

Quarterly Groundwater Monitoring Report

Prepared for

Black & Decker (U.S.) Inc.

Hampstead, Maryland

October 2005

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.
- 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 2005.

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 166 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 2005 are included in Appendix B.

2.3 GROUNDWATER QUALITY DATA

For the reporting period of July through September 2005, approximately 41 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) (70 %) and tetrachlorethene (PCE) (30 %). Analytical results of the groundwater collected at the inlet to the air stripper for the period of July through September 2005 are included in Appendix C.

Table 2-1
Treatment System Pumping Records - 3rd Quarter 2005
Black & Decker
Hampstead, Maryland

Date	Water Pumped (gallons)
July 2005	7,238,781
August 2005	7,117,255
September 2005	6,741,037

Table 2-2
Groundwater Elevation Data - 3rd Quarter 2005
Black & Decker
Hampstead, Maryland

WELL NO.	TOC ELEV.	TOTAL DEPTH	7/13/2005		8/18/2005		9/30/05	
			DTW	ELEV	DTW	ELEV	DTW	ELEV
EW-1	847.21	55	DRY	NA	DRY	NA	DRY	NA
EW-2	849.21	110	91.42	757.79	101.30	747.91	92.84	756.37
EW-3	846.64	118	88.18	758.46	89.43	757.21	89.40	757.24
EW-4	858.01	97.5	NA	NA	NA	NA	NA	NA
EW-5	864.17	98	90.89	773.28	90.66	773.51	91.47	772.70
EW-6	831.98	115	82.11	749.87	82.72	749.26	83.67	748.31
EW-7	818.38	78	42.13	776.25	38.45	779.93	49.41	768.97
EW-8	811.13	98	43.58	767.55	44.81	766.32	47.38	763.75
EW-9	811.35	141	94.73	716.62	104.50	706.85	96.88	714.47
EW-10	807.74	NA	44.86	762.88	42.71	765.03	48.00	759.74
RFW-1A	864.37	78	50.43	813.94	49.43	814.94	51.55	812.82
RFW-1B	864.23	200	50.45	813.78	49.46	814.77	51.58	812.65
RFW-2A	857.41	35	13.07	844.34	15.71	841.70	14.11	843.30
RFW-2B	857.73	75	13.84	843.89	16.32	841.41	14.68	843.05
RFW-3B	839.21	153	27.26	811.95	30.37	808.84	29.32	809.89
RFW-4A	830.37	62	36.96	793.41	37.90	792.47	38.77	791.60
RFW-4B	830.37	120	36.84	793.53	37.76	792.61	38.70	791.67
RFW-5A	817.50	30	DRY	NA	DRY	NA	DRY	NA
RFW-6	785.04	120	2.94	782.10	3.99	781.05	4.23	780.81
RFW-7	805.14	29	7.57	797.57	7.51	797.63	8.19	796.95
RFW-8	860.07	56	DRY	NA	DRY	NA	DRY	NA
RFW-9	862.02	49	25.11	836.91	26.43	835.59	27.43	834.59
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	71.11	778.51	70.14	779.48	72.46	777.16
RFW-12B	844.87	264	51.47	793.40	51.42	793.45	55.69	789.18
RFW-13	849.11	150	59.13	789.98	58.93	790.18	60.31	788.80
RFW-14B	812.39	281	33.91	778.48	34.43	777.96	34.44	777.95
RFW-16	856.14	41	DRY	NA	DRY	NA	DRY	856.14
RFW-17	834.66	60.5	25.99	808.67	27.01	807.65	27.76	806.90
RFW-20	842.49	142	33.47	809.02	34.14	808.35	34.11	808.38
RFW-21	832.65	102	21.26	811.39	21.76	810.89	22.69	809.96
PH-7	805.94	89	19.00	786.94	19.56	786.38	19.76	786.18
PH-9	814.94	98	31.17	783.77	32.90	782.04	33.13	781.81
PH-11	820.68	78	42.03	778.65	42.38	778.30	43.94	776.74
PH-12	828.35	87	42.93	785.42	43.67	784.68	44.27	784.08
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	31.40	773.56	29.56	775.40	19.57	785.39
Pembroke #1	NA	NA	11.99	NA	12.35	NA	12.68	NA
Pembroke #2	NA	NA	NA	NA	NA	NA	NA	NA
N. Houcks. Rd.	NA	NA	10.18	NA	10.80	NA	9.89	NA
E. Century St.	NA	NA	29.11	NA	26.53	NA	27.59	NA
Lwr. Beckleys. Rd.	NA	NA	52.26	NA	NA	NA	54.26	NA

NA - Not Available/Not Accessible

Table 2-3
Effluent Characteristics Summary - 3rd Quarter 2005
Black & Decker
Hampstead, Maryland

Discharge Number	Parameter	Units	Permit Limits	DMR DATE			
				July 2005	August 2005	September 2005	
001	FLOW	average	MGD	NA	0.338	0.113	0.057
		maximum	MGD	NA	1.141	1.141	0.064
	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	6.20	6.10	6.30
		maximum	STD	8.5	7.00	6.90	6.70
	BOD		mg/l	15	5.0	< 2	7.0
	TSS	maximum	mg/l	30	13.0	8.0	14.0
quarterly average		mg/l	20	NR	NR	12.0	
101 (Monitoring Point)	FLOW	average	MGD	NA	0.257	0.260	0.237
		maximum	MGD	NA	0.290	0.268	0.277
	Fecal Coliform		MPN/100ml	200	< 2	< 2	< 2
201 (Monitoring Point)	FLOW	average	MGD	NA	0.234	0.230	0.225
		maximum	MGD	NA	0.277	0.278	0.273
	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 2005) 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 samples collected from extraction well EW-9. The remainder of VOC's present were detected at levels well below the Federal Maximum Contaminant Levels (MCL).

Table 2-4
Summary of Groundwater Analytical Results - August 2005
Black & Decker
Hampstead, Maryland

PARAMETER	Units	EW-1	EW-2	EW-3	EW-4	EW-5	EW-5 (DUP)	EW-6	EW-7	EW-8	EW-9	EW-10
Chloromethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Vinyl Chloride	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Acetone	ug/L	NS	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	ug/L	NS	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethene	ug/L	NS	1 U	1 U	5 U	1 J	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 J	1 U	1 U
1,2-Dichloroethene (total)	ug/L	NS	4	2.4	5 U	1 U	1 U	1 U	5.3	21	1.2	1 U
Chloroform	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	ug/L	NS	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1,1-Trichloroethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
cis-1,3-Dichloropropene	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	NS	740	230	950	410	390	8.8	4.4	10	2.3	1 U
Dibromochloromethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trans-1,3-Dichloropropene	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
4-Methyl-2-pentanone	ug/L	NS	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	NS	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	NS	68	5.5	27	13	13	21	6.9	63	180	10
1,1,2,2-Tetrachloroethane	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	ug/L	NS	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylene (total)	ug/L	NS	1 U	1 U	5 U	1 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 2005
Black & Decker
Hampstead, Maryland

PARAMETER	Units	RFW-1A	RFW-1B	RFW-2A	RFW-2B	RFW-3B	RFW-4A	RFW-4A (DUP)	RFW-4B	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	1.2	1 U	1 U	1 U	NS	1 U	1 U	NS	1.6	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	1.2	NS
1,2-Dichloroethene (total)	ug/L	1 U	1 U	1 U	1 U	10	1.8	1.7	6.6	NS	1.6	1 U	NS	12	NS
Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	1.3	1.2	0.9 J	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	2	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	7.9	56	55	18	NS	9.9	11	NS	21	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	8.2	65	63	60	NS	6.8	1 U	NS	5	NS
1,1,1,2-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 2005
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	1.1	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	6.6	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	31	550	3.1	NS	1 U	1.5	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	40	16	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.

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 2005) 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 2005
Black & Decker
Hampstead, Maryland

Date	Event/Corrective Action
Jul-05	Replaced the integrater for the flow meter in well EW-8.
Aug-05	Replaced the integrater for the flow meter in well EW-2.

4. RECOMMENDATIONS

For the reporting period of July through September 2005, 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 2005)

Month / Year

July 2005

Black & Decker
Air Stripper # 2
Operating Record

Past Month Reading

37618663

Date	Day	Time	Integ. Reading	GPD	Pump # 11	Pump # 12
1	F	1040	37846003	↑	25938	25904
2						
3						
4	Holiday			939078		
5	T	1035	38785081	238789	25938	26000
6	W	1100	39023876	231664	25902	26000
7	T	1045	39255534	259760	25906	26000
8	F	1320	39515494	↑	26013	26000
9						
10				698558		
11	M	1245	40214052	241825	26084	26000
12	T	1325	40455877	225144	26084	26025
13	W	1240	40681021	201524	26084	26048
14	T	0920	40882545	276965	26084	26069
15	F	1335	41159510	↑	26084	26097
16						
17				679722		
18	M	1130	41839232	234951	26084	26167
19	T	1135	42074183	235961	26108	26167
20	W	1150	42310144	215928	26132	26167
21	T	1005	42526072	232012	26154	26167
22	F	0950	42758084	↑	26178	26167
23						
24				725988		
25	M	1240	43484072	197635	26253	26167
26	T	0908	43681707	264207	26253	26187
27	W	1220	43945914	234173	26253	26215
28	T	1225	44180087	211741	26253	26239
29	F	1020	44391828	↑	26253	26261
30						
31				692956		
Total				7238781		
Average				233509		

40214054

0 1 15

Month / Year

Aug. 2005

Black & Decker
Air Stripper # 2
Operating Record

Past Month Reading

44391828

Date	Day	Time	Integ. Reading	GPD	Pump # 11	Pump # 12
1	M	1005	45084784	232348	26253	26332
2	T	1000	45317132	230874	26277	26332
3	W	0955	45548006	250766	26301	26332
4	T	1155	45798772	225543	26327	26332
5	F	1120	46024315	↑	26351	26332
6						
7				699135		
8	M	1200	46723450	223698	26423	26332
9	T	1115	46947148	219553	26423	26356
10	W	1010	47166701	237719	26423	26379
11	T	1055	4740420	225935	26423	26404
12	F	1030	47630355	↑	26423	26427
13						
14				691545		
15	M	1040	48321900	236567	26423	26499
16	T	1125	48558467	277914	26448	26499
17	W	435 ^{pm}	48736381	183728	26477	26499
18	T	1155	49020109	223809	26496	26499
19	F	1120	49243918	↑	26520	26499
20						
21				675816		
22	M	1010	49919734	225639	26591	26499
23	T	0955	50145373	236097	26591	26523
24	W	1045	50381470	229356	26591	26548
25	T	1055	50610856	219593	26591	26572
26	F	1005	50830444	↑	26591	26595
27						
28				694946		
29	M	1120	51525395	212925	26591	26668
30	T	0955	51738320	235438	26591	26691
31	W	1040	51973758	228281	26591	26715
Total				7117255		
Average				229589		

Next Month Reading 52202039

Date 9-1-05

Month / Year

Sept. 2005

Black & Decker
Air Stripper # 2
Operating Record

Past Month Reading

51973758

Date	Day	Time	Integ. Reading	GPD	Pump # 11	Pump # 12
1	T	1046	52262039	231731	26615	26715
2	F	1115	52433770	↑	26639	26715
3	S					
4	S					
5	M	0605	53064839	631069		
6	T	1100	53337593	272754	26700	26715
7	W	1315	53584705	247112	26735	26715
8	T	1125	53792649	207944	26735	26742
9	F	1225	54037848	245199	26735	26764
10	S			↑	26735	26790
11	S					
12	M	1140	54695951	658103		
13	T	1230	54929318	233367	26735	26860
14	W	1130	55143854	214536	26760	26860
15	T	1130	55368974	225120	26783	26860
16	F	0935	55574909	205935	26807	26860
17	S			↑	26829	26860
18	S					
19	M	1225	56272728	697819		
20	T	1130	56487275	214547	26904	26860
21	W	1050	56704698	217423	26904	26883
22	T	0830	56905815	201117	26904	26906
23	F	0850	57129456	223641	26904	26928
24	S			↑	26904	26952
25	S					
26	M	1055	57820838	691382		
27	T	1105	58044331	223493	26904	27027
28	W	1025	58260491	216160	26928	27027
29	T	1040	58484951	224460	26951	27027
30	F	1150	58717096	232145	26976	27027
31				225980	27101	27027
Total				6741037		
Average				224701		

Next Month Reading 52262039

**APPENDIX B
DISCHARGE MONITORING REPORTS
(JULY - SEPTEMBER 2005)**
