

**US Army Corps
of Engineers
Baltimore District**

Fort Detrick Installation Restoration Program

**Restoration Advisory Board Meeting
11 December 2003 7:30 PM
Fort Detrick, Frederick, Maryland**



**US Army Corps
of Engineers**
Baltimore District

Fort Detrick

Area B-11 Removal Project Status

- No lost time accidents (1044 days)
- Removed 2005 tons of waste and contaminated soil from Pit 1. 52 cylinders (39 intact) recovered from Pit 1.
- Overburden removed from Pits 2, 3, and 4 from 8 May through 30 May 2003
- Excavation of waste materials from Pit 2 commenced 5 June 2003 and ended 11 June 2003. Pit 3 excavation commenced 16 June 2003 and ended 1 August 2003 (completed within surveyed limits based on trench delineation). **Pit 4 excavation commenced 7 August 2003 and ended 3 November 2003. Site regraded from 3 November through 17 November.**
- **Approximately 1,534 tons total soil removed from Pits 2, 3, and 4. 42 cylinders (20 intact) removed from Pits 2, 3, and 4.**



Pit 1 Completed Grade



Fort Detrick

US Army Corps of Engineers Area B-11 Pits 2, 3, 4 Removal Project Status

Baltimore District

Excavation of Pits 2, 3, and 4 Completed!!

Wastes recovered during Phase II excavation (Pits 2, 3 and 4) include:

- Small glass containers
- Glass/plastic
- Medical waste
- Metal fragments
- Five 5-gallon pails
- Small laboratory chemical bottles
- Two vials containing white-yellowish powder
- Approximately twenty (20) intact cylinders and 22 perforated cylinders ranging in size from 7/8-8" diameter by 5-25" long have been recovered to date. Some intact or partial valve assembly. All have been cataloged and secured.



Scalpels Recovered from Pit 2

Approximately 1534 tons of soil (9 non-hazardous overburden roll-offs for Detrick landfill) have been loaded from Pits 2, 3, and 4 into roll-off boxes as of 11 December 2003.



**US Army Corps
of Engineers**
Baltimore District

Fort Detrick

Area B-11 Pits 2, 3, 4 Removal Project Status (Continued)

- Pits 2, 3, and 4 Schedule
 - Startup activities: 21 March 2003 – 02 May 2003
 - Excavation: 08 May 2003 – 10 Dec 2003
 - Final Demob April 2004
- Funding
 - Removal action was fully funded in June 2003



Pit 4 – 4 Dec 2004 (pending backfill)



Pits 2 and 3 – 4 Dec 2003



**US Army Corps
of Engineers**
Baltimore District

Fort Detrick

Area B-11 Cylinders, Overview

Approximately 94 Cylinders Removed during Area B-11 Removal Action

- 52 from Pit 1; 42 from Pits 2, 3, 4
- Size range from 7/8" to 8" diameter and 5" to 25" in length

X-ray and Portable Isotopic Neutron Spectroscopy (PINS) Evaluation Performed on Five of the Cylinders

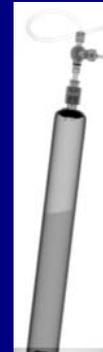
- X-Rays indicated cylinders contain liquids and gases
- PINS analysis indicated weak chlorine peaks and no signatures that would indicate the presence of chemical warfare material

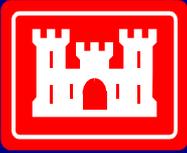
While the Contents of the Majority of the Cylinders are Unknown, the Potential Exists that they Contain Biological Agents or Chemical Agents

- However, based on PINS analysis, it is likely that most contain soil and water residues



Radiography of
cylinders recovered





**US Army Corps
of Engineers**
Baltimore District

Fort Detrick

Area B-11 Cylinder Disposition Option Selected

Open, Analyze, and Disinfect Cylinders On-Site, Disposal of Biological Materials in the Fort Detrick Medical Waste Incinerator and Disposal of Hazardous Waste Off-site

- **Cylinder Disposition Schedule**

- Complete Work Plans: 01 Dec 2003 – 27 Jan 2004
- Prove-out Biological Sterilization Process: 15 Dec 2003 – 15 Jan 2003
- Cylinder Disposition: 26 Jan 2004 – 12 March 2004
- Final Decon/Site Restoration: 15 March 2004 – 30 April 2004

- **Funding**

- Cylinder disposition funded – Contract to to Shaw in place 29 September 2003
- Cylinder disposition subcontract in place 2 December 2003.



**Cylinders Recovered
from Pit 2**

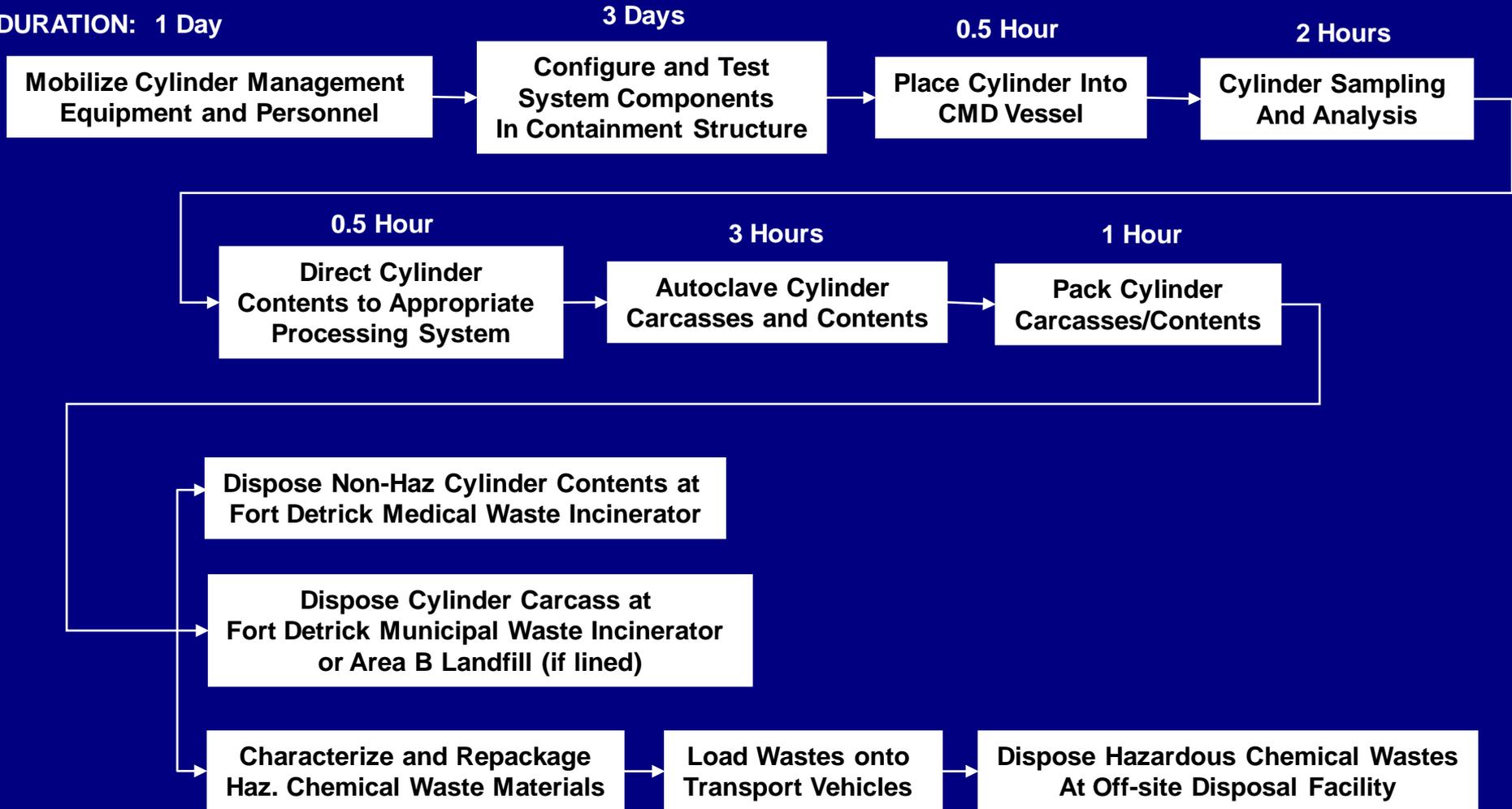


Fort Detrick Area B-11

US Army Corps
of Engineers
Baltimore District

Cylinders Alternative 2 Process Flowchart

DURATION: 1 Day





Fort Detrick Area A LTM Update

US Army Corps
of Engineers
Baltimore District

Pending Schedule:

LTM (Five Year Review)

Semi-Annual Sampling Report (June 03 Sampling)

Final Area A LTM Sampling Report (May 03 Sampling)

Draft Area A LTM Sampling Report (Oct 03 Sampling)

Estimated Completion Date

July 06

November 03

December 03

January 04 (Army
Review)

Items Completed:

Area A Long-Term Monitoring (LTM) Plan

Area A LTM Sampling (1st round)

Area A LTM Sampling (2nd round)

Semi-Annual Sampling Report (May 02 Sampling)

Area A LTM Sampling (3rd round)

Completed Date

April 02

May 02

June 03

November 02

October 03



Area A Shallow Water Levels

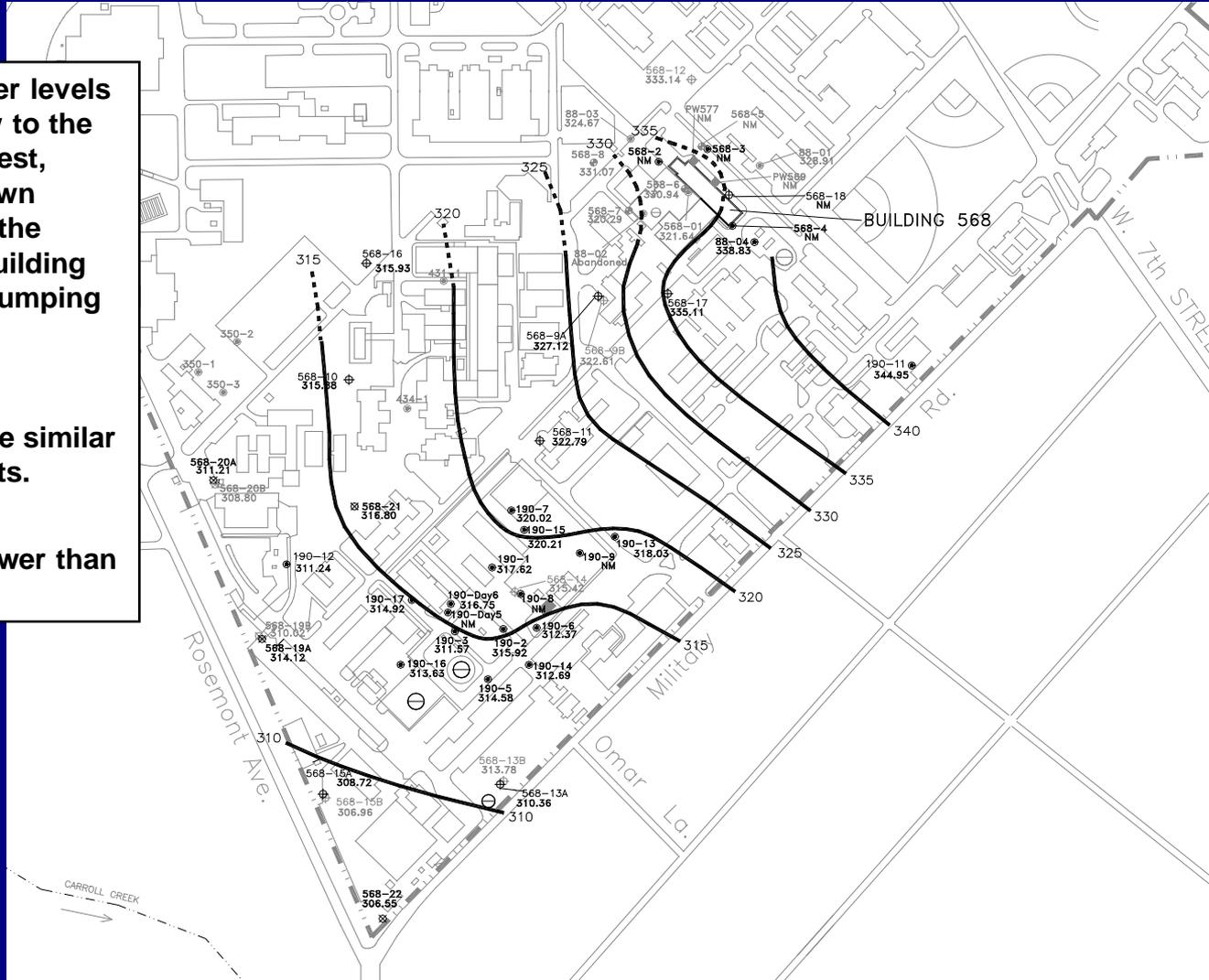
US Army Corps
of Engineers
Baltimore District

20 October 2003

Shallow water levels indicate flow to the south and west, with drawdown influence in the vicinity of Building 568 due to pumping wells.

Gradients are similar to past events.

Water levels generally lower than Spring 03





Area A Deep Water Levels

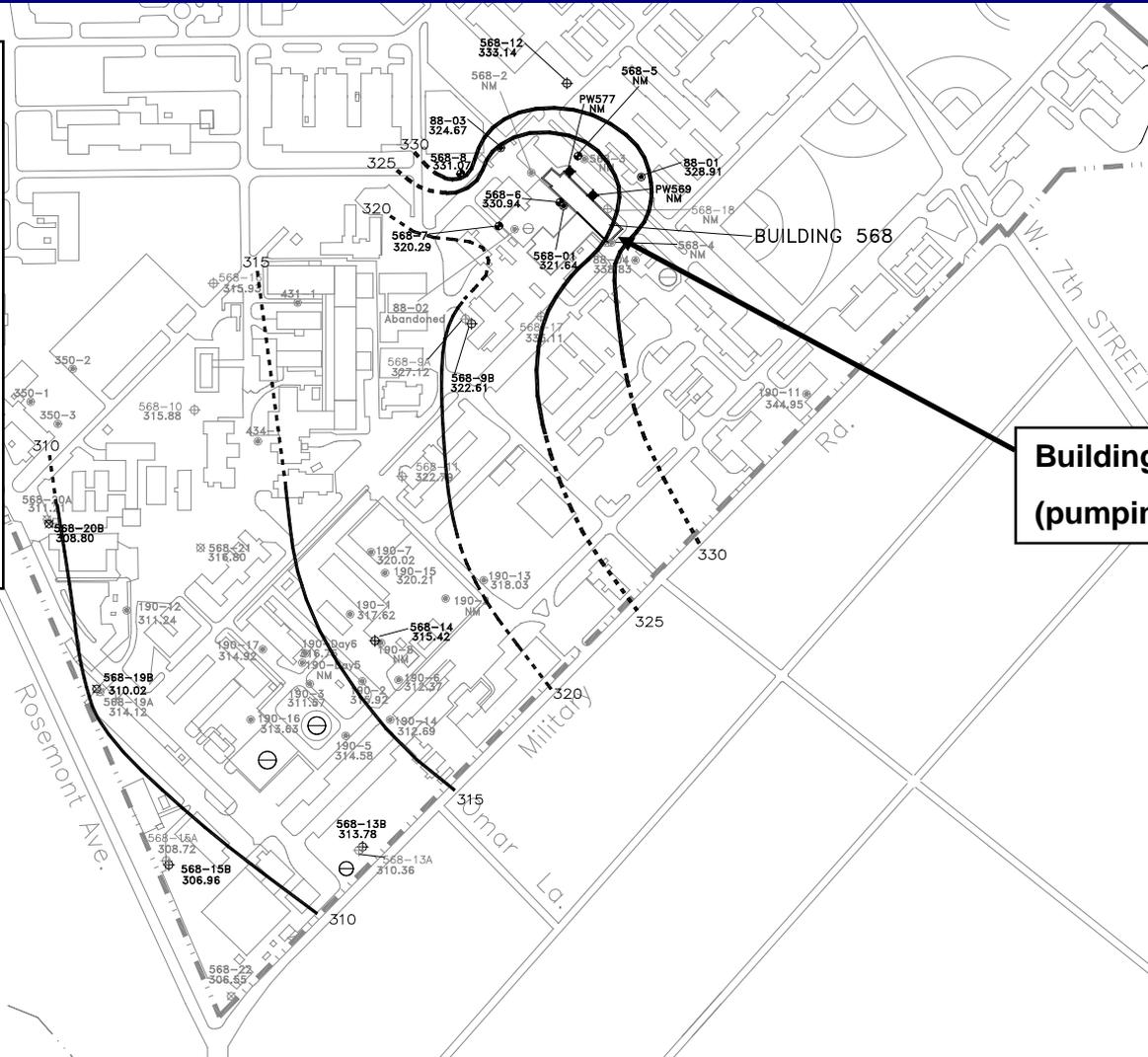
US Army Corps
of Engineers
Baltimore District

20 October 2003

Deep water levels indicate flow to the south and west, with drawdown influence in the vicinity of Building 568 due to pumping wells.

Gradients are similar to past events.

Water Levels Generally Lower than Spring 03



Building 568
(pumping in this area)



Fort Detrick RI/FS

Area B Update

US Army Corps
of Engineers
Baltimore District

COMPLETED (none new)

Engineering Evaluation/Cost Analysis (EECA) Area B-11 Chemical Waste Disposal Pits	(Feb 00)
EECA (Proposed Plan)	(May 00)
EECA (Decision Document)	(July 00)
Public Involvement and Response Plan	(July 00)
Chemical Oxidation Bench-Scale Test Work Plan	(Oct 00)
Photographic Analysis (USEPA EPIC Study)	(Mar 01)
Chemical Oxidation Bench-Scale Test Report (Final)	(July 01)
Area B Background and B-20 North Follow-On Work Plan	(Nov 02)

PENDING

Area B Background Study
Groundwater Pilot Test Field Technology Assessment Work Plan
Area B Additional Investigation Work Plan
Dye Trace Study Work Plan (Final)
RI
FS
PP
DD
RD
RA

Completion Date

January 04

Pending Funding
Pending completion of Background Study
Pending Funding
Schedule being developed
Schedule being developed

March 04

Area B-1 Site Close-Out Document (Draft Final)

Explanation of Significant Differences – B-11 Pit 1 Removal Action

Awaiting Army Signature

Explanation of Significant Differences – B-11 Pits 2,3,4 Removal Action

Awaiting Army Signature

* Additional sites are being evaluated for Close-Out Documents.



US Army Corps
of Engineers
Baltimore District

Fort Detrick RI/FS

Area B Update

Completed and Planned Field Activities

COMPLETED TASKS SINCE LAST MEETING

- Semi-Annual Area B Sampling (October 03) Results Pending

PLANNED

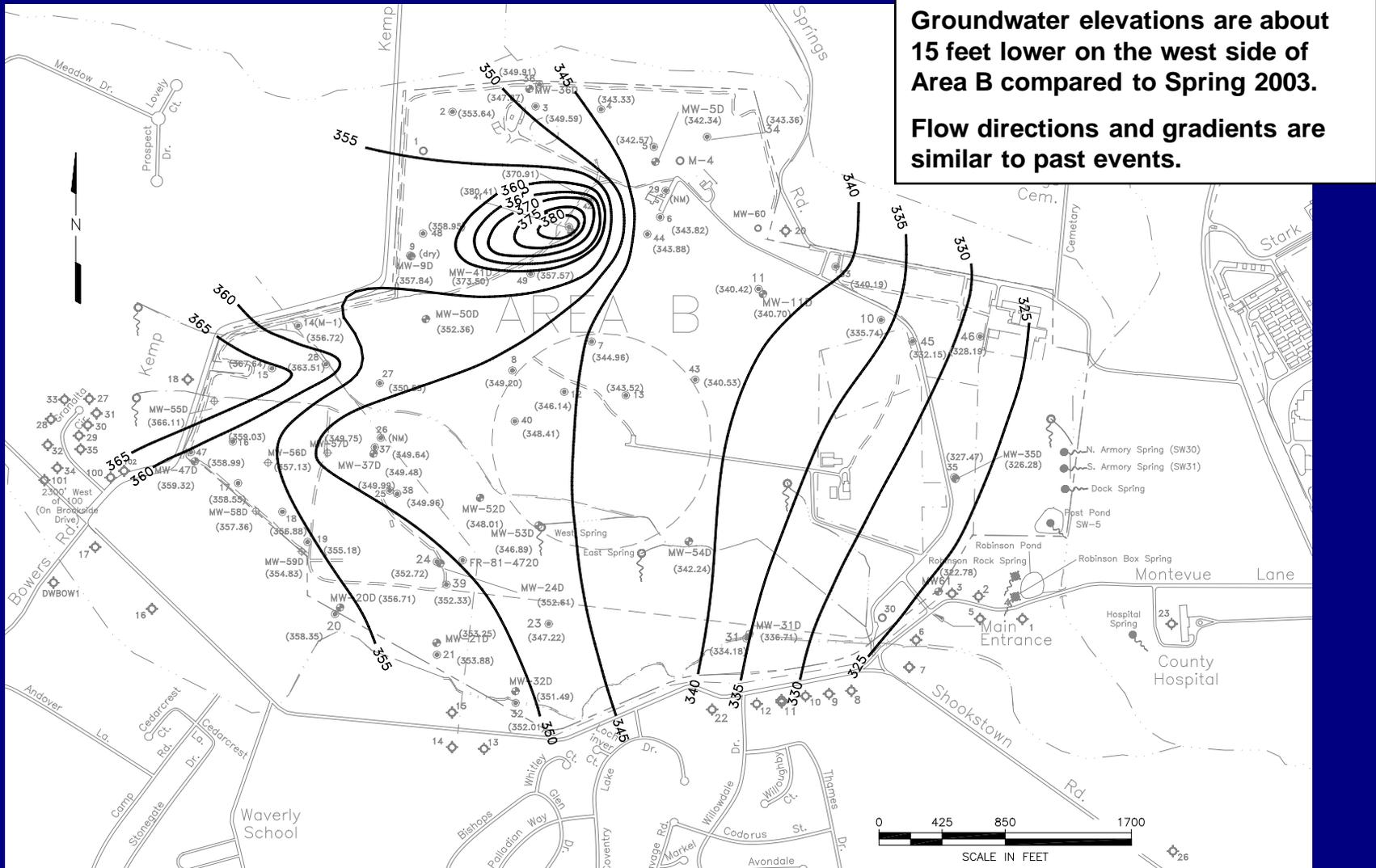
- Dye Trace Study - Schedule being developed (funding dependent).
- Additional Periodic Groundwater Monitoring



Area B Water Levels

US Army Corps
of Engineers
Baltimore District

24 October 2003





US Army Corps
of Engineers
Baltimore District

Area C Update

- Draft Final RI was completed October 2003.
Currently under review.
- Final scheduled for **February 2004**

