Fort George G. Meade

Groundwater Contamination, Odenton, Maryland
Interim Measures Update

Restoration Advisory Board Meeting
September 16, 2010

Study Areas

- 1-mile radius surrounding monitoring wells MW-125d/123s & MW-126d/124s located at the intersection of North Patuxent Road and Dovetail Lane, Odenton
- Nevada Ave, Odenton
- Old Dairy Farm Road, Gambrills

Monitoring Well Results

Analytes	Maximum Contaminant Level (MCL)	MW-125d	2004 Results	2005 Results	2008 Results	March 2009 Results	June 2009 Results	MW-126d	2004 Results	2005 Results	2008 Results	March 2009 Results	June 2009 Results
METALS													
Lead	15		**16.3**	ND	NT	NT	NT		14.4	ND	NT	NT	NT
Thallium	2		**6.9**	ND	NT	NT	NT		ND	ND	NT	NT	NT
VOLATILE ORGANICS													
Acetone	-		49.2	120	ND	ND	ND		ND	ND	ND	ND	ND
CCl_4	5		**21.3**	**20**	**25**	**20.3**	**17.0**		4.1	3	**51**	**21.8**	**65.8**
Chloroform	-		0.85J	0.8	1J	ND	1.0		0.43J	0.29	2J	ND	1.6
DCE	70		ND	ND	<0.8	ND	ND		0.42J	2.3	3J	0.69J	2.3
PCE	5		2.8	1.2	**5**	0.66J	ND		**12.4**	**6.5**	**51**	**11.5**	**31.4**
Toluene	1,000		0.36J	1.8	ND	ND	ND		0.5J	ND	ND	ND	ND
TCE	5		0.5	0.28	1 J	ND	ND		3.5	2.4	**16**	4.9	**13.1**

Analytes	MW-123s	2004 Results	March 2009 Results	June 2009 Results	MW-124s	2004 Results	March 2009 Results	June 2009 Results
METALS		All Below MCLs	NT	NT		All Below MCLs	NT	NT
VOLATILE ORGANICS		Dry Well	All ND	All ND		All ND	All ND	All ND

All results in micrograms per liter (ug/L)

NT = Not Tested
ND = Not Detected
CCl_4 = Carbon Tetrachloride

DCE = cis-1,2-Dichloroethene
PCE = Tetrachloroethene
TCE = Trichloroethene

Drinking Water Well Survey

- Initiated April 29, 2009
- Over 2,500 properties
- Results; 1,695 surveys answered
  - 75 Confirmed Primary Drinking Water Source1,599 Confirmed No Well on Property
- Final Letter Campaign
  - 12 Certified letters sent to owners/tenants to confirm decision to decline participation (8 June 2010)
  - 11 Confirmed delivery
    - One new property on Old Dairy Farm Road added to sampling schedule
    - No response from ten (i.e., No signed “Statements Declining Participation” received to date)
  - 1 Undeliverable (address change – letter resent)

Drinking Water Well Results

Street	Addresses with Detections		DCE (MCL - 70 µg/L)		DCA (MCL - 5 µg/L)		TCE (MCL - 5 µg/L)		PCE (MCL - 5 µg/L)		CCl_4 (MCL - 5 µg/L)		Methylene Chloride (MCL - 5,900 µg/L)		1,1,1-Trichloroethane (MCL - 200 µg/L)		Vinyl Chloride (MCL - 2 µg/L)	
	Round 1	Round 2	# of Detections	Range (µg/L)	# of Detections	Range (µg/L)	# of Detections	Range (µg/L)	# of Detections	Range (µg/L)	# of Detections	Range (µg/L)	# of Detections	Range (µg/L)	# of Detections	Range (µg/L)	# of Detections	Range (µg/L)
Annapolis Rd	1	0	1	0.23J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Baliol Ln	0	1	--	--	--	--	--	--	1	0.72J	--	--	--	--	--	--	--	--
Berger St	0	1	--	--	1	0.51 J	--	--	--	--	--	--	--	--	--	--	--	--
Galloway Rd	1	1	--	--	--	--	2	3.2 - 3.5	2	1.3 - 1.9	--	--	--	--	--	--	--	--
Gambrills Rd	1	0	--	--	--	--	--	--	--	--	--	--	--	--	1	0.45J	1	0.45J
Murray Rd	2	2	--	--	--	--	--	--	3	0.94J - 2.6	4	0.80 - 1.2	--	--	--	--	--	--
Nevada Ave	6	7	6	1.1 – 2.20	--	--	3	0.46J - 0.89	8	0.60J - **5.7**	--	--	1	0.60J	--	--	--	--
Old Waugh Chapel Rd	1	0	--	--	--	--	--	--	--	--	--	--	--	--	1	0.54J	--	--
Robey Ln	2	3	5	0.22J - 0.44J	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Tolbert Dr	0	1	1	0.18J	--	--	--	--	--	--	--	--	--	--	--	--	--	--

J = Estimated Value

MCL = Maximum Contaminant Level as defined by the US Environmental Protection Agency

µg/L = one microgram per liter which is equivalent to one part per billion

**Only properties with detections related to the Interim Measures for Monitoring Wells 125d and 126d study are included in the table.*

*** **Bold** indicates value above MCL. Only one sample was above the MCL and resident is receiving bottled water.*

**** Duplicate samples are included in the range of detections*

DCE = Dichloroethene

DCA = Dichloroethane

TCE = Trichloroethene

PCE = Tetrachloroethene

CCl_4 = Carbon Tetrachloride

***Data is current as of 14 September 2010

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Nevada Avenue Monthly Sampling - Interim Results

- Initiated in October 2009 for property with PCE MCL exceedance and 2 adjacent properties
- One additional PCE MCL exceedance to date (Feb10)
- Two detections equal to PCE MCL (Nov 09, Jun 10)

Month	*Dichloroethene (MCL - 70 µg/L)*		*Tetrachloroethene (MCL - 5 µg/L)*		*Trichloroethene (MCL - 5 µg/L)*		*Toluene (MCL – 1,000 µg/L)*	
	# of Detections /Samples	Range (µg/L)	# of Detections /Samples	Range (µg/L)	# of Detections /Samples	Range (µg/L)	# of Detections /Samples	Range (µg/L)
Oct 09	1/1	1.7	1/1	4.5	1/1	0.77J	0/1	--
Nov 09	3/3	1.1-1.8	3/3	2.7-5.0	2/3	0.71J-0.84J	0/3	--
Dec 09	3/3	1.7-1.9K	3/3	3.6-4.6	3/3	0.52J-0.68J	0/3	--
Jan 10	2/2	1.4-1.6	2/2	3.8-4.9	0/2	--	0/3	--
Feb 10	3/3	1.4-1.9	3/3	4.4-**5.3**	3/3	0.57J/0.85J	0/3	--
Mar 10	3/3	1.2J-1.5J	3/3	3.3J-4.3J	3/3	0.48J-0.51J	0/3	--
Apr 10	3/3	1.6-1.7	3/3	3.8-4.2	3/3	0.61J-0.68J	0/3	--
May 10	3/3	1.5-1.6	3/3	4.2-4.5	0/3	--	0/3	--
Jun 10	3/3	1.6-1.8	3/3	4.1-5.0	3/3	0.57J-0.71J	0/3	--
Jul 10	3/3	1.3-1.7	3/3	3.7-4.2	3/3	0.42J-0.7J	1/3	2.0
Aug 10*	3/3	1.4-1.6	3/3	3.5-3.9	1/3	0.53J	1/3	0.49J

***Unvalidated data for the month of August 2010**
Data Qualifiers: K = reported value may be biased high J= estimated concentration below the method detection limit

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Next Steps

- Complete private well survey
- Complete drinking water well sampling
- Continue to supply bottled water
- Reporting
  - Draft Survey Summary Report (Oct 2010)
  - Draft Round #1 Sample Summary Report (Oct 2010)
  - Draft Interim Measures Report (Nov 2010)

Follow-on Work

Off-post Private Well Investigation

- Notification to Proceed issued 30 June 2010
- Scope of Work:
  - Nevada Avenue area groundwater investigation
  - Installation of up to 7 monitoring wells
    - 5 deep
    - 2 shallow (optional)
  - Historical research on potential sources
  - Continuation of bottled water supply
  - Public outreach
  - Reporting

Proposed New Monitoring Well Location

Points of Contact

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