	ND 9.4E-3	ND 5.0E+0			
1,2-dimethoxyethane	(H)	ND 5.4E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.7E-3	ND 7.2E-4	ND 9.0E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	2.0E-2	5.2E-4	6.5E-3	1.6E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.5E-2	8.4E-4	1.0E-2	1.1E+1	15.7	94	43.05
methylene chloride	(H)	6.8E-2	4.6E-3	5.7E-2	3.7E+1	11.3	96	49.00
naphthalene	(H)	ND 8.2E-3	ND 8.3E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.1E-3	ND 9.9E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.9E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 8.1E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.8E-3	ND 5.0E-4	ND 6.2E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.3E-3	9.1E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	1.9
Source Temp (C):	35.6
Sampling Date:	9/17/96
Sampling Start Time:	14:30
Sampling End Time:	15:00

TABLE H-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RHN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.2E-2	4.1E-4	5.2E-3	2.0E+1	6.0	97	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.6E-3	ND 2.0E-2	ND 5.0E+0	54.9	97	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.1E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	40.6	94	93.10
chloroform	(H)	ND 6.4E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	97	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.3E-3	ND 5.0E+0	36.3	99	105.10
p-cymene		ND 6.8E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	41.7	91	119.15
1,2-dimethoxyethane	(H)	ND 5.2E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.5E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.5	91	68.10
methanol	(H)	2.8E-2	4.0E-4	5.0E-3	2.3E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.6E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	95	43.05
methylene chloride	(H)	3.2E-2	1.2E-3	1.5E-2	1.8E+1	11.3	95	49.00
naphthalene	(H)	ND 7.9E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.9E-3	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	36.2	97	93.10
beta-pinene		ND 8.7E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	39.0	86	93.10
propionaldehyde	(H)	ND 7.8E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.6E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.0E-3	2.5E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	37.8
Sampling Date:	9/17/96
Sampling Start Time:	14:30
Sampling End Time:	15:00

TABLE I-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RIN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.2E-2	9.6E-4	1.2E-2	2.3E+1	6.0	97	43.00
biphenyl	(H)	ND 4.9E-2	ND 3.2E-3	ND 4.0E-2	ND 5.0E+0	54.9	84	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.8E-4	ND 6.1E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 9.8E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.7E-4	ND 8.4E-3	ND 5.0E+0	16.6	18	82.95
cumene	(H)	ND 1.4E-2	ND 6.9E-4	ND 8.7E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 1.4E-2	ND 8.1E-4	ND 1.0E-2	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 1.1E-2	ND 4.1E-4	ND 5.2E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 1.4E-2	ND 7.8E-4	ND 9.8E-3	ND 5.0E+0	41.5	10	68.10
methanol	(H)	6.3E-1	8.4E-3	1.1E-1	2.4E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.4E-2	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0	15.7	94	43.05
methylene chloride	(H)	5.5E-2	2.0E-3	2.5E-2	1.5E+1	11.3	97	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.6E-1	ND 2.6E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.6E-2	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.4E-4	ND 6.7E-3	ND 5.0E+0	25.6	98	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.1E-2	1.4E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	3.9
Source Temp (C):	40.0
Sampling Date:	9/18/96
Sampling Start Time:	9:05
Sampling End Time:	9:35

TABLE I-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RINX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.0E-2	9.2E-4	1.1E-2	2.2E+1	6.0	73	43.00
biphenyl	(H)	ND 4.9E-2	ND 3.2E-3	ND 4.0E-2	ND 5.0E+0	54.9	89	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.8E-4	ND 6.1E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 9.8E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.7E-4	ND 8.4E-3	ND 5.0E+0	16.6	18	82.95
cumene	(H)	ND 1.4E-2	ND 6.9E-4	ND 8.7E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 1.4E-2	ND 8.1E-4	ND 1.0E-2	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 1.1E-2	ND 4.1E-4	ND 5.2E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 1.4E-2	ND 7.8E-4	ND 9.8E-3	ND 5.0E+0	41.6	0	68.10
methanol	(H)	5.9E-1	7.9E-3	9.9E-2	2.2E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.4E-2	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0	15.7	94	43.05
methylene chloride	(H)	5.6E-2	2.0E-3	2.5E-2	1.5E+1	11.3	96	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.6E-1	ND 2.6E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.6E-2	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.4E-4	ND 6.7E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.1E-2	1.4E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	3.9
Source Temp (C):	40.0
Sampling Date:	9/18/96
Sampling Start Time:	9:05
Sampling End Time:	9:35

2/19/97
12:00 PM

TABLE I-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RIN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.3E-2	1.1E-3	1.4E-2	3.2E+1	6.0	70	43.00
biphenyl	(H)	ND 2.2E-2	ND 2.8E-3	ND 3.4E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 6.9E-3	ND 4.2E-4	ND 5.2E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 7.9E-3	ND 8.5E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.2E-3	ND 5.8E-4	ND 7.3E-3	ND 5.0E+0	16.7	96	82.95
cumene	(H)	ND 6.3E-3	ND 6.0E-4	ND 7.5E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 6.6E-3	ND 7.0E-4	ND 8.7E-3	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 5.0E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.3E-3	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	6.6E-2	1.7E-3	2.1E-2	5.5E+1	6.9	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.4E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	15.7	92	43.05
methylene chloride	(H)	2.1E-2	1.4E-3	1.8E-2	1.2E+1	11.3	96	49.00
naphthalene	(H)	ND 7.6E-3	ND 7.8E-4	ND 9.7E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.0E-1	ND 2.3E-2	ND 2.8E-1	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 8.5E-3	ND 9.2E-4	ND 1.2E-2	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.4E-3	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	1.7E-2	8.0E-4	1.0E-2	1.1E+1	9.7	46	58.10
toluene	(H)	ND 6.4E-3	ND 4.6E-4	ND 5.8E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			5.0E-3	6.3E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	1.8
Source Temp (C):	31.7
Sampling Date:	9/18/96
Sampling Start Time:	9:05
Sampling End Time:	9:35

TABLE I-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RIN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.7E-2	3.2E-4	4.1E-3	1.6E+1	5.5	75	43.00
biphenyl	(H)	ND 2.2E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	96	154.15
carbon disulfide	(H)	ND 6.9E-3	ND 2.3E-4	ND 2.9E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 7.8E-3	ND 4.6E-4	ND 5.8E-3	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 6.1E-3	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.5E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 5.0E-3	ND 2.0E-4	ND 2.4E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.2E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	41.5	54	68.10
methanol	(H)	2.0E-2	2.8E-4	3.6E-3	1.7E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.4E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	15.7	92	43.05
methylene chloride	(H)	1.3E-2	4.7E-4	5.9E-3	7.4E+0	11.3	95	49.00
naphthalene	(H)	ND 7.6E-3	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.0E-1	ND 1.2E-2	ND 1.5E-1	ND 5.0E+1			
alpha-pinene		ND 8.5E-3	ND 5.1E-4	ND 6.3E-3	ND 5.0E+0	36.2	91	93.10
beta-pinene		ND 8.3E-3	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0	39.0	66	93.10
propionaldehyde	(H)	ND 7.5E-3	ND 1.9E-4	ND 2.4E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.3E-3	ND 2.5E-4	ND 3.2E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.1E-3	1.3E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	35.0
Sampling Date:	9/18/96
Sampling Start Time:	9:05
Sampling End Time:	9:35

2/19/97
12:00 PM

TABLE I-5 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 4

WMU4RIN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.1E-1	7.9E-4	9.9E-3	2.0E+2	5.9	98	43.00
biphenyl	(H)	ND 4.4E-2	ND 3.0E-4	ND 3.8E-3	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.6E-5	ND 5.7E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.5E-2	ND 9.3E-5	ND 1.2E-3	ND 5.0E+0	40.5	0	93.10
chloroform	(H)	ND 1.2E-2	ND 6.4E-5	ND 7.9E-4	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 1.2E-2	ND 6.6E-5	ND 8.2E-4	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 1.3E-2	ND 7.6E-5	ND 9.5E-4	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	3.9E-2	1.6E-4	2.0E-3	2.0E+1	18.7	99	45.05
limonene		ND 1.2E-2	ND 7.4E-5	ND 9.2E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	8.4E-1	1.2E-3	1.5E-2	3.6E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	3.3E-1	1.1E-3	1.3E-2	1.3E+2	15.7	97	43.05
methylene chloride	(H)	1.2E+0	4.6E-3	5.7E-2	3.6E+2	11.3	98	49.00
naphthalene	(H)	ND 1.5E-2	ND 8.5E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.0E-1	ND 2.5E-3	ND 3.1E-2	ND 5.0E+1			
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 1.6E-2	ND 9.9E-5	ND 1.2E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.5E-2	ND 3.8E-5	ND 4.8E-4	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.2E-2	ND 5.1E-5	ND 6.3E-4	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.8E-3	9.7E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.8
Source Temp (C):	28.3
Sampling Date:	9/18/96
Sampling Start Time:	9:03
Sampling End Time:	9:33

2/19/97
12:00 PM

TABLE J-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RJN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	8.1E-2	1.5E-3	1.9E-2	3.7E+1	6.0	85	43.00
biphenyl	(H)	ND 4.8E-2	ND 3.1E-3	ND 3.9E-2	ND 5.0E+0			
carbon disulfide	(H)	ND 1.5E-2	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.6E-4	ND 8.2E-3	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 1.3E-2	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0			
p-cymene		ND 1.4E-2	ND 7.9E-4	ND 9.9E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 1.1E-2	ND 4.1E-4	ND 5.1E-3	ND 5.0E+0	18.7	93	45.05
limonene		ND 1.3E-2	ND 7.7E-4	ND 9.6E-3	ND 5.0E+0	41.6	0	68.10
methanol	(H)	1.2E+0	1.6E-2	1.9E-1	4.5E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	2.0E-2	6.0E-4	7.5E-3	7.2E+0	15.7	94	43.05
methylene chloride	(H)	1.5E-1	5.4E-3	6.7E-2	4.1E+1	11.3	96	49.00
naphthalene	(H)	ND 1.6E-2	ND 8.8E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.5E-1	ND 2.6E-2	ND 3.2E-1	ND 5.0E+1			
alpha-pinene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 1.6E-2	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.3E-2	2.9E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.1
Source Temp (C):	41.1
Sampling Date:	9/18/96
Sampling Start Time:	10:20
Sampling End Time:	10:50

TABLE J-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RJN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.6E-2	1.3E-3	1.6E-2	3.5E+1	6.0	84	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.8E-3	ND 3.5E-2	ND 5.0E+0	54.9	95	154.15
carbon disulfide	(H)	ND 7.0E-3	ND 4.3E-4	ND 5.3E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.0E-3	ND 8.6E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.3E-3	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 6.4E-3	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 6.7E-3	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.4E-3	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	4.9E-2	1.2E-3	1.6E-2	4.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.5E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	15.7	91	43.05
methylene chloride	(H)	4.6E-2	3.1E-3	3.9E-2	2.7E+1	11.3	96	49.00
naphthalene	(H)	ND 7.7E-3	ND 7.9E-4	ND 9.9E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 2.3E-2	ND 2.9E-1	ND 5.0E+1			
alpha-pinene		ND 8.7E-3	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.5E-3	ND 9.2E-4	ND 1.1E-2	ND 5.0E+0	39.1	0	93.10
propionaldehyde	(H)	ND 7.7E-3	ND 3.5E-4	ND 4.4E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.5E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			5.6E-3	7.1E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.2
Source Temp (C):	27.2
Sampling Date:	9/18/96
Sampling Start Time:	10:20
Sampling End Time:	10:50

TABLE J-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RJNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.8E-2	1.3E-3	1.7E-2	3.7E+1	6.0	81	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.8E-3	ND 3.5E-2	ND 5.0E+0	54.9	86	154.15
carbon disulfide	(H)	ND 7.0E-3	ND 4.3E-4	ND 5.3E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.0E-3	ND 8.6E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.3E-3	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0	16.7	100	82.95
cumene	(H)	ND 6.4E-3	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0			
p-cymene		ND 6.7E-3	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.4E-3	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0			
methanol	(H)	4.4E-2	1.1E-3	1.4E-2	3.6E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.5E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	15.7	91	43.05
methylene chloride	(H)	4.6E-2	3.1E-3	3.9E-2	2.6E+1	11.3	96	49.00
naphthalene	(H)	ND 7.7E-3	ND 7.9E-4	ND 9.9E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 2.3E-2	ND 2.9E-1	ND 5.0E+1			
alpha-pinene		ND 8.7E-3	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.5E-3	ND 9.2E-4	ND 1.1E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 7.7E-3	ND 3.5E-4	ND 4.4E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.5E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			5.6E-3	6.9E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.2
Source Temp (C):	27.2
Sampling Date:	9/18/96
Sampling Start Time:	10:20
Sampling End Time:	10:50

TABLE J-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RJN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.3E-2	4.4E-4	5.5E-3	2.2E+1	5.5	91	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	99	154.15
carbon disulfide	(H)	ND 7.0E-3	ND 2.3E-4	ND 2.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 7.9E-3	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	40.6	94	93.10
chloroform	(H)	ND 6.2E-3	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	36.3	98	105.10
p-cymene		ND 6.6E-3	ND 3.9E-4	ND 4.8E-3	ND 5.0E+0	41.7	93	119.15
1,2-dimethoxyethane	(H)	ND 5.0E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.7	90	45.05
limonene		ND 6.3E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	41.5	88	68.10
methanol	(H)	2.9E-2	4.0E-4	5.0E-3	2.4E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.4E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	1.9E-2	7.1E-4	8.8E-3	1.1E+1	11.3	97	49.00
naphthalene	(H)	ND 7.6E-3	ND 4.3E-4	ND 5.3E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.0E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.6E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	36.2	93	93.10
beta-pinene		ND 8.4E-3	ND 5.0E-4	ND 6.2E-3	ND 5.0E+0	39.0	85	93.10
propionaldehyde	(H)	1.2E-2	3.0E-4	3.7E-3	7.7E+0	9.6	46	58.10
toluene	(H)	ND 6.4E-3	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.8E-3	2.3E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.4
Source Temp (C):	35.6
Sampling Date:	9/18/96
Sampling Start Time:	10:20
Sampling End Time:	10:50

2/19/97
12:00 PM

TABLE J-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RJN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	8.1E-1	1.6E-3	2.0E-2	4.0E+2	5.9	99	43.00
biphenyl	(H)	ND 4.5E-2	ND 3.0E-4	ND 3.8E-3	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.6E-5	ND 5.8E-4	ND 5.0E+0			
3-carene		ND 1.6E-2	ND 9.4E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.4E-5	ND 8.0E-4	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.3E-2	ND 6.6E-5	ND 8.3E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.7E-5	ND 9.7E-4	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	5.7E-2	2.3E-4	2.8E-3	2.9E+1	18.6	99	45.05
limonene		ND 1.2E-2	ND 7.5E-5	ND 9.3E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	2.5E+0	3.5E-3	4.3E-2	1.0E+3	6.5	0	31.15
methyl ethyl ketone (MEK)	(H)	3.8E-1	1.2E-3	1.5E-2	1.5E+2	15.7	97	43.05
methylene chloride	(H)	2.8E+0	1.1E-2	1.3E-1	8.4E+2	11.3	99	49.00
naphthalene	(H)	ND 1.5E-2	ND 8.6E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.0E-1	ND 2.5E-3	ND 3.1E-2	ND 5.0E+1			
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	1.6E-2	4.2E-5	5.2E-4	5.4E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.1E-5	ND 6.4E-4	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			1.7E-2	2.2E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.8
Source Temp (C):	28.3
Sampling Date:	9/18/96
Sampling Start Time:	10:18
Sampling End Time:	10:48

TABLE K-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RKN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	8.7E-2	1.6E-3	2.0E-2	3.9E+1	6.0	90	43.00
biphenyl	(H)	ND 4.8E-2	ND 3.1E-3	ND 3.9E-2	ND 5.0E+0			
carbon disulfide	(H)	ND 1.5E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.6E-4	ND 8.3E-3	ND 5.0E+0	16.7	96	82.95
cumene	(H)	ND 1.4E-2	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.4E-2	ND 8.0E-4	ND 1.0E-2	ND 5.0E+0			
1,2-dimethoxyethane	(H)	1.4E-2	5.1E-4	6.4E-3	6.3E+0	18.7	95	45.05
limonene		ND 1.3E-2	ND 7.7E-4	ND 9.7E-3	ND 5.0E+0			
methanol	(H)	1.6E+0	2.1E-2	2.7E-1	6.1E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	2.9E-2	8.9E-4	1.1E-2	1.1E+1	15.7	93	43.05
methylene chloride	(H)	1.8E-1	6.4E-3	8.0E-2	4.9E+1	11.3	96	49.00
naphthalene	(H)	ND 1.6E-2	ND 8.9E-4	ND 1.1E-2	ND 5.0E+0	49.9	100	128.05
phenol	(H)	ND 6.5E-1	ND 2.6E-2	ND 3.2E-1	ND 5.0E+1			
alpha-pinene		ND 1.8E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 1.6E-2	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.1E-2	3.8E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.1
Source Temp (C):	42.2
Sampling Date:	9/18/96
Sampling Start Time:	11:22
Sampling End Time:	11:52

TABLE K-2 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 2

WMU2RKN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.0E-2	1.7E-3	2.2E-2	4.6E+1	5.4	84	43.00
biphenyl	(H)	ND 2.4E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.3E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.3E-3	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.5E-3	ND 6.1E-4	ND 7.7E-3	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.9E-3	ND 5.0E+0			
p-cymene		ND 6.9E-3	ND 7.4E-4	ND 9.2E-3	ND 5.0E+0			
1,2-dimethoxyethane	(H)	ND 5.3E-3	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.6E-3	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.2E-2	8.2E-4	1.0E-2	2.6E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.8E-3	ND 3.9E-4	ND 4.8E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	5.0E-2	3.4E-3	4.2E-2	2.8E+1	11.3	96	49.00
naphthalene	(H)	ND 8.0E-3	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0	49.9	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.0E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.8E-3	ND 9.5E-4	ND 1.2E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 7.9E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 6.7E-3	ND 4.9E-4	ND 6.1E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.0E-3	7.5E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.1
Source Temp (C):	33.9
Sampling Date:	9/18/96
Sampling Start Time:	11:22
Sampling End Time:	11:52

2/19/97
12:00 PM

TABLE K-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RKN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.9E-2	9.3E-4	1.2E-2	4.5E+1	5.5	95	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.6E-3	ND 2.0E-2	ND 5.0E+0	54.9	99	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.1E-3	ND 4.8E-4	ND 6.1E-3	ND 5.0E+0	40.5	0	93.10
chloroform	(H)	ND 6.4E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.3E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.8E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	41.7	91	119.15
1,2-dimethoxyethane	(H)	ND 5.2E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.5E-3	ND 3.9E-4	ND 4.8E-3	ND 5.0E+0	41.5	56	68.10
methanol	(H)	2.3E-2	3.2E-4	4.0E-3	1.8E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.6E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	90	43.05
methylene chloride	(H)	2.5E-2	9.4E-4	1.2E-2	1.4E+1	11.3	96	49.00
naphthalene	(H)	ND 7.9E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1	44.2	40	94.10
alpha-pinene		ND 8.9E-3	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	36.2	91	93.10
beta-pinene		ND 8.7E-3	ND 5.2E-4	ND 6.4E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 7.8E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.6E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.2E-3	2.7E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	37.8
Sampling Date:	9/18/96
Sampling Start Time:	11:22
Sampling End Time:	11:52

TABLE K-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RKNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.0E-2	9.6E-4	1.2E-2	4.7E+1	5.5	85	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.6E-3	ND 2.0E-2	ND 5.0E+0	54.9	100	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.1E-3	ND 4.8E-4	ND 6.1E-3	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 6.4E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.3E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.8E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	41.7	90	119.15
1,2-dimethoxyethane	(H)	ND 5.2E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.5E-3	ND 3.9E-4	ND 4.8E-3	ND 5.0E+0	41.5	10	68.10
methanol	(H)	2.5E-2	3.5E-4	4.4E-3	2.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.6E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	91	43.05
methylene chloride	(H)	2.5E-2	9.3E-4	1.2E-2	1.4E+1	11.3	97	49.00
naphthalene	(H)	ND 7.9E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.9E-3	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.7E-3	ND 5.2E-4	ND 6.4E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 7.8E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.6E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.2E-3	2.8E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	37.8
Sampling Date:	9/18/96
Sampling Start Time:	11:22
Sampling End Time:	11:52

TABLE K-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RKN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.1E+0	2.2E-3	2.7E-2	5.3E+2	5.9	99	43.00
biphenyl	(H)	ND 4.6E-2	ND 3.1E-4	ND 3.9E-3	ND 5.0E+0	54.9	0	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.8E-5	ND 6.0E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.7E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.7E-5	ND 8.3E-4	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 1.3E-2	ND 6.9E-5	ND 8.6E-4	ND 5.0E+0			
p-cymene		ND 1.3E-2	ND 8.0E-5	ND 1.0E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	8.2E-2	3.3E-4	4.1E-3	4.0E+1	18.6	99	45.05
limonene		ND 1.3E-2	ND 7.7E-5	ND 9.7E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.7E+0	5.2E-3	6.5E-2	1.5E+3	6.5	0	31.15
methyl ethyl ketone (MEK)	(H)	5.3E-1	1.7E-3	2.1E-2	2.0E+2	15.7	97	43.05
methylene chloride	(H)	4.0E+0	1.5E-2	1.9E-1	1.1E+3	11.3	99	49.00
naphthalene	(H)	ND 1.6E-2	ND 8.9E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.2E-1	ND 2.6E-3	ND 3.2E-2	ND 5.0E+1			
alpha-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	2.4E-2	6.2E-5	7.7E-4	7.7E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.3E-5	ND 6.6E-4	ND 5.0E+0	25.5	98	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.4E-2	3.1E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	4.1
Source Temp (C):	29.4
Sampling Date:	9/18/96
Sampling Start Time:	11:20
Sampling End Time:	11:50

TABLE L-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RLN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	7.9E-2	1.5E-3	1.8E-2	3.6E+1	6.0	95	43.00
biphenyl	(H)	ND 4.8E-2	ND 3.1E-3	ND 3.9E-2	ND 5.0E+0	55.0	35	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.6E-4	ND 8.3E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.4E-2	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0			
p-cymene		ND 1.4E-2	ND 8.0E-4	ND 1.0E-2	ND 5.0E+0	41.7	93	119.15
1,2-dimethoxyethane	(H)	3.3E-2	1.2E-3	1.5E-2	1.5E+1	18.7	97	45.05
limonene		ND 1.3E-2	ND 7.7E-4	ND 9.6E-3	ND 5.0E+0			
methanol	(H)	2.6E+0	3.5E-2	4.4E-1	1.0E+3	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	3.2E-2	9.6E-4	1.2E-2	1.1E+1	15.7	94	43.05
methylene chloride	(H)	1.6E-1	5.8E-3	7.2E-2	4.4E+1	11.3	96	49.00
naphthalene	(H)	ND 1.6E-2	ND 8.8E-4	ND 1.1E-2	ND 5.0E+0	49.9	100	128.05
phenol	(H)	ND 6.5E-1	ND 2.6E-2	ND 3.2E-1	ND 5.0E+1	44.3	40	94.10
alpha-pinene		ND 1.8E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0			
beta-pinene		ND 1.8E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 1.6E-2	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			4.5E-2	5.6E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.0
Source Temp (C):	42.8
Sampling Date:	9/18/96
Sampling Start Time:	12:50
Sampling End Time:	13:20

2/19/97
12:00 PM

TABLE L-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RLN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.5E-2	1.2E-3	1.5E-2	3.4E+1	6.0	82	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.8E-3	ND 3.5E-2	ND 5.0E+0			
carbon disulfide	(H)	ND 7.0E-3	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 7.9E-3	ND 8.5E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.2E-3	ND 5.8E-4	ND 7.3E-3	ND 5.0E+0	16.7	98	82.95
cumene	(H)	ND 6.3E-3	ND 6.0E-4	ND 7.5E-3	ND 5.0E+0			
p-cymene		ND 6.6E-3	ND 7.0E-4	ND 8.8E-3	ND 5.0E+0			
1,2-dimethoxyethane	(H)	ND 5.0E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.3E-3	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0			
methanol	(H)	8.6E-2	2.2E-3	2.7E-2	7.1E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	7.1E-3	4.0E-4	5.1E-3	5.5E+0	15.7	92	43.05
methylene chloride	(H)	4.8E-2	3.2E-3	4.0E-2	2.8E+1	11.3	95	49.00
naphthalene	(H)	ND 7.6E-3	ND 7.8E-4	ND 9.7E-3	ND 5.0E+0	49.9	100	128.05
phenol	(H)	ND 3.0E-1	ND 2.3E-2	ND 2.8E-1	ND 5.0E+1			
alpha-pinene		ND 8.6E-3	ND 9.3E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.4E-3	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0			
propionaldehyde	(H)	7.9E-3	3.7E-4	4.6E-3	5.2E+0	9.6	46	58.10
toluene	(H)	ND 6.4E-3	ND 4.7E-4	ND 5.8E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.4E-3	9.3E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	1.9
Source Temp (C):	35.6
Sampling Date:	9/18/96
Sampling Start Time:	12:50
Sampling End Time:	13:20

TABLE L-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RLN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.0E-2	3.9E-4	4.9E-3	2.0E+1	6.0	85	43.00
biphenyl	(H)	ND 2.2E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 6.9E-3	ND 2.3E-4	ND 2.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 7.8E-3	ND 4.7E-4	ND 5.8E-3	ND 5.0E+0			
chloroform	(H)	ND 6.2E-3	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	36.3	98	105.10
p-cymene		ND 6.5E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 5.0E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	18.9	0	45.05
limonene		ND 6.2E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	41.5	53	68.10
methanol	(H)	3.6E-2	5.0E-4	6.2E-3	3.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.4E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	2.5E-2	9.1E-4	1.1E-2	1.4E+1	11.3	96	49.00
naphthalene	(H)	ND 7.6E-3	ND 4.3E-4	ND 5.3E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.0E-1	ND 1.2E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.5E-3	ND 5.1E-4	ND 6.3E-3	ND 5.0E+0	36.2	99	93.10
beta-pinene		ND 8.4E-3	ND 5.0E-4	ND 6.2E-3	ND 5.0E+0	39.0	47	93.10
propionaldehyde	(H)	ND 7.5E-3	ND 1.9E-4	ND 2.4E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	1.0E-2	4.1E-4	5.1E-3	8.1E+0	25.5	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.2E-3	2.8E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	37.8
Sampling Date:	9/18/96
Sampling Start Time:	12:50
Sampling End Time:	13:20

TABLE L-4 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 4

WMU4RLN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.7E+0	3.3E-3	4.1E-2	8.1E+2	5.9	99	43.00
biphenyl	(H)	ND 4.5E-2	ND 3.1E-4	ND 3.8E-3	ND 5.0E+0	54.9	87	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.7E-5	ND 5.8E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.4E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.5E-5	ND 8.1E-4	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 1.3E-2	ND 6.7E-5	ND 8.3E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.8E-5	ND 9.7E-4	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	1.1E-1	4.3E-4	5.4E-3	5.4E+1	18.6	99	45.05
limonene		ND 1.2E-2	ND 7.5E-5	ND 9.4E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	4.8E+0	6.8E-3	8.5E-2	2.0E+3	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	6.0E-1	1.9E-3	2.4E-2	2.3E+2	15.7	97	43.05
methylene chloride	(H)	5.2E+0	1.9E-2	2.4E-1	1.5E+3	11.3	98	49.00
naphthalene	(H)	ND 1.5E-2	ND 8.6E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.1E-1	ND 2.5E-3	ND 3.2E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	ND 1.5E-2	ND 3.9E-5	ND 4.8E-4	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.2E-5	ND 6.4E-4	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.2E-2	4.0E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.8
Source Temp (C):	28.3
Sampling Date:	9/1896
Sampling Start Time:	12:48
Sampling End Time:	13:18

TABLE L-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RLNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	1.7E+0	3.3E-3	4.2E-2	8.3E+2	5.9	99	43.00
biphenyl	(H)	ND 4.5E-2	ND 3.1E-4	ND 3.8E-3	ND 5.0E+0	54.9	89	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.7E-5	ND 5.8E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.4E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.5E-5	ND 8.1E-4	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 1.3E-2	ND 6.7E-5	ND 8.3E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.8E-5	ND 9.7E-4	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	1.1E-1	4.4E-4	5.5E-3	5.5E+1	18.6	99	45.05
limonene		ND 1.2E-2	ND 7.5E-5	ND 9.4E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	5.0E+0	7.0E-3	8.8E-2	2.1E+3	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	8.3E-1	2.6E-3	3.3E-2	3.2E+2	15.7	97	43.05
methylene chloride	(H)	5.4E+0	2.0E-2	2.5E-1	1.6E+3	11.3	98	49.00
naphthalene	(H)	ND 1.5E-2	ND 8.6E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.1E-1	ND 2.5E-3	ND 3.2E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	ND 1.5E-2	ND 3.9E-5	ND 4.8E-4	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.2E-5	ND 6.4E-4	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.4E-2	4.2E-1				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.8
Source Temp (C):	28.3
Sampling Date:	9/1896
Sampling Start Time:	12:48
Sampling End Time:	13:18

TABLE M-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RMN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	9.0E-2	1.7E-3	2.1E-2	3.9E+1	5.5	100	43.00
biphenyl	(H)	ND 5.0E-2	ND 3.2E-3	ND 4.0E-2	ND 5.0E+0	54.9	94	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.7E-2	ND 1.0E-3	ND 1.2E-2	ND 5.0E+0	40.5	0	93.10
chloroform	(H)	ND 1.4E-2	ND 6.8E-4	ND 8.6E-3	ND 5.0E+0	16.6	18	82.95
cumene	(H)	ND 1.4E-2	ND 7.1E-4	ND 8.8E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.5E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 1.1E-2	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0			
limonene		ND 1.4E-2	ND 8.0E-4	ND 9.9E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	1.2E-1	1.7E-3	2.1E-2	4.6E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.4E-2	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	ND 1.9E-2	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0	11.3	95	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.7E-1	ND 2.7E-2	ND 3.3E-1	ND 5.0E+1	44.3	40	94.10
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	2.9E-2	7.0E-4	8.8E-3	8.6E+0	9.6	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.5E-4	ND 6.8E-3	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)	ND 4.0E-2	ND 5.1E-4	ND 6.3E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			4.0E-3	5.0E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	3.8
Source Temp (C):	41.1
Sampling Date:	9/19/96
Sampling Start Time:	9:31
Sampling End Time:	10:00

TABLE M-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RMNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	9.0E-2	1.7E-3	2.1E-2	3.9E+1	5.5	90	43.00
biphenyl	(H)	ND 5.0E-2	ND 3.2E-3	ND 4.0E-2	ND 5.0E+0	54.9	88	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-4	ND 6.2E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.7E-2	ND 1.0E-3	ND 1.2E-2	ND 5.0E+0	40.5	0	93.10
chloroform	(H)	ND 1.4E-2	ND 6.8E-4	ND 8.6E-3	ND 5.0E+0	16.6	18	82.95
cumene	(H)	ND 1.4E-2	ND 7.1E-4	ND 8.8E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.5E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 1.1E-2	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0			
limonene		ND 1.4E-2	ND 8.0E-4	ND 9.9E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	1.3E-1	1.7E-3	2.2E-2	4.8E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.4E-2	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	ND 1.9E-2	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0	11.3	96	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.7E-1	ND 2.7E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	3.0E-2	7.3E-4	9.1E-3	8.9E+0	9.6	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.5E-4	ND 6.8E-3	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			4.1E-3	5.2E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	3.8
Source Temp (C):	41.1
Sampling Date:	9/19/96
Sampling Start Time:	9:31
Sampling End Time:	10:00

TABLE M-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RMN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	7.2E-2	2.5E-3	3.1E-2	6.1E+1	5.5	97	43.00
biphenyl	(H)	ND 2.5E-2	ND 3.1E-3	ND 3.9E-2	ND 5.0E+0	54.9	94	154.15
carbon disulfide	(H)	ND 7.9E-3	ND 4.8E-4	ND 5.9E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.9E-3	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 7.0E-3	ND 6.6E-4	ND 8.2E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 7.1E-3	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 7.4E-3	ND 7.9E-4	ND 9.9E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 5.7E-3	ND 4.1E-4	ND 5.1E-3	ND 5.0E+0			
limonene		ND 7.1E-3	ND 7.7E-4	ND 9.6E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	1.1E-1	2.9E-3	3.6E-2	8.4E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 7.3E-3	ND 4.2E-4	ND 5.2E-3	ND 5.0E+0	15.7	90	43.05
methylene chloride	(H)	ND 9.7E-3	ND 6.6E-4	ND 8.2E-3	ND 5.0E+0	11.3	95	49.00
naphthalene	(H)	ND 8.6E-3	ND 8.8E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.4E-1	ND 2.6E-2	ND 3.2E-1	ND 5.0E+1	44.3	40	94.10
alpha-pinene		ND 9.7E-3	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 9.5E-3	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	1.9E-2	8.9E-4	1.1E-2	1.1E+1	9.6	46	58.10
toluene	(H)	1.1E-2	8.2E-4	1.0E-2	7.8E+0	25.5	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			7.1E-3	8.9E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	31.7
Sampling Date:	9/19/96
Sampling Start Time:	9:31
Sampling End Time:	10:00

TABLE M-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RMD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	7.4E-2	2.6E-3	3.2E-2	6.2E+1	5.5	100	43.00
biphenyl	(H)	ND 2.6E-2	ND 3.2E-3	ND 4.0E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 8.0E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 9.0E-3	ND 9.8E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 7.1E-3	ND 6.7E-4	ND 8.4E-3	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 7.3E-3	ND 6.9E-4	ND 8.7E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 7.6E-3	ND 8.1E-4	ND 1.0E-2	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 5.8E-3	ND 4.1E-4	ND 5.2E-3	ND 5.0E+0			
limonene		ND 7.2E-3	ND 7.8E-4	ND 9.7E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	8.2E-2	2.1E-3	2.6E-2	6.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 7.4E-3	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0	15.7	90	43.05
methylene chloride	(H)	ND 9.9E-3	ND 6.7E-4	ND 8.3E-3	ND 5.0E+0	11.3	95	49.00
naphthalene	(H)	ND 8.8E-3	ND 8.9E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.5E-1	ND 2.6E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 9.8E-3	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 9.6E-3	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 8.7E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	1.1E-2	8.4E-4	1.0E-2	7.8E+0	25.6	99	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			5.5E-3	6.9E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = *Below Calibration Limit; value estimated*

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.0
Source Temp (C):	31.7
Sampling Date:	9/19/96
Sampling Start Time:	9:31
Sampling End Time:	10:00

TABLE M-5 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 3

WMU3RMN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	9.0E-2	1.7E-3	2.2E-2	7.8E+1	5.5	98	43.00
biphenyl	(H)	ND 2.5E-2	ND 1.7E-3	ND 2.1E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 7.8E-3	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.8E-3	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	40.5	94	93.10
chloroform	(H)	ND 6.9E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 7.1E-3	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	36.3	98	105.10
p-cymene		ND 7.4E-3	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	41.7	91	119.15
1,2-dimethoxyethane	(H)	ND 5.6E-3	ND 2.2E-4	ND 2.8E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 7.0E-3	ND 4.2E-4	ND 5.2E-3	ND 5.0E+0	41.5	93	68.10
methanol	(H)	3.7E-2	5.2E-4	6.5E-3	2.8E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 7.2E-3	ND 2.3E-4	ND 2.8E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	ND 9.6E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	11.3	95	49.00
naphthalene	(H)	ND 8.6E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.4E-1	ND 1.4E-2	ND 1.8E-1	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 9.6E-3	ND 5.7E-4	ND 7.1E-3	ND 5.0E+0	36.2	94	93.10
beta-pinene		ND 9.4E-3	ND 5.6E-4	ND 7.0E-3	ND 5.0E+0	39.0	82	93.10
propionaldehyde	(H)	ND 8.5E-3	ND 2.2E-4	ND 2.7E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	1.2E-2	4.9E-4	6.1E-3	8.5E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			2.7E-3	3.4E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.9
Source Temp (C):	33.3
Sampling Date:	9/19/96
Sampling Start Time:	9:31
Sampling End Time:	10:01

TABLE M-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RMN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	7.5E-2	1.5E-4	1.8E-3	3.5E+1	5.5	96	43.00
biphenyl	(H)	ND 4.7E-2	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	54.9	91	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.9E-5	ND 6.1E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.9E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.8E-5	ND 8.5E-4	ND 5.0E+0	16.6	97	82.95
cumene	(H)	ND 1.3E-2	ND 7.0E-5	ND 8.7E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.4E-2	ND 8.1E-5	ND 1.0E-3	ND 5.0E+0			
1,2-dimethoxyethane	(H)	ND 1.0E-2	ND 4.2E-5	ND 5.2E-4	ND 5.0E+0	18.8	0	45.05
limonene		ND 1.3E-2	ND 7.9E-5	ND 9.8E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	5.9E-2	8.4E-5	1.0E-3	2.4E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.3E-2	ND 4.3E-5	ND 5.3E-4	ND 5.0E+0	15.7	92	43.05
methylene chloride	(H)	3.7E-2	1.4E-4	1.7E-3	1.0E+1	11.3	96	49.00
naphthalene	(H)	ND 1.6E-2	ND 9.0E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.3E-1	ND 2.6E-3	ND 3.3E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	ND 1.6E-2	ND 4.1E-5	ND 5.1E-4	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.4E-5	ND 6.7E-4	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)	ND 3.8E-2	ND 5.0E-5	ND 6.3E-4	ND 5.0E+0			
THC (as C)								
Total HAPs			3.7E-4	4.6E-3				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.7
Source Temp (C):	27.8
Sampling Date:	9/19/96
Sampling Start Time:	9:29
Sampling End Time:	9:58

TABLE N-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RNN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.0E-2	1.0E-3	1.3E-2	2.7E+1	5.5	94	43.00
biphenyl	(H)	ND 2.4E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.5E-3	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.4E-3	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.8E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.8E-3	ND 6.5E-4	ND 8.1E-3	ND 5.0E+0			
p-cymene		ND 7.0E-3	ND 7.5E-4	ND 9.4E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 5.4E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0			
limonene		ND 6.7E-3	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.5	88	68.10
methanol	(H)	8.6E-2	2.2E-3	2.7E-2	6.7E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.9E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	15.7	92	43.05
methylene chloride	(H)	1.1E-2	7.2E-4	9.1E-3	5.8E+0	11.3	98	49.00
naphthalene	(H)	ND 8.2E-3	ND 8.3E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.3E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.2E-3	ND 9.9E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 9.0E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 8.1E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	9.0E-3	6.6E-4	8.2E-3	6.6E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			4.6E-3	5.8E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.1
Source Temp (C):	32.8
Sampling Date:	9/19/96
Sampling Start Time:	10:40
Sampling End Time:	11:13

TABLE N-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RNNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.1E-2	1.1E-3	1.4E-2	2.8E+1	5.5	96	43.00
biphenyl	(H)	ND 2.4E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.5E-3	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.4E-3	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.8E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 6.8E-3	ND 6.5E-4	ND 8.1E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 7.0E-3	ND 7.5E-4	ND 9.4E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 5.4E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0			
limonene		ND 6.7E-3	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.5	90	68.10
methanol	(H)	9.3E-2	2.4E-3	2.9E-2	7.2E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.9E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	15.7	91	43.05
methylene chloride	(H)	1.1E-2	7.2E-4	9.0E-3	5.8E+0	11.3	98	49.00
naphthalene	(H)	ND 8.2E-3	ND 8.3E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.3E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.2E-3	ND 9.9E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 9.0E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 8.1E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	8.9E-3	6.5E-4	8.2E-3	6.6E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			4.8E-3	6.0E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.1
Source Temp (C):	32.8
Sampling Date:	9/19/96
Sampling Start Time:	10:40
Sampling End Time:	11:13

TABLE N-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RNN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.6E-2	4.8E-4	6.0E-3	1.3E+1	5.5	86	43.00
biphenyl	(H)	ND 4.5E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.4E-4	ND 5.6E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 1.6E-2	ND 9.0E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.2E-4	ND 7.7E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.3E-2	ND 6.4E-4	ND 7.9E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.4E-4	ND 9.2E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 1.0E-2	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0			
limonene		ND 1.2E-2	ND 7.2E-4	ND 8.9E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	9.2E-2	1.2E-3	1.6E-2	3.9E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.3E-2	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	15.7	56	43.05
methylene chloride	(H)	ND 1.7E-2	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0	11.3	95	49.00
naphthalene	(H)	ND 1.5E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.1E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 1.7E-2	ND 9.8E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 1.5E-2	ND 3.7E-4	ND 4.6E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 4.9E-4	ND 6.1E-3	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)	ND 4.0E-2	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			1.7E-3	2.2E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	4.0
Source Temp (C):	41.1
Sampling Date:	9/19/96
Sampling Start Time:	10:40
Sampling End Time:	11:13

TABLE N-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RNN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.0E-2	1.0E-3	1.3E-2	2.7E+1	5.5	94	43.00
biphenyl	(H)	ND 2.4E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.5E-3	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.4E-3	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.8E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.8E-3	ND 6.5E-4	ND 8.1E-3	ND 5.0E+0			
p-cymene		ND 7.0E-3	ND 7.5E-4	ND 9.4E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 5.4E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0			
limonene		ND 6.7E-3	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.5	88	68.10
methanol	(H)	8.6E-2	2.2E-3	2.7E-2	6.7E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.9E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	15.7	92	43.05
methylene chloride	(H)	1.1E-2	7.2E-4	9.1E-3	5.8E+0	11.3	98	49.00
naphthalene	(H)	ND 8.2E-3	ND 8.3E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.3E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.2E-3	ND 9.9E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 9.0E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 8.1E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	9.0E-3	6.6E-4	8.2E-3	6.6E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			4.6E-3	5.8E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.1
Source Temp (C):	32.8
Sampling Date:	9/19/96
Sampling Start Time:	10:40
Sampling End Time:	11:13

TABLE N-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RNNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.1E-2	1.1E-3	1.4E-2	2.8E+1	5.5	96	43.00
biphenyl	(H)	ND 2.4E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.5E-3	ND 4.5E-4	ND 5.6E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.4E-3	ND 9.1E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.8E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 6.8E-3	ND 6.5E-4	ND 8.1E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 7.0E-3	ND 7.5E-4	ND 9.4E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 5.4E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0			
limonene		ND 6.7E-3	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.5	90	68.10
methanol	(H)	9.3E-2	2.4E-3	2.9E-2	7.2E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.9E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	15.7	91	43.05
methylene chloride	(H)	1.1E-2	7.2E-4	9.0E-3	5.8E+0	11.3	98	49.00
naphthalene	(H)	ND 8.2E-3	ND 8.3E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.3E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 9.2E-3	ND 9.9E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 9.0E-3	ND 9.7E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 8.1E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	8.9E-3	6.5E-4	8.2E-3	6.6E+0	25.6	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			4.8E-3	6.0E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.1
Source Temp (C):	32.8
Sampling Date:	9/19/96
Sampling Start Time:	10:40
Sampling End Time:	11:13

TABLE N-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RND

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.9E-2	5.6E-4	7.0E-3	2.7E+1	5.5	66	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.6E-3	ND 1.9E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 7.1E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.1E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
chloroform	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.2E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 6.7E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	41.8	92	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0			
limonene		ND 6.4E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	4.3E-2	6.0E-4	7.5E-3	3.5E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.6E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	91	43.05
methylene chloride	(H)	9.1E-3	3.4E-4	4.2E-3	5.1E+0	11.3	96	49.00
naphthalene	(H)	ND 7.8E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.8E-3	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 8.6E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 7.8E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.5E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			1.5E-3	1.9E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.9
Source Temp (C):	33.9
Sampling Date:	9/19/96
Sampling Start Time:	10:40
Sampling End Time:	11:13

TABLE N-5 DETAILED EMISSION TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 3

WMU3RNN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.2E-2	8.2E-4	1.0E-2	4.0E+1	6.0	93	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.5E-3	ND 1.9E-2	ND 5.0E+0	54.9	91	154.15
carbon disulfide	(H)	ND 7.1E-3	ND 2.4E-4	ND 2.9E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.0E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 6.3E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.2E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 6.7E-3	ND 3.9E-4	ND 4.9E-3	ND 5.0E+0	41.8	48	119.15
1,2-dimethoxyethane	(H)	ND 5.1E-3	ND 2.0E-4	ND 2.5E-3	ND 5.0E+0			
limonene		ND 6.4E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.5	92	68.10
methanol	(H)	3.9E-2	5.4E-4	6.7E-3	3.2E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.6E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	15.7	93	43.05
methylene chloride	(H)	8.9E-3	3.3E-4	4.1E-3	5.1E+0	11.3	95	49.00
naphthalene	(H)	ND 7.8E-3	ND 4.4E-4	ND 5.4E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.7E-3	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.6E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	39.0	47	93.10
propionaldehyde	(H)	2.0E-2	5.2E-4	6.4E-3	1.3E+1	9.6	46	58.10
toluene	(H)	ND 6.5E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)	ND 2.0E-2	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			2.2E-3	2.8E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.9
Source Temp (C):	33.9
Sampling Date:	9/19/96
Sampling Start Time:	10:40
Sampling End Time:	11:13

2/19/97
12:00 PM

TABLE N-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RNN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.8E-2	1.1E-4	1.4E-3	2.8E+1	6.0	98	43.00
biphenyl	(H)	9.9E-2	6.8E-4	8.5E-3	1.1E+1	54.9	99	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.7E-5	ND 5.8E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.4E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 6.5E-5	ND 8.1E-4	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.3E-2	ND 6.7E-5	ND 8.3E-4	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.8E-5	ND 9.7E-4	ND 5.0E+0	41.7	91	119.15
1,2-dimethoxyethane	(H)	3.1E-2	1.2E-4	1.5E-3	1.5E+1	18.7	98	45.05
limonene		ND 1.2E-2	ND 7.5E-5	ND 9.4E-4	ND 5.0E+0	41.5	90	68.10
methanol	(H)	5.2E-2	7.3E-5	9.1E-4	2.2E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.3E-2	ND 4.1E-5	ND 5.1E-4	ND 5.0E+0	15.7	56	43.05
methylene chloride	(H)	2.5E-2	9.5E-5	1.2E-3	7.4E+0	11.3	96	49.00
naphthalene	(H)	1.8E-2	1.0E-4	1.3E-3	6.1E+0	49.8	100	128.05
phenol	(H)	ND 6.0E-1	ND 2.5E-3	ND 3.1E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	ND 1.5E-2	ND 3.9E-5	ND 4.8E-4	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.1E-5	ND 6.4E-4	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)	ND 3.8E-2	ND 5.0E-5	ND 6.2E-4	ND 5.0E+0			
THC (as C)								
Total HAPs			1.2E-3	1.5E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	3.7
Source Temp (C):	27.8
Sampling Date:	9/19/96
Sampling Start Time:	10:38
Sampling End Time:	11:11

2/19/97
12:00 PM

TABLE O-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RON

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.6E-2	6.7E-4	8.4E-3	1.7E+1	5.5	80	43.00
biphenyl	(H)	ND 4.6E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.4E-2	ND 4.5E-4	ND 5.7E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.2E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.3E-4	ND 7.9E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 1.3E-2	ND 6.5E-4	ND 8.1E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 1.3E-2	ND 7.6E-4	ND 9.4E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 1.0E-2	ND 3.9E-4	ND 4.8E-3	ND 5.0E+0			
limonene		ND 1.3E-2	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	5.9E-2	8.0E-4	1.0E-2	2.4E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.3E-2	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	15.7	56	43.05
methylene chloride	(H)	ND 1.7E-2	ND 6.2E-4	ND 7.8E-3	ND 5.0E+0	11.3	96	49.00
naphthalene	(H)	ND 1.6E-2	ND 8.4E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.2E-1	ND 2.5E-2	ND 3.1E-1	ND 5.0E+1			
alpha-pinene		ND 1.7E-2	ND 1.0E-3	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.7E-2	ND 9.8E-4	ND 1.2E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 1.5E-2	ND 3.8E-4	ND 4.7E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.0E-4	ND 6.3E-3	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)	ND 4.0E-2	ND 5.1E-4	ND 6.3E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			1.5E-3	1.8E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	3.6
Source Temp (C):	41.7
Sampling Date:	9/19/96
Sampling Start Time:	11:52
Sampling End Time:	12:22

TABLE O-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RON

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.7E-2	2.0E-3	2.5E-2	5.3E+1	5.5	98	43.00
biphenyl	(H)	ND 2.3E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.2E-3	ND 8.8E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 6.4E-3	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 6.6E-3	ND 6.3E-4	ND 7.8E-3	ND 5.0E+0	36.3	0	105.10
p-cymene		ND 6.8E-3	ND 7.3E-4	ND 9.1E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 5.2E-3	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.5E-3	ND 7.0E-4	ND 8.8E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	4.5E-2	1.1E-3	1.4E-2	3.6E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.7E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	15.7	92	43.05
methylene chloride	(H)	ND 8.9E-3	ND 6.0E-4	ND 7.5E-3	ND 5.0E+0	11.3	97	49.00
naphthalene	(H)	ND 7.9E-3	ND 8.1E-4	ND 1.0E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 2.4E-2	ND 3.0E-1	ND 5.0E+1			
alpha-pinene		ND 8.9E-3	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.7E-3	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	ND 7.9E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 6.6E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			3.1E-3	3.9E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	2.2
Source Temp (C):	34.4
Sampling Date:	9/19/96
Sampling Start Time:	11:52
Sampling End Time:	12:22

TABLE O-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RON

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.5E-2	6.7E-4	8.3E-3	3.2E+1	6.0	92	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.6E-3	ND 2.0E-2	ND 5.0E+0	54.9	96	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.1E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	40.5	94	93.10
chloroform	(H)	ND 6.4E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.3E-3	ND 5.0E+0	36.3	97	105.10
p-cymene		ND 6.8E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	41.7	92	119.15
1,2-dimethoxyethane	(H)	1.3E-2	5.0E-4	6.3E-3	1.2E+1	18.7	98	45.05
limonene		ND 6.5E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.5	91	68.10
methanol	(H)	5.2E-2	7.2E-4	9.0E-3	4.2E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.1E-2	3.4E-4	4.3E-3	8.2E+0	15.7	96	43.05
methylene chloride	(H)	1.3E-2	4.9E-4	6.1E-3	7.4E+0	11.3	96	49.00
naphthalene	(H)	ND 7.9E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1			
alpha-pinene		ND 8.8E-3	ND 5.2E-4	ND 6.6E-3	ND 5.0E+0	36.2	95	93.10
beta-pinene		ND 8.6E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	39.0	89	93.10
propionaldehyde	(H)	2.1E-2	5.3E-4	6.6E-3	1.3E+1	9.6	46	58.10
toluene	(H)	ND 6.6E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			3.3E-3	4.1E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	37.2
Sampling Date:	9/19/96
Sampling Start Time:	11:52
Sampling End Time:	12:22

TABLE O-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RONX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.5E-2	6.6E-4	8.3E-3	3.2E+1	6.0	91	43.00
biphenyl	(H)	ND 2.3E-2	ND 1.6E-3	ND 2.0E-2	ND 5.0E+0	54.9	89	154.15
carbon disulfide	(H)	ND 7.2E-3	ND 2.4E-4	ND 3.0E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.1E-3	ND 4.8E-4	ND 6.0E-3	ND 5.0E+0	40.6	95	93.10
chloroform	(H)	ND 6.4E-3	ND 3.3E-4	ND 4.1E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 6.5E-3	ND 3.4E-4	ND 4.3E-3	ND 5.0E+0	36.3	98	105.10
p-cymene		ND 6.8E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	41.7	90	119.15
1,2-dimethoxyethane	(H)	1.3E-2	5.2E-4	6.5E-3	1.3E+1	18.7	97	45.05
limonene		ND 6.5E-3	ND 3.8E-4	ND 4.8E-3	ND 5.0E+0	41.5	92	68.10
methanol	(H)	5.4E-2	7.5E-4	9.3E-3	4.3E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.1E-2	3.5E-4	4.4E-3	8.5E+0	15.7	95	43.05
methylene chloride	(H)	1.3E-2	4.9E-4	6.1E-3	7.5E+0	11.3	96	49.00
naphthalene	(H)	ND 7.9E-3	ND 4.4E-4	ND 5.5E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.1E-1	ND 1.3E-2	ND 1.6E-1	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 8.8E-3	ND 5.2E-4	ND 6.6E-3	ND 5.0E+0	36.2	93	93.10
beta-pinene		ND 8.6E-3	ND 5.1E-4	ND 6.4E-3	ND 5.0E+0	39.0	89	93.10
propionaldehyde	(H)	2.1E-2	5.4E-4	6.7E-3	1.4E+1	9.6	46	58.10
toluene	(H)	ND 6.6E-3	ND 2.6E-4	ND 3.3E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			3.3E-3	4.1E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	37.2
Sampling Date:	9/19/96
Sampling Start Time:	11:52
Sampling End Time:	12:22

TABLE O-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4ROD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.1E-2	8.1E-5	1.0E-3	1.8E+1	6.0	99	43.00
biphenyl	(H)	ND 4.9E-2	ND 3.3E-4	ND 4.2E-3	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 5.1E-5	ND 6.4E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.7E-2	ND 1.0E-4	ND 1.3E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 7.0E-5	ND 8.8E-4	ND 5.0E+0	16.6	97	82.95
cumene	(H)	ND 1.4E-2	ND 7.3E-5	ND 9.1E-4	ND 5.0E+0			
p-cymene		ND 1.4E-2	ND 8.5E-5	ND 1.1E-3	ND 5.0E+0	41.7	90	119.15
1,2-dimethoxyethane	(H)	ND 1.1E-2	ND 4.3E-5	ND 5.4E-4	ND 5.0E+0			
limonene		ND 1.4E-2	ND 8.2E-5	ND 1.0E-3	ND 5.0E+0	41.5	10	68.10
methanol	(H)	4.0E-2	5.6E-5	7.0E-4	1.5E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.4E-2	ND 4.4E-5	ND 5.6E-4	ND 5.0E+0	15.7	56	43.05
methylene chloride	(H)	2.0E-2	7.6E-5	9.4E-4	5.4E+0	11.3	95	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.4E-5	ND 1.2E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.6E-1	ND 2.7E-3	ND 3.4E-2	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-4	ND 1.4E-3	ND 5.0E+0			
beta-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.4E-3	ND 5.0E+0			
propionaldehyde	(H)	ND 1.6E-2	ND 4.2E-5	ND 5.3E-4	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.6E-5	ND 7.0E-4	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)	ND 4.2E-2	ND 5.5E-5	ND 6.9E-4	ND 5.0E+0			
THC (as C)								
Total HAPs			2.1E-4	2.7E-3				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	4.1
Source Temp (C):	29.4
Sampling Date:	9/19/96
Sampling Start Time:	11:52
Sampling End Time:	12:22

TABLE O-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RON

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.0E-2	7.9E-5	9.8E-4	1.9E+1	5.5	99	43.00
biphenyl	(H)	7.0E-2	4.8E-4	6.0E-3	7.5E+0	54.9	98	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-5	ND 6.1E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.6E-2	ND 9.9E-5	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.8E-5	ND 8.5E-4	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.3E-2	ND 7.0E-5	ND 8.8E-4	ND 5.0E+0			
p-cymene		ND 1.4E-2	ND 8.2E-5	ND 1.0E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 1.0E-2	ND 4.2E-5	ND 5.2E-4	ND 5.0E+0	18.8	0	45.05
limonene		ND 1.3E-2	ND 7.9E-5	ND 9.9E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	4.8E-2	6.7E-5	8.4E-4	1.9E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.3E-2	ND 4.3E-5	ND 5.4E-4	ND 5.0E+0	15.7	56	43.05
methylene chloride	(H)	2.1E-2	7.9E-5	9.9E-4	5.9E+0	11.3	94	49.00
naphthalene	(H)	ND 1.6E-2	ND 9.1E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.4E-1	ND 2.6E-3	ND 3.3E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0			
beta-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	ND 1.6E-2	ND 4.1E-5	ND 5.1E-4	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.4E-5	ND 6.8E-4	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)	ND 4.1E-2	ND 5.4E-5	ND 6.8E-4	ND 5.0E+0			
THC (as C)								
Total HAPs			7.1E-4	8.8E-3				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	4.1
Source Temp (C):	29.4
Sampling Date:	9/19/96
Sampling Start Time:	11:50
Sampling End Time:	12:20

2/19/97
12:00 PM

TABLE P-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RPN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.5E-2	1.0E-3	1.3E-2	2.8E+1	6.0	96	43.00
biphenyl	(H)	ND 4.3E-2	ND 2.8E-3	ND 3.5E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.3E-2	ND 4.3E-4	ND 5.3E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.5E-2	ND 8.6E-4	ND 1.1E-2	ND 5.0E+0			
chloroform	(H)	ND 1.2E-2	ND 5.9E-4	ND 7.4E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.2E-2	ND 6.1E-4	ND 7.6E-3	ND 5.0E+0			
p-cymene		ND 1.3E-2	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 9.6E-3	ND 3.6E-4	ND 4.5E-3	ND 5.0E+0			
limonene		ND 1.2E-2	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	6.1E-2	8.2E-4	1.0E-2	2.7E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.2E-2	ND 3.7E-4	ND 4.7E-3	ND 5.0E+0	15.7	92	43.05
methylene chloride	(H)	ND 1.6E-2	ND 5.9E-4	ND 7.3E-3	ND 5.0E+0	11.3	94	49.00
naphthalene	(H)	ND 1.5E-2	ND 7.9E-4	ND 9.8E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 5.8E-1	ND 2.3E-2	ND 2.9E-1	ND 5.0E+1			
alpha-pinene		ND 1.6E-2	ND 9.4E-4	ND 1.2E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.6E-2	ND 9.2E-4	ND 1.1E-2	ND 5.0E+0			
propionaldehyde	(H)	3.6E-2	8.8E-4	1.1E-2	1.2E+1	9.6	46	58.10
toluene	(H)	ND 1.2E-2	ND 4.7E-4	ND 5.9E-3	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)	ND 3.9E-2	ND 5.0E-4	ND 6.2E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			2.7E-3	3.4E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	3.5
Source Temp (C):	43.3
Sampling Date:	9/19/96
Sampling Start Time:	13:01
Sampling End Time:	13:38

2/19/97
12:00 PM

TABLE P-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
WMU1RPD

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.3E-2	6.2E-4	7.7E-3	1.4E+1	6.0	89	43.00
biphenyl	(H)	ND 5.0E-2	ND 3.2E-3	ND 4.1E-2	ND 5.0E+0	54.9	35	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 5.0E-4	ND 6.2E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.7E-2	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
chloroform	(H)	ND 1.4E-2	ND 6.9E-4	ND 8.6E-3	ND 5.0E+0	16.6	98	82.95
cumene	(H)	ND 1.4E-2	ND 7.1E-4	ND 8.9E-3	ND 5.0E+0			
p-cymene		ND 1.5E-2	ND 8.2E-4	ND 1.0E-2	ND 5.0E+0			
1,2-dimethoxyethane	(H)	ND 1.1E-2	ND 4.2E-4	ND 5.3E-3	ND 5.0E+0			
limonene		ND 1.4E-2	ND 8.0E-4	ND 1.0E-2	ND 5.0E+0	41.5	0	68.10
methanol	(H)	6.0E-2	8.1E-4	1.0E-2	2.2E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.4E-2	ND 4.3E-4	ND 5.4E-3	ND 5.0E+0	15.7	56	43.05
methylene chloride	(H)	ND 1.9E-2	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0	11.3	95	49.00
naphthalene	(H)	ND 1.7E-2	ND 9.2E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.8E-1	ND 2.7E-2	ND 3.3E-1	ND 5.0E+1			
alpha-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.4E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.9E-2	ND 1.1E-3	ND 1.3E-2	ND 5.0E+0			
propionaldehyde	(H)	ND 1.7E-2	ND 4.1E-4	ND 5.1E-3	ND 5.0E+0	9.7	46	58.10
toluene	(H)	ND 1.4E-2	ND 5.5E-4	ND 6.8E-3	ND 5.0E+0	25.5	100	91.10
formaldehyde	(H)	ND 4.1E-2	ND 5.2E-4	ND 6.5E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			1.4E-3	1.8E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2700
Source Moisture (%):	3.5
Source Temp (C):	43.3
Sampling Date:	9/19/96
Sampling Start Time:	13:02
Sampling End Time:	13:38

TABLE P-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 2
WMU2RPN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.5E-2	8.8E-4	1.1E-2	2.1E+1	6.0	87	43.00
biphenyl	(H)	ND 2.5E-2	ND 3.1E-3	ND 3.9E-2	ND 5.0E+0	54.9	94	154.15
carbon disulfide	(H)	ND 7.9E-3	ND 4.8E-4	ND 5.9E-3	ND 5.0E+0	10.3	0	75.95
3-carene		ND 8.9E-3	ND 9.6E-4	ND 1.2E-2	ND 5.0E+0			
chloroform	(H)	ND 7.0E-3	ND 6.6E-4	ND 8.2E-3	ND 5.0E+0	16.6	100	82.95
cumene	(H)	ND 7.1E-3	ND 6.8E-4	ND 8.5E-3	ND 5.0E+0			
p-cymene		ND 7.4E-3	ND 7.9E-4	ND 9.9E-3	ND 5.0E+0			
1,2-dimethoxyethane	(H)	ND 5.7E-3	ND 4.1E-4	ND 5.1E-3	ND 5.0E+0			
limonene		ND 7.1E-3	ND 7.7E-4	ND 9.6E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.4E-2	8.6E-4	1.1E-2	2.5E+1	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 7.3E-3	ND 4.2E-4	ND 5.2E-3	ND 5.0E+0	15.7	90	43.05
methylene chloride	(H)	ND 9.7E-3	ND 6.5E-4	ND 8.2E-3	ND 5.0E+0	11.3	97	49.00
naphthalene	(H)	ND 8.6E-3	ND 8.8E-4	ND 1.1E-2	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.4E-1	ND 2.6E-2	ND 3.2E-1	ND 5.0E+1			
alpha-pinene		ND 9.7E-3	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 9.5E-3	ND 1.0E-3	ND 1.3E-2	ND 5.0E+0			
propionaldehyde	(H)	9.5E-3	4.4E-4	5.5E-3	5.6E+0	9.7	46	58.10
toluene	(H)	ND 7.2E-3	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	25.6	99	91.10
formaldehyde	(H)	ND 2.0E-2	ND 4.8E-4	ND 5.9E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			2.2E-3	2.7E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	5100
Source Moisture (%):	1.7
Source Temp (C):	33.9
Sampling Date:	9/19/96
Sampling Start Time:	13:02
Sampling End Time:	13:38

TABLE P-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RPN

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.6E-2	5.1E-4	6.3E-3	2.4E+1	6.0	83	43.00
biphenyl	(H)	ND 2.4E-2	ND 1.6E-3	ND 2.0E-2	ND 5.0E+0	54.9	98	154.15
carbon disulfide	(H)	ND 7.4E-3	ND 2.5E-4	ND 3.1E-3	ND 5.0E+0	10.2	0	75.95
3-carene		ND 8.4E-3	ND 5.0E-4	ND 6.2E-3	ND 5.0E+0	40.6	0	93.10
chloroform	(H)	ND 6.6E-3	ND 3.4E-4	ND 4.3E-3	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 6.7E-3	ND 3.5E-4	ND 4.4E-3	ND 5.0E+0	36.3	52	105.10
p-cymene		ND 7.0E-3	ND 4.1E-4	ND 5.1E-3	ND 5.0E+0	41.7	48	119.15
1,2-dimethoxyethane	(H)	ND 5.3E-3	ND 2.1E-4	ND 2.6E-3	ND 5.0E+0	18.8	0	45.05
limonene		ND 6.7E-3	ND 4.0E-4	ND 5.0E-3	ND 5.0E+0	41.5	0	68.10
methanol	(H)	3.9E-2	5.4E-4	6.8E-3	3.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 6.8E-3	ND 2.2E-4	ND 2.7E-3	ND 5.0E+0	15.7	94	43.05
methylene chloride	(H)	ND 9.2E-3	ND 3.4E-4	ND 4.2E-3	ND 5.0E+0	11.3	94	49.00
naphthalene	(H)	ND 8.1E-3	ND 4.6E-4	ND 5.7E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 3.2E-1	ND 1.3E-2	ND 1.7E-1	ND 5.0E+1	44.3	0	94.10
alpha-pinene		ND 9.1E-3	ND 5.4E-4	ND 6.8E-3	ND 5.0E+0	36.2	30	93.10
beta-pinene		ND 8.9E-3	ND 5.3E-4	ND 6.6E-3	ND 5.0E+0	39.0	0	93.10
propionaldehyde	(H)	1.2E-2	2.9E-4	3.7E-3	7.1E+0	9.6	46	58.10
toluene	(H)	ND 6.8E-3	ND 2.7E-4	ND 3.4E-3	ND 5.0E+0	25.6	100	91.10
formaldehyde	(H)	ND 2.0E-2	ND 2.6E-4	ND 3.2E-3	ND 5.0E+0			
THC (as C)								
Total HAPs			1.3E-3	1.7E-2				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.0
Source Temp (C):	37.2
Sampling Date:	9/19/96
Sampling Start Time:	13:02
Sampling End Time:	13:38

TABLE P-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RPN

Analyte	Source			Canister	Mass Spec		
	ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde (H)	5.2E-2	1.0E-4	1.3E-3	2.4E+1	6.0	94	43.00
biphenyl (H)	ND 4.7E-2	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	55.0	0	154.15
carbon disulfide (H)	ND 1.5E-2	ND 4.9E-5	ND 6.2E-4	ND 5.0E+0	10.2	0	75.95
3-carene	ND 1.7E-2	ND 1.0E-4	ND 1.2E-3	ND 5.0E+0			
chloroform (H)	ND 1.3E-2	ND 6.8E-5	ND 8.6E-4	ND 5.0E+0	16.6	99	82.95
cumene (H)	ND 1.3E-2	ND 7.1E-5	ND 8.8E-4	ND 5.0E+0			
p-cymene	ND 1.4E-2	ND 8.2E-5	ND 1.0E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane (H)	ND 1.1E-2	ND 4.2E-5	ND 5.3E-4	ND 5.0E+0			
limonene	ND 1.3E-2	ND 8.0E-5	ND 9.9E-4	ND 5.0E+0	41.5	0	68.10
methanol (H)	5.2E-2	7.3E-5	9.2E-4	2.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK) (H)	ND 1.4E-2	ND 4.3E-5	ND 5.4E-4	ND 5.0E+0	15.7	88	43.05
methylene chloride (H)	2.0E-2	7.4E-5	9.2E-4	5.4E+0	11.3	96	49.00
naphthalene (H)	ND 1.6E-2	ND 9.1E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol (H)	ND 6.4E-1	ND 2.7E-3	ND 3.3E-2	ND 5.0E+1			
alpha-pinene	ND 1.8E-2	ND 1.1E-4	ND 1.4E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene	ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde (H)	ND 1.6E-2	ND 4.1E-5	ND 5.1E-4	ND 5.0E+0	9.6	46	58.10
toluene (H)	ND 1.3E-2	ND 5.5E-5	ND 6.8E-4	ND 5.0E+0	25.5	99	91.10
formaldehyde (H)	ND 4.1E-2	ND 5.5E-5	ND 6.8E-4	ND 5.0E+0			
THC (as C)							
Total HAPs		2.5E-4	3.1E-3				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	4.3
Source Temp (C):	31.7
Sampling Date:	9/19/96
Sampling Start Time:	13:00
Sampling End Time:	13:36

TABLE P-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 4
WMU4RPNX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.2E-2	1.0E-4	1.3E-3	2.4E+1	6.0	92	43.00
biphenyl	(H)	ND 4.7E-2	ND 3.2E-4	ND 4.0E-3	ND 5.0E+0	55.0	0	154.15
carbon disulfide	(H)	ND 1.5E-2	ND 4.9E-5	ND 6.2E-4	ND 5.0E+0	10.2	0	75.95
3-carene		ND 1.7E-2	ND 1.0E-4	ND 1.2E-3	ND 5.0E+0			
chloroform	(H)	ND 1.3E-2	ND 6.8E-5	ND 8.6E-4	ND 5.0E+0	16.6	99	82.95
cumene	(H)	ND 1.3E-2	ND 7.1E-5	ND 8.8E-4	ND 5.0E+0			
p-cymene		ND 1.4E-2	ND 8.2E-5	ND 1.0E-3	ND 5.0E+0	41.7	0	119.15
1,2-dimethoxyethane	(H)	ND 1.1E-2	ND 4.2E-5	ND 5.3E-4	ND 5.0E+0			
limonene		ND 1.3E-2	ND 8.0E-5	ND 9.9E-4	ND 5.0E+0	41.5	0	68.10
methanol	(H)	5.2E-2	7.3E-5	9.2E-4	2.0E+1	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.4E-2	ND 4.3E-5	ND 5.4E-4	ND 5.0E+0	15.7	89	43.05
methylene chloride	(H)	2.0E-2	7.5E-5	9.4E-4	5.5E+0	11.3	95	49.00
naphthalene	(H)	ND 1.6E-2	ND 9.1E-5	ND 1.1E-3	ND 5.0E+0	49.8	100	128.05
phenol	(H)	ND 6.4E-1	ND 2.7E-3	ND 3.3E-2	ND 5.0E+1			
alpha-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.4E-3	ND 5.0E+0	36.2	0	93.10
beta-pinene		ND 1.8E-2	ND 1.1E-4	ND 1.3E-3	ND 5.0E+0			
propionaldehyde	(H)	ND 1.6E-2	ND 4.1E-5	ND 5.1E-4	ND 5.0E+0	9.6	46	58.10
toluene	(H)	ND 1.3E-2	ND 5.5E-5	ND 6.8E-4	ND 5.0E+0	25.5	99	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			2.5E-4	3.1E-3				

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	284
Source Moisture (%):	4.3
Source Temp (C):	31.7
Sampling Date:	9/19/96
Sampling Start Time:	13:00
Sampling End Time:	13:36

TABLE Q-2 SUMMARY EMISSIONS TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
Spike Level B

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	9.0E-1	3.5E-3	4.4E-2
biphenyl	(H)	1.3E-1	1.2E-2	1.5E-1
carbon disulfide	(H)	ND 4.4E-2	ND 1.2E-3	ND 1.6E-2
3-carene		ND 5.0E-2	ND 2.5E-3	ND 3.2E-2
chloroform	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.2E-2
cumene	(H)	ND 4.0E-2	ND 1.8E-3	ND 2.2E-2
p-cymene		ND 4.2E-2	ND 2.1E-3	ND 2.6E-2
1,2-dimethoxyethane	(H)	7.0E-2	1.1E-3	1.3E-2
limonene		ND 4.0E-2	ND 2.0E-3	ND 2.5E-2
methanol	(H)	2.1E-1	1.5E-3	1.8E-2
methyl ethyl ketone (MEK)	(H)	5.4E-1	2.2E-3	2.7E-2
methylene chloride	(H)	1.9E+0	1.2E-2	1.4E-1
naphthalene	(H)	7.7E-1	1.8E-2	2.2E-1
phenol	(H)	ND 1.9E+0	ND 6.7E-2	ND 8.4E-1
alpha-pinene		ND 5.4E-2	ND 2.7E-3	ND 3.4E-2
beta-pinene		ND 5.3E-2	ND 2.7E-3	ND 3.4E-2
propionaldehyde	(H)	2.8E-2	3.0E-4	3.8E-3
toluene	(H)	ND 4.0E-2	ND 1.4E-3	ND 1.7E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			4.8E-2	6.0E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.9
Source Temp (C):	32.4

TABLE Q-3 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level C

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	9.5E-1	3.7E-3	4.6E-2
biphenyl	(H)	ND 1.4E-1	ND 7.8E-3	ND 9.7E-2
carbon disulfide	(H)	ND 4.2E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.8E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.8E-2	ND 1.6E-3	ND 2.1E-2
cumene	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.0E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	8.9E-2	7.8E-4	9.7E-3
limonene		ND 3.8E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	2.8E-1	1.9E-3	2.3E-2
methyl ethyl ketone (MEK)	(H)	8.2E-1	3.3E-3	4.1E-2
methylene chloride	(H)	3.9E+0	2.2E-2	2.7E-1
naphthalene	(H)	3.3E-2	1.9E-4	2.3E-3
phenol	(H)	ND 1.9E+0	ND 6.4E-2	ND 8.0E-1
alpha-pinene		ND 5.2E-2	ND 2.6E-3	ND 3.3E-2
beta-pinene		ND 5.1E-2	ND 2.6E-3	ND 3.2E-2
propionaldehyde	(H)	ND 4.6E-2	ND 9.9E-4	ND 1.2E-2
toluene	(H)	ND 3.9E-2	ND 1.3E-3	ND 1.6E-2
formaldehyde	(H)	ND 1.2E-1	ND 1.3E-3	ND 1.7E-2
THC (as C)				
Total HAPs			3.2E-2	4.0E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.9
Source Temp (C):	34.0

TABLE Q-4 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level D

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	2.2E+0	7.5E-3	9.3E-2
biphenyl	(H)	ND 1.4E-1	ND 8.0E-3	ND 9.9E-2
carbon disulfide	(H)	ND 4.3E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.9E-2	ND 2.5E-3	ND 3.1E-2
chloroform	(H)	ND 3.8E-2	ND 1.7E-3	ND 2.1E-2
cumene	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.2E-2
p-cymene		ND 4.1E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	2.0E-1	1.9E-3	2.4E-2
limonene		ND 3.9E-2	ND 2.0E-3	ND 2.4E-2
methanol	(H)	5.3E-1	3.3E-3	4.1E-2
methyl ethyl ketone (MEK)	(H)	1.8E+0	6.8E-3	8.5E-2
methylene chloride	(H)	6.2E+0	3.4E-2	4.3E-1
naphthalene	(H)	7.5E-3	4.3E-5	5.3E-4
phenol	(H)	ND 1.9E+0	ND 6.6E-2	ND 8.2E-1
alpha-pinene		ND 5.3E-2	ND 2.7E-3	ND 3.3E-2
beta-pinene		ND 5.2E-2	ND 2.6E-3	ND 3.3E-2
propionaldehyde	(H)	4.6E-2	7.9E-4	9.8E-3
toluene	(H)	ND 4.0E-2	ND 1.3E-3	ND 1.7E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			5.4E-2	6.8E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.6
Source Temp (C):	33.9

TABLE Q-5 SUMMARY EMISSIONS TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
Spike Level E

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	3.0E+0	9.1E-3	1.1E-1
biphenyl	(H)	ND 1.4E-1	ND 8.0E-3	ND 1.0E-1
carbon disulfide	(H)	ND 4.4E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 5.0E-2	ND 2.5E-3	ND 3.1E-2
chloroform	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
cumene	(H)	ND 4.0E-2	ND 1.7E-3	ND 2.2E-2
p-cymene		ND 4.2E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	2.5E-1	2.2E-3	2.8E-2
limonene		ND 4.0E-2	ND 2.0E-3	ND 2.5E-2
methanol	(H)	6.1E-1	3.9E-3	4.8E-2
methyl ethyl ketone (MEK)	(H)	2.1E+0	8.1E-3	1.0E-1
methylene chloride	(H)	7.1E+0	3.9E-2	4.9E-1
naphthalene	(H)	ND 4.9E-2	ND 2.3E-3	ND 2.8E-2
phenol	(H)	ND 1.9E+0	ND 6.6E-2	ND 8.2E-1
alpha-pinene		ND 5.5E-2	ND 2.7E-3	ND 3.4E-2
beta-pinene		ND 5.3E-2	ND 2.6E-3	ND 3.3E-2
propionaldehyde	(H)	1.0E-2	2.6E-5	3.2E-4
toluene	(H)	ND 4.1E-2	ND 1.3E-3	ND 1.7E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			6.3E-2	7.8E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	3.0
Source Temp (C):	35.1

TABLE Q-6 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level F

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	4.1E+0	1.2E-2	1.5E-1
biphenyl	(H)	ND 1.4E-1	ND 8.0E-3	ND 1.0E-1
carbon disulfide	(H)	ND 4.4E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 5.0E-2	ND 2.5E-3	ND 3.1E-2
chloroform	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
cumene	(H)	ND 4.0E-2	ND 1.8E-3	ND 2.2E-2
p-cymene		ND 4.2E-2	ND 2.0E-3	ND 2.6E-2
1,2-dimethoxyethane	(H)	3.4E-1	3.1E-3	3.9E-2
limonene		ND 4.0E-2	ND 2.0E-3	ND 2.5E-2
methanol	(H)	9.7E-1	7.2E-3	9.0E-2
methyl ethyl ketone (MEK)	(H)	2.5E+0	1.1E-2	1.3E-1
methylene chloride	(H)	9.2E+0	5.3E-2	6.6E-1
naphthalene	(H)	ND 4.8E-2	ND 2.3E-3	ND 2.8E-2
phenol	(H)	ND 1.9E+0	ND 6.6E-2	ND 8.3E-1
alpha-pinene		ND 5.4E-2	ND 2.7E-3	ND 3.4E-2
beta-pinene		ND 5.3E-2	ND 2.6E-3	ND 3.3E-2
propionaldehyde	(H)	2.0E-2	5.1E-5	6.4E-4
toluene	(H)	ND 4.0E-2	ND 1.4E-3	ND 1.7E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			8.6E-2	1.1E+0

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.9
Source Temp (C):	35.0

TABLE Q-7 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level G

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	6.2E+0	1.8E-2	2.3E-1
biphenyl	(H)	ND 1.4E-1	ND 7.9E-3	ND 9.8E-2
carbon disulfide	(H)	ND 4.4E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 5.0E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
cumene	(H)	ND 4.0E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.2E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	5.2E-1	4.9E-3	6.1E-2
limonene		ND 4.0E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	1.3E+0	8.6E-3	1.1E-1
methyl ethyl ketone (MEK)	(H)	4.0E+0	1.7E-2	2.1E-1
methylene chloride	(H)	1.6E+1	8.3E-2	1.0E+0
naphthalene	(H)	ND 4.8E-2	ND 2.2E-3	ND 2.8E-2
phenol	(H)	ND 1.9E+0	ND 6.5E-2	ND 8.1E-1
alpha-pinene		ND 5.4E-2	ND 2.6E-3	ND 3.3E-2
beta-pinene		ND 5.3E-2	ND 2.6E-3	ND 3.2E-2
propionaldehyde	(H)	5.2E-2	1.3E-3	1.6E-2
toluene	(H)	ND 4.0E-2	ND 1.3E-3	ND 1.7E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			1.3E-1	1.7E+0

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.9
Source Temp (C):	36.7

TABLE Q-8 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level H

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	7.3E+0	2.0E-2	2.5E-1
biphenyl	(H)	ND 1.4E-1	ND 7.7E-3	ND 9.6E-2
carbon disulfide	(H)	ND 4.3E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.9E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.8E-2	ND 1.6E-3	ND 2.0E-2
cumene	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.1E-2	ND 2.0E-3	ND 2.4E-2
1,2-dimethoxyethane	(H)	6.8E-1	5.6E-3	7.0E-2
limonene		ND 3.9E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	1.5E+0	7.8E-3	9.8E-2
methyl ethyl ketone (MEK)	(H)	4.4E+0	1.8E-2	2.2E-1
methylene chloride	(H)	1.8E+1	8.8E-2	1.1E+0
naphthalene	(H)	ND 4.7E-2	ND 2.2E-3	ND 2.7E-2
phenol	(H)	ND 1.9E+0	ND 6.3E-2	ND 7.9E-1
alpha-pinene		ND 5.3E-2	ND 2.6E-3	ND 3.2E-2
beta-pinene		ND 5.2E-2	ND 2.5E-3	ND 3.2E-2
propionaldehyde	(H)	2.5E-2	6.5E-5	8.1E-4
toluene	(H)	ND 3.9E-2	ND 1.3E-3	ND 1.6E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			1.4E-1	1.7E+0

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.8
Source Temp (C):	36.5

TABLE Q-9 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level I

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	5.1E-1	3.2E-3	4.0E-2
biphenyl	(H)	ND 1.4E-1	ND 7.7E-3	ND 9.7E-2
carbon disulfide	(H)	ND 4.3E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.8E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.8E-2	ND 1.6E-3	ND 2.0E-2
cumene	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.0E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	3.9E-2	1.6E-4	2.0E-3
limonene		ND 3.8E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	1.5E+0	1.1E-2	1.4E-1
methyl ethyl ketone (MEK)	(H)	3.3E-1	1.1E-3	1.3E-2
methylene chloride	(H)	1.3E+0	8.5E-3	1.1E-1
naphthalene	(H)	ND 4.7E-2	ND 2.2E-3	ND 2.7E-2
phenol	(H)	ND 1.9E+0	ND 6.4E-2	ND 8.0E-1
alpha-pinene		ND 5.2E-2	ND 2.6E-3	ND 3.2E-2
beta-pinene		ND 5.1E-2	ND 2.5E-3	ND 3.2E-2
propionaldehyde	(H)	1.7E-2	8.0E-4	1.0E-2
toluene	(H)	ND 3.9E-2	ND 1.3E-3	ND 1.6E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			2.5E-2	3.1E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.7
Source Temp (C):	33.8

TABLE Q-10 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level J

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	9.5E-1	4.8E-3	6.0E-2
biphenyl	(H)	ND 1.4E-1	ND 7.7E-3	ND 9.7E-2
carbon disulfide	(H)	ND 4.3E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.8E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.8E-2	ND 1.6E-3	ND 2.0E-2
cumene	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.0E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	5.7E-2	2.3E-4	2.8E-3
limonene		ND 3.8E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	3.7E+0	2.1E-2	2.6E-1
methyl ethyl ketone (MEK)	(H)	4.0E-1	1.8E-3	2.3E-2
methylene chloride	(H)	3.1E+0	2.0E-2	2.5E-1
naphthalene	(H)	ND 4.7E-2	ND 2.2E-3	ND 2.7E-2
phenol	(H)	ND 1.9E+0	ND 6.4E-2	ND 8.0E-1
alpha-pinene		ND 5.2E-2	ND 2.6E-3	ND 3.2E-2
beta-pinene		ND 5.1E-2	ND 2.5E-3	ND 3.2E-2
propionaldehyde	(H)	2.8E-2	3.4E-4	4.2E-3
toluene	(H)	ND 3.9E-2	ND 1.3E-3	ND 1.6E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			4.8E-2	6.0E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.9
Source Temp (C):	33.1

TABLE Q-11 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level K

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	1.3E+0	6.5E-3	8.1E-2
biphenyl	(H)	ND 1.4E-1	ND 7.9E-3	ND 9.9E-2
carbon disulfide	(H)	ND 4.4E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.9E-2	ND 2.4E-3	ND 3.1E-2
chloroform	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
cumene	(H)	ND 4.0E-2	ND 1.7E-3	ND 2.2E-2
p-cymene		ND 4.1E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	9.5E-2	8.4E-4	1.0E-2
limonene		ND 3.9E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	5.3E+0	2.8E-2	3.5E-1
methyl ethyl ketone (MEK)	(H)	5.6E-1	2.6E-3	3.2E-2
methylene chloride	(H)	4.2E+0	2.6E-2	3.2E-1
naphthalene	(H)	ND 4.8E-2	ND 2.2E-3	ND 2.8E-2
phenol	(H)	ND 1.9E+0	ND 6.5E-2	ND 8.2E-1
alpha-pinene		ND 5.4E-2	ND 2.7E-3	ND 3.3E-2
beta-pinene		ND 5.3E-2	ND 2.6E-3	ND 3.3E-2
propionaldehyde	(H)	2.4E-2	6.2E-5	7.7E-4
toluene	(H)	ND 4.0E-2	ND 1.3E-3	ND 1.7E-2
formaldehyde	(H)			
THC (as C)				
Total HAPs			6.3E-2	7.9E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.9
Source Temp (C):	35.8

TABLE Q-12 SUMMARY EMISSIONS TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
Spike Level L

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	1.8E+0	6.4E-3	8.0E-2
biphenyl	(H)	ND 1.4E-1	ND 7.7E-3	ND 9.6E-2
carbon disulfide	(H)	ND 4.3E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.8E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.8E-2	ND 1.6E-3	ND 2.0E-2
cumene	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.0E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	1.4E-1	1.7E-3	2.1E-2
limonene		ND 3.8E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	7.6E+0	4.5E-2	5.6E-1
methyl ethyl ketone (MEK)	(H)	7.5E-1	3.6E-3	4.5E-2
methylene chloride	(H)	5.5E+0	3.0E-2	3.7E-1
naphthalene	(H)	ND 4.7E-2	ND 2.2E-3	ND 2.7E-2
phenol	(H)	ND 1.9E+0	ND 6.4E-2	ND 8.0E-1
alpha-pinene		ND 5.3E-2	ND 2.6E-3	ND 3.2E-2
beta-pinene		ND 5.1E-2	ND 2.5E-3	ND 3.2E-2
propionaldehyde	(H)	7.9E-3	3.7E-4	4.6E-3
toluene	(H)	1.0E-2	4.1E-4	5.1E-3
formaldehyde	(H)			
THC (as C)				
Total HAPs			8.7E-2	1.1E+0

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.8
Source Temp (C):	36.1

TABLE Q-13 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level M

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	3.3E-1	6.1E-3	7.6E-2
biphenyl	(H)	ND 1.5E-1	ND 8.4E-3	ND 1.0E-1
carbon disulfide	(H)	ND 4.6E-2	ND 1.3E-3	ND 1.6E-2
3-carene		ND 5.2E-2	ND 2.6E-3	ND 3.2E-2
chloroform	(H)	ND 4.0E-2	ND 1.8E-3	ND 2.2E-2
cumene	(H)	ND 4.1E-2	ND 1.8E-3	ND 2.3E-2
p-cymene		ND 4.3E-2	ND 2.1E-3	ND 2.7E-2
1,2-dimethoxyethane	(H)	ND 3.3E-2	ND 1.1E-3	ND 1.4E-2
limonene		ND 4.1E-2	ND 2.1E-3	ND 2.6E-2
methanol	(H)	3.2E-1	4.8E-3	6.0E-2
methyl ethyl ketone (MEK)	(H)	ND 4.2E-2	ND 1.1E-3	ND 1.4E-2
methylene chloride	(H)	3.7E-2	1.4E-4	1.7E-3
naphthalene	(H)	ND 5.0E-2	ND 2.4E-3	ND 3.0E-2
phenol	(H)	ND 2.0E+0	ND 6.9E-2	ND 8.6E-1
alpha-pinene		ND 5.6E-2	ND 2.8E-3	ND 3.5E-2
beta-pinene		ND 5.5E-2	ND 2.8E-3	ND 3.4E-2
propionaldehyde	(H)	3.9E-2	1.2E-3	1.5E-2
toluene	(H)	2.3E-2	1.3E-3	1.6E-2
formaldehyde	(H)	ND 1.2E-1	ND 1.3E-3	ND 1.6E-2
THC (as C)				
Total HAPs			1.4E-2	1.7E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.8
Source Temp (C):	33.5

TABLE Q-14 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level N

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	1.5E-1	2.3E-3	2.9E-2
biphenyl	(H)	9.9E-2	6.8E-4	8.5E-3
carbon disulfide	(H)	ND 4.2E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.8E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.7E-2	ND 1.6E-3	ND 2.0E-2
cumene	(H)	ND 3.8E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.0E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	3.1E-2	1.2E-4	1.5E-3
limonene		ND 3.8E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	2.7E-1	4.2E-3	5.2E-2
methyl ethyl ketone (MEK)	(H)	ND 3.9E-2	ND 1.0E-3	ND 1.3E-2
methylene chloride	(H)	4.5E-2	1.2E-3	1.4E-2
naphthalene	(H)	1.8E-2	1.0E-4	1.3E-3
phenol	(H)	ND 1.8E+0	ND 6.4E-2	ND 8.0E-1
alpha-pinene		ND 5.2E-2	ND 2.6E-3	ND 3.2E-2
beta-pinene		ND 5.1E-2	ND 2.5E-3	ND 3.2E-2
propionaldehyde	(H)	1.0E-2	2.6E-4	3.2E-3
toluene	(H)	9.0E-3	6.6E-4	8.2E-3
formaldehyde	(H)	ND 1.2E-1	ND 1.3E-3	ND 1.6E-2
THC (as C)				
Total HAPs			9.5E-3	1.2E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.9
Source Temp (C):	33.9

TABLE Q-15 SUMMARY EMISSIONS TEST RESULTS

Pilot-Scale Paper Machine, Dryer Hood Vent No. 1

Spike Level O

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	1.7E-1	3.4E-3	4.3E-2
biphenyl	(H)	3.5E-2	2.4E-4	3.0E-3
carbon disulfide	(H)	ND 4.3E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.9E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.8E-2	ND 1.6E-3	ND 2.0E-2
cumene	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.1E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	1.3E-2	5.1E-4	6.4E-3
limonene		ND 3.9E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	2.0E-1	2.7E-3	3.4E-2
methyl ethyl ketone (MEK)	(H)	1.1E-2	3.5E-4	4.3E-3
methylene chloride	(H)	3.4E-2	5.7E-4	7.1E-3
naphthalene	(H)	ND 4.7E-2	ND 2.2E-3	ND 2.7E-2
phenol	(H)	ND 1.9E+0	ND 6.4E-2	ND 8.0E-1
alpha-pinene		ND 5.3E-2	ND 2.6E-3	ND 3.2E-2
beta-pinene		ND 5.2E-2	ND 2.5E-3	ND 3.2E-2
propionaldehyde	(H)	2.1E-2	5.3E-4	6.7E-3
toluene	(H)	ND 3.9E-2	ND 1.3E-3	ND 1.6E-2
formaldehyde	(H)	ND 1.2E-1	ND 1.3E-3	ND 1.6E-2
THC (as C)				
Total HAPs			8.3E-3	1.0E-1

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.9
Source Temp (C):	35.7

TABLE Q-16 SUMMARY EMISSIONS TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 1
Spike Level P

Analyte		Average Source Emissions		
		ppmVd	lb/hr	lb/ton
acetaldehyde	(H)	1.5E-1	2.3E-3	2.9E-2
biphenyl	(H)	ND 1.4E-1	ND 7.8E-3	ND 9.8E-2
carbon disulfide	(H)	ND 4.3E-2	ND 1.2E-3	ND 1.5E-2
3-carene		ND 4.9E-2	ND 2.4E-3	ND 3.0E-2
chloroform	(H)	ND 3.8E-2	ND 1.7E-3	ND 2.1E-2
cumene	(H)	ND 3.9E-2	ND 1.7E-3	ND 2.1E-2
p-cymene		ND 4.1E-2	ND 2.0E-3	ND 2.5E-2
1,2-dimethoxyethane	(H)	ND 3.1E-2	ND 1.0E-3	ND 1.3E-2
limonene		ND 3.9E-2	ND 1.9E-3	ND 2.4E-2
methanol	(H)	1.8E-1	2.3E-3	2.9E-2
methyl ethyl ketone (MEK)	(H)	ND 4.0E-2	ND 1.0E-3	ND 1.3E-2
methylene chloride	(H)	2.0E-2	7.5E-5	9.3E-4
naphthalene	(H)	ND 4.7E-2	ND 2.2E-3	ND 2.8E-2
phenol	(H)	ND 1.9E+0	ND 6.5E-2	ND 8.1E-1
alpha-pinene		ND 5.3E-2	ND 2.6E-3	ND 3.3E-2
beta-pinene		ND 5.2E-2	ND 2.6E-3	ND 3.2E-2
propionaldehyde	(H)	3.9E-2	1.2E-3	1.5E-2
toluene	(H)	ND 4.0E-2	ND 1.3E-3	ND 1.7E-2
formaldehyde	(H)	ND 1.2E-1	ND 1.3E-3	ND 1.6E-2
THC (as C)				
Total HAPs			5.8E-3	7.3E-2

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2721
Source Moisture (%):	2.6
Source Temp (C):	36.5

TABLE R-1 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RAS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.4E-1	4.6E-3	5.7E-2	1.5E+2	5.9	97	43.00
biphenyl	(H)	4.1E-2	2.7E-3	3.4E-2	2.6E+1	54.9	98	154.15
carbon disulfide	(H)	1.5E-1	5.1E-3	6.3E-2	9.6E+1	10.5	100	75.95
3-carene		1.0E-1	6.2E-3	7.7E-2	6.6E+1	40.6	94	93.10
chloroform	(H)	1.8E-1	9.4E-3	1.2E-1	1.1E+2	16.7	100	82.95
cumene	(H)	1.4E-1	7.6E-3	9.4E-2	9.1E+1	36.4	97	105.10
p-cymene		1.4E-1	8.4E-3	1.0E-1	9.0E+1	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.5E-1	1.0E-2	1.2E-1	1.6E+2	18.6	100	45.05
limonene		1.5E-1	8.9E-3	1.1E-1	9.5E+1	41.6	92	68.10
methanol	(H)	2.5E-1	3.5E-3	4.4E-2	1.6E+2	7.1	20	31.15
methyl ethyl ketone (MEK)	(H)	1.8E-1	5.5E-3	6.9E-2	1.1E+2	15.7	96	43.05
methylene chloride	(H)	1.4E-1	5.2E-3	6.5E-2	8.8E+1	11.5	95	49.00
naphthalene	(H)	1.2E-1	6.6E-3	8.2E-2	7.4E+1	49.9	100	128.05
phenol	(H)	ND 7.9E-2	ND 3.3E-3	ND 4.1E-2	ND 5.0E+1	44.3	81	94.10
alpha-pinene		8.7E-2	5.2E-3	6.5E-2	5.5E+1	36.2	94	93.10
beta-pinene		9.2E-2	5.4E-3	6.8E-2	5.8E+1	39.1	92	93.10
propionaldehyde	(H)	1.4E-1	3.7E-3	4.6E-2	9.1E+1	10.1	95	58.10
toluene	(H)	1.7E-1	6.9E-3	8.6E-2	1.1E+2	25.6	100	91.10
formaldehyde	(H)	3.2E-2	4.2E-4	5.2E-3	3.1E+1			
THC (as C)								
Total HAPs			7.1E-2	8.9E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	36.1
Sampling Date:	9/16/96
Sampling Start Time:	13:50
Sampling End Time:	14:20

TABLE R-2 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RBS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.1E-1	4.0E-3	5.0E-2	1.4E+2	5.9	98	43.00
biphenyl	(H)	3.5E-2	2.3E-3	2.9E-2	2.4E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	5.0E-3	6.2E-2	1.0E+2	10.6	100	75.95
3-carene		1.3E-1	8.0E-3	1.0E-1	9.2E+1	40.6	94	93.10
chloroform	(H)	1.8E-1	9.1E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.7E-1	8.9E-3	1.1E-1	1.2E+2	36.4	97	105.10
p-cymene		1.7E-1	9.9E-3	1.2E-1	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.3E-1	9.0E-3	1.1E-1	1.6E+2	18.6	100	45.05
limonene		1.8E-1	1.1E-2	1.3E-1	1.2E+2	41.6	93	68.10
methanol	(H)	2.1E-1	3.0E-3	3.7E-2	1.5E+2	7.2	1	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	5.1E-3	6.3E-2	1.1E+2	15.7	97	43.05
methylene chloride	(H)	1.3E-1	4.8E-3	6.0E-2	8.9E+1	11.5	94	49.00
naphthalene	(H)	1.4E-1	7.6E-3	9.5E-2	9.4E+1	49.9	100	128.05
phenol	(H)	ND 7.3E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+1			
alpha-pinene		1.1E-1	6.8E-3	8.5E-2	7.9E+1	36.2	95	93.10
beta-pinene		1.2E-1	7.2E-3	9.0E-2	8.3E+1	39.1	92	93.10
propionaldehyde	(H)	1.4E-1	3.5E-3	4.4E-2	9.6E+1	10.1	0	58.10
toluene	(H)	1.7E-1	7.0E-3	8.7E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)	2.7E-2	3.5E-4	4.4E-3	2.7E+1			
THC (as C)								
Total HAPs			7.0E-2	8.7E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	36.1
Sampling Date:	9/16/96
Sampling Start Time:	14:40
Sampling End Time:	15:10

TABLE R-3 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RCS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.2E-1	4.2E-3	5.3E-2	1.6E+2	5.9	98	43.00
biphenyl	(H)	5.5E-2	3.7E-3	4.6E-2	3.9E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	4.9E-3	6.2E-2	1.0E+2	10.6	100	75.95
3-carene		1.4E-1	8.4E-3	1.0E-1	9.9E+1	40.6	94	93.10
chloroform	(H)	1.8E-1	9.1E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.7E-1	8.8E-3	1.1E-1	1.2E+2	36.4	97	105.10
p-cymene		1.7E-1	9.8E-3	1.2E-1	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.1E-1	8.2E-3	1.0E-1	1.5E+2	18.6	99	45.05
limonene		1.8E-1	1.0E-2	1.3E-1	1.2E+2	41.6	93	68.10
methanol	(H)	1.8E-1	2.5E-3	3.1E-2	1.3E+2	7.3	25	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	5.0E-3	6.3E-2	1.1E+2	15.7	97	43.05
methylene chloride	(H)	1.3E-1	4.9E-3	6.2E-2	9.4E+1	11.5	95	49.00
naphthalene	(H)	1.4E-1	8.0E-3	1.0E-1	1.0E+2	49.9	100	128.05
phenol	(H)	ND 7.1E-2	ND 2.9E-3	ND 3.7E-2	ND 5.0E+1	44.3	40	94.10
alpha-pinene		1.2E-1	7.1E-3	8.9E-2	8.4E+1	36.2	95	93.10
beta-pinene		1.3E-1	7.8E-3	9.7E-2	9.2E+1	39.1	93	93.10
propionaldehyde	(H)	1.4E-1	3.6E-3	4.5E-2	9.9E+1	10.2	0	58.10
toluene	(H)	1.7E-1	6.9E-3	8.6E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)	1.8E-2	2.3E-4	2.9E-3	1.8E+1			
THC (as C)								
Total HAPs			7.0E-2	8.8E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	35.0
Sampling Date:	9/17/96
Sampling Start Time:	8:42
Sampling End Time:	9:12

2/19/97
11:54 AM

TABLE R-4 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RCSX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.2E-1	4.2E-3	5.2E-2	1.5E+2	5.9	99	43.00
biphenyl	(H)	6.7E-2	4.5E-3	5.6E-2	4.7E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	5.0E-3	6.3E-2	1.1E+2	10.6	100	75.95
3-carene		1.4E-1	8.2E-3	1.0E-1	9.6E+1	40.6	95	93.10
chloroform	(H)	1.7E-1	8.9E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.7E-1	8.9E-3	1.1E-1	1.2E+2	36.4	97	105.10
p-cymene		1.7E-1	9.7E-3	1.2E-1	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.1E-1	8.2E-3	1.0E-1	1.5E+2	18.6	99	45.05
limonene		1.7E-1	1.0E-2	1.3E-1	1.2E+2	41.6	93	68.10
methanol	(H)	1.9E-1	2.7E-3	3.3E-2	1.3E+2	7.0	0	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	5.0E-3	6.3E-2	1.1E+2	15.7	97	43.05
methylene chloride	(H)	1.3E-1	5.0E-3	6.2E-2	9.4E+1	11.5	95	49.00
naphthalene	(H)	1.4E-1	8.1E-3	1.0E-1	1.0E+2	49.9	100	128.05
phenol	(H)	ND 7.1E-2	ND 2.9E-3	ND 3.7E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		1.3E-1	7.5E-3	9.3E-2	8.8E+1	36.2	95	93.10
beta-pinene		1.3E-1	7.6E-3	9.5E-2	9.0E+1	39.1	93	93.10
propionaldehyde	(H)	1.4E-1	3.5E-3	4.4E-2	9.8E+1	10.1	0	58.10
toluene	(H)	1.6E-1	6.6E-3	8.2E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.1E-2	8.8E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	35.0
Sampling Date:	9/17/96
Sampling Start Time:	8:42
Sampling End Time:	9:12

TABLE R-5 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RDS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.0E-1	3.8E-3	4.7E-2	1.4E+2	5.9	98	43.00
biphenyl	(H)	5.7E-2	3.9E-3	4.8E-2	4.1E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	5.1E-3	6.3E-2	1.1E+2	10.6	100	75.95
3-carene		1.4E-1	8.6E-3	1.1E-1	1.0E+2	40.6	94	93.10
chloroform	(H)	1.7E-1	8.7E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.7E-1	8.8E-3	1.1E-1	1.2E+2	36.4	98	105.10
p-cymene		1.6E-1	9.4E-3	1.2E-1	1.1E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	1.9E-1	7.6E-3	9.5E-2	1.4E+2	18.6	99	45.05
limonene		1.7E-1	9.9E-3	1.2E-1	1.2E+2	41.6	93	68.10
methanol	(H)	1.8E-1	2.6E-3	3.2E-2	1.3E+2	6.9	0	31.15
methyl ethyl ketone (MEK)	(H)	1.5E-1	4.9E-3	6.1E-2	1.1E+2	15.7	97	43.05
methylene chloride	(H)	1.3E-1	4.9E-3	6.2E-2	9.5E+1	11.5	96	49.00
naphthalene	(H)	1.5E-1	8.5E-3	1.1E-1	1.1E+2	49.8	100	128.05
phenol	(H)	ND 7.0E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+1	44.3	83	94.10
alpha-pinene		1.6E-1	9.3E-3	1.2E-1	1.1E+2	36.2	95	93.10
beta-pinene		1.6E-1	9.3E-3	1.2E-1	1.1E+2	39.1	93	93.10
propionaldehyde	(H)	1.3E-1	3.3E-3	4.1E-2	9.3E+1	10.1	0	58.10
toluene	(H)	1.7E-1	6.7E-3	8.4E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.9E-2	8.6E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	35.6
Sampling Date:	9/17/96
Sampling Start Time:	9:50
Sampling End Time:	10:23

TABLE R-6 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RES

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.1E-1	4.0E-3	5.0E-2	1.4E+2	5.8	98	43.00
biphenyl	(H)	4.1E-2	2.7E-3	3.4E-2	2.8E+1	54.9	99	154.15
carbon disulfide	(H)	1.4E-1	4.8E-3	5.9E-2	9.9E+1	10.5	100	75.95
3-carene		1.4E-1	8.4E-3	1.0E-1	9.8E+1	40.6	94	93.10
chloroform	(H)	1.6E-1	8.5E-3	1.1E-1	1.1E+2	16.6	100	82.95
cumene	(H)	1.7E-1	8.7E-3	1.1E-1	1.2E+2	36.3	97	105.10
p-cymene		1.7E-1	9.7E-3	1.2E-1	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.0E-1	7.8E-3	9.7E-2	1.4E+2	18.6	99	45.05
limonene		1.7E-1	1.0E-2	1.3E-1	1.2E+2	41.6	94	68.10
methanol	(H)	1.9E-1	2.7E-3	3.4E-2	1.3E+2	7.0	0	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	4.9E-3	6.1E-2	1.1E+2	15.7	98	43.05
methylene chloride	(H)	1.4E-1	5.1E-3	6.3E-2	9.5E+1	11.4	96	49.00
naphthalene	(H)	1.4E-1	7.7E-3	9.6E-2	9.6E+1	49.8	100	128.05
phenol	(H)	ND 7.2E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+1			
alpha-pinene		1.1E-1	6.8E-3	8.5E-2	7.9E+1	36.2	94	93.10
beta-pinene		1.2E-1	7.3E-3	9.2E-2	8.6E+1	39.0	93	93.10
propionaldehyde	(H)	1.4E-1	3.5E-3	4.4E-2	9.6E+1	10.0	99	58.10
toluene	(H)	1.6E-1	6.3E-3	7.8E-2	1.1E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.7E-2	8.3E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	36.1
Sampling Date:	9/17/96
Sampling Start Time:	11:00
Sampling End Time:	11:30

TABLE R-7 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RFS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.3E-1	4.5E-3	5.6E-2	1.6E+2	5.8	96	43.00
biphenyl	(H)	3.4E-2	2.3E-3	2.9E-2	2.4E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	5.0E-3	6.2E-2	1.0E+2	10.5	100	75.95
3-carene		1.3E-1	8.0E-3	1.0E-1	9.2E+1	40.6	94	93.10
chloroform	(H)	1.7E-1	8.7E-3	1.1E-1	1.2E+2	16.6	100	82.95
cumene	(H)	1.6E-1	8.6E-3	1.1E-1	1.1E+2	36.3	97	105.10
p-cymene		1.6E-1	9.5E-3	1.2E-1	1.1E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.2E-1	8.8E-3	1.1E-1	1.5E+2	18.6	100	45.05
limonene		1.7E-1	1.0E-2	1.2E-1	1.2E+2	41.5	93	68.10
methanol	(H)	3.1E-1	4.3E-3	5.3E-2	2.1E+2	7.0	0	31.15
methyl ethyl ketone (MEK)	(H)	1.7E-1	5.4E-3	6.7E-2	1.2E+2	15.6	97	43.05
methylene chloride	(H)	1.6E-1	5.8E-3	7.2E-2	1.1E+2	11.4	97	49.00
naphthalene	(H)	1.3E-1	7.5E-3	9.4E-2	9.3E+1	49.8	100	128.05
phenol	(H)	ND 7.3E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+1			
alpha-pinene		1.2E-1	7.1E-3	8.9E-2	8.2E+1	36.2	95	93.10
beta-pinene		1.2E-1	7.4E-3	9.2E-2	8.5E+1	39.0	94	93.10
propionaldehyde	(H)	1.5E-1	3.9E-3	4.8E-2	1.0E+2	10.0	99	58.10
toluene	(H)	1.7E-1	6.6E-3	8.3E-2	1.1E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.1E-2	8.9E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	36.1
Sampling Date:	9/17/96
Sampling Start Time:	12:20
Sampling End Time:	12:50

2/19/97
11:54 AM

TABLE R-8 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RGS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.5E-1	4.9E-3	6.1E-2	1.8E+2	5.8	98	43.00
biphenyl	(H)	3.5E-2	2.3E-3	2.9E-2	2.4E+1	54.9	98	154.15
carbon disulfide	(H)	1.5E-1	4.9E-3	6.2E-2	1.0E+2	10.5	100	75.95
3-carene		1.4E-1	8.1E-3	1.0E-1	9.5E+1	40.6	95	93.10
chloroform	(H)	1.7E-1	9.0E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.7E-1	9.0E-3	1.1E-1	1.2E+2	36.3	97	105.10
p-cymene		1.7E-1	1.0E-2	1.2E-1	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.0E-1	7.9E-3	9.9E-2	1.4E+2	18.6	100	45.05
limonene		1.8E-1	1.1E-2	1.3E-1	1.2E+2	41.6	94	68.10
methanol	(H)	2.2E-1	3.1E-3	3.8E-2	1.5E+2	7.0	20	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	5.1E-3	6.4E-2	1.1E+2	15.7	97	43.05
methylene chloride	(H)	1.5E-1	5.4E-3	6.8E-2	1.0E+2	11.4	95	49.00
naphthalene	(H)	1.4E-1	7.8E-3	9.7E-2	9.8E+1	49.8	100	128.05
phenol	(H)	ND 7.1E-2	ND 2.9E-3	ND 3.7E-2	ND 5.0E+1			
alpha-pinene		1.2E-1	7.1E-3	8.8E-2	8.3E+1	36.2	96	93.10
beta-pinene		1.2E-1	7.0E-3	8.7E-2	8.2E+1	39.0	93	93.10
propionaldehyde	(H)	1.3E-1	3.4E-3	4.3E-2	9.4E+1	10.1	98	58.10
toluene	(H)	1.7E-1	6.8E-3	8.6E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.0E-2	8.7E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.7
Source Temp (C):	38.3
Sampling Date:	9/17/96
Sampling Start Time:	13:30
Sampling End Time:	14:00

TABLE R-9 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RGSX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.4E-1	4.6E-3	5.8E-2	1.7E+2	5.9	99	43.00
biphenyl	(H)	4.3E-2	2.9E-3	3.6E-2	3.0E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	4.9E-3	6.1E-2	1.0E+2	10.5	100	75.95
3-carene		1.4E-1	8.4E-3	1.1E-1	9.9E+1	40.6	95	93.10
chloroform	(H)	1.7E-1	8.6E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.7E-1	9.1E-3	1.1E-1	1.2E+2	36.3	97	105.10
p-cymene		1.7E-1	1.0E-2	1.3E-1	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	1.9E-1	7.6E-3	9.5E-2	1.4E+2	18.6	99	45.05
limonene		1.8E-1	1.1E-2	1.3E-1	1.3E+2	41.6	94	68.10
methanol	(H)	2.2E-1	3.1E-3	3.9E-2	1.6E+2	7.1	20	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	5.0E-3	6.2E-2	1.1E+2	15.7	97	43.05
methylene chloride	(H)	1.4E-1	5.3E-3	6.7E-2	1.0E+2	11.5	95	49.00
naphthalene	(H)	1.4E-1	8.0E-3	1.0E-1	1.0E+2	49.8	100	128.05
phenol	(H)	ND 7.1E-2	ND 2.9E-3	ND 3.7E-2	ND 5.0E+1			
alpha-pinene		1.3E-1	7.9E-3	9.9E-2	9.3E+1	36.2	96	93.10
beta-pinene		1.3E-1	7.6E-3	9.5E-2	9.0E+1	39.0	94	93.10
propionaldehyde	(H)	1.3E-1	3.4E-3	4.2E-2	9.3E+1	10.1	0	58.10
toluene	(H)	1.7E-1	6.7E-3	8.3E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.9E-2	8.7E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.7
Source Temp (C):	38.3
Sampling Date:	9/17/96
Sampling Start Time:	13:30
Sampling End Time:	14:00

TABLE R-10 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RHS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.1E-1	4.0E-3	5.0E-2	1.4E+2	5.8	98	43.00
biphenyl	(H)	5.8E-2	3.9E-3	4.9E-2	4.0E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	4.9E-3	6.2E-2	1.0E+2	10.5	100	75.95
3-carene		1.2E-1	7.3E-3	9.1E-2	8.5E+1	40.6	94	93.10
chloroform	(H)	1.7E-1	8.6E-3	1.1E-1	1.1E+2	16.7	100	82.95
cumene	(H)	1.6E-1	8.4E-3	1.0E-1	1.1E+2	36.3	97	105.10
p-cymene		1.6E-1	9.2E-3	1.1E-1	1.1E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.6E-1	1.0E-2	1.3E-1	1.8E+2	18.6	100	45.05
limonene		1.6E-1	9.6E-3	1.2E-1	1.1E+2	41.6	94	68.10
methanol	(H)	2.5E-1	3.4E-3	4.3E-2	1.7E+2	7.0	0	31.15
methyl ethyl ketone (MEK)	(H)	1.8E-1	5.6E-3	7.0E-2	1.2E+2	15.7	97	43.05
methylene chloride	(H)	1.5E-1	5.7E-3	7.2E-2	1.1E+2	11.4	96	49.00
naphthalene	(H)	1.3E-1	7.4E-3	9.3E-2	9.1E+1	49.8	100	128.05
phenol	(H)	ND 7.3E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+1	44.2	40	94.10
alpha-pinene		1.2E-1	7.0E-3	8.7E-2	8.1E+1	36.2	93	93.10
beta-pinene		1.2E-1	7.1E-3	8.8E-2	8.2E+1	39.0	93	93.10
propionaldehyde	(H)	1.4E-1	3.7E-3	4.6E-2	9.9E+1	10.1	99	58.10
toluene	(H)	1.6E-1	6.5E-3	8.2E-2	1.1E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.3E-2	9.1E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	37.8
Sampling Date:	9/17/96
Sampling Start Time:	14:30
Sampling End Time:	15:00

2/19/97
11:54 AM

TABLE R-11 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RIS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.1E-1	3.9E-3	4.9E-2	1.5E+2	5.8	100	43.00
biphenyl	(H)	5.9E-2	4.0E-3	4.9E-2	4.2E+1	54.9	99	154.15
carbon disulfide	(H)	1.4E-1	4.8E-3	6.0E-2	1.0E+2	10.5	100	75.95
3-carene		1.3E-1	7.4E-3	9.3E-2	9.0E+1	40.6	94	93.10
chloroform	(H)	1.7E-1	8.6E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.6E-1	8.4E-3	1.1E-1	1.2E+2	36.3	97	105.10
p-cymene		1.6E-1	9.1E-3	1.1E-1	1.1E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.2E-1	8.8E-3	1.1E-1	1.6E+2	18.6	100	45.05
limonene		1.6E-1	9.5E-3	1.2E-1	1.1E+2	41.6	93	68.10
methanol	(H)	2.1E-1	3.0E-3	3.7E-2	1.5E+2	7.0	0	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	5.0E-3	6.2E-2	1.1E+2	15.7	98	43.05
methylene chloride	(H)	1.3E-1	4.7E-3	5.9E-2	9.1E+1	11.4	96	49.00
naphthalene	(H)	1.3E-1	7.5E-3	9.4E-2	9.6E+1	49.8	100	128.05
phenol	(H)	ND 7.0E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+1	44.2	0	94.10
alpha-pinene		1.2E-1	7.3E-3	9.1E-2	8.8E+1	36.2	95	93.10
beta-pinene		1.2E-1	7.1E-3	8.9E-2	8.6E+1	39.0	93	93.10
propionaldehyde	(H)	1.3E-1	3.2E-3	4.1E-2	9.2E+1	10.1	99	58.10
toluene	(H)	1.6E-1	6.6E-3	8.3E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.9E-2	8.6E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	35.0
Sampling Date:	9/18/96
Sampling Start Time:	9:05
Sampling End Time:	9:35

TABLE R-12 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RJS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.4E-1	4.6E-3	5.7E-2	1.7E+2	5.9	99	43.00
biphenyl	(H)	4.6E-2	3.1E-3	3.9E-2	3.2E+1	54.9	98	154.15
carbon disulfide	(H)	1.5E-1	4.9E-3	6.1E-2	1.0E+2	10.6	100	75.95
3-carene		1.4E-1	8.2E-3	1.0E-1	9.8E+1	40.6	92	93.10
chloroform	(H)	1.7E-1	8.7E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.7E-1	8.9E-3	1.1E-1	1.2E+2	36.3	97	105.10
p-cymene		1.6E-1	9.4E-3	1.2E-1	1.1E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.2E-1	8.8E-3	1.1E-1	1.6E+2	18.6	99	45.05
limonene		1.6E-1	9.8E-3	1.2E-1	1.2E+2	41.6	94	68.10
methanol	(H)	1.4E-1	1.9E-3	2.4E-2	9.8E+1	7.6	0	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	5.1E-3	6.3E-2	1.1E+2	15.7	97	43.05
methylene chloride	(H)	1.3E-1	4.9E-3	6.1E-2	9.4E+1	11.5	96	49.00
naphthalene	(H)	1.3E-1	7.5E-3	9.3E-2	9.5E+1	49.8	100	128.05
phenol	(H)	ND 7.1E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+1	44.2	0	94.10
alpha-pinene		1.2E-1	7.4E-3	9.2E-2	8.8E+1	36.2	97	93.10
beta-pinene		1.3E-1	7.6E-3	9.5E-2	9.1E+1	39.0	93	93.10
propionaldehyde	(H)	1.5E-1	3.7E-3	4.6E-2	1.0E+2	10.1	0	58.10
toluene	(H)	1.6E-1	6.6E-3	8.2E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.9E-2	8.6E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.4
Source Temp (C):	35.6
Sampling Date:	9/18/96
Sampling Start Time:	10:20
Sampling End Time:	10:50

2/19/97
11:54 AM

TABLE R-13 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RKS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.6E-1	4.9E-3	6.1E-2	1.8E+2	5.9	97	43.00
biphenyl	(H)	2.2E-2	1.5E-3	1.8E-2	1.5E+1	54.9	98	154.15
carbon disulfide	(H)	1.5E-1	4.9E-3	6.1E-2	1.0E+2	10.5	100	75.95
3-carene		1.1E-1	6.5E-3	8.1E-2	7.5E+1	40.6	94	93.10
chloroform	(H)	1.7E-1	8.6E-3	1.1E-1	1.1E+2	16.7	100	82.95
cumene	(H)	1.5E-1	8.0E-3	1.0E-1	1.0E+2	36.3	97	105.10
p-cymene		1.4E-1	8.0E-3	1.0E-1	9.4E+1	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.4E-1	9.3E-3	1.2E-1	1.6E+2	18.6	100	45.05
limonene		1.4E-1	8.4E-3	1.1E-1	9.7E+1	41.5	93	68.10
methanol	(H)	2.5E-1	3.5E-3	4.3E-2	1.7E+2	7.0	0	31.15
methyl ethyl ketone (MEK)	(H)	1.7E-1	5.5E-3	6.9E-2	1.2E+2	15.7	97	43.05
methylene chloride	(H)	1.5E-1	5.4E-3	6.7E-2	1.0E+2	11.5	96	49.00
naphthalene	(H)	9.3E-2	5.2E-3	6.5E-2	6.4E+1	49.8	100	128.05
phenol	(H)	ND 7.3E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+1	44.3	0	94.10
alpha-pinene		1.1E-1	6.6E-3	8.2E-2	7.6E+1	36.2	94	93.10
beta-pinene		1.1E-1	6.4E-3	8.0E-2	7.4E+1	39.0	93	93.10
propionaldehyde	(H)	1.4E-1	3.6E-3	4.6E-2	9.9E+1	10.1	100	58.10
toluene	(H)	1.6E-1	6.3E-3	7.9E-2	1.1E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.7E-2	8.3E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	37.8
Sampling Date:	9/18/96
Sampling Start Time:	11:22
Sampling End Time:	11:52

TABLE R-14 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RKSX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.0E-1	5.7E-3	7.1E-2	2.0E+2	5.7	1	43.00
biphenyl	(H)	ND 7.3E-3	ND 4.9E-4	ND 6.1E-3	ND 5.0E+0	55.6	0	154.15
carbon disulfide	(H)	1.5E-1	4.9E-3	6.1E-2	1.0E+2	10.4	100	75.95
3-carene		1.1E-1	6.4E-3	8.0E-2	7.4E+1	40.5	95	93.10
chloroform	(H)	1.7E-1	8.6E-3	1.1E-1	1.1E+2	16.6	100	82.95
cumene	(H)	1.4E-1	7.5E-3	9.4E-2	9.8E+1	36.3	97	105.10
p-cymene		1.3E-1	7.5E-3	9.4E-2	8.8E+1	41.7	93	119.15
1,2-dimethoxyethane	(H)	2.2E-1	8.6E-3	1.1E-1	1.5E+2	18.6	100	45.05
limonene		1.3E-1	8.0E-3	1.0E-1	9.3E+1	41.5	93	68.10
methanol	(H)	2.2E-1	3.1E-3	3.9E-2	1.5E+2	7.0	0	31.15
methyl ethyl ketone (MEK)	(H)	1.7E-1	5.5E-3	6.9E-2	1.2E+2	15.6	98	43.05
methylene chloride	(H)	1.5E-1	5.5E-3	6.8E-2	1.0E+2	11.4	96	49.00
naphthalene	(H)	8.4E-2	4.7E-3	5.9E-2	5.8E+1	49.8	100	128.05
phenol	(H)	ND 7.3E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+1	44.3	83	94.10
alpha-pinene		1.1E-1	6.6E-3	8.3E-2	7.7E+1	36.2	95	93.10
beta-pinene		1.1E-1	6.4E-3	8.0E-2	7.4E+1	39.0	93	93.10
propionaldehyde	(H)	1.5E-1	3.8E-3	4.8E-2	1.0E+2	10.0	99	58.10
toluene	(H)	1.6E-1	6.3E-3	7.9E-2	1.1E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.4E-2	8.0E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.5
Source Temp (C):	37.8
Sampling Date:	9/18/96
Sampling Start Time:	11:22
Sampling End Time:	11:52

TABLE R-15 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RLS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.1E-1	4.1E-3	5.1E-2	1.5E+2	5.8	97	43.00
biphenyl	(H)	3.3E-2	2.2E-3	2.8E-2	2.4E+1	54.9	99	154.15
carbon disulfide	(H)	1.4E-1	4.7E-3	5.9E-2	1.0E+2	10.5	100	75.95
3-carene		1.4E-1	8.1E-3	1.0E-1	9.8E+1	40.5	95	93.10
chloroform	(H)	1.6E-1	8.3E-3	1.0E-1	1.1E+2	16.6	100	82.95
cumene	(H)	1.6E-1	8.5E-3	1.1E-1	1.2E+2	36.3	98	105.10
p-cymene		1.4E-1	8.4E-3	1.1E-1	1.0E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	1.8E-1	7.1E-3	8.8E-2	1.3E+2	18.5	99	45.05
limonene		1.5E-1	8.8E-3	1.1E-1	1.0E+2	41.5	93	68.10
methanol	(H)	1.8E-1	2.5E-3	3.1E-2	1.3E+2	7.1	25	31.15
methyl ethyl ketone (MEK)	(H)	1.6E-1	5.1E-3	6.4E-2	1.2E+2	15.6	98	43.05
methylene chloride	(H)	1.4E-1	5.2E-3	6.5E-2	1.0E+2	11.4	96	49.00
naphthalene	(H)	1.4E-1	8.1E-3	1.0E-1	1.0E+2	49.8	100	128.05
phenol	(H)	ND 7.0E-2	ND 2.9E-3	ND 3.6E-2	ND 5.0E+1	44.3	40	94.10
alpha-pinene		1.6E-1	9.7E-3	1.2E-1	1.2E+2	36.2	96	93.10
beta-pinene		1.6E-1	9.5E-3	1.2E-1	1.1E+2	39.0	94	93.10
propionaldehyde	(H)	1.5E-1	3.8E-3	4.7E-2	1.1E+2	10.0	98	58.10
toluene	(H)	1.6E-1	6.5E-3	8.2E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			6.6E-2	8.3E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.3
Source Temp (C):	37.8
Sampling Date:	9/18/96
Sampling Start Time:	12:50
Sampling End Time:	13:20

TABLE R-16 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RMS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.8E-1	7.4E-3	9.2E-2	2.4E+2	5.9	96	43.00
biphenyl	(H)	6.8E-2	4.6E-3	5.8E-2	4.3E+1	54.9	99	154.15
carbon disulfide	(H)	1.6E-1	5.4E-3	6.8E-2	1.0E+2	10.6	100	75.95
3-carene		1.6E-1	9.3E-3	1.2E-1	9.9E+1	40.6	95	93.10
chloroform	(H)	1.8E-1	9.4E-3	1.2E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.9E-1	9.7E-3	1.2E-1	1.2E+2	36.3	97	105.10
p-cymene		1.9E-1	1.1E-2	1.4E-1	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.0E-1	8.0E-3	1.0E-1	1.3E+2	18.6	99	45.05
limonene		1.9E-1	1.2E-2	1.4E-1	1.2E+2	41.6	94	68.10
methanol	(H)	2.2E-1	3.1E-3	3.9E-2	1.4E+2	7.1	1	31.15
methyl ethyl ketone (MEK)	(H)	1.8E-1	5.8E-3	7.2E-2	1.2E+2	15.7	98	43.05
methylene chloride	(H)	1.4E-1	5.2E-3	6.5E-2	8.9E+1	11.5	96	49.00
naphthalene	(H)	1.8E-1	9.8E-3	1.2E-1	1.1E+2	49.9	100	128.05
phenol	(H)	ND 7.9E-2	ND 3.2E-3	ND 4.1E-2	ND 5.0E+1	44.3	84	94.10
alpha-pinene		1.3E-1	8.0E-3	1.0E-1	8.5E+1	36.2	96	93.10
beta-pinene		1.4E-1	8.4E-3	1.1E-1	9.0E+1	39.0	94	93.10
propionaldehyde	(H)	1.7E-1	4.2E-3	5.3E-2	1.1E+2	10.1	0	58.10
toluene	(H)	1.9E-1	7.5E-3	9.4E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)	2.8E-2	3.7E-4	4.6E-3	2.7E+1			
THC (as C)								
Total HAPs			8.1E-2	1.0E+0				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.9
Source Temp (C):	33.3
Sampling Date:	9/19/96
Sampling Start Time:	9:31
Sampling End Time:	10:01

TABLE R-17 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RNS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.1E-1	4.0E-3	5.0E-2	1.5E+2	5.9	97	43.00
biphenyl	(H)	5.5E-2	3.7E-3	4.6E-2	3.8E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	4.9E-3	6.1E-2	1.0E+2	10.6	100	75.95
3-carene		1.3E-1	7.5E-3	9.3E-2	8.7E+1	40.6	93	93.10
chloroform	(H)	1.7E-1	8.6E-3	1.1E-1	1.2E+2	16.7	99	82.95
cumene	(H)	1.6E-1	8.3E-3	1.0E-1	1.1E+2	36.3	97	105.10
p-cymene		1.6E-1	9.2E-3	1.2E-1	1.1E+2	41.8	92	119.15
1,2-dimethoxyethane	(H)	1.5E-1	6.0E-3	7.5E-2	1.1E+2	18.6	99	45.05
limonene		1.6E-1	9.6E-3	1.2E-1	1.1E+2	41.6	93	68.10
methanol	(H)	1.8E-1	2.5E-3	3.1E-2	1.2E+2	7.2	19	31.15
methyl ethyl ketone (MEK)	(H)	1.5E-1	4.7E-3	5.9E-2	1.0E+2	15.7	98	43.05
methylene chloride	(H)	1.2E-1	4.4E-3	5.5E-2	8.3E+1	11.5	96	49.00
naphthalene	(H)	1.4E-1	7.6E-3	9.5E-2	9.5E+1	49.8	100	128.05
phenol	(H)	ND 7.2E-2	ND 3.0E-3	ND 3.7E-2	ND 5.0E+1	44.3	40	94.10
alpha-pinene		1.1E-1	6.5E-3	8.1E-2	7.6E+1	36.2	95	93.10
beta-pinene		1.1E-1	6.7E-3	8.4E-2	7.9E+1	39.0	93	93.10
propionaldehyde	(H)	1.3E-1	3.4E-3	4.2E-2	9.3E+1	10.1	0	58.10
toluene	(H)	1.7E-1	6.9E-3	8.6E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)	2.4E-2	3.2E-4	4.0E-3	2.4E+1			
THC (as C)								
Total HAPs			6.5E-2	8.2E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.9
Source Temp (C):	33.9
Sampling Date:	9/19/96
Sampling Start Time:	10:40
Sampling End Time:	11:13

TABLE R-18 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3ROS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.9E-1	5.5E-3	6.9E-2	2.0E+2	6.0	99	43.00
biphenyl	(H)	9.3E-2	6.3E-3	7.8E-2	6.4E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	5.0E-3	6.2E-2	1.0E+2	10.6	100	75.95
3-carene		1.4E-1	8.2E-3	1.0E-1	9.5E+1	40.6	94	93.10
chloroform	(H)	1.6E-1	8.6E-3	1.1E-1	1.1E+2	16.7	100	82.95
cumene	(H)	1.7E-1	8.8E-3	1.1E-1	1.2E+2	36.4	97	105.10
p-cymene		1.1E-1	6.4E-3	8.0E-2	7.6E+1	41.8	93	119.15
1,2-dimethoxyethane	(H)	1.5E-1	6.1E-3	7.6E-2	1.1E+2	18.6	99	45.05
limonene		1.8E-1	1.0E-2	1.3E-1	1.2E+2	41.6	93	68.10
methanol	(H)	1.9E-1	2.6E-3	3.3E-2	1.3E+2	7.3	1	31.15
methyl ethyl ketone (MEK)	(H)	1.4E-1	4.3E-3	5.4E-2	9.4E+1	15.7	98	43.05
methylene chloride	(H)	1.1E-1	4.1E-3	5.1E-2	7.6E+1	11.5	96	49.00
naphthalene	(H)	1.7E-1	9.5E-3	1.2E-1	1.2E+2	49.9	100	128.05
phenol	(H)	8.9E-2	3.6E-3	4.6E-2	6.1E+1	44.3	86	94.10
alpha-pinene		1.1E-1	6.8E-3	8.5E-2	7.9E+1	36.2	94	93.10
beta-pinene		1.1E-1	6.8E-3	8.4E-2	7.8E+1	39.1	93	93.10
propionaldehyde	(H)	1.1E-1	2.7E-3	3.4E-2	7.5E+1	10.2	0	58.10
toluene	(H)	1.6E-1	6.6E-3	8.2E-2	1.1E+2	25.6	100	91.10
formaldehyde	(H)	3.2E-2	4.2E-4	5.3E-3	3.2E+1			
THC (as C)								
Total HAPs			7.4E-2	9.3E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	37.2
Sampling Date:	9/19/96
Sampling Start Time:	11:52
Sampling End Time:	12:22

TABLE R-19 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3ROSX

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.7E-1	5.3E-3	6.6E-2	1.9E+2	6.0	96	43.00
biphenyl	(H)	7.4E-2	5.0E-3	6.2E-2	5.1E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	5.1E-3	6.4E-2	1.1E+2	10.6	100	75.95
3-carene		1.4E-1	8.1E-3	1.0E-1	9.4E+1	40.6	94	93.10
chloroform	(H)	1.7E-1	8.8E-3	1.1E-1	1.2E+2	16.7	100	82.95
cumene	(H)	1.7E-1	9.1E-3	1.1E-1	1.2E+2	36.3	97	105.10
p-cymene		1.8E-1	1.0E-2	1.3E-1	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	1.6E-1	6.4E-3	8.0E-2	1.1E+2	18.6	99	45.05
limonene		1.8E-1	1.1E-2	1.3E-1	1.2E+2	41.6	94	68.10
methanol	(H)	1.8E-1	2.5E-3	3.1E-2	1.2E+2	7.2	1	31.15
methyl ethyl ketone (MEK)	(H)	1.4E-1	4.5E-3	5.6E-2	9.8E+1	15.7	98	43.05
methylene chloride	(H)	1.1E-1	4.2E-3	5.2E-2	7.8E+1	11.5	96	49.00
naphthalene	(H)	1.7E-1	9.3E-3	1.2E-1	1.1E+2	49.9	100	128.05
phenol	(H)	7.9E-2	3.2E-3	4.0E-2	5.4E+1	44.3	86	94.10
alpha-pinene		1.2E-1	7.2E-3	9.0E-2	8.3E+1	36.2	94	93.10
beta-pinene		1.2E-1	7.0E-3	8.8E-2	8.2E+1	39.1	93	93.10
propionaldehyde	(H)	1.1E-1	2.9E-3	3.6E-2	7.8E+1	10.2	0	58.10
toluene	(H)	1.7E-1	6.8E-3	8.5E-2	1.2E+2	25.6	100	91.10
formaldehyde	(H)							
THC (as C)								
Total HAPs			7.3E-2	9.1E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.6
Source Temp (C):	37.2
Sampling Date:	9/19/96
Sampling Start Time:	11:52
Sampling End Time:	12:22

TABLE R-20 DETAILED EMISSION TEST RESULTS
Pilot-Scale Paper Machine, Dryer Hood Vent No. 3
WMU3RPS

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	2.6E-1	4.9E-3	6.1E-2	1.7E+2	5.9	98	43.00
biphenyl	(H)	5.5E-2	3.7E-3	4.6E-2	3.7E+1	54.9	99	154.15
carbon disulfide	(H)	1.5E-1	5.1E-3	6.4E-2	1.0E+2	10.5	100	75.95
3-carene		1.3E-1	8.0E-3	1.0E-1	8.9E+1	40.6	95	93.10
chloroform	(H)	1.7E-1	8.6E-3	1.1E-1	1.1E+2	16.7	100	82.95
cumene	(H)	1.7E-1	9.0E-3	1.1E-1	1.1E+2	36.3	97	105.10
p-cymene		1.7E-1	1.0E-2	1.2E-1	1.1E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	2.1E-1	8.1E-3	1.0E-1	1.4E+2	18.6	99	45.05
limonene		1.8E-1	1.0E-2	1.3E-1	1.2E+2	41.6	94	68.10
methanol	(H)	2.2E-1	3.1E-3	3.8E-2	1.5E+2	7.1	19	31.15
methyl ethyl ketone (MEK)	(H)	1.9E-1	5.9E-3	7.4E-2	1.2E+2	15.7	98	43.05
methylene chloride	(H)	1.5E-1	5.4E-3	6.8E-2	9.7E+1	11.5	96	49.00
naphthalene	(H)	1.4E-1	8.0E-3	1.0E-1	9.5E+1	49.8	100	128.05
phenol	(H)	1.5E-1	6.0E-3	7.5E-2	9.7E+1	44.3	87	94.10
alpha-pinene		1.2E-1	6.9E-3	8.6E-2	7.7E+1	36.2	94	93.10
beta-pinene		1.2E-1	7.1E-3	8.9E-2	8.0E+1	39.1	93	93.10
propionaldehyde	(H)	1.9E-1	4.8E-3	5.9E-2	1.2E+2	10.1	98	58.10
toluene	(H)	1.7E-1	6.7E-3	8.4E-2	1.1E+2	25.6	100	91.10
formaldehyde	(H)	3.4E-2	4.4E-4	5.5E-3	3.3E+1			
THC (as C)								
Total HAPs			8.0E-2	9.9E-1				

ND x.xEx = Below Detection Limit of x.xEx

ADTP/D = AIR DRIED TONS OF PAPER PER DAY

Prod. Rate (ADTP/D):	2
Vol. Flow Rate (DSCFM):	2800
Source Moisture (%):	1.0
Source Temp (C):	37.2
Sampling Date:	9/19/96
Sampling Start Time:	13:02
Sampling End Time:	13:38

TABLE S-1 DETAILED EMISSION TEST RESULTS

Train Blank Sample

WMUBR1N

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	* 3.8E-3			* 3.8E+0	6.0	99	43.00
biphenyl	(H)	* 3.6E-3			* 2.2E+0	54.9	99	154.15
carbon disulfide	(H)	ND 7.5E-4			ND 5.0E-1	10.2	0	75.95
3-carene		ND 1.5E-3			ND 8.0E-1			
chloroform	(H)	ND 7.8E-4			ND 6.0E-1	16.6	0	82.95
cumene	(H)	ND 1.8E-3			ND 1.1E+0	36.3	0	105.10
p-cymene		ND 1.2E-3			ND 8.0E-1	41.8	0	119.15
1,2-dimethoxyethane	(H)	ND 2.8E-3			ND 2.1E+0	18.8	0	45.05
limonene		ND 1.7E-3			ND 1.1E+0	41.5	0	68.10
methanol	(H)	ND 1.3E-2			ND 6.0E+0	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.9E-3			ND 1.8E+0	15.7	56	43.05
methylene chloride	(H)	* 5.1E-3			* 4.2E+0	11.3	95	49.00
naphthalene	(H)	* 1.6E-3			* 9.5E-1	49.8	100	128.05
phenol	(H)	ND 1.3E-1			ND 5.0E+1			
alpha-pinene		ND 2.1E-3			ND 8.0E-1	36.2	0	93.10
beta-pinene		ND 1.4E-3			ND 6.0E-1			
propionaldehyde	(H)	ND 4.7E-3			ND 4.3E+0	9.7	46	58.10
toluene	(H)	ND 1.0E-3			ND 8.0E-1	25.5	99	91.10
formaldehyde	(H)	ND 5.2E-4			ND 1.0E+0			
THC (as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	0.0
Source Temp (C):	24.8
Sampling Date:	9/24/96
Sampling Start Time:	14:20
Sampling End Time:	15:20

TABLE S-2 DETAILED EMISSION TEST RESULTS

Train Blank Sample

WMUBR2N

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	* 3.1E-3			* 3.1E+0	6.0	86	43.00
biphenyl	(H)	ND 2.8E-3			ND 1.7E+0	55.0	0	154.15
carbon disulfide	(H)	ND 7.5E-4			ND 5.0E-1	10.3	0	75.95
3-carene		ND 1.5E-3			ND 8.0E-1			
chloroform	(H)	ND 7.8E-4			ND 6.0E-1			
cumene	(H)	ND 1.8E-3			ND 1.1E+0			
p-cymene		ND 1.2E-3			ND 8.0E-1	41.8	0	119.15
1,2-dimethoxyethane	(H)	ND 2.8E-3			ND 2.1E+0			
limonene		ND 1.7E-3			ND 1.1E+0			
methanol	(H)	ND 1.3E-2			ND 6.0E+0	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.9E-3			ND 1.8E+0	15.7	0	43.05
methylene chloride	(H)	* 5.3E-3			* 4.3E+0	11.3	95	49.00
naphthalene	(H)	ND 1.5E-3			ND 9.0E-1	49.9	0	128.05
phenol	(H)	ND 1.3E-1			ND 5.0E+1			
alpha-pinene		ND 2.1E-3			ND 8.0E-1	36.2	0	93.10
beta-pinene		ND 1.4E-3			ND 6.0E-1			
propionaldehyde	(H)	ND 4.7E-3			ND 4.3E+0			
toluene	(H)	ND 1.0E-3			ND 8.0E-1	25.5	21	91.10
formaldehyde	(H)	ND 5.2E-4			ND 1.0E+0			
THC (as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	0.0
Source Temp (C):	24.8
Sampling Date:	9/24/96
Sampling Start Time:	14:20
Sampling End Time:	15:20

TABLE S-3 DETAILED EMISSION TEST RESULTS
Train Blank Sample
WMUBR3N

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	* 1.5E-3			* 1.5E+0	6.0	0	43.00
biphenyl	(H)	ND 2.8E-3			ND 1.7E+0			
carbon disulfide	(H)	ND 7.5E-4			ND 5.0E-1			
3-carene		ND 1.5E-3			ND 8.0E-1			
chloroform	(H)	ND 7.8E-4			ND 6.0E-1			
cumene	(H)	ND 1.8E-3			ND 1.1E+0	36.3	0	105.10
p-cymene		ND 1.2E-3			ND 8.0E-1			
1,2-dimethoxyethane	(H)	ND 2.8E-3			ND 2.1E+0			
limonene		ND 1.7E-3			ND 1.1E+0			
methanol	(H)	ND 1.3E-2			ND 6.0E+0	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.9E-3			ND 1.8E+0	15.8	0	43.05
methylene chloride	(H)	* 5.1E-3			* 4.1E+0	11.3	96	49.00
naphthalene	(H)	ND 1.5E-3			ND 9.0E-1			
phenol	(H)	ND 1.3E-1			ND 5.0E+1			
alpha-pinene		ND 2.1E-3			ND 8.0E-1	36.2	0	93.10
beta-pinene		ND 1.4E-3			ND 6.0E-1			
propionaldehyde	(H)	ND 4.7E-3			ND 4.3E+0			
toluene	(H)	ND 1.0E-3			ND 8.0E-1	25.6	0	91.10
formaldehyde	(H)	* 1.3E-3			* 2.4E+0			
THC (as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	0.0
Source Temp (C):	24.8
Sampling Date:	9/24/96
Sampling Start Time:	14:20
Sampling End Time:	15:20

TABLE S-4 DETAILED EMISSION TEST RESULTS

Train Blank Sample

WMUBR4N

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	6.0E-3			6.0E+0	6.0	89	43.00
biphenyl	(H)	ND 2.8E-3			ND 1.7E+0			
carbon disulfide	(H)	ND 7.5E-4			ND 5.0E-1			
3-carene		ND 1.5E-3			ND 8.0E-1			
chloroform	(H)	ND 7.8E-4			ND 6.0E-1			
cumene	(H)	ND 1.8E-3			ND 1.1E+0	36.3	0	105.10
p-cymene		ND 1.2E-3			ND 8.0E-1			
1,2-dimethoxyethane	(H)	ND 2.8E-3			ND 2.1E+0			
limonene		ND 1.7E-3			ND 1.1E+0			
methanol	(H)	ND 1.3E-2			ND 6.0E+0	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.9E-3			ND 1.8E+0	15.7	0	43.05
methylene chloride	(H)	* 5.2E-3			* 4.3E+0	11.3	94	49.00
naphthalene	(H)	ND 1.5E-3			ND 9.0E-1			
phenol	(H)	ND 1.3E-1			ND 5.0E+1			
alpha-pinene		ND 2.1E-3			ND 8.0E-1			
beta-pinene		ND 1.4E-3			ND 6.0E-1			
propionaldehyde	(H)	ND 4.7E-3			ND 4.3E+0			
toluene	(H)	ND 1.0E-3			ND 8.0E-1	25.5	21	91.10
formaldehyde	(H)	ND 5.2E-4			ND 1.0E+0			
THC (as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	0.0
Source Temp (C):	24.8
Sampling Date:	9/24/96
Sampling Start Time:	14:20
Sampling End Time:	15:20

TABLE S-5 DETAILED EMISSION TEST RESULTS

Train Blank Sample

WMUBR5N

Analyte		Source			Canister	Mass Spec		
		ppmVd	lb/hr	lb/ton	ppbw	Ret. time, min	Match, %	Qion
acetaldehyde	(H)	5.8E-3			5.8E+0	6.0	95	43.00
biphenyl	(H)	ND 2.8E-3			ND 1.7E+0			
carbon disulfide	(H)	ND 7.5E-4			ND 5.0E-1			
3-carene		ND 1.5E-3			ND 8.0E-1			
chloroform	(H)	ND 7.8E-4			ND 6.0E-1	16.6	0	82.95
cumene	(H)	ND 1.8E-3			ND 1.1E+0	36.3	0	105.10
p-cymene		ND 1.2E-3			ND 8.0E-1	41.8	0	119.15
1,2-dimethoxyethane	(H)	ND 2.8E-3			ND 2.1E+0			
limonene		ND 1.7E-3			ND 1.1E+0			
methanol	(H)	ND 1.3E-2			ND 6.0E+0	6.7	0	31.15
methyl ethyl ketone (MEK)	(H)	ND 1.9E-3			ND 1.8E+0	15.7	56	43.05
methylene chloride	(H)	* 5.8E-3			* 4.7E+0	11.3	94	49.00
naphthalene	(H)	ND 1.5E-3			ND 9.0E-1			
phenol	(H)	ND 1.3E-1			ND 5.0E+1			
alpha-pinene		ND 2.1E-3			ND 8.0E-1	36.2	0	93.10
beta-pinene		ND 1.4E-3			ND 6.0E-1			
propionaldehyde	(H)	ND 4.7E-3			ND 4.3E+0	9.7	46	58.10
toluene	(H)	ND 1.0E-3			ND 8.0E-1	25.5	21	91.10
formaldehyde	(H)	ND 5.2E-4			ND 1.0E+0			
THC (as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	0.0
Source Temp (C):	24.8
Sampling Date:	9/24/96
Sampling Start Time:	14:20
Sampling End Time:	15:20

TABLE S-6 DETAILED EMISSION TEST RESULTS

Train Spike Sample

WMUSR1S

Analyte		Source ppmVd	Spike ppmVd	Recovery %	Canister ppbw	Mass Spec Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.4E-1	2.7E-1	125	1.2E+2	6.0	100	43.00
biphenyl	(H)	6.6E-2	2.7E-1	24	2.4E+1	54.9	99	154.15
carbon disulfide	(H)	2.8E-1	2.7E-1	104	1.0E+2	10.3	0	75.95
3-carene		3.3E-1	2.7E-1	123	1.2E+2	40.6	95	93.10
chloroform	(H)	3.4E-1	2.7E-1	127	1.2E+2	16.6	100	82.95
cumene	(H)	3.6E-1	2.7E-1	131	1.3E+2	36.3	99	105.10
p-cymene		3.2E-1	2.7E-1	119	1.2E+2	41.8	94	119.15
1,2-dimethoxyethane	(H)	3.3E-1	2.7E-1	122	1.2E+2	18.6	99	45.05
limonene		3.4E-1	2.7E-1	124	1.2E+2	41.5	94	68.10
methanol	(H)	6.7E-1	2.7E-1	247	2.4E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	3.1E-1	2.7E-1	114	1.1E+2	15.7	96	43.05
methylene chloride	(H)	3.1E-1	2.7E-1	114	1.1E+2	11.3	96	49.00
naphthalene	(H)	2.4E-1	2.7E-1	88	8.6E+1	49.8	100	128.05
phenol	(H)	ND 1.4E-1	2.7E-1		ND 5.0E+1	44.3	40	94.10
alpha-pinene		4.5E-1	2.7E-1	165	1.6E+2	36.2	97	93.10
beta-pinene		4.0E-1	2.7E-1	146	1.4E+2	39.0	94	93.10
propionaldehyde	(H)	3.0E-1	2.7E-1	111	1.1E+2	9.6	46	58.10
toluene	(H)	3.1E-1	2.7E-1	115	1.1E+2	25.6	100	91.10
formaldehyde	(H)	2.3E-1	2.7E-1	84	1.1E+2			
THC(ppbVd as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	3.0
Source Temp (C):	20.3
Sampling Date:	9/25/96
Sampling Start Time:	15:32
Sampling End Time:	16:32

TABLE S-7 DETAILED EMISSION TEST RESULTS

Train Spike Sample

WMUSR2S

Analyte		Source ppmVd	Spike ppmVd	Recovery %	Canister ppbw	Mass Spec Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.1E-1	2.7E-1	116	1.1E+2	5.9	97	43.00
biphenyl	(H)	7.0E-2	2.7E-1	26	2.5E+1	54.9	99	154.15
carbon disulfide	(H)	2.9E-1	2.7E-1	107	1.0E+2	10.3	0	75.95
3-carene		3.4E-1	2.7E-1	126	1.2E+2	40.5	95	93.10
chloroform	(H)	3.5E-1	2.7E-1	129	1.2E+2	16.6	100	82.95
cumene	(H)	3.6E-1	2.7E-1	133	1.3E+2	36.3	99	105.10
p-cymene		3.3E-1	2.7E-1	121	1.2E+2	41.8	94	119.15
1,2-dimethoxyethane	(H)	3.6E-1	2.7E-1	132	1.3E+2	18.6	99	45.05
limonene		3.5E-1	2.7E-1	129	1.2E+2	41.5	94	68.10
methanol	(H)	6.5E-1	2.7E-1	241	2.3E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	3.2E-1	2.7E-1	116	1.1E+2	15.6	96	43.05
methylene chloride	(H)	3.0E-1	2.7E-1	112	1.1E+2	11.3	96	49.00
naphthalene	(H)	2.5E-1	2.7E-1	91	8.6E+1	49.8	100	128.05
phenol	(H)	ND 1.4E-1	2.7E-1		ND 5.0E+1	44.3	0	94.10
alpha-pinene		4.5E-1	2.7E-1	167	1.6E+2	36.2	97	93.10
beta-pinene		4.0E-1	2.7E-1	146	1.4E+2	39.0	94	93.10
propionaldehyde	(H)	3.0E-1	2.7E-1	109	1.0E+2	9.6	46	58.10
toluene	(H)	3.2E-1	2.7E-1	118	1.1E+2	25.6	100	91.10
formaldehyde	(H)	2.3E-1	2.7E-1	87	1.2E+2			
THC(ppbVd as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	3.0
Source Temp (C):	20.3
Sampling Date:	9/25/96
Sampling Start Time:	15:32
Sampling End Time:	16:32

TABLE S-8 DETAILED EMISSION TEST RESULTS

Train Spike Sample

WMUSR3S

Analyte		Source ppmVd	Spike ppmVd	Recovery %	Canister ppbw	Mass Spec Ret. time, min	Match, %	Qion
acetaldehyde	(H)	4.6E-1	2.8E-1	168	1.7E+2	6.0	98	43.00
biphenyl	(H)	9.4E-2	2.8E-1	34	3.5E+1	54.9	99	154.15
carbon disulfide	(H)	3.0E-1	2.8E-1	109	1.1E+2	10.3	0	75.95
3-carene		3.2E-1	2.8E-1	117	1.2E+2	40.5	94	93.10
chloroform	(H)	3.6E-1	2.8E-1	130	1.3E+2	16.6	100	82.95
cumene	(H)	3.7E-1	2.8E-1	134	1.4E+2	36.3	99	105.10
p-cymene		3.4E-1	2.8E-1	124	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	4.2E-1	2.8E-1	153	1.5E+2	18.6	99	45.05
limonene		3.2E-1	2.8E-1	115	1.2E+2	41.5	94	68.10
methanol	(H)	7.6E-1	2.8E-1	276	2.8E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	3.6E-1	2.8E-1	129	1.3E+2	15.7	96	43.05
methylene chloride	(H)	3.3E-1	2.8E-1	120	1.2E+2	11.3	97	49.00
naphthalene	(H)	2.6E-1	2.8E-1	93	9.4E+1	49.8	100	128.05
phenol	(H)	ND 1.4E-1	2.8E-1		ND 5.0E+1	44.3	40	94.10
alpha-pinene		4.5E-1	2.8E-1	165	1.7E+2	36.2	96	93.10
beta-pinene		3.9E-1	2.8E-1	142	1.4E+2	39.0	94	93.10
propionaldehyde	(H)	3.8E-1	2.8E-1	138	1.4E+2	9.7	46	58.10
toluene	(H)	3.2E-1	2.8E-1	118	1.2E+2	25.6	100	91.10
formaldehyde	(H)	2.2E-1	2.8E-1	82	1.1E+2			
THC(ppbVd as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	3.0
Source Temp (C):	20.3
Sampling Date:	9/25/96
Sampling Start Time:	15:32
Sampling End Time:	16:32

TABLE S-9 DETAILED EMISSION TEST RESULTS

Train Spike Sample

WMUSR4S

Analyte		Source ppmVd	Spike ppmVd	Recovery %	Canister ppbw	Mass Spec Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.4E-1	2.7E-1	124	1.3E+2	6.0	96	43.00
biphenyl	(H)	9.3E-2	2.7E-1	34	3.5E+1	54.9	99	154.15
carbon disulfide	(H)	3.1E-1	2.7E-1	113	1.2E+2	10.3	0	75.95
3-carene		3.6E-1	2.7E-1	132	1.4E+2	40.5	95	93.10
chloroform	(H)	3.6E-1	2.7E-1	131	1.3E+2	16.6	100	82.95
cumene	(H)	3.7E-1	2.7E-1	135	1.4E+2	36.3	99	105.10
p-cymene		3.4E-1	2.7E-1	126	1.3E+2	41.8	92	119.15
1,2-dimethoxyethane	(H)	4.1E-1	2.7E-1	149	1.5E+2	18.6	100	45.05
limonene		3.6E-1	2.7E-1	133	1.4E+2	41.5	94	68.10
methanol	(H)	7.1E-1	2.7E-1	258	2.7E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	3.5E-1	2.7E-1	128	1.3E+2	15.7	96	43.05
methylene chloride	(H)	3.3E-1	2.7E-1	120	1.2E+2	11.3	97	49.00
naphthalene	(H)	2.6E-1	2.7E-1	96	9.9E+1	49.8	100	128.05
phenol	(H)	ND 1.3E-1	2.7E-1		ND 5.0E+1	44.3	0	94.10
alpha-pinene		4.7E-1	2.7E-1	172	1.8E+2	36.2	97	93.10
beta-pinene		4.1E-1	2.7E-1	150	1.5E+2	39.0	95	93.10
propionaldehyde	(H)	3.2E-1	2.7E-1	118	1.2E+2	9.7	46	58.10
toluene	(H)	3.2E-1	2.7E-1	118	1.2E+2	25.6	100	91.10
formaldehyde	(H)	2.5E-1	2.7E-1	92	1.2E+2			
THC(ppbVd as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	3.0
Source Temp (C):	20.3
Sampling Date:	9/25/96
Sampling Start Time:	15:32
Sampling End Time:	16:32

TABLE S-10 DETAILED EMISSION TEST RESULTS

Train Spike Sample

WMUSR5S

Analyte		Source ppmVd	Spike ppmVd	Recovery %	Canister ppbw	Mass Spec Ret. time, min	Match, %	Qion
acetaldehyde	(H)	3.2E-1	2.7E-1	118	1.2E+2	6.0	99	43.00
biphenyl	(H)	3.6E-2	2.7E-1	13	1.3E+1	54.9	98	154.15
carbon disulfide	(H)	2.9E-1	2.7E-1	107	1.1E+2	10.3	0	75.95
3-carene		3.4E-1	2.7E-1	124	1.2E+2	40.5	95	93.10
chloroform	(H)	3.4E-1	2.7E-1	126	1.3E+2	16.6	100	82.95
cumene	(H)	3.5E-1	2.7E-1	130	1.3E+2	36.3	99	105.10
p-cymene		3.3E-1	2.7E-1	120	1.2E+2	41.8	93	119.15
1,2-dimethoxyethane	(H)	3.3E-1	2.7E-1	122	1.2E+2	18.6	99	45.05
limonene		3.5E-1	2.7E-1	128	1.3E+2	41.5	94	68.10
methanol	(H)	6.8E-1	2.7E-1	251	2.5E+2	6.6	0	31.15
methyl ethyl ketone (MEK)	(H)	3.3E-1	2.7E-1	122	1.2E+2	15.7	96	43.05
methylene chloride	(H)	3.2E-1	2.7E-1	117	1.2E+2	11.3	97	49.00
naphthalene	(H)	2.3E-1	2.7E-1	83	8.3E+1	49.8	100	128.05
phenol	(H)	ND 1.4E-1	2.7E-1		ND 5.0E+1	44.3	0	94.10
alpha-pinene		4.6E-1	2.7E-1	166	1.7E+2	36.2	96	93.10
beta-pinene		4.0E-1	2.7E-1	147	1.5E+2	39.0	95	93.10
propionaldehyde	(H)	3.1E-1	2.7E-1	113	1.1E+2	9.6	46	58.10
toluene	(H)	3.1E-1	2.7E-1	115	1.1E+2	25.6	100	91.10
formaldehyde	(H)	2.6E-1	2.7E-1	94	1.3E+2			
THC(ppbVd as C)								
Total HAPs								

ND x.xEx = Below Detection Limit of x.xEx

* = Below Calibration Limit; value estimated

Source Moisture (%):	3.0
Source Temp (C):	20.3
Sampling Date:	9/25/96
Sampling Start Time:	15:32
Sampling End Time:	16:32

TABLE T-1 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-A

	Run A1	Run A2	Average
Date	9/16/96	9/16/96	
Time	13:55	14:21	
pH, Standard Units	8.0	8.3	8.3
Temperature, °C	46	46	46
GC/ FID	**Run A1**	**Run A2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	2.19	2.61	2.40
Methanol, mg/L	2.52	2.92	2.72
1,2 Dimethoxyethane, mg/L	3.01	2.93	2.97
Methylene Chloride, mg/L	1.20	1.92	1.56
2-Butoxyethanol, mg/L	2.20		2.20
Naphthalene, mg/L	0.99		0.99
Ethylene Glycol, mg/L	ND 0.15		ND 0.15
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

3:37 PM
1/31/97

TABLE T-2 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-B

	Run B1	Run B2	Average
Date	9/16/96	9/16/96	
Time	14:42	15:10	
pH, Standard Units	8.4	8.3	8.3
Temperature, °C	47	47	47
GC/ FID	**Run B1**	**Run B2**	**Average**
Acetaldehyde, mg/L	ND 0.15	7.29	3.65
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	4.46	4.82	4.64
Methanol, mg/L	4.73	5.04	4.88
1,2 Dimethoxyethane, mg/L	5.87	5.85	5.86
Methylene Chloride, mg/L	4.60	4.67	4.64
2-Butoxyethanol, mg/L	4.90		4.90
Naphthalene, mg/L	1.25		1.25
Ethylene Glycol, mg/L	ND 0.15		ND 0.15
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-3 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-C

	Run C1	Run C2	Average
Date	9/17/96	9/17/96	
Time	8:44	9:12	
pH, Standard Units	8.2	8.3	8.3
Temperature, °C	46	47	47
GC/ FID	**Run C1**	**Run C2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	6.67	5.38	6.03
Methanol, mg/L	7.24	2.71	4.97
1,2 Dimethoxyethane, mg/L	8.36	8.38	8.37
Methylene Chloride, mg/L	8.90	6.13	7.51
2-Butoxyethanol, mg/L	6.80		6.80
Naphthalene, mg/L			
Ethylene Glycol, mg/L	12.0		12.0
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-4 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-D

	Run D1	Run D2	Average
Date	9/17/96	9/17/96	
Time	9:54	10:25	
pH, Standard Units	8.4	8.4	8.4
Temperature, °C	48	48	48
GC/ FID	**Run D1**	**Run D2**	**Average**
Acetaldehyde, mg/L	ND 0.15	2.94	1.47
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	12.3	12.9	12.6
Methanol, mg/L	12.7	13.7	13.2
1,2 Dimethoxyethane, mg/L	15.1	15.0	15.1
Methylene Chloride, mg/L	17.9	15.1	16.5
2-Butoxyethanol, mg/L	15.1		15.1
Naphthalene, mg/L			
Ethylene Glycol, mg/L	20.7		20.7
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-5 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-E

	Run E1	Run E2	Average
Date	9/17/96	9/17/96	
Time	11:04	11:31	
pH, Standard Units	8.4	8.4	8.4
Temperature, °C	48	49	49
GC/ FID	**Run E1**	**Run E2**	**Average**
Acetaldehyde, mg/L	19.1	20.7	19.9
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	16.6	16.5	16.6
Methanol, mg/L	17.1	17.1	17.1
1,2 Dimethoxyethane, mg/L	19.2	19.2	19.2
Methylene Chloride, mg/L	18.9	19.5	19.2
2-Butoxyethanol, mg/L	16.8		16.8
Naphthalene, mg/L			
Ethylene Glycol, mg/L	28.4		28.4
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-6 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-F

	Run F1	Run F2	Average
Date	9/17/96	9/17/96	
Time	12:24	12:53	
pH, Standard Units	8.4	8.3	8.3
Temperature, °C	49	48	48
GC/ FID	**Run F1**	**Run F2**	**Average**
Acetaldehyde, mg/L	27.8	27.1	27.4
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	21.3	21.2	21.3
Methanol, mg/L	22.5	21.6	22.0
1,2 Dimethoxyethane, mg/L	24.0	25.2	24.6
Methylene Chloride, mg/L	26.9	25.4	26.1
2-Butoxyethanol, mg/L	22.1		22.1
Naphthalene, mg/L			
Ethylene Glycol, mg/L	38.4		38.4
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

3:37 PM
1/31/97

TABLE T-7 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-G

	Run G1	Run G2	Average
Date	9/17/96	9/17/96	
Time	13:33	14:01	
pH, Standard Units	8.4	8.4	8.4
Temperature, °C	48	48	48
GC/ FID	**Run G1**	**Run G2**	**Average**
Acetaldehyde, mg/L	42.2	47.6	44.9
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	34.3	35.2	34.8
Methanol, mg/L	35.8	36.9	36.3
1,2 Dimethoxyethane, mg/L	41.1	41.5	41.3
Methylene Chloride, mg/L	33.1	43.1	38.1
2-Butoxyethanol, mg/L	38.6		38.6
Naphthalene, mg/L			
Ethylene Glycol, mg/L	49.8		49.8
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-8 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-H

	Run H1	Run H2	Average
Date	9/17/96	9/17/96	
Time	14:32	15:00	
pH, Standard Units	8.5	8.5	8.5
Temperature, °C	48	48	48
GC/ FID	**Run H1**	**Run H2**	**Average**
Acetaldehyde, mg/L	58.4	63.4	60.9
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	41.4	42.5	42.0
Methanol, mg/L	43.5	44.5	44.0
1,2 Dimethoxyethane, mg/L	48.8	49.7	49.3
Methylene Chloride, mg/L	54.8	49.9	52.3
2-Butoxyethanol, mg/L	44.3		44.3
Naphthalene, mg/L			
Ethylene Glycol, mg/L	61.7		61.7
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-9 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-I

	Run I1	Run I2	Average
Date	9/18/96	9/18/96	
Time	9:15	9:36	
pH, Standard Units	8.4	8.4	8.4
Temperature, °C	48	48	48
GC/ FID	**Run I1**	**Run I2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	2.33	2.37	2.35
Methanol, mg/L	50.2	52.2	51.2
1,2 Dimethoxyethane, mg/L	3.75	3.92	3.83
Methylene Chloride, mg/L	2.73	2.68	2.71
2-Butoxyethanol, mg/L	2.80		2.80
Naphthalene, mg/L			
Ethylene Glycol, mg/L	6.20		6.20
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx

* = Below Quantitation Limit; value estimated

TABLE T-10 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-J

	Run J1	Run J2	Average
Date	9/18/96	9/18/96	
Time	10:24	10:51	
pH, Standard Units	8.5	8.5	8.5
Temperature, °C	46	47	47
GC/ FID	**Run J1**	**Run J2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	4.21	4.09	4.15
Methanol, mg/L	94.7	94.7	94.7
1,2 Dimethoxyethane, mg/L	6.42	8.62	7.52
Methylene Chloride, mg/L	5.14	8.23	6.69
2-Butoxyethanol, mg/L	5.10		5.10
Naphthalene, mg/L			
Ethylene Glycol, mg/L	8.10		8.10
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-11 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-K

	Run K1	Run K2	Average
Date	9/18/96	9/18/96	
Time	11:26	11:53	
pH, Standard Units	8.5	8.5	8.5
Temperature, °C	47	48	48
GC/ FID	**Run K1**	**Run K2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	6.23	6.53	6.38
Methanol, mg/L	139	142	140
1,2 Dimethoxyethane, mg/L	9.65	9.29	9.47
Methylene Chloride, mg/L	1.42	7.49	4.46
2-Butoxyethanol, mg/L	7.60		7.60
Naphthalene, mg/L			
Ethylene Glycol, mg/L	10.4		10.4
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-12 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-L

	Run L1	Run L2	Average
Date	9/18/96	9/18/96	
Time	12:55	13:21	
pH, Standard Units	8.5	8.5	8.5
Temperature, °C	48	48	48
GC/ FID	**Run L1**	**Run L2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	8.81	9.23	9.02
Methanol, mg/L	193	203	198
1,2 Dimethoxyethane, mg/L	14.5	12.6	13.6
Methylene Chloride, mg/L	15.5	11.6	13.5
2-Butoxyethanol, mg/L	9.90		9.90
Naphthalene, mg/L			
Ethylene Glycol, mg/L	13.2		13.2
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

3:37 PM
1/31/97

TABLE T-13 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-M

	Run M1	Run M2	Average
Date	9/19/96	9/19/96	
Time	9:33	10:03	
pH, Standard Units	8.8	8.9	8.9
Temperature, °C	54	54	54
GC/ FID	**Run M1**	**Run M2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methanol, mg/L	2.51	2.61	2.56
1,2 Dimethoxyethane, mg/L	ND 0.15	ND 0.15	ND 0.15
Methylene Chloride, mg/L	ND 0.15	ND 0.15	ND 0.15
2-Butoxyethanol, mg/L			
Naphthalene, mg/L			
Ethylene Glycol, mg/L			
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-14 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-N

	Run N1	Run N2	Average
Date	9/19/96	9/19/96	
Time	10:42	11:13	
pH, Standard Units	8.9	8.9	8.9
Temperature, °C	53	53	53
GC/ FID	**Run N1**	**Run N2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methanol, mg/L	2.64	2.41	2.52
1,2 Dimethoxyethane, mg/L	ND 0.15	ND 0.15	ND 0.15
Methylene Chloride, mg/L	ND 0.15	ND 0.15	ND 0.15
2-Butoxyethanol, mg/L			
Naphthalene, mg/L			
Ethylene Glycol, mg/L			
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

3:37 PM
1/31/97

TABLE T-15 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-O

	Run O1	Run O2	Average
Date	9/19/96	9/19/96	
Time	11:55	12:25	
pH, Standard Units	8.7	9.0	9.0
Temperature, °C	51	52	52
GC/ FID	**Run O1**	**Run O2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methanol, mg/L	1.19	1.43	1.31
1,2 Dimethoxyethane, mg/L	ND 0.15	ND 0.15	ND 0.15
Methylene Chloride, mg/L	ND 0.15	ND 0.15	ND 0.15
2-Butoxyethanol, mg/L			
Naphthalene, mg/L			
Ethylene Glycol, mg/L			
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-16 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

White Water Overflow

WMUL01-P

	Run P1	Run P2	Average
Date	9/19/96	9/19/96	
Time	13:02	13:38	
pH, Standard Units	8.4	8.4	8.4
Temperature, °C	55	55	55
GC/ FID	**Run P1**	**Run P2**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	ND 0.15	ND 0.15	ND 0.15
Methanol, mg/L	1.32	1.25	1.28
1,2 Dimethoxyethane, mg/L	ND 0.15	ND 0.15	ND 0.15
Methylene Chloride, mg/L	ND 0.15	ND 0.15	ND 0.15
2-Butoxyethanol, mg/L			
Naphthalene, mg/L			
Ethylene Glycol, mg/L			
Diethanolamine, mg/L			

ND = Below Detection Limit of x.xx
* = Below Quantitation Limit; value estimated

TABLE T-17 SUMMARY OF PROCESS LIQUID SAMPLE RESULTS

Thick Stock

WMUL02

	Run 1	Run 2	Run 3	Run 4	Run 5	Average
Date	9/16/96	9/17/96	9/18/96	9/19/96	9/19/96	
Time	10:30	8:10	9:00	9:16	12:00	
pH, Standard Units	7.7	8.1	8.4	7.7	8.1	8.1
Temperature, °C	17	16	17	15	16	16
GC/ FID	**Run 1**	**Run 2**	**Run 3**	**Run 4**	**Run 5**	**Average**
Acetaldehyde, mg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
Acetone, mg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
Methyl Ethyl Ketone, mg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
Methanol, mg/L	ND 0.15	ND 0.15	ND 0.15	2.75	1.56	0.86
1,2 Dimethoxyethane, mg/L	* 0.35	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
Methylene Chloride, mg/L	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15	ND 0.15
2-Butoxyethanol, mg/L	ND 0.15	ND 0.15	ND 0.15			ND 0.15
Naphthalene, mg/L	ND 0.15					ND 0.15
Ethylene Glycol, mg/L	ND 0.15	ND 0.15	ND 0.15			ND 0.15
Diethanolamine, mg/L						

ND = Below Detection Limit of x.xx

* = Below Quantitation Limit; value estimated

3:36 PM
1/31/97