



THE MEMPHIS DEPOT TENNESSEE

ADMINISTRATIVE RECORD COVER SHEET

AR File Number 216

OU-1, SITE 4.1



DEFENSE LOGISTICS AGENCY
DEFENSE DISTRIBUTION DEPOT MEMPHIS
2163 AIRWAYS BOULEVARD
MEMPHIS, TENNESSEE 38114-5210

File:
C.G. 541. 460. 12

216

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IN REPLY
REFER TO

DDMT-DE

MAR 4 1997

Mr. Dann Spariosu
Environmental Protection Agency Region 4
Waste Management Division
61 Forsyth Street SW
Atlanta GA, 30303

Dear Mr. Spariosu:

The Defense Distribution Depot Memphis is pleased to submit the enclosed data from the groundwater sampling conducted by CH2M Hill in February 1996. We have been assured by CH2M Hill that the Groundwater Characterization Technical Memorandum will be received by the March 10, 1997.

Please be aware that CH2M Hill will send personnel to the Depot next Monday afternoon for the purpose of sampling three monitoring wells within the boundary of Dunn Field. The sampling analytical objective is to determine what provisions need to be included in the Groundwater Interim Remedial Action Design for the treatment system to accommodate the iron present in the extracted groundwater. The sampling next week is expressly for no other purpose (such as risk assessment).

A copy of this information has been forwarded to Mr. Jordan English, TDEC.

Please contact Mr. Shawn Phillips at 775-6372 if you have any other questions.

Sincerely,

G.L. KADEN, R.E.M.

Chief

Environmental Protection and Safety Office

Enclosure

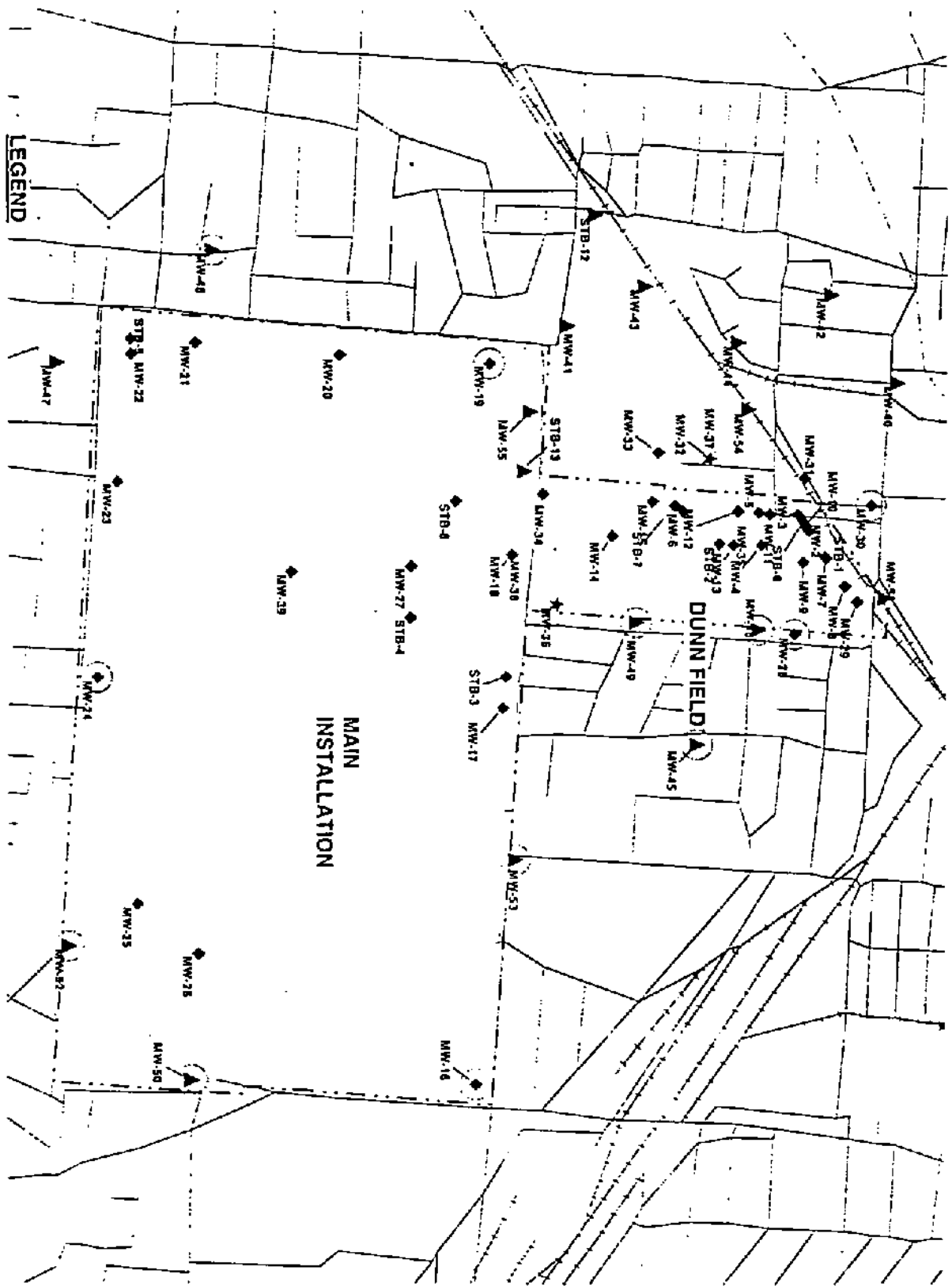
cc (w/out encl):

CEHNC, Julian Savage
CH2M Hill, Greg Underberg
DDRE-ASCE-WP, Mike Dobbs



SCALE:
1in = 1/4 mi

- LEGEND**
- ▲ ALLUVIAL AQUIFER WELLBOREHOLE (INSTALLED 1996)
 - ◆ PREVIOUS INSTALLED WELLBOREHOLE
 - ★ MEMPHIS SAND WELL
 - BACKGROUND WELL



GROUNDWATER MONITORING WELL
LOCATIONS

DEFENSE DEPT. MEMPHIS TENNESSEE



DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA 1 M RECOVERY WELLS
Sampled In February, 1996.

PARAMETER	UNITS	MMW02	MMW03	MMW04	MMW05	MMW06	MMW07	MMW08	MMW09	MMW10	MMW11	MMW12
Inorganic												
ARSENIC	UG/L	.68 UJ	.68 UJ	.68 UJ	.68 UJ	.68 UJ	.68 UJ	.68 UJ	.68 UJ	.68 UJ	.68 UJ	.68 UJ
LEAD	UG/L	9.9 =	1.8 J	9.4 =	1.4 U	5.2 =	1.4 U	6.7 =	18.4 =	8.1 UJ	3.5 =	1.4 U
SELENIUM	UG/L	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ
THALLIUM	UG/L	86 UJ	86 UJ	86 UJ	86 UJ	86 UJ	86 UJ	86 UJ	86 UJ	86 UJ	86 UJ	86 UJ
ALUMINUM	UG/L	601 J	718 J	252 J	127 UJ	1120 J	679 J	3610 J	5210 J	730 =	1115 UJ	20500 =
ANTIMONY	UG/L	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U
BARIUM	UG/L	3.7 J	19 U	1.1 U	1.5 U	25 U	67.3 J	39 U	96 U	89.3 J	15 U	2.9 J
CADMIUM	UG/L	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U
CALCIUM	UG/L	2.2 U	9.9 J	2.2 U	2.2 U	21.9 =	16900 =	26.4 =	12.4 U	20100 =	10.8 =	2.2 U
CHROMIUM, TOTAL	UG/L	32.5 =	2 U	2.8 J	2 U	2 U	2.2 U	2 U	33.9 =	14.2 U	12 U	105 =
COBALT	UG/L	3810 J	3810 J	3810 J	3810 J	3810 J	3810 J	3810 J	3810 J	3810 J	3810 J	3810 J
COPPER	UG/L	7.7 U	10.4 J	7.7 U	7.7 U	25.3 J	23.2 =	16 J	7.7 U	8.7 J	7.7 U	46 =
IRON	UG/L	1110 J	1110 J	1110 J	1110 J	1110 J	1110 J	1110 J	1110 J	1110 J	1110 J	1110 J
MANGANESE	UG/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
NICKEL	UG/L	48300 J	48300 J	48300 J	48300 J	48300 J	48300 J	48300 J	48300 J	48300 J	48300 J	48300 J
POISSIUM	UG/L	53.1 U	18 U	10.8 U	4.3 U	21.6 U	18.1 U	19.3 U	38.8 U	23.6 U	5.6 U	132 =
SILICON	UG/L	84 =	07 U	07 U	12 U	33 U	07 U	07 U	09 U	07 U	07 U	17 J
SILVER	UG/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
SODIUM	UG/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
VANADIUM	UG/L	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
ZINC	UG/L	53.1 U	18 U	10.8 U	4.3 U	21.6 U	18.1 U	19.3 U	38.8 U	23.6 U	5.6 U	132 =
MERCURY	UG/L	84 =	07 U	07 U	12 U	33 U	07 U	07 U	09 U	07 U	07 U	17 J
Pesticides/PCBs												
ALDRIN	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ALPHA BHC (ALPHA)	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ALPHA ENDOSULFAN	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ALPHA-CHLORDANE	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
BETA BHC (BETA HEXACHLORO CYCLOHEXANE)	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
BETA ENDOSULFAN	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
DECA-CHLOROBIPHENYL	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
DELTA BHC (DELTA)	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
DIELDRIN	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ENDOSULFAN SULFATE	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ENDRIN	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ENDRIN ALDEHYDE	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ENDRIN KETONE	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
GAMMA BHC (LINDANE)	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
GAMMA-CHLORDANE	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
HEPTACHLOR	UG/L	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U

U = undetected, UJ = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA F M RECOVERY WELLS
Sampled In February, 1996.

Page 2 of 12

PARAMETER	MW135	MW14	MW15	MW28	MW29	MW30	MW31	MW32	MW33	MW35	MW45	MW46
Inorganic												
ARSENIC	.68 U	.9 J	.68 U	.68 U	.68 U	.68 U	.81 J	.68 U	.68 U	.68 U	.1 U	.68 U
LEAD	2.3 J	1.9 =	2.6 J	1.4 U	1.4 U	1.4 U	1.4 U	1.5 J	2.3 U	8.4 =	2.3 U	2.3 U
SELENIUM	2.3 U	2.3 U	2.3 U	4.6 U	2.3 U	2.3 U	2.3 U	2.3 U	6.9 U	2.3 U	2.3 U	2.3 U
THALLIUM	.86 U	.86 U	.86 U	.86 U	.86 U	.86 U	.86 U	.86 U	.86 U	.86 U	.86 U	.86 U
ALUMINUM	1270 J	22600 J	210 J	287 J	768 J	166 U	47.6 U	213 U	73.4 U	3850 =	586 J	103 U
ANTIMONY	10.9 U	10.9 U	10.9 U	19.7 U	10.9 U	11.8 U	10.9 U	16.1 U	10.9 U	10.9 U	17.2 J	10.9 U
BARIUM	.312 =	.70.5 J	47.6 J	.21 J	.15 U	.15 U	.15 U	.15 U	53.3 J	124 J	127 J	99.3 J
BERYLLIUM	18 U	2.9 J	53 J	21 J	15 U	15 U	15 U	15 U	15 U	15 U	15 U	15 U
CADMIUM	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	3.6 U
CALCIUM	16900 =	14300 =	14300 =	14000 =	22900 =	22900 =	57400 =	8910 =	13100 =	34700 =	17400 =	
CHROMIUM, TOTAL	12.5 U	42.6 =	2.2 U	2.2 U	4 U	2.2 U	2.2 U	2.2 U	2.2 U	23.4 =	4.9 U	4.6 U
COBALT	61.9 =	4 U	6.1 U	4.4 J	2 U	1.8 U	2 U	3 U	1.7 U	11.7 J	9.5 J	8.5 U
COPPER	3.2 U	36 =	75 =	598 J	340 U	12000 =	329 U	147 U	5.8 U	5.8 U	3.8 J	2 U
IRON	5370 =	96100 J	271 U	6470 =	12000 =	13300 =	4750 J	6700 =	16200 =	19500 =	12280 J	648 =
MAGNESIUM	8920 =	6280 =	6470 =	75.6 =	32 U	5.2 U	7.7 U	8.6 J	7.7 U	13 J	7.7 U	7.7 U
MANGANESE	1400 =	52.2 =	75.6 =	7.7 U	7.7 U	7.7 U	1280 J	767 U	1170 J	849 J	858 J	
NICKEL	12.6 U	25.3 J	7.7 U	7.7 U	7.7 U	7.7 U	1280 J	767 U	1170 J	849 J	858 J	
POTASSIUM	2470 J	1900 J	767 U	767 U	767 U	767 U	767 U	767 U	767 U	767 U	767 U	
SILICON	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
SODIUM	16200 =	11600 U	15000 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U
VANADIUM	101 =	8.2 J	5.1 J	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U
ZINC	19.8 U	100 =	23.2 U	17.8 U	13.5 U	12.9 U	44 U	13.5 U	9.8 U	39.6 U	12.2 U	54.9 U
MERCURY	.07 U	.46 U	.37 U	.14 U	.07 U	.07 U	.07 U	.55 U	.07 U	.07 U	.19 U	.07 U
Pesticides/PCBs												
ALDRIN	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ALPHA BHC (ALPHA)	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ALPHA ENDOSULFAN	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
ALPHA-CHLORDANE	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
BETA BHC (BETA HEXACHLOROCYCLOHEXANE)	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
BETA ENDOSULFAN	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
DECAChlorobiphenyl	.58 =	104 =	107 =	107 =	107 =	107 =	107 =	107 =	107 =	107 =	107 =	107 =
DELTA BHC (DELTA)	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
DIELDRIN	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U
ENDOSULFAN SULFATE	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U
ENDRIN	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U
ENDRIN ALDEHYDE	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U
ENDRIN KETONE	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U	.1 U
GAMMA BHC (LINDANE)	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
GAMMA-CHLORDANE	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U
HEPTACHLOR	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U	.05 U

U = undetected, UJ = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

216 5

U = undetected, UJ = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA - M RECOVERY WELLS
Sampled in February, 1996.

PARAMETER	UNITS	MW02	MW03	MW04	MW05	MW06	MW07	MW08	MW09	MW10	MW11	MW12
HEPACHLOR EPOXIDE	UG/L											
METHOXYCHLOR	UG/L											
p,p'-DDO	UG/L				5 U							
p,p'-DDE	UG/L				1 U							
p,p'-DDT	UG/L				1 U							
PCB-1016 (AROCHLOR 1016)	UG/L				1 U							
PCB-1221 (AROCHLOR 1221)	UG/L				2 U							
PCB-1232 (AROCHLOR 1232)	UG/L				1 U							
PCB-1242 (AROCHLOR 1242)	UG/L				1 U							
PCB-1248 (AROCHLOR 1248)	UG/L				1 U							
PCB-1254 (AROCHLOR 1254)	UG/L				1 U							
PCB-1260 (AROCHLOR 1260)	UG/L				1 U							
TOXAPHENE	UG/L				5 U							
1,2,4-TRICHLOROBENZENE	UG/L				10 U							
1,2-DICHLOROBENZENE	UG/L				10 U							
1,3-DICHLOROBENZENE	UG/L				10 U							
1,4-DICHLOROBENZENE	UG/L				10 U							
2,2'-OXYBIS(1-CHLORO)PROPANE	UG/L				10 U							
2,4,5-TRICHLOROPHENOL	UG/L				25 U							
2,4,6-TRICHLOROPHENOL	UG/L				86 =							
2,4-DICHLOROPHENOL	UG/L				10 U							
2,4-DIMETHYLPHENOL	UG/L				10 U							
2,4-DINITROPHENOL	UG/L				10 U							
2,4-DINITROTOLUENE	UG/L				25 U							
2,6-DINITROTOLUENE	UG/L				10 U							
2-CHLORONAPHTHALENE	UG/L				10 U							
2-CHLOROPHENOL	UG/L				10 U							
2-METHYLNAPHTHALENE	UG/L				10 U							
2-METHYLPHENOL (o-CRESOL)	UG/L				10 U							
2-NITROANILINE	UG/L				10 U							
2-NITROPHENOL	UG/L				25 U							
3,3-DICHLOROBENZIDINE	UG/L				10 U							
3-NITROANILINE	UG/L				10 U							
4,6-DINITRO-2-METHYLPHENOL	UG/L				25 U							
4-BROMOPHENYL PHENYL ETHER	UG/L				25 U							
4-CHLORO-3-METHYLPHENOL	UG/L				10 U							
4-CHLOROANILINE	UG/L				10 U							
4-CHLOROPHENYL PHENYL ETHER	UG/L				10 U							
4-METHYLPHENOL (p-CRESOL)	UG/L				10 U							
4-NITROANILINE	UG/L				25 U							

U = undetected, UJ = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA F W RECOVERY WELLS

Sampled in February, 1996.

PARAMETER	MW13	MW14	MW15	MW28	MW29	MW30	MW31	MW32	MW33	MW35	MW45	MW46
HEPACHLOR EPOXIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
METHOXYCHLOR	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
p,p'-DDD	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
p,p'-DDE	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
p,p'-DDI	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
PCB-1016 (AROCHLOR 1016)	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
PCB-1221 (AROCHLOR 1221)	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
PCB-1232 (AROCHLOR 1232)	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
PCB-1242 (AROCHLOR 1242)	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
PCB-1248 (AROCHLOR 1248)	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
PCB-1254 (AROCHLOR 1254)	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
PCB-1260 (AROCHLOR 1260)	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
IOXAPHENE	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
2,4,6-Trichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,2-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,3-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
1,4-Dichlorobenzene	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2,2'-Oxybis(1-chloropropane)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2,4,6-Trichlorophenol	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U
2,4,6-Trichlorophenol	90 =	69 =	72 =	75 =	102 =	86 =	82 =	87 =	10U	10U	10U	10U
2,4-Dichlorophenol	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2,4-Dimethylphenol	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2,4-Dinitrophenol	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U
2,4-Dinitrotoluene	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2,6-Dinitrotoluene	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Chloronaphthalene	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Chlorophenol	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Methylnaphthalene	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Methylphenol (o-Cresol)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
2-Nitroaniline	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U
2-Nitrophenol	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
3,3-Dichlorobenzidine	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
3-Nitroaniline	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U
4,6-Dinitro-2-methylphenol	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U
4-Bromophenyl phenyl ether	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-Chloro-3-methylphenol	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-Chloroaniline	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-Chlorophenyl phenyl ether	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-Methylphenol (p-Cresol)	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
4-Nitroaniline	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U	25U

U = undetected, UI = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA F M RECOVERY WELLS
Sampled in February, 1996.

PESTICIDES/PCB (CONT'D)

PARAMETER	2 MW49K	2 MW51K	2 MW54K
HEPTACHLOR EPOXIDE	05 U	05 U	05 U
METHOXYCHLOR	5 U	5 U	5 U
p,p'-DDD	1 U	1 U	1 U
p,p'-DDE	1 U	1 U	1 U
p,p'-DDT	1 U	1 U	1 U
PCB-1016 (AROCHEOR 1016)	1 U	1 U	1 U
PCB-1221 (AROCHEOR 1221)	2 U	2 U	2 U
PCB-1232 (AROCHEOR 1232)	1 U	1 U	1 U
PCB-1242 (AROCHEOR 1242)	1 U	1 U	1 U
PCB-1248 (AROCHEOR 1248)	1 U	1 U	1 U
PCB-1254 (AROCHEOR 1254)	1 U	1 U	1 U
PCB-1260 (AROCHEOR 1260)	1 U	1 U	1 U
TOXAPHENE	5 U	5 U	5 U
1,2,4-TRICHLOROBENZENE	10 U	10 U	10 U
1,2-DICHLOROBENZENE	10 U	10 U	10 U
1,3-DICHLOROBENZENE	10 U	10 U	10 U
1,4-DICHLOROBENZENE	10 U	10 U	10 U
2,2'-OXYBIS(1-CHLORO)PROPANE	10 U	10 U	10 U
2,4,5-TRICHLOROPHENOL	25 U	25 U	25 U
2,4,6-TRIBROMOPHENOL	52 =	52 =	75 =
2,4,6-TRICHLOROPHENOL	10 U	10 U	10 U
2,4-DICHLOROPHENOL	10 U	10 U	10 U
2,4-DIMETHYLPHENOL	10 U	10 U	10 U
2,4-DINITROPHENOL	25 U	25 U	25 U
2,4-DINITROTOLUENE	10 U	10 U	10 U
2,6-DINITROTOLUENE	10 U	10 U	10 U
2-CHLORONAPHTHALENE	10 U	10 U	10 U
2-CHLOROPHENOL	10 U	10 U	10 U
2-METHYLNAPHTHALENE	10 U	10 U	10 U
2-METHYLPHENOL (o-CRESOL)	10 U	10 U	10 U
2-NITROANILINE	25 U	25 U	25 U
2-NITROPHENOL	10 U	10 U	10 U
3,3'-DICHLOROBENZIDINE	10 U	10 U	10 U
3-NITROANILINE	25 U	25 U	25 U
4,6-DINITRO-2-METHYLPHENOL	25 U	25 U	25 U
4-BROMOPHENYL PHENYL ETHER	10 U	10 U	10 U
4-CHLORO-3-METHYLPHENOL	10 U	10 U	10 U
4-CHLOROANILINE	10 U	10 U	10 U
4-CHLOROPHENYL PHENYL ETHER	10 U	10 U	10 U
4-METHYLPHENOL (p-CRESOL)	10 U	10 U	10 U
4-NITROANILINE	25 U	25 U	25 U

U = undetected. UJ = undetected (estimated detection limit). J = estimated below detection limit. "=" = detected value

DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA F. M RECOVERY WELLS
Sampled in February, 1996.

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PARAMETER	UNITS	MW02	MW03	MW04	MW05	MW06	MW07	MW08	MW09	MW10	MW11	MW12
4-NITROPHENOL	UG/L				25 U	25 U	25 U			25 U		
ACENAPHTHENE	UG/L				10 U	10 U	10 U			10 U		
ACENAPHTHYLENE	UG/L				10 U	10 U	10 U			10 U		
ANTHRACENE	UG/L				10 U	10 U	10 U			10 U		
BENZO(a)ANTHRACENE	UG/L				10 U	10 U	10 U			10 U		
BENZO(b)PYRENE	UG/L				10 U	10 U	10 U			10 U		
BENZO(b)FLUORANTHENE	UG/L				10 U	10 U	10 U			10 U		
BENZO(g,h,i)PERYLENE	UG/L				10 U	10 U	10 U			10 U		
BENZO(k)FLUORANTHENE	UG/L				10 U	10 U	10 U			10 U		
BENZYL BUTYL PHTHALATE	UG/L				10 U	10 U	10 U			10 U		
bis(2-CHLOROETHOXY) METHANE	UG/L				10 U	10 U	10 U			10 U		
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL	UG/L				10 U	10 U	10 U			10 U		
bis(2-ETHYLHEXYL) PHTHALATE	UG/L				10 U	10 U	10 U			10 U		
CARBAZOLE	UG/L				10 U	10 U	10 U			10 U		
CHRYSENE	UG/L				10 U	10 U	10 U			10 U		
DI-n-BUTYL PHTHALATE	UG/L				10 U	10 U	10 U			10 U		
DI-n-OCTYL PHTHALATE	UG/L				2 J	10 U	10 U			10 U		
DIBENZO(a,h)ANTHRACENE	UG/L				10 U	10 U	10 U			10 U		
DIBENZOFURAN	UG/L				10 U	10 U	10 U			10 U		
DIETHYL PHTHALATE	UG/L				10 U	10 U	10 U			10 U		
DIMETHYL PHTHALATE	UG/L				10 U	10 U	10 U			10 U		
FLUORANTHENE	UG/L				10 U	10 U	10 U			10 U		
FLUORENE	UG/L				10 U	10 U	10 U			10 U		
HEXACHLOROBENZENE	UG/L				10 U	10 U	10 U			10 U		
HEXACHLOROCYCLOPENTADIENE	UG/L				10 U	10 U	10 U			10 U		
HEXACHLOROCYCLOPENTADIENE	UG/L				10 U	10 U	10 U			10 U		
INDENOL(1,2,3-c,d)PYRENE	UG/L				10 U	10 U	10 U			10 U		
ISOPHORONE	UG/L				10 U	10 U	10 U			10 U		
N-NITROSODI-n-PROPYLAMINE	UG/L				10 U	10 U	10 U			10 U		
N-NITROSODIPHENYLAMINE	UG/L				10 U	10 U	10 U			10 U		
NAPHTHALENE	UG/L				10 U	10 U	10 U			10 U		
NITROBENZENE	UG/L				10 U	10 U	10 U			10 U		
PENTACHLOROPHENOL	UG/L				5 U	5 U	5 U			5 U		
PHENANTHRENE	UG/L				10 U	10 U	10 U			10 U		
PHENOL	UG/L				10 U	10 U	10 U			10 U		
PYRENE	UG/L				10 U	10 U	10 U			10 U		
1,1,1-IRCHLOROETHANE	UG/L	10 U	10 U	10 U	10 U	10 U	2 J	2 J	10 U	10 U	3 J	10 U
1,1,2,2-IRCHLOROETHANE	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U
1,1,2-IRCHLOROETHANE	UG/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	130 U
1,1-DICHLOROETHANE	UG/L	10 U	10 U	10 U	10 U	10 U	2 J	2 J	10 U	10 U	10 U	50 U
												50 U

U = undetected, UJ = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

SEMI-VOL'S (CONT'D)

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U = undetected, UU = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA 1 M RECOVERY WELLS
Sampled in February, 1996.

SEMI-VOLS (CONT'D)

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PARAMETER	MW49	MW51	MW54
4-NITROPHENOL	25 U	25 U	25 U
ACENAPHTHENE	10 U	10 U	10 U
ACENAPHTHYLENE	10 U	10 U	10 U
ANTHRACENE	10 U	10 U	10 U
BENZO(a)ANTHRACENE	10 U	10 U	10 U
BENZO(a)PYRENE	10 U	10 U	10 U
BENZO(b)FLUORANTHENE	10 U	10 U	10 U
BENZO(g,h,i)PERYLENE	10 U	10 U	10 U
BENZO(k)FLUORANTHENE	10 U	10 U	10 U
BENZYL BUTYL PHTHALATE	10 U	10 U	10 U
bis(2-CHLOROETHOXY) METHANE	10 U	10 U	10 U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL	10 U	10 U	10 U
bis(2-ETHYLHEXYL) PHTHALATE	10 U	10 U	10 U
CARBAZOLE	10 U	10 U	10 U
CHRYSENE	10 U	10 U	10 U
Di-n-BUTYL PHTHALATE	10 U	10 U	10 U
Di-n-OCTYL PHTHALATE	10 U	10 U	10 U
DIBENZ(a,h)ANTHRACENE	10 U	10 U	5 U
DIBENZOFURAN	10 U	10 U	10 U
DIETHYL PHTHALATE	10 U	10 U	10 U
DIMETHYL PHTHALATE	10 U	10 U	10 U
FLUORANTHENE	10 U	10 U	10 U
FLUORENE	10 U	10 U	10 U
HEXACHLOROBENZENE	10 U	10 U	10 U
HEXACHLOROBUTADIENE	10 U	10 U	10 U
HEXACHLOROCYCLOPENTADIENE	10 U	10 U	10 U
HEXACHLOROETHANE	10 U	10 U	10 U
INDENO(1,2,3-c,d)PYRENE	10 U	10 U	10 U
ISOPHORONE	10 U	10 U	10 U
N-NITROSODI-n-PROPYLAMINE	10 U	10 U	10 U
N-NITROSODIPHENYLAMINE	10 U	10 U	10 U
NAPHTHALENE	10 U	10 U	10 U
NITROBENZENE	10 U	10 U	10 U
PENTACHLOROPHENOL	5 U	5 U	5 U
PHENANTHRENE	10 U	10 U	10 U
PHENOL	10 U	10 U	10 U
PYRENE	10 U	10 U	10 U
1,1,1-TRICHLOROETHANE	10 U	10 U	10 U
1,1,2,2-TETRACHLOROETHANE	10 U	10 U	10 U
1,1,2-TRICHLOROETHANE	10 U	10 U	10 U
1,1-DICHLOROETHANE	10 U	10 U	10 U

U = undetected, UU = undetected (estimated detection limit), J = estimated below detection limit, * = detected value

DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA 1 M RECOVERY WELLS
Sampled in February, 1996.

PARAMETER	UNITS	MW02	MW03	MW04	MW05	MW06	MW07	MW08	MW09	MW10	MW11	MW12
1,1-DICHLOROETHENE	UG/L	7.1	14	10U	10U	10U	10U	10U	1.1	48	10U	50U
1,2-DICHLOROETHANE	UG/L	10U	10U	10U	10U	10U	10U	10U	1.1	10U	10U	50U
1,2-DICHLOROPROPANE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
2-HEXANONE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
ACETONE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
BENZENE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
BROMODICHLOROMETHANE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
BROMOFORM	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
BROMOMETHANE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
CARBON DISULFIDE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
CARBON TETRACHLORIDE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
CHLOROBENZENE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
CHLOROETHANE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
CHLOROFORM	UG/L	8.1	7.1	10U	10U	10U	10U	10U	2.1	14	10U	50U
CHLOROMETHANE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
cis-1,3-DICHLOROPROPENE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
DIBROMOCHLOROMETHANE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
ETHYLBENZENE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
METHYL ETHYL KETONE (2-BUTANONE)	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
METHYLENE CHLORIDE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
STYRENE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
TETRACHLOROETHYLENE(PCE)	UG/L	22	24	10U	12	96	10U	10U	51	26	10U	12.1
TOLUENE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
TOTAL 1,2-DICHLOROETHENE	UG/L	10	2.1	10U	10U	200	10U	10U	10U	10U	10U	55
Total Xylenes	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
trans-1,3-DICHLOROPROPENE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
TRICHLOROETHYLENE (TCE)	UG/L	26	13	10U	14	130	26	14	2.1	280R	46	650
VINYL CHLORIDE	UG/L	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U	50U
Other Parameters												
CHLORIDE (AS CL)	MG/L	16.2	22	18.3								
FLUORIDE	MG/L											
NITROGEN AMMONIA (AS N)	MG/L	2U										
NITROGEN NITRATE (AS N)	MG/L											
NITROGEN NITRATE-NITRITE	MG/L	3.07										
SULFATE (AS SO4)	MG/L	45.9			11.2		2.25					

U = undetected, UU = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

VOC's (CONT'D) 216 12

**DDMT GROUNDWATER RECOVERY SYSTEM
ANALYTICAL DATA F. M RECOVERY WELLS**
Sampled in February, 1996.

PARAMETER	MW13	MW14	MW15	MW28	MW29	MW30	MW31	MW32	MW33	MW35	MW45	MW46
1,1-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	2U	10U
1,2-DICHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
2-HEXANONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
ACETONE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
BENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
BROMOFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
BROMOMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
CARBON DISULFIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
CHLOROBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
CHLOROETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
CHLOROFORM	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
CHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
CIS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
DIBROMOCHLOROMETHANE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
ETHYLBENZENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
METHYL ETHYL KETONE (2-BUTANONE)	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
METHYL ISOBUTYL KETONE (4-METHYL-2-METHYLENE CHLORIDE)	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
STYRENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
TETRACHLOROETHYLENE (PCE)	5U	10U	10U	2U	10U	10U	10U	10U	10U	200U	10U	10U
TOLUENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
TOTAL 1,2-DICHLOROETHENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
Total Xylenes	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
TRANS-1,3-DICHLOROPROPENE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
TRICHLOROETHYLENE (TCE)	2U	10U	10U	11U	10U	10U	10U	10U	10U	200U	10U	10U
VINYL CHLORIDE	10U	10U	10U	10U	10U	10U	10U	10U	10U	200U	10U	10U
Other Parameters												
CHLORIDE (AS CL)	11.7 =	10.1 =										
FLUORIDE												
NITROGEN AMMONIA (AS N)		4 =										
NITROGEN NITRATE (AS N)												
NITROGEN NITRATE-NITRITE		4.69 =										
SULFATE (AS SO4)	21.6 =	23.7 =										

U = undetected, UJ = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

DDMT GROUNDWAT RECOVERY SYSTEM
ANALYTICAL DATA FROM RECOVERY WELLS
Sampled in February, 1996.

VOC's (Keto) 216 14

PARAMETER	PMW498	PMW512	PMW542
1,1-DICHLOROETHENE	10U	4J	10U
1,2-DICHLOROETHANE	10U	10U	10U
1,2-DICHLOROPROPANE	10U	10U	10U
2-HEXANONE	10U	10U	10U
ACETONE	10U	10U	10U
BENZENE	10U	10U	10U
BROMODICHLOROMETHANE	10U	10U	10U
BROMOFORM	10U	10U	10U
BROMOMETHANE	10U	10U	10U
CARBON DISULFIDE	10U	10U	10U
CARBON TETRACHLORIDE	10U	10U	10U
CHLOROBENZENE	10U	10U	10U
CHLOROETHANE	10U	10U	10U
CHLOROFORM	10U	10U	10U
CHLOROMETHANE	10U	10U	10U
cis-1,3-DICHLOROPROPENE	10U	10U	10U
DIBROMOCHLOROMETHANE	10U	10U	10U
ETHYLBENZENE	10U	10U	10U
METHYL ETHYL KETONE (2-BUTANONE)	10U	10U	10U
METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)	10U	10U	10U
METHYLENE CHLORIDE	10U	10U	10U
STYRENE	10U	10U	10U
TETRACHLOROETHYLENE(PCE)	10U	2J	10U
TOLUENE	10U	10U	10U
TOTAL 1,2-DICHLOROETHENE	10U	10U	10U
Total Xylenes	10U	10U	1J
trans-1,3-DICHLOROPROPENE	10U	10U	10U
TRICHLOROETHYLENE (TCE)	10U	5J	17 =
VINYL CHLORIDE	10U	10U	10U
Other Parameters			
CHLORIDE (AS CL)			
FLUORIDE			
NITROGEN, AMMONIA (AS N)			
NITROGEN, NITRATE (AS N)			
NITROGEN, NITRATE-NITRITE			
SULFATE (AS SO4)			

U = undetected, UJ = undetected (estimated detection limit), J = estimated below detection limit, "=" = detected value

FINAL PAGE

ADMINISTRATIVE RECORD

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ADMINISTRATIVE RECORD

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