

**Quarterly Groundwater Monitoring Report**

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

Hampstead, Maryland

January 2009

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 October through December 2008.

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 October through December 2008, the extraction wells were pumping at an average combined rate of approximately 150 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 October through December 2008 are included in Appendix B.

### **2.3 GROUNDWATER QUALITY DATA**

For the reporting period of October through December 2008, approximately 18.3 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) (82.7%) and tetrachloroethene (PCE) (17.3%). Analytical results of the groundwater collected from the air stripper for the period of January through March 2008 are included in Appendix C.

A summary of the analytical results from the third quarter (November 2008) groundwater sampling round of the extraction and monitor wells is included in Table 2-4. The complete

**Table 2-1**  
**Treatment System Pumping Records - 4th Quarter 2008**  
**Black & Decker**  
**Hampstead, Maryland**

<b>Date</b>	<b>Water Pumped (gallons)</b>
<b>October 2008</b>	6,564,137
<b>November 2008</b>	6,263,267
<b>December 2008</b>	6,501,837

**Table 2-2**  
**Groundwater Elevation Data - 4th Quarter 2008**  
**Black & Decker**  
**Hampstead, Maryland**

WELL NO.	TOC ELEV.	TOTAL DEPTH	10/27/2008		11/5/2008		12/22/2008	
			DTW	ELEV	DTW	ELEV	DTW	ELEV
EW-1	847.21	55	DRY	NC	DRY	NC	DRY	NC
EW-2	849.21	110	74.83	774.38	74.36	774.85	74.96	774.25
EW-3	846.64	118	85.11	761.53	77.81	768.83	78.11	768.53
EW-4	858.01	97.5	PC	NC	PC	NC	PC	NC
EW-5	864.17	98	61.54	802.63	61.54	802.63	69.94	794.23
EW-6	831.98	115	103.23	728.75	103.61	728.37	104.70	727.28
EW-7	818.38	78	73.60	744.78	73.50	744.88	74.31	744.07
EW-8	811.13	98	92.10	719.03	91.71	719.42	90.89	720.24
EW-9	811.35	141	104.20	707.15	102.60	708.75	101.87	709.48
EW-10	807.74	INA	61.43	746.31	59.81	747.93	60.40	747.34
RFW-1A	864.37	78	50.68	813.69	48.21	816.16	50.26	814.11
RFW-1B	864.23	200	50.73	813.50	48.24	815.99	50.30	813.93
RFW-2A	857.41	35	16.99	840.42	17.51	839.90	17.43	839.98
RFW-2B	857.73	75	17.41	840.32	18.11	839.62	17.97	839.76
RFW-3B	839.21	153	38.10	801.11	35.86	803.35	38.26	800.95
RFW-4A	830.37	62	42.73	787.64	35.51	794.86	42.89	787.48
RFW-4B	830.37	120	42.68	787.69	35.43	794.94	42.76	787.61
RFW-5A	817.50	30	DRY	NC	DRY	NC	DRY	NC
RFW-6	785.04	120	4.46	780.58	4.85	780.19	3.98	781.06
RFW-7	805.14	29	8.14	797.00	7.51	797.63	7.89	797.25
RFW-8	860.07	56	DRY	NC	DRY	NC	DRY	NC
RFW-9	862.02	49	28.77	833.25	28.16	833.86	29.41	832.61
RFW-10	852.06	58	DRY	NC	DRY	NC	DRY	NC
RFW-11A	849.32	72	Damaged	NC	Damaged	NC	Damaged	NC
RFW-11B	849.62	116	66.84	782.78	65.48	784.14	67.40	782.22
RFW-12B	844.87	264	51.47	793.40	48.90	795.97	52.51	792.36
RFW-13	849.11	150	65.90	783.21	65.46	783.65	66.04	783.07
RFW-14B	812.39	281	45.11	767.28	49.58	762.81	46.22	766.17
RFW-16	856.14	41	DRY	NC	DRY	NC	DRY	NC
RFW-17	834.66	60.5	28.02	806.64	27.41	807.25	27.87	806.79
RFW-20	842.49	142	35.84	806.65	35.63	806.86	35.58	806.91
RFW-21	832.65	102	25.30	807.35	23.18	809.47	25.03	807.62
PH-7	805.94	89	40.06	765.88	37.69	768.25	40.86	765.08
PH-9	814.94	98	50.41	764.53	55.23	759.71	49.73	765.21
PH-11	820.68	78	51.48	769.20	50.78	769.90	51.53	769.15
PH-12	828.35	87	52.30	776.05	51.52	776.83	52.61	775.74
B-3	803.02	83	9.61	793.41	9.17	793.85	9.13	793.89
Amoco	842.29	INA	NA	NC	NA	NC	NA	NC
Hamp. Town #22	804.96	INA	29.85	775.11	17.11	787.85	24.16	780.80
Pembroke #1	INA	INA	12.61	NC	16.00	NC	11.24	NC
Pembroke #2	INA	INA	Damaged	NC	Damaged	NC	Damaged	NC
N. Houcks. Rd.	INA	INA	10.21	NC	12.11	NC	9.19	NC
E. Century St.	INA	INA	19.21	NC	19.46	NC	19.47	NC
Lwr. Beckleys. Rd.	INA	INA	54.02	NC	54.64	NC	55.17	NC

NA - Not Available/Not Accessible  
NC - Not Calculable  
INA - Information not available  
PC - Pump Cycles

**Table 2-3**  
**Effluent Characteristics Summary - 4th Quarter 2008**  
**Black & Decker**  
**Hampstead, Maryland**

Discharge Number	Parameter	Units	Permit Limits	DMR DATE			
				October 2008	November 2008	December 2008	
001	FLOW	average	MGD	NA	0.120	0.157	0.170
		maximum	MGD	NA	0.286	0.316	0.662
	1,1,1-Trichloroethane	ug/l	5	< 1	< 1	< 1	
	Tetrachloroethylene	ug/l	5	< 1	< 1	< 1	
	Trichloroethylene	ug/l	5	< 1	< 1	< 1	
	Total Residual Chlorine	mg/l	< 0.1	< 0.1	< 0.1	< 0.1	
	Oil & Grease	maximum	mg/l	15	< 5	13	7.0
		quarterly average	mg/l	10	< 5	13	7.0
	pH	minimum	STD	6.0	6.30	6.10	6.00
		maximum	STD	8.5	7.10	7.10	6.80
	BOD		mg/l	15	6.0	0.0	2.0
TSS	maximum	mg/l	30	13.0	7.0	0.0	
	quarterly average	mg/l	20	13.0	7.0	0.0	
101 (Monitoring Point)	FLOW	average	MGD	NA	0.275	0.282	0.280
		maximum	MGD	NA	0.346	0.344	0.360
	Fecal Coliform	MPN/100ml	200	1.0	1.0	1.0	
201 (Monitoring Point)	FLOW	average	MGD	NA	NR	NR	0.210
		maximum	MGD	NA	NR	NR	0.236
	1,1,1-Trichloroethane	ug/l	NA	NR	NR	< 1	
	Tetrachloroethylene	ug/l	NA	NR	NR	< 1	
	Trichloroethylene	ug/l	NA	NR	NR	< 1	

DMR - Discharge Monitoring Report

NA - Not Applicable

NR - Not Reported



Table 2-4  
 Summary of Groundwater Analytical Results - November 2008  
 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
Chloromethane	ug/L	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromomethane	ug/L	NS	1 U	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	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	ug/L	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	ug/L	NS	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acetone	ug/L	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Carbon Disulfide	ug/L	NS	5 U	5 U	5 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	1 U	1 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	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene (total)	ug/L	NS	3.7	2.8	1 U	1 U	1 U	7.7	25	1 U	1 U	1 U
Chloroform	ug/L	NS	1 U	1 U	1 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	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone	ug/L	NS	5 U	5 U	5 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	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Carbon Tetrachloride	ug/L	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/L	NS	1 U	1 U	1 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	1 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	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	NS	460	150	1000	230	11	5.5	11	1.7	1.2	1 U
Dibromochloromethane	ug/L	NS	1 U	1 U	1 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	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Benzene	ug/L	NS	1 U	1 U	1 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	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	NS	1 U	1 U	1 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	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Hexanone	ug/L	NS	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	NS	64	3.8	23	16	20	11	70	180	190	2.1
1,1,2,2-Tetrachloroethane	ug/L	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/L	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/L	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Ethylbenzene	ug/L	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Styrene	ug/L	NS	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylene (total)	ug/L	NS	1 U	1 U	1 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.  
 NS = Not Sampled

Table 2-4  
 Summary of Groundwater Analytical Results - November 2008  
 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	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	NS	2 U	2 U	NS	2 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	1.3	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	4.9	1 U	1 U	4.1	NS	1	1 U	NS	11	NS
Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	1.2	1.1	2	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	1.4	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	1.6	1.9	3.9	26	26	50	NS	4.1	3.2	NS	15	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	1 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	2.7	18	18	81	NS	3.3	1 U	NS	4.7	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 - November 2008  
 Black & Decker  
 Hampstead, Maryland

PARAMETER	Units	RFW-11A	RFW-11B	RFW-12B	RFW-13	RFW-16	RFW-17	Leister Dairy	Leister Res. #1	Leister Res. #2	Trip Blank	RFW-20	RFW-21	Town #22	Town #23	Trip Blank
		USEPA drinking water method 524.2														
Chloromethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromomethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	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	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	1 U	1 U	1 U	1 U	1 U
Methylene Chloride	ug/L	NS	2 U	2 U	2 U	NS	2 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Acetone	ug/L	NS	5 U	5 U	5 U	NS	5 U	ABD	ABD	ABD	5 U	10 U	10 U	10 U	10 U	2.6 J
Carbon Disulfide	ug/L	NS	5 U	5 U	5 U	NS	5 U	ABD	ABD	ABD	5 U	NA	NA	NA	NA	NA
1,1-Dichloroethene	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1-Dichloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloroethene (total)	ug/L	NS	1 U	2.3	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chloroform	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.26 J	0.5 U	0.5 U
1,2-Dichloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
2-Butanone	ug/L	NS	5 U	5 U	5 U	NS	5 U	ABD	ABD	ABD	5 U	10 U	10 U	10 U	10 U	10 U
1,1,1-Trichloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Carbon Tetrachloride	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromodichloromethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,2-Dichloropropane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
cis-1,3-Dichloropropene	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trichloroethene	ug/L	NS	11	560	10	NS	1 U	ABD	ABD	ABD	1 U	0.8	0.5 U	0.5 U	0.5 U	0.5 U
Dibromochloromethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2-Trichloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Benzene	ug/L	NS	1 U	1 U	1 U	NS	2.5	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Trans-1,3-Dichloropropene	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Bromoform	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
4-Methyl-2-pentanone	ug/L	NS	5 U	5 U	5 U	NS	5 U	ABD	ABD	ABD	5 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	ug/L	NS	5 U	5 U	5 U	NS	5 U	ABD	ABD	ABD	5 U	10 U	10 U	10 U	10 U	10 U
Tetrachloroethene	ug/L	NS	1 U	46	32	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
1,1,2,2-Tetrachloroethane	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Chlorobenzene	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Ethylbenzene	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Styrene	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U
Xylene (total)	ug/L	NS	1 U	1 U	1 U	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 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.  
 ABD = Well has been abandoned

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 wells RFW-4B and 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 (October through December 2008) 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 - 4th Quarter 2008**  
**Black & Decker**  
**Hampstead, Maryland**

Date	Event/Corrective Action
Oct-08	Alarm at air stripper. High wet well, reset the system. System back online.
Nov-08	Alarm at air stripper due to high column blower failure, reset the system. System back online.
Nov-08	EW - 9 tripped out due to a faulty heater. The heater was replaced and the well is back online. EW - 9 was down for about 16 hours.
Dec-08	EW - 2 tripped out. Replaced the timer relay, the well is back online.
Dec-08	The alarm at the air stripper due to a blower failure caused by a high column. The stripper was reset all systems are okay.
Dec-08	The new heaters were installed in wells EW - 2, EW - 4 and EW - 9.
Dec-08	Alarm at the stripper due to a low wet well. The system was reset everything is okay.
Dec-08	The air stripper and wells were down for two hours due to electrical work being done on the circuit breaker that feeds the dumping valve. Everything is up and running.

#### 4. RECOMMENDATIONS

For the reporting period of October through December 2008, 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**  
**(OCTOBER – DECEMBER 2008)**

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Operator Justin Myers, ESS Certification # 8406

# Black & Decker WTP

PWSID # 106-0004 County: Carroll

Month: October

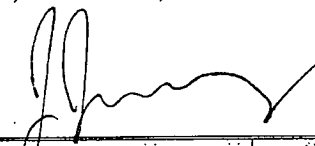
Operated by

Address: BTR CAPITAL GROUP, Hampstead, MD 21073

Maryland Environmental Service

625 Hanover Pike, Hampstead, Carroll County, Maryland

Year: 2008



GENERAL (DOMESTIC WATER)				CHEMICAL								MONITORING		DISTRIBUTION			RAW WATER		Comments
Date	Day	Weather	Flow meter reading	MGD	pH	Free	Na2CO3	Na2CO3	NaOCL	NaOCL	VOC'S	Bacti	pH	TRC	DISTRIBUTION	Operator	pH	TOTAL RAW	
			0	Total FQIR	P.O.E	Cl2	Level	(gpd)	Level	(gpd)	(ppb)	Pos/Neg	su	mg/l	LOCATION	Initials	su	WATER WELL (mgd)	
1	wed	cldy	0	0.0054	7.17	1.38	40.00	1.00	51.00	0.00			6.81	1.22	Eng Lab	djones	5.01	0.221434	
2	thur	clr	0	0.0053	7.15	1.31	39.00	2.00	51.00	0.00						djones		0.222702	
3	fri	clr	0	0.0023	7.51	1.37	37.00	1.00	51.00	0.00			7.21	1.07	Admin 2nd Fl	djones		0.226702	
4	sat	clr	0	0.0000	7.28	1.31	36.00	0.00	51.00	0.00						djones		0.214185	
5	sun	clr	0	0.0048	7.21	1.21	36.00	2.00	51.00	0.00						djones		0.236422	
6	mon	clr	0	0.0026	7.64	1.27	34.00	1.00	51.00	0.00			6.77	1.02	Admin 1st Fl	ss		0.210081	
7	tue	clr	0	0.0052	7.06	1.21	33.00	2.00	51.00	0.00						ss		0.189104	
8	wed	cldy	0	0.0029	6.96	1.49	31.00	1.00	51.00	0.00			6.77	1.10	Eng Lab	ss		0.225652	
9	thur	clr	0	0.0052	6.90	1.30	30.00	2.00	51.00	0.00						djones	5.00	0.228154	
10	fri	clr	0	0.0023	6.57	1.05	28.00	1.00	51.00	0.00			6.94	1.00	Admin 2nd Fl	gk		0.202923	
11	sat	clr	0	0.0000	7.10	1.19	27.00	0.00	51.00	0.00						djones		0.213149	
12	sun	clr	0	0.0049	7.09	1.14	47.00	1.00	51.00	0.00						djones		0.228446	
13	mon	clr	0	0.0026	7.46	1.39	46.00	2.00	51.00	0.00			7.19	0.89	Admin 1st Fl	ss		0.207306	
14	tue	clr	0	0.0044	7.07	1.27	44.00	1.00	51.00	0.00						ss		0.190577	
15	wed	cldy	0	0.0035	7.27	1.38	43.00	1.00	51.00	0.00			7.06	1.09	Eng Lab	djones	5.01	0.213187	
16	thur	rain	0	0.0073	7.30	1.52	42.00	2.00	51.00	0.00						djones		0.227793	
17	fri	cldy	0	0.0005	8.26	1.41	40.00	0.00	51.00	0.00			8.22	1.03	Admin 2nd Fl	gk		0.209354	
18	sat	clr	0	0.0023	6.98	1.22	40.00	1.00	51.00	0.00						ss		0.212506	
19	sun	clr	0	0.0027	7.06	1.14	39.00	1.00	51.00	0.00						ss		0.203532	
20	mon	clr	0	0.0052	6.70	1.18	38.00	2.00	51.00	0.00			6.65	0.96	Admin 1st Fl	djones		0.196341	
21	tue	clr	0	0.0023	7.80	1.37	36.00	1.00	51.00	0.00						djones	5.38	0.193754	
22	wed	clr	0	0.0043	8.00	1.41	35.00	1.00	51.00	0.00			7.70	1.13	Eng Lab	djones		0.221788	
23	thur	clr	0	0.0052	7.70	1.51	34.00	2.00	51.00	0.00						djones		0.210487	
24	fri	cldy	0	0.0014	7.72	1.41	32.00	1.00	51.00	0.00			7.20	1.27	Admin 2nd Fl	djones		0.224980	
25	sat	rain	0	0.0000	7.85	1.21	31.00	0.00	51.00	0.00						gk		0.198766	
26	sun	clr	0	0.0047	7.91	1.19	31.00	1.00	51.00	0.00						gk		0.202013	
27	mon	rain	0	0.0038	7.90	1.35	30.00	2.00	51.00	0.00			7.50	1.12	Admin 1st Fl	djones		0.198935	
28	tue	rain	0	0.0060	7.92	1.36	28.00	3.00	51.00	0.00						djones	5.33	0.220388	
29	wed	cldy	0	0.0023	8.39	1.29	45.00	1.00	51.00	0.00						gk		0.190662	
30	thur	clr	0	0.0054	7.85	1.40	44.00	1.00	51.00	0.00			7.36	1.17	Eng Lab	djones		0.218826	
31	fri	clr	0	0.0024	8.42	1.20	43.00	1.00	51.00	0.00			8.13	0.94	Admin 2nd Fl	gk		0.203988	
Total				0.1072	7.20	1.44	1139.0	38.00	1581.0	0.00	0.0	0.0	7.02	1.07				6.564137	
Average				0.0035	7.46	1.30	36.74	1.23	51.00	0.00	0.0	0.0	7.25	1.07				0.211746	
Minimum				0.0000	6.57	1.05	27.00	0.00	51.00	0.00	0.0	0.0	6.65	0.89				0.189104	MOR
Maximum				0.0073	8.42	1.52	47.00	3.00	51.00	0.00	0.0	0.0	8.22	1.27				0.236422	04/09/07