

**QUARTERLY GROUNDWATER
MONITORING REPORT**

Prepared for

Black & Decker (U.S.) Inc.
Hampstead, Maryland

October 2002

Prepared by

WESTON SOLUTIONS, INC.
1400 Weston Way
West Chester, Pennsylvania 19380-1499

W.O. No. 02501.004.004.0200

29 October 2002

Ms. Patti Davis
Waste Management Administration
Maryland Department of the Environment
2500 Broening Highway
Baltimore, MD 21224

Re: Black & Decker Hampstead Facility

Dear Ms. Davis:

On behalf of our client, Black & Decker (U.S.) Inc. (Black & Decker), Weston Solutions, Inc. (WESTON®) provides enclosed with this letter two copies of the Quarterly Groundwater Monitoring Report for the period of July through September 2002. This report has been drafted for your review pursuant to the Administrative Consent Order of 13 April 1995.

If you have any questions regarding the enclosure, please contact me at (610) 701-7360.

Very truly yours,

WESTON SOLUTIONS, INC.

Thomas Cornuet, P.G.
Project Manager

Enclosure

cc: L. Biagioni, B&D
V. DaGrava, B&D
T. Lynch III, M&S
H. Suominen, AG/GFI
L. Bove, WESTON

TABLE OF CONTENTS

Section	Page
1. INTRODUCTION.....	1-1
2. SITE CHARACTERISTICS.....	2-1
2.1 HYDRAULIC PROPERTIES	2-1
2.2 EFFLUENT CHARACTERISTICS	2-1
2.3 GROUNDWATER QUALITY DATA	2-1
3. OPERATION AND MAINTENANCE OF THE TREATMENT SYSTEM.....	3-1
4. RECOMMENDATIONS.....	4-1

APPENDIX A – GROUNDWATER TREATMENT SYSTEM PUMPING RECORDS

APPENDIX B – DISCHARGE MONITORING REPORTS

APPENDIX C – GROUNDWATER TREATMENT SYSTEM ANALYTICAL RESULTS

APPENDIX D – GROUNDWATER ANALYTICAL DATA PACKAGE

LIST OF TABLES

Table	Page
Table 2-1 Treatment System Pumping Records – 3 rd Quarter 2002.....	2-2
Table 2-2 Groundwater Elevation Data – 3 rd Quarter 2002.....	2-3
Table 2-3 Effluent Characteristics Summary – 3 rd Quarter 2002	2-4
Table 2-4 Summary of Groundwater Analytical Results – August 2002	2-6
Table 3-1 Treatment System Maintenance Activities – 3 rd Quarter 2002	3-2

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.
- 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 is 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 2002.

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 an average combined rate of approximately 135 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 2002 are included in Appendix B.

2.3 GROUNDWATER QUALITY DATA

For the reporting period of July through September 2002, approximately 46 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) (77 %) and tetrachlorethene (PCE) (23 %). Analytical results of the groundwater collected at the inlet to the air stripper for the period of July through September 2002 are included in Appendix C.

Table 2-1
Treatment System Pumping Records - 3rd Quarter 2002
Black & Decker
Hampstead, Maryland

Date	Water Pumped (gallons)
July 2002	5,843,452
August 2002	5,873,450
September 2002	5,577,285

Table 2-2
Groundwater Elevation Data - 3rd Quarter 2002
Black & Decker
Hampstead, Maryland

WELL NO.	FOC ELEV.	TOTAL DEPTH	07/31/02		8/26/02		9/30/02	
			DTW	ELEV	DTW	ELEV	DTW	ELEV
EW-1	847.21	55	DRY	--	DRY	--	DRY	--
EW-2	849.21	110	94.63	754.58	102.85	746.36	102.88	746.33
EW-3	846.64	118	89.43	757.21	93.10	753.54	93.62	753.02
EW-4	858.01	97.5	--	--	--	--	--	--
EW-5	864.17	98	88.00	776.17	87.88	776.29	86.94	777.23
EW-6	831.98	115	86.96	745.02	89.51	742.47	88.93	743.05
EW-7	818.38	78	67.94	750.44	71.65	746.73	72.43	745.95
EW-8	811.13	98	93.62	717.51	93.15	717.98	94.15	716.98
EW-9	811.35	141	99.79	711.56	102.55	708.80	102.00	709.35
EW-10	807.74	NA	44.68	763.06	53.12	754.62	54.89	752.85
RFW-1A	864.37	78	56.88	807.49	56.66	807.71	56.73	807.64
RFW-1B	864.23	200	56.92	807.31	56.63	807.60	56.70	807.53
RFW-2A	857.41	35	19.32	838.09	21.72	835.69	20.86	836.55
RFW-2B	857.73	75	19.91	837.82	22.35	835.38	22.42	835.31
RFW-3B	839.21	153	39.22	799.99	40.65	798.56	41.51	797.70
RFW-4A	830.37	62	40.71	789.66	40.43	789.94	40.46	789.91
RFW-4B	830.37	120	40.63	789.74	40.28	790.09	40.69	789.68
RFW-5A	817.50	30	DRY	--	DRY	--	DRY	--
RFW-6	785.04	120	3.85	781.19	5.97	779.07	5.60	779.44
RFW-7	805.14	29	8.09	797.05	9.66	795.48	8.39	796.75
RFW-8	860.07	56	DRY	--	DRY	--	DRY	--
RFW-9	862.02	49	30.43	831.59	31.25	830.77	31.43	830.59
RFW-10	852.06	58	DRY	--	DRY	--	DRY	--
RFW-11A	849.32	72	NA	--	NA	--	NA	--
RFW-11B	849.62	116	75.32	774.30	75.42	774.20	76.03	773.59
RFW-12B	844.87	264	59.41	785.46	56.40	788.47	57.49	787.38
RFW-13	849.11	150	67.26	781.85	67.52	781.59	68.26	780.85
RFW-14B	812.39	281	50.17	762.22	50.98	761.41	50.79	761.60
RFW-16	856.14	41	DRY	--	DRY	--	DRY	--
RFW-17	834.66	60.5	30.57	804.09	30.95	803.71	31.46	803.20
RFW-20	842.49	142	38.62	803.87	39.51	802.98	40.43	802.06
RFW-21	832.65	102	25.17	807.48	25.56	807.09	25.99	806.66
PH-7	805.94	89	34.06	771.88	33.02	772.92	33.85	772.09
PH-9	814.94	98	54.82	760.12	57.54	757.40	57.49	757.45
PH-11	820.68	78	46.31	774.37	46.55	774.13	45.98	774.70
PH-12	828.35	87	52.41	775.94	55.13	773.22	54.67	773.68
B-3	803.02	83	9.13	793.89	8.96	794.06	8.87	794.15
Amoco	842.29	NA	26.89	815.40	27.13	815.16	27.34	814.95
Hamp. Town #22	804.96	NA	25.11	779.85	17.83	787.13	29.43	775.53
Pembroke #1	NA	NA	14.68	--	14.43	--	13.94	--
Pembroke #2	NA	NA	NA	--	NA	--	NA	--
N. Houcks. Rd.	NA	NA	11.09	--	11.17	--	11.15	--
E. Century St.	NA	NA	35.41	--	21.12	--	23.43	--
Lwr. Beckleys. Rd.	NA	NA	--	--	58.62	--	58.55	--

NA - Not Available/Not Accessible

Table 2-3
Effluent Characteristics Summary - 3rd Quarter 2002
Black & Decker
Hampstead, Maryland

Discharge Number	Parameter	Units	Permit Limits	DMR DATE			
				July 2002	August 2002	September 2002	
001	FLOW	average	MGD	NA	0.104	0.055	0.155
		maximum	MGD	NA	0.155	0.101	1.079
	1,1,1-Trichloroethane		ug/l	5	< 5	< 5	< 5
	Tetrachloroethylene		ug/l	5	< 5	< 5	< 5
	Trichloroethylene		ug/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	6.76	6.21	6.06
		maximum	STD	8.5	8.21	7.09	7.01
	BOD		mg/l	15	4.4	6.5	1.6
TSS	maximum	mg/l	30	10	11.0	11.0	
	quarterly average	mg/l	20	NR	NR	10.7	
101 (Monitoring Point)	FLOW	average	MGD	NA	0.428	0.353	0.394
		maximum	MGD	NA	0.452	0.390	0.448
	Fecal Coliform		MPN/100ml	200	< 2	< 2	<2
201 (Monitoring Point)	FLOW	average	MGD	NA	0.188	0.189	0.186
		maximum	MGD	NA	0.228	0.249	0.206
	1,1,1-Trichloroethane		ug/l	NA	< 5	< 5	< 5
	Tetrachloroethylene		ug/l	NA	< 5	< 5	< 5
	Trichloroethylene		ug/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 2002) 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. Lower concentrations of 1,2-dichloroethene were also detected. 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 2002
Black & Decker
Hampstead, Maryland

PARAMETER	Units	EW-1	EW-2	EW-2 (DUP)	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)	(10)	(5)	(10)	(5)				(2)	(2)	(2)			
Chloromethane	µg/L	NS	100 U	100 U	50 U	100 U	50 U	10 U	10 U	10 U	20 U	20 U	20 U	10 U	10 U	10 U
Bromomethane	µg/L	NS	100 U	100 U	50 U	100 U	50 U	10 U	10 U	10 U	20 U	20 U	20 U	10 U	10 U	10 U
Vinyl Chloride	µg/L	NS	100 U	100 U	50 U	100 U	50 U	10 U	10 U	10 U	20 U	20 U	20 U	10 U	10 U	10 U
Chloroethane	µg/L	NS	100 U	100 U	50 U	100 U	50 U	10 U	10 U	10 U	20 U	20 U	20 U	10 U	10 U	10 U
Methylene Chloride	µg/L	NS	50 U	210 B	25 U	60 B	13 JB	5 U	5 U	5 JB	10 U	13 B	10 U	5 U	5 U	5 U
Acetone	µg/L	NS	100 U	100 U	50 U	100 U	50 U	10 U	10 U	10 U	20 U	20 U	20 U	10 U	10 U	10 U
Carbon Disulfide	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
1,1-Dichloroethene	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
1,1-Dichloroethane	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	1 J	1 J	10 U	10 U	10 U	5 U	5 U	5 U
1,2-Dichloroethene (total)	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	7	28	2 J	10 U	10 U	5 U	5 U	5 U
Chloroform	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
1,2-Dichloroethane	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
2-Butanone	µg/L	NS	100 U	100 U	50 U	100 U	50 U	10 U	10 U	10 U	20 U	20 U	20 U	10 U	10 U	10 U
1,1,1-Trichloroethane	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	2 J
Carbon Tetrachloride	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Bromodichloromethane	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
1,2-Dichloropropane	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
cis-1,3-Dichloropropene	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Trichloroethene	µg/L	NS	1200	1100	410	1400	520	19	11	20	3 J	3 J	10 U	5 U	5 U	9
Dibromochloromethane	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
1,1,2-Trichloroethane	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Benzene	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Trans-1,3-Dichloropropene	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Bromoform	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
4-Methyl-2-pentanone	µg/L	NS	100 U	100 U	50 U	100 U	50 U	10 U	10 U	10 U	20 U	20 U	20 U	10 U	10 U	10 U
2-Hexanone	µg/L	NS	100 U	100 U	50 U	100 U	50 U	10 U	10 U	10 U	20 U	20 U	20 U	10 U	10 U	10 U
Tetrachloroethene	µg/L	NS	69	67	9 J	23 J	17 J	33	23	120	250	220	11	5 U	5 U	5 U
1,1,2,2-Tetrachloroethane	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Toluene	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Chlorobenzene	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Ethylbenzene	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Styrene	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 U	5 U	5 U	5 U
Xylene (total)	µg/L	NS	50 U	50 U	25 U	50 U	25 U	5 U	5 U	5 U	10 U	10 U	10 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 2002
Black & Decker
Hampstead, Maryland

PARAMETER	Units	RFW-2B	RFW-3B	RFW-4A	RFW-4A (DUP)	RFW-4B	RFW-5A	RFW-6	RFW-7	RFW-8	RFW-9	RFW-10	RFW-11A	RFW-11B
Chloromethane	µg/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U
Bromomethane	µg/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U
Vinyl Chloride	µg/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U
Chloroethane	µg/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U
Methylene Chloride	µg/L	5 B	5 U	5 U	5 U	5 U	NS	21	5 U	NS	5 U	NS	NS	5 U
Acetone	µg/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U
Carbon Disulfide	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
1,1-Dichloroethene	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
1,1-Dichloroethane	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
1,2-Dichloroethene (total)	µg/L	5 U	23	2 J	2 J	7	NS	1 J	2 J	NS	7	NS	NS	5 U
Chloroform	µg/L	5 U	5 U	1 J	1 J	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
1,2-Dichloroethane	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
2-Butanone	µg/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U
1,1,1-Trichloroethane	µg/L	5 U	3 J	5 U	5 U	5 U	NS	5 U	5 U	NS	2 J	NS	NS	5 U
Carbon Tetrachloride	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Bromodichloromethane	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
1,2-Dichloropropane	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
cis-1,3-Dichloropropene	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Trichloroethene	µg/L	1 J	17	68	67	15	NS	9	30	NS	30	NS	NS	110
Dibromochloromethane	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
1,1,2-Trichloroethane	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Benzene	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Trans-1,3-Dichloropropene	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Bromoform	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
4-Methyl-2-pentanone	µg/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U
2-Hexanone	µg/L	10 U	10 U	10 U	10 U	10 U	NS	10 U	10 U	NS	10 U	NS	NS	10 U
Tetrachloroethene	µg/L	5 U	14	65	62	79	NS	8	5 U	NS	5	NS	NS	2 J
1,1,2,2-Tetrachloroethane	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Toluene	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Chlorobenzene	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Ethylbenzene	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Styrene	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	NS	5 U
Xylene (total)	µg/L	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS	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.

Table 2-4
Summary of Groundwater Analytical Results - August 2002
Black & Decker
Hampstead, Maryland

PARAMETER	Units	RFW-12B	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	µg/L	50 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Bromomethane	µg/L	50 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Vinyl Chloride	µg/L	50 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Chloroethane	µg/L	50 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Methylene Chloride	µg/L	160	18	NS	19	21	22	5 U	5 U	7 B	5 U	NS	5 B
Acetone	µg/L	50 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Carbon Disulfide	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,1-Dichloroethene	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,1-Dichloroethane	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,2-Dichloroethene (total)	µg/L	11 J	5 U	NS	1 J	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Chloroform	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,2-Dichloroethane	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
2-Butanone	µg/L	50 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
1,1,1-Trichloroethane	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Carbon Tetrachloride	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Bromodichloromethane	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,2-Dichloropropane	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
cis-1,3-Dichloropropene	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Trichloroethene	µg/L	430	25	NS	5 U	5 U	3 J	5 U	5 U	5 U	5 U	NS	5 U
Dibromochloromethane	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
1,1,2-Trichloroethane	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Benzene	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Trans-1,3-Dichloropropene	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Bromoform	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
4-Methyl-2-pentanone	µg/L	50 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
2-Hexanone	µg/L	50 U	10 U	NS	10 U	10 U	10 U	10 U	10 U	10 U	10 U	NS	10 U
Tetrachloroethene	µg/L	20 J	85	NS	5 U	5 U	5 U	5 U	5 U	2 J	5 U	NS	5 U
1,1,2,2-Tetrachloroethane	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Toluene	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	4 J
Chlorobenzene	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Ethylbenzene	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Styrene	µg/L	25 U	5 U	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U
Xylene (total)	µg/L	25 U	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 2002) 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 2002
Black & Decker
Hampstead, Maryland

Date	Event/Corrective Action
September 2002	Replaced pitless adaptor in EW-3.
September 2002	Replaced check valve in EW-2. It had a bad O-ring.

4. RECOMMENDATIONS

For the reporting period of July through September 2002, 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.