

July 26, 1996

Mr. Craig R. Bostwick  
Manager, Environmental and Safety  
Cook Composites and Polymers Co.  
P.O. Box 419389  
Kansas City, MO 64141-6389

RE: First 1996 Semiannual SVE System Progress Report  
Cook Composites and Polymers, Saukville, Wisconsin

Dear Craig:

This letter serves as the first semiannual report for the operations of the soil vapor extraction (SVE) system at the Cook Composites and Polymers (CCP) facility in Saukville, Wisconsin. This report covers the dates from October 31, 1995, through June 5, 1996. Personnel at CCP have been performing the regular operation, maintenance, and monitoring of the system. RMT, Inc. (RMT), has given trouble shooting assistance to CCP as needed.

### **System Operations**

The system was started on a full-time basis on October 31, 1995. All four vapor extraction (VE) wells have been in operation since startup (i.e., the wells have not been cycled on or off). The SVE system has been operating at a flow rate of approximately 180 to 190 standard cubic feet per minute (scfm). Between October 31, 1995, and June 5, 1996, approximately 36,460,000 standard cubic feet of air was emitted into the atmosphere. The total volume of air emitted is the sum of the air extracted from the subsurface and the atmospheric bleed air introduced into the system.

The extent of influence measurements were taken at vapor monitoring point VM-1. With a vacuum of approximately 20 inches water column (in. wc.) at each VE well, the vacuum at VM-1 was 1.1 in. wc. This is 5.5 percent of the applied vacuum, which indicates that the subsurface is being ventilated effectively. Please refer to Figure 1 for the location of VM-1 with respect to the other VE wells.

Each VE well has a submersible pump for recovering groundwater in order for the well screen to remain above the water table. Since startup, at least 5,350 gallons of groundwater have been recovered and disposed into a sanitary sewer. Since the flow meters failed prematurely and were not replaced immediately, the volume of recovered groundwater may be underestimated.

### **Air Emission Summary**

Between October 31, 1995, and June 5, 1996, the SVE system has recovered approximately 6.86 pounds of benzene and 2,621 pounds of total BTEX. As of June 5, 1996, the benzene and total BTEX emission rates were 0.001 lb/hr and 0.405 lb/hr, respectively (Table 1). The attached graphs show the BTEX emission rate over time and also the cumulative BTEX emissions over time. The laboratory reports are also attached.



**RMT, INC. — MADISON, WI**  
744 HEARTLAND TRAIL — 53717-1934  
P.O. BOX 8923 — 53708-8923  
608/831-4444 — 608/831-3334 FAX

Craig Bostwick  
July 26, 1996  
Page 2

**Problems Noted/Corrective Action Taken**

The blower was taken off-line on February 29 after it became seized. After the blower was repaired, and a lubrication issue was resolved, the blower was put back into service on April 24. The system continued to operate but shut down sporadically due to high temperature alarms. Because of this, the system was turned off on May 6. The high temperature alarms were caused by a faulty high temperature switch; the switch was replaced, and the system was restarted on May 31 and has run continuously since then.

The individual flow meters for each groundwater recovery line failed after a couple of weeks of operation. Visual inspection of the flow meter internals showed the meters to have deteriorated and to have become clogged with resin. During initial startup, a slug of resin that was present on the water table may have entered the groundwater recovery system and clogged the flow meters. In order to keep maintenance costs down, a single Kent flow meter was installed on the manifold to monitor the combined flow from the wells. The new meter was installed on April 30 and continues to provide reliable service. A piece of clear plastic pipe was also installed in the manifold to serve a sight glass for the recovered groundwater. No distinct product layer has been noticed; therefore, the resin clogging problem appears to have been a one-time occurrence.

**Recommendations**

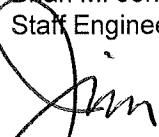
Since the system is currently operating well after being down for approximately 2 1/2 months, no changes in operational configuration are recommended. It is however, recommended that, after 3 additional months of continuous operation, the system be evaluated to enhance the recovery of volatile organics, as needed. Craig, please forward this report under CCP letterhead to the WDNR.

If you have any questions or comments, please call.

Sincerely,



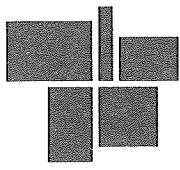
Brian M. Johnson  
Staff Engineer



James S. Rickun  
Vice President, Northern Region/  
Air Program Manager

Attachments

cc: E. Naimark, CCP  
F. Swed, RMT



COOK COMPOSITES AND POLYMERS CO.  
 SOIL VAPOR EXTRACTION SYSTEM  
 FORMER HAZARDOUS WASTE INCINERATOR

File Name: SVESYST.XLS  
 Author: B. Johnson  
 Date: 6/14/96

OPERATIONS LOG

PROJECT NUMBER 3333.01  
 LOCATION: SAUKVILLE, WI

DATE	TIME	SYSTEM DATA		LABORATORY ANALYTICAL RESULTS					EMISSION RATE					CUMULATIVE EMISSIONS		COMMENTS	
		Cumulative Operating Time (hours)	Outlet Airflow Rate (scfm)	Benzene (lb/cf)	Toluene (lb/cf)	Ethyl Benzene (lb/cf)	m,p-Xylene (lb/cf)	o-Xylene (lb/cf)	Total BETX (lb/cf)	Benzene (lb/hr)	Toluene (lb/hr)	Ethyl Benzene (lb/hr)	m,p-Xylene (lb/hr)	o-Xylene (lb/hr)	Total BETX (lb/hr)		Benzene (lb)
				REGULATORY EMISSION LIMITATIONS (2):					-	31.2312 lb/hr	36.228 lb/hr	36.228 lb/hr	5.7 lb/hr	300 lb/yr	-		
10/31/95	1:00 PM	0.00	180	4.93E-07	3.59E-05	1.78E-05	5.10E-05	8.17E-06	1.13E-04	0.005	0.388	0.192	0.551	0.088	1.220	0.01	1.22
11/1/95	10:06 AM	21.10	180	1.09E-06	8.18E-05	4.49E-05	1.87E-04	4.70E-05	3.62E-04	0.012	0.883	0.485	2.020	0.508	3.910	0.25	83.71
11/2/95	2:44 PM	49.73	180	7.09E-07	5.16E-05	1.81E-05	9.64E-05	1.38E-05	1.81E-04	0.008	0.557	0.195	1.041	0.149	1.955	0.47	139.69
11/8/95	8:17 AM	187.28	180	5.44E-07	4.24E-05	3.26E-05	9.84E-05	2.97E-05	2.04E-04	0.006	0.458	0.352	1.063	0.321	2.203	1.28	442.74
11/15/95	11:45 AM	358.75	180	4.26E-07	2.25E-05	1.56E-05	4.83E-05	1.63E-06	1.03E-04	0.005	0.243	0.168	0.522	0.018	1.112	2.07	633.48
11/21/95	11:22 AM	502.37	190	2.44E-07	1.43E-05	1.44E-05	4.48E-05	1.39E-05	8.76E-05	0.003	0.163	0.164	0.511	0.158	0.999	2.47	776.90
12/19/95	3:00 PM	1178.00	190	1.80E-07	1.73E-05	1.36E-05	4.03E-05	1.22E-05	8.36E-05	0.002	0.197	0.155	0.459	0.139	0.953	3.86	1420.65
1/16/96	3:00 PM	1850.00	190	1.70E-07	1.62E-05	1.25E-05	3.41E-05	7.15E-06	7.01E-05	0.002	0.185	0.143	0.389	0.082	0.799	5.16	1957.82
2/19/96	1:00 PM	2664.00	190	1.48E-07	1.13E-05	8.89E-06	2.65E-05	5.60E-06	5.24E-05	0.002	0.129	0.101	0.302	0.064	0.598	6.53	2444.43
4/30/96	1:15 PM	3045.25	195	3.30E-08	3.90E-06	3.20E-06	1.30E-05	4.10E-06	2.42E-05	0.000	0.046	0.037	0.152	0.048	0.284	6.68	2552.52
6/5/96	2:30 PM	3214.50	180	1.00E-07	9.00E-06	4.90E-06	1.80E-05	5.50E-06	3.75E-05	0.001	0.097	0.053	0.194	0.059	0.405	6.86	2621.07

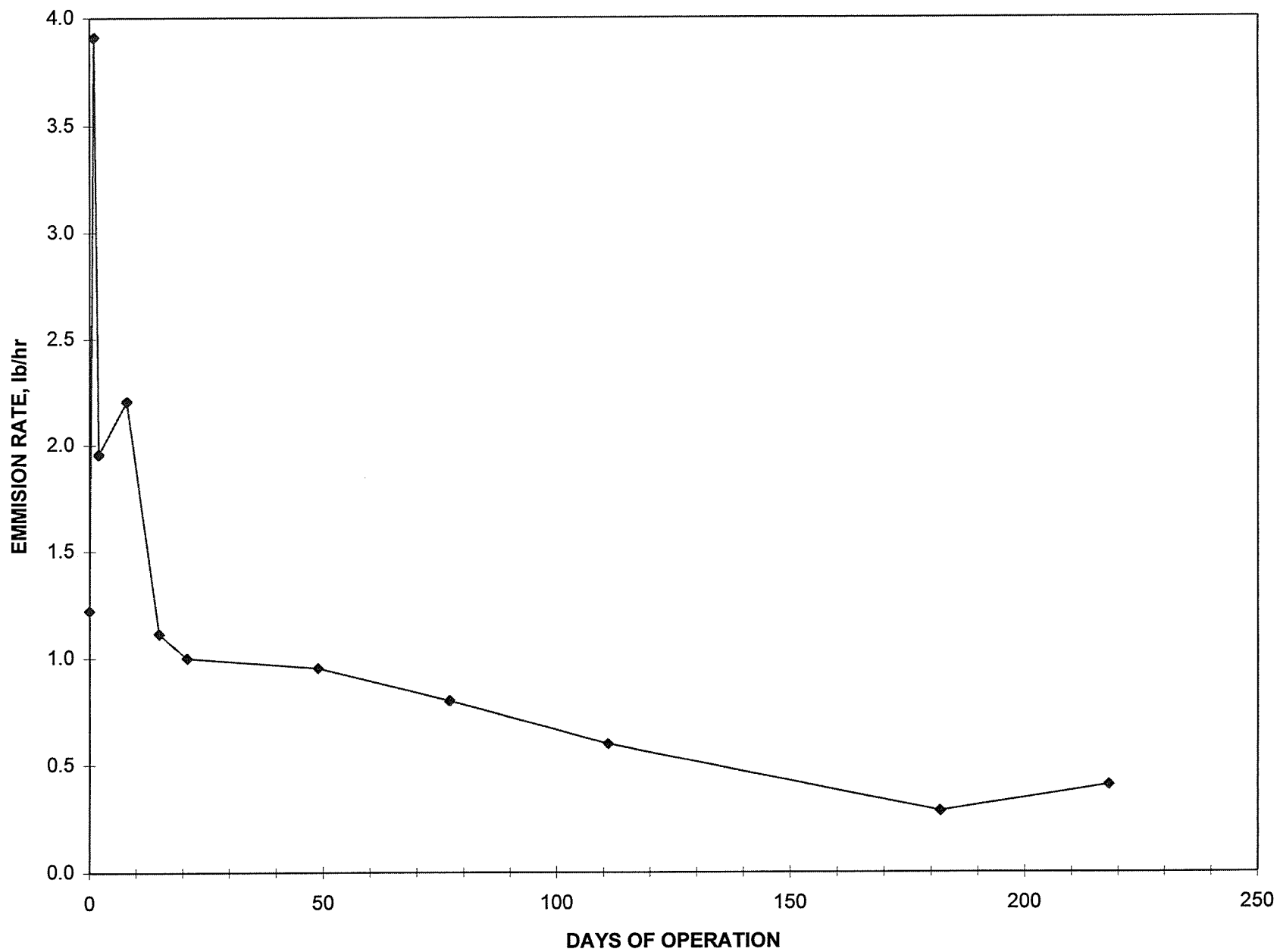
NOTES:

- Cumulative emissions calculated as follows:  
 (Current cumulative operating time - Previous cumulative operating time) \* Current emission rate + Previous cumulative emission rate
- Chapter NR 406, Wisconsin Administrative Code, applies to construction permits; Ch. NR 419 applies to control of organic compound emissions; Ch. NR 445 applies to control of hazardous pollutants.

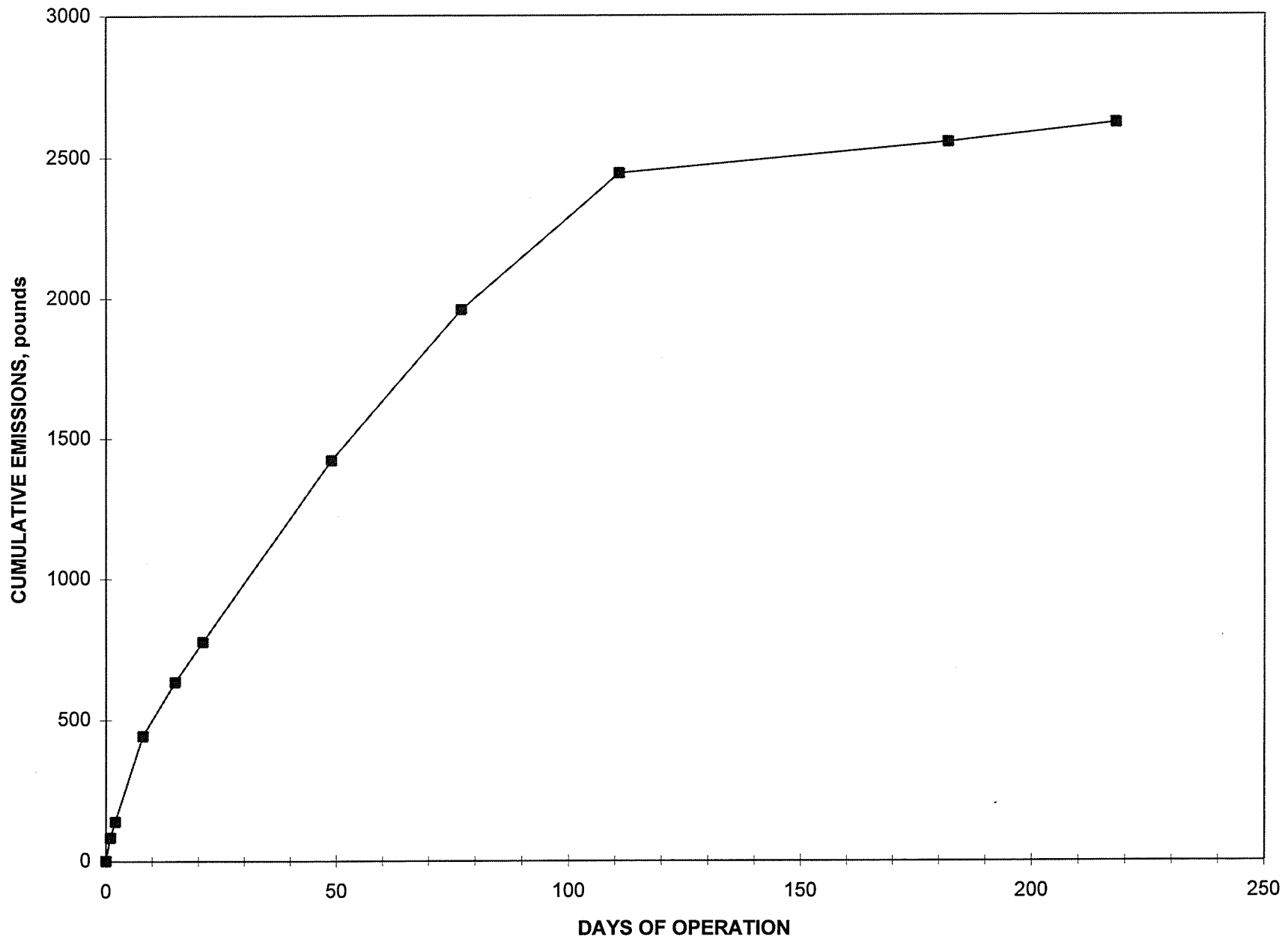
System cumulative operation time has been adjusted for system down time:

SYSTEM DOWN	SYSTEM RESTARTED	DOWN TIME (hrs)
2/24/96	2/24/96	3
2/29/96	4/24/96	1320
5/1/96	5/5/96	96
5/6/96	5/31/96	600
TOTAL=		2019

**BETX EMISSION RATE  
SOIL VAPOR EXTRACTION SYSTEM  
COOK COMPOSITES AND POLYMERS**



**CUMULATIVE BETX EMISSIONS  
SOIL VAPOR EXTRACTION SYSTEM  
Cook Composites and Polymers**



**PLOT DATA**

Drawing Name: x  
 Operator Name: x  
 Scale: x

Dwg Size: x  
 Plot Date: x  
 Plot Time: x  
 Attached Xref's: x

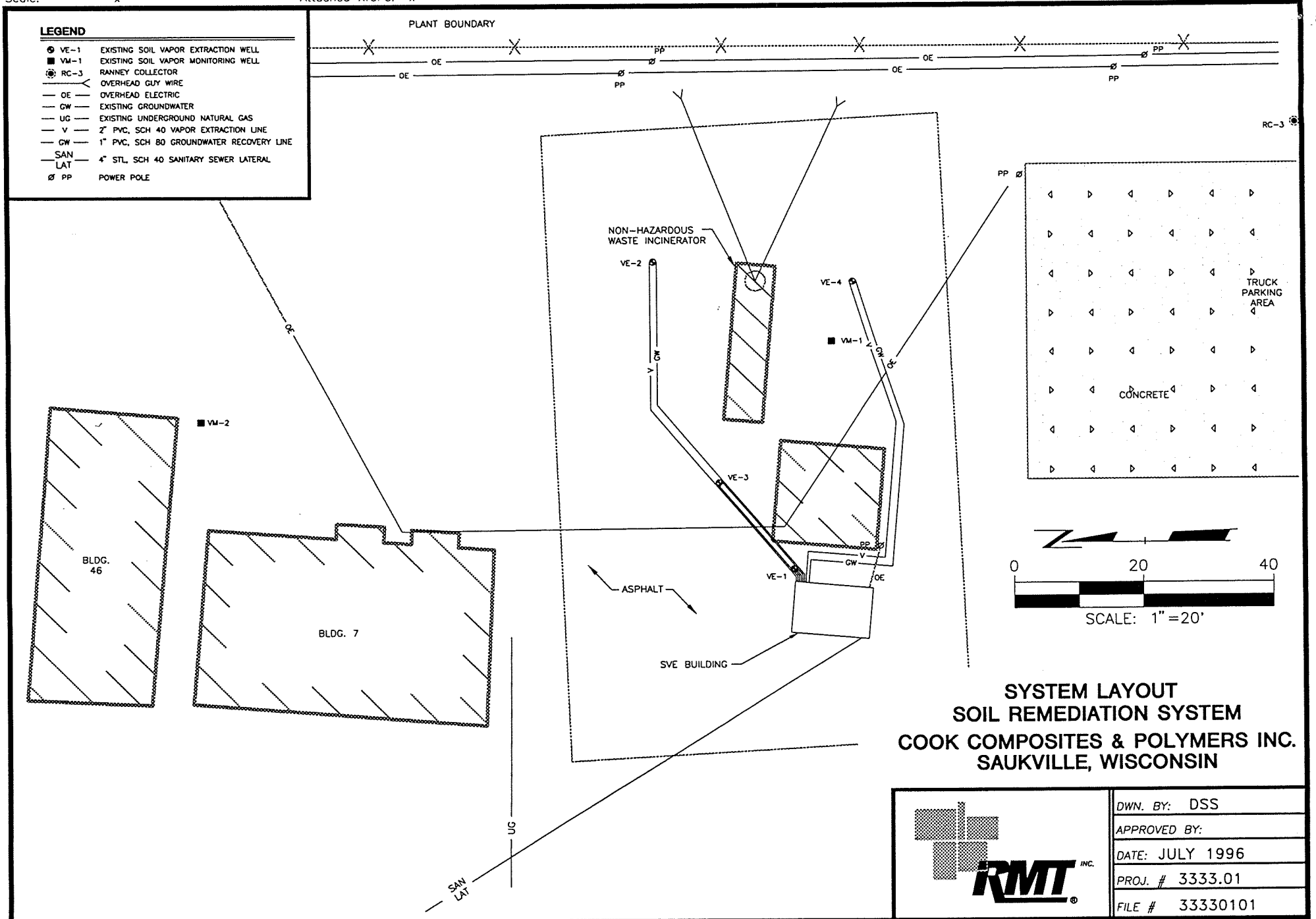


FIGURE 1

Date: 11-1-95

PORTABLE GC RESULTS SUMMARY

Project Name: CCP

Project # 1832-88

Note: All Units in  $\mu\text{g}/\text{m}^3$

Sample ID	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	Comments
<sup>13:00</sup> 10/31 SVE Discharge	4.93E-7	3.59E-5	1.78E-5	5.10E-5	8.17E-6	Total 1.13E-4
11/1 10:25 Stack	1.09E-6	8.18E-5	4.49E-5	1.87E-4	4.70E-5	3.62E-4
11/2 Stack	7.09E-7	5.16E-5	1.81E-5	9.64E-5	1.38E-5	1.81E-4
11/8 Stack	5.44E-7	4.24E-5	3.26E-5	9.84E-5	2.97E-5	2.04E-4
11/15 Stack 11:45	4.26E-7	2.25E-5	1.56E-5	4.83E-5	1.63E-6	1.03E-4
11/21 Stack 11:22	2.44E-7	1.43E-5	1.44E-5	4.78E-5	1.39E-5	8.96E-5

QC - Date

KKS    11.1.95  
KKS    11.3.95  
KKS    11.3.95  
KKS    11.9.95  
KKS    11.16.95  
KKS    11.22.95

Notes:  
 BD = Below detection (using maximum sensitivity of operation conditions described in sampling procedures).  
 ND = Nondetect (no concentration detected for operation conditions less than maximum sensitivity).

copy Leo T.

**PORTABLE GC RESULTS SUMMARY**  
Project Name: CCP

Project # 3333.01

Date: 12-20-95

Note: All Units in lbs/ft<sup>3</sup>

Sample ID	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	Comments	GC/Date
Field blank 12-19-95 15:00	BD	$1.4 \times 10^{-8}$	BD	BD	BD	GC Anal 12-20-95	
12-19-95 15:00 SVE Exhaust	$1.8 \times 10^{-7}$ ND	$1.73 \times 10^{-5}$	$1.36 \times 10^{-5}$	$4.03 \times 10^{-5}$	$1.22 \times 10^{-5}$	GC Anal 12-20-95	

CCD Data  
} WMS 12/21/95

Notes:  
BD = Below detection (using maximum sensitivity of operation conditions described in sampling procedures).  
ND = Nondetect (no concentration detected for operation conditions less than maximum sensitivity).

COPIES TO: Leo Tramm  
Jim Rickun



**PORTABLE GC RESULTS SUMMARY**

Date: 01-17-96

Project Name: CCP

Project # 3333.01

Note: All Units in lbs/ft<sup>3</sup>

Sample ID	Benzene	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	Comments	GC / Date
<u>01-16-96</u> Field Blank <sup>3:00 in</sup>	$< 2 \times 10^{-9}$	$5.0 \times 10^{-7}$	$< 3 \times 10^{-9}$	$< 2 \times 10^{-7}$	$< 3 \times 10^{-9}$		XAD 1/17/96
SVE Exhaust 3:00 p	$1.7 \times 10^{-7}$	$1.6 \times 10^{-5}$	$1.25 \times 10^{-5}$	$3.41 \times 10^{-5}$	$7.15 \times 10^{-6}$		XAD 1/17/96

Notes: Copy to Leo Tramm and Jim Rickun.

Analyst: [Signature]

Analysis Date: 01-17-96

Date: 02-20-96

### PORTABLE GC RESULTS SUMMARY

Project Name: CCP

Project # 3332.01

Note: All Units in lbs/ft<sup>3</sup>

Sample ID	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	Comments	GC / Date
<u>02-19-96</u> Field Blank <sup>13:00</sup>	$2.4 \times 10^{-9}$	$2.2 \times 10^{-7}$	$28.3 \times 10^{-11}$	$25.5 \times 10^{-9}$	$28.3 \times 10^{-9}$		KB / 2-21-96
EXHAUST <sup>13:02</sup>	$1.48 \times 10^{-7}$	$1.13 \times 10^{-5}$	$8.89 \times 10^{-6}$	$2.65 \times 10^{-5}$	$5.60 \times 10^{-6}$		KB / 2-21-96

Notes: Copy to Leo Tramm and Jim Rickun.

Analyst: Ry We

Analysis Date: 2/20/96

Date: 5/1/96

**PORTABLE GC RESULTS SUMMARY**  
Project Name: CCP

Project # 3333.01

Note: All Units in lbs/ft<sup>3</sup>

Sample ID	Benzene	Toluene	Ethyl-benzene	m,p-Xylene	o-Xylene	Comments	QC / Date
STACK	$3.3 \times 10^{-8}$	$3.6 \times 10^{-6}$	$2.8 \times 10^{-6}$	$1.2 \times 10^{-5}$	$3.6 \times 10^{-6}$		
STACK (dup)	$<6.7 \times 10^{-8}$	$4.2 \times 10^{-6}$	$3.5 \times 10^{-6}$	$1.3 \times 10^{-5}$	$4.6 \times 10^{-6}$		

Notes: Copy to Leo Tramm and Jim Rickun.  
Analyst: K Barber Brian Johnson  
QC: KAS 5.1.96

Analysis Date: 5/1/96