

**Quarterly Groundwater Monitoring Report**

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

Hampstead, Maryland

October 2011

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 2011.

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 2011, the extraction wells were pumping at an average combined rate of approximately 158 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 2011 are included in Appendix B.

### **2.3 GROUNDWATER QUALITY DATA**

For the reporting period of July through September 2011, approximately 11.64 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) (83 %) and tetrachloroethene (PCE) (17 %). Analytical results of the groundwater collected from the air stripper for the period of July through September 2011 are included in Appendix C.

A summary of the analytical results from the third quarter (August 2011) 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 2011**  
**Black & Decker**  
**Hampstead, Maryland**

<b>Date</b>	<b>Water Pumped (gallons)</b>
July 2011	6,548,083
August 2011	6,654,014
September 2011	5,361,690

**Table 2-2**  
**Groundwater Elevation Data - 3rd Quarter 2011**  
**Black & Decker**  
**Hampstead, Maryland**

WELL NO	TOC ELEV	TOTAL DEPTH	7/16/2011		8/24/2011		9/27/2011	
			DTW	ELEV	DTW	ELEV	DTW	ELEV
EW-1	847.21	55	DRY	NC	DRY	NC	DRY	NC
EW-2	849.21	110	91.43	757.78	91.86	757.35	91.23	757.98
EW-3	846.64	118	88.43	758.21	88.82	757.82	88.76	757.88
EW-4	858.01	97.5	PC	NC	PC	NC	PC	NC
EW-5	864.17	98	90.50	773.67	89.87	774.30	90.43	773.74
EW-6	831.98	115	103.00	728.98	100.33	731.65	103.21	728.77
EW-7	818.38	78	71.60	746.78	71.34	747.04	70.77	747.61
EW-8	811.13	98	91.50	719.63	93.00	718.13	30.66*	811.13
EW-9	811.35	141	102.50	708.85	102.62	708.73	103.00	708.35
EW-10	807.74	INA	46.22	761.52	52.26	755.48	47.48	760.26
RFW-1A	864.37	78	51.15	813.22	52.81	811.56	52.68	811.69
RFW-1B	864.23	200	51.18	813.05	52.86	811.37	52.73	811.50
RFW-2A	857.41	35	13.10	844.31	17.32	840.09	16.94	840.47
RFW-2B	857.73	75	13.65	844.08	17.98	839.75	17.28	840.45
RFW-3B	839.21	153	37.41	801.80	37.26	801.95	34.32	804.89
RFW-4A	830.37	62	36.12	794.25	38.57	791.80	36.92	793.45
RFW-4B	830.37	120	36.05	794.32	38.52	791.85	36.85	793.52
RFW-5A	817.50	30	DRY	NC	DRY	NC	DRY	NC
RFW-6	785.04	120	4.10	780.94	4.89	780.15	3.90	781.14
RFW-7	805.14	29	7.94	797.20	7.10	798.04	6.98	798.16
RFW-8	860.07	56	DRY	NC	DRY	NC	DRY	NC
RFW-9	862.02	49	25.47	836.55	27.97	834.05	25.26	836.76
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	64.23	785.39	64.58	785.04	64.08	785.54
RFW-12B	844.87	264	51.87	793.00	51.11	793.76	51.34	793.53
RFW-13	849.11	150	65.43	783.68	65.78	783.33	65.70	783.41
RFW-14B	812.39	281	58.47	753.92	49.77	762.62	52.63	759.76
RFW-16	856.14	41	DRY	NC	DRY	NC	DRY	NC
RFW-17	834.66	60.5	26.41	808.25	27.43	807.23	27.58	807.08
RFW-20	842.49	142	33.13	809.36	35.03	807.46	36.71	805.78
RFW-21	832.65	102	20.68	811.97	22.22	810.43	22.63	810.02
PH-7	805.94	89	33.30	772.64	34.26	771.68	24.22	781.72
PH-9	814.94	98	51.02	763.92	54.71	760.23	51.30	763.64
PH-11	820.68	78	49.62	771.06	47.60	773.08	43.22	777.46
PH-12	828.35	87	49.83	778.52	53.63	774.72	51.51	776.84
B-3	803.02	83	10.40	792.62	10.60	792.42	10.38	792.64
Amoco	842.29	INA	NA	NC	NA	NC	NA	NC
Hamp. Town #22	804.96	INA	0.96	804.00	2.34	802.62	3.31	801.65
Pembroke #1	INA	INA	11.36	NC	10.96	NC	10.87	NC
Pembroke #2	INA	INA	Damaged	NC	Damaged	NC	Damaged	NC
N. Houcks. Rd.	INA	INA	11.43	NC	10.88	NC	10.98	NC
E. Century St.	INA	INA	19.24	NC	19.24	NC	19.21	NC
Lwr. Beckleys. Rd.	INA	INA	55.67	NC	56.13	NC	55.48	NC

\* - Pump not running at time of water level due to damage from a downed tree.

NA - Not Available/Not Accessible

NC - Not Calculable

INA - Information not available

PC - Pump Cycles

**Table 2-3  
Effluent Characteristics Summary - 3rd Quarter 2011  
Black & Decker  
Hampstead, Maryland**

Discharge Number	Parameter	Units	Permit Limits	DMR DATE			
				July 2011	August 2011	September 2011	
001	FLOW	average	MGD	NA	0.111	0.166	0.288
		maximum	MGD	NA	0.133	0.410	1.470
	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	< 5	< 5
		monthly average	mg/l	10	< 5	< 5	< 5
	pH	minimum	STD	6.0	6.6	6.3	6.1
		maximum	STD	8.5	7.0	8.5	7.3
BOD		mg/l	15	4.0	5.0	0.0	
TSS	maximum	mg/l	30	9.0	20.0	5.0	
	monthly average	mg/l	20	9.0	20.0	5.0	
101 (Monitoring Point)	FLOW	average	MGD	NA	0.178	0.208	0.208
		maximum	MGD	NA	0.223	0.325	0.255
	Fecal Coliform		MPN/100ml	200	2.0	1.0	5.0
201 (Monitoring Point)	FLOW	average	MGD	NA	NR	NR	0.202
		maximum	MGD	NA	NR	NR	0.268
	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 - August 2011

## Black &amp; 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	0.9 J	0.9 J	1 U	1 U	1 U
1,2-Dichloroethene (total)	ug/L	NS	4.5	1 U	1 U	1 U	1 U	9	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	280	73	770	120	6.7	6.6	9.1	0.8	0.8	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	55	2.3	13	3.4	13	14	62	100	110	1 U
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 - August 2011  
 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	1.1	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	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	2.5	0.7 J	1 U	3.4	NS	1 U	1 U	NS	11	NS
Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	0.8 J	1 U	1.7	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 U	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	0.9	1	1 U	28	27	50	NS	3	3.7	NS	12	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	0.8 J	21	20	78	NS	2.9	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 - August 2011

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	2 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	10 U
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	2.7	0.9 J	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	0.32 J	0.3 J	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	1 U	120	3.2	NS	1 U	ABD	ABD	ABD	1 U	0.5	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	1.5	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	8.9	18	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 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 2011) 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 2011**  
**Black & Decker**  
**Hampstead, Maryland**

Date	Event/Corrective Action
Jul-11	Alarm at the air stripper due to a loss of the air compressors to the pumping valve. The system is back online.
Jul-11	Alarm at the air stripper due to a high column blower failure, reset the system is back online.
Jul-11	Alarm at the air stripper due to a bad Moore controller, the controller was repaired and the system is back online.
Jul-11	Alarm at the air stripper due to a series of power outages caused by severe weather.
Aug-11	Alarm at the air stripper, due to a high wet well. Reset the system, the stripper is back online.
Aug-11	Alarm at the air stripper, high column and blower failure. Reset the system, the stripper is back online.
Aug-11	Alarm at the air stripper due to a power outage caused by Hurricane Irene. A temporary electrical feed was run from old well house #2. The system is up and running wells EW-8 and EW-10 are still down. EW-8 was damaged by a downed tree, a new well house and replacement parts were ordered. EW-10 is still down so we don't trip the temporary breaker.
Sep-11	The temporary electric feed is moved to a larger breaker at the boiler room. Well EW-10 is back online after it was down for 2 weeks.
Sep-11	Alarm at the air stripper, EW-3 is down due to a bad control relay. The control relay is replaced the well is back online.

#### 4. RECOMMENDATIONS

For the reporting period of July through September 2011, 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 2011)**

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MARYLAND DEPARTMENT of the ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION, 1800 WASHINGTON BLVD, BALTIMORE, MD 21230

Operated By:  
Maryland Environmental Service  
259 Najoles Road, Millersville MD

Facility: BTR Capital Group  
Address: 626 Hanover Pike, Hampstead Maryland  
Additional Op's & cert # - Dorrance Jones 0763, Gary Dickerson 0782, Anthony Phillips 3001, Francis Schmidt 2757, David Smith 9153, Brian Musselman 2775

Permit Number: 02-DP-0022  
Superintendent: Earle Villarreal

Certification # 1017

Month: July  
Year: 2011

Final Effluent: outfall:001											Outfall:101					Outfall:201			Operator		
Date	Appearance	Discharge MGD	pH	Cl2 mg/l	Trichloroethylene ug/l	1,1,1-Trichloroethylene ug/l	Trichloroethylene ug/l	BOD <sub>5</sub> mg/l	TSS mg/l	O&G mg/l	Flow MGD	Fecal: mpn	Basin: Inches	Alum: Gpd	Hypochlorite: Gpd	Post Cl2 mg/l	Trichloroethylene ug/l	1,1,1-Trichloroethylene ug/l		Trichloroethylene ug/l	Discharge mgd
1	Clear	0.12200									0.175000		0.0	1.0	1.0	5.0				0.236424	Djones
2	Clear	0.09100									0.163000		0.0	1.0	1.0	5.0				0.170884	APhillips
3	Clear	0.10700									0.163000		0.0	1.0	1.0	5.0				0.242028	APhillips
4	Clear	0.09600									0.169000		0.0	1.0	1.0	5.0				0.201690	Fschmidt
5	Clear	0.11400	6.87	0.00							0.177000		0.0	1.0	1.0	5.0				0.227725	Djones
6	Clear	0.11700									0.163000	2.0	0.0	1.0	1.0	5.0				0.256823	Djones
7	Clear	0.10900	6.65	0.00							0.183000		0.0	1.0	1.0	5.0				0.085417	Djones
8	Clear	0.12000									0.155000		0.0	1.0	1.0	5.0				0.249383	Djones
9	Clear	0.10300									0.167000		0.0	1.0	1.0	5.0				0.200451	Djones
10	Clear	0.11600									0.181000		0.0	1.0	1.0	5.0				0.199197	Djones
11	Clear	0.10900									0.181000		0.0	1.0	1.0	5.0				0.245163	Bmusselman
12	Clear	0.10500	6.64	0.00							0.186000	< 1.8	0.0	1.0	1.0	5.0				0.214168	Gdickerson
13	Clear	0.11100									0.178000		0.0	1.0	1.0	5.0				0.234864	Djones
14	Clear	0.11100	6.75	0.00							0.188000		0.0	1.0	1.0	5.0				0.222817	Djones
15	Clear	0.11200									0.220000		0.0	1.0	1.0	5.0				0.224561	Djones
16	Clear	0.09700									0.117000		0.0	1.0	1.0	5.0				0.170868	Dsmith
17	Clear	0.11200									0.200000		0.0	1.0	1.0	5.0				0.225118	Dsmith
18	Clear	0.13200									0.188000		0.0	1.0	1.0	5.0				0.267848	Djones
19	Clear	0.11700	6.73	0.00	< 1.00	< 1.00	< 1.00	4.0	9.0		0.164000	< 1.8	0.0	1.0	1.0	5.0	< 1.0	< 1.0	< 1.0	0.140160	Djones
20	Clear	0.10100									0.183000		0.0	1.0	1.0	5.0				0.088587	Djones
21	Clear	0.11600	6.70	0.00							0.178000		0.0	1.0	1.0	5.0				0.259058	Gdickerson
22	Clear	0.11200									0.198000		0.0	1.0	1.0	5.0				0.230580	Gdickerson
23	Clear	0.11300									0.175000		0.0	1.0	1.0	5.0				0.189602	APhillips
24	Clear	0.11100									0.174000		0.0	1.0	1.0	5.0				0.220351	APhillips
25	Clear	0.10900									0.171000		0.0	1.0	1.0	5.0				0.227284	Gdickerson
26	Clear	0.10700	6.96	0.00							0.202000	< 1.8	0.0	1.0	1.0	5.0				0.204766	Gdickerson
27	Clear	0.12900									0.180000		0.0	1.0	1.0	5.0				0.254597	Djones
28	Clear	0.09700	6.68	0.00					< 5.5		0.192000		0.0	1.0	1.0	5.0				0.207609	Djones
29	Clear	0.12300									0.173000		0.0	1.0	1.0	5.0				0.222919	Djones
30	Clear	0.09400									0.223000		0.0	1.0	1.0	5.0				0.172116	Djones
31	Clear	0.13300									0.164000		0.0	1.0	1.0	5.0				0.255025	Djones
Total		3.44600									5.531000									6.548083	
Average		0.11116	6.73	<0.10	0	0	0	4	9	0	0.178419	1	0.0	1.0	1.0	5.0	0	0	0	0.211228	
Minimum		0.09100	6.6	0.00	0	0	0	4	9	0	0.117000	1	0.0	1.0	1.0	5.0	0	0	0	0.085417	
Maximum		0.13300	7.0	<0.10	0	0	0	4	9	0	0.223000	2	0.0	1.0	1.0	5.0	0	0	0	0.267848	MOR 5-11-09

COMMENTS: