

**Quarterly Groundwater Monitoring Report**

Prepared for

**Black & Decker (U.S.) Inc.**

Hampstead, Maryland

October 2006

Prepared by

**WESTON SOLUTIONS, INC.**

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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.
- 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 2006.

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. For the reporting period of July through September 2006, the extraction wells were pumping at an average combined rate of approximately 160 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 2006 are included in Appendix B.

### **2.3 GROUNDWATER QUALITY DATA**

For the reporting period of July through September 2006, approximately 33 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) (65 %) and tetrachloroethene (PCE) (35 %). Analytical results of the groundwater collected at the inlet to the air stripper for the period of July through September 2006 are included in Appendix C.

A summary of the analytical results from the third quarter (August 2006) groundwater sampling round of the extraction and monitor wells is included in Table 2-4. The complete

**Table 2-1**  
**Treatment System Pumping Records - 3rd Quarter 2006**  
**Black & Decker**  
**Hampstead, Maryland**

<b>Date</b>	<b>Water Pumped (gallons)</b>
July 2006	6,719,488
August 2006	6,287,027
September 2006	6,261,273

**Table 2-2**  
**Groundwater Elevation Data - 3rd Quarter 2006**  
**Black & Decker**  
**Hampstead, Maryland**

WELL NO.	TOC ELEV.	TOTAL DEPTH	7/19/2006		8/16/2006		9/22/2006	
			DTW	ELEV	DTW	ELEV	DTW	ELEV
EW-1	847.21	55	DRY	NA	DRY	NA	DRY	NA
EW-2	849.21	110	86.36	762.85	93.68	755.53	92.88	756.33
EW-3	846.64	118	101.60	745.04	100.30	746.34	81.11	765.53
EW-4	858.01	97.5	NA	NA	NA	NA	NA	NA
EW-5	864.17	98	76.31	787.86	70.65	793.52	68.88	795.29
EW-6	831.98	115	83.20	748.78	101.25	730.73	100.42	731.56
EW-7	818.38	78	44.71	773.67	44.37	774.01	44.91	773.47
EW-8	811.13	98	49.92	761.21	43.73	767.40	45.60	765.53
EW-9	811.35	141	102.00	709.35	98.80	712.55	100.99	710.36
EW-10	807.74	NA	42.60	765.14	50.27	757.47	51.47	756.27
RFW-1A	864.37	78	50.17	814.20	49.90	814.47	50.61	813.76
RFW-1B	864.23	200	50.24	813.99	49.92	814.31	50.64	813.59
RFW-2A	857.41	35	15.03	842.38	17.22	840.19	15.83	841.58
RFW-2B	857.73	75	15.26	842.47	17.83	839.90	16.40	841.33
RFW-3B	839.21	153	31.79	807.42	33.05	806.16	33.63	805.58
RFW-4A	830.37	62	38.28	792.09	38.74	791.63	37.64	792.73
RFW-4B	830.37	120	38.46	791.91	38.67	791.70	37.57	792.80
RFW-5A	817.50	30	DRY	NA	DRY	NA	DRY	NA
RFW-6	785.04	120	3.61	781.43	4.94	780.10	4.88	780.16
RFW-7	805.14	29	7.86	797.28	7.83	797.31	8.19	796.95
RFW-8	860.07	56	DRY	NA	DRY	NA	DRY	NA
RFW-9	862.02	49	27.11	834.91	27.71	834.31	26.84	835.18
RFW-10	852.06	58	DRY	NA	DRY	NA	DRY	NA
RFW-11A	849.32	72	NA	NA	NA	NA	NA	NA
RFW-11B	849.62	116	71.04	778.58	69.71	779.91	70.05	779.57
RFW-12B	844.87	264	52.61	792.26	51.88	792.99	52.17	792.70
RFW-13	849.11	150	62.73	786.38	62.39	786.72	62.61	786.50
RFW-14B	812.39	281	49.11	763.28	48.78	763.61	47.82	764.57
RFW-16	856.14	41	DRY	NA	DRY	NA	DRY	NA
RFW-17	834.66	60.5	27.57	807.09	29.08	805.58	29.41	805.25
RFW-20	842.49	142	35.06	807.43	35.75	806.74	36.34	806.15
RFW-21	832.65	102	21.70	810.95	23.02	809.63	22.73	809.92
PH-7	805.94	89	31.28	774.66	28.20	777.74	28.11	777.83
PH-9	814.94	98	32.84	782.10	38.22	776.72	38.13	776.81
PH-11	820.68	78	42.51	778.17	44.27	776.41	44.90	775.78
PH-12	828.35	87	42.70	785.65	47.81	780.54	47.47	780.88
B-3	803.02	83	NA	NA	NA	NA	NA	NA
Amoco	842.29	NA	NA	NA	NA	NA	NA	NA
Hamp. Town #22	804.96	NA	29.13	775.83	31.26	773.70	26.43	778.53
Pembroke #1	NA	NA	12.14	NA	11.88	NA	12.61	NA
Pembroke #2	NA	NA	NA	NA	NA	NA	NA	NA
N. Houcks. Rd.	NA	NA	9.47	NA	9.56	NA	9.06	NA
E. Century St.	NA	NA	23.41	NA	20.89	NA	21.11	NA
Lwr. Beckleys. Rd.	NA	NA	55.61	NA	56.22	NA	55.89	NA

NA - Not Available/Not Accessible

**Table 2-3**  
**Effluent Characteristics Summary - 1st Quarter 2006**  
**Black & Decker**  
**Hampstead, Maryland**

Discharge Number	Parameter	Units	Permit Limits	DMR DATE			
				July 2006	August 2006	September 2006	
001	FLOW	average	MGD	NA	0.161	0.065	0.271
		maximum	MGD	NA	0.234	0.095	0.901
	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	6.00	6.20	6.10
		maximum	STD	8.5	6.80	6.60	6.70
BOD		mg/l	15	3.8	2.7	< 2	
TSS	maximum	mg/l	30	3.5	< 2.5	9.0	
	quarterly average	mg/l	20	NR	NR	5.0	
101 (Monitoring Point)	FLOW	average	MGD	NA	0.235	0.232	0.340
		maximum	MGD	NA	0.266	0.246	0.381
	Fecal Coliform	MPN/100ml	200	< 2	< 2	< 2	
201 (Monitoring Point)	FLOW	average	MGD	NA	0.217	0.203	0.209
		maximum	MGD	NA	0.253	0.234	0.246
	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



Table 2-4  
 Summary of Groundwater Analytical Results - August 2006  
 Black & Decker  
 Hampstead, Maryland

PARAMETER	Units	EW-1	EW-2	EW-3	EW-3 (DUP)	EW-4	EW-5	EW-6	EW-7	EW-8	EW-9	EW-10
Chloromethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	ug/L	NS	5 U	5 U	5 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	ug/L	NS	5 U	5 U	5 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	0.94 J	1 U	1 U	1 U
1,2-Dichloroethene (total)	ug/L	NS	2.6	1.9	2	2 U	1 U	1 U	8.6	20	1 U	1 U
Chloroform	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	ug/L	NS	5 U	5 U	5 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	NS	460	160	160	770	250	12	7.3	11	1.3	1 U
Dibromochloromethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone	ug/L	NS	5 U	5 U	5 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	NS	5 U	5 U	5 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	NS	52	4.2	4.3	18	12	25	13	65	160	5
1,1,2,2-Tetrachloroethane	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylene (total)	ug/L	NS	1 U	1 U	1 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U

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

Table 2-4  
 Summary of Groundwater Analytical Results - August 2006  
 Black & Decker  
 Hampstead, Maryland

PARAMETER	Units	RFW-1A	RFW-1B	RFW-2A	RFW-2B	RFW-3B	RFW-4A	RFW-4B	RFW-4B (DUP)	RFW-5A	RFW-6	RFW-7	RFW-8	RFW-9	RFW-10
Chloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Bromomethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Vinyl Chloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Chloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Methylene Chloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Acetone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS
Carbon Disulfide	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS
1,1-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1.2	NS
1,1-Dichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
1,2-Dichloroethene (total)	ug/L	1 U	1 U	1 U	1 U	7.5	1	4.3	4.7	NS	1.2	1 U	NS	6.3	NS
Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	0.93 J	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
1,2-Dichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
2-Butanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS
1,1,1-Trichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1.6	NS
Carbon Tetrachloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Bromodichloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
1,2-Dichloropropane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
cis-1,3-Dichloropropene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Trichloroethene	ug/L	1 U	1 U	1.5	1 U	6.3	43	13	6.3	NS	8.1	6.7	NS	17	NS
Dibromochloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
1,1,2-Trichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Benzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Trans-1,3-Dichloropropene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Bromoform	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
4-Methyl-2-pentanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS
2-Hexanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	NS	5 U	5 U	NS	5 U	NS
Tetrachloroethene	ug/L	1 U	1 U	1 U	1 U	5	49	43	30	NS	5.2	1 U	NS	2.9	NS
1,1,2,2-Tetrachloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Toluene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Chlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Ethylbenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Styrene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS
Xylene (total)	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1 U	NS

Notes: DUP = Duplicate sample  
 NS = Not sampled

U = Compound was analyzed for but not detected. Value shown is the method detection limit for quantification.  
 J = Indicates an estimated value.

**Table 2-4**  
**Summary of Groundwater Analytical Results - August 2006**  
**Black & Decker**  
**Hampstead, Maryland**

PARAMETER	Units	RFW-11A	RFW-11B	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	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Bromomethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Chloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Acetone	ug/L	NS	5 U	5 U	5 U	NS	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U	5 U
Carbon Disulfide	ug/L	NS	5 U	5 U	5 U	NS	5 U	NA	NA	NA	NA	5 U	5 U	5 U	5 U
1,1-Dichloroethene	ug/L	NS	1 U	0.76 J	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (total)	ug/L	NS	1 U	6.4	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Chloroform	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
2-Butanone	ug/L	NS	5 U	5 U	5 U	NS	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	NS	19	320	15	NS	1 U	1.4	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Dibromochloromethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Benzene	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone	ug/L	NS	5 U	5 U	5 U	NS	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	NS	5 U	5 U	5 U	NS	5 U	10 U	10 U	10 U	10 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	NS	1 U	27	46	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Toluene	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Styrene	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U
Xylene (total)	ug/L	NS	1 U	1 U	1 U	NS	1 U	0.5 U	0.5 U	0.5 U	0.5 U	1 U	1 U	1 U	1 U

Notes: Samples from wells RFW-20 & 21, Town-22&23 are analyzed with the USEPA drinking water method 524.2 at the request of the MDE Source Protection and Appropriation Division. Samples from all of the other wells are analyzed with USEPA Method 8260.

NS = Not sampled

U = Compound was analyzed but not detected.

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 well EW-9. The remainder of VOCs present were detected at levels below the Federal Maximum Contaminant Levels (MCL).

### 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 2006) 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 2006**  
**Black & Decker**  
**Hampstead, Maryland**

Date	Event/Corrective Action
August 2006	EW-10 went down. The pump motor was burned out . A new pump and motor were installed. The well was down for 7 days. The well is back online.

#### 4. RECOMMENDATIONS

For the reporting period of July through September 2006, 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.

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**APPENDIX A**  
**GROUNDWATER TREATMENT SYSTEM PUMPING RECORDS**  
**(JULY - SEPTEMBER 2006)**

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MONTH / YEAR

July 2006

BLACK & DECKER  
AIR STRIPPER # 2  
OPERATING RECORD

PAST MONTH READING

118373248

Date	Day	Time	Inleg. Reading	GPD	Pump # 11	Pump # 12
1	S	1056	118 587 213	238612	30291	30305
2	S	1230	118 825 825	202087	30291	30335
3	M	1200	119 027 912	191 149	30291	30357
4	T	900	119 219 061	253 081	30291	30378
5	W	1255	119472142	227509	30291	30407
6	T	1350	119699651	206027	30316	30407
7	F	1225	119905678	↑	30338	30407
8						
9				671821		
10	M	1410	120577499	205030	30412	30407
11	T	1240	120782529	230663	30412	30429
12	W	1405	121013192	206126	30412	30454
13	T	1250	121219318	208780	30412	30477
14	F	1155	121428098	↑	30412	30500
15						
16				657430		
17	M	1230	122085528	226342	30412	30573
18	T	1330	122311870	216904	30437	30573
19	W	1330	122528774	196976	30461	30573
20	T	1120	122725750	207778	30483	30573
21	F	1020	122933528	↑	30506	30573
22						
23				667808		
24	M	1220	123601336	216407	30580	30573
25	T	1225	123817743	229055	30604	30573
26	W	1350	124046798	207194	30604	30598
27	T	1250	124253992	195730	30604	30621
28	F	1040	124449722	↑	30604	30643
29						
30				656846		
31	M	1155	125106568	200133	30604	30716
Total				4719488		
Average				216758		

NEXT MONTH READING 125306701

DATE 7-31-06

MONTH / YEAR

Aug. 2006

BLACK & DECKER  
AIR STRIPPER # 2  
OPERATING RECORD

PAST MONTH READING

125106568

Date	Day	Time	Integ. Reading	GPD	Pump # 11	Pump # 12
1	T	1820	125306701	233680	30626	30716
2	W	1215	125540381	219589	30652	30716
3	T	1300	125759970	206514	30697	30716
4	F	1210	125966484	↑	30700	30716
5						
6				640620		
7	M	1215	126607104	206441	30772	30716
8	T	1130	126813545	221856	30772	30740
9	W	1225	127035401	227341	30772	30765
10	T	1405	127262742	217537	30772	30790
11	F	1430	127480279	↑	30772	30815
12						
13				579992		
14	M	1230	128060271	210048	30772	30885
15	T	1210	128270319	228676	30772	30908
16	W	1405	128498995	* 104792	30798	30908
17	T	1315	128603787	176533	30821	30908
18	F	1250	128780320	↑	30845	30908
19						
20				536907		
21	M	1245	129317227	179503	30917	30908
22	T	1250	129496730	172880	30917	30932
23	W	1135	129669610	220957	30917	30955
24	T	1225	129890567	210133	30917	30980
25	F	1205	130100700	↑	30917	31004
26						
27				618644		
28	M	0950	130719344	230681	30917	31073
29	T	1155	130950025	213144	30943	31073
30	W	1220	131163169	212841	30967	31073
31	T	1220	131376010	217615	30993	31073
Total				6287027		
Average				202807		

8/16 Weston head # 7 & 8 off overnight. Also # 10 west down. 8/17 # 10 remains off. 8/23

NEXT MONTH READING 131593625

DATE 9-1-06