



Fort Detrick Remedial Investigation/Feasibility Study

Status Update

Fort Detrick Restoration Advisory Board Meeting
29 October 2008
Fort Detrick, Maryland



Status Update Discussion

- **Area A – Building 568 TCE Spill Site**
 - Recent Long-Term Monitoring Results
 - CERCLA Five-Year Review
- **Area B Former Disposal Sites**
 - Schedule Update
 - Proposed Plan
- **Area B Groundwater**
 - Recent Quarterly Sampling
 - NPL Listing and Status



Area A – Building 568 TCE Spill Site



Area A

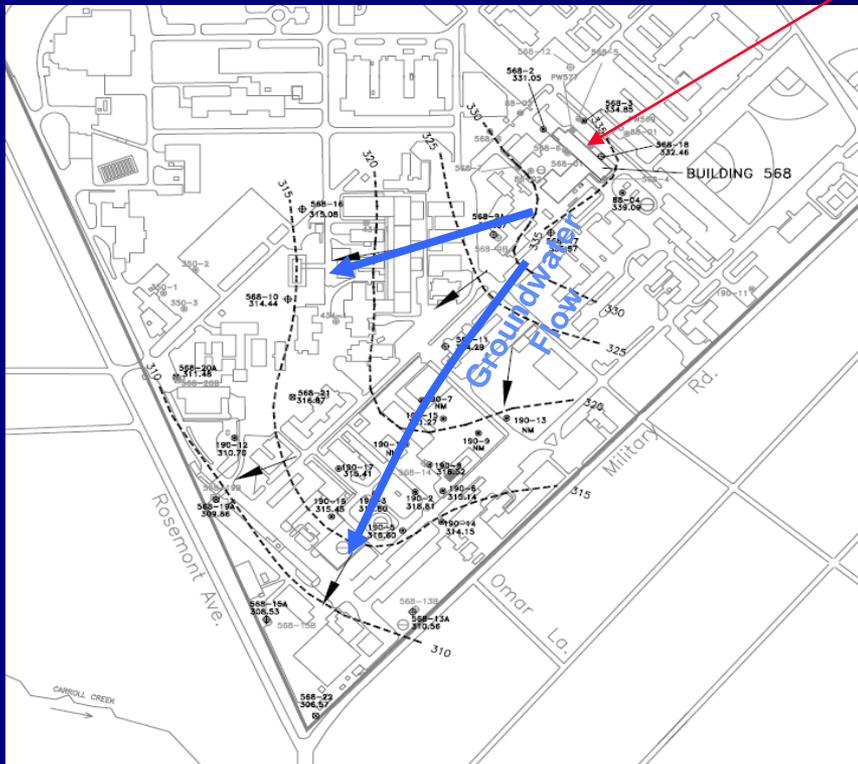
Building 568 TCE Spill Site

- Selected remedy was “Plume Containment using Groundwater Extraction and Monitoring”, which included:
 - Continued operation of the existing groundwater extraction system in Building 568
 - Long-term monitoring of groundwater every six months since 2002

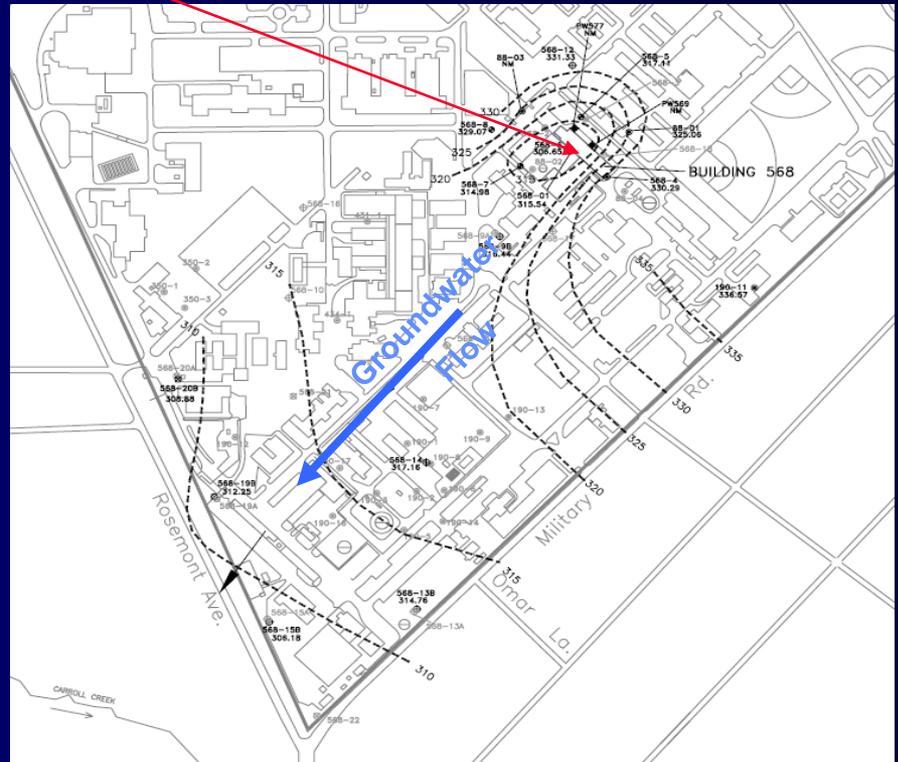


Area A Groundwater Contours March 2008

Building 568



Shallow Groundwater (<70 ft bgs)



Deep Groundwater (<70 ft bgs)



Building 568 TCE Concentrations Recent Sampling

TCE in groundwater at Building 568 slightly above the 5 µg/L MCL

PW 569

Mar 08 – 12 µg/L
Sep 08 – 10 µg/L

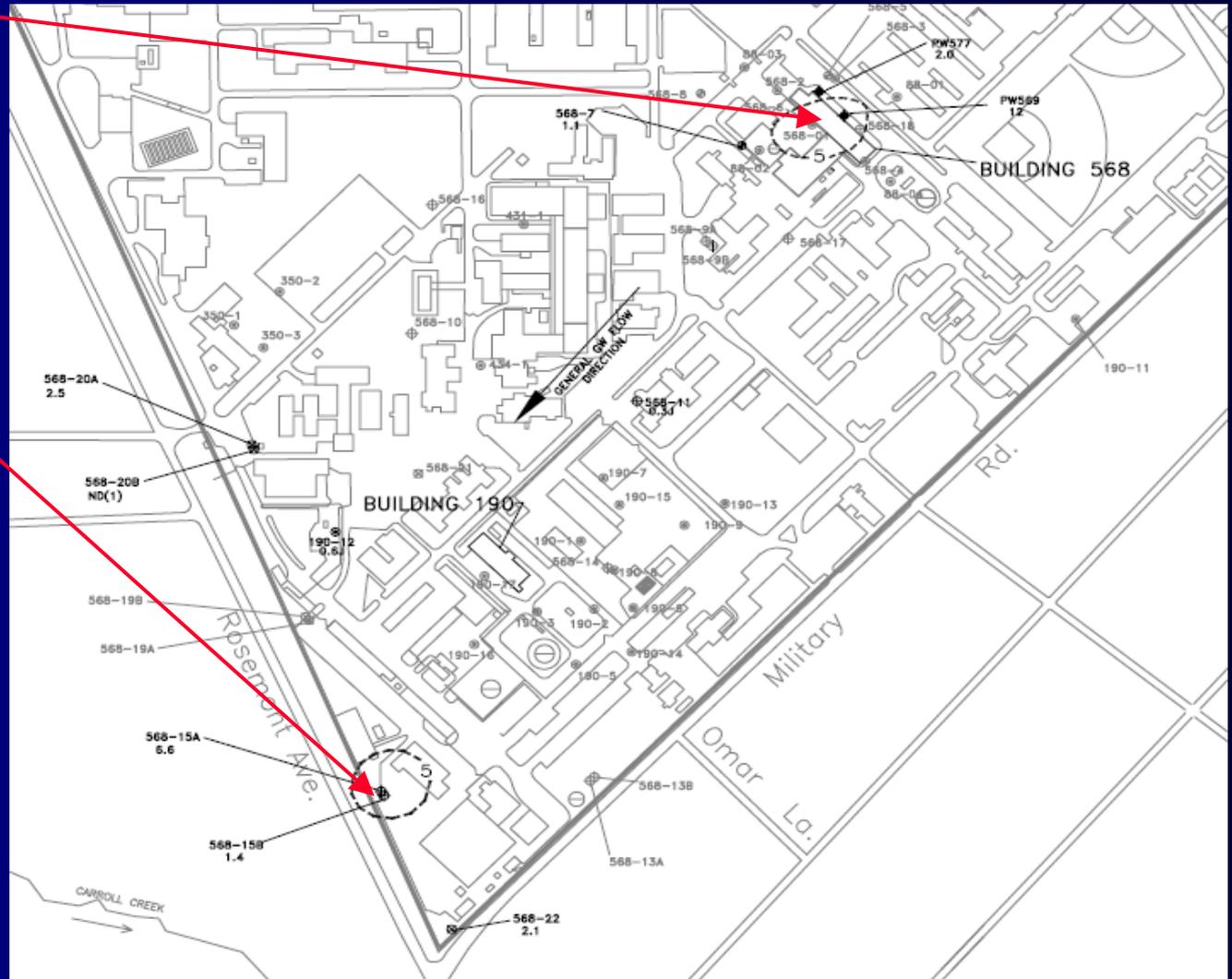
PW 577

Mar 08 – 2.0 µg/L
Sep 08 – 0.8 µg/L

TCE in 568-15A has been near the 5 µg/L MCL over the past few years

Mar 06 – 3.8 µg/L
Sep 06 – 5.8 µg/L
Mar 07 – 7.1 µg/L
Oct 07 – 2.4 µg/L
Mar 08 – 5.7 to µg/L
Sep 08 – 2.9 µg/L

PCE has also been detected in 568-15A, possibly indicating a different source





Building 568 TCE Spill Site CERCLA Five-Year Review

- CERCLA Five-Year Review is currently under review by the EPA and MDE to evaluate whether selected remedy continues to be effective and protective
- Primary issue of concern is occasional TCE concentrations greater than the 5 $\mu\text{g}/\text{L}$ MCL in boundary well 568-15A
- The presence of PCE in 568-15A may indicate a different source



Area B Former Disposal Sites



Area B Former Disposal Sites





Remedial Strategy for Area B Former Disposal Sites

- Utilize EPA Presumptive Remedy for Landfills B-2, B-3 Inactive, B-6, B-8, Trenches North of B-8, B-10, B-11, and B-18
- Comply with current Code of Maryland Regulation 26.04.07.21 for Sanitary Landfill Closure as a relevant and appropriate requirement, which requires an impermeable cap to minimize infiltration of precipitation



Proposed Plan

- Proposed Plan recommending capping was submitted to MDE and EPA in August. Comments from EPA were recently received and comments from MDE are expected soon.
- The Army anticipates finalization of the Proposed Plan in November with initiation of a 30 day public comment period.
- The Proposed Plan will include the following disposal areas:
 - FTD 51 - Area B-3 Inactive
 - FTD 69 - Area B-6
 - FTD 70 - Area B-8, the Trenches North of Area B-8, and Area B-18
 - FTD 71 - Area B-10 and B-10 Grove
 - FTD 49 - Area B-11



Area B Former Disposal Site Schedule

Site	Remedial Investigation/ Feasibility Study	Proposed Plan Public Comment	Decision Document	Capping Design	Construction
B-2	Finalized Oct 2006	Aug 24 - Sep 23 2007	Signed 21 February 2008	Complete by Spring 2009	Spring 2009
B-3 Inactive	Finalized Aug 2008	Nov/Dec 2008	Jan/Feb 2009		
B-6	Finalized Feb 2007				
B-8 Trenches North B-8 B-10/B-10 Grove B-11	Finalized Apr 2008				
B-18	March 2008 investigation confirmed buried waste present. Site included with area B-8.				



Area B Groundwater



Area B Groundwater Quarterly Monitoring

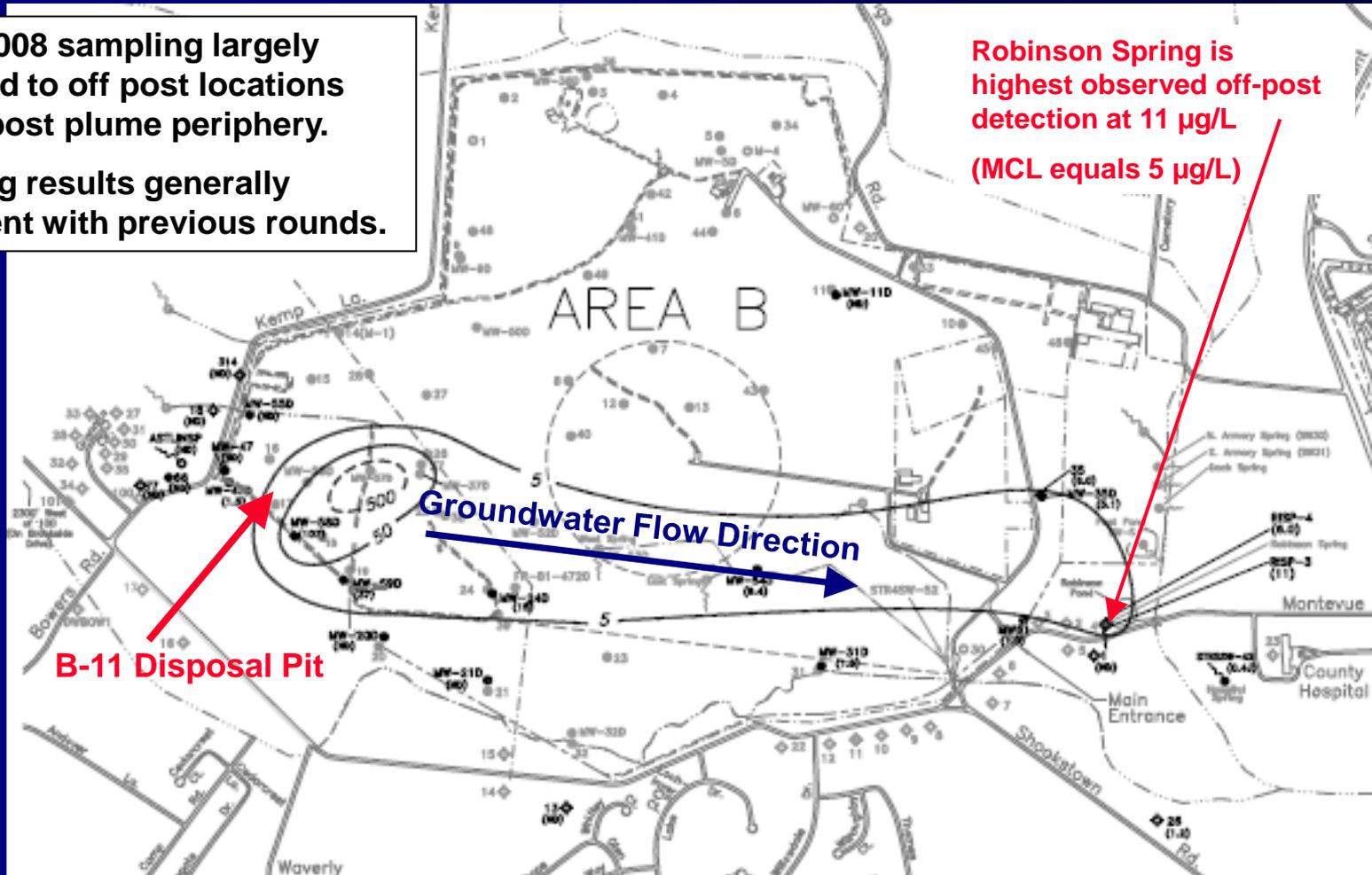
- **Recent sampling since last RAB includes:**
 - March 2008 – Sampling locations primarily restricted to on post plume periphery and off post neighboring locations.
 - June 2008 – Sampling limited to private wells in use neighboring Area B.
 - September 2008 – Sampling limited to private wells in use neighboring Area B, plus two new off post locations.



March 2008 TCE Concentrations

March 2008 sampling largely restricted to off post locations and on post plume periphery. Sampling results generally consistent with previous rounds.

Robinson Spring is highest observed off-post detection at 11 µg/L (MCL equals 5 µg/L)



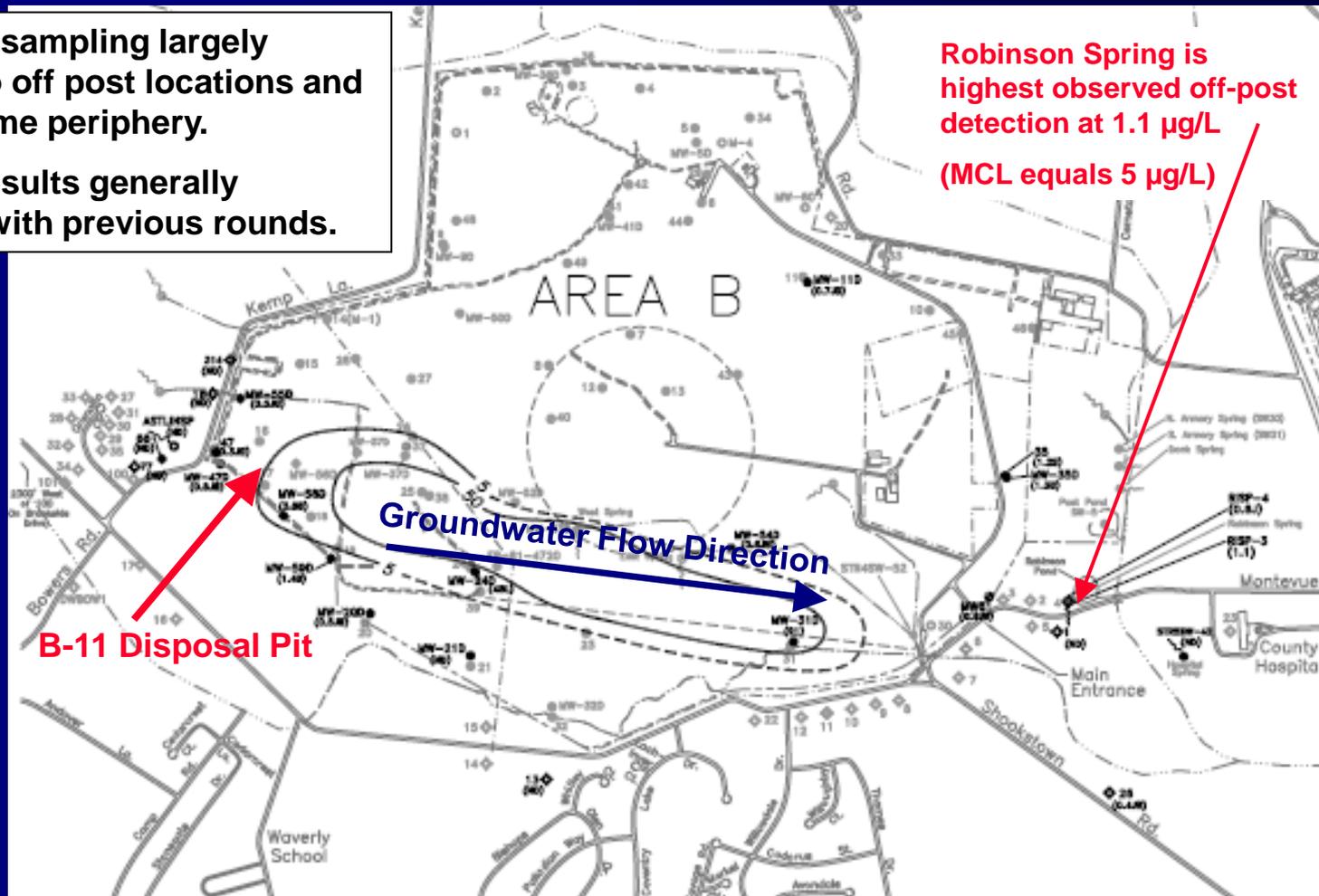


March 2008 PCE Concentrations

March 2008 sampling largely restricted to off post locations and on post plume periphery.

Sampling results generally consistent with previous rounds.

Robinson Spring is highest observed off-post detection at 1.1 $\mu\text{g/L}$
(MCL equals 5 $\mu\text{g/L}$)



B-11 Disposal Pit

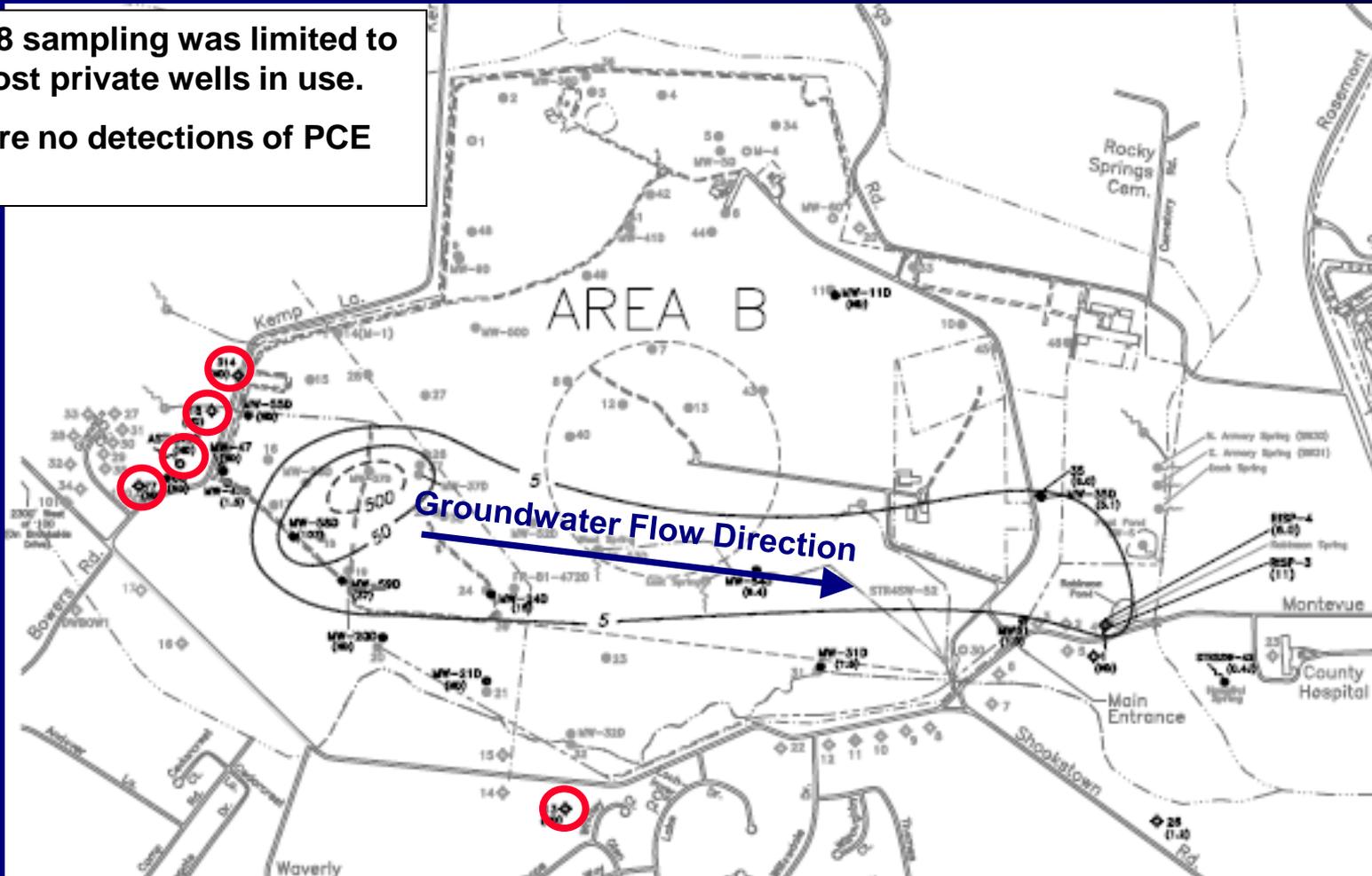
Groundwater Flow Direction



June 2008 Sampling

June 2008 sampling was limited to five off post private wells in use.

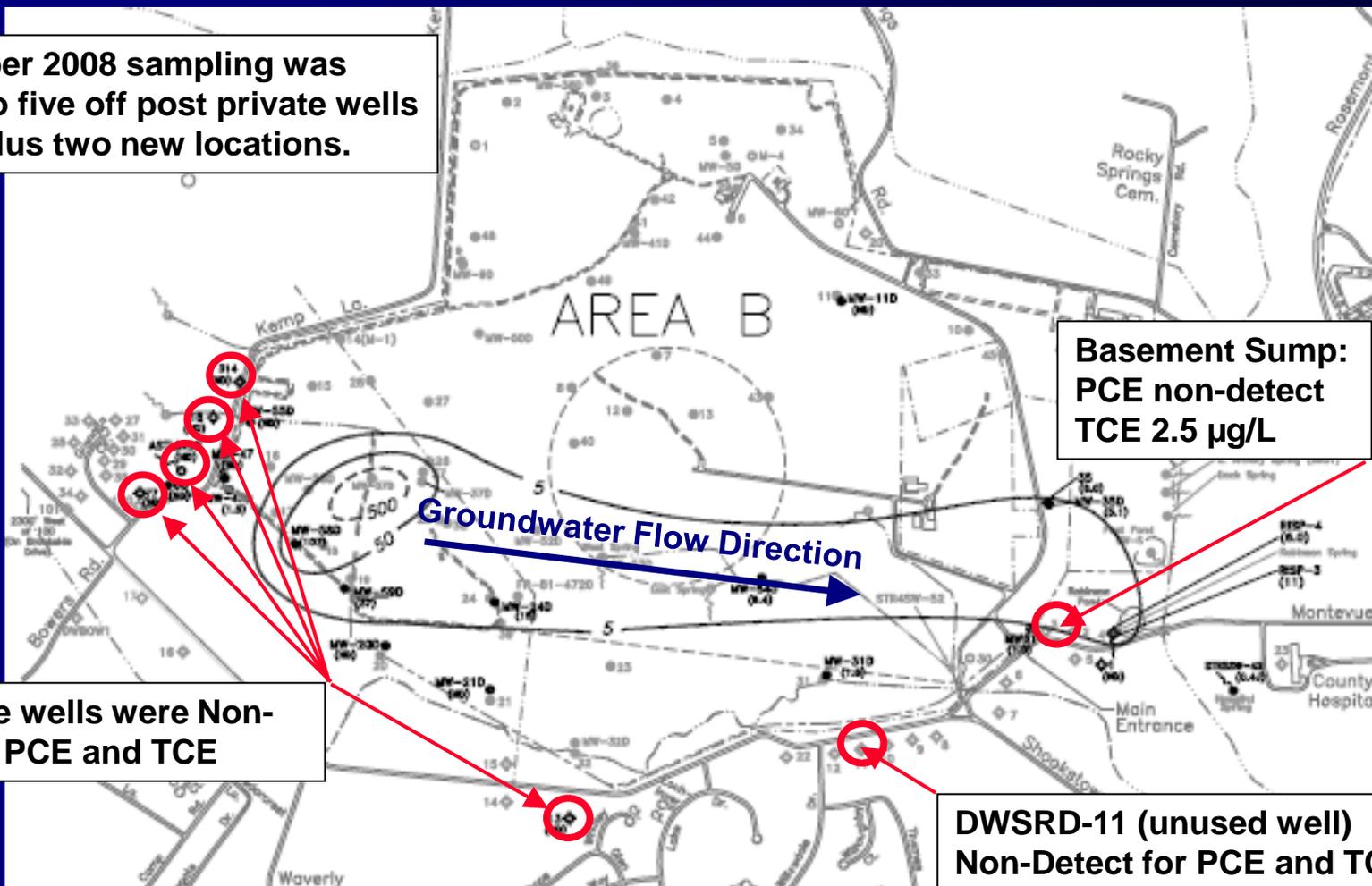
There were no detections of PCE or TCE.





September 2008 Sampling

September 2008 sampling was limited to five in use private wells in use, plus two new locations.



Basement Sump:
PCE non-detect
TCE 2.5 µg/L

Five in use wells were Non-Detect for PCE and TCE

DWSRD-11 (unused well)
Non-Detect for PCE and TCE



Area B Groundwater NPL listing

- In February 2008, the Army submitted a Conceptual Site Model (CSM) to MDE and EPA describing the site conditions.
- MDE and EPA expressed concern that further characterization of groundwater was needed, and has proposed the site to be listed on the National Priorities List (NPL).
- As part of the NPL listing, the Agency for Toxic Substances and Disease Registry (ATSDR) is performing a Public Health Assessment.



Area B Groundwater 2008 Activities and Path Forward

- **March-October 2008**
 - Army, MDE, and EPA held six technical working meetings to review existing site data so that necessary further work can be identified.
- **November 2008**
 - Army is planning to begin an interim data collection effort to gather valuable information regarding how groundwater flows through the bedrock and to what depth.
 - This preliminary effort is expected to include drilling of two boreholes to 325' below ground, followed by well installation and sampling.
- **November 18, 2008**
 - Next Army/MDE/EPA technical meeting scheduled. Goal is to scope a final, comprehensive work plan over the winter to complete site characterization.
 - Investigation activities are expected to occur through 2009.