

**US Army Corps
of Engineers
Baltimore District**

Fort Detrick Installation Restoration Program

**Restoration Advisory Board Meeting
12 February 2003 7:30 PM
Fort Detrick, Frederick, Maryland**



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Fort Detrick

Area B-11 Pit 1 Removal Project Status

- No lost time accidents (719 days)

SITUATION AS OF FEBRUARY 11:

- Pit #1 is has been completely excavated (ended 19 December 2003).
- Removed 1976 tons of waste and contaminated soil from the pit (112 rolloffs)
- 175 tons non hazardous overburden to Fort Detrick's landfill.
- Most equipment inside structure has been decontaminated and removed.
- HEPA systems are still active until building and floor have been decontaminated
- Confirmatory wipe biological samples will follow disinfection.

View of Completed Excavation



Remaining Freeze
Pipes (to be capped)



Carbon Unit
Disassembly



Cleaning/Disinfecting
Equipment





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Area B-11 Pit 1 Removal Project Status

Container Removal Summary

- A total of 40+ 55-gallon drums in various stages of decomposition were removed as of 12/20/02 (the end of excavation) and sent out as hazardous waste
- Recovered 20 containers(>1 gal) with contents
 - 6 were 55 gal drums with contents,
- Resulting in:
 - 13 overpacks of which 8 are 55 gal overpacks
- Additional recovery:
 - **52 cylinders (One additional cylinder)**
- Misc. copper tubes with lab pipettes (destroyed at Fort Detrick incinerator)
- 113 vials (some are at USAMRIID and ECBC – the majority destroyed)
- 12 drums and metal containers have been tested
- Results -
 - Picloram (pesticide) was identified in three containers
 - 2-s-butyl-4,6-dinitrophenol (pesticide) in two containers
 - Diocetyl phthalate – used in plastics and aluminum silicate (inorganic unknown use) – in one container
 - Poly(butyl acrylate) – Polymer – in one container
 - Chlorophenyl isocyanate – intermediate for dyes and pharmaceuticals – in one container
 - Poly(ethyl acrylate) – polymer – in one container
 - Q-thane (poly ester urethane resin) – in one container
 - Tolyene 2,4-diisocyanate (TDI) - Polyurethane foams and coatings – in one container
 - Ankerite (Commercial Materials Painter Minerals) – in one container





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Area B-11 Pit 1 Removal Project Status
Explanation of Significant Differences (ESD)

The ESD is required to be produced for the Area B-11 Pit 1 project due to process changes that have occurred in the project since the Decision Document was originally agreed to in July 2000.

Significant Differences Include:

- The total volume of material to be excavated and disposed has increased from 546 cubic yards to 2,355 cubic yards.
 - This condition required that the pit materials be removed in phases and a larger freeze wall was needed for Pit 1.
- Reactive and explosive materials were found in Pit 1.
 - This condition required improvements for remote crushing and sorting of containers as well as air treatment system improvements.
- Biological wastes were found in Pit 1
 - This condition required:
 - Air handling improvements (Filtration upgrade)
 - Soil milling improvements
 - Dust monitoring and control
 - Use of disinfectants
 - Segregation of medical wastes
 - Lab analysis for biological pathogens
- The explanation of Significant Difference (ESD) document is complete pending review from regulators.
- The ESD document will be included in the Administrative Record and its availability will be published in local papers



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Area B-11 Pit 1 Removal Project Status (Continued)

- **New Schedule**

- Pit 1 Building and floor disinfection, pit backfill.
to be completed by approximately 28 Feb 2003.

Funding

- Funds are programmed to available to complete
Pit 1.





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Area B-11 Pits 2, 3, 4 Removal – Project Status and Funding

- **Fort Detrick presented a briefing to the DA on 10 January 2003**

Schedule

- **Mobilization : March-April 2003**
- **Excavation operations to begin May 2003**
- **Excavation operations complete Fall 2003**



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Area B-11 Pits 2, 3, 4 Removal Project Status
Explanation of Significant Differences (ESD)

An Explanation of Significant Differences (ESD) is being performed for Pits 2, 3, and 4 that includes the changes described for the Pit 1 ESD as well as not installing the freeze wall for Phase II (shallower waste and engineering controls will protect groundwater).

New removal action objective (no freeze wall to define excavation limits):

“the action is considered to be complete when there is no visual evidence of broken or intact chemical waste containers remaining in the pit areas and any materials released during excavation are removed from the site or all materials have been removed to the technically practicable excavation depth.”

This decision was based on the following:

- 1) All wastes that have the potential to cause a major release to groundwater are buried within the practicable excavation depth and will have been removed from the site at the time of action completion; and,
- 2) A Remedial Investigation/Feasibility Study (RI/FS) will be performed after completion of the removal action and the most effective, implementable, and cost effective remedial alternative will be employed if unacceptable human health or environmental risks are associated with the remaining soil.

The ESD is being reviewed internally before regulator comments.

Upon Army signature, the availability will be published in local papers for public review.



Fort Detrick Area A LTM Update

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Pending Schedule:

Area A LTM Sampling (2nd round)
LTM (Five Year Review)

Estimated Completion Date

February/March 03
July 06

Items Completed (None New):

Area A Long-Term Monitoring (LTM) Plan
Area A LTM Sampling (1st round)
Semi-Annual Sampling Report (May 02 Sampling)

Completed Date

April 02
May 02
November 02



Fort Detrick RI/FS

Area B Update

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DOCUMENTS

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

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

Area B-1 Site Close-Out Document

Area B-18 Site Close-Out Document

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

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

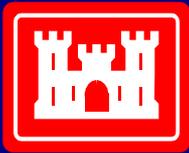
* Additional sites are being evaluated for Close-Out Documents.

Completion Date

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

March 03

March 03



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Area B Update

Completed and Planned Field Activities

COMPLETED TASKS SINCE LAST MEETING

- No Field Activities

PLANNED

- Additional periodic residential and on-post well and surface water sampling - **Every 6 months.**
- Dye Trace Study - Schedule being developed (funding dependent).
- Water Treatment System (Krantz) - On-hold pending funding.
- Area B Background Study to assess metals concentrations in background for comparison with site data.
- Additional Residential well research downgradient of Area B to aid in monitoring groundwater contamination.

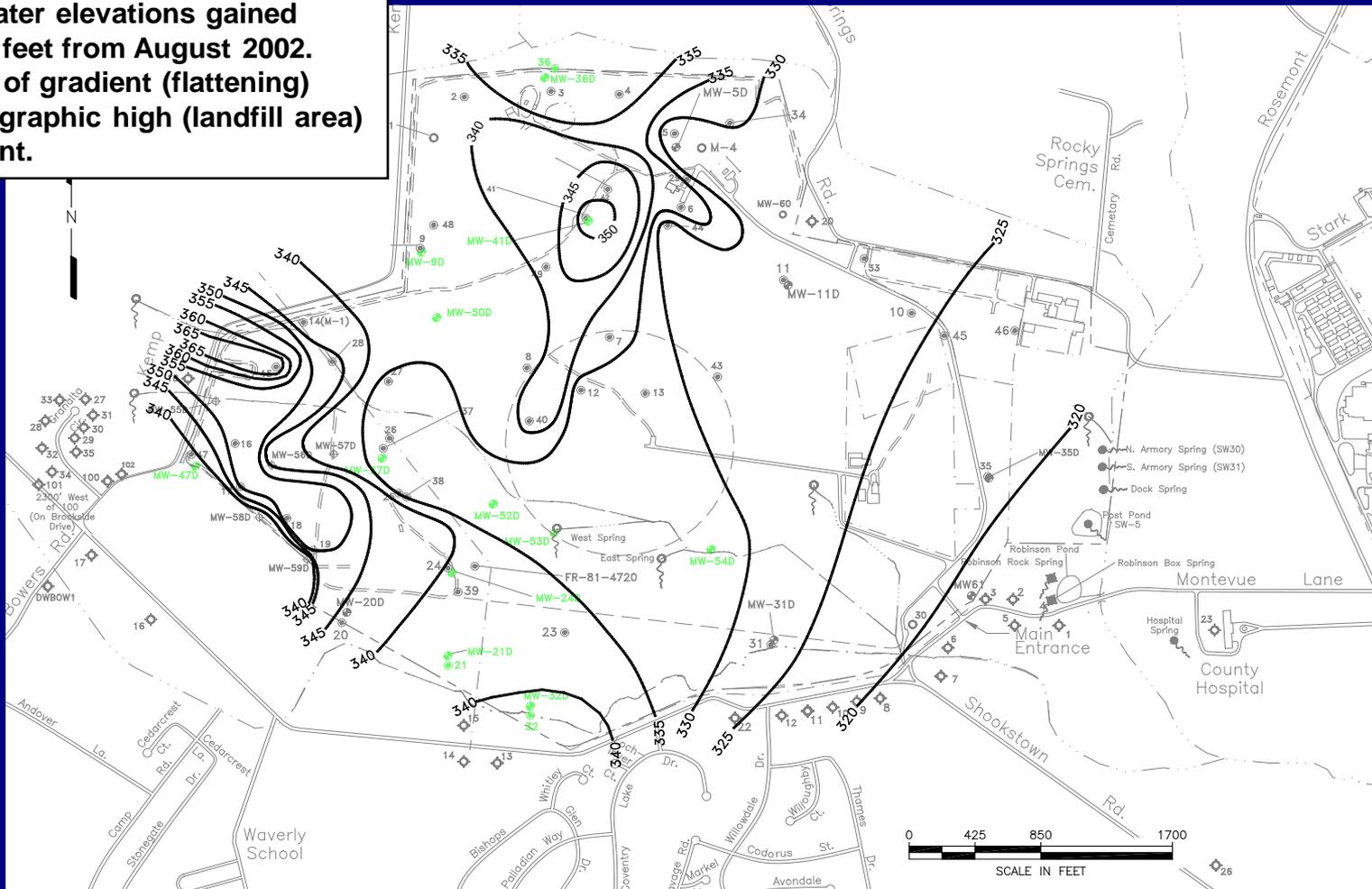


Area B Water Levels

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November 4, 2002 (From last Meeting)

Groundwater elevations gained about 0.5 feet from August 2002. Decrease of gradient (flattening) near topographic high (landfill area) still evident.



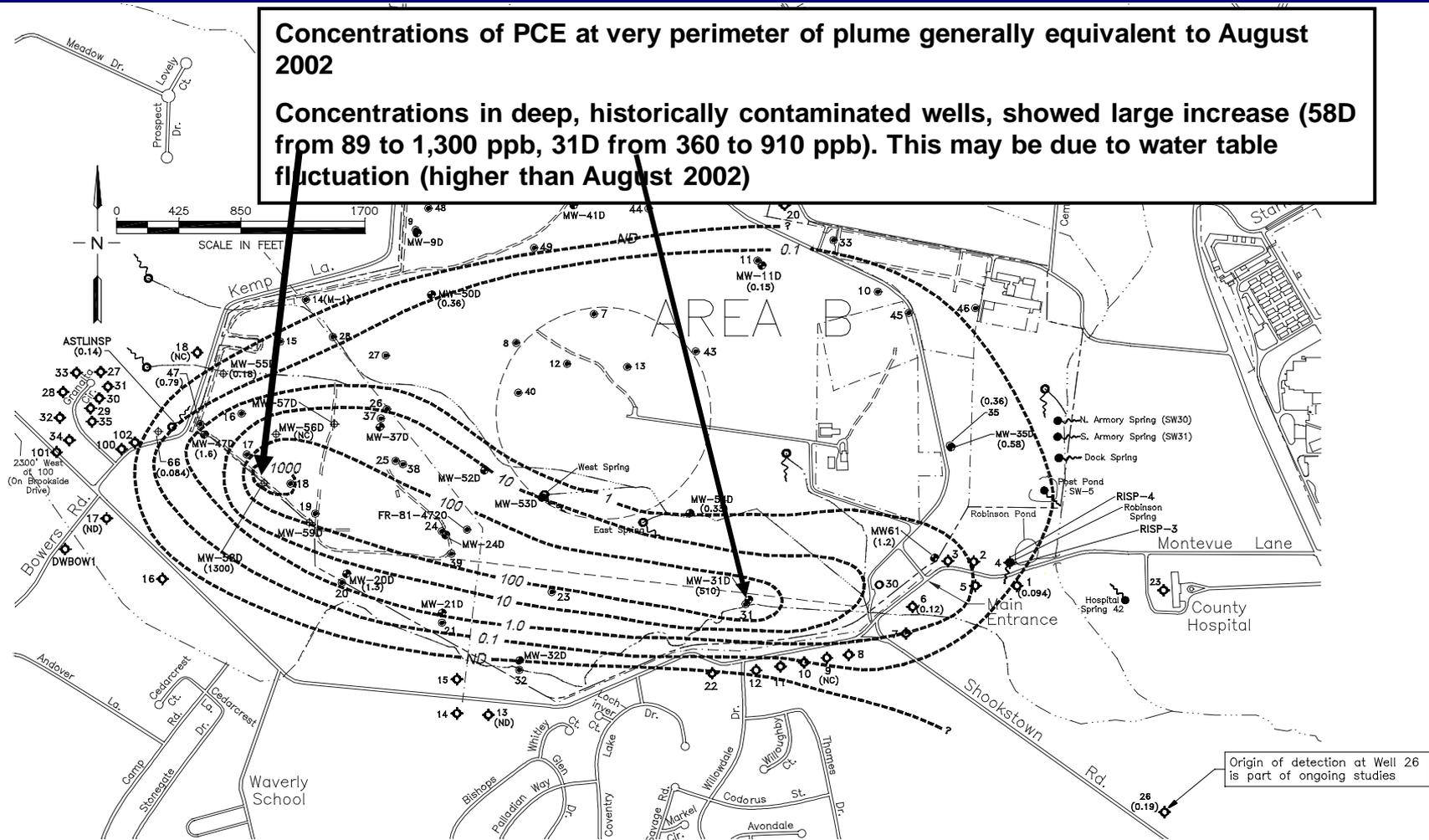


Fort Detrick RI/FS Quarterly Sampling results PCE Plume (November 2002)

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Concentrations of PCE at very perimeter of plume generally equivalent to August 2002

Concentrations in deep, historically contaminated wells, showed large increase (58D from 89 to 1,300 ppb, 31D from 360 to 910 ppb). This may be due to water table fluctuation (higher than August 2002)





Fort Detrick RI/FS

RESIDENTIAL BOUNDARY WELLS AND SURFACE WATER Sampling Locations Data November 2002

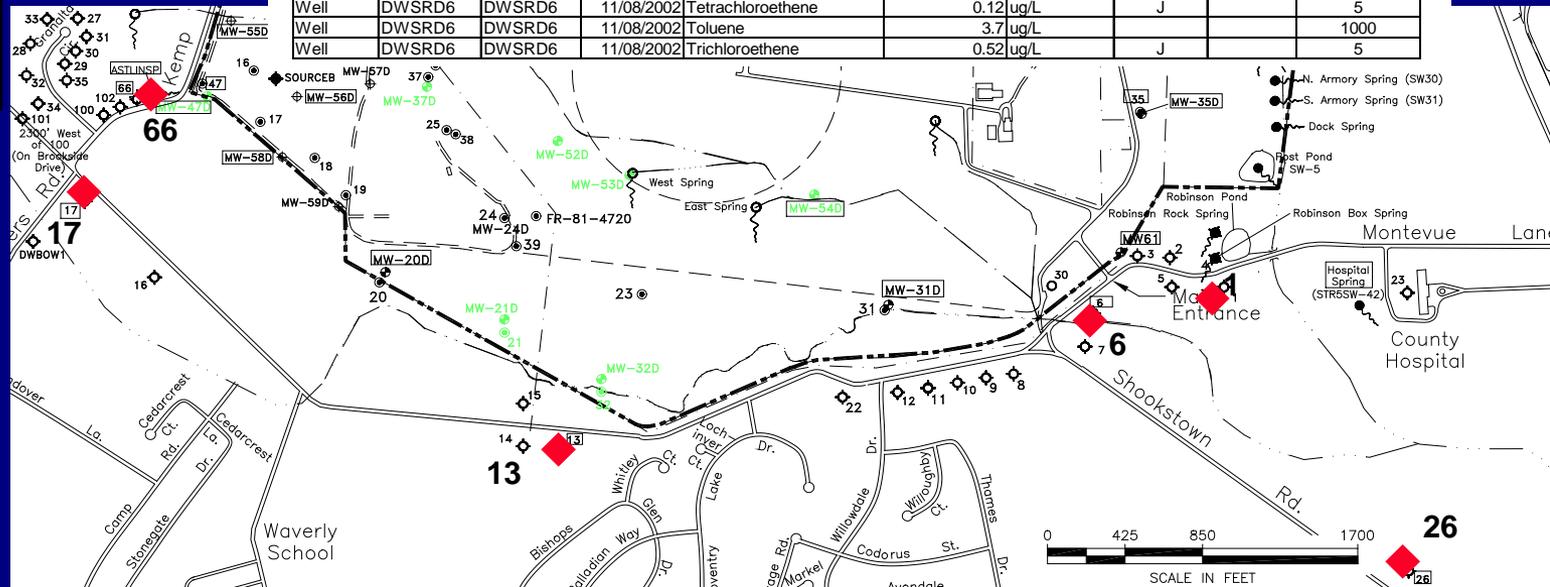
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Low-levels of volatile compounds have been found at all sampled locations with the exception of locations 17 and 13. These contaminants have generally been found in Area B as well; however, there may be more than one source for some of the contaminants besides Area B.

All concentrations are well below USEPA drinking water standards (MCLs).

Wells 13, 17, 66 are the only wells sampled that are used for residential purposes. Well 13 is supplied with bottled water for consumption.

Site Type	Site ID	Sample ID	Sample Date	Analyte Description	Concentration	Unit Measure	Lab Qualifiers	Validation Qualifiers	MCL ug/L
Spring	ASTLINSP	ASTLINSP	11/07/2002	1,2-Dichloroethane	0.076	ug/L	J		5
Spring	ASTLINSP	ASTLINSP	11/07/2002	m&p-Xylene	0.1	ug/L	J		10000
Spring	ASTLINSP	ASTLINSP	11/07/2002	Tetrachloroethene	0.14	ug/L	J		5
Well	DWELL-66	DWELL-66	11/07/2002	1,1,1-Trichloroethane	0.36	ug/L	J		200
Well	DWELL-66	DWELL-66	11/07/2002	Tetrachloroethene	0.084	ug/L	J		5
Well	DWSRD-1	DWSRD-1	11/07/2002	Benzene	0.36	ug/L	J		5
Well	DWSRD-1	DWSRD-1	11/07/2002	Butane	1.7	ug/L	J	NJ	No MCL
Well	DWSRD-1	DWSRD-1	11/07/2002	Pentane	1.2	ug/L	J	NJ	No MCL
Well	DWSRD-1	DWSRD-1	11/07/2002	Propane	2.8	ug/L	J	NJ	No MCL
Well	DWSRD-1	DWSRD-1	11/07/2002	Tetrachloroethene	0.094	ug/L	J		5
Well	DWSRD-1	DWSRD-1	11/07/2002	Trichloroethene	0.5	ug/L	J		5
Well	DWSRD-26	DWSRD-26	11/07/2002	1,1,1-Trichloroethane	0.082	ug/L	J		200
Well	DWSRD-26	DWSRD-26	11/07/2002	Butane	2.9	ug/L	J	NJ	No MCL
Well	DWSRD-26	DWSRD-26	11/07/2002	Chloroform	0.2	ug/L	J	B	80
Well	DWSRD-26	DWSRD-26	11/07/2002	Isobutane	1.6	ug/L	J	NJ	No MCL
Well	DWSRD-26	DWSRD-26	11/07/2002	Propane	4.7	ug/L	J	NJ	No MCL
Well	DWSRD-26	DWSRD-26	11/07/2002	Tetrachloroethene	0.19	ug/L	J		5
Well	DWSRD-26	DWSRD-26	11/07/2002	Trichloroethene	0.62	ug/L	J		5
Well	DWSRD-26	DWSRD-26	11/07/2002	Trichlorofluoromethane	0.26	ug/L	J		No MCL
Well	DWSRD6	DWSRD6	11/08/2002	Acetone	11	ug/L	J	B	No MCL
Well	DWSRD6	DWSRD6	11/08/2002	cis-1,2-Dichloroethene	0.12	ug/L	J		70
Well	DWSRD6	DWSRD6	11/08/2002	Tetrachloroethene	0.12	ug/L	J		5
Well	DWSRD6	DWSRD6	11/08/2002	Toluene	3.7	ug/L	J		1000
Well	DWSRD6	DWSRD6	11/08/2002	Trichloroethene	0.52	ug/L	J		5





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Area C Update

- Currently finalizing risk assessment (soils and groundwater).
- Final Report has been funded.
- Scheduled to be completed Winter 03.

