

**Quarterly Groundwater Monitoring Report**

Prepared for

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

Hampstead, Maryland

October 2014

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 2014.

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 2014, the extraction wells were pumping at an average combined rate of approximately 185 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 2014 are included in Appendix B.

### **2.3 GROUNDWATER QUALITY DATA**

For the reporting period of July through September 2014, approximately 12.26 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) (76.2 %) and tetrachloroethene (PCE) (23.8 %). Analytical results of the groundwater collected from the air stripper for the period of July through September 2014 are included in Appendix C.

A summary of the analytical results from the third quarter (August 2014) 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 2014**  
**Black & Decker**  
**Hampstead, Maryland**

<b>Date</b>	<b>Water Pumped (gallons)</b>
<b>July 2014</b>	8,365,626
<b>August 2014</b>	7,970,793
<b>September 2014</b>	7,680,935

**Table 2-2**  
**Groundwater Elevation Data - 3rd Quarter 2014**  
**Black & Decker**  
**Hampstead, Maryland**

WELL NO.	TOC ELEV.	TOTAL DEPTH	7/15/2014		8/27/2014		9/25/2014	
			DTW	ELEV	DTW	ELEV	DTW	ELEV
EW-1	847.21	55	DRY	NC	DRY	NC	DRY	NC
EW-2	849.21	110	72.74	776.47	78.84	770.37	78.10	771.11
EW-3	846.64	118	89.19	757.45	86.49	760.15	85.94	760.70
EW-4	858.01	97.5	PC	NC	PC	NC	PC	NC
EW-5	864.17	98	89.75	774.42	89.91	774.26	89.74	774.43
EW-6	831.98	115	74.30	757.68	77.91	754.07	78.11	753.87
EW-7	818.38	78	59.44	758.94	55.36	763.02	57.23	761.15
EW-8	811.13	98	93.00	718.13	91.43	719.70	91.30	719.83
EW-9	811.35	141	96.30	715.05	95.87	715.48	95.81	715.54
EW-10	807.74	INA	53.22	754.52	48.97	758.77	49.73	758.01
RFW-1A	864.37	78	48.02	816.35	47.92	816.45	48.11	816.26
RFW-1B	864.23	200	48.05	816.18	47.99	816.24	48.18	816.05
RFW-2A	857.41	35	11.31	846.10	14.51	842.90	14.53	842.88
RFW-2B	857.73	75	11.82	845.91	15.16	842.57	15.21	842.52
RFW-3B	839.21	153	27.01	812.20	30.33	808.88	30.30	808.91
RFW-4A	830.37	62	32.91	797.46	35.78	794.59	35.84	794.53
RFW-4B	830.37	120	32.63	797.74	35.69	794.68	35.77	794.60
RFW-5A	817.50	30	DRY	NC	DRY	NC	DRY	NC
RFW-6	785.04	120	4.02	781.02	2.95	782.09	4.10	780.94
RFW-7	805.14	29	7.65	797.49	5.81	799.33	7.03	798.11
RFW-8	860.07	56	DRY	NC	DRY	NC	DRY	NC
RFW-9	862.02	49	23.83	838.19	25.55	836.47	26.03	835.99
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	58.13	791.49	59.44	790.18	58.73	790.89
RFW-12B	844.87	264	49.28	795.59	48.23	796.64	48.94	795.93
RFW-13	849.11	150	60.51	788.60	57.29	791.82	59.04	790.07
RFW-14B	812.39	281	53.47	758.92	53.79	758.60	54.80	757.59
RFW-16	856.14	41	DRY	NC	DRY	NC	DRY	NC
RFW-17	834.66	60.5	23.52	811.14	24.36	810.30	34.41	800.25
RFW-20	842.49	142	30.31	812.18	32.16	810.33	32.21	810.28
RFW-21	832.65	102	19.29	813.36	20.18	812.47	20.19	812.46
PH-7	805.94	89	26.04	779.90	27.43	778.51	27.81	778.13
PH-9	814.94	98	50.39	764.55	43.28	771.66	44.24	770.70
PH-11	820.68	78	47.17	773.51	48.11	772.57	48.23	772.45
PH-12	828.35	87	48.13	780.22	49.06	779.29	49.01	779.34
B-3	803.02	83	10.84	792.18	9.88	793.14	10.37	792.65
Amoco	842.29	INA	NA	NC	NA	NC	NA	NC
Hamp. Town #22	804.96	INA	1.29	803.67	1.03	803.93	1.43	803.53
Pembroke #1	INA	INA	10.45	NC	10.58	NC	10.73	NC
Pembroke #2	INA	INA	Damaged	NC	Damaged	NC	Damaged	NC
N. Houcks. Rd.	INA	INA	9.96	NC	10.39	NC	10.51	NC
E. Century St.	INA	INA	19.29	NC	19.21	NC	19.27	NC
Lwr. Beckleys. Rd.	INA	INA	53.56	NC	54.55	NC	54.21	NC

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

**Table 2-3  
Effluent Characteristics Summary - 3rd Quarter 2014  
Black & Decker  
Hampstead, Maryland**

Discharge Number	Parameter	Units	Permit Limits	DMR DATE			
				July 2014	August 2014	September 2014	
001	FLOW	average	MGD	NA	0.311	0.231	0.155
		maximum	MGD	NA	0.777	0.819	0.419
	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	7.2	7.1	7.4
		maximum	STD	8.5	8.4	8.2	8.3
	BOD		mg/l	15	5.0	7.0	5.0
TSS	maximum	mg/l	30	0	0	0	
	monthly average	mg/l	20	0	0	0	
101 (Monitoring Point)	FLOW	average	MGD	NA	0.180	0.149	0.145
		maximum	MGD	NA	0.210	0.190	0.163
	Fecal Coliform	MPN/100ml	200	10.0	1.0	1.0	
201 (Monitoring Point)	FLOW	average	MGD	NA	NR	NR	0.261
		maximum	MGD	NA	NR	NR	0.314
	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 2014**  
**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	0.8 J	1 U	1 U	1 U
1,2-Dichloroethene (total)	ug/L	NS	3	1.8	1 U	1 U	1 U	2.9	23	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	130	34	540	100	4.6	2	6.8	0.4 J	0.5 J	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	51	1.4	11	3.6	10	5.1	73	98	99	2
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 2014**  
**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	1.6	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	1 U	1 U	1 U	NS	1 U	7	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	0.6 J	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	0.7 J	NS
1,2-Dichloroethene (total)	ug/L	1 U	1 U	1 U	1 U	1.2	0.9 J	0.9 J	3	NS	1 U	1 U	NS	15	NS
Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	0.6 J	0.5 J	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	0.6 J	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	0.3 J	0.3 J	1 U	34	33	48	NS	0.5 J	2.1	NS	7.5	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	0.2 J	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	0.7 J	28	28	84	NS	0.7 J	1 U	NS	4.2	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 2014**  
**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	USEPA drinking water method 524.2				
												RFW-20	RFW-21	Town #22	Town #23	Trip Blank
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	1 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	1.6	0.7 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	0.4 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	1.8	60	2.5	NS	1 U	ABD	ABD	ABD	1 U	0.5 U	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	0.6	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	4.5	15	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

RFW -20 was not sampled because it was damaged. The well is now repaired and will be sampled during the 4th quarter.

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 EW-2 and EW-4 and the highest concentration of PCE was detected in the groundwater sample collected from wells RFW-4B & 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 2014) 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 2014**  
**Black & Decker**  
**Hampstead, Maryland**

<b>Date</b>	<b>Event/Corrective Action</b>
Aug-14	EW -10 is off due to bad underground control wires. EW-10 was repaired and back in service.
Aug-14	Scheduled power outage for work in the yard substation. Power was off for 9:30 hours. Everything restarted and running.

#### 4. RECOMMENDATIONS

For the reporting period of July through September 2014, 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 2014)**

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ENT ADMINISTRATION, 1800 WASHINGTON BLVD, BALTIMORE, MD 21230

Operated By: **Facility: BTR Capital Group**  
 Maryland Environmental Service **Address: 627 Hanover Pike, Hampstead Maryland**  
 259 Najoles Road, Millersville MD **Additional Op's & cert # - Dorrance Jones 0763, James Elliott 3738, Anthony Phillips 3001**

**Permit Number: 07-DP-0022**  
**Superintendent: Earle Villarreal Certification # 1017**

**Month: July**  
**Year: 2014**

Date	Appearance	Discharge MGD	pH su	Cl2 mg/l	Final Effluent outfall 001											Outfall 101					Outfall 201			Operator		
					Turbidity ug/l	1,1,1-Trichloroethane ug/l	Trichloroethene ug/l	BOD <sub>5</sub> mg/l	TSS mg/l	TKN mg/l	N+N mg/l	TP mg/l	TN mg/l	O&G mg/l	eColi mpn	Flow MGD	eColi mpn	Basin inches	Alum Gpd	Hypochlorite Gpd	Post Cl2 mg/l	Tetrachloroethylene ug/l	1,1,1-Trichloroethane ug/l		Trichloroethene ug/l	Discharge mgd
1	Clear	0.17300													<1	0.163000	<1	1.0	1.0	1.0	5.0				0.278164	APhillips
2	Clear	0.21000	7.45	0.00												0.173000		3.0	1.0	1.0	5.0				0.270754	Djones
3	Clear	0.19300	8.16	0.00												0.181000		3.0	1.0	1.0	5.0				0.286041	Djones
4	Clear	0.65600														0.202000		0.0	1.0	1.0	5.0				0.186051	Djones
5	Clear	0.28200														0.177000		0.0	1.0	1.0	5.0				0.290171	APhillips
6	Clear	0.24800														0.175000		0.0	1.0	1.0	5.0				0.265684	APhillips
7	Clear	0.27300	7.47	0.00											0.165000		3.0	1.0	1.0	5.0				0.283729	Djones	
8	Clear	0.27400			<1	<1	<1	5.00	15.80	0.99	0.90	0.09	1.9	<5	30.6	0.186000	9.90	3.0	1.0	1.0	5.0				0.273107	Djones
9	Clear	0.36800	7.19	0.00											0.196000		1.0	1.0	1.0	5.0				0.283062	Djones	
10	Clear	0.44400													0.183000		1.0	1.0	1.0	5.0				0.261373	Djones	
11	Clear	0.62600													0.198000		0.0	1.0	1.0	5.0				0.274277	Djones	
12	Clear	0.23600													0.184000		0.0	1.0	1.0	5.0				0.263635	APhillips	
13	Clear	0.24400													0.180000		0.0	1.0	1.0	5.0				0.271356	APhillips	
14	Clear	0.77700													0.185000		0.0	1.0	1.0	5.0				0.281417	Djones	
15	Clear	0.77100	8.38	0.00											0.185000	<1	0.0	1.0	1.0	5.0				0.270180	Djones	
16	Clear	0.35200													0.186000		0.0	1.0	1.0	5.0				0.271524	Djones	
17	Clear	0.28000	7.26	0.00											0.197000		1.0	1.0	1.0	5.0				0.265816	Djones	
18	Clear	0.27800													0.190000		1.0	1.0	1.0	5.0				0.277019	Djones	
19	Clear	0.28000													0.171000		1.0	1.0	1.0	5.0				0.273880	Djones	
20	Clear	0.26000													0.192000		1.0	1.0	1.0	5.0				0.257874	Djones	
21	Clear	0.27500	8.32	0.00											0.178000		1.0	1.0	1.0	5.0				0.285224	APhillips	
22	Clear	0.27000	8.17	0.00											0.175000	<1	1.0	1.0	1.0	5.0				0.270208	APhillips	
23	Clear	0.21300													0.146000		1.0	1.0	1.0	5.0				0.270000	APhillips	
24	Clear	0.30100													0.196000		1.0	1.0	1.0	5.0				0.224602	APhillips	
25	Clear	0.24700													0.187000		1.0	1.0	1.0	5.0				0.303062	Jelliott	
26	Clear	0.15000													0.166000		1.0	1.0	1.0	5.0				0.249405	Jelliott	
27	Clear	0.17400													0.150000		1.0	1.0	1.0	5.0				0.266828	Jelliott	
28	Clear	0.37800	8.34	0.00											0.210000		1.0	1.0	1.0	5.0				0.264684	Jelliott	
29	Clear	0.16900	7.29	0.00											0.175000	<1	1.0	1.0	1.0	5.0				0.284753	A.phillips	
30	Clear	0.11800													0.176000		2.0	1.0	1.0	5.0				0.284042	Djones	
31	Clear	0.12300													0.165000		2.0	1.0	1.0	5.0				0.277704	Djones	
Total		9.64300													5.593000										8.365626	
Average		0.31106	7.8	<0.10	0.000	0.000	0.000	5	16	1	1	0	2	0	6	0.180419	1.6	1.0	1.0	1.0	5.0	#DIV/0!	#DIV/0!	#DIV/0!	0.269859	
Minimum		0.11800	7.2	0.00	0.000	0.000	0.000	5	16	1	1	0	2	0	0	0.146000	0.0	0.0	1.0	1.0	5.0	0.0	0.0	0.0	0.186051	
Maximum		0.77700	8.4	<0.10	0.000	0.000	0.000	5	16	1	1	0	2	0	31	0.210000	10	3.0	1.0	1.0	5.0	0.0	0.0	0.0	0.303062	MOR 01-3-14

COMMENTS:

Created By:  
Maryland Environmental Service  
9 Najoles Road, Millersville MD

Facility: BTR Capital Group  
Address: 627 Hanover Pike, Hampstead Maryland  
Additional Op's & cert # - Dorrance Jones 0763, Keith White 4609, Chris Dallas 6202, Anthony Phillips 3001

Permit Number: 07-DP-0022  
Superintendent: Earle Villarreal

Certification # 1017

Month: August  
Year: 2014

Date	Appearance	Discharge MGD	pH	Cl2 mg/l	Final Effluent outfall 001										Outfall 101					Outfall 201			Operator				
					Turbidity ug/l	1,1,1-Trichloroethane ug/l	Trichloroethane ug/l	BOD5 mg/l	TSS mg/l	TKN mg/l	N+N mg/l	TP mg/l	TN mg/l	O&G mg/l	eColi mpn	Flow MGD	eColi mpn	Basin Inches	Alum Gpd	Hypochlorite Gpd	Post Cl2 mg/l	Turbidity ug/l		1,1,1-Trichloroethane ug/l	Trichloroethane ug/l	Discharge mgd	
1	Clear	0.10800														0.188000		2.0	1.0	1.0	5.0				0.270051	Djones	
2	Clear	0.12500														0.163000		2.0	1.0	1.0	5.0				0.255688	APhillips	
3	Clear	0.58200														0.173000		0.0	1.0	1.0	5.0				0.247096	APhillips	
4	Clear	0.27000														0.140000		0.0	1.0	1.0	5.0				0.297789	Djones	
5	Clear	0.14100				<1	<1	<1	7.00	9.60	0.999	0.85	<0.05	1.9	<5	9.9	0.160000	<1	0.0	1.0	1.0	5.0				0.227908	Djones
6	Clear	0.16700	7.14	0.00												0.163000		0.0	1.0	1.0	5.0				0.245214	Kwhite	
7	Clear	0.12700														0.133000		0.0	1.0	1.0	5.0				0.232003	Kwhite	
8	Clear	0.10000	7.55	0.00												0.149000		0.0	1.0	1.0	5.0				0.239082	Kwhite	
9	Clear	0.12000														0.138000		0.0	2.0	1.0	5.0				0.252032	Djones	
10	Clear	0.12300														0.155000		0.0	5.0	1.0	5.0				0.254093	Djones	
11	Clear	0.40000														0.130000		0.0	5.0	1.0	5.0				0.297872	Kwhite	
12	Clear	0.41400														0.144000	<1	0.0	5.0	1.0	5.0				0.265889	Kwhite	
13	Clear	0.81900	7.65	0.00												0.148000		0.0	5.0	1.0	5.0				0.249227	Kwhite	
14	Clear	0.19400	8.02	0.00												0.156000		0.0	5.0	1.0	5.0				0.215517	Kwhite	
15	Clear	0.13300														0.162000		0.0	5.0	1.0	5.0				0.259543	Kwhite	
16	Clear	0.13100														0.115000		0.0	5.0	1.0	5.0				0.281408	Kwhite	
17	Clear	0.12500														0.190000		0.0	5.0	1.0	5.0				0.253190	Kwhite	
18	Clear	0.12700														0.003500	<1	0.0	5.0	1.0	5.0				0.251014	Cdallas	
19	Clear	0.12200														0.147000		0.0	5.0	1.0	5.0				0.233688	Cdallas	
20	Clear	0.17300	7.18	0.00												0.154000		0.0	5.0	1.0	5.0				0.307327	Cdallas	
21	Clear	0.14000	8.16	0.00												0.143000		0.0	5.0	1.0	5.0				0.239568	Djones	
22	Clear	0.13400														0.151000		0.0	5.0	1.0	5.0				0.256905	Djones	
23	Clear	0.14500														0.144000		0.0	5.0	1.0	5.0				0.260362	APhillips	
24	Clear	0.49300														0.168000		0.0	5.0	1.0	5.0				0.250706	APhillips	
25	Clear	0.28400	7.43	0.00												0.167000		0.0	5.0	1.0	5.0				0.309336	Djones	
26	Clear	0.44100														0.160000	<1	0.0	5.0	1.0	5.0	<1	<1	<1	0.261267	Djones	
27	Clear	0.28100														0.149000		0.0	5.0	1.0	5.0				0.259180	Kwhite	
28	Clear	0.33700	7.81	0.00												0.168000		1.0	5.0	1.0	5.0				0.267688	Kwhite	
29	Clear	0.12900														0.131000		1.0	5.0	1.0	5.0				0.257533	Kwhite	
30	Clear	0.07400														0.157000		1.0	5.0	1.0	5.0				0.206407	Djones	
31	Clear	0.18800														0.159000		1.0	5.0	1.0	5.0				0.266210	Djones	
Total		7.14700														4.608500										7.970793	
Average		0.23055	7.6	<0.10	0.000	0.000	0.000	7.0	9.6	1.0	0.9	0.0	1.9	0.0	9.9	0.148661	1.0	0.3	3.9	1.0	5.0	0.0	0.0	0.0	0.257122		
Minimum		0.07400	7.1	0.00	0.000	0.000	0.000	7.0	9.6	1.0	0.9	0.0	1.9	0.0	9.9	0.003500	0.0	0.0	1.0	1.0	5.0	0.0	0.0	0.0	0.206407		
Maximum		0.81900	8.2	<0.10	0.000	0.000	0.000	7.0	9.6	1.0	0.9	0.0	1.9	0.0	9.9	0.190000	0.0	2.0	5.0	1.0	5.0	0.0	0.0	0.0	0.309336	MOR 01-3-14	

COMMENTS: