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C.H.

THE MEMPHIS DEPOT
TENNESSEE

ADMINISTRATIVE RECORD
COVER SHEET

AR File Number 804

File: C.H. 541.460.0004

AR# 804

FIELD SAMPLING INVESTIGATION
DEFENSE DEPOT MEMPHIS TENNESSEE
MEMPHIS, SHELBY COUNTY, TENNESSEE
SESD PROJECT NUMBERS 01-0211
DECEMBER, 2000

INTRODUCTION

During the week of December 11, 2000 the United States Environmental Protection Agency (USEPA), Region 4, Science and Ecosystem Support Division (SESD), conducted a surface soil sampling investigation in the area surrounding the Defense Depot facility in Memphis, Tennessee (DDMT). The investigation was requested by USEPA, Waste Management Division (WMD) to fill identified data gaps and assess exposure potential to site related contaminants in the predominantly residential areas surrounding the facility. The study participants included:

Art Masters	US-EPA (SESD)
Sharon Matthews	US-EPA (SESD)
Maria Labrador	US-EPA (SESD)
Sandy Wewers	US-EPA (SESD)
Turpin Ballard	US-EPA (WMD)
Benjamin Moore	Agency for Toxic Substances and Disease Registry (ATSDR)

The objective of the investigation was to determine levels of site related contaminants in the surface soil along principle surface water migration pathways.

BACKGROUND

DDMT consists of 642 acres in a mixed residential/commercial/industrial area in south-central Memphis. The facility is made up of two adjacent sections: Dunn field, an open storage and burial area of about 60 acres, and the main installation. DDMT has conducted numerous operations with hazardous substances with contamination resulting from leakage, spillage, and disposal of out of date materials. Removal actions in 1998-99 excavated small volumes of lead and pesticide contaminated soil at the main installation.

SAMPLING AND ANALYSIS

The sampling investigation was conducted in accordance with the study plan, which is attached to this report as Appendix C. Slight modifications to the study plan were made based upon observations during the investigation. These modifications led to the collection of two additional samples. Three areas surrounding the facility were sampled.

Ten (10) samples were collected in the area of the southeast drainage ditches. Three composite samples were collected from the drainage ditch running parallel to Mullen Road. Field observations indicated that the ditch had recently been excavated prior to the initiation of the

sampling investigation. Photographs 1 and 3 in Appendix B show the excavation marks evident in the ditch. Samples were taken at intervals along the bottom of the ditch. Additional composite samples were taken outside of the ditch adjacent to each of the bottom samples. One sample, not discussed in the study plan, was collected adjacent to the ditch on the facility side of Ball Street. This area was selected because it appeared it had not been recently excavated. This location, DDE-SE07, also was likely to be inundated in the event of a ditch-overflow situation. A grab sample, DDE-SE08, was collected on the facility side of Ball Street at the 012 outfall. A composite sample, DDE-SE09 was taken downstream of Ball Street and the 012 outfall on the low side of the stream. A composite sample, DDE-SE10 was collected downstream of Ketchum Road and the 004 outfall. Figure 1 contains the geographic locations of all samples collected.

Figure 1

Sample ID	Sample type	Longitude	Latitude	Easting	Northing
DDE-SE01	Comp	89° 59′ 22.088″ W	35° 04′ 52.088″ N	806591.825	275190.961
DDE-SE02	Comp	89° 59′ 22.415″ W	35° 04′ 51.180″ N	806560.961	275100.305
DDE-SE03	Comp	89° 59′ 23.532″ W	35° 04′ 48.821″ N	806458.475	274865.814
DDE-SE04	Comp	89° 59′ 22.219″ W	35° 04′ 51.955″ N	806580.383	275177.917
DDE-SE05	Comp	89° 59′ 22.430″ W	35° 04′ 51.302″ N	806560.192	275112.732
DDE-SE06	Comp	89° 59′ 23.632″ W	35° 04′ 48.893″ N	806450.468	274873.439
DDE-SE07	Grab	89° 59′ 21.911″ W	35° 04′ 52.519″ N	806608.295	275233.848
DDE-SE08	Grab	89° 59′ 26.115″ W	35° 04′ 52.856″ N	806260.605	275282.195
DDE-SE09	Comp	89° 59′ 26.323″ W	35° 04′ 52.011″ N	806239.806	275197.455
DDE-SE10	Comp	89° 59′ 32.897″ W	35° 04′ 51.834″ N	805693.103	275201.859
DDE-RZ01	Comp	90° 00′ 26.056″ W	35° 05′ 41.669″ N	801484.611	280416.888
DDE-RZ02	Grab	90° 00′ 25.499″ W	35° 05′ 41.590″ N	801530.553	280407.045
DDE-RZ03	Comp	90° 00′ 21.130″ W	35° 05′ 41.847″ N	801894.365	280418 074
DDE-RZ04	Comp	90° 00′ 24.265″ W	35° 05′ 45.608″ N	801649.625	280808.713
DDE-TR01	Comp	90° 00′ 43.169″ W	35° 05′ 17.628″ N	799964.087	278046.453

Note: The above Geographic and Tennessee State Plane Coordinates are in NAD27. Sample type designation Comp is a composite sample.

Three composite samples and one grab sample were collected in the Rozelle neighborhood. One composite, DDE-RZ01 and one grab, DDE-RZ02 were collected on the property owned by at One composite sample,

DDE-RZ03 was collected upstream of property. A composite sample, DDE-RZ04 was collected from the ditch on property located at

One composite sample, DDE-TR01 was collected from the vacant lot bordered by Sparks Court, Sparks Road and the concrete lined storm-water ditch. All samples were collected from 0" - 3" below ground surface. Grab samples were collected by emptying the auger contents into a clean glass pan and mixing throughly. The sample containers were then filled from the pan. The composite samples were collected by emptying the contents of the auger from each location included in the composite and mixing thoroughly. This mixture was then used to fill the sample containers.

Figure 2 shows the locations of the samples collected in the area of the southeast drainage ditches. Figure 3 shows the locations of the samples collected in the Rozelle neighborhood and Tarrant Branch area.

DISCUSSION OF RESULTS

Table 1 contains a summary of the pesticide compounds detected in the samples collected during the December investigation. Table 4 contains all pesticide compounds which were analyzed for, as well as the method quantitation limit for those compounds not detected. Dieldrin was detected in thirteen of the fifteen samples collected, ranging from 9 μg/kg to 1300 μg/kg

Table 2 contains a summary of the metals data for the samples collected during the investigation. Table 5 contains all metals which were analyzed for, as well as the method quantitation limit for those compounds not detected.

Table 3 contains a summary of the extractable organic compounds (SVOC) detected in the samples collected during the December investigation. Table 6 contains all extractable organic compounds which were analyzed for, as well as the method quantitation limit for those compounds not detected. Benzo-A-Pyrene was detected in thirteen of the fifteen samples, ranging from 110 μg/kg to 20000 μg/kg.

One duplicate sample was collected for quality control relative to sample handling procecures. This sample, DDESE92 was co-located with DDESE02. Data were generally in agreement which would indicate proper mixing of the samples. Some variabilty was seen with the SVOC data. The variability could be related to the nature (clay mix) of the sample matrix.

Complete analytical results for all samples collected are included as Appendix A. The Data Qualifier Reports from the Quality Assurance check of the analyses are also included in Appendix A.

METHODOLOGY

All samples were collected and handled in accordance with the USEPA, Region 4,Science

and Ecosystem Support Division, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual, May, 1996, (EISOPQAM). All samples were analyzed in accordance with current USEPA standard procedures and protocols for the Contract Laboratory Program (CLP). The CLP generated data was validated by the USEPA's contractor, Environmental Services Assistance Team (ESAT). The data were validated using the USEPA Region 4 Data Validation Standard Operating Procedure, Revision 2.1, July 1999. This guidance document governs the validation process for the data generated by a CLP laboratory. Additional data review was provided by the SESD's Office of Quality Assurance (OQA).

TABLE 1
Defense Depot Memphis
Soil Samples
Pesticide Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
4,4'-DDD (P,P'-DDD)	UG/KG	--		--		4		--		--	
4,4'-DDE (P,P'-DDE)	UG/KG	32	N	--		--		--		--	
4,4'-DDT (P,P'-DDT)	UG/KG	65		66		--		32		7.9	
ALPHA-CHLORDANE /2	UG/KG	--		--		--		--		--	
DIELDRIN	UG/KG	1300	C	1300	C	23		540	C	18	
ENDOSULFAN I (ALPHA)	UG/KG	--		--		--		--		--	
ENDOSULFAN II (BETA)	UG/KG	--		--		--		--		--	
ENDRIN	UG/KG	--		--		--		--		--	
GAMMA-CHLORDANE /2	UG/KG	12		8.5	N	6.1		12		--	
HEPTACHLOR EPOXIDE	UG/KG	7	N	--		--		--		--	
PCB-1254 (AROCLOR 1254)	UG/KG	--		--		--		--		--	
PCB-1260 (AROCLOR 1260)	UG/KG	--		--		--		--		--	

Data Qualifiers

J-Estimated value.
N-Presumptive evidence of presence of material.
C-Confirmed by GCMS.
-- -Material was analyzed for but not detected.

TABLE 1 (continued)
Defense Depot Memphis
Soil Samples
Pesticide Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
4,4'-DDD (P,P'-DDD)	UG/KG	22		--		--		--		--	
4,4'-DDE (P,P'-DDE)	UG/KG	23		28		40		12		16	
4,4'-DDT (P,P'-DDT)	UG/KG	16		38		35		17		29	
ALPHA-CHLORDANE /2	UG/KG	9.2	N	12	N	--		--		--	
DIELDRIN	UG/KG	100		780	C	88		9		22	
ENDOSULFAN I (ALPHA)	UG/KG	5.4		7.1	J	9.5	N	--		--	
ENDOSULFAN II (BETA)	UG/KG	--		--		--		--		--	
ENDRIN	UG/KG	--		15	N	--		--		--	
GAMMA-CHLORDANE /2	UG/KG	--		--		--		--		--	
HEPTACHLOR EPOXIDE	UG/KG	--		--		--		--		--	
PCB-1254 (AROCLOR 1254)	UG/KG	--		200		420		--		--	
PCB-1260 (AROCLOR 1260)	UG/KG	120		--		--		--		54	

Data Qualifiers

J-Estimated value.
N-Presumptive evidence of presence of material.
C-Confirmed by GCMS.
-- -Material was analyzed for but not detected.

TABLE 1 (continued)
Defense Depot Memphis
Soil Samples
Pesticide Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
4,4'-DDD (P,P'-DDD)	UG/KG	--		--		130	N	--		--	
4,4'-DDE (P,P'-DDE)	UG/KG	56		--		270		130		--	
4,4'-DDT (P,P'-DDT)	UG/KG	82		--		510		310		4.6	
ALPHA-CHLORDANE /2	UG/KG	12	N	--		--		--		--	
DIELDRIN	UG/KG	96		--		270		76		--	
ENDOSULFAN I (ALPHA)	UG/KG	8		--		--		--		--	
ENDOSULFAN II (BETA)	UG/KG	--		--		--		--		--	
ENDRIN	UG/KG	--		--		--		--		--	
GAMMA-CHLORDANE /2	UG/KG	--		--		12		4.7		--	
HEPTACHLOR EPOXIDE	UG/KG	--		--		--		--		--	
PCB-1254 (AROCLOR 1254)	UG/KG	250		--		--		--		--	
PCB-1260 (AROCLOR 1260)	UG/KG	--		--		100		44		--	

Data Qualifiers

J-Estimated value.
N-Presumptive evidence of presence of material.
C-Confirmed by GCMS.
-- -Material was analyzed for but not detected.

TABLE 2
Defense Depot Memphis
Soil Samples
Metals Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
ALUMINUM	MG/KG	15000	J	19000	J	13000	J	6100	J	8000	J
ARSENIC	MG/KG	12		13		3.4		9.6		11	
BARIUM	MG/KG	130		160		380		140		110	
CALCIUM	MG/KG	14000		25000		54000		3200		2300	
CHROMIUM	MG/KG	20		24		29		11		11	
COBALT	MG/KG	8.1		8.4		4.8		8.2		8.6	
COPPER	MG/KG	37		32		18		34		25	
IRON	MG/KG	18000	J	17000	J	11000	J	16000	J	18000	J
LEAD	MG/KG	94		120		94		70		39	
MAGNESIUM	MG/KG	2500		3100		4100		1700		1900	
MANGANESE	MG/KG	610		630		180		820		630	
NICKEL	MG/KG	17		18		--		16		14	
POTASSIUM	MG/KG	1200	J	2000	J	900	J	670	J	860	J
SELENIUM	MG/KG	--	J	1.4	J	--		1.6	J	--	
SODIUM	MG/KG	130		170		1400		86		86	
THALLIUM	MG/KG	--		3.4		2.3		--		--	
VANADIUM	MG/KG	30	J	36	J	20	J	19	J	22	J
ZINC	MG/KG	150		140		100		180		74	

Data Qualifiers

J-Estimated value.
-- -Material was analyzed for but not detected.

TABLE 2 (continued)
Defense Depot Memphis
Soil Samples
Metals Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
ALUMINUM	MG/KG	5000	J	4300	J	5600	J	4300	J	5500	J
ARSENIC	MG/KG	8.5		9.4		14		7.5		8.8	
BARIUM	MG/KG	51		77		120		60		97	
CALCIUM	MG/KG	6000		3800		3200		11000		14000	
CHROMIUM	MG/KG	8.9		9.2		11		8.1		12	
COBALT	MG/KG	4.3		5.3		9.3		4.1		5.9	
COPPER	MG/KG	28		30		31		18		26	
IRON	MG/KG	12000	J	12000	J	14000	J	11000	J	13000	J
LEAD	MG/KG	40		78		45		33		62	
MAGNESIUM	MG/KG	1600		1200		1100		1600		2300	
MANGANESE	MG/KG	240		410		1300		400		620	
NICKEL	MG/KG	--		11		13		--		11	
POTASSIUM	MG/KG	390	J	380	J	440	J	370	J	510	J
SELENIUM	MG/KG	--		--		--		--		--	
SODIUM	MG/KG	120		110		120		120		100	
THALLIUM	MG/KG	--		--		--		--		--	
VANADIUM	MG/KG	14	J	16	J	16	J	15	J	17	J
ZINC	MG/KG	80		150		98		55		96	

Data Qualifiers

J-Estimated value.
-- -Material was analyzed for but not detected.

TABLE 2 (continued)
Defense Depot Memphis
Soil Samples
Metals Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
ALUMINUM	MG/KG	4000	J	9200	J	4600	J	5600	J	7300	J
ARSENIC	MG/KG	8.3		23		11		8.9		6.9	
BARIUM	MG/KG	97		81		56		92		120	
CALCIUM	MG/KG	4000		1100		27000		4600		940	
CHROMIUM	MG/KG	8.2		12		11		12		11	
COBALT	MG/KG	5.9		14		7		6.7		7.9	
COPPER	MG/KG	31		28		14		28		20	
IRON	MG/KG	11000	J	22000	J	9100	J	12000	J	15000	J
LEAD	MG/KG	84		17		29		40		16	
MAGNESIUM	MG/KG	1100		2000		1400		1300		1200	
MANGANESE	MG/KG	580		760		530		620		950	
NICKEL	MG/KG	--		13		--		11		10	
POTASSIUM	MG/KG	420	J	680	J	380	J	240	J	420	J
SELENIUM	MG/KG	--		--		--		--		--	
SODIUM	MG/KG	98		160		140		95		100	
THALLIUM	MG/KG	--		2.4		--		--		--	
VANADIUM	MG/KG	13	J	25	J	15	J	17	J	25	J
ZINC	MG/KG	90		59		95		91		37	

Data Qualifiers

J-Estimated value.
-- -Material was analyzed for but not detected.

TABLE 3
Defense Depot Memphis
Soil Samples
Extractable Organic Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
2-METHYLNAPHTHALENE	UG/KG	--		69	J	69	J	260	J	--	
ACENAPHTHENE	UG/KG	720		1300		130	J	--		--	
ACENAPHTHYLENE	UG/KG	230	J	180	J	130	J	--		--	
ANTHRACENE	UG/KG	1300		2400		360	J	--		--	
BENZALDEHYDE	UG/KG	--		--		--		--		--	
BENZO(A)ANTHRACENE	UG/KG	11000		20000		1400	J	240	J	110	J
BENZO(B)FLUORANTHENE	UG/KG	18000	J	28000		2000	J	410	J	200	J
BENZO(GHI)PERYLENE	UG/KG	6900	J	13000		870	J	140	J	68	J
BENZO(K)FLUORANTHENE	UG/KG	7400	J	11000		850	J	170	J	73	J
BENZO-A-PYRENE	UG/KG	12000	J	20000		1200	J	250	J	120	J
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	--		1000		--	J	880		--	
CARBAZOLE	UG/KG	1300		2200		320	J	--		--	
CHRYSENE	UG/KG	12000		20000		1400	J	260	J	130	J
DIBENZO(A,H)ANTHRACENE	UG/KG	230	J	590		--	R	--		--	
DIBENZOFURAN	UG/KG	230	J	350	J	140	J	--		--	
DI-N-OCTYLPHTHALATE	UG/KG	--	J	--		--	R	--		--	
FLUORANTHENE	UG/KG	21000		30000		2000		440		250	J
FLUORENE	UG/KG	560		950		210	J	--		--	
INDENO (1,2,3-CD) PYRENE	UG/KG	7800	J	15000		1000	J	160	J	86	J
NAPHTHALENE	UG/KG	--		--		160	J	86	J	--	
PHENANTHRENE	UG/KG	10000		14000		1800		180	J	100	J
PYRENE	UG/KG	23000		30000		4000	J	460		240	J

Data Qualifiers
J-Estimated value.
R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.
-- - Material was analyzed for but not detected.

TABLE 3 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
2-METHYLNAPHTHALENE	UG/KG	--		--		--		--		--	
ACENAPHTHENE	UG/KG	--		--		42	J	--		--	
ACENAPHTHYLENE	UG/KG	--		950		--		--		--	
ANTHRACENE	UG/KG	120	J	1200		190	J	--		--	
BENZALDEHYDE	UG/KG	--		--		82	J	--		--	
BENZO(A)ANTHRACENE	UG/KG	350	J	6900	J	460		110	J	190	J
BENZO(B)FLUORANTHENE	UG/KG	440	J	19000		610	J	200	J	510	J
BENZO(GHI)PERYLENE	UG/KG	230	J	4500	J	130	J	64	J	200	J
BENZO(K)FLUORANTHENE	UG/KG	260	J	8000	J	230	J	69	J	160	J
BENZO-A-PYRENE	UG/KG	370	J	11000		410	J	110	J	240	J
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	--	R	2000		--		--		450	
CARBAZOLE	UG/KG	100	J	320	J	52	J	--		--	
CHRYSENE	UG/KG	340	J	12000		380	J	130	J	230	J
DIBENZO(A,H)ANTHRACENE	UG/KG	--	R	320	J	--	J	--	J	--	J
DIBENZOFURAN	UG/KG	--		--		--		--		--	
DI-N-OCTYLPHTHALATE	UG/KG	--	R	--		--	J	--	J	--	J
FLUORANTHENE	UG/KG	590	J	2100		880		190	J	150	J
FLUORENE	UG/KG	--		100	J	49	J	--		--	
INDENO (1,2,3-CD) PYRENE	UG/KG	260	J	6200	J	160	J	64	J	150	J
NAPHTHALENE	UG/KG	--		--		--		--		--	
PHENANTHRENE	UG/KG	470	J	720		590		130	J	70	J
PYRENE	UG/KG	960	J	6100	J	1000		260	J	300	J

Data Qualifiers
J-Estimated value.
R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.
-- - Material was analyzed for but not detected.

TABLE 3 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Data Summary
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
2-METHYLNAPHTHALENE	UG/KG	--		--		--		--		--	
ACENAPHTHENE	UG/KG	--		110	J	--		--		--	
ACENAPHTHYLENE	UG/KG	--		--		--		--		--	
ANTHRACENE	UG/KG	91	J	230	J	--		45	J	--	
BENZALDEHYDE	UG/KG	43	J	--		--		--		--	
BENZO(A)ANTHRACENE	UG/KG	460	J	800		--		230	J	--	
BENZO(B)FLUORANTHENE	UG/KG	800	J	1300	J	--		470	J	--	
BENZO(GHI)PERYLENE	UG/KG	210	J	370	J	--		140	J	--	
BENZO(K)FLUORANTHENE	UG/KG	280	J	400	J	--		150	J	--	
BENZO-A-PYRENE	UG/KG	390	J	760	J	--		240	J	--	
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	--	R	--		--		--		--	
CARBAZOLE	UG/KG	51	J	220	J	--		53	J	--	
CHRYSENE	UG/KG	550	J	900		--		290	J	--	
DIBENZO(A,H)ANTHRACENE	UG/KG	--	R	92	J	--		--	J	--	
DIBENZOFURAN	UG/KG	--		99	J	--		--		--	
DI-N-OCTYLPHTHALATE	UG/KG	--	R	--	J	--		--	J	--	
FLUORANTHENE	UG/KG	710		1600		--		490		63	J
FLUORENE	UG/KG	--		170	J	--		--		--	
INDENO (1,2,3-CD) PYRENE	UG/KG	210	J	430	J	--		160	J	--	
NAPHTHALENE	UG/KG	--		65	J	--		--		--	
PHENANTHRENE	UG/KG	300	J	1400		--		270	J	--	
PYRENE	UG/KG	1300	J	1900		--		540		49	J

Data Qualifiers
J-Estimated value.
R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.
-- - Material was analyzed for but not detected.

TABLE 4
Defense Depot Memphis
Soil Samples
Pesticide Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/00	DQ	DDE-RZ02 1435 12/12/00	DQ	DDE-RZ03 1450 12/12/00	DQ	DDE-RZ04 1450 12/12/00	DQ	DDE-TR01 1545 12/12/00	DQ
4,4'-DDD (P,P'-DDD)	UG/KG	13	U	13	U	4		4.2	U	4.1	U
4,4'-DDE (P,P'-DDE)	UG/KG	32	N	13	U	3.6	U	4.2	U	4.1	U
4,4'-DDT (P,P'-DDT)	UG/KG	65		66		10	U	32		7.9	
ALDRIN	UG/KG	6.8	U	6.5	U	1.8	U	2.2	U	2.1	U
ALPHA-BHC	UG/KG	6.8	U	6.5	U	1.8	U	2.2	U	2.1	U
ALPHA-CHLORDANE /2	UG/KG	18	U	12	U	5.5	U	16	U	2.1	U
BETA-BHC	UG/KG	6.8	U	6.5	U	1.8	U	2.2	U	2.1	U
DELTA-BHC	UG/KG	6.8	U	6.5	U	1.8	U	2.2	U	2.1	U
DIELDRIN	UG/KG	1300	C	1300	C	23		540	C	18	
ENDOSULFAN I (ALPHA)	UG/KG	6.8	U	6.5	U	1.8	U	2.2	U	2.1	U
ENDOSULFAN II (BETA)	UG/KG	13	U	13	U	3.6	U	4.2	U	4.1	U
ENDOSULFAN SULFATE	UG/KG	13	U	13	U	3.6	U	4.2	U	4.1	U
ENDRIN	UG/KG	13	U	13	U	3.6	U	4.2	U	4.1	U
ENDRIN ALDEHYDE	UG/KG	13	U	13	U	3.6	U	4.2	U	4.1	U
ENDRIN KETONE	UG/KG	13	U	16	U	3.6	U	4.2	U	4.1	U
GAMMA-BHC (LINDANE)	UG/KG	6.8	U	6.5	U	1.8	U	2.2	U	2.1	U
GAMMA-CHLORDANE /2	UG/KG	12		8.5	N	6.1		12		2.1	U
HEPTACHLOR	UG/KG	6.8	U	6.5	U	1.8	U	2.2	U	2.1	U
HEPTACHLOR EPOXIDE	UG/KG	7	N	6.5	U	1.8	U	2.2	U	2.1	U
METHOXYCHLOR	UG/KG	68	U	65	U	18	U	22	U	21	U
PCB-1016 (AROCLOR 1016)	UG/KG	130	U	130	U	36	U	42	U	41	U
PCB-1221 (AROCLOR 1221)	UG/KG	270	U	260	U	73	U	86	U	82	U
PCB-1232 (AROCLOR 1232)	UG/KG	130	U	130	U	36	U	42	U	41	U
PCB-1242 (AROCLOR 1242)	UG/KG	130	U	130	U	36	U	42	U	41	U
PCB-1248 (AROCLOR 1248)	UG/KG	130	U	130	U	36	U	42	U	41	U
PCB-1254 (AROCLOR 1254)	UG/KG	130	U	130	U	36	U	42	U	41	U
PCB-1260 (AROCLOR 1260)	UG/KG	130	U	130	U	36	U	42	U	41	U
TOXAPHENE	UG/KG	680	U	650	U	190	U	220	U	210	U

Data Qualifiers

N-Presumptive evidence of presence of material.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.
C-Confirmed by GCMS.

TABLE 4 (continued)
Defense Depot Memphis
Soil Samples
Pesticide Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/00	DQ	DDE-SE02 940 12/12/00	DQ	DDE-SE03 955 12/12/00	DQ	DDE-SE04 1005 12/12/00	DQ	DDE-SE05 1015 12/12/00	DQ
4,4'-DDD (P,P'-DDD)	UG/KG	22		8.2	U	4.1	U	4.2	U	4.2	U
4,4'-DDE (P,P'-DDE)	UG/KG	23		28		40		12		16	
4,4'-DDT (P,P'-DDT)	UG/KG	16		38		35		17		29	
ALDRIN	UG/KG	2.2	U	5.4	U	2.1	U	2.2	U	2.2	U
ALPHA-BHC	UG/KG	2.2	U	4.2	U	2.1	U	2.2	U	2.2	U
ALPHA-CHLORDANE /2	UG/KG	9.2	N	12	N	14	U	2.2	U	2.7	U
BETA-BHC	UG/KG	2.2	U	4.2	U	2.1	U	2.2	U	2.2	U
DELTA-BHC	UG/KG	2.2	U	4.2	U	2.1	U	2.2	U	2.2	U
DIELDRIN	UG/KG	100		780	C	88		9		22	
ENDOSULFAN I (ALPHA)	UG/KG	5.4		7.1	J	9.5	N	2.2	U	2.2	U
ENDOSULFAN II (BETA)	UG/KG	4.4	U	8.2	U	4.1	U	4.2	U	4.2	U
ENDOSULFAN SULFATE	UG/KG	4.4	U	8.2	U	4.1	U	4.2	U	4.2	U
ENDRIN	UG/KG	4.4	U	15	N	4.5	U	4.2	U	4.2	U
ENDRIN ALDEHYDE	UG/KG	4.4	U	8.2	U	4.1	U	4.2	U	4.2	U
ENDRIN KETONE	UG/KG	4.4	U	16	U	4.1	U	4.2	U	4.2	U
GAMMA-BHC (LINDANE)	UG/KG	2.2	U	4.2	U	2.1	U	2.2	U	2 2	U
GAMMA-CHLORDANE /2	UG/KG	6.8	U	8.5	U	3.5	U	2.2	U	2.2	U
HEPTACHLOR	UG/KG	2.2	U	4.2	U	2.1	U	2.2	U	2.2	U
HEPTACHLOR EPOXIDE	UG/KG	2.2	U	4.2	U	2.1	U	2.2	U	2.2	U
METHOXYCHLOR	UG/KG	22	U	42	U	21	U	22	U	22	U
PCB-1016 (AROCLOR 1016)	UG/KG	44	U	82	U	41	U	42	U	42	U
PCB-1221 (AROCLOR 1221)	UG/KG	89	U	170	U	84	U	85	U	86	U
PCB-1232 (AROCLOR 1232)	UG/KG	44	U	82	U	41	U	42	U	42	U
PCB-1242 (AROCLOR 1242)	UG/KG	44	U	82	U	41	U	42	U	42	U
PCB-1248 (AROCLOR 1248)	UG/KG	44	U	82	U	41	U	42	U	42	U
PCB-1254 (AROCLOR 1254)	UG/KG	44	U	200		420		42	U	42	U
PCB-1260 (AROCLOR 1260)	UG/KG	120		82	U	41	U	42	U	54	
TOXAPHENE	UG/KG	220	U	420	U	210	U	220	U	220	U

Data Qualifiers

N-Presumptive evidence of presence of material.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.
C-Confirmed by GCMS.

TABLE 4 (continued)
Defense Depot Memphis
Soil Samples
Pesticide Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/00	DQ	DDE-SE07 1030 12/12/00	DQ	DDE-SE08 1135 12/12/00	DQ	DDE-SE09 1140 12/12/00	DQ	DDE-SE10 1215 12/12/00	DQ
4,4'-DDD (P,P'-DDD)	UG/KG	4	U	4.1	U	130	N	21	U	4.1	U
4,4'-DDE (P,P'-DDE)	UG/KG	56		4.1	U	270		130		4.1	U
4,4'-DDT (P,P'-DDT)	UG/KG	82		4.1	U	510		310		4.6	
ALDRIN	UG/KG	2.1	U	2.1	U	2	U	2.2	U	2.1	U
ALPHA-BHC	UG/KG	2.1	U	2.1	U	2	U	2.2	U	2.1	U
ALPHA-CHLORDANE /2	UG/KG	12	N	2.1	U	12	U	5.4	U	2.1	U
BETA-BHC	UG/KG	2.1	U	2.1	U	2	U	2.2	U	2.1	U
DELTA-BHC	UG/KG	2.1	U	2.1	U	2	U	2.2	U	2.1	U
DIELDRIN	UG/KG	96		4.1	U	270		76		4.1	U
ENDOSULFAN I (ALPHA)	UG/KG	8		2.1	U	2	U	2.2	U	2.1	U
ENDOSULFAN II (BETA)	UG/KG	4.6	U	4.1	U	3.9	U	4.3	U	4.1	U
ENDOSULFAN SULFATE	UG/KG	4	U	4.1	U	3.9	U	4.3	U	4 1	U
ENDRIN	UG/KG	7.5	U	4.1	U	4.3	U	4.3	U	4.1	U
ENDRIN ALDEHYDE	UG/KG	4	U	4.1	U	3.9	U	4.3	U	4.1	U
ENDRIN KETONE	UG/KG	4	U	4.1	U	3.9	U	4.3	U	4.1	U
GAMMA-BHC (LINDANE)	UG/KG	2.1	U	2.1	U	2	U	2.2	U	2.1	U
GAMMA-CHLORDANE /2	UG/KG	5.5	U	2.1	U	12		4.7		2.1	U
HEPTACHLOR	UG/KG	2.1	U	2.1	U	2	U	2.2	U	2.1	U
HEPTACHLOR EPOXIDE	UG/KG	2.1	U	2.1	U	2	U	2.2	U	2.1	U
METHOXYCHLOR	UG/KG	21	U	21	U	20	U	22	U	21	U
PCB-1016 (AROCLOR 1016)	UG/KG	40	U	41	U	39	U	43	U	41	U
PCB-1221 (AROCLOR 1221)	UG/KG	82	U	83	U	79	U	87	U	83	U
PCB-1232 (AROCLOR 1232)	UG/KG	40	U	41	U	39	U	43	U	41	U
PCB-1242 (AROCLOR 1242)	UG/KG	40	U	41	U	39	U	43	U	41	U
PCB-1248 (AROCLOR 1248)	UG/KG	40	U	41	U	39	U	43	U	41	U
PCB-1254 (AROCLOR 1254)	UG/KG	250		41	U	39	U	43	U	41	U
PCB-1260 (AROCLOR 1260)	UG/KG	40	U	41	U	100		44		41	U
TOXAPHENE	UG/KG	210	U	210	U	200	U	220	U	210	U

Data Qualifiers

N-Presumptive evidence of presence of material.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.
C-Confirmed by GCMS.

TABLE 5
Defense Depot Memphis
Soil Samples
Metals Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
ALUMINUM	MG/KG	15000	J	19000	J	13000	J	6100	J	8000	J
ANTIMONY	MG/KG	0.92	U	0.9	U	0.79	U	0.92	U	0.88	U
ARSENIC	MG/KG	12		13		3.4		9.6		11	
BARIUM	MG/KG	130		160		380		140		110	
BERYLLIUM	MG/KG	0.51	U	0.53	U	0.59	U	0.46	U	0.47	U
CADMIUM	MG/KG	0.13	U	0.13	U	0.18	U	0.13	U	0.12	U
CALCIUM	MG/KG	14000		25000		54000		3200		2300	
CHROMIUM	MG/KG	20		24		29		11		11	
COBALT	MG/KG	8.1		8.4		4.8		8.2		8.6	
COPPER	MG/KG	37		32		18		34		25	
IRON	MG/KG	18000	J	17000	J	11000	J	16000	J	18000	J
LEAD	MG/KG	94		120		94		70		39	
MAGNESIUM	MG/KG	2500		3100		4100		1700		1900	
MANGANESE	MG/KG	610		630		180		820		630	
NICKEL	MG/KG	17		18		7.9	U	16		14	
POTASSIUM	MG/KG	1200	J	2000	J	900	J	670	J	860	J
SELENIUM	MG/KG	1.1	UJ	1.4	J	0.85	U	1.6	J	0.96	U
SILVER	MG/KG	0.52	U	0.48	U	0.37	U	0.33	U	0.31	U
SODIUM	MG/KG	130		170		1400		86		86	
THALLIUM	MG/KG	2	U	3.4		2.3		2	U	2	U
TOTAL MERC	MG/KG	0.07	UJ	0 06	UJ	0.06	UJ	0.07	UJ	0.06	UJ
VANADIUM	MG/KG	30	J	36	J	20	J	19	J	22	J
ZINC	MG/KG	150		140		100		180		74	

Data Qualifiers

NA-Not analyzed. J-Estimated value.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 5 (continued)
Defense Depot Memphis
Soil Samples
Metals Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
ALUMINUM	MG/KG	5000	J	4300	J	5600	J	4300	J	5500	J
ANTIMONY	MG/KG	1	U	0.91	U	0.86	U	0.88	U	0.89	U
ARSENIC	MG/KG	8.5		9.4		14		7.5		8.8	
BARIUM	MG/KG	51		77		120		60		97	
BERYLLIUM	MG/KG	0.34	U	0.32	U	0.48	U	0.29	U	0.38	U
CADMIUM	MG/KG	0.14	U	0.13	U	0.12	U	0.12	U	0.12	U
CALCIUM	MG/KG	6000		3800		3200		11000		14000	
CHROMIUM	MG/KG	8.9		9.2		11		8.1		12	
COBALT	MG/KG	4.3		5.3		9.3		4.1		5.9	
COPPER	MG/KG	28		30		31		18		26	
IRON	MG/KG	12000	J	12000	J	14000	J	11000	J	13000	J
LEAD	MG/KG	40		78		45		33		62	
MAGNESIUM	MG/KG	1600		1200		1100		1600		2300	
MANGANESE	MG/KG	240		410		1300		400		620	
NICKEL	MG/KG	9.1	U	11		13		7.7	U	11	
POTASSIUM	MG/KG	390	J	380	J	440	J	370	J	510	J
SELENIUM	MG/KG	1.1	U	0.99	U	0.93	U	0.95	U	0.96	U
SILVER	MG/KG	0.53	U	0.33	U	0.19	U	0.43	U	0.32	U
SODIUM	MG/KG	120		110		120		120		100	
THALLIUM	MG/KG	2.3	U	2	U	1.9	U	2.2	U	2	U
TOTAL MERC	MG/KG	0.07	UJ	0.06	UJ	0.06	UJ	0.06	UJ	0.06	UJ
VANADIUM	MG/KG	14	J	16	J	16	J	15	J	17	J
ZINC	MG/KG	80		150		98		55		96	

Data Qualifiers

NA-Not analyzed. J-Estimated value.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 5 (continued)
Defense Depot Memphis
Soil Samples
Metals Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
ALUMINUM	MG/KG	4000	J	9200	J	4600	J	5600	J	7300	J
ANTIMONY	MG/KG	0.88	U	0.85	U	0.82	U	0.93	U	0.9	U
ARSENIC	MG/KG	8.3		23		11		8.9		6.9	
BARIUM	MG/KG	97		81		56		92		120	
BERYLLIUM	MG/KG	0.33	U	0.48	U	0.3	U	0.38	U	0.65	U
CADMIUM	MG/KG	0.12	U	0.12	U	0.11	U	0.13	U	0.12	U
CALCIUM	MG/KG	4000		1100		27000		4600		940	
CHROMIUM	MG/KG	8.2		12		11		12		11	
COBALT	MG/KG	5.9		14		7		6.7		7.9	
COPPER	MG/KG	31		28		14		28		20	
IRON	MG/KG	11000	J	22000	J	9100	J	12000	J	15000	J
LEAD	MG/KG	84		17		29		40		16	
MAGNESIUM	MG/KG	1100		2000		1400		1300		1200	
MANGANESE	MG/KG	580		760		530		620		950	
NICKEL	MG/KG	9.1	U	13		7.9	U	11		10	
POTASSIUM	MG/KG	420	J	680	J	380	J	240	J	420	J
SELENIUM	MG/KG	0.95	U	0.92	U	0.89	U	1	U	0.97	U
SILVER	MG/KG	0.19	U	0.21	U	0.3	U	0.31	U	0.2	U
SODIUM	MG/KG	98		160		140		95		100	
THALLIUM	MG/KG	1.9	U	2.4		1.8	U	2.1	U	2	U
TOTAL MERC	MG/KG	0.06	UJ	0.06	UJ	0.06	UJ	0.06	UJ	0.06	UJ
VANADIUM	MG/KG	13	J	25	J	15	J	17	J	25	J
ZINC	MG/KG	90		59		95		91		37	

Data Qualifiers

NA-Not analyzed. J-Estimated value.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.

TABLE 6
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
(3-AND/OR 4-)METHYLPHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
1,1-BIPHENYL	UG/KG	430	U	430	U	360	U	430	U	400	U
2,4,5-TRICHLOROPHENOL	UG/KG	1100	U	1100	U	910	U	1100	U	1000	U
2,4,6-TRICHLOROPHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
2,4-DICHLOROPHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
2,4-DIMETHYLPHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
2,4-DINITROPHENOL	UG/KG	1100	U	1100	U	910	U	1100	U	1000	U
2,4-DINITROTOLUENE	UG/KG	430	U	430	U	360	U	430	U	400	U
2,6-DINITROTOLUENE	UG/KG	430	U	430	U	360	U	430	U	400	U
2-CHLORONAPHTHALENE	UG/KG	430	U	430	U	360	U	430	U	400	U
2-CHLOROPHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
2-METHYL-4,6-DINITROPHENOL	UG/KG	1100	U	1100	U	910	U	1100	U	1000	U
2-METHYLNAPHTHALENE	UG/KG	430	U	69	J	69	J	260	J	400	U
2-METHYLPHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
2-NITROANILINE	UG/KG	1100	U	1100	U	910	U	1100	U	1000	U
2-NITROPHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
3,3'-DICHLOROBENZIDINE	UG/KG	430	U	430	U	360	UJ	430	U	400	U
3-NITROANILINE	UG/KG	1100	U	1100	U	910	U	1100	U	1000	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	430	U	430	U	360	U	430	U	400	U
4-CHLORO-3-METHYLPHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
4-CHLOROANILINE	UG/KG	430	UJ	430	UJ	360	UJ	430	UJ	400	UJ
4-CHLOROPHENYL PHENYL ETHER	UG/KG	430	U	430	U	360	U	430	U	400	U
4-NITROANILINE	UG/KG	1100	U	1100	U	910	U	1100	U	1000	U
4-NITROPHENOL	UG/KG	1100	U	1100	U	910	U	1100	U	1000	U
ACENAPHTHENE	UG/KG	720		1300		130	J	430	U	400	U
ACENAPHTHYLENE	UG/KG	230	J	180	J	130	J	430	U	400	U
ACETOPHENONE	UG/KG	430	U	430	U	360	U	430	U	400	U
ANTHRACENE	UG/KG	1300		2400		360	J	430	U	400	U
ATRAZINE	UG/KG	430	U	430	U	360	U	430	U	400	U

TABLE 6 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
BENZALDEHYDE	UG/KG	430	U	430	U	360	U	430	U	400	U
BENZO(A)ANTHRACENE	UG/KG	11000		20000		1400	J	240	J	110	J
BENZO(B)FLUORANTHENE	UG/KG	18000	J	28000		2000	J	410	J	200	J
BENZO(GHI)PERYLENE	UG/KG	6900	J	13000		870	J	140	J	68	J
BENZO(K)FLUORANTHENE	UG/KG	7400	J	11000		850	J	170	J	73	J
BENZO-A-PYRENE	UG/KG	12000	J	20000		1200	J	250	J	120	J
BENZYL BUTYL PHTHALATE	UG/KG	430	U	430	U	360	UJ	430	U	400	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	430	U	430	U	360	U	430	U	400	U
BIS(2-CHLOROETHYL) ETHER	UG/KG	430	U	430	U	360	U	430	U	400	U
BIS(2-CHLOROISOPROPYL) ETHER	UG/KG	430	U	430	U	360	U	430	U	400	U
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	430	U	1000		360	UJ	880		400	U
CAPROLACTAM	UG/KG	430	U	430	U	360	U	430	U	400	U
CARBAZOLE	UG/KG	1300		2200		320	J	430	U	400	U
CHRYSENE	UG/KG	12000		20000		1400	J	260	J	130	J
DIBENZO(A,H)ANTHRACENE	UG/KG	230	J	590		360	UR	430	U	400	U
DIBENZOFURAN	UG/KG	230	J	350	J	140	J	430	U	400	U
DIETHYL PHTHALATE	UG/KG	430	U	430	U	360	U	430	U	400	U
DIMETHYL PHTHALATE	UG/KG	430	U	430	U	360	U	430	U	400	U
DI-N-BUTYLPHTHALATE	UG/KG	430	U	430	U	360	U	430	U	400	U
DI-N-OCTYLPHTHALATE	UG/KG	430	UJ	430	U	360	UR	430	U	400	U
FLUORANTHENE	UG/KG	21000		30000		2000		440		250	J
FLUORENE	UG/KG	560		950		210	J	430	U	400	U
HEXACHLOROBENZENE (HCB)	UG/KG	430	U	430	U	360	U	430	U	400	U
HEXACHLOROBUTADIENE	UG/KG	430	U	430	U	360	U	430	U	400	U
HEXACHLOROCYCLOPENTADIENE (HCCP)	UG/KG	430	UJ	430	UJ	360	UJ	430	UJ	400	UJ
HEXACHLOROETHANE	UG/KG	430	U	430	U	360	U	430	U	400	U
INDENO (1,2,3-CD) PYRENE	UG/KG	7800	J	15000		1000	J	160	J	86	J
ISOPHORONE	UG/KG	430	U	430	U	360	U	430	U	400	U
NAPHTHALENE	UG/KG	430	U	430	U	160	J	86	J	400	U

TABLE 6 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
NITROBENZENE	UG/KG	430	U	430	U	360	U	430	U	400	U
N-NITROSODI-N-PROPYLAMINE	UG/KG	430	U	430	U	360	U	430	U	400	U
N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	UG/KG	430	U	430	U	360	U	430	U	400	U
PENTACHLOROPHENOL	UG/KG	1100	U	1100	U	910	U	1100	U	1000	U
PHENANTHRENE	UG/KG	10000		14000		1800		180	J	100	J
PHENOL	UG/KG	430	U	430	U	360	U	430	U	400	U
PYRENE	UG/KG	23000		30000		4000	J	460		240	J

Data Qualifiers

J-Estimated value.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.
R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.
C-Confirmed by GCMS.

TABLE 6 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
(3-AND/OR 4-)METHYLPHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
1,1-BIPHENYL	UG/KG	890	U	410	U	410	U	410	U	420	U
2,4,5-TRICHLOROPHENOL	UG/KG	2200	U	1000	U	1000	U	1000	U	1100	U
2,4,6-TRICHLOROPHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
2,4-DICHLOROPHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
2,4-DIMETHYLPHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
2,4-DINITROPHENOL	UG/KG	2200	U	1000	U	1000	U	1000	U	1100	U
2,4-DINITROTOLUENE	UG/KG	890	U	410	U	410	U	410	U	420	U
2,6-DINITROTOLUENE	UG/KG	890	U	410	U	410	U	410	U	420	U
2-CHLORONAPHTHALENE	UG/KG	890	U	410	U	410	U	410	U	420	U
2-CHLOROPHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
2-METHYL-4,6-DINITROPHENOL	UG/KG	2200	U	1000	U	1000	U	1000	U	1100	U
2-METHYLNAPHTHALENE	UG/KG	890	U	410	U	410	U	410	U	420	U
2-METHYLPHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
2-NITROANILINE	UG/KG	2200	U	1000	U	1000	U	1000	U	1100	U
2-NITROPHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
3,3'-DICHLOROBENZIDINE	UG/KG	890	UJ	410	UJ	410	U	410	U	420	U
3-NITROANILINE	UG/KG	2200	U	1000	U	1000	U	1000	U	1100	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	890	U	410	U	410	U	410	U	420	U
4-CHLORO-3-METHYLPHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
4-CHLOROANILINE	UG/KG	890	UJ	410	UJ	410	UJ	410	UJ	420	UJ
4-CHLOROPHENYL PHENYL ETHER	UG/KG	890	U	410	U	410	U	410	U	420	U
4-NITROANILINE	UG/KG	2200	U	1000	U	1000	U	1000	U	1100	U
4-NITROPHENOL	UG/KG	2200	U	1000	U	1000	U	1000	U	1100	U
ACENAPHTHENE	UG/KG	890	U	410	U	42	J	410	U	420	U
ACENAPHTHYLENE	UG/KG	890	U	950		410	U	410	U	420	U
ACETOPHENONE	UG/KG	890	U	410	U	410	U	410	U	420	U
ANTHRACENE	UG/KG	120	J	1200		190	J	410	U	420	U
ATRAZINE	UG/KG	890	U	410	U	410	U	410	U	420	U

TABLE 6 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
BENZALDEHYDE	UG/KG	890	U	410	U	82	J	410	U	420	U
BENZO(A)ANTHRACENE	UG/KG	350	J	6900	J	460		110	J	190	J
BENZO(B)FLUORANTHENE	UG/KG	440	J	19000		610	J	200	J	510	J
BENZO(GHI)PERYLENE	UG/KG	230	J	4500	J	130	J	64	J	200	J
BENZO(K)FLUORANTHENE	UG/KG	260	J	8000	J	230	J	69	J	160	J
BENZO-A-PYRENE	UG/KG	370	J	11000		410	J	110	J	240	J
BENZYL BUTYL PHTHALATE	UG/KG	890	UR	410	UJ	410	U	410	U	420	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	890	U	410	U	410	U	410	U	420	U
BIS(2-CHLOROETHYL) ETHER	UG/KG	890	U	410	U	410	U	410	U	420	U
BIS(2-CHLOROISOPROPYL) ETHER	UG/KG	890	U	410	U	410	U	410	U	420	U
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	890	UR	2000		410	U	410	U	450	
CAPROLACTAM	UG/KG	890	U	410	U	410	U	410	U	420	U
CARBAZOLE	UG/KG	100	J	320	J	52	J	410	U	420	U
CHRYSENE	UG/KG	340	J	12000		380	J	130	J	230	J
DIBENZO(A,H)ANTHRACENE	UG/KG	890	UR	320	J	410	UJ	410	UJ	420	UJ
DIBENZOFURAN	UG/KG	890	U	410	U	410	U	410	U	420	U
DIETHYL PHTHALATE	UG/KG	890	U	410	U	410	U	410	U	420	U
DIMETHYL PHTHALATE	UG/KG	890	U	410	U	410	U	410	U	420	U
DI-N-BUTYLPHTHALATE	UG/KG	890	U	410	U	410	U	410	U	420	U
DI-N-OCTYLPHTHALATE	UG/KG	890	UR	410	U	410	UJ	410	UJ	420	UJ
FLUORANTHENE	UG/KG	590	J	2100		880		190	J	150	J
FLUORENE	UG/KG	890	U	100	J	49	J	410	U	420	U
HEXACHLOROBENZENE (HCB)	UG/KG	890	U	410	U	410	U	410	U	420	U
HEXACHLOROBUTADIENE	UG/KG	890	U	410	U	410	U	410	U	420	U
HEXACHLOROCYCLOPENTADIENE (HCCP)	UG/KG	890	UJ	410	UJ	410	UJ	410	UJ	420	UJ
HEXACHLOROETHANE	UG/KG	890	U	410	U	410	U	410	U	420	U
INDENO (1,2,3-CD) PYRENE	UG/KG	260	J	6200	J	160	J	64	J	150	J
ISOPHORONE	UG/KG	890	U	410	U	410	U	410	U	420	U
NAPHTHALENE	UG/KG	890	U	410	U	410	U	410	U	420	U

TABLE 6 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
NITROBENZENE	UG/KG	890	U	410	U	410	U	410	U	420	U
N-NITROSODI-N-PROPYLAMINE	UG/KG	890	U	410	U	410	U	410	U	420	U
N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	UG/KG	890	U	410	U	410	U	410	U	420	U
PENTACHLOROPHENOL	UG/KG	2200	U	1000	U	1000	U	1000	U	1100	U
PHENANTHRENE	UG/KG	470	J	720		590		130	J	70	J
PHENOL	UG/KG	890	U	410	U	410	U	410	U	420	U
PYRENE	UG/KG	960	J	6100	J	1000		260	J	300	J

Data Qualifiers

J-Estimated value.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.
R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.
C-Confirmed by GCMS.

TABLE 6 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
(3-AND/OR 4-)METHYLPHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
1,1-BIPHENYL	UG/KG	400	U	410	U	390	U	420	U	400	U
2,4,5-TRICHLOROPHENOL	UG/KG	1000	U	1000	U	980	U	1100	U	1000	U
2,4,6-TRICHLOROPHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
2,4-DICHLOROPHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
2,4-DIMETHYLPHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
2,4-DINITROPHENOL	UG/KG	1000	U	1000	U	980	U	1100	U	1000	U
2,4-DINITROTOLUENE	UG/KG	400	U	410	U	390	U	420	U	400	U
2,6-DINITROTOLUENE	UG/KG	400	U	410	U	390	U	420	U	400	U
2-CHLORONAPHTHALENE	UG/KG	400	U	410	U	390	U	420	U	400	U
2-CHLOROPHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
2-METHYL-4,6-DINITROPHENOL	UG/KG	1000	U	1000	U	980	U	1100	U	1000	U
2-METHYLNAPHTHALENE	UG/KG	400	U	410	U	390	U	420	U	400	U
2-METHYLPHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
2-NITROANILINE	UG/KG	1000	U	1000	U	980	U	1100	U	1000	U
2-NITROPHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
3,3'-DICHLOROBENZIDINE	UG/KG	400	UR	410	U	390	U	420	U	400	U
3-NITROANILINE	UG/KG	1000	U	1000	U	980	U	1100	U	1000	U
4-BROMOPHENYL PHENYL ETHER	UG/KG	400	U	410	U	390	U	420	U	400	U
4-CHLORO-3-METHYLPHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
4-CHLOROANILINE	UG/KG	400	UJ	410	UJ	390	UJ	420	UJ	400	UJ
4-CHLOROPHENYL PHENYL ETHER	UG/KG	400	U	410	U	390	U	420	U	400	U
4-NITROANILINE	UG/KG	1000	U	1000	U	980	U	1100	U	1000	U
4-NITROPHENOL	UG/KG	1000	U	1000	U	980	U	1100	U	1000	U
ACENAPHTHENE	UG/KG	400	U	110	J	390	U	420	U	400	U
ACENAPHTHYLENE	UG/KG	400	U	410	U	390	U	420	U	400	U
ACETOPHENONE	UG/KG	400	U	410	U	390	U	420	U	400	U
ANTHRACENE	UG/KG	91	J	230	J	390	U	45	J	400	U
ATRAZINE	UG/KG	400	U	410	U	390	U	420	U	400	U

TABLE 6 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
BENZALDEHYDE	UG/KG	43	J	410	U	390	U	420	U	400	U
BENZO(A)ANTHRACENE	UG/KG	460	J	800		390	U	230	J	400	U
BENZO(B)FLUORANTHENE	UG/KG	800	J	1300	J	390	U	470	J	400	U
BENZO(GHI)PERYLENE	UG/KG	210	J	370	J	390	U	140	J	400	U
BENZO(K)FLUORANTHENE	UG/KG	280	J	400	J	390	U	150	J	400	U
BENZO-A-PYRENE	UG/KG	390	J	760	J	390	U	240	J	400	U
BENZYL BUTYL PHTHALATE	UG/KG	400	UR	410	U	390	U	420	U	400	U
BIS(2-CHLOROETHOXY)METHANE	UG/KG	400	U	410	U	390	U	420	U	400	U
BIS(2-CHLOROETHYL) ETHER	UG/KG	400	U	410	U	390	U	420	U	400	U
BIS(2-CHLOROISOPROPYL) ETHER	UG/KG	400	U	410	U	390	U	420	U	400	U
BIS(2-ETHYLHEXYL) PHTHALATE	UG/KG	400	UR	410	U	390	U	420	U	400	U
CAPROLACTAM	UG/KG	400	U	410	U	390	U	420	U	400	U
CARBAZOLE	UG/KG	51	J	220	J	390	U	53	J	400	U
CHRYSENE	UG/KG	550	J	900		390	U	290	J	400	U
DIBENZO(A,H)ANTHRACENE	UG/KG	400	UR	92	J	390	U	420	UJ	400	U
DIBENZOFURAN	UG/KG	400	U	99	J	390	U	420	U	400	U
DIETHYL PHTHALATE	UG/KG	400	U	410	U	390	U	420	U	400	U
DIMETHYL PHTHALATE	UG/KG	400	U	410	U	390	U	420	U	400	U
DI-N-BUTYLPHTHALATE	UG/KG	400	U	410	U	390	U	420	U	400	U
DI-N-OCTYLPHTHALATE	UG/KG	400	UR	410	UJ	390	U	420	UJ	400	U
FLUORANTHENE	UG/KG	710		1600		390	U	490		63	J
FLUORENE	UG/KG	400	U	170	J	390	U	420	U	400	U
HEXACHLOROBENZENE (HCB)	UG/KG	400	U	410	U	390	U	420	U	400	U
HEXACHLOROBUTADIENE	UG/KG	400	U	410	U	390	U	420	U	400	U
HEXACHLOROCYCLOPENTADIENE (HCCP)	UG/KG	400	UJ	410	UJ	390	UJ	420	UJ	400	UJ
HEXACHLOROETHANE	UG/KG	400	U	410	U	390	U	420	U	400	U
INDENO (1,2,3-CD) PYRENE	UG/KG	210	J	430	J	390	U	160	J	400	U
ISOPHORONE	UG/KG	400	U	410	U	390	U	420	U	400	U
NAPHTHALENE	UG/KG	400	U	65	J	390	U	420	U	400	U

TABLE 6 (continued)
Defense Depot Memphis
Soil Samples
Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
NITROBENZENE	UG/KG	400	U	410	U	390	U	420	U	400	U
N-NITROSODI-N-PROPYLAMINE	UG/KG	400	U	410	U	390	U	420	U	400	U
N-NITROSODIPHENYLAMINE/DIPHENYLAMINE	UG/KG	400	U	410	U	390	U	420	U	400	U
PENTACHLOROPHENOL	UG/KG	1000	U	1000	U	980	U	1100	U	1000	U
PHENANTHRENE	UG/KG	300	J	1400		390	U	270	J	400	U
PHENOL	UG/KG	400	U	410	U	390	U	420	U	400	U
PYRENE	UG/KG	1300	J	1900		390	U	540		49	J

Data Qualifiers

J-Estimated value.
U-Material was analyzed for but not detected. The number is the minimum quantitation limit.
R-QC indicates that data unusable. Compound may or may not be present. Resampling and reanalysis is necessary for verification.
C-Confirmed by GCMS.

TABLE 7
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
1,4-METHANO-1H-INDENE, OCTAH	UG/KG		NR		NR		NR	130	NJ		NR
11 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR	5100	J		NR
11H-BENZO [B] FLUORENE	UG/KG		NR		NR		NR		NR		NR
11UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
1-DECENE	UG/KG		NR		NR		NR		NR		NR
1H-CYCLOPENTA [1,3] CYCLOPROPA	UG/KG		NR		NR		NR	120	NJ		NR
2 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR	180	J
2-PHENYLNAPHTHALENE	UG/KG		NR		NR		NR		NR		NR
4 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
5 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
6 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
7H-BENZ [DE] ANTHRACEN-7-ONE	UG/KG		NR		NR		NR		NR		NR
8 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
9 UNKNOWN COMPOUNDS	UG/KG	3200	J	3300	J		NR		NR		NR
9, 12-OCTADECADIENOIC ACID (Z	UG/KG		NR		NR		NR		NR		NR
9,10-ANTHRACENEDIONE	UG/KG	740	NJ		NR		NR		NR		NR
9-ANTHRACENECARBONITRILE	UG/KG	350	NJ	260	NJ		NR		NR		NR
9-HEXADECENOIC ACID	UG/KG		NR		NR		NR		NR		NR
9H-FLUOREN-9-ONE	UG/KG	330	NJ	340	NJ		NR		NR		NR
9H-FLUORENE, 1-METHYL-	UG/KG		NR	260	NJ		NR		NR		NR
9H-FLUORENE, 9-METHYLENE-	UG/KG		NR		NR		NR		NR		NR
ACRIDINE	UG/KG		NR	280	NJ		NR		NR		NR
ANTHRACENE, 1-METHYL-	UG/KG		NR		NR		NR		NR		NR
ANTHRACENE, 2-METHYL-	UG/KG	480	NJ		NR		NR		NR		NR
ANTHRACENE, 9-METHYL-	UG/KG	450	NJ		NR		NR		NR		NR
ANTRHACENE, 2-METHYL- (2 ISOMERS)	UG/KG		NR	1500	JN		NR		NR		NR
BENZ [E] ACEPHENANTHRYLENE (2 ISOMERS)	UG/KG		NR		NR		NR		NR		NR
BENZENAMINE, 2,4,6-TRICHLORO	UG/KG		NR	160	NJ		NR		NR		NR
BENZENAMINE, 2,4,6-TRICHLRO	UG/KG		NR		NR		NR		NR		NR

TABLE 7 (continued)
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
BENZENE, 1-(1,5-DIMETHYL-4-H	UG/KG		NR		NR		NR		NR		NR
BENZENE, 1,1'-(1,2-CYCLOBUTA	UG/KG		NR		NR		NR		NR		NR
BENZENE, 1,2,3,4-TETRAMETHYL	UG/KG		NR		NR		NR	120	NJ		NR
BENZENE, 1-METHYL-2-(1-METHY	UG/KG		NR		NR		NR	97	NJ		NR
BENZENE, 2-ETHENYLL-1,4-DIMET	UG/KG		NR		NR		NR	140	NJ		NR
BENZENE, 2-ETHYL-1,4-DIMETHY	UG/KG		NR		NR		NR	150	NJ		NR
BENZO [B] NAPHTHO [2,1-D] THIOPH	UG/KG	550	NJ		NR		NR		NR		NR
BENZO [B] NAPHTHO [2,3-D] FURAN	UG/KG		NR		NR		NR		NR		NR
BENZO [B] NAPHTHO [2,3-D] FURAN (2 ISOMERS)	UG/KG		NR	940	JN		NR		NR		NR
BENZO [B] NAPHTHO [2,3-D]FURAN (2 ISOMERS)	UG/KG	460	JN		NR		NR		NR		NR
BENZO [E] PYRENE	UG/KG		NR		NR		NR		NR	99	NJ
BENZO [F] QUINOLINE	UG/KG	170	NJ		NR		NR		NR		NR
BICYCLO [2.2.1] HEPTAN-2-ONE,	UG/KG		NR		NR		NR		NR		NR
CEDROL	UG/KG		NR		NR		NR	740	NJ		NR
CHLOROPHENOTHANE	UG/KG		NR		NR		NR		NR		NR
CHOLESTEROL	UG/KG		NR		NR		NR		NR		NR
CYCLODODECANE	UG/KG		NR		NR		NR		NR		NR
CYCLOPENTA (DEF) PHENANTHRENON	UG/KG		NR		NR		NR		NR		NR
DECANE, 2-METHYL-	UG/KG		NR		NR		NR		NR		NR
DIBENZOFURAN, 4-METHYL-	UG/KG	130	NJ	210	NJ		NR		NR		NR
DIBENZOTHIOPHENE	UG/KG	320	NJ	450	NJ		NR		NR		NR
D-LIMONENE	UG/KG		NR		NR		NR		NR		NR
DODECANOIC ACID, METHYL ESTE	UG/KG		NR		NR		NR		NR		NR
HEPTADECANOIC ACID	UG/KG		NR		NR		NR		NR		NR
HEXADECANIC ACID	UG/KG		NR		NR		NR		NR	240	NJ
HEXADECANOIC ACID	UG/KG		NR		NR		NR	390	NJ		NR
HEXADECANOIC ACID, METHYL ES	UG/KG		NR	110	NJ		NR		NR		NR
INDENE	UG/KG		NR		NR		NR		NR		NR
METHYL 9-METHYLTETRADECANOAT	UG/KG		NR		NR		NR		NR		NR

TABLE 7 (continued)
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-RZ01 1510 12/12/2000	DQ	DDE-RZ02 1435 12/12/2000	DQ	DDE-RZ03 1450 12/12/2000	DQ	DDE-RZ04 1450 12/12/2000	DQ	DDE-TR01 1545 12/12/2000	DQ
NAPHTAHLENE, 2-PHENYL-	UG/KG		NR	710	NJ		NR		NR		NR
NAPHTHALENE, 1,2-DIMETHYLY-	UG/KG		NR	170	NJ		NR		NR		NR
NAPHTHALENE, 1-METHYL-	UG/KG		NR	110	NJ		NR	200	NJ		NR
NAPHTHALENE, 1-PHENYL-	UG/KG		NR	100	NJ		NR		NR		NR
NAPHTHALENE, 2-PHENYL-	UG/KG	470	NJ		NR		NR		NR		NR
OCTADECANOIC ACID, METHYL ES	UG/KG		NR		NR		NR		NR		NR
OLEIC ACID	UG/KG		NR		NR		NR		NR		NR
OXACYCLOHEXADECAN-2-ONE, 16-	UG/KG		NR		NR		NR		NR		NR
P,P'-DDE	UG/KG		NR		NR		NR		NR		NR
PENTADECANOIC ACID	UG/KG		NR		NR		NR	200	NJ	160	NJ
PHENANTHRENE, 1,2,3,4,4A,9,1	UG/KG		NR		NR		NR	96	NJ		NR
PHENANTHRENE, 2,3-DIMETHYL-	UG/KG	190	NJ		NR		NR		NR		NR
PHENANTHRENE, 2,7-DIMETHYL-	UG/KG	130	NJ		NR		NR		NR		NR
PHENANTHRENE, 3-METHYL-	UG/KG		NR		NR		NR		NR		NR
PHENANTHRENE, 4,5-DIMETHYL-	UG/KG		NR	160	NJ		NR		NR		NR
PYRENE, 1-METHYL-	UG/KG		NR	1200	NJ		NR		NR		NR
PYRENE, 2-METHYL-	UG/KG	840	NJ		NR		NR		NR		NR
PYRENE, 4-METHYL-	UG/KG	170	NJ		NR		NR		NR		NR
TETRADECANOIC ACID	UG/KG		NR		NR		NR		NR		NR
THUJOPSENE	UG/KG		NR		NR		NR	170	NJ		NR
UNKNOWN	UG/KG		NR		NR	75	J		NR		NR

Data Qualifiers

J-Estimated value.
N-Presumptive evidence of presence of material.
NR-Not Reported

TABLE 7 (continued)
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
1,4-METHANO-1H-INDENE, OCTAH	UG/KG		NR		NR		NR		NR		NR
11 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
11H-BENZO [B] FLUORENE	UG/KG		NR	560	NJ		NR		NR		NR
11UNKNOWN COMPOUNDS	UG/KG		NR		NR	1300	J		NR		NR
1-DECENE	UG/KG	470	NJ		NR		NR		NR		NR
1H-CYCLOPENTA [1,3] CYCLOPROPA	UG/KG	470	NJ		NR		NR		NR		NR
2 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
2-PHENYLNAPHTHALENE	UG/KG		NR		NR		NR		NR		NR
4 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
5 UNKNOWN COMPOUNDS	UG/KG	2000	J	2000	J		NR		NR	910	J
6 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR	1600	J		NR
7H-BENZ [DE] ANTHRACEN-7-ONE	UG/KG		NR		NR		NR		NR		NR
8 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
9 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
9, 12-OCTADECADIENOIC ACID (Z	UG/KG		NR		NR		NR	68	NJ		NR
9,10-ANTHRACENEDIONE	UG/KG		NR		NR		NR		NR		NR
9-ANTHRACENECARBONITRILE	UG/KG		NR		NR		NR		NR		NR
9-HEXADECENOIC ACID	UG/KG		NR		NR		NR		NR	300	NJ
9H-FLUOREN-9-ONE	UG/KG		NR		NR		NR		NR		NR
9H-FLUORENE, 1-METHYL-	UG/KG		NR		NR		NR		NR		NR
9H-FLUORENE, 9-METHYLENE-	UG/KG		NR	170	NJ		NR		NR		NR
ACRIDINE	UG/KG		NR		NR		NR		NR		NR
ANTHRACENE, 1-METHYL-	UG/KG		NR		NR		NR		NR		NR
ANTHRACENE, 2-METHYL-	UG/KG		NR	210	NJ	74	NJ		NR		NR
ANTHRACENE, 9-METHYL-	UG/KG		NR		NR	47	NJ		NR		NR
ANTRHACENE, 2-METHYL- (2 ISOMERS)	UG/KG		NR		NR		NR		NR		NR
BENZ [E] ACEPHENANTHRYLENE (2 ISOMERS)	UG/KG		NR		NR		NR		NR		NR
BENZENAMINE, 2,4,6-TRICHLORO	UG/KG		NR		NR		NR		NR		NR
BENZENAMINE, 2,4,6-TRICHLRO	UG/KG		NR		NR		NR		NR		NR

TABLE 7 (continued)
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
BENZENE, 1-(1,5-DIMETHYL-4-H	UG/KG	580	NJ		NR		NR		NR		NR
BENZENE, 1,1'-(1,2-CYCLOBUTA	UG/KG		NR		NR		NR		NR		NR
BENZENE, 1,2,3,4-TETRAMETHYL	UG/KG		NR		NR		NR		NR		NR
BENZENE, 1-METHYL-2-(1-METHY	UG/KG		NR		NR		NR		NR		NR
BENZENE, 2-ETHENYLL-1,4-DIMET	UG/KG		NR		NR		NR		NR		NR
BENZENE, 2-ETHYL-1,4-DIMETHY	UG/KG		NR		NR		NR		NR		NR
BENZO [B] NAPHTHO [2,1-D] THIOPH	UG/KG		NR		NR		NR		NR		NR
BENZO [B] NAPHTHO [2,3-D] FURAN	UG/KG		NR	140	NJ		NR		NR		NR
BENZO [B] NAPHTHO [2,3-D] FURAN (2 ISOMERS)	UG/KG		NR		NR		NR		NR		NR
BENZO [B] NAPHTHO [2,3-D]FURAN (2 ISOMERS)	UG/KG		NR		NR		NR		NR		NR
BENZO [E] PYRENE	UG/KG		NR		NR		NR		NR		NR
BENZO [F] QUINOLINE	UG/KG		NR		NR		NR		NR		NR
BICYCLO [2.2.1] HEPTAN-2-ONE,	UG/KG		NR	92	NJ		NR		NR		NR
CEDROL	UG/KG		NR		NR		NR		NR		NR
CHLOROPHENOTHANE	UG/KG		NR		NR		NR		NR		NR
CHOLESTEROL	UG/KG		NR		NR		NR	790	NJ		NR
CYCLODODECANE	UG/KG		NR	540	NJ		NR		NR		NR
CYCLOPENTA (DEF) PHENANTHRENON	UG/KG		NR	230	NJ		NR		NR		NR
DECANE, 2-METHYL-	UG/KG		NR	150	NJ		NR		NR		NR
DIBENZOFURAN, 4-METHYL-	UG/KG		NR		NR		NR		NR		NR
DIBENZOTHIOPHENE	UG/KG		NR		NR		NR		NR		NR
D-LIMONENE	UG/KG		NR	170	NJ		NR		NR		NR
DODECANOIC ACID, METHYL ESTE	UG/KG		NR		NR		NR	90	NJ		NR
HEPTADECANOIC ACID	UG/KG		NR		NR		NR	200	NJ		NR
HEXADECANIC ACID	UG/KG		NR		NR		NR		NR		NR
HEXADECANOIC ACID	UG/KG		NR		NR	520	NJ	1200	NJ	720	NJ
HEXADECANOIC ACID, METHYL ES	UG/KG		NR		NR		NR	130	NJ		NR
INDENE	UG/KG		NR	130	NJ		NR		NR		NR
METHYL 9-METHYLTETRADECANOAT	UG/KG		NR		NR		NR		NR	97	NJ

TABLE 7 (continued)
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE01 910 12/12/2000	DQ	DDE-SE02 940 12/12/2000	DQ	DDE-SE03 955 12/12/2000	DQ	DDE-SE04 1005 12/12/2000	DQ	DDE-SE05 1015 12/12/2000	DQ
NAPHTAHLENE, 2-PHENYL-	UG/KG		NR		NR		NR		NR		NR
NAPHTHALENE, 1,2-DIMETHYLY-	UG/KG		NR		NR		NR		NR		NR
NAPHTHALENE, 1-METHYL-	UG/KG		NR		NR		NR		NR		NR
NAPHTHALENE, 1-PHENYL-	UG/KG		NR		NR		NR		NR		NR
NAPHTHALENE, 2-PHENYL-	UG/KG		NR	150	NJ	200	NJ		NR		NR
OCTADECANOIC ACID, METHYL ES	UG/KG		NR		NR		NR	140	NJ		NR
OLEIC ACID	UG/KG		NR		NR		NR	2800	NJ		NR
OXACYCLOHEXADECAN-2-ONE, 16-	UG/KG		NR		NR		NR	320	NJ	180	NJ
P,P'-DDE	UG/KG		NR		NR		NR		NR		NR
PENTADECANOIC ACID	UG/KG		NR		NR		NR	510	NJ	270	NJ
PHENANTHRENE, 1,2,3,4,4A,9,1	UG/KG		NR		NR		NR		NR		NR
PHENANTHRENE, 2,3-DIMETHYL-	UG/KG		NR	290	NJ		NR		NR		NR
PHENANTHRENE, 2,7-DIMETHYL-	UG/KG		NR		NR		NR		NR		NR
PHENANTHRENE, 3-METHYL-	UG/KG		NR	470	NJ		NR		NR		NR
PHENANTHRENE, 4,5-DIMETHYL-	UG/KG		NR		NR		NR		NR		NR
PYRENE, 1-METHYL-	UG/KG		NR	1000	NJ		NR		NR		NR
PYRENE, 2-METHYL-	UG/KG		NR		NR		NR		NR		NR
PYRENE, 4-METHYL-	UG/KG		NR	350	NJ	94	NJ		NR		NR
TETRADECANOIC ACID	UG/KG		NR		NR		NR	140	NJ		NR
THUJOPSENE	UG/KG		NR		NR		NR		NR		NR
UNKNOWN	UG/KG		NR		NR		NR		NR		NR

Data Qualifiers

J-Estimated value.
N-Presumptive evidence of presence of material.
NR-Not Reported

TABLE 7 (continued)
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
1,4-METHANO-1H-INDENE, OCTAH	UG/KG		NR		NR		NR		NR		NR
11 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
11H-BENZO [B] FLUORENE	UG/KG		NR	130	NJ		NR		NR		NR
11UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
1-DECENE	UG/KG		NR		NR		NR		NR		NR
1H-CYCLOPENTA [1,3] CYCLOPROPA	UG/KG		NR		NR		NR		NR		NR
2 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
2-PHENYLNAPHTHALENE	UG/KG		NR	280	NJ		NR		NR		NR
4 UNKNOWN COMPOUNDS	UG/KG		NR	1500	J		NR		NR		NR
5 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
6 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
7H-BENZ [DE] ANTHRACEN-7-ONE	UG/KG		NR	60	NJ		NR		NR		NR
8 UNKNOWN COMPOUNDS	UG/KG	1400	J		NR		NR	1400	J		NR
9 UNKNOWN COMPOUNDS	UG/KG		NR		NR		NR		NR		NR
9, 12-OCTADECADIENOIC ACID (Z	UG/KG		NR		NR		NR		NR		NR
9,10-ANTHRACENEDIONE	UG/KG		NR		NR		NR		NR		NR
9-ANTHRACENECARBONITRILE	UG/KG		NR		NR		NR		NR		NR
9-HEXADECENOIC ACID	UG/KG		NR		NR		NR		NR		NR
9H-FLUOREN-9-ONE	UG/KG		NR	97	NJ		NR		NR		NR
9H-FLUORENE, 1-METHYL-	UG/KG		NR		NR		NR		NR		NR
9H-FLUORENE, 9-METHYLENE-	UG/KG		NR		NR		NR		NR		NR
ACRIDINE	UG/KG		NR		NR		NR		NR		NR
ANTHRACENE, 1-METHYL-	UG/KG		NR	97	NJ		NR		NR		NR
ANTHRACENE, 2-METHYL-	UG/KG		NR	120	NJ		NR		NR		NR
ANTHRACENE, 9-METHYL-	UG/KG		NR		NR		NR		NR		NR
ANTRHACENE, 2-METHYL- (2 ISOMERS)	UG/KG		NR		NR		NR		NR		NR
BENZ [E] ACEPHENANTHRYLENE (2 ISOMERS)	UG/KG	720	JN		NR		NR		NR		NR
BENZENAMINE, 2,4,6-TRICHLORO	UG/KG		NR		NR		NR		NR		NR
BENZENAMINE, 2,4,6-TRICHLRO	UG/KG		NR		NR		NR	94	NJ		NR

TABLE 7 (continued)
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
BENZENE, 1-(1,5-DIMETHYL-4-H	UG/KG		NR		NR		NR		NR		NR
BENZENE, 1,1'-(1,2-CYCLOBUTA	UG/KG	160	NJ		NR		NR		NR		NR
BENZENE, 1,2,3,4-TETRAMETHYL	UG/KG		NR		NR		NR		NR		NR
BENZENE, 1-METHYL-2-(1-METHY	UG/KG		NR		NR		NR		NR		NR
BENZENE, 2-ETHENYLL-1,4-DIMET	UG/KG		NR		NR		NR		NR		NR
BENZENE, 2-ETHYL-1,4-DIMETHY	UG/KG		NR		NR		NR		NR		NR
BENZO [B] NAPHTHO [2,1-D] THIOPH	UG/KG		NR	100	NJ		NR	81	NJ		NR
BENZO [B] NAPHTHO [2,3-D] FURAN	UG/KG		NR		NR		NR		NR		NR
BENZO [B] NAPHTHO [2,3-D] FURAN (2 ISOMERS)	UG/KG		NR		NR		NR		NR		NR
BENZO [B] NAPHTHO [2,3-D]FURAN (2 ISOMERS)	UG/KG		NR		NR		NR		NR		NR
BENZO [E] PYRENE	UG/KG		NR		NR		NR		NR		NR
BENZO [F] QUINOLINE	UG/KG		NR		NR		NR		NR		NR
BICYCLO [2.2.1] HEPTAN-2-ONE,	UG/KG		NR		NR		NR		NR		NR
CEDROL	UG/KG		NR		NR		NR		NR		NR
CHLOROPHENOTHANE	UG/KG		NR	150	NJ		NR	130	NJ		NR
CHOLESTEROL	UG/KG		NR		NR		NR		NR		NR
CYCLODODECANE	UG/KG		NR		NR		NR		NR		NR
CYCLOPENTA (DEF) PHENANTHRENON	UG/KG	97	NJ		NR		NR		NR		NR
DECANE, 2-METHYL-	UG/KG		NR		NR		NR		NR		NR
DIBENZOFURAN, 4-METHYL-	UG/KG		NR		NR		NR		NR		NR
DIBENZOTHIOPHENE	UG/KG		NR	110	NJ		NR		NR		NR
D-LIMONENE	UG/KG		NR		NR		NR		NR		NR
DODECANOIC ACID, METHYL ESTE	UG/KG		NR		NR		NR		NR		NR
HEPTADECANOIC ACID	UG/KG		NR		NR		NR		NR		NR
HEXADECANIC ACID	UG/KG		NR		NR		NR		NR		NR
HEXADECANOIC ACID	UG/KG	1000	NJ	410	NJ		NR	730	NJ		NR
HEXADECANOIC ACID, METHYL ES	UG/KG	95	NJ		NR		NR	110	NJ		NR
INDENE	UG/KG		NR	130	NJ		NR		NR		NR
METHYL 9-METHYLTETRADECANOAT	UG/KG		NR		NR		NR		NR		NR

TABLE 7 (continued)
Defense Depot Memphis
Soil Samples
Miscellaneous Extractable Organic Results
Memphis, Tennessee
December, 2000

ANALYTE	UNITS	DDE-SE06 1020 12/12/2000	DQ	DDE-SE07 1030 12/12/2000	DQ	DDE-SE08 1135 12/12/2000	DQ	DDE-SE09 1140 12/12/2000	DQ	DDE-SE10 1215 12/12/2000	DQ
NAPHTAHLENE, 2-PHENYL-	UG/KG		NR		NR		NR		NR		NR
NAPHTHALENE, 1,2-DIMETHYLY-	UG/KG		NR		NR		NR		NR		NR
NAPHTHALENE, 1-METHYL-	UG/KG		NR		NR		NR		NR		NR
NAPHTHALENE, 1-PHENYL-	UG/KG		NR		NR		NR		NR		NR
NAPHTHALENE, 2-PHENYL-	UG/KG		NR		NR		NR		NR		NR
OCTADECANOIC ACID, METHYL ES	UG/KG		NR		NR		NR		NR		NR
OLEIC ACID	UG/KG	490	NJ		NR		NR	150	NJ		NR
OXACYCLOHEXADECAN-2-ONE, 16-	UG/KG		NR		NR		NR		NR		NR
P,P'-DDE	UG/KG		NR	180	NJ		NR	150	NJ		NR
PENTADECANOIC ACID	UG/KG	150	NJ	170	NJ		NR	320	NJ		NR
PHENANTHRENE, 1,2,3,4,4A,9,1	UG/KG		NR		NR		NR		NR		NR
PHENANTHRENE, 2,3-DIMETHYL-	UG/KG		NR		NR		NR		NR		NR
PHENANTHRENE, 2,7-DIMETHYL-	UG/KG		NR		NR		NR		NR		NR
PHENANTHRENE, 3-METHYL-	UG/KG		NR		NR		NR		NR		NR
PHENANTHRENE, 4,5-DIMETHYL-	UG/KG		NR		NR		NR		NR		NR
PYRENE, 1-METHYL-	UG/KG		NR		NR		NR		NR		NR
PYRENE, 2-METHYL-	UG/KG		NR		NR		NR		NR		NR
PYRENE, 4-METHYL-	UG/KG		NR	260	NJ		NR		NR		NR
TETRADECANOIC ACID	UG/KG		NR		NR		NR		NR		NR
THUJOPSENE	UG/KG		NR		NR		NR		NR		NR
UNKNOWN	UG/KG		NR		NR		NR		NR	90	J

Data Qualifiers

J-Estimated value.
N-Presumptive evidence of presence of material
NR-Not Reported

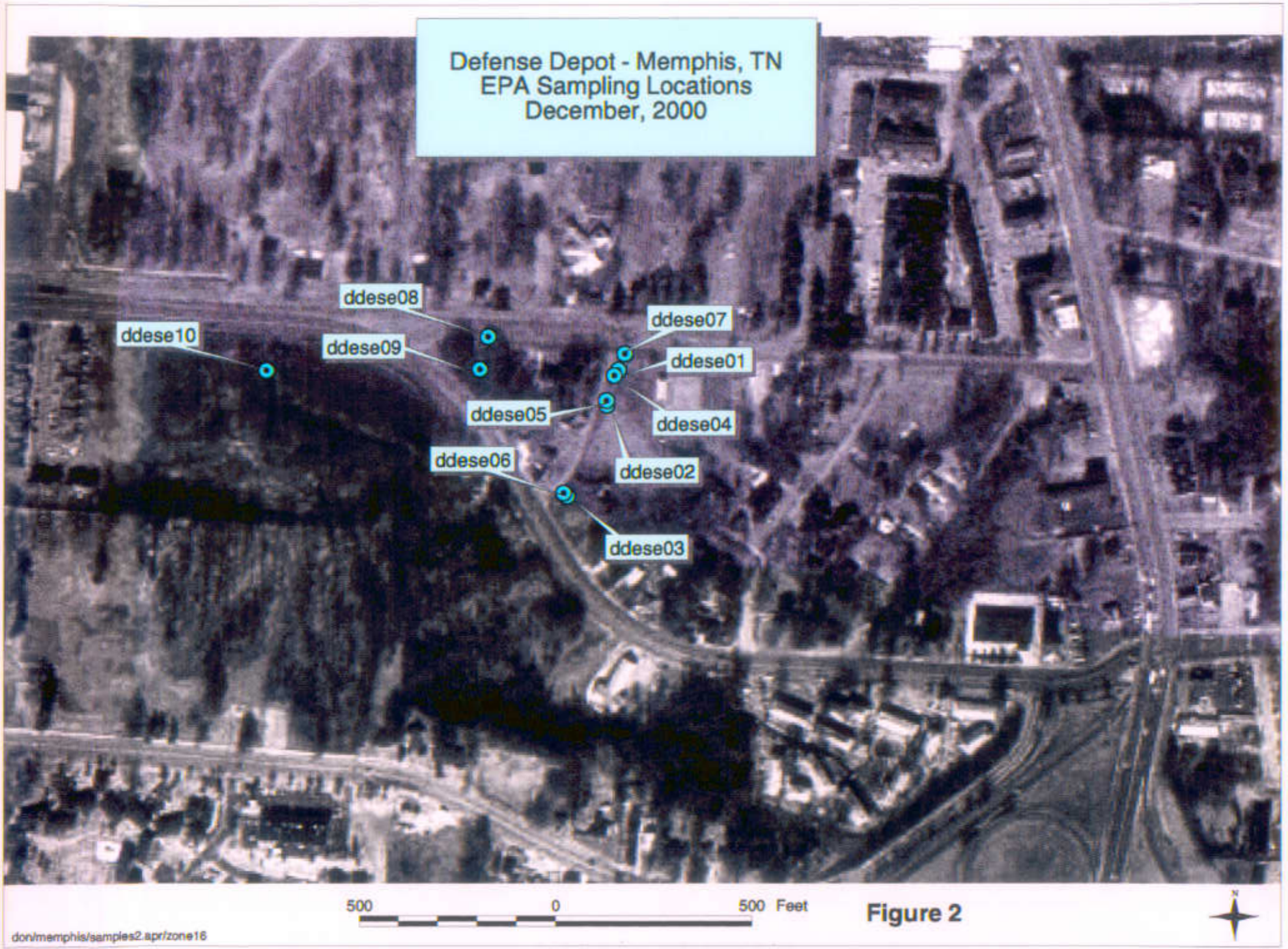
Defense Depot - Memphis, TN
EPA Sampling Locations
December, 2000
ddese08
ddese07
ddese10
ddese09
ddese01
ddese05
ddese04
ddese06
ddese02
ddese03
500
0
500 Feet
don/memphis/samples2.apr/zone16

Figure 2

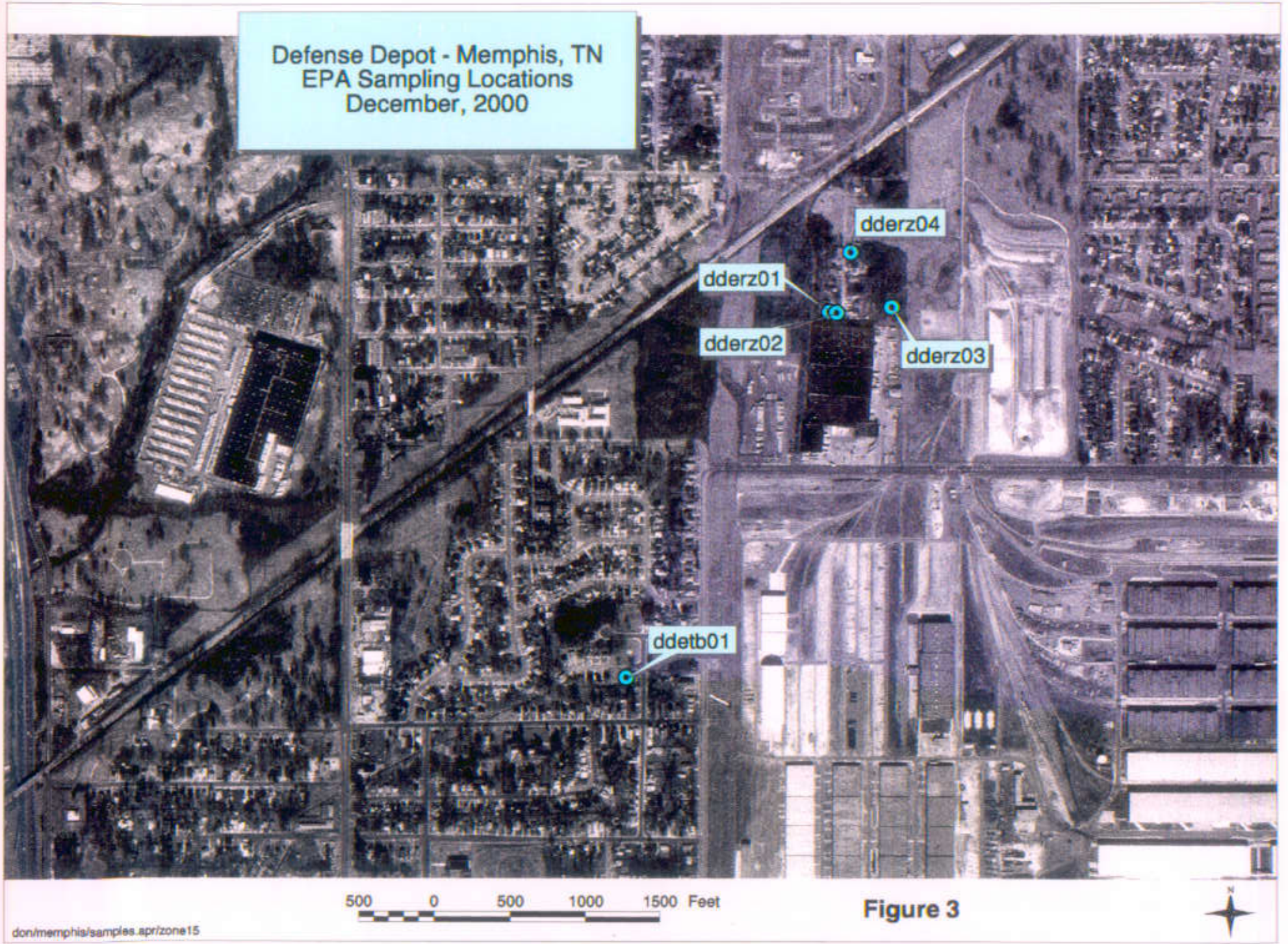
Defense Depot - Memphis, TN
EPA Sampling Locations
December, 2000
dderz04
dderz01
dderz02
dderz03
ddetb01
500 0 500 1000 1500 Feet
don/memphis/samples.apr/zone15

Figure 3

APPENDIX A

ANALYTICAL DATA SHEETS

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1976** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDERZ01 / — MD No: 0E65 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E65 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 15:10
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
6.8U	UG/KG	ALPHA-BHC
6.8U	UG/KG	BETA-BHC
6.8U	UG/KG	DELTA-BHC
6.8U	UG/KG	GAMMA-BHC (LINDANE)
6.8U	UG/KG	HEPTACHLOR
6.8U	UG/KG	ALDRIN
7.0N	UG/KG	HEPTACHLOR EPOXIDE
6.8U	UG/KG	ENDOSULFAN I (ALPHA)
1300C	UG/KG	DIELDRIN
32N	UG/KG	4,4'-DDE (P,P'-DDE)
13U	UG/KG	ENDRIN
13U	UG/KG	ENDOSULFAN II (BETA)
13U	UG/KG	4,4'-DDD (P,P'-DDD)
13U	UG/KG	ENDOSULFAN SULFATE
65	UG/KG	4,4'-DDT (P,P'-DDT)
68U	UG/KG	METHOXYCHLOR
13U	UG/KG	ENDRIN KETONE
13U	UG/KG	ENDRIN ALDEHYDE
18U	UG/KG	ALPHA-CHLORDANE /2
12	UG/KG	GAMMA-CHLORDANE /2
680U	UG/KG	TOXAPHENE
130U	UG/KG	PCB-1016 (AROCLOR 1016)
270U	UG/KG	PCB-1221 (AROCLOR 1221)
130U	UG/KG	PCB-1232 (AROCLOR 1232)
130U	UG/KG	PCB-1242 (AROCLOR 1242)
130U	UG/KG	PCB-1248 (AROCLOR 1248)
130U	UG/KG	PCB-1254 (AROCLOR 1254)
130U	UG/KG	PCB-1260 (AROCLOR 1260)
25	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1976** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDERZ01 / — MD No: 0E65 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E65 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 15:10
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
15000J	MG/KG	ALUMINUM
0.92U	MG/KG	ANTIMONY
12	MG/KG	ARSENIC
130	MG/KG	BARIUM
0.51U	MG/KG	BERYLLIUM
0.13U	MG/KG	CADMIUM
14000	MG/KG	CALCIUM
20	MG/KG	CHROMIUM
8.1	MG/KG	COBALT
37	MG/KG	COPPER
18000J	MG/KG	IRON
94	MG/KG	LEAD
2500	MG/KG	MAGNESIUM
610	MG/KG	MANGANESE
0.07UJ	MG/KG	TOTAL MERCURY
17	MG/KG	NICKEL
1200J	MG/KG	POTASSIUM
1.1UJ	MG/KG	SELENIUM
0.52U	MG/KG	SILVER
130	MG/KG	SODIUM
2.0U	MG/KG	THALLIUM
30J	MG/KG	VANADIUM
150	MG/KG	ZINC
NA	MG/KG	CYANIDE
23	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

804 42

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1976** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDERZ01 / MD No: 0E65 Inorg Contractor: CHEM
Media: SOIL D No: 0E65 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 15:10
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
430U	UG/KG	BENZALDEHYDE
430U	UG/KG	PHENOL
430U	UG/KG	BIS(2-CHLOROETHYL) ETHER
430U	UG/KG	2-CHLOROPHENOL
430U	UG/KG	2-METHYLPHENOL
430U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
430U	UG/KG	ACETOPHENONE
430U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
430U	UG/KG	N-NITROSODI-N-PROPYLAMINE
430U	UG/KG	HEXACHLOROETHANE
430U	UG/KG	NITROBENZENE
430U	UG/KG	ISOPHORONE
430U	UG/KG	2-NITROPHENOL
430U	UG/KG	2,4-DIMETHYLPHENOL
430U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
430U	UG/KG	2,4-DICHLOROPHENOL
430U	UG/KG	NAPHTHALENE
430UJ	UG/KG	4-CHLOROANILINE
430U	UG/KG	HEXACHLOROBUTADIENE
430U	UG/KG	CAPROLACTAM
430U	UG/KG	4-CHLORO-3-METHYLPHENOL
430U	UG/KG	2-METHYLNAPHTHALENE
430UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	UG/KG	2,4,6-TRICHLOROPHENOL
1100U	UG/KG	2,4,5-TRICHLOROPHENOL
430U	UG/KG	1,1-BIPHENYL
430U	UG/KG	2-CHLORONAPHTHALENE
1100U	UG/KG	2-NITROANILINE
430U	UG/KG	DIMETHYL PHTHALATE
430U	UG/KG	2,6-DINITROTOLUENE
230J	UG/KG	ACENAPHTHYLENE
1100U	UG/KG	3-NITROANILINE
720	UG/KG	ACENAPHTHENE
1100U	UG/KG	2,4-DINITROPHENOL
1100U	UG/KG	4-NITROPHENOL
230J	UG/KG	DIBENZOFURAN
430U	UG/KG	2,4-DINITROTOLUENE
430U	UG/KG	DIETHYL PHTHALATE
560	UG/KG	FLUORENE
430U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1100U	UG/KG	4-NITROANILINE
1100U	UG/KG	2-METHYL-4,6-DINITROPHENOL
430U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	UG/KG	4-BROMOPHENYL PHENYL ETHER
430U	UG/KG	HEXACHLOROBENZENE (HCB)
430U	UG/KG	ATRAZINE
1100U	UG/KG	PENTACHLOROPHENOL
10000	UG/KG	PHENANTHRENE
1300	UG/KG	ANTHRACENE
1300	UG/KG	CARBAZOLE
430U	UG/KG	DI-N-BUTYLPHTHALATE
21000	UG/KG	FLUORANTHENE
23000	UG/KG	PYRENE
430U	UG/KG	BENZYL BUTYL PHTHALATE
430U	UG/KG	3,3'-DICHLOROBENZIDINE
11000	UG/KG	BENZO(A)ANTHRACENE
12000	UG/KG	CHRYSENE
430U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
430UJ	UG/KG	DI-N-OCTYLPHTHALATE
18000J	UG/KG	BENZO(B)FLUORANTHENE
7400J	UG/KG	BENZO(K)FLUORANTHENE
12000J	UG/KG	BENZO-A-PYRENE
7800J	UG/KG	INDENO (1,2,3-CD) PYRENE
230J	UG/KG	DIBENZO(A,H)ANTHRACENE
6900J	UG/KG	BENZO(GHI)PERYLENE
25	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 1976 FY 2001 Project: 01-0211

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDERZ01 / MD No: 0E65 Inorg Contractor: CHEM
Media: SOIL D No: 0E65 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 15:10
Ending:

RESULTS	UNITS	ANALYTE
130NJ	UG/KG	DIBENZOFURAN, 4-METHYL-
330NJ	UG/KG	9H-FLUOREN-9-ONE
3200J	UG/KG	9 UNKNOWN COMPOUNDS
320NJ	UG/KG	DIBENZOTHIOPHENE
170NJ	UG/KG	BENZO [F] QUINOLINE
480NJ	UG/KG	ANTHRACENE, 2-METHYL-
450NJ	UG/KG	ANTHRACENE, 9-METHYL-
470NJ	UG/KG	NAPHTHALENE, 2-PHENYL-
740NJ	UG/KG	9,10-ANTHRACENEDIONE
130NJ	UG/KG	PHENANTHRENE, 2,7-DIMETHYL-
190NJ	UG/KG	PHENANTHRENE, 2,3-DIMETHYL-
350NJ	UG/KG	9-ANTHRACENECARBONITRILE
460JN	UG/KG	BENZO [B] NAPHTHO [2,3-D]FURAN (2 ISOMERS)
840NJ	UG/KG	PYRENE, 2-METHYL-
170NJ	UG/KG	PYRENE, 4-METHYL-
550NJ	UG/KG	BENZO [B] NAPHTHO [2,1-D] THIOPH

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample 1977 FY 2001 Project: 01-0211
PESTICIDES SCAN
Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDERZ02 / MD No: 0E66 Inorg Contractor: CHEM
Media: SOIL D No: 0E66 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:35
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
6.5U	UG/KG	ALPHA-BHC
6.5U	UG/KG	BETA-BHC
6.5U	UG/KG	DELTA-BHC
6.5U	UG/KG	GAMMA-BHC (LINDANE)
6.5U	UG/KG	HEPTACHLOR
6.5U	UG/KG	ALDRIN
6.5U	UG/KG	HEPTACHLOR EPOXIDE
6.5U	UG/KG	ENDOSULFAN I (ALPHA)
1300C	UG/KG	DIELDRIN
13U	UG/KG	4,4'-DDE (P,P'-DDE)
13U	UG/KG	ENDRIN
13U	UG/KG	ENDOSULFAN II (BETA)
13U	UG/KG	4,4'-DDD (P,P'-DDD)
13U	UG/KG	ENDOSULFAN SULFATE
66	UG/KG	4,4'-DDT (P,P'-DDT)
65U	UG/KG	METHOXYCHLOR
16U	UG/KG	ENDRIN KETONE
13U	UG/KG	ENDRIN ALDEHYDE
12U	UG/KG	ALPHA-CHLORDANE /2
8.5N	UG/KG	GAMMA-CHLORDANE /2
650U	UG/KG	TOXAPHENE
130U	UG/KG	PCB-1016 (AROCLOR 1016)
260U	UG/KG	PCB-1221 (AROCLOR 1221)
130U	UG/KG	PCB-1232 (AROCLOR 1232)
130U	UG/KG	PCB-1242 (AROCLOR 1242)
130U	UG/KG	PCB-1248 (AROCLOR 1248)
130U	UG/KG	PCB-1254 (AROCLOR 1254)
130U	UG/KG	PCB-1260 (AROCLOR 1260)
23	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1977** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDERZ02 / — MD No: 0E66 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E66 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:35
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
19000J	MG/KG	ALUMINUM
0.90U	MG/KG	ANTIMONY
13	MG/KG	ARSENIC
160	MG/KG	BARIUM
0.53U	MG/KG	BERYLLIUM
0.13U	MG/KG	CADMIUM
25000	MG/KG	CALCIUM
24	MG/KG	CHROMIUM
8.4	MG/KG	COBALT
32	MG/KG	COPPER
17000J	MG/KG	IRON
120	MG/KG	LEAD
3100	MG/KG	MAGNESIUM
630	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
18	MG/KG	NICKEL
2000J	MG/KG	POTASSIUM
1.4J	MG/KG	SELENIUM
0.48U	MG/KG	SILVER
170	MG/KG	SODIUM
3.4	MG/KG	THALLIUM
36J	MG/KG	VANADIUM
140	MG/KG	ZINC
NA	MG/KG	CYANIDE
22	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 1977 FY 2001 Project: 01-0211

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDERZ02 / MD No: 0E66 Inorg Contractor: CHEM
Media: SOIL D No: 0E66 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor.
Project Leader: AMASTERS
Beginning: 12/12/2000 14:35
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
430U	UG/KG	BENZALDEHYDE
430U	UG/KG	PHENOL
430U	UG/KG	BIS(2-CHLOROETHYL) ETHER
430U	UG/KG	2-CHLOROPHENOL
430U	UG/KG	2-METHYLPHENOL
430U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
430U	UG/KG	ACETOPHENONE
430U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
430U	UG/KG	N-NITROSODI-N-PROPYLAMINE
430U	UG/KG	HEXACHLOROETHANE
430U	UG/KG	NITROBENZENE
430U	UG/KG	ISOPHORONE
430U	UG/KG	2-NITROPHENOL
430U	UG/KG	2,4-DIMETHYLPHENOL
430U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
430U	UG/KG	2,4-DICHLOROPHENOL
430U	UG/KG	NAPHTHALENE
430UJ	UG/KG	4-CHLOROANILINE
430U	UG/KG	HEXACHLOROBUTADIENE
430U	UG/KG	CAPROLACTAM
430U	UG/KG	4-CHLORO-3-METHYLPHENOL
69J	UG/KG	2-METHYLNAPHTHALENE
430UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	UG/KG	2,4,6-TRICHLOROPHENOL
1100U	UG/KG	2,4,5-TRICHLOROPHENOL
430U	UG/KG	1,1-BIPHENYL
430U	UG/KG	2-CHLORONAPHTHALENE
1100U	UG/KG	2-NITROANILINE
430U	UG/KG	DIMETHYL PHTHALATE
430U	UG/KG	2,6-DINITROTOLUENE
180J	UG/KG	ACENAPHTHYLENE
1100U	UG/KG	3-NITROANILINE
1300	UG/KG	ACENAPHTHENE
1100U	UG/KG	2,4-DINITROPHENOL
1100U	UG/KG	4-NITROPHENOL

RESULTS	UNITS	ANALYTE
350J	UG/KG	DIBENZOFURAN
430U	UG/KG	2,4-DINITROTOLUENE
430U	UG/KG	DIETHYL PHTHALATE
950	UG/KG	FLUORENE
430U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1100U	UG/KG	4-NITROANILINE
1100U	UG/KG	2-METHYL-4,6-DINITROPHENOL
430U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	UG/KG	4-BROMOPHENYL PHENYL ETHER
430U	UG/KG	HEXACHLOROBENZENE (HCB)
430U	UG/KG	ATRAZINE
1100U	UG/KG	PENTACHLOROPHENOL
14000	UG/KG	PHENANTHRENE
2400	UG/KG	ANTHRACENE
2200	UG/KG	CARBAZOLE
430U	UG/KG	DI-N-BUTYLPHTHALATE
30000	UG/KG	FLUORANTHENE
30000	UG/KG	PYRENE
430U	UG/KG	BENZYL BUTYL PHTHALATE
430U	UG/KG	3,3'-DICHLOROBENZIDINE
20000	UG/KG	BENZO(A)ANTHRACENE
20000	UG/KG	CHRYSENE
1000	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
430U	UG/KG	DI-N-OCTYLPHTHALATE
28000	UG/KG	BENZO(B)FLUORANTHENE
11000	UG/KG	BENZO(K)FLUORANTHENE
20000	UG/KG	BENZO-A-PYRENE
15000	UG/KG	INDENO (1,2,3-CD) PYRENE
590	UG/KG	DIBENZO(A,H)ANTHRACENE
13000	UG/KG	BENZO(GHI)PERYLENE
23	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 1977 FY 2001 Project: 01-0211

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDERZ02 / MD No: 0E66 Inorg Contractor: CHEM
Media: SOIL D No: 0E66 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:35
Ending:

RESULTS	UNITS	ANALYTE
110NJ	UG/KG	NAPHTHALENE, 1-METHYL-
160NJ	UG/KG	BENZENAMINE, 2,4,6-TRICHLORO
170NJ	UG/KG	NAPHTHALENE, 1,2-DIMETHYLY-
3300J	UG/KG	9 UNKNOWN COMPOUNDS
210NJ	UG/KG	DIBENZOFURAN, 4-METHYL-
260NJ	UG/KG	9H-FLUORENE, 1-METHYL-
340NJ	UG/KG	9H-FLUOREN-9-ONE
450NJ	UG/KG	DIBENZOTHIOPHENE
280NJ	UG/KG	ACRIDINE
100NJ	UG/KG	NAPHTHALENE, 1-PHENYL-
110NJ	UG/KG	HEXADECANOIC ACID, METHYL ES
1500JN	UG/KG	ANTRHACENE, 2-METHYL- (2 ISOMERS)
710NJ	UG/KG	NAPHTAHLENE, 2-PHENYL-
160NJ	UG/KG	PHENANTHRENE, 4,5-DIMETHYL-
260NJ	UG/KG	9-ANTHRACENECARBONITRILE
940JN	UG/KG	BENZO [B] NAPHTHO [2,3-D] FURAN (2 ISOMERS)
1200NJ	UG/KG	PYRENE, 1-METHYL-

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1978** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDERZ03 /
Media: SOIL

Case No: 28833
MD No: 0E67
D No: 0E67

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
1.8U	UG/KG	ALPHA-BHC
1.8U	UG/KG	BETA-BHC
1.8U	UG/KG	DELTA-BHC
1.8U	UG/KG	GAMMA-BHC (LINDANE)
1.8U	UG/KG	HEPTACHLOR
1.8U	UG/KG	ALDRIN
1.8U	UG/KG	HEPTACHLOR EPOXIDE
1.8U	UG/KG	ENDOSULFAN I (ALPHA)
23	UG/KG	DIELDRIN
3.6U	UG/KG	4,4'-DDE (P,P'-DDE)
3.6U	UG/KG	ENDRIN
3.6U	UG/KG	ENDOSULFAN II (BETA)
4.0	UG/KG	4,4'-DDD (P,P'-DDD)
3.6U	UG/KG	ENDOSULFAN SULFATE
10U	UG/KG	4,4'-DDT (P,P'-DDT)
18U	UG/KG	METHOXYCHLOR
3.6U	UG/KG	ENDRIN KETONE
3.6U	UG/KG	ENDRIN ALDEHYDE
5.5U	UG/KG	ALPHA-CHLORDANE /2
6.1	UG/KG	GAMMA-CHLORDANE /2
190U	UG/KG	TOXAPHENE
36U	UG/KG	PCB-1016 (AROCLOR 1016)
73U	UG/KG	PCB-1221 (AROCLOR 1221)
36U	UG/KG	PCB-1232 (AROCLOR 1232)
36U	UG/KG	PCB-1242 (AROCLOR 1242)
36U	UG/KG	PCB-1248 (AROCLOR 1248)
36U	UG/KG	PCB-1254 (AROCLOR 1254)
36U	UG/KG	PCB-1260 (AROCLOR 1260)
10	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1978** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDERZ03 / — MD No: 0E67 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E67 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
13000J	MG/KG	ALUMINUM
0.79U	MG/KG	ANTIMONY
3.4	MG/KG	ARSENIC
380	MG/KG	BARIUM
0.59U	MG/KG	BERYLLIUM
0.18U	MG/KG	CADMIUM
54000	MG/KG	CALCIUM
29	MG/KG	CHROMIUM
4.8	MG/KG	COBALT
18	MG/KG	COPPER
11000J	MG/KG	IRON
94	MG/KG	LEAD
4100	MG/KG	MAGNESIUM
180	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
7.9U	MG/KG	NICKEL
900J	MG/KG	POTASSIUM
0.85U	MG/KG	SELENIUM
0.37U	MG/KG	SILVER
1400	MG/KG	SODIUM
2.3	MG/KG	THALLIUM
20J	MG/KG	VANADIUM
100	MG/KG	ZINC
NA	MG/KG	CYANIDE
10	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

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EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1978** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDERZ03 /
Media: SOIL

Case No: 28833
MD No: 0E67
D No: 0E67

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
360U	UG/KG	BENZALDEHYDE
360U	UG/KG	PHENOL
360U	UG/KG	BIS(2-CHLOROETHYL) ETHER
360U	UG/KG	2-CHLOROPHENOL
360U	UG/KG	2-METHYLPHENOL
360U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
360U	UG/KG	ACETOPHENONE
360U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
360U	UG/KG	N-NITROSODI-N-PROPYLAMINE
360U	UG/KG	HEXACHLOROETHANE
360U	UG/KG	NITROBENZENE
360U	UG/KG	ISOPHORONE
360U	UG/KG	2-NITROPHENOL
360U	UG/KG	2,4-DIMETHYLPHENOL
360U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
360U	UG/KG	2,4-DICHLOROPHENOL
160J	UG/KG	NAPHTHALENE
360UJ	UG/KG	4-CHLOROANILINE
360U	UG/KG	HEXACHLOROBUTADIENE
360U	UG/KG	CAPROLACTAM
360U	UG/KG	4-CHLORO-3-METHYLPHENOL
69J	UG/KG	2-METHYLNAPHTHALENE
360UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
360U	UG/KG	2,4,6-TRICHLOROPHENOL
910U	UG/KG	2,4,5-TRICHLOROPHENOL
360U	UG/KG	1,1-BIPHENYL
360U	UG/KG	2-CHLORONAPHTHALENE
910U	UG/KG	2-NITROANILINE
360U	UG/KG	DIMETHYL PHTHALATE
360U	UG/KG	2,6-DINITROTOLUENE
130J	UG/KG	ACENAPHTHYLENE
910U	UG/KG	3-NITROANILINE
130J	UG/KG	ACENAPHTHENE
910U	UG/KG	2,4-DINITROPHENOL
910U	UG/KG	4-NITROPHENOL
140J	UG/KG	DIBENZOFURAN
360U	UG/KG	2,4-DINITROTOLUENE
360U	UG/KG	DIETHYL PHTHALATE
210J	UG/KG	FLUORENE
360U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
910U	UG/KG	4-NITROANILINE
910U	UG/KG	2-METHYL-4,6-DINITROPHENOL
360U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
360U	UG/KG	4-BROMOPHENYL PHENYL ETHER
360U	UG/KG	HEXACHLOROBENZENE (HCB)
360U	UG/KG	ATRAZINE
910U	UG/KG	PENTACHLOROPHENOL
1800	UG/KG	PHENANTHRENE
360J	UG/KG	ANTHRACENE
320J	UG/KG	CARBAZOLE
360U	UG/KG	DI-N-BUTYLPHTHALATE
2000	UG/KG	FLUORANTHENE
4000J	UG/KG	PYRENE
360UJ	UG/KG	BENZYL BUTYL PHTHALATE
360UJ	UG/KG	3,3'-DICHLOROBENZIDINE
1400J	UG/KG	BENZO(A)ANTHRACENE
1400J	UG/KG	CHRYSENE
360UJ	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
360UR	UG/KG	DI-N-OCTYLPHTHALATE
2000J	UG/KG	BENZO(B)FLUORANTHENE
850J	UG/KG	BENZO(K)FLUORANTHENE
1200J	UG/KG	BENZO-A-PYRENE
1000J	UG/KG	INDENO (1,2,3-CD) PYRENE
360UR	UG/KG	DIBENZO(A,H)ANTHRACENE
870J	UG/KG	BENZO(GHI)PERYLENE
10	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1978** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDERZ03 /
Media: SOIL

Case No: 28833
MD No: 0E67
D No: 0E67

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:50
Ending:

RESULTS	UNITS	ANALYTE
75J	UG/KG	UNKNOWN

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

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PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1979** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDERZ04 / MD No: 0E69 Inorg Contractor: CHEM
Media: SOIL D No: 0E69 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.2U	UG/KG	ALPHA-BHC
2.2U	UG/KG	BETA-BHC
2.2U	UG/KG	DELTA-BHC
2.2U	UG/KG	GAMMA-BHC (LINDANE)
2.2U	UG/KG	HEPTACHLOR
2.2U	UG/KG	ALDRIN
2.2U	UG/KG	HEPTACHLOR EPOXIDE
2.2U	UG/KG	ENDOSULFAN I (ALPHA)
540C	UG/KG	DIELDRIN
4.2U	UG/KG	4,4'-DDE (P,P'-DDE)
4.2U	UG/KG	ENDRIN
4.2U	UG/KG	ENDOSULFAN II (BETA)
4.2U	UG/KG	4,4'-DDD (P,P'-DDD)
4.2U	UG/KG	ENDOSULFAN SULFATE
32	UG/KG	4,4'-DDT (P,P'-DDT)
22U	UG/KG	METHOXYCHLOR
4.2U	UG/KG	ENDRIN KETONE
4.2U	UG/KG	ENDRIN ALDEHYDE
16U	UG/KG	ALPHA-CHLORDANE /2
12	UG/KG	GAMMA-CHLORDANE /2
220U	UG/KG	TOXAPHENE
42U	UG/KG	PCB-1016 (AROCLOR 1016)
86U	UG/KG	PCB-1221 (AROCLOR 1221)
42U	UG/KG	PCB-1232 (AROCLOR 1232)
42U	UG/KG	PCB-1242 (AROCLOR 1242)
42U	UG/KG	PCB-1248 (AROCLOR 1248)
42U	UG/KG	PCB-1254 (AROCLOR 1254)
42U	UG/KG	PCB-1260 (AROCLOR 1260)
24	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1979** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDERZ04 / — MD No: 0E69 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E69 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
6100J	MG/KG	ALUMINUM
0.92U	MG/KG	ANTIMONY
9.6	MG/KG	ARSENIC
140	MG/KG	BARIUM
0.46U	MG/KG	BERYLLIUM
0.13U	MG/KG	CADMIUM
3200	MG/KG	CALCIUM
11	MG/KG	CHROMIUM
8.2	MG/KG	COBALT
34	MG/KG	COPPER
16000J	MG/KG	IRON
70	MG/KG	LEAD
1700	MG/KG	MAGNESIUM
820	MG/KG	MANGANESE
0.07UJ	MG/KG	TOTAL MERCURY
16	MG/KG	NICKEL
670J	MG/KG	POTASSIUM
1.6J	MG/KG	SELENIUM
0.33U	MG/KG	SILVER
86	MG/KG	SODIUM
2.0U	MG/KG	THALLIUM
19J	MG/KG	VANADIUM
180	MG/KG	ZINC
NA	MG/KG	CYANIDE
23	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences J-estimated value. N-presumptive evidence of presence of material
K-actual value is known to be less than value given. L-actual value is known to be greater than value given U-material was analyzed for but not detected. the number is the minimum quantitation limit
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

Sample 1979 FY 2001 Project: 01-0211

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDERZ04 / MD No: 0E69 Inorg Contractor: CHEM
Media: SOIL D No: 0E69 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:50
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
430U	UG/KG	BENZALDEHYDE
430U	UG/KG	PHENOL
430U	UG/KG	BIS(2-CHLOROETHYL) ETHER
430U	UG/KG	2-CHLOROPHENOL
430U	UG/KG	2-METHYLPHENOL
430U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
430U	UG/KG	ACETOPHENONE
430U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
430U	UG/KG	N-NITROSODI-N-PROPYLAMINE
430U	UG/KG	HEXACHLOROETHANE
430U	UG/KG	NITROBENZENE
430U	UG/KG	ISOPHORONE
430U	UG/KG	2-NITROPHENOL
430U	UG/KG	2,4-DIMETHYLPHENOL
430U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
430U	UG/KG	2,4-DICHLOROPHENOL
86J	UG/KG	NAPHTHALENE
430UJ	UG/KG	4-CHLOROANILINE
430U	UG/KG	HEXACHLOROBUTADIENE
430U	UG/KG	CAPROLACTAM
430U	UG/KG	4-CHLORO-3-METHYLPHENOL
260J	UG/KG	2-METHYLNAPHTHALENE
430UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
430U	UG/KG	2,4,6-TRICHLOROPHENOL
1100U	UG/KG	2,4,5-TRICHLOROPHENOL
430U	UG/KG	1,1-BIPHENYL
430U	UG/KG	2-CHLORONAPHTHALENE
1100U	UG/KG	2-NITROANILINE
430U	UG/KG	DIMETHYL PHTHALATE
430U	UG/KG	2,6-DINITROTOLUENE
430U	UG/KG	ACENAPHTHYLENE
1100U	UG/KG	3-NITROANILINE
430U	UG/KG	ACENAPHTHENE
1100U	UG/KG	2,4-DINITROPHENOL
1100U	UG/KG	4-NITROPHENOL
430U	UG/KG	DIBENZOFURAN
430U	UG/KG	2,4-DINITROTOLUENE
430U	UG/KG	DIETHYL PHTHALATE
430U	UG/KG	FLUORENE
430U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1100U	UG/KG	4-NITROANILINE
1100U	UG/KG	2-METHYL-4,6-DINITROPHENOL
430U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
430U	UG/KG	4-BROMOPHENYL PHENYL ETHER
430U	UG/KG	HEXACHLOROBENZENE (HCB)
430U	UG/KG	ATRAZINE
1100U	UG/KG	PENTACHLOROPHENOL
180J	UG/KG	PHENANTHRENE
430U	UG/KG	ANTHRACENE
430U	UG/KG	CARBAZOLE
430U	UG/KG	DI-N-BUTYLPHTHALATE
440	UG/KG	FLUORANTHENE
460	UG/KG	PYRENE
430U	UG/KG	BENZYL BUTYL PHTHALATE
430U	UG/KG	3,3'-DICHLOROBENZIDINE
240J	UG/KG	BENZO(A)ANTHRACENE
260J	UG/KG	CHRYSENE
880	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
430U	UG/KG	DI-N-OCTYLPHTHALATE
410J	UG/KG	BENZO(B)FLUORANTHENE
170J	UG/KG	BENZO(K)FLUORANTHENE
250J	UG/KG	BENZO-A-PYRENE
160J	UG/KG	INDENO (1,2,3-CD) PYRENE
430U	UG/KG	DIBENZO(A,H)ANTHRACENE
140J	UG/KG	BENZO(GHI)PERYLENE
24	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1979** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDERZ04 /
Media: SOIL

Case No: 28833
MD No: 0E69
D No: 0E69

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 14:50
Ending:

RESULTS	UNITS	ANALYTE
150NJ	UG/KG	BENZENE, 2-ETHYL-1,4-DIMETHY
120NJ	UG/KG	BENZENE, 1,2,3,4-TETRAMETHYL
140NJ	UG/KG	BENZENE, 2-ETHENYLL-1,4-DIMET
97NJ	UG/KG	BENZENE, 1-METHYL-2-(1-METHY
5100J	UG/KG	11 UNKNOWN COMPOUNDS
200NJ	UG/KG	NAPHTHALENE, 1-METHYL-
130NJ	UG/KG	1,4-METHANO-1H-INDENE, OCTAH
120NJ	UG/KG	1H-CYCLOPENTA [1,3] CYCLOPROPA
170NJ	UG/KG	THUJOPSENE
740NJ	UG/KG	CEDROL
200NJ	UG/KG	PENTADECANOIC ACID
390NJ	UG/KG	HEXADECANOIC ACID
96NJ	UG/KG	PHENANTHRENE, 1,2,3,4,4A,9,1

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1980** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDETR01 / — MD No: 0E70 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E70 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 15:45
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.1U	UG/KG	ALPHA-BHC
2.1U	UG/KG	BETA-BHC
2.1U	UG/KG	DELTA-BHC
2.1U	UG/KG	GAMMA-BHC (LINDANE)
2.1U	UG/KG	HEPTACHLOR
2.1U	UG/KG	ALDRIN
2.1U	UG/KG	HEPTACHLOR EPOXIDE
2.1U	UG/KG	ENDOSULFAN I (ALPHA)
18	UG/KG	DIELDRIN
4.1U	UG/KG	4,4'-DDE (P,P'-DDE)
4.1U	UG/KG	ENDRIN
4.1U	UG/KG	ENDOSULFAN II (BETA)
4.1U	UG/KG	4,4'-DDD (P,P'-DDD)
4.1U	UG/KG	ENDOSULFAN SULFATE
7.9	UG/KG	4,4'-DDT (P,P'-DDT)
21U	UG/KG	METHOXYCHLOR
4.1U	UG/KG	ENDRIN KETONE
4.1U	UG/KG	ENDRIN ALDEHYDE
2.1U	UG/KG	ALPHA-CHLORDANE /2
2.1U	UG/KG	GAMMA-CHLORDANE /2
210U	UG/KG	TOXAPHENE
41U	UG/KG	PCB-1016 (AROCLOR 1016)
82U	UG/KG	PCB-1221 (AROCLOR 1221)
41U	UG/KG	PCB-1232 (AROCLOR 1232)
41U	UG/KG	PCB-1242 (AROCLOR 1242)
41U	UG/KG	PCB-1248 (AROCLOR 1248)
41U	UG/KG	PCB-1254 (AROCLOR 1254)
41U	UG/KG	PCB-1260 (AROCLOR 1260)
19	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

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METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1980** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDETR01 / — MD No: 0E70 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E70 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning. 12/12/2000 15:45
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
8000J	MG/KG	ALUMINUM
0.88U	MG/KG	ANTIMONY
11	MG/KG	ARSENIC
110	MG/KG	BARIUM
0.47U	MG/KG	BERYLLIUM
0.12U	MG/KG	CADMIUM
2300	MG/KG	CALCIUM
11	MG/KG	CHROMIUM
8.6	MG/KG	COBALT
25	MG/KG	COPPER
18000J	MG/KG	IRON
39	MG/KG	LEAD
1900	MG/KG	MAGNESIUM
630	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
14	MG/KG	NICKEL
860J	MG/KG	POTASSIUM
0.96U	MG/KG	SELENIUM
0.31U	MG/KG	SILVER
86	MG/KG	SODIUM
2.0U	MG/KG	THALLIUM
22J	MG/KG	VANADIUM
74	MG/KG	ZINC
NA	MG/KG	CYANIDE
19	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1980** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDETR01 / — MD No: 0E70 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E70 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 15:45
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
400U	UG/KG	BENZALDEHYDE
400U	UG/KG	PHENOL
400U	UG/KG	BIS(2-CHLOROETHYL) ETHER
400U	UG/KG	2-CHLOROPHENOL
400U	UG/KG	2-METHYLPHENOL
400U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
400U	UG/KG	ACETOPHENONE
400U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
400U	UG/KG	N-NITROSODI-N-PROPYLAMINE
400U	UG/KG	HEXACHLOROETHANE
400U	UG/KG	NITROBENZENE
400U	UG/KG	ISOPHORONE
400U	UG/KG	2-NITROPHENOL
400U	UG/KG	2,4-DIMETHYLPHENOL
400U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
400U	UG/KG	2,4-DICHLOROPHENOL
400U	UG/KG	NAPHTHALENE
400UJ	UG/KG	4-CHLOROANILINE
400U	UG/KG	HEXACHLOROBUTADIENE
400U	UG/KG	CAPROLACTAM
400U	UG/KG	4-CHLORO-3-METHYLPHENOL
400U	UG/KG	2-METHYLNAPHTHALENE
400UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
400U	UG/KG	2,4,6-TRICHLOROPHENOL
1000U	UG/KG	2,4,5-TRICHLOROPHENOL
400U	UG/KG	1,1-BIPHENYL
400U	UG/KG	2-CHLORONAPHTHALENE
1000U	UG/KG	2-NITROANILINE
400U	UG/KG	DIMETHYL PHTHALATE
400U	UG/KG	2,6-DINITROTOLUENE
400U	UG/KG	ACENAPHTHYLENE
1000U	UG/KG	3-NITROANILINE
400U	UG/KG	ACENAPHTHENE
1000U	UG/KG	2,4-DINITROPHENOL
1000U	UG/KG	4-NITROPHENOL

RESULTS	UNITS	ANALYTE
400U	UG/KG	DIBENZOFURAN
400U	UG/KG	2,4-DINITROTOLUENE
400U	UG/KG	DIETHYL PHTHALATE
400U	UG/KG	FLUORENE
400U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1000U	UG/KG	4-NITROANILINE
1000U	UG/KG	2-METHYL-4,6-DINITROPHENOL
400U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
400U	UG/KG	4-BROMOPHENYL PHENYL ETHER
400U	UG/KG	HEXACHLOROBENZENE (HCB)
400U	UG/KG	ATRAZINE
1000U	UG/KG	PENTACHLOROPHENOL
100J	UG/KG	PHENANTHRENE
400U	UG/KG	ANTHRACENE
400U	UG/KG	CARBAZOLE
400U	UG/KG	DI-N-BUTYLPHTHALATE
250J	UG/KG	FLUORANTHENE
240J	UG/KG	PYRENE
400U	UG/KG	BENZYL BUTYL PHTHALATE
400U	UG/KG	3,3'-DICHLOROBENZIDINE
110J	UG/KG	BENZO(A)ANTHRACENE
130J	UG/KG	CHRYSENE
400U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
400U	UG/KG	DI-N-OCTYLPHTHALATE
200J	UG/KG	BENZO(B)FLUORANTHENE
73J	UG/KG	BENZO(K)FLUORANTHENE
120J	UG/KG	BENZO-A-PYRENE
86J	UG/KG	INDENO (1,2,3-CD) PYRENE
400U	UG/KG	DIBENZO(A,H)ANTHRACENE
68J	UG/KG	BENZO(GHI)PERYLENE
19	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

804 59

EXTRACTABLES SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:14**

Sample **1980** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDETR01 / MD No: 0E70 Inorg Contractor: CHEM
Media: SOIL D No: 0E70 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 15:45
Ending:

RESULTS	UNITS	ANALYTE
180J	UG/KG	2 UNKNOWN COMPOUNDS
160NJ	UG/KG	PENTADECANOIC ACID
240NJ	UG/KG	HEXADECANIC ACID
99NJ	UG/KG	BENZO [E] PYRENE

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

804 60

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1965** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE01 / MD No: 0E54 Inorg Contractor: CHEM
Media: SOIL D No: 0E54 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:10
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.2U	UG/KG	ALPHA-BHC
2.2U	UG/KG	BETA-BHC
2.2U	UG/KG	DELTA-BHC
2.2U	UG/KG	GAMMA-BHC (LINDANE)
2.2U	UG/KG	HEPTACHLOR
2.2U	UG/KG	ALDRIN
2.2U	UG/KG	HEPTACHLOR EPOXIDE
5.4	UG/KG	ENDOSULFAN I (ALPHA)
100	UG/KG	DIELDRIN
23	UG/KG	4,4'-DDE (P,P'-DDE)
4.4U	UG/KG	ENDRIN
4.4U	UG/KG	ENDOSULFAN II (BETA)
22	UG/KG	4,4'-DDD (P,P'-DDD)
4.4U	UG/KG	ENDOSULFAN SULFATE
16	UG/KG	4,4'-DDT (P,P'-DDT)
22U	UG/KG	METHOXYCHLOR
4.4U	UG/KG	ENDRIN KETONE
4.4U	UG/KG	ENDRIN ALDEHYDE
9.2N	UG/KG	ALPHA-CHLORDANE /2
6.8U	UG/KG	GAMMA-CHLORDANE /2
220U	UG/KG	TOXAPHENE
44U	UG/KG	PCB-1016 (AROCLOR 1016)
89U	UG/KG	PCB-1221 (AROCLOR 1221)
44U	UG/KG	PCB-1232 (AROCLOR 1232)
44U	UG/KG	PCB-1242 (AROCLOR 1242)
44U	UG/KG	PCB-1248 (AROCLOR 1248)
44U	UG/KG	PCB-1254 (AROCLOR 1254)
120	UG/KG	PCB-1260 (AROCLOR 1260)
26	%	% MOISTURE

804 61

A-average value. NA-not analyzed. NAI-interferences. J-estimated value N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1965** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE01 / — MD No: 0E54 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E54 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:10
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
5000J	MG/KG	ALUMINUM
1.0U	MG/KG	ANTIMONY
8.5	MG/KG	ARSENIC
51	MG/KG	BARIUM
0.34U	MG/KG	BERYLLIUM
0.14U	MG/KG	CADMIUM
6000	MG/KG	CALCIUM
8.9	MG/KG	CHROMIUM
4.3	MG/KG	COBALT
28	MG/KG	COPPER
12000J	MG/KG	IRON
40	MG/KG	LEAD
1600	MG/KG	MAGNESIUM
240	MG/KG	MANGANESE
0.07UJ	MG/KG	TOTAL MERCURY
9.1U	MG/KG	NICKEL
390J	MG/KG	POTASSIUM
1.1U	MG/KG	SELENIUM
0.53U	MG/KG	SILVER
120	MG/KG	SODIUM
2.3U	MG/KG	THALLIUM
14J	MG/KG	VANADIUM
80	MG/KG	ZINC
NA	MG/KG	CYANIDE
29	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1965** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE01 / MD No: 0E54 Inorg Contractor: CHEM
Media: SOIL D No: 0E54 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:10
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
890U	UG/KG	BENZALDEHYDE
890U	UG/KG	PHENOL
890U	UG/KG	BIS(2-CHLOROETHYL) ETHER
890U	UG/KG	2-CHLOROPHENOL
890U	UG/KG	2-METHYLPHENOL
890U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
890U	UG/KG	ACETOPHENONE
890U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
890U	UG/KG	N-NITROSODI-N-PROPYLAMINE
890U	UG/KG	HEXACHLOROETHANE
890U	UG/KG	NITROBENZENE
890U	UG/KG	ISOPHORONE
890U	UG/KG	2-NITROPHENOL
890U	UG/KG	2,4-DIMETHYLPHENOL
890U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
890U	UG/KG	2,4-DICHLOROPHENOL
890U	UG/KG	NAPHTHALENE
890UJ	UG/KG	4-CHLOROANILINE
890U	UG/KG	HEXACHLOROBUTADIENE
890U	UG/KG	CAPROLACTAM
890U	UG/KG	4-CHLORO-3-METHYLPHENOL
890U	UG/KG	2-METHYLNAPHTHALENE
890UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
890U	UG/KG	2,4,6-TRICHLOROPHENOL
2200U	UG/KG	2,4,5-TRICHLOROPHENOL
890U	UG/KG	1,1-BIPHENYL
890U	UG/KG	2-CHLORONAPHTHALENE
2200U	UG/KG	2-NITROANILINE
890U	UG/KG	DIMETHYL PHTHALATE
890U	UG/KG	2,6-DINITROTOLUENE
890U	UG/KG	ACENAPHTHYLENE
2200U	UG/KG	3-NITROANILINE
890U	UG/KG	ACENAPHTHENE
2200U	UG/KG	2,4-DINITROPHENOL
2200U	UG/KG	4-NITROPHENOL

RESULTS	UNITS	ANALYTE
890U	UG/KG	DIBENZOFURAN
890U	UG/KG	2,4-DINITROTOLUENE
890U	UG/KG	DIETHYL PHTHALATE
890U	UG/KG	FLUORENE
890U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
2200U	UG/KG	4-NITROANILINE
2200U	UG/KG	2-METHYL-4,6-DINITROPHENOL
890U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
890U	UG/KG	4-BROMOPHENYL PHENYL ETHER
890U	UG/KG	HEXACHLOROBENZENE (HCB)
890U	UG/KG	ATRAZINE
2200U	UG/KG	PENTACHLOROPHENOL
470J	UG/KG	PHENANTHRENE
120J	UG/KG	ANTHRACENE
100J	UG/KG	CARBAZOLE
890U	UG/KG	DI-N-BUTYLPHTHALATE
590J	UG/KG	FLUORANTHENE
960J	UG/KG	PYRENE
890UR	UG/KG	BENZYL BUTYL PHTHALATE
890UJ	UG/KG	3,3'-DICHLOROBENZIDINE
350J	UG/KG	BENZO(A)ANTHRACENE
340J	UG/KG	CHRYSENE
890UR	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
890UR	UG/KG	DI-N-OCTYLPHTHALATE
440J	UG/KG	BENZO(B)FLUORANTHENE
260J	UG/KG	BENZO(K)FLUORANTHENE
370J	UG/KG	BENZO-A-PYRENE
260J	UG/KG	INDENO (1,2,3-CD) PYRENE
890UR	UG/KG	DIBENZO(A,H)ANTHRACENE
230J	UG/KG	BENZO(GHI)PERYLENE
26	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1965** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE01 / — MD No: 0E54 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E54 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:10
Ending:

RESULTS	UNITS	ANALYTE
470NJ	UG/KG	1H-CYCLOPENTA [1,3] CYCLOPROPA
470NJ	UG/KG	1-DECENE
580NJ	UG/KG	BENZENE, 1-(1,5-DIMETHYL-4-H
2000J	UG/KG	5 UNKNOWN COMPOUNDS

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:16**

Sample 1966 FY 2001 Project: 01-0211
PESTICIDES SCAN
Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE02 / MD No: 0E55 Inorg Contractor: CHEM
Media: SOIL D No: 0E55 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
4.2U	UG/KG	ALPHA-BHC
4.2U	UG/KG	BETA-BHC
4.2U	UG/KG	DELTA-BHC
4.2U	UG/KG	GAMMA-BHC (LINDANE)
4.2U	UG/KG	HEPTACHLOR
5.4U	UG/KG	ALDRIN
4.2U	UG/KG	HEPTACHLOR EPOXIDE
7.1J	UG/KG	ENDOSULFAN I (ALPHA)
780C	UG/KG	DIELDRIN
28	UG/KG	4,4'-DDE (P,P'-DDE)
15N	UG/KG	ENDRIN
8.2U	UG/KG	ENDOSULFAN II (BETA)
8.2U	UG/KG	4,4'-DDD (P,P'-DDD)
8.2U	UG/KG	ENDOSULFAN SULFATE
38	UG/KG	4,4'-DDT (P,P'-DDT)
42U	UG/KG	METHOXYCHLOR
16U	UG/KG	ENDRIN KETONE
8.2U	UG/KG	ENDRIN ALDEHYDE
12N	UG/KG	ALPHA-CHLORDANE /2
8.5U	UG/KG	GAMMA-CHLORDANE /2
420U	UG/KG	TOXAPHENE
82U	UG/KG	PCB-1016 (AROCLOR 1016)
170U	UG/KG	PCB-1221 (AROCLOR 1221)
82U	UG/KG	PCB-1232 (AROCLOR 1232)
82U	UG/KG	PCB-1242 (AROCLOR 1242)
82U	UG/KG	PCB-1248 (AROCLOR 1248)
200	UG/KG	PCB-1254 (AROCLOR 1254)
82U	UG/KG	PCB-1260 (AROCLOR 1260)
21	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1966** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE02 / — MD No: 0E55 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E55 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
4300J	MG/KG	ALUMINUM
0.91U	MG/KG	ANTIMONY
9.4	MG/KG	ARSENIC
77	MG/KG	BARIUM
0.32U	MG/KG	BERYLLIUM
0.13U	MG/KG	CADMIUM
3800	MG/KG	CALCIUM
9.2	MG/KG	CHROMIUM
5.3	MG/KG	COBALT
30	MG/KG	COPPER
12000J	MG/KG	IRON
78	MG/KG	LEAD
1200	MG/KG	MAGNESIUM
410	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
11	MG/KG	NICKEL
380J	MG/KG	POTASSIUM
0.99U	MG/KG	SELENIUM
0.33U	MG/KG	SILVER
110	MG/KG	SODIUM
2.0U	MG/KG	THALLIUM
16J	MG/KG	VANADIUM
150	MG/KG	ZINC
NA	MG/KG	CYANIDE
22	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected the number is the minimum quantitation limit.
R-qc indicates that data unusable compound may or may not be present. resampling and reanalysis is necessary for verification.

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EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1966** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE02 / — MD No: 0E55 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E55 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
410U	UG/KG	BENZALDEHYDE
410U	UG/KG	PHENOL
410U	UG/KG	BIS(2-CHLOROETHYL) ETHER
410U	UG/KG	2-CHLOROPHENOL
410U	UG/KG	2-METHYLPHENOL
410U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
410U	UG/KG	ACETOPHENONE
410U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
410U	UG/KG	N-NITROSODI-N-PROPYLAMINE
410U	UG/KG	HEXACHLOROETHANE
410U	UG/KG	NITROBENZENE
410U	UG/KG	ISOPHORONE
410U	UG/KG	2-NITROPHENOL
410U	UG/KG	2,4-DIMETHYLPHENOL
410U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
410U	UG/KG	2,4-DICHLOROPHENOL
410U	UG/KG	NAPHTHALENE
410UJ	UG/KG	4-CHLOROANILINE
410U	UG/KG	HEXACHLOROBUTADIENE
410U	UG/KG	CAPROLACTAM
410U	UG/KG	4-CHLORO-3-METHYLPHENOL
410U	UG/KG	2-METHYLNAPHTHALENE
410UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
410U	UG/KG	2,4,6-TRICHLOROPHENOL
1000U	UG/KG	2,4,5-TRICHLOROPHENOL
410U	UG/KG	1,1-BIPHENYL
410U	UG/KG	2-CHLORONAPHTHALENE
1000U	UG/KG	2-NITROANILINE
410U	UG/KG	DIMETHYL PHTHALATE
410U	UG/KG	2,6-DINITROTOLUENE
950	UG/KG	ACENAPHTHYLENE
1000U	UG/KG	3-NITROANILINE
410U	UG/KG	ACENAPHTHENE
1000U	UG/KG	2,4-DINITROPHENOL
1000U	UG/KG	4-NITROPHENOL
410U	UG/KG	DIBENZOFURAN
410U	UG/KG	2,4-DINITROTOLUENE
410U	UG/KG	DIETHYL PHTHALATE
100J	UG/KG	FLUORENE
410U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1000U	UG/KG	4-NITROANILINE
1000U	UG/KG	2-METHYL-4,6-DINITROPHENOL
410U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
410U	UG/KG	4-BROMOPHENYL PHENYL ETHER
410U	UG/KG	HEXACHLOROBENZENE (HCB)
410U	UG/KG	ATRAZINE
1000U	UG/KG	PENTACHLOROPHENOL
720	UG/KG	PHENANTHRENE
1200	UG/KG	ANTHRACENE
320J	UG/KG	CARBAZOLE
410U	UG/KG	DI-N-BUTYLPHTHALATE
2100	UG/KG	FLUORANTHENE
6100J	UG/KG	PYRENE
410UJ	UG/KG	BENZYL BUTYL PHTHALATE
410UJ	UG/KG	3,3'-DICHLOROBENZIDINE
6900J	UG/KG	BENZO(A)ANTHRACENE
12000	UG/KG	CHRYSENE
2000	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
410U	UG/KG	DI-N-OCTYLPHTHALATE
19000	UG/KG	BENZO(B)FLUORANTHENE
8000J	UG/KG	BENZO(K)FLUORANTHENE
11000	UG/KG	BENZO-A-PYRENE
6200J	UG/KG	INDENO (1,2,3-CD) PYRENE
320J	UG/KG	DIBENZO(A,H)ANTHRACENE
4500J	UG/KG	BENZO(GHI)PERYLENE
21	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1966** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDESE02 /
Media: SOIL

Case No: 28833
MD No: 0E55
D No: 0E55

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:40
Ending:

RESULTS	UNITS	ANALYTE
170NJ	UG/KG	D-LIMONENE
130NJ	UG/KG	INDENE
92NJ	UG/KG	BICYCLO [2.2.1] HEPTAN-2-ONE,
540NJ	UG/KG	CYCLODODECANE
150NJ	UG/KG	DECANE, 2-METHYL-
170NJ	UG/KG	9H-FLUORENE, 9-METHYLENE-
2000J	UG/KG	5 UNKNOWN COMPOUNDS
210NJ	UG/KG	ANTHRACENE, 2-METHYL-
470NJ	UG/KG	PHENANTHRENE, 3-METHYL-
150NJ	UG/KG	NAPHTHALENE, 2-PHENYL-
290NJ	UG/KG	PHENANTHRENE, 2,3-DIMETHYL-
230NJ	UG/KG	CYCLOPENTA (DEF) PHENANTHRENON
140NJ	UG/KG	BENZO [B] NAPHTHO [2,3-D] FURAN
560NJ	UG/KG	11H-BENZO [B] FLUORENE
1000NJ	UG/KG	PYRENE, 1-METHYL-
350NJ	UG/KG	PYRENE, 4-METHYL-

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1967** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE92 / — MD No: 0E56 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E56 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.2U	UG/KG	ALPHA-BHC
2.2U	UG/KG	BETA-BHC
2.2U	UG/KG	DELTA-BHC
2.2U	UG/KG	GAMMA-BHC (LINDANE)
2.2U	UG/KG	HEPTACHLOR
3.5U	UG/KG	ALDRIN
2.2U	UG/KG	HEPTACHLOR EPOXIDE
6.9J	UG/KG	ENDOSULFAN I (ALPHA)
240	UG/KG	DIELDRIN
40J	UG/KG	4,4'-DDE (P,P'-DDE)
4.2U	UG/KG	ENDRIN
8.3NJ	UG/KG	ENDOSULFAN II (BETA)
5.0U	UG/KG	4,4'-DDD (P,P'-DDD)
4.2U	UG/KG	ENDOSULFAN SULFATE
48J	UG/KG	4,4'-DDT (P,P'-DDT)
22U	UG/KG	METHOXYCHLOR
21U	UG/KG	ENDRIN KETONE
4.2U	UG/KG	ENDRIN ALDEHYDE
13J	UG/KG	ALPHA-CHLORDANE /2
7.5U	UG/KG	GAMMA-CHLORDANE /2
220U	UG/KG	TOXAPHENE
42U	UG/KG	PCB-1016 (AROCLOR 1016)
86U	UG/KG	PCB-1221 (AROCLOR 1221)
42U	UG/KG	PCB-1232 (AROCLOR 1232)
42U	UG/KG	PCB-1242 (AROCLOR 1242)
42U	UG/KG	PCB-1248 (AROCLOR 1248)
42U	UG/KG	PCB-1254 (AROCLOR 1254)
150J	UG/KG	PCB-1260 (AROCLOR 1260)
23	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

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METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1967** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE92 / — MD No: 0E56 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E56 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
5800J	MG/KG	ALUMINUM
0.93U	MG/KG	ANTIMONY
9.8	MG/KG	ARSENIC
110	MG/KG	BARIUM
0.46U	MG/KG	BERYLLIUM
0.13U	MG/KG	CADMIUM
33000	MG/KG	CALCIUM
10	MG/KG	CHROMIUM
6.1	MG/KG	COBALT
31	MG/KG	COPPER
13000J	MG/KG	IRON
94	MG/KG	LEAD
5200	MG/KG	MAGNESIUM
520	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
11	MG/KG	NICKEL
900J	MG/KG	POTASSIUM
1.0U	MG/KG	SELENIUM
0.42U	MG/KG	SILVER
200	MG/KG	SODIUM
2.1U	MG/KG	THALLIUM
15J	MG/KG	VANADIUM
160	MG/KG	ZINC
NA	MG/KG	CYANIDE
22	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1967** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE92 / — MD No: 0E56 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E56 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
420U	UG/KG	BENZALDEHYDE
420U	UG/KG	PHENOL
420U	UG/KG	BIS(2-CHLOROETHYL) ETHER
420U	UG/KG	2-CHLOROPHENOL
420U	UG/KG	2-METHYLPHENOL
420U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
420U	UG/KG	ACETOPHENONE
420U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
420U	UG/KG	N-NITROSODI-N-PROPYLAMINE
420U	UG/KG	HEXACHLOROETHANE
420U	UG/KG	NITROBENZENE
420U	UG/KG	ISOPHORONE
420U	UG/KG	2-NITROPHENOL
420U	UG/KG	2,4-DIMETHYLPHENOL
420U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
420U	UG/KG	2,4-DICHLOROPHENOL
420U	UG/KG	NAPHTHALENE
420UJ	UG/KG	4-CHLOROANILINE
420U	UG/KG	HEXACHLOROBUTADIENE
420U	UG/KG	CAPROLACTAM
420U	UG/KG	4-CHLORO-3-METHYLPHENOL
51J	UG/KG	2-METHYLNAPHTHALENE
420UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
420U	UG/KG	2,4,6-TRICHLOROPHENOL
1100U	UG/KG	2,4,5-TRICHLOROPHENOL
420U	UG/KG	1,1-BIPHENYL
420U	UG/KG	2-CHLORONAPHTHALENE
1100U	UG/KG	2-NITROANILINE
420U	UG/KG	DIMETHYL PHTHALATE
420U	UG/KG	2,6-DINITROTOLUENE
640	UG/KG	ACENAPHTHYLENE
1100U	UG/KG	3-NITROANILINE
45J	UG/KG	ACENAPHTHENE
1100U	UG/KG	2,4-DINITROPHENOL
1100U	UG/KG	4-NITROPHENOL

RESULTS	UNITS	ANALYTE
420U	UG/KG	DIBENZOFURAN
420U	UG/KG	2,4-DINITROTOLUENE
420U	UG/KG	DIETHYL PHTHALATE
95J	UG/KG	FLUORENE
420U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1100U	UG/KG	4-NITROANILINE
1100U	UG/KG	2-METHYL-4,6-DINITROPHENOL
420U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
420U	UG/KG	4-BROMOPHENYL PHENYL ETHER
420U	UG/KG	HEXACHLOROBENZENE (HCB)
420U	UG/KG	ATRAZINE
1100U	UG/KG	PENTACHLOROPHENOL
650	UG/KG	PHENANTHRENE
810	UG/KG	ANTHRACENE
270J	UG/KG	CARBAZOLE
420U	UG/KG	DI-N-BUTYLPHTHALATE
1700	UG/KG	FLUORANTHENE
3800	UG/KG	PYRENE
420U	UG/KG	BENZYL BUTYL PHTHALATE
420U	UG/KG	3,3'-DICHLOROBENZIDINE
4400	UG/KG	BENZO(A)ANTHRACENE
6700	UG/KG	CHRYSENE
10000	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
700J	UG/KG	DI-N-OCTYLPHTHALATE
11000J	UG/KG	BENZO(B)FLUORANTHENE
3900J	UG/KG	BENZO(K)FLUORANTHENE
6100J	UG/KG	BENZO-A-PYRENE
3100J	UG/KG	INDENO (1,2,3-CD) PYRENE
190J	UG/KG	DIBENZO(A,H)ANTHRACENE
1800J	UG/KG	BENZO(GHI)PERYLENE
23	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:14**

Sample **1967** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE92 / MD No: 0E56 Inorg Contractor: CHEM
Media: SOIL D No: 0E56 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:40
Ending:

RESULTS	UNITS	ANALYTE
100NJ	UG/KG	INDENE
1300J	UG/KG	7 UNKNOWN COMPOUNDS
130NJ	UG/KG	3H-3A, 7-METHANOAZULENE, 2,4,
130NJ	UG/KG	ANTHRACENE, 2-METHYL-
530NJ	UG/KG	PHENANTHRENE, 3-METHYL-
530NJ	UG/KG	HEXADECANOIC ACID
210NJ	UG/KG	PHENANTHRENE, 2,7-DIMETHYL-
120NJ	UG/KG	CYCLOPENTA (DEF) PHENANTHRENON
430NJ	UG/KG	11H-BENZO [B] FLUORENE
740NJ	UG/KG	PYRENE, 1-METHYL-
220NJ	UG/KG	PYRENE, 2-METHYL-
290NJ	UG/KG	BENZO [B] NAPHTO [2,1-D] THIOPH

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:16**

Sample **1970** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE03 / MD No: 0E59 Inorg Contractor: CHEM
Media: SOIL D No: 0E59 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:55
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.1U	UG/KG	ALPHA-BHC
2.1U	UG/KG	BETA-BHC
2.1U	UG/KG	DELTA-BHC
2.1U	UG/KG	GAMMA-BHC (LINDANE)
2.1U	UG/KG	HEPTACHLOR
2.1U	UG/KG	ALDRIN
2.1U	UG/KG	HEPTACHLOR EPOXIDE
9.5N	UG/KG	ENDOSULFAN I (ALPHA)
88	UG/KG	DIELDRIN
40	UG/KG	4,4'-DDE (P,P'-DDE)
4.5U	UG/KG	ENDRIN
4.1U	UG/KG	ENDOSULFAN II (BETA)
4.1U	UG/KG	4,4'-DDD (P,P'-DDD)
4.1U	UG/KG	ENDOSULFAN SULFATE
35	UG/KG	4,4'-DDT (P,P'-DDT)
21U	UG/KG	METHOXYCHLOR
4.1U	UG/KG	ENDRIN KETONE
4.1U	UG/KG	ENDRIN ALDEHYDE
14U	UG/KG	ALPHA-CHLORDANE /2
3.5U	UG/KG	GAMMA-CHLORDANE /2
210U	UG/KG	TOXAPHENE
41U	UG/KG	PCB-1016 (AROCLOR 1016)
84U	UG/KG	PCB-1221 (AROCLOR 1221)
41U	UG/KG	PCB-1232 (AROCLOR 1232)
41U	UG/KG	PCB-1242 (AROCLOR 1242)
41U	UG/KG	PCB-1248 (AROCLOR 1248)
420	UG/KG	PCB-1254 (AROCLOR 1254)
41U	UG/KG	PCB-1260 (AROCLOR 1260)
21	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1970** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE03 / — MD No: 0E59 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E59 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:55
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
5600J	MG/KG	ALUMINUM
0.86U	MG/KG	ANTIMONY
14	MG/KG	ARSENIC
120	MG/KG	BARIUM
0.48U	MG/KG	BERYLLIUM
0.12U	MG/KG	CADMIUM
3200	MG/KG	CALCIUM
11	MG/KG	CHROMIUM
9.3	MG/KG	COBALT
31	MG/KG	COPPER
14000J	MG/KG	IRON
45	MG/KG	LEAD
1100	MG/KG	MAGNESIUM
1300	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
13	MG/KG	NICKEL
440J	MG/KG	POTASSIUM
0.93U	MG/KG	SELENIUM
0.19U	MG/KG	SILVER
120	MG/KG	SODIUM
1.9U	MG/KG	THALLIUM
16J	MG/KG	VANADIUM
98	MG/KG	ZINC
NA	MG/KG	CYANIDE
19	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

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EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1970** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE03 / — MD No: 0E59 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E59 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:55
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
82J	UG/KG	BENZALDEHYDE
410U	UG/KG	PHENOL
410U	UG/KG	BIS(2-CHLOROETHYL) ETHER
410U	UG/KG	2-CHLOROPHENOL
410U	UG/KG	2-METHYLPHENOL
410U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
410U	UG/KG	ACETOPHENONE
410U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
410U	UG/KG	N-NITROSODI-N-PROPYLAMINE
410U	UG/KG	HEXACHLOROETHANE
410U	UG/KG	NITROBENZENE
410U	UG/KG	ISOPHORONE
410U	UG/KG	2-NITROPHENOL
410U	UG/KG	2,4-DIMETHYLPHENOL
410U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
410U	UG/KG	2,4-DICHLOROPHENOL
410U	UG/KG	NAPHTHALENE
410UJ	UG/KG	4-CHLOROANILINE
410U	UG/KG	HEXACHLOROBUTADIENE
410U	UG/KG	CAPROLACTAM
410U	UG/KG	4-CHLORO-3-METHYLPHENOL
410U	UG/KG	2-METHYLNAPHTHALENE
410UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
410U	UG/KG	2,4,6-TRICHLOROPHENOL
1000U	UG/KG	2,4,5-TRICHLOROPHENOL
410U	UG/KG	1,1-BIPHENYL
410U	UG/KG	2-CHLORONAPHTHALENE
1000U	UG/KG	2-NITROANILINE
410U	UG/KG	DIMETHYL PHTHALATE
410U	UG/KG	2,6-DINITROTOLUENE
410U	UG/KG	ACENAPHTHYLENE
1000U	UG/KG	3-NITROANILINE
42J	UG/KG	ACENAPHTHENE
1000U	UG/KG	2,4-DINITROPHENOL
1000U	UG/KG	4-NITROPHENOL
410U	UG/KG	DIBENZOFURAN
410U	UG/KG	2,4-DINITROTOLUENE
410U	UG/KG	DIETHYL PHTHALATE
49J	UG/KG	FLUORENE
410U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1000U	UG/KG	4-NITROANILINE
1000U	UG/KG	2-METHYL-4,6-DINITROPHENOL
410U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
410U	UG/KG	4-BROMOPHENYL PHENYL ETHER
410U	UG/KG	HEXACHLOROBENZENE (HCB)
410U	UG/KG	ATRAZINE
1000U	UG/KG	PENTACHLOROPHENOL
590	UG/KG	PHENANTHRENE
190J	UG/KG	ANTHRACENE
52J	UG/KG	CARBAZOLE
410U	UG/KG	DI-N-BUTYLPHTHALATE
880	UG/KG	FLUORANTHENE
1000	UG/KG	PYRENE
410U	UG/KG	BENZYL BUTYL PHTHALATE
410U	UG/KG	3,3'-DICHLOROBENZIDINE
460	UG/KG	BENZO(A)ANTHRACENE
380J	UG/KG	CHRYSENE
410U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
410UJ	UG/KG	DI-N-OCTYLPHTHALATE
610J	UG/KG	BENZO(B)FLUORANTHENE
230J	UG/KG	BENZO(K)FLUORANTHENE
410J	UG/KG	BENZO-A-PYRENE
160J	UG/KG	INDENO (1,2,3-CD) PYRENE
410UJ	UG/KG	DIBENZO(A,H)ANTHRACENE
130J	UG/KG	BENZO(GHI)PERYLENE
21	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

804 25

Sample **1970** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDESE03 /
Media: SOIL

Case No: 28833
MD No: 0E59
D No: 0E59

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 09:55
Ending:

RESULTS	UNITS	ANALYTE
1300J	UG/KG	11UNKNOWN COMPOUNDS
47NJ	UG/KG	ANTHRACENE, 9-METHYL-
74NJ	UG/KG	ANTHRACENE, 2-METHYL-
520NJ	UG/KG	HEXADECANOIC ACID
200NJ	UG/KG	NAPHTHALENE, 2-PHENYL-
94NJ	UG/KG	PYRENE, 4-METHYL-

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification

804 76

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1969** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDESE04 /
Media: SOIL

Case No: 28833
MD No: 0E58
D No: 0E58

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:05
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.2U	UG/KG	ALPHA-BHC
2.2U	UG/KG	BETA-BHC
2.2U	UG/KG	DELTA-BHC
2.2U	UG/KG	GAMMA-BHC (LINDANE)
2.2U	UG/KG	HEPTACHLOR
2.2U	UG/KG	ALDRIN
2.2U	UG/KG	HEPTACHLOR EPOXIDE
2.2U	UG/KG	ENDOSULFAN I (ALPHA)
9.0	UG/KG	DIELDRIN
12	UG/KG	4,4'-DDE (P,P'-DDE)
4.2U	UG/KG	ENDRIN
4.2U	UG/KG	ENDOSULFAN II (BETA)
4.2U	UG/KG	4,4'-DDD (P,P'-DDD)
4.2U	UG/KG	ENDOSULFAN SULFATE
17	UG/KG	4,4'-DDT (P,P'-DDT)
22U	UG/KG	METHOXYCHLOR
4.2U	UG/KG	ENDRIN KETONE
4.2U	UG/KG	ENDRIN ALDEHYDE
2.2U	UG/KG	ALPHA-CHLORDANE /2
2.2U	UG/KG	GAMMA-CHLORDANE /2
220U	UG/KG	TOXAPHENE
42U	UG/KG	PCB-1016 (AROCLOR 1016)
85U	UG/KG	PCB-1221 (AROCLOR 1221)
42U	UG/KG	PCB-1232 (AROCLOR 1232)
42U	UG/KG	PCB-1242 (AROCLOR 1242)
42U	UG/KG	PCB-1248 (AROCLOR 1248)
42U	UG/KG	PCB-1254 (AROCLOR 1254)
42U	UG/KG	PCB-1260 (AROCLOR 1260)
22	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

804 77

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1969** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE04 / — MD No: 0E58 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E58 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:05
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
4300J	MG/KG	ALUMINUM
0.88U	MG/KG	ANTIMONY
7.5	MG/KG	ARSENIC
60	MG/KG	BARIUM
0.29U	MG/KG	BERYLLIUM
0.12U	MG/KG	CADMIUM
11000	MG/KG	CALCIUM
8.1	MG/KG	CHROMIUM
4.1	MG/KG	COBALT
18	MG/KG	COPPER
11000J	MG/KG	IRON
33	MG/KG	LEAD
1600	MG/KG	MAGNESIUM
400	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
7.7U	MG/KG	NICKEL
370J	MG/KG	POTASSIUM
0.95U	MG/KG	SELENIUM
0.43U	MG/KG	SILVER
120	MG/KG	SODIUM
2.2U	MG/KG	THALLIUM
15J	MG/KG	VANADIUM
55	MG/KG	ZINC
NA	MG/KG	CYANIDE
20	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample 1969 FY 2001 Project: 01-0211

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE04 / MD No: 0E58 Inorg Contractor: CHEM
Media: SOIL D No: 0E58 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:05
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
410U	UG/KG	BENZALDEHYDE
410U	UG/KG	PHENOL
410U	UG/KG	BIS(2-CHLOROETHYL) ETHER
410U	UG/KG	2-CHLOROPHENOL
410U	UG/KG	2-METHYLPHENOL
410U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
410U	UG/KG	ACETOPHENONE
410U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
410U	UG/KG	N-NITROSODI-N-PROPYLAMINE
410U	UG/KG	HEXACHLOROETHANE
410U	UG/KG	NITROBENZENE
410U	UG/KG	ISOPHORONE
410U	UG/KG	2-NITROPHENOL
410U	UG/KG	2,4-DIMETHYLPHENOL
410U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
410U	UG/KG	2,4-DICHLOROPHENOL
410U	UG/KG	NAPHTHALENE
410UJ	UG/KG	4-CHLOROANILINE
410U	UG/KG	HEXACHLOROBUTADIENE
410U	UG/KG	CAPROLACTAM
410U	UG/KG	4-CHLORO-3-METHYLPHENOL
410U	UG/KG	2-METHYLNAPHTHALENE
410UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
410U	UG/KG	2,4,6-TRICHLOROPHENOL
1000U	UG/KG	2,4,5-TRICHLOROPHENOL
410U	UG/KG	1,1-BIPHENYL
410U	UG/KG	2-CHLORONAPHTHALENE
1000U	UG/KG	2-NITROANILINE
410U	UG/KG	DIMETHYL PHTHALATE
410U	UG/KG	2,6-DINITROTOLUENE
410U	UG/KG	ACENAPHTHYLENE
1000U	UG/KG	3-NITROANILINE
410U	UG/KG	ACENAPHTHENE
1000U	UG/KG	2,4-DINITROPHENOL
1000U	UG/KG	4-NITROPHENOL
410U	UG/KG	DIBENZOFURAN
410U	UG/KG	2,4-DINITROTOLUENE
410U	UG/KG	DIETHYL PHTHALATE
410U	UG/KG	FLUORENE
410U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1000U	UG/KG	4-NITROANILINE
1000U	UG/KG	2-METHYL-4,6-DINITROPHENOL
410U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
410U	UG/KG	4-BROMOPHENYL PHENYL ETHER
410U	UG/KG	HEXACHLOROBENZENE (HCB)
410U	UG/KG	ATRAZINE
1000U	UG/KG	PENTACHLOROPHENOL
130J	UG/KG	PHENANTHRENE
410U	UG/KG	ANTHRACENE
410U	UG/KG	CARBAZOLE
410U	UG/KG	DI-N-BUTYLPHTHALATE
190J	UG/KG	FLUORANTHENE
260J	UG/KG	PYRENE
410U	UG/KG	BENZYL BUTYL PHTHALATE
410U	UG/KG	3,3'-DICHLOROBENZIDINE
110J	UG/KG	BENZO(A)ANTHRACENE
130J	UG/KG	CHRYSENE
410U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
410UJ	UG/KG	DI-N-OCTYLPHTHALATE
200J	UG/KG	BENZO(B)FLUORANTHENE
69J	UG/KG	BENZO(K)FLUORANTHENE
110J	UG/KG	BENZO-A-PYRENE
64J	UG/KG	INDENO (1,2,3-CD) PYRENE
410UJ	UG/KG	DIBENZO(A,H)ANTHRACENE
64J	UG/KG	BENZO(GHI)PERYLENE
22	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

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EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1969** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE04 / MD No: 0E58 Inorg Contractor: CHEM
Media: SOIL D No: 0E58 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:05
Ending:

RESULTS	UNITS	ANALYTE
1600J	UG/KG	6 UNKNOWN COMPOUNDS
140NJ	UG/KG	TETRADECANOIC ACID
90NJ	UG/KG	DODECANOIC ACID, METHYL ESTE
510NJ	UG/KG	PENTADECANOIC ACID
240NJ	UG/KG	HEXADECANOIC ACID, METHYL ES
320NJ	UG/KG	OXACYCLOHEXADECAN-2-ONE, 16-
1200NJ	UG/KG	HEXADECANOIC ACID
130NJ	UG/KG	HEXADECANOIC ACID, METHYL ES
200NJ	UG/KG	HEPTADECANOIC ACID
68NJ	UG/KG	9, 12-OCTADECADIENOIC ACID (Z
140NJ	UG/KG	OCTADECANOIC ACID, METHYL ES
2800NJ	UG/KG	OLEIC ACID
790NJ	UG/KG	CHOLESTEROL

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

804 80

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:16**

Sample **1968** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE05 / MD No: 0E57 Inorg Contractor: CHEM
Media: SOIL D No: 0E57 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:15
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.2U	UG/KG	ALPHA-BHC
2.2U	UG/KG	BETA-BHC
2.2U	UG/KG	DELTA-BHC
2.2U	UG/KG	GAMMA-BHC (LINDANE)
2.2U	UG/KG	HEPTACHLOR
2.2U	UG/KG	ALDRIN
2.2U	UG/KG	HEPTACHLOR EPOXIDE
2.2U	UG/KG	ENDOSULFAN I (ALPHA)
22	UG/KG	DIELDRIN
16	UG/KG	4,4'-DDE (P,P'-DDE)
4.2U	UG/KG	ENDRIN
4.2U	UG/KG	ENDOSULFAN II (BETA)
4.2U	UG/KG	4,4'-DDD (P,P'-DDD)
4.2U	UG/KG	ENDOSULFAN SULFATE
29	UG/KG	4,4'-DDT (P,P'-DDT)
22U	UG/KG	METHOXYCHLOR
4.2U	UG/KG	ENDRIN KETONE
4.2U	UG/KG	ENDRIN ALDEHYDE
2.7U	UG/KG	ALPHA-CHLORDANE /2
2.2U	UG/KG	GAMMA-CHLORDANE /2
220U	UG/KG	TOXAPHENE
42U	UG/KG	PCB-1016 (AROCLOR 1016)
86U	UG/KG	PCB-1221 (AROCLOR 1221)
42U	UG/KG	PCB-1232 (AROCLOR 1232)
42U	UG/KG	PCB-1242 (AROCLOR 1242)
42U	UG/KG	PCB-1248 (AROCLOR 1248)
42U	UG/KG	PCB-1254 (AROCLOR 1254)
54	UG/KG	PCB-1260 (AROCLOR 1260)
24	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1968** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE05 / — MD No: 0E57 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E57 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:15
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
5500J	MG/KG	ALUMINUM
0.89U	MG/KG	ANTIMONY
8.8	MG/KG	ARSENIC
97	MG/KG	BARIUM
0.38U	MG/KG	BERYLLIUM
0.12U	MG/KG	CADMIUM
14000	MG/KG	CALCIUM
12	MG/KG	CHROMIUM
5.9	MG/KG	COBALT
26	MG/KG	COPPER
13000J	MG/KG	IRON
62	MG/KG	LEAD
2300	MG/KG	MAGNESIUM
620	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
11	MG/KG	NICKEL
510J	MG/KG	POTASSIUM
0.96U	MG/KG	SELENIUM
0.32U	MG/KG	SILVER
100	MG/KG	SODIUM
2.0U	MG/KG	THALLIUM
17J	MG/KG	VANADIUM
96	MG/KG	ZINC
NA	MG/KG	CYANIDE
21	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample 1968 FY 2001 Project: 01-0211
EXTRACTABLES SCAN
Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE05 / MD No: 0E57 Inorg Contractor: CHEM
Media: SOIL D No: 0E57 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:15
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
420U	UG/KG	BENZALDEHYDE
420U	UG/KG	PHENOL
420U	UG/KG	BIS(2-CHLOROETHYL) ETHER
420U	UG/KG	2-CHLOROPHENOL
420U	UG/KG	2-METHYLPHENOL
420U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
420U	UG/KG	ACETOPHENONE
420U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
420U	UG/KG	N-NITROSODI-N-PROPYLAMINE
420U	UG/KG	HEXACHLOROETHANE
420U	UG/KG	NITROBENZENE
420U	UG/KG	ISOPHORONE
420U	UG/KG	2-NITROPHENOL
420U	UG/KG	2,4-DIMETHYLPHENOL
420U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
420U	UG/KG	2,4-DICHLOROPHENOL
420U	UG/KG	NAPHTHALENE
420UJ	UG/KG	4-CHLOROANILINE
420U	UG/KG	HEXACHLOROBUTADIENE
420U	UG/KG	CAPROLACTAM
420U	UG/KG	4-CHLORO-3-METHYLPHENOL
420U	UG/KG	2-METHYLNAPHTHALENE
420UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
420U	UG/KG	2,4,6-TRICHLOROPHENOL
1100U	UG/KG	2,4,5-TRICHLOROPHENOL
420U	UG/KG	1,1-BIPHENYL
420U	UG/KG	2-CHLORONAPHTHALENE
1100U	UG/KG	2-NITROANILINE
420U	UG/KG	DIMETHYL PHTHALATE
420U	UG/KG	2,6-DINITROTOLUENE
420U	UG/KG	ACENAPHTHYLENE
1100U	UG/KG	3-NITROANILINE
420U	UG/KG	ACENAPHTHENE
1100U	UG/KG	2,4-DINITROPHENOL
1100U	UG/KG	4-NITROPHENOL
420U	UG/KG	DIBENZOFURAN
420U	UG/KG	2,4-DINITROTOLUENE
420U	UG/KG	DIETHYL PHTHALATE
420U	UG/KG	FLUORENE
420U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1100U	UG/KG	4-NITROANILINE
1100U	UG/KG	2-METHYL-4,6-DINITROPHENOL
420U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
420U	UG/KG	4-BROMOPHENYL PHENYL ETHER
420U	UG/KG	HEXACHLOROBENZENE (HCB)
420U	UG/KG	ATRAZINE
1100U	UG/KG	PENTACHLOROPHENOL
70J	UG/KG	PHENANTHRENE
420U	UG/KG	ANTHRACENE
420U	UG/KG	CARBAZOLE
420U	UG/KG	DI-N-BUTYLPHTHALATE
150J	UG/KG	FLUORANTHENE
300J	UG/KG	PYRENE
420U	UG/KG	BENZYL BUTYL PHTHALATE
420U	UG/KG	3,3'-DICHLOROBENZIDINE
190J	UG/KG	BENZO(A)ANTHRACENE
230J	UG/KG	CHRYSENE
450	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
420UJ	UG/KG	DI-N-OCTYLPHTHALATE
510J	UG/KG	BENZO(B)FLUORANTHENE
160J	UG/KG	BENZO(K)FLUORANTHENE
240J	UG/KG	BENZO-A-PYRENE
150J	UG/KG	INDENO (1,2,3-CD) PYRENE
420UJ	UG/KG	DIBENZO(A,H)ANTHRACENE
200J	UG/KG	BENZO(GHI)PERYLENE
24	%	% MOISTURE

804 83

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:14**

Sample **1968** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE05 / MD No: 0E57 Inorg Contractor: CHEM
Media: SOIL D No: 0E57 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:15
Ending:

RESULTS	UNITS	ANALYTE
910J	UG/KG	5 UNKNOWN COMPOUNDS
270NJ	UG/KG	PENTADECANOIC ACID
97NJ	UG/KG	METHYL 9-METHYLTETRADECANOAT
180NJ	UG/KG	OXACYCLOHEXADECAN-2-ONE, 16-
300NJ	UG/KG	9-HEXADECENOIC ACID
720NJ	UG/KG	HEXADECANOIC ACID

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample 1971 FY 2001 Project: 01-0211
PESTICIDES SCAN
Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE06 / MD No: 0E60 Inorg Contractor: CHEM
Media: SOIL D No: 0E60 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:20
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.1U	UG/KG	ALPHA-BHC
2.1U	UG/KG	BETA-BHC
2.1U	UG/KG	DELTA-BHC
2.1U	UG/KG	GAMMA-BHC (LINDANE)
2.1U	UG/KG	HEPTACHLOR
2.1U	UG/KG	ALDRIN
2.1U	UG/KG	HEPTACHLOR EPOXIDE
8.0	UG/KG	ENDOSULFAN I (ALPHA)
96	UG/KG	DIELDRIN
56	UG/KG	4,4'-DDE (P,P'-DDE)
7.5U	UG/KG	ENDRIN
4.6U	UG/KG	ENDOSULFAN II (BETA)
4.0U	UG/KG	4,4'-DDD (P,P'-DDD)
4.0U	UG/KG	ENDOSULFAN SULFATE
82	UG/KG	4,4'-DDT (P,P'-DDT)
21U	UG/KG	METHOXYCHLOR
4.0U	UG/KG	ENDRIN KETONE
4.0U	UG/KG	ENDRIN ALDEHYDE
12N	UG/KG	ALPHA-CHLORDANE /2
5.5U	UG/KG	GAMMA-CHLORDANE /2
210U	UG/KG	TOXAPHENE
40U	UG/KG	PCB-1016 (AROCLOR 1016)
82U	UG/KG	PCB-1221 (AROCLOR 1221)
40U	UG/KG	PCB-1232 (AROCLOR 1232)
40U	UG/KG	PCB-1242 (AROCLOR 1242)
40U	UG/KG	PCB-1248 (AROCLOR 1248)
250	UG/KG	PCB-1254 (AROCLOR 1254)
40U	UG/KG	PCB-1260 (AROCLOR 1260)
20	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1971** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE06 / — MD No: 0E60 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E60 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:20
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
4000J	MG/KG	ALUMINUM
0.88U	MG/KG	ANTIMONY
8.3	MG/KG	ARSENIC
97	MG/KG	BARIUM
0.33U	MG/KG	BERYLLIUM
0.12U	MG/KG	CADMIUM
4000	MG/KG	CALCIUM
8.2	MG/KG	CHROMIUM
5.9	MG/KG	COBALT
31	MG/KG	COPPER
11000J	MG/KG	IRON
84	MG/KG	LEAD
1100	MG/KG	MAGNESIUM
580	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
9.1U	MG/KG	NICKEL
420J	MG/KG	POTASSIUM
0.95U	MG/KG	SELENIUM
0.19U	MG/KG	SILVER
98	MG/KG	SODIUM
1.9U	MG/KG	THALLIUM
13J	MG/KG	VANADIUM
90	MG/KG	ZINC
NA	MG/KG	CYANIDE
19	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

804 86

A-average value NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1971** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE06 / MD No: 0E60 Inorg Contractor: CHEM
Media: SOIL D No: 0E60 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:20
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
43J	UG/KG	BENZALDEHYDE
400U	UG/KG	PHENOL
400U	UG/KG	BIS(2-CHLOROETHYL) ETHER
400U	UG/KG	2-CHLOROPHENOL
400U	UG/KG	2-METHYLPHENOL
400U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
400U	UG/KG	ACETOPHENONE
400U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
400U	UG/KG	N-NITROSODI-N-PROPYLAMINE
400U	UG/KG	HEXACHLOROETHANE
400U	UG/KG	NITROBENZENE
400U	UG/KG	ISOPHORONE
400U	UG/KG	2-NITROPHENOL
400U	UG/KG	2,4-DIMETHYLPHENOL
400U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
400U	UG/KG	2,4-DICHLOROPHENOL
400U	UG/KG	NAPHTHALENE
400UJ	UG/KG	4-CHLOROANILINE
400U	UG/KG	HEXACHLOROBUTADIENE
400U	UG/KG	CAPROLACTAM
400U	UG/KG	4-CHLORO-3-METHYLPHENOL
400U	UG/KG	2-METHYLNAPHTHALENE
400UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
400U	UG/KG	2,4,6-TRICHLOROPHENOL
1000U	UG/KG	2,4,5-TRICHLOROPHENOL
400U	UG/KG	1,1-BIPHENYL
400U	UG/KG	2-CHLORONAPHTHALENE
1000U	UG/KG	2-NITROANILINE
400U	UG/KG	DIMETHYL PHTHALATE
400U	UG/KG	2,6-DINITROTOLUENE
400U	UG/KG	ACENAPHTHYLENE
1000U	UG/KG	3-NITROANILINE
400U	UG/KG	ACENAPHTHENE
1000U	UG/KG	2,4-DINITROPHENOL
1000U	UG/KG	4-NITROPHENOL
400U	UG/KG	DIBENZOFURAN
400U	UG/KG	2,4-DINITROTOLUENE
400U	UG/KG	DIETHYL PHTHALATE
400U	UG/KG	FLUORENE
400U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1000U	UG/KG	4-NITROANILINE
1000U	UG/KG	2-METHYL-4,6-DINITROPHENOL
400U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
400U	UG/KG	4-BROMOPHENYL PHENYL ETHER
400U	UG/KG	HEXACHLOROBENZENE (HCB)
400U	UG/KG	ATRAZINE
1000U	UG/KG	PENTACHLOROPHENOL
300J	UG/KG	PHENANTHRENE
91J	UG/KG	ANTHRACENE
51J	UG/KG	CARBAZOLE
400U	UG/KG	DI-N-BUTYLPHTHALATE
710	UG/KG	FLUORANTHENE
1300J	UG/KG	PYRENE
400UR	UG/KG	BENZYL BUTYL PHTHALATE
400UR	UG/KG	3,3'-DICHLOROBENZIDINE
460J	UG/KG	BENZO(A)ANTHRACENE
550J	UG/KG	CHRYSENE
400UR	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
400UR	UG/KG	DI-N-OCTYLPHTHALATE
800J	UG/KG	BENZO(B)FLUORANTHENE
280J	UG/KG	BENZO(K)FLUORANTHENE
390J	UG/KG	BENZO-A-PYRENE
210J	UG/KG	INDENO (1,2,3-CD) PYRENE
400UR	UG/KG	DIBENZO(A,H)ANTHRACENE
210J	UG/KG	BENZO(GHI)PERYLENE
20	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:14**

Sample **1971** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE06 / MD No: 0E60 Inorg Contractor: CHEM
Media: SOIL D No: 0E60 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:20
Ending:

RESULTS	UNITS	ANALYTE
1400J	UG/KG	8 UNKNOWN COMPOUNDS
160NJ	UG/KG	BENZENE, 1,1'-(1,2-CYCLOBUTA
150NJ	UG/KG	PENTADECANOIC ACID
95NJ	UG/KG	HEXADECANOIC ACID, METHYL ES
1000NJ	UG/KG	HEXADECANOIC ACID
97NJ	UG/KG	CYCLOPENTA (DEF) PHENANTHRENON
490NJ	UG/KG	OLEIC ACID
720JN	UG/KG	BENZ [E] ACEPHENANTHRYLENE (2 ISOMERS)

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1972** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE07 / MD No: 0E61 Inorg Contractor: CHEM
Media: SOIL D No: 0E61 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:30
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.1U	UG/KG	ALPHA-BHC
2.1U	UG/KG	BETA-BHC
2.1U	UG/KG	DELTA-BHC
2.1U	UG/KG	GAMMA-BHC (LINDANE)
2.1U	UG/KG	HEPTACHLOR
2.1U	UG/KG	ALDRIN
2.1U	UG/KG	HEPTACHLOR EPOXIDE
2.1U	UG/KG	ENDOSULFAN I (ALPHA)
4.1U	UG/KG	DIELDRIN
4.1U	UG/KG	4,4'-DDE (P,P'-DDE)
4.1U	UG/KG	ENDRIN
4.1U	UG/KG	ENDOSULFAN II (BETA)
4.1U	UG/KG	4,4'-DDD (P,P'-DDD)
4.1U	UG/KG	ENDOSULFAN SULFATE
4.1U	UG/KG	4,4'-DDT (P,P'-DDT)
21U	UG/KG	METHOXYCHLOR
4.1U	UG/KG	ENDRIN KETONE
4.1U	UG/KG	ENDRIN ALDEHYDE
2.1U	UG/KG	ALPHA-CHLORDANE /2
2.1U	UG/KG	GAMMA-CHLORDANE /2
210U	UG/KG	TOXAPHENE
41U	UG/KG	PCB-1016 (AROCLOR 1016)
83U	UG/KG	PCB-1221 (AROCLOR 1221)
41U	UG/KG	PCB-1232 (AROCLOR 1232)
41U	UG/KG	PCB-1242 (AROCLOR 1242)
41U	UG/KG	PCB-1248 (AROCLOR 1248)
41U	UG/KG	PCB-1254 (AROCLOR 1254)
41U	UG/KG	PCB-1260 (AROCLOR 1260)
20	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present resampling and reanalysis is necessary for verification.
C-confirmed by gcms. 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1972** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE07 / — MD No: 0E61 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E61 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:30
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
9200J	MG/KG	ALUMINUM
0.85U	MG/KG	ANTIMONY
23	MG/KG	ARSENIC
81	MG/KG	BARIUM
0.48U	MG/KG	BERYLLIUM
0.12U	MG/KG	CADMIUM
1100	MG/KG	CALCIUM
12	MG/KG	CHROMIUM
14	MG/KG	COBALT
28	MG/KG	COPPER
22000J	MG/KG	IRON
17	MG/KG	LEAD
2000	MG/KG	MAGNESIUM
760	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
13	MG/KG	NICKEL
680J	MG/KG	POTASSIUM
0.92U	MG/KG	SELENIUM
0.21U	MG/KG	SILVER
160	MG/KG	SODIUM
2.4	MG/KG	THALLIUM
25J	MG/KG	VANADIUM
59	MG/KG	ZINC
NA	MG/KG	CYANIDE
17	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

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EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample 1972 FY 2001 Project: 01-0211

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE07 / MD No: 0E61 Inorg Contractor: CHEM
Media: SOIL D No: 0E61 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:30
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
410U	UG/KG	BENZALDEHYDE
410U	UG/KG	PHENOL
410U	UG/KG	BIS(2-CHLOROETHYL) ETHER
410U	UG/KG	2-CHLOROPHENOL
410U	UG/KG	2-METHYLPHENOL
410U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
410U	UG/KG	ACETOPHENONE
410U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
410U	UG/KG	N-NITROSODI-N-PROPYLAMINE
410U	UG/KG	HEXACHLOROETHANE
410U	UG/KG	NITROBENZENE
410U	UG/KG	ISOPHORONE
410U	UG/KG	2-NITROPHENOL
410U	UG/KG	2,4-DIMETHYLPHENOL
410U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
410U	UG/KG	2,4-DICHLOROPHENOL
65J	UG/KG	NAPHTHALENE
410UJ	UG/KG	4-CHLOROANILINE
410U	UG/KG	HEXACHLOROBUTADIENE
410U	UG/KG	CAPROLACTAM
410U	UG/KG	4-CHLORO-3-METHYLPHENOL
410U	UG/KG	2-METHYLNAPHTHALENE
410UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
410U	UG/KG	2,4,6-TRICHLOROPHENOL
1000U	UG/KG	2,4,5-TRICHLOROPHENOL
410U	UG/KG	1,1-BIPHENYL
410U	UG/KG	2-CHLORONAPHTHALENE
1000U	UG/KG	2-NITROANILINE
410U	UG/KG	DIMETHYL PHTHALATE
410U	UG/KG	2,6-DINITROTOLUENE
410U	UG/KG	ACENAPHTHYLENE
1000U	UG/KG	3-NITROANILINE
110J	UG/KG	ACENAPHTHENE
1000U	UG/KG	2,4-DINITROPHENOL
1000U	UG/KG	4-NITROPHENOL
99J	UG/KG	DIBENZOFURAN
410U	UG/KG	2,4-DINITROTOLUENE
410U	UG/KG	DIETHYL PHTHALATE
170J	UG/KG	FLUORENE
410U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1000U	UG/KG	4-NITROANILINE
1000U	UG/KG	2-METHYL-4,6-DINITROPHENOL
410U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
410U	UG/KG	4-BROMOPHENYL PHENYL ETHER
410U	UG/KG	HEXACHLOROBENZENE (HCB)
410U	UG/KG	ATRAZINE
1000U	UG/KG	PENTACHLOROPHENOL
1400	UG/KG	PHENANTHRENE
230J	UG/KG	ANTHRACENE
220J	UG/KG	CARBAZOLE
410U	UG/KG	DI-N-BUTYLPHTHALATE
1600	UG/KG	FLUORANTHENE
1900	UG/KG	PYRENE
410U	UG/KG	BENZYL BUTYL PHTHALATE
410U	UG/KG	3,3'-DICHLOROBENZIDINE
800	UG/KG	BENZO(A)ANTHRACENE
900	UG/KG	CHRYSENE
410U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
410UJ	UG/KG	DI-N-OCTYLPHTHALATE
1300J	UG/KG	BENZO(B)FLUORANTHENE
400J	UG/KG	BENZO(K)FLUORANTHENE
760J	UG/KG	BENZO-A-PYRENE
430J	UG/KG	INDENO (1,2,3-CD) PYRENE
92J	UG/KG	DIBENZO(A,H)ANTHRACENE
370J	UG/KG	BENZO(GHI)PERYLENE
20	%	% MOISTURE

804 61

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
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R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1972** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDESE07 /
Media: SOIL

Case No: 28833
MD No: 0E61
D No: 0E61

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 10:30
Ending:

RESULTS	UNITS	ANALYTE
130NJ	UG/KG	INDENE
1500J	UG/KG	4 UNKNOWN COMPOUNDS
97NJ	UG/KG	9H-FLUOREN-9-ONE
110NJ	UG/KG	DIBENZOTHIOPHENE
170NJ	UG/KG	PENTADECANOIC ACID
97NJ	UG/KG	ANTHRACENE, 1-METHYL-
120NJ	UG/KG	ANTHRACENE, 2-METHYL-
410NJ	UG/KG	HEXADECANOIC ACID
280NJ	UG/KG	2-PHENYLNAPHTHALENE
180NJ	UG/KG	P,P'-DDE
130NJ	UG/KG	11H-BENZO [B] FLUORENE
260NJ	UG/KG	PYRENE, 4-METHYL-
150NJ	UG/KG	CHLOROPHENOTHANE
100NJ	UG/KG	BENZO [B] NAPHTHO [2,1-D] THIOPH
60NJ	UG/KG	7H-BENZ [DE] ANTHRACEN-7-ONE

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

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PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1973** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE08 / — MD No: 0E62 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E62 — Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 11:35
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.0U	UG/KG	ALPHA-BHC
2.0U	UG/KG	BETA-BHC
2.0U	UG/KG	DELTA-BHC
2.0U	UG/KG	GAMMA-BHC (LINDANE)
2.0U	UG/KG	HEPTACHLOR
2.0U	UG/KG	ALDRIN
2.0U	UG/KG	HEPTACHLOR EPOXIDE
2.0U	UG/KG	ENDOSULFAN I (ALPHA)
270	UG/KG	DIELDRIN
270	UG/KG	4,4'-DDE (P,P'-DDE)
4.3U	UG/KG	ENDRIN
3.9U	UG/KG	ENDOSULFAN II (BETA)
130N	UG/KG	4,4'-DDD (P,P'-DDD)
3.9U	UG/KG	ENDOSULFAN SULFATE
510	UG/KG	4,4'-DDT (P,P'-DDT)
20U	UG/KG	METHOXYCHLOR
3.9U	UG/KG	ENDRIN KETONE
3.9U	UG/KG	ENDRIN ALDEHYDE
12U	UG/KG	ALPHA-CHLORDANE /2
12	UG/KG	GAMMA-CHLORDANE /2
200U	UG/KG	TOXAPHENE
39U	UG/KG	PCB-1016 (AROCLOR 1016)
79U	UG/KG	PCB-1221 (AROCLOR 1221)
39U	UG/KG	PCB-1232 (AROCLOR 1232)
39U	UG/KG	PCB-1242 (AROCLOR 1242)
39U	UG/KG	PCB-1248 (AROCLOR 1248)
39U	UG/KG	PCB-1254 (AROCLOR 1254)
100	UG/KG	PCB-1260 (AROCLOR 1260)
16	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1973** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE08 / — MD No: 0E62 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E62 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 11:35
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
4600J	MG/KG	ALUMINUM
0.82U	MG/KG	ANTIMONY
11	MG/KG	ARSENIC
56	MG/KG	BARIUM
0.30U	MG/KG	BERYLLIUM
0.11U	MG/KG	CADMIUM
27000	MG/KG	CALCIUM
11	MG/KG	CHROMIUM
7.0	MG/KG	COBALT
14	MG/KG	COPPER
9100J	MG/KG	IRON
29	MG/KG	LEAD
1400	MG/KG	MAGNESIUM
530	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
7.9U	MG/KG	NICKEL
380J	MG/KG	POTASSIUM
0.89U	MG/KG	SELENIUM
0.30U	MG/KG	SILVER
140	MG/KG	SODIUM
1.8U	MG/KG	THALLIUM
15J	MG/KG	VANADIUM
95	MG/KG	ZINC
NA	MG/KG	CYANIDE
14	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1973** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE08 / MD No: 0E62 Inorg Contractor: CHEM
Media: SOIL D No: 0E62 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 11:35
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
390U	UG/KG	BENZALDEHYDE
390U	UG/KG	PHENOL
390U	UG/KG	BIS(2-CHLOROETHYL) ETHER
390U	UG/KG	2-CHLOROPHENOL
390U	UG/KG	2-METHYLPHENOL
390U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
390U	UG/KG	ACETOPHENONE
390U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
390U	UG/KG	N-NITROSODI-N-PROPYLAMINE
390U	UG/KG	HEXACHLOROETHANE
390U	UG/KG	NITROBENZENE
390U	UG/KG	ISOPHORONE
390U	UG/KG	2-NITROPHENOL
390U	UG/KG	2,4-DIMETHYLPHENOL
390U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
390U	UG/KG	2,4-DICHLOROPHENOL
390U	UG/KG	NAPHTHALENE
390UJ	UG/KG	4-CHLOROANILINE
390U	UG/KG	HEXACHLOROBUTADIENE
390U	UG/KG	CAPROLACTAM
390U	UG/KG	4-CHLORO-3-METHYLPHENOL
390U	UG/KG	2-METHYLNAPHTHALENE
390UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
390U	UG/KG	2,4,6-TRICHLOROPHENOL
980U	UG/KG	2,4,5-TRICHLOROPHENOL
390U	UG/KG	1,1-BIPHENYL
390U	UG/KG	2-CHLORONAPHTHALENE
980U	UG/KG	2-NITROANILINE
390U	UG/KG	DIMETHYL PHTHALATE
390U	UG/KG	2,6-DINITROTOLUENE
390U	UG/KG	ACENAPHTHYLENE
980U	UG/KG	3-NITROANILINE
390U	UG/KG	ACENAPHTHENE
980U	UG/KG	2,4-DINITROPHENOL
980U	UG/KG	4-NITROPHENOL

RESULTS	UNITS	ANALYTE
390U	UG/KG	DIBENZOFURAN
390U	UG/KG	2,4-DINITROTOLUENE
390U	UG/KG	DIETHYL PHTHALATE
390U	UG/KG	FLUORENE
390U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
980U	UG/KG	4-NITROANILINE
980U	UG/KG	2-METHYL-4,6-DINITROPHENOL
390U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
390U	UG/KG	4-BROMOPHENYL PHENYL ETHER
390U	UG/KG	HEXACHLOROBENZENE (HCB)
390U	UG/KG	ATRAZINE
980U	UG/KG	PENTACHLOROPHENOL
390U	UG/KG	PHENANTHRENE
390U	UG/KG	ANTHRACENE
390U	UG/KG	CARBAZOLE
390U	UG/KG	DI-N-BUTYLPHTHALATE
390U	UG/KG	FLUORANTHENE
390U	UG/KG	PYRENE
390U	UG/KG	BENZYL BUTYL PHTHALATE
390U	UG/KG	3,3'-DICHLOROBENZIDINE
390U	UG/KG	BENZO(A)ANTHRACENE
390U	UG/KG	CHRYSENE
390U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
390U	UG/KG	DI-N-OCTYLPHTHALATE
390U	UG/KG	BENZO(B)FLUORANTHENE
390U	UG/KG	BENZO(K)FLUORANTHENE
390U	UG/KG	BENZO-A-PYRENE
390U	UG/KG	INDENO (1,2,3-CD) PYRENE
390U	UG/KG	DIBENZO(A,H)ANTHRACENE
390U	UG/KG	BENZO(GHI)PERYLENE
16	%	% MOISTURE

804 95

A-average value NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:16**

Sample **1974** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE09 / MD No: 0E63 Inorg Contractor: CHEM
Media: SOIL D No: 0E63 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 11:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.2U	UG/KG	ALPHA-BHC
2.2U	UG/KG	BETA-BHC
2.2U	UG/KG	DELTA-BHC
2.2U	UG/KG	GAMMA-BHC (LINDANE)
2.2U	UG/KG	HEPTACHLOR
2.2U	UG/KG	ALDRIN
2.2U	UG/KG	HEPTACHLOR EPOXIDE
2.2U	UG/KG	ENDOSULFAN I (ALPHA)
76	UG/KG	DIELDRIN
130	UG/KG	4,4'-DDE (P,P'-DDE)
4.3U	UG/KG	ENDRIN
4.3U	UG/KG	ENDOSULFAN II (BETA)
21U	UG/KG	4,4'-DDD (P,P'-DDD)
4.3U	UG/KG	ENDOSULFAN SULFATE
310	UG/KG	4,4'-DDT (P,P'-DDT)
22U	UG/KG	METHOXYCHLOR
4.3U	UG/KG	ENDRIN KETONE
4.3U	UG/KG	ENDRIN ALDEHYDE
5.4U	UG/KG	ALPHA-CHLORDANE /2
4.7	UG/KG	GAMMA-CHLORDANE /2
220U	UG/KG	TOXAPHENE
43U	UG/KG	PCB-1016 (AROCLOR 1016)
87U	UG/KG	PCB-1221 (AROCLOR 1221)
43U	UG/KG	PCB-1232 (AROCLOR 1232)
43U	UG/KG	PCB-1242 (AROCLOR 1242)
43U	UG/KG	PCB-1248 (AROCLOR 1248)
43U	UG/KG	PCB-1254 (AROCLOR 1254)
44	UG/KG	PCB-1260 (AROCLOR 1260)
24	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

804 96

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1974** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE09 / — MD No: 0E63 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E63 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 11:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
5600J	MG/KG	ALUMINUM
0.93U	MG/KG	ANTIMONY
8 9	MG/KG	ARSENIC
92	MG/KG	BARIUM
0.38U	MG/KG	BERYLLIUM
0.13U	MG/KG	CADMIUM
4600	MG/KG	CALCIUM
12	MG/KG	CHROMIUM
6.7	MG/KG	COBALT
28	MG/KG	COPPER
12000J	MG/KG	IRON
40	MG/KG	LEAD
1300	MG/KG	MAGNESIUM
620	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
11	MG/KG	NICKEL
240J	MG/KG	POTASSIUM
1.0U	MG/KG	SELENIUM
0.31U	MG/KG	SILVER
95	MG/KG	SODIUM
2.1U	MG/KG	THALLIUM
17J	MG/KG	VANADIUM
91	MG/KG	ZINC
NA	MG/KG	CYANIDE
22	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

804 97

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1974** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE09 / MD No: 0E63 Inorg Contractor: CHEM
Media: SOIL D No: 0E63 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 11:40
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
420U	UG/KG	BENZALDEHYDE
420U	UG/KG	PHENOL
420U	UG/KG	BIS(2-CHLOROETHYL) ETHER
420U	UG/KG	2-CHLOROPHENOL
420U	UG/KG	2-METHYLPHENOL
420U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
420U	UG/KG	ACETOPHENONE
420U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
420U	UG/KG	N-NITROSODI-N-PROPYLAMINE
420U	UG/KG	HEXACHLOROETHANE
420U	UG/KG	NITROBENZENE
420U	UG/KG	ISOPHORONE
420U	UG/KG	2-NITROPHENOL
420U	UG/KG	2,4-DIMETHYLPHENOL
420U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
420U	UG/KG	2,4-DICHLOROPHENOL
420U	UG/KG	NAPHTHALENE
420UJ	UG/KG	4-CHLOROANILINE
420U	UG/KG	HEXACHLOROBUTADIENE
420U	UG/KG	CAPROLACTAM
420U	UG/KG	4-CHLORO-3-METHYLPHENOL
420U	UG/KG	2-METHYLNAPHTHALENE
420UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
420U	UG/KG	2,4,6-TRICHLOROPHENOL
1100U	UG/KG	2,4,5-TRICHLOROPHENOL
420U	UG/KG	1,1-BIPHENYL
420U	UG/KG	2-CHLORONAPHTHALENE
1100U	UG/KG	2-NITROANILINE
420U	UG/KG	DIMETHYL PHTHALATE
420U	UG/KG	2,6-DINITROTOLUENE
420U	UG/KG	ACENAPHTHYLENE
1100U	UG/KG	3-NITROANILINE
420U	UG/KG	ACENAPHTHENE
1100U	UG/KG	2,4-DINITROPHENOL
1100U	UG/KG	4-NITROPHENOL
420U	UG/KG	DIBENZOFURAN
420U	UG/KG	2,4-DINITROTOLUENE
420U	UG/KG	DIETHYL PHTHALATE
420U	UG/KG	FLUORENE
420U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1100U	UG/KG	4-NITROANILINE
1100U	UG/KG	2-METHYL-4,6-DINITROPHENOL
420U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
420U	UG/KG	4-BROMOPHENYL PHENYL ETHER
420U	UG/KG	HEXACHLOROBENZENE (HCB)
420U	UG/KG	ATRAZINE
1100U	UG/KG	PENTACHLOROPHENOL
270J	UG/KG	PHENANTHRENE
45J	UG/KG	ANTHRACENE
53J	UG/KG	CARBAZOLE
420U	UG/KG	DI-N-BUTYLPHTHALATE
490	UG/KG	FLUORANTHENE
540	UG/KG	PYRENE
420U	UG/KG	BENZYL BUTYL PHTHALATE
420U	UG/KG	3,3'-DICHLOROBENZIDINE
230J	UG/KG	BENZO(A)ANTHRACENE
290J	UG/KG	CHRYSENE
420U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
420UJ	UG/KG	DI-N-OCTYLPHTHALATE
470J	UG/KG	BENZO(B)FLUORANTHENE
150J	UG/KG	BENZO(K)FLUORANTHENE
240J	UG/KG	BENZO-A-PYRENE
160J	UG/KG	INDENO (1,2,3-CD) PYRENE
420UJ	UG/KG	DIBENZO(A,H)ANTHRACENE
140J	UG/KG	BENZO(GHI)PERYLENE
24	%	% MOISTURE

804 69 8

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1974** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDESE09 /
Media: SOIL

Case No: 28833
MD No: 0E63
D No: 0E63

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 11:40
Ending:

RESULTS	UNITS	ANALYTE
1400J	UG/KG	8 UNKNOWN COMPOUNDS
94NJ	UG/KG	BENZENAMINE, 2,4,6-TRICHLRO
320NJ	UG/KG	PENTADECANOIC ACID
110NJ	UG/KG	HEXADECANOIC ACID, METHYL ES
730NJ	UG/KG	HEXADECANOIC ACID
150NJ	UG/KG	OLEIC ACID
150NJ	UG/KG	P,P'-DDE
130NJ	UG/KG	CHLOROPHENOTHANE
81NJ	UG/KG	BENZO [B] NAPHTHO [2,1-D] THIOPH

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

PESTICIDES/PCB SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:16**

Sample **1975** FY **2001** Project: **01-0211**

PESTICIDES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE
Id/Station: DDESE010 /
Media: SOIL

Case No: 28833
MD No: 0E64
D No: 0E64

Inorg Contractor: CHEM
Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 12:15
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
2.1U	UG/KG	ALPHA-BHC
2.1U	UG/KG	BETA-BHC
2.1U	UG/KG	DELTA-BHC
2.1U	UG/KG	GAMMA-BHC (LINDANE)
2.1U	UG/KG	HEPTACHLOR
2.1U	UG/KG	ALDRIN
2.1U	UG/KG	HEPTACHLOR EPOXIDE
2.1U	UG/KG	ENDOSULFAN I (ALPHA)
4.1U	UG/KG	DIELDRIN
4.1U	UG/KG	4,4'-DDE (P,P'-DDE)
4.1U	UG/KG	ENDRIN
4.1U	UG/KG	ENDOSULFAN II (BETA)
4.1U	UG/KG	4,4'-DDD (P,P'-DDD)
4.1U	UG/KG	ENDOSULFAN SULFATE
4.6	UG/KG	4,4'-DDT (P,P'-DDT)
21U	UG/KG	METHOXYCHLOR
4.1U	UG/KG	ENDRIN KETONE
4.1U	UG/KG	ENDRIN ALDEHYDE
2.1U	UG/KG	ALPHA-CHLORDANE /2
2.1U	UG/KG	GAMMA-CHLORDANE /2
210U	UG/KG	TOXAPHENE
41U	UG/KG	PCB-1016 (AROCLOR 1016)
83U	UG/KG	PCB-1221 (AROCLOR 1221)
41U	UG/KG	PCB-1232 (AROCLOR 1232)
41U	UG/KG	PCB-1242 (AROCLOR 1242)
41U	UG/KG	PCB-1248 (AROCLOR 1248)
41U	UG/KG	PCB-1254 (AROCLOR 1254)
41U	UG/KG	PCB-1260 (AROCLOR 1260)
20	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.
C-confirmed by gcms: 1.when no value is reported, see chlordane constituents 2.constituents or metabolites of technical chlordane

METALS SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 16:18**

Sample **1975** FY **2001** Project: **01-0211**

METALS SCAN

Facility: Defense Distribution Depot Mem — Memphis, TN
Program: SFE — Case No: 28833
Id/Station: DDESE010 / — MD No: 0E64 — Inorg Contractor: CHEM
Media: SOIL — D No: 0E64 — Org Contractor: MITKEM

Produced by: Guthrie, Diane
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 12:15
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
7300J	MG/KG	ALUMINUM
0.90U	MG/KG	ANTIMONY
6.9	MG/KG	ARSENIC
120	MG/KG	BARIUM
0.65U	MG/KG	BERYLLIUM
0.12U	MG/KG	CADMIUM
940	MG/KG	CALCIUM
11	MG/KG	CHROMIUM
7.9	MG/KG	COBALT
20	MG/KG	COPPER
15000J	MG/KG	IRON
16	MG/KG	LEAD
1200	MG/KG	MAGNESIUM
950	MG/KG	MANGANESE
0.06UJ	MG/KG	TOTAL MERCURY
10	MG/KG	NICKEL
420J	MG/KG	POTASSIUM
0.97U	MG/KG	SELENIUM
0.20U	MG/KG	SILVER
100	MG/KG	SODIUM
2.0U	MG/KG	THALLIUM
25J	MG/KG	VANADIUM
37	MG/KG	ZINC
NA	MG/KG	CYANIDE
20	%	% MOISTURE

CYANIDE ANALYSIS NOT REQUESTED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification

EXTRACTABLES SAMPLE ANALYSIS | **EPA - REGION IV SESD, ATHENS, GA** | **Production Date: 02/06/2001 14:14**

Sample **1975** FY **2001** Project: **01-0211**

EXTRACTABLES SCAN

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE010 / MD No: 0E64 Inorg Contractor: CHEM
Media: SOIL D No: 0E64 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 12:15
Ending:

DATA REPORTED ON DRY WEIGHT BASIS

RESULTS	UNITS	ANALYTE
400U	UG/KG	BENZALDEHYDE
400U	UG/KG	PHENOL
400U	UG/KG	BIS(2-CHLOROETHYL) ETHER
400U	UG/KG	2-CHLOROPHENOL
400U	UG/KG	2-METHYLPHENOL
400U	UG/KG	BIS(2-CHLOROISOPROPYL) ETHER
400U	UG/KG	ACETOPHENONE
400U	UG/KG	(3-AND/OR 4-)METHYLPHENOL
400U	UG/KG	N-NITROSODI-N-PROPYLAMINE
400U	UG/KG	HEXACHLOROETHANE
400U	UG/KG	NITROBENZENE
400U	UG/KG	ISOPHORONE
400U	UG/KG	2-NITROPHENOL
400U	UG/KG	2,4-DIMETHYLPHENOL
400U	UG/KG	BIS(2-CHLOROETHOXY)METHANE
400U	UG/KG	2,4-DICHLOROPHENOL
400U	UG/KG	NAPHTHALENE
400UJ	UG/KG	4-CHLOROANILINE
400U	UG/KG	HEXACHLOROBUTADIENE
400U	UG/KG	CAPROLACTAM
400U	UG/KG	4-CHLORO-3-METHYLPHENOL
400U	UG/KG	2-METHYLNAPHTHALENE
400UJ	UG/KG	HEXACHLOROCYCLOPENTADIENE (HCCP)
400U	UG/KG	2,4,6-TRICHLOROPHENOL
1000U	UG/KG	2,4,5-TRICHLOROPHENOL
400U	UG/KG	1,1-BIPHENYL
400U	UG/KG	2-CHLORONAPHTHALENE
1000U	UG/KG	2-NITROANILINE
400U	UG/KG	DIMETHYL PHTHALATE
400U	UG/KG	2,6-DINITROTOLUENE
400U	UG/KG	ACENAPHTHYLENE
1000U	UG/KG	3-NITROANILINE
400U	UG/KG	ACENAPHTHENE
1000U	UG/KG	2,4-DINITROPHENOL
1000U	UG/KG	4-NITROPHENOL
400U	UG/KG	DIBENZOFURAN
400U	UG/KG	2,4-DINITROTOLUENE
400U	UG/KG	DIETHYL PHTHALATE
400U	UG/KG	FLUORENE
400U	UG/KG	4-CHLOROPHENYL PHENYL ETHER
1000U	UG/KG	4-NITROANILINE
1000U	UG/KG	2-METHYL-4,6-DINITROPHENOL
400U	UG/KG	N-NITROSODIPHENYLAMINE/DIPHENYLAMINE
400U	UG/KG	4-BROMOPHENYL PHENYL ETHER
400U	UG/KG	HEXACHLOROBENZENE (HCB)
400U	UG/KG	ATRAZINE
1000U	UG/KG	PENTACHLOROPHENOL
400U	UG/KG	PHENANTHRENE
400U	UG/KG	ANTHRACENE
400U	UG/KG	CARBAZOLE
400U	UG/KG	DI-N-BUTYLPHTHALATE
63J	UG/KG	FLUORANTHENE
49J	UG/KG	PYRENE
400U	UG/KG	BENZYL BUTYL PHTHALATE
400U	UG/KG	3,3'-DICHLOROBENZIDINE
400U	UG/KG	BENZO(A)ANTHRACENE
400U	UG/KG	CHRYSENE
400U	UG/KG	BIS(2-ETHYLHEXYL) PHTHALATE
400U	UG/KG	DI-N-OCTYLPHTHALATE
400U	UG/KG	BENZO(B)FLUORANTHENE
400U	UG/KG	BENZO(K)FLUORANTHENE
400U	UG/KG	BENZO-A-PYRENE
400U	UG/KG	INDENO (1,2,3-CD) PYRENE
400U	UG/KG	DIBENZO(A,H)ANTHRACENE
400U	UG/KG	BENZO(GHI)PERYLENE
20	%	% MOISTURE

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

EXTRACTABLES SAMPLE ANALYSIS **EPA - REGION IV SESD, ATHENS, GA** **Production Date: 02/06/2001 14:14**

Sample **1975** FY **2001** Project: **01-0211**

MISCELLANEOUS COMPOUNDS

Facility: Defense Distribution Depot Mem Memphis, TN
Program: SFE Case No: 28833
Id/Station: DDESE010 / MD No: 0E64 Inorg Contractor: CHEM
Media: SOIL D No: 0E64 Org Contractor: MITKEM

Produced by: Goddard, Denise
Requestor:
Project Leader: AMASTERS
Beginning: 12/12/2000 12:15
Ending:

RESULTS	UNITS	ANALYTE
90J	UG/KG	UNKNOWN

DATA REPORTED AS IDENTIFIED BY CLP LAB - IDS NOT VERIFIED

A-average value. NA-not analyzed. NAI-interferences. J-estimated value. N-presumptive evidence of presence of material.
K-actual value is known to be less than value given. L-actual value is known to be greater than value given. U-material was analyzed for but not detected. the number is the minimum quantitation limit.
R-qc indicates that data unusable. compound may or may not be present. resampling and reanalysis is necessary for verification.

January 16, 2001

INORGANIC DATA QUALIFIERS REPORT

Case Number: 28833
Project Number: 01-0211
Site: Defense Distribution Depot, Memphis, TN

Sample No.	Element	Flag	Reason
1965	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	UJ	Matrix spike recovery = 60.7% Positive reported < lowest std on cal curve
	Ni	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 15.9%
	Ag	U	Baseline instability in cal blanks
	Tl	U	% RSD > 20% for ICP multiple exposures and result > IDL, but < CRDL
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%
1966	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	K	J	Serial dilution percent difference = 15.9%
	Ag	U	Baseline instability in cal blanks
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%
1967	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	K	J	Serial dilution percent difference = 15.9%
	Ag	U	Baseline instability in cal blanks
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%
1968	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	K	J	Serial dilution percent difference = 15.9%
	Ag	U	Baseline instability in cal blanks
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%
1969	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	K	J	Serial dilution percent difference = 15.9%
	Ag	U	Baseline instability in cal blanks
	Tl	U	% RSD > 20% for ICP multiple exposures and result > IDL, but < CRDL
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%

January 16, 2001

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 28833
Project Number: 01-0211
Site: Defense Distribution Depot, Memphis, TN

Sample No.	Element	Flag	Reason	
1970	Al	J	Blind spike recovery < action limit	
	Be	U	Baseline instability in cal blanks	
	Fe	J	Blind spike recovery < warning limit	
	Hg	J	Matrix spike recovery = 60.7%	
	K	J	Serial dilution percent difference =	15.9%
	V	J	Blind spike recovery < warning limit	
			Serial dilution percent difference =	13.9%
1971	Al	J	Blind spike recovery < action limit	
	Be	U	Baseline instability in cal blanks	
	Fe	J	Blind spike recovery < warning limit	
	Hg	J	Matrix spike recovery = 60.7%	
	Ni	U	Baseline instability in cal blanks	
	K	J	Serial dilution percent difference =	15.9%
	Ag	U	Baseline instability in cal blanks	
	V	J	Blind spike recovery < warning limit	
			Serial dilution percent difference =	13.9%
1972	Al	J	Blind spike recovery < action limit	
	Be	U	Baseline instability in cal blanks	
	Fe	J	Blind spike recovery < warning limit	
	Hg	J	Matrix spike recovery = 60.7%	
	K	J	Serial dilution percent difference =	15.9%
	Ag	U	Baseline instability in cal blanks	
	V	J	Blind spike recovery < warning limit	
			Serial dilution percent difference =	13.9%
1973	Al	J	Blind spike recovery < action limit	
	Be	U	Baseline instability in cal blanks	
	Fe	J	Blind spike recovery < warning limit	
	Hg	J	Matrix spike recovery = 60.7%	
	K	J	Serial dilution percent difference =	15.9%
	Ag	U	Baseline instability in cal blanks	
	V	J	Blind spike recovery < warning limit	
			Serial dilution percent difference =	13.9%
1974	Al	J	Blind spike recovery < action limit	
	Be	U	Baseline instability in cal blanks	
	Fe	J	Blind spike recovery < warning limit	
	Hg	J	Matrix spike recovery = 60.7%	
	K	J	Serial dilution percent difference =	15.9%
	Ag	U	Baseline instability in cal blanks	
	V	J	Blind spike recovery < warning limit	
			Serial dilution percent difference =	13.9%
1975	Al	J	Blind spike recovery < action limit	
	Be	U	Baseline instability in cal blanks	
	Fe	J	Blind spike recovery < warning limit	
	Hg	J	Matrix spike recovery = 60.7%	
	K	J	Serial dilution percent difference =	15.9%
	V	J	Blind spike recovery < warning limit	
			Serial dilution percent difference =	13.9%

January 16, 2001

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 28833
Project Number: 01-0211
Site: Defense Distribution Depot, Memphis, TN

Sample No.	Element	Flag	Reason
1976	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	K	J	Serial dilution percent difference = 15.9%
	Se	UJ	Matrix spike recovery = 156.1% % RSD > 20% for ICP multiple exposures and result > IDL, but < CRDL
	Ag	U	Baseline instability in cal blanks
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%
1977	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	K	J	Serial dilution percent difference = 15.9%
	Se	J	Matrix spike recovery = 156.1% % RSD > 20% for ICP multiple exposures
	Ag	U	Baseline instability in cal blanks
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%
1978	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Cd	U	% RSD > 20% for ICP multiple exposures and result > IDL, but < CRDL
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	Ni	U	Baseline instability in cal blanks
	K	J	Serial dilution percent difference = 15.9%
	Ag	U	Baseline instability in cal blanks
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%
1979	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	K	J	Serial dilution percent difference = 15.9%
	Se	J	Matrix spike recovery = 156.1% % RSD > 20% for ICP multiple exposures
	Ag	U	Baseline instability in cal blanks
	V	J	Blind spike recovery < warning limit Serial dilution percent difference = 13.9%

January 16, 2001

INORGANIC DATA QUALIFIERS REPORT (continued)

Case Number: 28833
Project Number: 01-0211
Site: Defense Distribution Depot, Memphis, TN

Sample No.	Element	Flag	Reason
1980	Al	J	Blind spike recovery < action limit
	Be	U	Baseline instability in cal blanks
	Fe	J	Blind spike recovery < warning limit
	Hg	J	Matrix spike recovery = 60.7%
	K	J	Serial dilution percent difference = 15.9%
	Ag	U	Baseline instability in cal blanks
	V	J	Blind spike recovery < warning limit
			Serial dilution percent difference = 13.9%

ORGANIC DATA QUALIFIER REPORT

Case Number: 28833 Project Number 01-0211 SAS Number N/A

Site ID. Defence Distribution Depot Mem, Memphis, TN

Date: 1/11/01

Affected Samples	Compound or Fraction	Flag Used	Reason
VOA			
N/A			
BNA			
1965-1980	4-chloroaniline, hexachlorocyclopentadiene	J	erratic response factor
1965	pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	internal standard recovery < 10%
	butylbenzylphthalate, 3,3'-dichlorobenzidine, bis(2-ethylhexyl)phthalate, di-n-octylphthalate,dibenzo(a,h)anthracene	R	internal standard recovery < 10%
	phenanthrene, anthracene, carbazole, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	< quantitation limit
1966	fluorene, carbazole, pyrene, benzo(a)anthracene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, benzo(g,h,i)perylene	J	< quantitation limit
1967-1970,1972, 1974,1976	di-n-octylphthalate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, benzo(g,h,i)perylene	J	low internal standard recovery
1967	2-methylnaphthalene, acenaphthene, fluorene, carbazole, dibenzo(a,h)anthracene	J	< quantitation limi
1968	phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	< quantitation limit

ORGANIC DATA QUALIFIER REPORT

Case Number: 28833 Project Number 01-0211 SAS Number N/A

Site ID. Defence Distribution Depot Mem, Memphis, TN

Date: 1/11/01

Affected Samples	Compound or Fraction	Flag Used	Reason
1969	phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	< quantitation limit
1970	benzaldehyde, acenaphthene, fluorene, anthracene, carbazole, chrysene, benzo(k)fluoranthene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	< quantitation limit
1971	pyrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	internal standard recovery < 10%
	butylbenzylphthalate, 3,3'-dichlorobenzidine, bis(2-ethylhexyl)phthalate, di-n-octylphthalate,dibenzo(a,h)anthracene	R	internal standard recovery < 10%
	benzaldehyde, phenanthrene, anthracene, carbazole, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	< quantitation limit
1972	naphthalene, acenaphthene, dibenzofuran, fluorene, anthracene, carbazole, benzo(k)fluoranthene, dibenzo(a,h)anthracene, benzo(g,h,i)perylene	J	< quantitation limit
1974	phenanthrene, anthracene, carbazole, benzo(a)anthracene, chrysene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	< quantitation limit
1975	fluoranthene, pyrene	J	< quantitation limit
1976	acenaphthylene, dibenzofuran, dibenzo(a,h)anthracene	J	< quantitation limit
1977	2-methylnaphthalene, acenaphthylene, dibenzofuran	J	< quantitation limit

ORGANIC DATA QUALIFIER REPORT

Case Number: 28833 Project Number 01-0211 SAS Number N/A

Site ID. Defence Distribution Depot Mem, Memphis, TN

Date: 1/11/01

Affected Samples	Compound or Fraction	Flag Used	Reason
1978	pyrene, butylbenzylphthalate, 3,3'-dichlorobenzidine, benzo(a)anthracene, chrysene, bis(2-ethylhexyl)phthalate	J	low internal standard recovery
	di-n-octylphthalate, dibenzo(a,h)anthracene	R	internal standard recovery < 10%
	benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	internal standard recovery < 10%
	naphthalene, 2-methylnaphthalene, acenaphthylene, acenaphthene, dibenzofuran, fluorene, anthracene, carbazole	J	< quantitation limit
1979	naphthalene, 2-methylnaphthalene, phenanthrene, benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	< quantitation limit
1980	phenanthrene, fluoranthene, pyrene, benzo(a)antharcene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benzo(g,h,i)perylene	J	< quantitation limit
PEST			
1965	alpha-chlordane	N	difference in columns
1966	endrin, alpha-chlordane	N	difference in columns
	dieldrin	C	GC/MS confirmed
1967	endosulfan II	N	difference in columns
	endosulfan I, 4,4'-DDE, endosulfan II, 4,4'-DDT, alpha-chlordane, aroclor-1260	J	high surrogate recovery
1970	endosulfan I	N	difference in columns
1971	alpha-chlordane	N	difference in columns

ORGANIC DATA QUALIFIER REPORT

Case Number: 28833 Project Number 01-0211 SAS Number N/A

Site ID. Defence Distribution Depot Mem, Memphis, TN

Date: 1/11/01

Affected Samples	Compound or Fraction	Flag Used	Reason
1973	4,4'-DDD	N	difference in columns
1976	heptachlor epoxide, 4,4'-DDE	N	difference in columns
	dieldrin	C	GC/MS confirmed
1977	gamma-chlordane	N	difference in columns
	dieldrin	C	GC/MS confirmed
1979	dieldrin	C	GC/MS confirmed

APPENDIX B

PHOTOGRAPHS

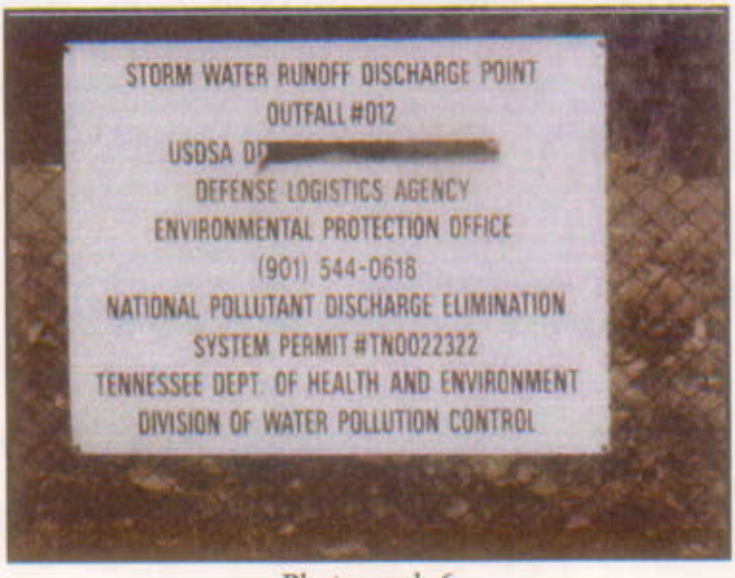
Photograph 1
Downstream view of
Mullen Road Ditch

Photograph 2
Outfall at intersection of Mullen
and Ball Streets
Sample location DDE-SE07

Photograph 3
Close-up of Mullen Ditch

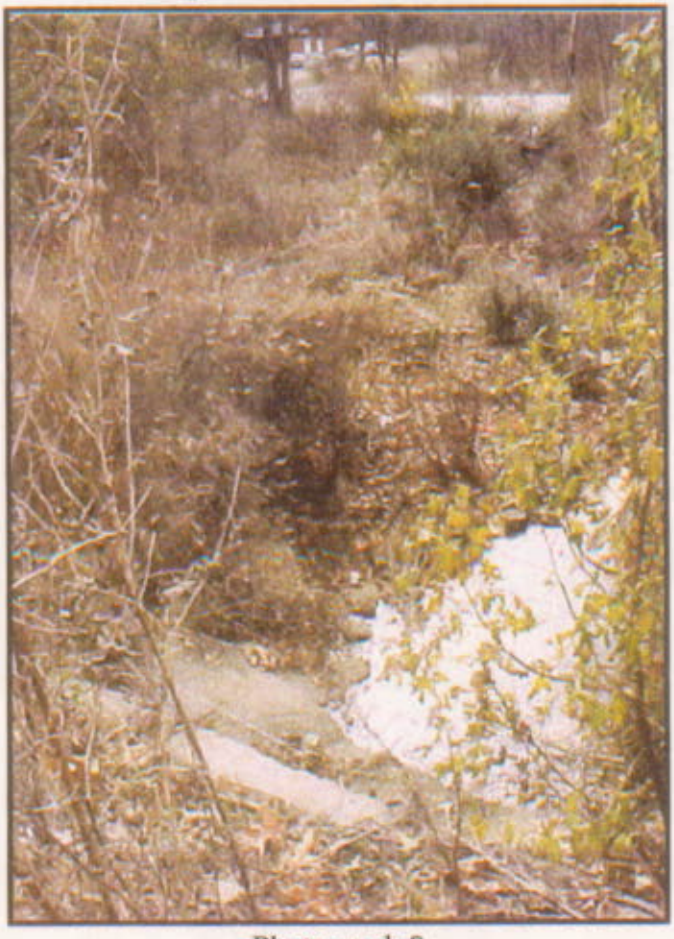
Photograph 4
Mullen ditch looking upstream to facility

Photograph 5
Mullen Road Ditch



Photograph 6
Sign at 012 Outfall

Photograph 7
012 Outfall
Sample location DDE-SE08



Photograph 8
Sample location DDE-SE09

Photograph 9
Sample location DDE-RZ01

Photograph 10
Sample location DDE-RZ03

Photograph 11
Sample Location DDE-RZ04

Photograph 12
Sample Location DDE-TB01

APPENDIX C

STUDY PLAN

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 4, SCIENCE and ECOSYSTEM SUPPORT DIVISION
ATHENS, GEORGIA 30605-2720

4SESD-EIB

MEMORANDUM

SUBJECT: Defense Depot Memphis, Study Plan
Memphis, Tennessee
SESD Project Numbers 01-0211

FROM: Art Masters, Environmental Scientist
Enforcement Section

TO: Turpin Ballard, Remedial Project Manager
Federal Facilities Branch
Waste Management Division

Attached is the study plan for the soil sampling event scheduled at the Memphis Depot site in Memphis, Tennessee during the week of December 11, 2000. If you have any questions or comments, please call me at (706) 355-8612 or by email at masters.arthur@epa.gov .

Attachment

FIELD SAMPLING INVESTIGATION
DEFENSE DEPOT MEMPHIS TENNESSEE
MEMPHIS, SHELBY COUNTY, TENNESSEE
SESD PROJECT NUMBERS 01-0211

INTRODUCTION

A surface soil sampling investigation has been requested by Turpin Ballard, United States Environmental Protection Agency, Region 4 (USEPA), Waste Management Division. Art Masters and staff from the USEPA, Science and Ecosystem Support Division (SESD), will collect surface soil samples for extractable organic, pesticide and metals analyses from locations in the area surrounding the Defense Depot facility in Memphis, Tennessee (DDMT). The investigation is scheduled for the week of December 11, 2000.

BACKGROUND AND SCOPE

DDMT consists of 642 acres in a mixed residential/commercial/industrial area in south-central Memphis. The facility is made up of two adjacent sections: Dunn field, an open storage and burial area of about 60 acres, and the main installation. The Depot has conducted numerous operations with hazardous substances with contamination resulting from leakage, spillage, and disposal of out of date materials. Removal actions in 1998-99 excavated small volumes of lead and pesticide contaminated soil at the main installation.

During public involvement in the Public Health Assessment (PHA) process for the Depot by the Agency for Toxic Substances and Disease Registry (ATSDR), local residents relayed that there had been past instances where storm water in surface drainage ways from the Depot had overtopped the banks and flooded adjacent property. This presents a potential migration pathway for hazardous substances, pollutants, or contaminants to have migrated from the depot and been deposited in these areas. ATSDR identified this as a data gap. The objective of this sampling and analysis plan (SAP) is to collect and analyze soil from areas near the Depot and adjacent to the drainage ways in order to determine whether there may be a current risk of exposure from site-related contaminants in these predominantly residential areas.

After analysis, the sample results will be compared with both background values as previously established in the remedial investigation (RI), and with risk-based values for detected constituents. Of special interest will be constituents that have been previously linked to uses at the Depot, such as dieldrin.

METHODOLOGY

All samples will be collected in accordance with the USEPA, Region 4, Environmental Investigations Standard Operating Procedures and Quality Assurance Manual (EISOPQAM), May 1996. Specifically, the soil samples will be collected in accordance with Section 12 of the EISOPQAM. The sediment samples will be collected in accordance with Section 11 of the EISOPQAM. The samples will be analyzed at a CLP laboratory. All analyses will be conducted in accordance with the CLP Statement of Work.

SAMPLE COLLECTION

Three areas of concern have been identified: Rozelle neighborhood, the southeast drainage ditches and the Tarrent Branch drainage area. Sediment samples will be collected in some ditches to determine if contamination has migrated from the site in the ditches. Soil samples will be collected adjacent to the ditches in

potential depositional areas to determine if contamination may have been deposited during past flood events. In the southeast drainage area, nine sampling locations have been identified. Three linear composites will be collected from the ditch parallel to Mullen Road. Three additional linear composites will be collected adjacent to the ditch. One grab sample will be collected from the ditch downstream of the 012 outfall between the outfall and the Ball Street culvert. A composite sample will be collected downstream of Ball Street and the 012 outfall. One composite will be collected adjacent to the ditch downstream of the 004 outfall.

In the Tarrent Branch area, one composite sample will be collected in the area north of the drainage ditch and west of Sparks Road. In the Rozelle area three samples will be collected. One composite sample will be collected on the north side of the ditch, east of Rozelle Street. In addition, one composite and one grab sample will be collected from the area to the west of the southern end of Rozelle Street. Figures 1-3 represent the sampling locations. Each sampling location will be recorded using Trimble Pathfinder Pro XR® global positioning system equipment.

Each sample will be analyzed for pesticides, SVOCs, and metals. All samples will be analyzed via CLP laboratories. All sampling equipment used will be pre-cleaned at SESD facilities and wrapped in protective coverings in accordance with Appendix C of the EISOPQAM. At this time, it is not expected that sampling equipment will be cleaned in the field, because the field team plans to take sufficient clean sampling equipment to preclude the need for re-use. If it should become necessary to field clean any equipment, the cleaning will be in accordance with Appendix C and the appropriate rinse blanks will be collected.

SAMPLE IDENTIFICATION

Sample identification numbers will be assigned using the following format:

DD/E/xx - #, where:

DD/E Three letter code to identify the Defense Depot EPA sampling event.
XX TR = Tarrent, SE = Southeast, RZ= Rozelle

A two digit code to be used to designate the particular sample number.

HEALTH & SAFETY

All field operations will be conducted in accordance with a site specific safety plan prepared in accordance with the Office of Safety and Health Administration (29 CFR 1910.120). This plan is supplemented by the USEPA/SESD Environmental Compliance Branch Hazardous Waste Section Safety Manual.

FINAL PAGE

ADMINISTRATIVE RECORD

FINAL PAGE