

Quarterly Groundwater Monitoring Report

Prepared for

Black & Decker (U.S.) Inc.

Hampstead, Maryland

Prepared by

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1. INTRODUCTION

This Groundwater Monitoring Report has been prepared to meet the requirements of Condition IV.G of the Administrative Consent Order between the State of Maryland Department of the Environment (MDE) and Black & Decker (U.S.) Inc. (April 1995) (Consent Order). Specifically, Condition IV.G calls for preparation of a Groundwater Monitoring Report containing the following information for each reporting period: the quantities of groundwater pumped, treated, and discharged; the calculation of quantities of contaminants removed from groundwater; a summary of all sampling analyses; an explanation of all operational or other problems encountered, and the manner in which each problem was resolved; copies of all reports submitted to the Department of Natural Resources in conjunction with the Groundwater Appropriations Permit; and recommendations for changes to the Interim Groundwater Treatment System. This document is one of several which are being prepared in response to the Consent Order; each of these documents are to be submitted to the MDE in accordance with the schedule outlined in the Consent Order. This document will become part of the Administrative Record for the site, which is maintained at the Hampstead Public Library.

2. SITE CHARACTERISTICS

2.1 HYDRAULIC PROPERTIES

In accordance with the Consent Order and the Water Appropriation Permit issued to the Black and Decker (U.S.) Inc. Hampstead, Maryland, facility, the following pumping and water level information is included for the period of July through September 2001.

Pumping records showing the total gallons pumped per month of treatment system operation are presented in Table 2-1. The complete groundwater treatment system pumping records are included in Appendix A.

Monthly water levels for wells included in the water level monitoring plan are presented in Table 2-2. At the time the water level measurements were collected, the extraction wells were pumping at a combined rate of approximately 154 gallons per minute (gpm).

2.2 EFFLUENT CHARACTERISTICS

Effluent characteristics of the NPDES discharge points are recorded monthly on Discharge Monitoring Reports (DMRs) and are submitted to MDE, Water Management Administration, on a quarterly basis. A summary of the sample results from the DMRs is presented in Table 2-3. DMRs for the period of July through September 2001 are included in Appendix B.

2.3 GROUNDWATER QUALITY DATA

For the reporting period of July through September 2001, approximately 72 pounds of total volatile organic compounds (VOCs) were removed from the groundwater by the extraction and treatment system. In general, the total VOCs removed from the groundwater were comprised primarily of trichloroethene (TCE) (81 %) and tetrachlorethene (PCE) (19 %). Analytical results of the groundwater collected at the inlet to the air stripper for the period of July through September 2001 are included in Appendix C.

Table 2-1
Treatment System Pumping Records - 3rd Quarter 2001
Black & Decker
Hampstead, Maryland

Date	Total Volume of Water Pumped (gallons)
July 2001	6,816,267
August 2001	6,671,805
September 2001	6,343,554

Table 2-2
Groundwater Elevation Data - 3rd Quarter 2001
Black & Decker
Hampstead, Maryland

WELL NO.	TOC ELEV.	TOTAL DEPTH	07/11/01		8/28/01		9/12/01	
			DTW	ELEV	DTW	ELEV	DTW	ELEV
EW-1	847.21	55	DRY	--	DRY	--	DRY	--
EW-2	849.21	110	87.35	761.86	104.50	744.71	102.60	746.61
EW-3	846.64	118	72.96	773.68	84.05	762.59	85.61	761.03
EW-4	858.01	97.5	--	--	--	--	--	--
EW-5	864.17	98	87.96	776.21	84.33	779.84	86.11	778.06
EW-6	831.98	115	63.47	768.51	69.31	762.67	73.43	758.55
EW-7	818.38	78	47.81	770.57	49.83	768.55	50.41	767.97
EW-8	811.13	98	67.08	744.05	80.50	730.63	78.43	732.70
EW-9	811.35	141	92.81	718.54	92.05	719.30	92.01	719.34
EW-10	807.74	NA	49.06	758.68	51.25	756.49	52.61	755.13
RFW-1A	864.37	78	51.84	812.53	52.73	811.64	53.61	810.76
RFW-1B	864.23	200	51.86	812.37	52.77	811.46	53.63	810.60
RFW-2A	857.41	35	14.30	843.11	16.69	840.72	16.73	840.68
RFW-2B	857.73	75	14.98	842.75	17.31	840.42	17.41	840.32
RFW-3B	839.21	153	33.14	806.07	35.56	803.65	35.67	803.54
RFW-4A	830.37	62	37.27	793.10	37.70	792.67	37.94	792.43
RFW-4B	830.37	120	37.12	793.25	37.56	792.81	37.88	792.49
RFW-5A	817.50	30	DRY	--	DRY	--	DRY	--
RFW-6	785.04	120	3.74	781.30	3.97	781.07	4.11	780.93
RFW-7	805.14	29	7.23	797.91	7.66	797.48	7.69	797.45
RFW-8	860.07	56	DRY	--	DRY	--	DRY	--
RFW-9	862.02	49	25.91	836.11	27.49	834.53	27.58	834.44
RFW-10	852.06	58	DRY	--	DRY	--	DRY	--
RFW-11A	849.32	72	NA	--	NA	--	NA	--
RFW-11B	849.62	116	72.68	776.94	76.49	773.13	76.94	772.68
RFW-12B	844.87	264	52.82	792.05	53.64	791.23	54.17	790.70
RFW-13	849.11	150	62.18	786.93	62.31	786.80	62.21	786.90
RFW-14B	812.39	281	49.43	762.96	44.97	767.42	47.46	764.93
RFW-16	856.14	41	DRY	--	DRY	--	DRY	--
RFW-17	834.66	60.5	26.08	808.58	27.88	806.78	27.94	806.72
RFW-20	842.49	142	34.66	807.83	34.93	807.56	35.21	807.28
RFW-21	832.65	102	21.48	811.17	22.60	810.05	23.11	809.54
PH-7	805.94	89	30.21	775.73	30.78	775.16	30.79	775.15
PH-9	814.94	98	42.18	772.76	43.73	771.21	44.08	770.86
PH-11	820.68	78	41.71	778.97	42.77	777.91	43.11	777.57
PH-12	828.35	87	47.89	780.46	48.76	779.59	49.38	778.97
B-3	803.02	83	6.78	796.24	7.11	795.91	7.49	795.53
Amoco	842.29	NA	23.83	818.46	24.19	818.10	24.61	817.68
Hamp. Town #22	804.96	NA	48.92	756.04	46.75	758.21	36.42	768.54
Pembroke #1	NA	NA	14.86	--	11.37	--	15.12	--
Pembroke #2	NA	NA	NA	--	NA	--	NA	--
N. Houcks. Rd.	NA	NA	10.16	--	10.59	--	10.43	--
E. Century St.	NA	NA	--	--	11.36	--	11.29	--
Lwr. Beckleys. Rd.	NA	NA	--	--	57.24	--	57.96	--

NA - Not Available/Not Accessible

Table 2-3
Effluent Characteristics Summary - 3rd Quarter 2001
Black & Decker
Hampstead, Maryland

Discharge Number	Parameter	Units	Permit Limits	DMR DATE			
				July 2001	August 2001	September 2001	
001	FLOW	average	MGD	NA	0.163	0.177	0.145
		maximum	MGD	NA	0.386	0.362	0.322
	1,1,1-Trichloroethane	µg/l	5	< 5	< 5	< 5	
	Tetrachloroethylene	µg/l	5	< 5	< 5	< 5	
	Trichloroethylene	µg/l	5	< 5	< 5	< 5	
	Total Residual Chlorine	mg/l	<0.1	<0.1	<0.1	<0.1	
	Oil & Grease	maximum	mg/l	15	< 5	< 5	< 5
		quarterly average	mg/l	10	NR	NR	< 5
	pH	minimum	STD	6.0	6.96	6.85	6.53
		maximum	STD	8.5	7.25	7.53	7.68
	BOD		mg/l	15	2.4	2.6	2.9
TSS	maximum	mg/l	30	10	7.6	7.6	
	quarterly average	mg/l	20	NR	NR	8.3	
101 (Monitoring Point)	FLOW	average	MGD	NA	0.305	0.260	0.278
		maximum	MGD	NA	0.361	0.316	0.304
	Fecal Coliform	MPN/100ml	200	< 2	< 2	< 2	
201 (Monitoring Point)	FLOW	average	MGD	NA	0.227	0.215	0.211
		maximum	MGD	NA	0.239	0.249	0.231
	1,1,1-Trichloroethane	µg/l	NA	< 5	< 5	< 5	
	Tetrachloroethylene	µg/l	NA	< 5	< 5	< 5	
	Trichloroethylene	µg/l	NA	< 5	< 5	< 5	

DMR - Discharge Monitoring Report

NA - Not Applicable

NR - Not Reported

A summary of the analytical results from the third quarter (August 2001) groundwater sampling round of the extraction and monitor wells is included in Table 2-4. The complete analytical data package is included in Appendix D. As found in earlier sampling events at the Black & Decker facility, TCE and PCE were the VOCs detected at the highest concentrations in the groundwater samples. The highest concentration of TCE was detected in the groundwater samples collected from wells RFW-12B and EW-4 and the highest concentration of PCE was detected in the groundwater sample collected from extraction well EW-9. The remainder of VOCs present were detected at levels well below the Federal Maximum Contaminant Levels (MCL).

Table 2-4

Summary of Groundwater Analytical Results - August 2001

Black & Decker
Hampstead, Maryland

PARAMETER	Units	EW-1	EW-2	EW-3	EW-4	EW-5	EW-6	EW-7	EW-8	EW-9	EW-9 (DUP)	EW-10	RFW-1A	RFW-1B	RFW-2A
			(10)	(5)	(10)	(10)			(1)	(5)	(2)				
Chloromethane	ug/L	NS	100 U	50 U	100 U	100 U	10 U	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U
Bromomethane	ug/L	NS	100 U	50 U	100 U	100 U	10 U	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U
Vinyl Chloride	ug/L	NS	100 U	50 U	100 U	100 U	10 U	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U
Chloroethane	ug/L	NS	100 U	50 U	100 U	100 U	10 U	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U
Methylene Chloride	ug/L	NS	110 B	53 B	110 B	110 B	8 B	9 B	9 B	62 B	14 B	5 JB	5 JB	5 B	5 JB
Acetone	ug/L	NS	100 U	50 U	100 U	100 U	10 U	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U
Carbon Disulfide	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	2 J	25 U	10 U	5 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	ug/L	NS	50 U	25 U	50 U	50 U	5 U	7	39	25 U	3 J	5 U	5 U	5 U	5 U
Chloroform	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,2-Dichloroethane	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
2-Butanone	ug/L	NS	100 U	50 U	100 U	100 U	10 U	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	1 J	25 U	10 U	5 U	5 U	5 U	1 J
Carbon Tetrachloride	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Bromodichloromethane	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,2-Dichloropropane	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Trichloroethene	ug/L	NS	1300	370	1900	620	14	8	23	6 J	4 J	5 U	5 U	5 U	5
Dibromochloromethane	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
1,1,2-Trichloroethane	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Benzene	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	1 J	25 U	10 U	5 U	5 U	5 U	5 U
Trans-1,3-Dichloropropene	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Bromoform	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone	ug/L	NS	100 U	50 U	100 U	100 U	10 U	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U
2-Hexanone	ug/L	NS	100 U	50 U	100 U	100 U	10 U	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U
Tetrachloroethene	ug/L	NS	110	12 J	56	33 J	32	20	150	280	230	11	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Toluene	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Chlorobenzene	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Styrene	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U
Xylene (total)	ug/L	NS	50 U	25 U	50 U	50 U	5 U	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U

Notes: U = Compound was analyzed for but not detected. Value shown is the method detection limit for quantification.

J = Indicates an estimated value.

B = Indicates that the analyte was found in the associated blank as well as in the sample.

DUP = Duplicate sample

NS = Not sampled

(2.5) = Dilution factor.

Table 2-4
 Summary of Groundwater Analytical Results - August 2001
 Black & Decker
 Hampstead, Maryland

PARAMETER	Units	RFW-2B	RFW-3B	RFW-4A	RFW-4B	RFW-4B (DUP)	RFW-5A	RFW-6	RFW-7	RFW-8	RFW-9	RFW-10	RFW-11A	RFW-11B	RFW-12B (5)
Chloromethane	ug/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U	50 U
Bromomethane	ug/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U	50 U
Vinyl Chloride	ug/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U	50 U
Chloroethane	ug/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U	50 U
Methylene Chloride	ug/L	5 B	3 JB	3 JB	4 JB	3 JB	NS	3 JB	4 JB	NS	3 JB	NS	NS	3 JB	39 B
Acetone	ug/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U	50 U
Carbon Disulfide	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
1,1-Dichloroethene	ug/L	5 U	1 J	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
1,1-Dichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
1,2-Dichloroethene (total)	ug/L	5 U	27	3 J	7	8	NS	2 J	1 J	NS	7	NS	NS	7	24 J
Chloroform	ug/L	5 U	5 U	1 J	1 J	1 J	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
1,2-Dichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
2-Butanone	ug/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U	50 U
1,1,1-Trichloroethane	ug/L	5 U	3 J	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Carbon Tetrachloride	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Bromodichloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
1,2-Dichloropropane	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
cis-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Trichloroethene	ug/L	5 U	18	70	22	19	NS	7	21	NS	25	NS	NS	87	430
Dibromochloromethane	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
1,1,2-Trichloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Benzene	ug/L	5 U	5 U	2 J	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Trans-1,3-Dichloropropene	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Bromoform	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
4-Methyl-2-pentanone	ug/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U	50 U
2-Hexanone	ug/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U	50 U
Tetrachloroethene	ug/L	5 U	17	74	73	73	NS	8	2 J	NS	5 J	NS	NS	2 J	33
1,1,2,2-Tetrachloroethane	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Toluene	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Chlorobenzene	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Ethylbenzene	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Styrene	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U
Xylene (total)	ug/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U	25 U

Notes: U = Compound was analyzed for but not detected. Value shown is the method detection limit for quantification.
 J = Indicates an estimated value.
 B = Indicates that the analyte was found in the associated blank as well as in the sample.

DUP = Duplicate sample
 NS = Not sampled
 (2.5) = Dilution factor.

Table 2-4

Summary of Groundwater Analytical Results - August 2001
Black & Decker
Hampstead, Maryland

PARAMETER	Units	RFW-13	RFW-16	RFW-17	RFW-20	RFW-21	Town #22	Town #23	Leister Dairy	Leister Res. #1	Leister Res. #2	Trip Blank
Chloromethane	ug/L	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Bromomethane	ug/L	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Vinyl Chloride	ug/L	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Chloroethane	ug/L	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Methylene Chloride	ug/L	3 JB	NS	5 JB	5 JB	5 B	5 JB	4 B	8 B	8 B	NS	5 B
Acetone	ug/L	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Carbon Disulfide	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,1-Dichloroethene	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,1-Dichloroethane	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,2-Dichloroethene (total)	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Chloroform	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	4 J
1,2-Dichloroethane	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
2-Butanone	ug/L	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
1,1,1-Trichloroethane	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Carbon Tetrachloride	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Bromodichloromethane	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,2-Dichloropropane	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
cis-1,3-Dichloropropene	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Trichloroethene	ug/L	7	NS	5 U	5	5 U	5 U	5 U	5 U	5 U	NS	5 U
Dibromochloromethane	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,1,2-Trichloroethane	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Benzene	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Trans-1,3-Dichloropropene	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Bromoform	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
4-Methyl-2-pentanone	ug/L	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
2-Hexanone	ug/L	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Tetrachloroethene	ug/L	38	NS	5 U	5 U	5 U	5 U	5 U	3 J	5 U	NS	5 U
1,1,2,2-Tetrachloroethane	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Toluene	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Chlorobenzene	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Ethylbenzene	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Styrene	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Xylene (total)	ug/L	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U

Notes: U = Compound was analyzed for but not detected. Value shown is the method detection limit for quantification.

J = Indicates an estimated value.

B = Indicates that the analyte was found in the associated blank as well as in the sample.

DUP = Duplicate sample

NS = Not sampled

(2.5) = Dilution factor.

3. OPERATION AND MAINTENANCE OF THE TREATMENT SYSTEM

A summary of the maintenance activities which were undertaken with the extraction and treatment system during the reporting period (July through September 2001) is provided in Table 3-1. This table is comprehensive in summarizing significant maintenance events or activities, while not including those activities considered unworthy of note (such as replacement of light bulbs, lubrication of moving parts as appropriate or other routine activities).

Table 3-1
Treatment System Maintenance Activities - 3rd Quarter 2001
Black & Decker
Hampstead, Maryland

Date	Event/Corrective Action
July - Sept. 2001	No maintenance activities reported during this quarter.

4. RECOMMENDATIONS

For the reporting period of July through September 2001, the treatment system continued to create a hydraulic boundary preventing off-site migration of groundwater. The extraction system will continue to operate as currently configured to pump and treat contaminated groundwater. Depth-to-water measurements will continue to be collected on a monthly basis in all site monitor wells to construct a groundwater elevation contour map for the site. The groundwater elevation contour map will be used to verify that the required area of groundwater capture is being maintained. If necessary, pumping rates will be adjusted to maintain groundwater capture due to seasonal fluctuations in groundwater elevations. The treatment system will also continue to operate as currently configured, as data collected have proven that the treatment system is fully effective in removing VOCs from the extracted groundwater.

APPENDIX A
GROUNDWATER TREATMENT SYSTEM PUMPING RECORDS
(JULY – SEPTEMBER 2001)

**BLACK DECKER
AIR STRIPPER # 2
OPERATING RECORD**

PAST MONTH READING

* 16240809

MONTH / YEAR

July 2001

July Integ. Reading is estimate, Meter down since 6-11-01.

Date	Day	Time	Integ. Reading	GPD	Pump # 11	Pump # 12
1				↑		
2	M	1115		↑	8407	8443
3	T	0910		↑	8407	8465
4						
5	T	0910		1129626	8407	8523
6	F	1020	17370435	↑	8407	8538
7						
8				650832		
9	M	0925	18021267	221988	8407	8609
10	T	0950	18243255	↑	8431	8609
11	W			436450		
12	T	1110	18679705	210571	8478	8609
13	F	1005	18890276	↑	8501	8609
14						
15				663101		
16	M	1015	19553377	214299	8573	8609
17	T	0930	19767626	218450	8573	8633
18	W	0930	19986126	238742	8573	8656
19	T	1115	20224868	↑	8573	8682
20	F					
21						
22				864255		
23	M	0955	21089123	214696	8573	8777
24	T	0925	21303819	215963	8597	8777
25	W	0910	21519782	224481	8620	8777
26	T	0945	21744263	231784	8645	8777
27	F	1110	21976047	↑	8670	8777
28						
29				663885		
30	M	1120	22639932	191354	8743	8777
31	T	0855	22831286	225790	8743	8798
Total				6816267		
Average				227209		

NEXT MONTH READING 23057076

DATE 8-1-01

MONTH / YEAR

Aug. 01

**BLACK DECKER
AIR STRIPPER # 2
OPERATING RECORD**

PAST MONTH READING

22831286

Date	Day	Time	Integ. Reading	GPD	Pump # 11	Pump # 12
1	W	0920	23057076	221692	8743	8823
2	T	1055	23278768	219543	8743	8847
3	F	1000	23498311	↑	8743	8871
4						
5				636555		
6	M	0835	24134866	249078	8743	8942
7	T	1205	24383944	↑	8771	8942
8	W			410583		
9	T	0945	24794627	212563	8816	8942
10	F	0925	25007090	↑	8840	8942
11						
12				648840		
13	M	0935	25655930	213671	8912	8942
14	T	0930	25869601	215827	8912	8966
15	W	0915	26085428	215431	8912	8990
16	T	0925	26300859	↑	8912	9014
17	F					
18						
19				867481		
20	M	1000	27168340	198582	8912	9110
21	T	0810	27366922	233681	8934	9110
22	W	0955	27600603	207312	8960	9110
23	T	0925	27807915	219386	8983	9110
24	F	0945	28027301	↑	9008	9110
25						
26				645364		
27	M	1000	28672665	215146	9080	9110
28	T	1015	28887811	217458	9104	9110
29	W	1035	29185269	205062	9104	9135
30	T	0940	29310331	227440	9104	9158
31	F	11:15	29537771	191110	9104	9184
Total				6671805		
Average				215220		

NEXT MONTH READING 29728881DATE 9-1-01

MONTH / YEAR

Sept. 01

**BLACK DECKER
AIR STRIPPER # 2
OPERATING RECORD**

PAST MONTH READING

29537771

Date	Day	Time	Integ. Reading	GPD	Pump # 11	Pump # 12
1	S	0820	29728881	↑	9104	9205
2	S			↑		
3	M			632932		
4	T	0800	30361813	208331	9104	9276
5	W	0725	30570144	215081	9128	9276
6	T	0745	30785225	228142	9152	9276
7	F	0935	3101367	↑	9178	9276
8	S			↑		
9	S			622413		
10	M	0810	31635780	231462	9248	9276
11	T	1015	31867242	200708	9248	9302
12	W	0910	32067950	214870	9248	9325
13	T	0935	32282820	196288	9248	9349
14	F	0800	32479108	↑	9248	9372
15	S			↑		
16	S			644895		
17	M	0925	33124003	213624	9248	9445
18	T	0945	33337627	228772	9273	9445
19	W	1150	33546399	196734	9299	9445
20	T	1000	33763133	204786	9321	9445
21	F	0930	33971919	↑	9346	9445
22	S			↑		
23	S			638512		
24	M	1015	34606431	209929	9417	9445
25	T	1015	34816360	213903	9417	9469
26	W	1240	35030263	197752	9418	9494
27	T	0910	35228015	196039	9417	9516
28	F	0735	35424054	↑	9417	9539
29	S			↑		
30	S			648381		
31	.					
Total				6343554		
Average				211452		

NEXT MONTH READING 36072435

DATE 10-1-01

**APPENDIX B
DISCHARGE MONITORING REPORTS
(JULY - SEPTEMBER 2001)**
