



THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 544

Depot Groundwater Update

Presented to
Restoration Advisory Board
February 18, 1999

Presented by



544

File: 190.300.000.a
C.H. 544

Presentation Topics

- **Overview of Groundwater Investigation**
- **Monitoring Well Groundwater Sampling Results**
- **Dunn Field Groundwater Pumping System Performance**

Overview of Depot Groundwater Investigation

72 Wells Installed for Water Quality Sampling and Water Level Measurement

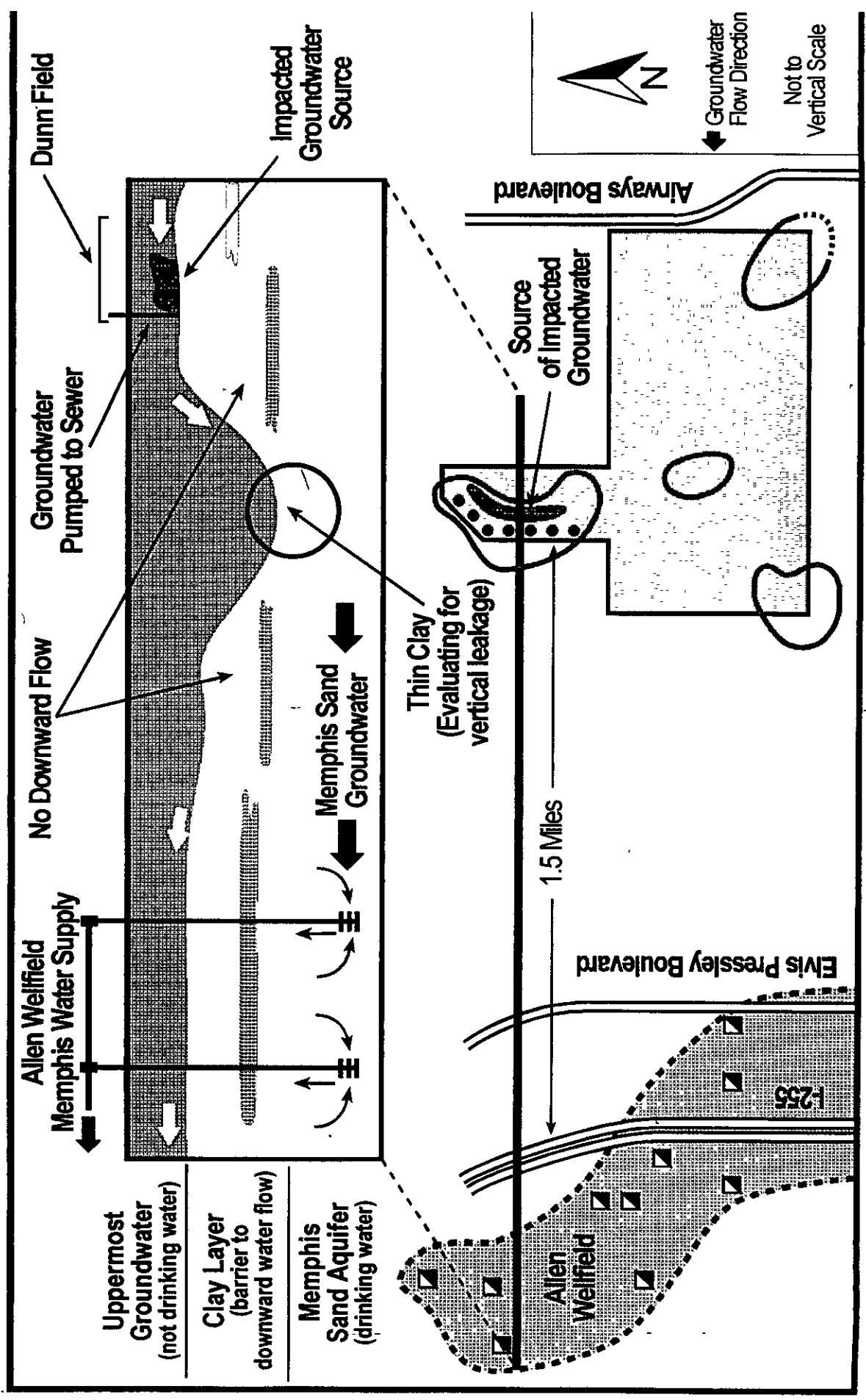
25 Wells on Main Installation, 28 Wells at Dunn Field, 19 Wells Offsite

14 Wells Installed in October to Further Define Groundwater Conditions

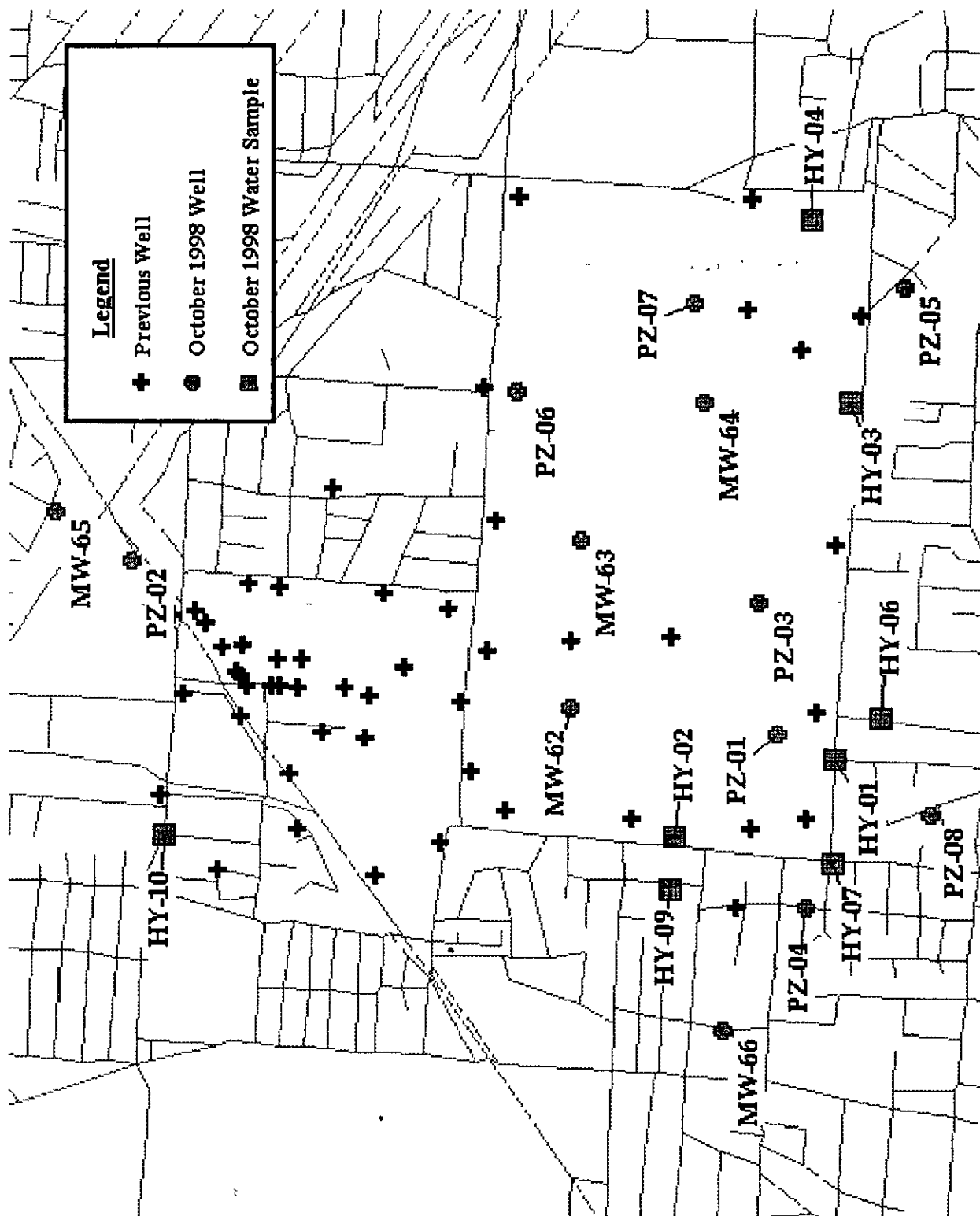
8 “Push” Groundwater Samples Taken at Main Installation in October, 1998

Monitoring Wells Sampled in February 1996, June 1997, September 1997, March 1998 and October 1998

Regional Conceptual Model



Monitoring Locations

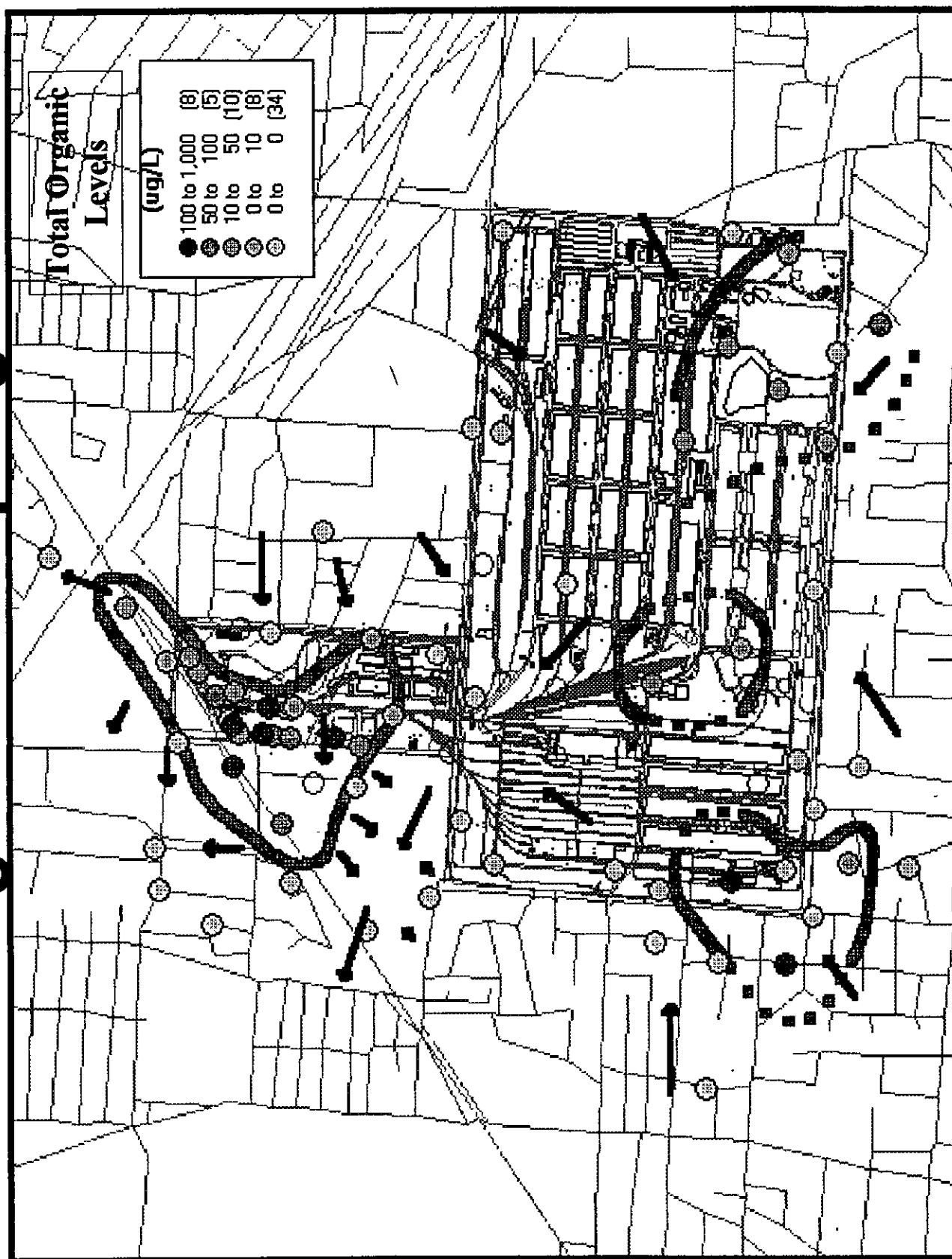


Detected Compounds in Groundwater Monitoring Wells - October, 1998

Compound	SDWA Criteria	Number Wells Above Criteria	ug/L		Max- imum
			Average	imum	
TRICHLOROETHYLENE (TCE)	5	21	49.9	380	
TETRACHLOROETHYLENE	5	17	29.0	120	
1,1,2,2-TETRACHLOROETHANE	5	10	32.8	220	
1,2-DICHLOROETHENE	70	4	56.1	280	
CARBON TETRACHLORIDE	5	1	6.3	23	
CADMIUM	5	3	1.2	7.6	
LEAD	15	2	5.5	34.4	
ARSENIC	50	0	13.5	21.1	
BERYLLIUM	4	0	1.1	1.2	
CHROMIUM, TOTAL	100	0	11.4	95.7	
COPPER	1300	0	10.9	102	
NICKEL	100	0	6.5	55.7	

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Monitoring Well Sampling Results



Dunn Field Groundwater Pumping System Performance

- **Seven Pumping Wells Installed
Along Dunn Field's Western
Fenceline**
- **Pumping Wells Operating Correctly**
- **Continuing to Sample Surrounding
Monitoring Wells to Determine
Effectiveness**

Organics in Water Pumped from Dunn Field

Chemical	Discharge Levels	City Discharge Limits	SDWA Limits
	ug/L		
Carbon Tetrachloride	3-5	40	5
Chloroform	13-21	40	5
Cis 1,2- Dichloroethene	29-47	100	70
Trans 1,2- Dichloroethene	6-11	100	100
T trachloroethene	22-35	60	5
1,1,2,2- Tetrachloroethane	159-272	1000	5
Trichloroethene	108-226	400	5

Ongoing Actions

- **Evaluate Groundwater and Soil Sources in Main Installation RI Report**
- **Identify Soil Sources at Dunn Field**
- **Evaluate Groundwater and Soil Sources in Dunn Field RI Report**
- **Conduct Risk Assessment of Chemicals in Groundwater**

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