

Quarterly Groundwater Monitoring Report

Prepared for
Black & Decker (U.S.) Inc.
Hampstead, Maryland
January 2010

Prepared by
WESTON SOLUTIONS, INC.
West Chester, Pennsylvania 19380-1499

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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 2009.

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 2009, the extraction wells were pumping at an average combined rate of approximately 151 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 2009 are included in Appendix B.

2.3 GROUNDWATER QUALITY DATA

For the reporting period of October through December 2009, approximately 15.9 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) (84.7%) and tetrachloroethene (PCE) (15.3%). Analytical results of the groundwater collected from the air stripper for the period of October through December 2009 are included in Appendix C.

A summary of the analytical results from the third quarter (November 2009) 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 2009
Black & Decker
Hampstead, Maryland

Date	Water Pumped (gallons)
October 2009	6,043,401
November 2009	6,059,578
December 2009	6,196,514

Table 2-2
Groundwater Elevation Data - 4th Quarter 2009
Black & Decker
Hampstead, Maryland

WELL NO.	TOC ELEV.	TOTAL DEPTH	10/21/2009		11/4/2009		12/30/2009	
			DTW	ELEV	DTW	ELEV	DTW	ELEV
EW-1	847.21	55	DRY	NC	DRY	NC	DRY	NC
EW-2	849.21	110	72.41	776.80	73.21	776.00	74.26	774.95
EW-3	846.64	118	80.96	765.68	85.10	761.54	85.81	760.83
EW-4	858.01	97.5	PC	NC	PC	NC	PC	NC
EW-5	864.17	98	72.85	791.32	73.50	790.67	74.06	790.11
EW-6	831.98	115	102.50	729.48	102.81	729.17	103.00	728.98
EW-7	818.38	78	57.82	760.56	50.55	767.83	51.61	766.77
EW-8	811.13	98	91.79	719.34	91.75	719.38	92.05	719.08
EW-9	811.35	141	100.86	710.49	101.34	710.01	101.56	709.79
EW-10	807.74	INA	54.88	752.86	53.26	754.48	53.27	754.47
RFW-1A	864.37	78	51.03	813.34	50.61	813.76	51.11	813.26
RFW-1B	864.23	200	51.06	813.17	50.67	813.56	51.14	813.09
RFW-2A	857.41	35	15.84	841.57	13.86	843.55	15.67	841.74
RFW-2B	857.73	75	16.41	841.32	14.53	843.20	16.07	841.66
RFW-3B	839.21	153	36.16	803.05	36.26	802.95	37.02	802.19
RFW-4A	830.37	62	37.84	792.53	35.95	794.42	37.89	792.48
RFW-4B	830.37	120	37.91	792.46	35.82	794.55	38.06	792.31
RFW-5A	817.50	30	DRY	NC	DRY	NC	DRY	NC
RFW-6	785.04	120	3.67	781.37	3.23	781.81	4.41	780.63
RFW-7	805.14	29	6.99	798.15	5.24	799.90	7.40	797.74
RFW-8	860.07	56	DRY	NC	DRY	NC	DRY	NC
RFW-9	862.02	49	26.79	835.23	25.82	836.20	26.69	835.33
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	65.96	783.66	65.79	783.83	66.10	783.52
RFW-12B	844.87	264	51.06	793.81	50.61	794.26	50.83	794.04
RFW-13	849.11	150	66.14	782.97	65.02	784.09	65.89	783.22
RFW-14B	812.39	281	48.06	764.33	49.71	762.68	47.86	764.53
RFW-16	856.14	41	DRY	NC	DRY	NC	DRY	NC
RFW-17	834.66	60.5	27.48	807.18	26.46	808.20	27.43	807.23
RFW-20	842.49	142	35.11	807.38	35.01	807.48	34.96	807.53
RFW-21	832.65	102	22.81	809.84	22.21	810.44	23.00	809.65
PH-7	805.94	89	27.43	778.51	27.50	778.44	27.61	778.33
PH-9	814.94	98	56.19	758.75	56.23	758.71	56.86	758.08
PH-11	820.68	78	50.92	769.76	50.94	769.74	50.88	769.80
PH-12	828.35	87	53.29	775.06	53.33	775.02	52.84	775.51
B-3	803.02	83	9.81	793.21	10.06	792.96	9.93	793.09
Amoco	842.29	INA	NA	NC	NA	NC	NA	NC
Hamp. Town #22	804.96	INA	29.86	775.10	19.33	785.63	27.11	777.85
Pembroke #1	INA	INA	11.77	NC	12.40	NC	12.53	NC
Pembroke #2	INA	INA	Damaged	NC	Damaged	NC	Damaged	NC
N. Houcks. Rd.	INA	INA	9.90	NC	11.79	NC	10.89	NC
E. Century St.	INA	INA	19.21	NC	23.64	NC	19.96	NC
Lwr. Beckleys. Rd.	INA	INA	55.08	NC	54.87	NC	55.21	NC

NA - Not Available/Not Accessible

NC - Not Calculable

INA - Information not available

PC - Pump Cycles

Table 2-3
Effluent Characteristics Summary - 4th Quarter 2009
Black & Decker
Hampstead, Maryland

Discharge Number	Parameter	Units	Permit Limits	DMR DATE			
				October 2009	November 2009	December 2009	
001	FLOW	average	MGD	NA	0.220	0.166	0.223
		maximum	MGD	NA	0.770	0.468	0.837
	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	349	< 5
		quarterly average	mg/l	10	< 5	349	< 5
	pH	minimum	STD	6.0	6.20	6.30	6.10
		maximum	STD	8.5	6.90	6.80	6.30
	BOD		mg/l	15	2.0	0.0	0.0
TSS	maximum	mg/l	30	0.0	0.0	0.0	
	quarterly average	mg/l	20	0.0	0.0	0.0	
101 (Monitoring Point)	FLOW	average	MGD	NA	0.199	0.206	0.259
		maximum	MGD	NA	0.261	0.298	0.314
	Fecal Coliform		MPN/100ml	200	1.0	1.0	1.0
201 (Monitoring Point)	FLOW	average	MGD	NA	NR	NR	0.199
		maximum	MGD	NA	NR	NR	0.245
	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

Note: The Non-Compliance Report Form filed to MDE for the November oil & grease result is included in Appendix B.

Table 2-4
 Summary of Groundwater Analytical Results - November 2009
 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	3.9	2.8	1 U	1 U	1 U	4.8	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	430	130	990	130	10	4.2	11	1.1	0.9 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	64	3.8	21	6.9	15	9.8	67	120	110	1.2
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 - November 2009
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	1.2	NS
1,1-Dichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	NS	1 U	1 U	NS	1	NS
1,2-Dichloroethene (total)	ug/L	1 U	1 U	1 U	1 U	3.5	1 U	1 U	3.3	NS	1 U	1 U	NS	15	NS
Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	1.1	1	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	1.4	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	1.2	1.5	1.3	24	24	50	NS	2.4	2.7	NS	16	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	1 U	14	15	78	NS	2.8	1 U	NS	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 2009
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	2.7	1.1	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	0.3 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	360	4.3	NS	1 U	ABD	ABD	ABD	1 U	0.9	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	2.7	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	32	22	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, EW-2 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 2009) 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 2009
Black & Decker
Hampstead, Maryland

Date	Event/Corrective Action
Oct-09	Alarm at air stripper. High wet well, reset the system. System back online.
Oct-09	Alarm at stripper. EW-9 tripped off, replaced the control relay. System back online.
Nov-09	Alarm at air stripper. High wet well, reset the system. System back online.
Nov-09	The heater in EW-10 was replaced.
Nov-09	Alarm at air stripper. Power outage caused a temporary shut down, reset the system. System back online.
Nov-09	Alarm at stripper. EW-5 tripped off, replaced the contactor. System back online.
Nov-09	The alarm at the air stripper due to a high column blower failure . The stripper was reset all systems are okay.
Dec-09	Alarm at air stripper. High wet well, reset the system. System back online.
Dec-09	Alarm at air stripper. Power outage caused a temporary shut down, reset the system. System back online.
Dec-09	Alarm at air stripper. EW-6 tripped off due to faulty control relay, control relay was replaced. System back online.
Dec-09	Alarm at air stripper. EW-8 tripped off due to broken heater, temporary heater was placed in the well house. System back online.
Dec-09	Alarm at air stripper. EW-10 tripped off due to water in well house due to flooding from excessive snow melt and rain. The well house was swept out and water was diverted away from well house. System back online.

4. RECOMMENDATIONS

For the reporting period of October through December 2009, 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
(OCTOBER – DECEMBER 2009)

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, Scott Steedman 0764, Gary Dickerson 0782, Martin Whitt 0666, Gary Kesslerling 01962, David Smith 9153

Permit Number 02-DP-0022
Superintendent Earle Villarreal

Certification # 1017

Month October
Year 2009

Date	Appearance	Final Effluent outfall 001									Outfall 101						Outfall 201			Operator	
		Discharge MGD	pH	Cl2 mg/l	1-cobaltous chloride ug/l	1-1-1 Trichloroethane ug/l	Inhibitors ug/l	BOD ₅ mg/l	TSS mg/l	O&G mg/l	Flow MGD	Fecal mpn	Basin Inches	Alum Gpd	Hypochlorite Gpd	Post Cl2 mg/l	1-cobaltous chloride ug/l	1-1-1-Trichloroethane ug/l	Inhibitors ug/l		Discharge mgd
1	clear	0 16600	6 65	0 00						0 248000		0 0	10 0	10 0	5 0				0 204548	djones	
2	clear	0 16300								0 261000		0 0	10 0	10 0	5 0				0 199096	djones	
3	clear	0 15300								0 246000		0 0	10 0	10 0	5 0				0 193876	ssteedman	
4	clear	0 16300								0 239000		0 0	10 0	10 0	5 0				0 210286	ssteedman	
5	clear	0 15600								0 201000		0 0	10 0	10 0	5 0				0 199151	djones	
6	clear	0 14200	6 35	0 00						0 179000		0 0	10 0	10 0	5 0				0 181955	djones	
7	clear	0 16300			< 1 00	< 1 00	< 1 00	2 0	< 4 0	< 5 0	0 199000	< 1 8	0 0	10 0	10 0	5 0	< 1 0	< 1 0	< 1 0	0 113976	djones
8	clear	0 16200	6 40	0 00						0 197000		0 0	10 0	10 0	5 0				0 201142	djones	
9	clear	0 13500								0 172000		0 0	10 0	10 0	5 0				0 155662	djones	
10	clear	0 15500								0 194000		0 0	10 0	10 0	5 0				0 201273	djones	
11	clear	0 17200								0 209000		0 0	5 0	10 0	5 0				0 236185	djones	
12	clear	0 14900								0 183000		0 0	5 0	10 0	5 0				0 193622	ssteedman	
13	clear	0 16600	6 58	0 00						0 210000		0 0	10 0	10 0	5 0				0 215170	mwhitt	
14	clear	0 13200								0 179000	< 1 8	0 0	10 0	10 0	5 0				0 191050	ssteedman	
15	clear	0 17000	6 87	0 00						0 189000		0 0	10 0	10 0	5 0				0 200070	djones	
16	clear	0 12500								0 157000		0 0	10 0	10 0	5 0				0 150084	djones	
17	clear	0 36200								0 188000		0 0	10 0	10 0	5 0				0 197025	dsmith	
18	clear	0 56700								0 208000		0 0	5 0	10 0	5 0				0 242522	dsmith	
19	clear	0 14600								0 209000		0 0	10 0	10 0	5 0				0 197130	djones	
20	clear	0 17100	6 20	0 00						0 165000		0 0	10 0	10 0	5 0				0 190308	djones	
21	clear	0 16400								0 184000	< 1 8	0 0	15 0	10 0	5 0				0 183205	gkesslerling	
22	clear	0 15600	6 53	0 00						0 188000		0 0	15 0	10 0	5 0				0 224227	gdickerson	
23	clear	0 16200								0 240000		0 0	10 0	10 0	5 0				0 192738	djones	
24	clear	0 58100								0 226000		0 0	10 0	10 0	5 0				0 199882	mwhitt	
25	clear	0 18100								0 201000		0 0	5 0	10 0	5 0				0 200687	mwhitt	
26	clear	0 20100								0 191000		0 0	5 0	10 0	5 0				0 191963	djones	
27	clear	0 77000	6 51	0 00						0 154000		0 0	5 0	10 0	5 0				0 173335	djones	
28	clear	0 41800								0 195000	< 1 8	0 0	20 0	10 0	5 0				0 232750	djones	
29	clear	0 15800	6 45	0 00						0 190000		0 0	20 0	10 0	5 0				0 200265	djones	
30	clear	0 14000								0 163000		0 0	10 0	10 0	5 0				0 161400	djones	
31	clear	0 16500								0 192000		0 0	10 0	10 0	5 0				0 208818	djones	
Total		6 81400								6 157000									6 043401		
Average		0 21981	6 5	<0 10	0	0	0	2	0	0	0 198613	1	0 0	10 0	10 0	5 0	0	0	0	0 194948	
Minimum		0 12500	6 2	0 00	0	0	0	2	0	0	0 154000	1	0 0	5 0	10 0	5 0	0	0	0	0 113976	
Maximum		0 77000	6 9	<0 10	0	0	0	2	0	0	0 261000	1	0 0	20 0	10 0	5 0	0	0	0	0 242522	

COMMENTS

MOR 5-11-09

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

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Permit Number 02-DP-0022

Superintendent Earle Villarreal

Certification # 1017

Month November
Year 2009

Final Effluent outfall 001											Outfall 101					Outfall 201			Operator		
Date	Appearance	Discharge MGD	pH su	Cl2 mg/l	Tetrachloroethylene ug/l	1,1,1-Trichloroethane ug/l	Trichloroethene ug/l	BOD ₅ mg/l	TSS mg/l	O&G mg/l	Flow MGD	Fecal 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 22400									0 217000		0 0	10 0	10 0	50				0 245419	djones
2	clear	0 13800									0 169000		0 0	10 0	10 0	50				0 197563	ssteedman
3	clear	0 14100	6 84	0 00							0 164000		0 0	10 0	10 0	50				0 171384	ssteedman
4	clear	0 15600			< 1 00	< 1 00	< 1 00	< 2 0	< 4 0	349 0	0 195000	< 1 8	0 0	10 0	10 0	50				0 230328	djones
5	clear	0 14100	6 57	0 00							0 223000		0 0	10 0	0 5	50				0 204569	djones
6	clear	0 11500									0 147000		0 0	10 0	10 0	50				0 154695	djones
7	clear	0 15700									0 183000		0 0	10 0	10 0	50				0 236525	dsmith
8	clear	0 12700									0 147000		0 0	10 0	10 0	50				0 209452	dsmith
9	clear	0 12800									0 169000		0 0	10 0	10 0	50				0 199896	djones
10	clear	0 19000	6 42	0 00							0 196000	< 1 8	0 0	10 0	10 0	4 8				0 203599	djones
11	clear	0 17500									0 169000		0 0	10 0	10 0	50				0 207152	djones
12	clear	0 18300	6 34	0 00							0 210000		0 0	10 0	10 0	50				0 195265	djones
13	clear	0 17500									0 219000		0 0	10 0	10 0	50				0 197973	djones
14	clear	0 15600									0 188000		0 0	10 0	10 0	50				0 199963	mwhitt
15	clear	0 17300									0 111000		0 0	10 0	10 0	50				0 214176	mwhitt
16	clear	0 13700									0 243000		0 0	10 0	10 0	50				0 192691	gkesseling
17	clear	0 14100	6 50	0 00							0 195000		0 0	5 0	10 0	50				0 217252	djones
18	clear	0 14600									0 183000	< 1 8	0 0	5 0	10 0	4 3				0 179048	gdickerson
19	clear	0 14600	6 35	0 00							0 226000		0 0	5 0	10 0	50				0 199065	djones
20	clear	0 13000									0 199000		0 0	5 0	10 0	50				0 160874	djones
21	clear	0 14700									0 234000		0 0	5 0	10 0	50				0 201686	djones
22	clear	0 16100									0 252000		0 0	5 0	10 0	50				0 235648	djones
23	clear	0 23800									0 225000		0 0	10 0	10 0	50				0 189501	gdickerson
24	clear	0 46800	6 38	0 00							0 254000		0 0	10 0	10 0	50				0 219741	gdickerson
25	clear	0 14900									0 247000		0 0	10 0	10 0	50				0 184229	djones
26	clear	0 16200									0 214000		0 0	5 0	10 0	50				0 175533	gdickerson
27	clear	0 19600									0 298000	< 1 8	0 0	5 0	10 0	50				0 237071	djones
28	clear	0 11700									0 227000		0 0	5 0	10 0	50				0 186477	gdickerson
29	clear	0 12800									0 237000		0 0	5 0	10 0	50				0 210944	gdickerson
30	clear	0 12600									0 245000		0 0	5 0	10 0	50				0 201859	djones
31																					
Total		4 97100									6 186000									6 059578	
Average		0 16570	6 5	<0 10	0	0	0	2	0	349	0 206200	1	0 0	8 2	10 0	50	#DIV/0!	#DIV/0!	#DIV/0!	0 201986	
Minimum		0 11500	6 3	0 00	0	0	0	2	0	349	0 111000	1	0 0	5 0	0 5	4 3	0	0	0	0 154695	
Maximum		0 46800	6 8	<0 10	0	0	0	0	0	349	0 298000	1	0 0	10 0	10 0	50	0	0	0	0 245419	MOR 5-11-09

COMMENTS: