160420

CEA 3777
0115-5

Environmental Services

Ground Water | Hydrocarbon | Remediation | Education

PO CE 91-7803

Fax# 516-249-0033

Date: 12/17/91

Time sent:

Fax No.: 314/694 ~~6260~~ 6957

To: Gordon Grundmann ~~Steve Smith~~

Monsanto

From: Dennis Colton

The accompanying document consists of the following item(s):

- Revised TCLP Summary Table - See Sulfide Data for Site M
- PCB Summary Table - Note Concentrations in Creek in shallow samples and only 1 of 3 samples in Site M exceeded 50 ppm
- Site maps for Creek and Site M

Total No. of Pages: 12 (including this page)

Please call _____ at 516-249-7600, Ext. _____, to verify you have received this document.

Or Direct Dial: 516-391-5236

G&M Project No.: NY60507

cc: Brooke Fischler

CC: Alan Faust 314/694-6138
Tom Bing - Chem Waste 618/271-2804 (Trade Waste)
Bruce Carruthers - USPCI 314/768-5813 x229

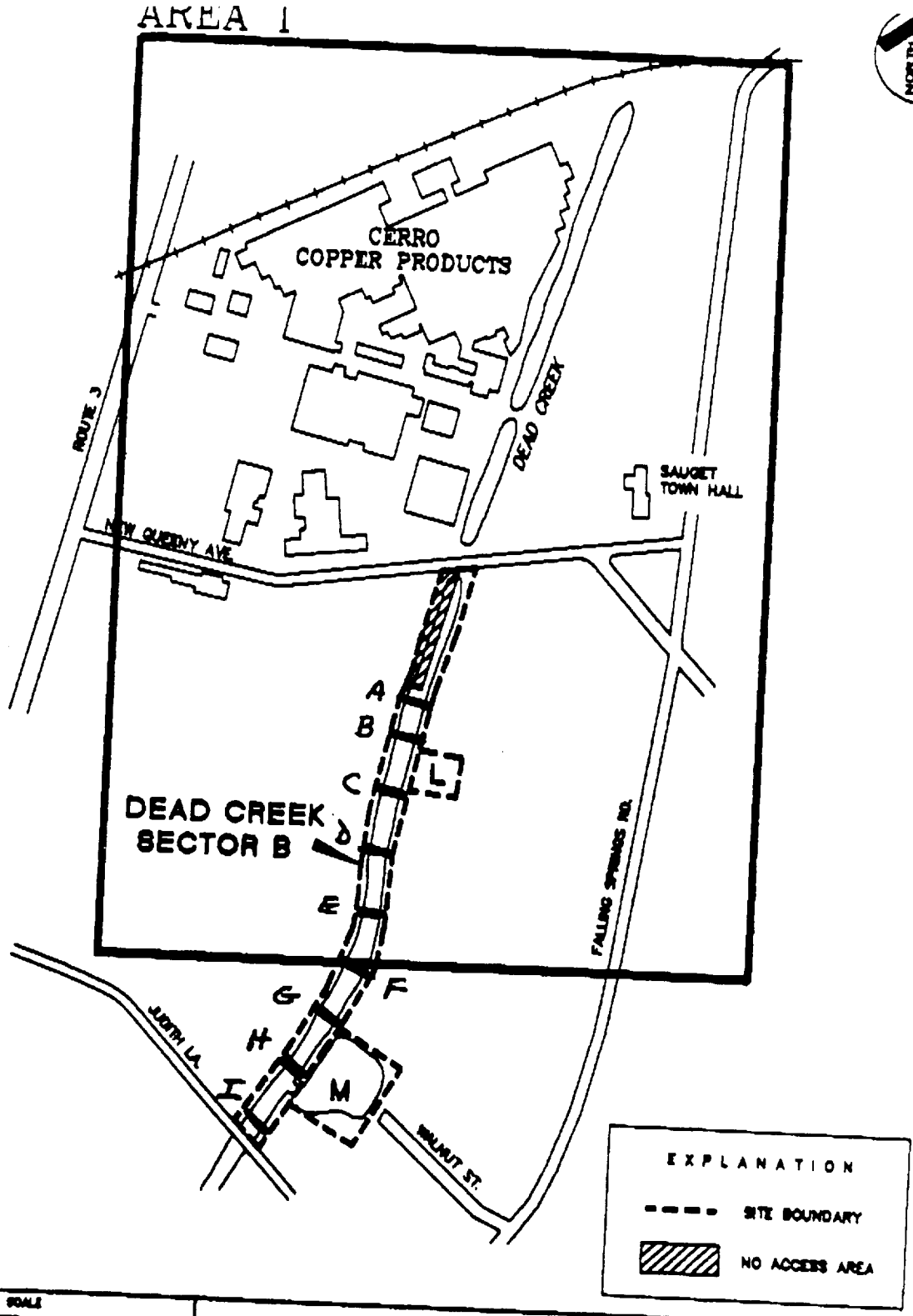
Note: TCL/TAL Results due tomorrow

CER 006607

125 East Bethpage Road • Plainview, New York 11803 • (516) 249-7600 • FAX (516) 249-7610

12-16-91 11:16 AM FROM GERAGHTY-MILLER INC. P01

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE



DRAFTER: G.S
MGR.: D. COLTON
COMPILER: D. COLTON
CAD FILE: SDYNREAT
FILE NO.: 1234
PROJ.T. NO.: NYNGGGN
DATE: 8-8-91

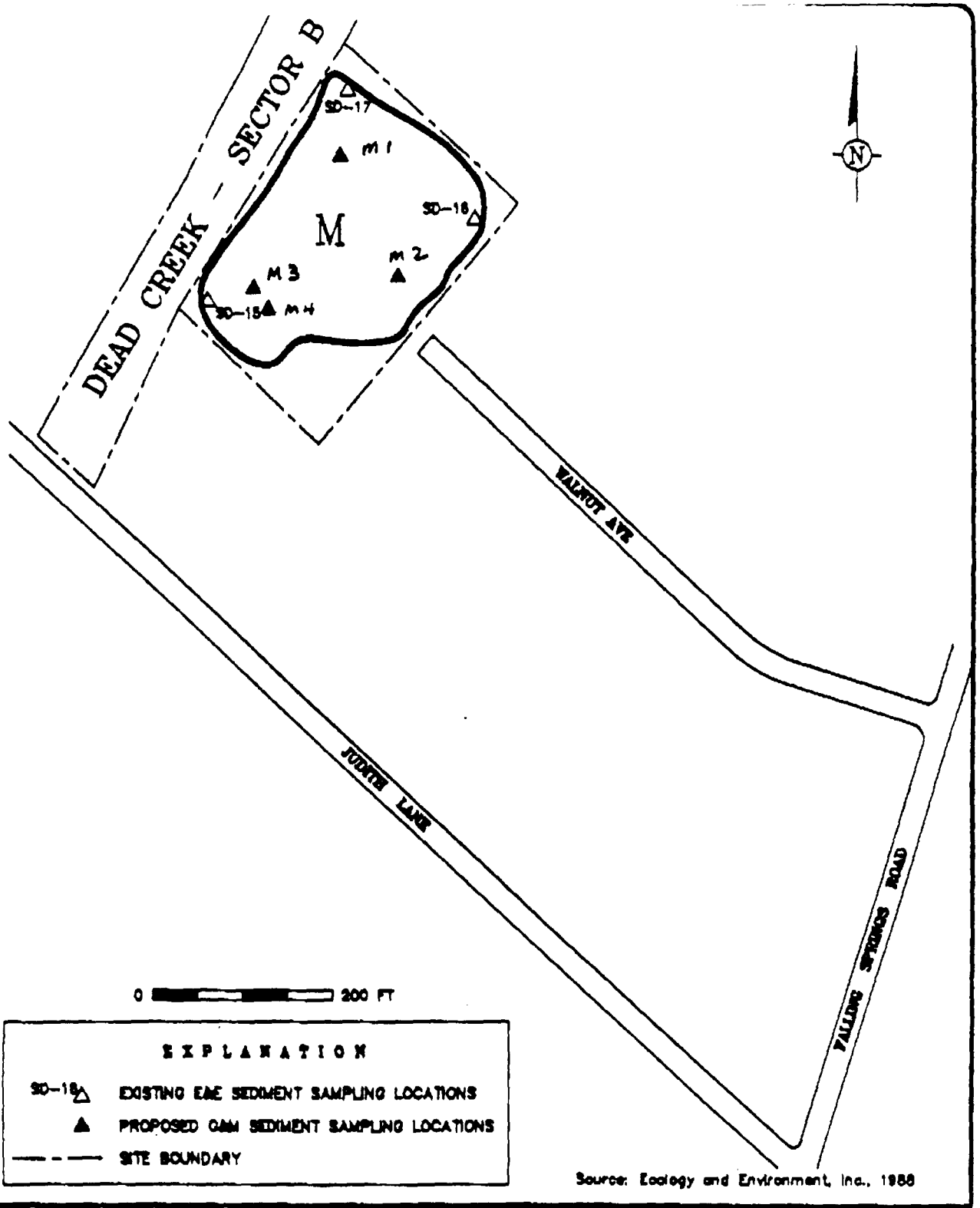
SCALE
0 500 FT

GERAGHTY & MILLER, INC.
Environmental Services

LOCATION OF STUDY AREAS, DEAD CREEK SECTOR B AND SITES L AND M, SAUGET-CAHOKIA, ILLINOIS

FIGURE 2

CER 006608



GERAGHTY & MILLER, INC.
Environmental Services

SEDIMENT SAMPLING LOCATIONS AT SITE M, CAHOKIA, ILLINOIS

FIGURE 5

DRAWN DATE: 8-8-91 | PROJECT NO.: MYR0004 | FILE NO.: 1444 | DRAWING: SEDSMP | CHECKED: AN | APPROVED: BB | DRAFTER: CS

CER 006609

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Table 1. Summary of RCRA Hazardous Characteristic Parameters for Dead Creek Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Sample Location:		Dead Creek	Dead Creek	Dead Creek	Dead Creek
Sample Identification:		AB	CDE	FGH	IJ
Sample Depth:					
Sample Date:		10/18/91	10/21/91	10/23/91	10/24/91
Parameter	Regulatory Limit				
Ignitability - Flash point	< 140 degrees F	non-ignitable	non-ignitable	non-ignitable	non-ignitable
Corrosivity (pH units)	< 2 or > 12.5	6.3	6.8	6.8	6.5
Reactivity (concentrations in mg/kg dw)					
Sulfide	500	16	<3.8	<3.8	<4.5
Cyanide	250	<1.5	<1.5	<1.5	<1.5
Volatiles (concentrations in mg/L)					
Benzene	0.5	<0.020	<0.020	<0.020	<0.020
Carbon Tetrachloride	0.5	<0.020	<0.020	<0.020	0.098
Chlorobenzene	100	0.053 (0.053)*	<0.020	<0.020	0.046 (0.066)*
Chloroform	6	<0.020	<0.020	<0.020	<0.020
1,2-Dichloroethane	0.5	<0.020	<0.020	<0.020	0.027
1,1-Dichloroethylene	0.7	<0.020	<0.020	<0.020	0.41 (0.15)*
2-Butanone (MEK)	200	<0.40	<0.40	<0.40	<0.40
Tetrachloroethylene	0.7	<0.020	<0.020	<0.020	<0.020
Trichloroethylene	0.5	<0.020	<0.020	<0.020	<0.020
Vinyl chloride	0.2	<0.040	<0.040	<0.040	<0.040
Semivolatiles (concentrations in mg/L)					
Cresol (o)	200	<0.060	<0.060	<0.060	<0.060
Cresol (m,p)	200	<0.060	<0.060	<0.060	<0.060
1,4-Dichlorobenzene	7.5	<0.060	<0.060	<0.060	<0.060
2,4-Dinitrotoluene	0.13	<0.060	<0.060	<0.060	<0.060
Hexachlorobenzene	0.13	<0.060	<0.060	<0.060	<0.060
Hexachlorobutadiene	0.5	<0.060	<0.060	<0.060	<0.060
Hexachloroethane	3	<0.060	<0.060	<0.060	<0.060
Nitrobenzene	2	<0.060	<0.060	<0.060	<0.060
Pentachlorophenol	100	<0.25	<0.25	<0.25	<0.25
2,4,5-Trichlorophenol	400	<0.25	<0.25	<0.25	<0.25
2,4,6-Trichlorophenol	2	<0.060	<0.060	<0.060	<0.060
Pyridine	5	<0.25	<0.25	<0.25	<0.25

Table 1. Summary of RCRA Hazardous Characteristic Parameters for Dead Creek Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Sample Location:		Dead Creek	Dead Creek	Dead Creek	Dead Creek
Sample Identification:		AB	CDE	FGH	IJ
Sample Depth:					
Sample Date:		10/18/91	10/21/91	10/22/91	10/24/91
Parameter	Regulatory Limit				
Pesticides (concentrations in mg/L)					
Chlordane	0.03	<0.0050	<0.0050	<0.0050	<0.0050
Endrin	0.02	<0.0010	<0.0010	<0.0010	<0.0010
Heptachlor	0.008	<0.00050	<0.00050	<0.00050	<0.00050
Heptachlor Epoxide	0.008	<0.00050	<0.00050	<0.00050	<0.00050
Lindane (g-BHC)	0.4	<0.00050	<0.00050	<0.00050	<0.00050
Methoxychlor	10	<0.025	<0.025	<0.025	<0.025
Toxaphene	0.5	<0.050	<0.050	<0.050	<0.050
Herbicides (concentrations in mg/L)					
2,4-D	10	<0.050	<0.050	<0.050	<0.050
Silvex (2,4,5-TP)	1	<0.010	<0.010	<0.010	<0.010
Metals (concentrations in mg/L)					
Arsenic	5	<0.50	<0.50	<0.50	<0.50
Barium	100	1.9 (1.5)*	1.9 (1.5)*	2.5 (2.4) *	2.5 (2.5)*
Cadmium	1	0.083 (0.074)*	0.13 (0.12)*	0.54 (0.59)*	0.51 (0.43)*
Chromium	5	<0.050	<0.050	<0.050	<0.050
Lead	5	<0.50	<0.20	0.39 (0.36)*	0.26 (0.21)*
Mercury	0.2	<0.050	<0.050	<0.050	<0.050
Selenium	1.0	<0.50	<0.50	<0.50	<0.50
Silver	5.0	<0.010	<0.010	<0.010	<0.010

HAZRCRA.XLS

CER 006611

GERAGHTY & MILLER, INC.

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Table 1. Summary of RCRA Hazardous Characteristic Parameters for Dead Creek Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Sample Location:		Site L	Site L	Site M	Site M
Sample Identification:		GML1	GML1	M1, M2, M3	Composite-M3
Sample Depth:		3-6'	9-14'	0-5'	0-5'
Sample Date:		10/16/91	10/16/91	11/5/91	12/4/91
Parameter	Regulatory Limit				
Ignitability - Flash point	< 140 degrees F	non-ignitable	non-ignitable	non-ignitable	NA
Corrosivity (pH units)	< 2 or > 12.5	8.2	8.4	7.2	NA
Reactivity (concentrations in mg/kg dw)					
Sulfide	500	71	24	800	< 4.5
Cyanide	250	< 1.0	< 1.1	< 1.6	NA
Volatiles (concentrations in mg/L)					
Benzene	0.5	< 0.020	< 0.020	< 0.020	NA
Carbon Tetrachloride	0.5	< 0.020	< 0.020	< 0.020	NA
Chlorobenzene	100	0.041 (0.036)*	< 0.020	0.079 (0.065)	NA
Chloroform	6	< 0.020	< 0.020	< 0.020	NA
1,2-Dichloroethane	0.5	< 0.020	< 0.020	< 0.020	NA
1,1-Dichloroethylene	0.7	< 0.020	< 0.020	< 0.020	NA
2-Butanone (MEK)	200	< 0.40	< 0.40	< 0.40	NA
Tetrachloroethylene	0.7	< 0.020	< 0.020	< 0.020	NA
Trichloroethylene	0.5	< 0.020	< 0.020	< 0.020	NA
Vinyl chloride	0.2	< 0.040	< 0.040	< 0.040	NA
Semivolatiles (concentrations in mg/L)					
Cresol (o)	200	< 0.020	< 0.020	< 0.020	NA
Cresol (m,p)	200	0.17 (0.10)*	0.18 (0.11)*	< 0.020	NA
1,4-Dichlorobenzene	7.5	0.41 (0.33)*	< 0.020	< 0.020	NA
2,4-Dinitrotoluene	0.13	< 0.020	< 0.020	< 0.020	NA
Hexachlorobenzene	0.13	< 0.020	< 0.020	< 0.020	NA
Hexachlorobutadiene	0.5	< 0.020	< 0.020	< 0.020	NA
Hexachloroethane	3	< 0.020	< 0.020	< 0.020	NA
Nitrobenzene	2	< 0.020	< 0.020	< 0.020	NA
Pentachlorophenol	100	< 0.25	< 0.25	< 0.25	NA
2,4,5-Trichlorophenol	400	< 0.25	< 0.25	< 0.25	NA
2,4,6-Trichlorophenol	2	< 0.020	< 0.020	< 0.020	NA
Pyridine	5	< 0.25	< 0.25	< 0.25	NA

HAZRORA.XLS

CER 006612

GERAGHTY & MILLER, INC.

12-13-91 11:16 AM FROM GERAGHTY-MILLER INC.

Table 1. Summary of RCRA Hazardous Characteristic Parameters for Dead Creek Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Parameter	Regulatory Limit				
Sample Location:		Site L	Site L	Site M	Site M
Sample Identification:		GML1	GML1	M1, M2, M3	Composite-M3
Sample Depth:		3-6'	8-14'	0-6'	0-6'
Sample Date:		10/16/91	10/16/91	11/5/91	12/4/91
Pesticides (concentrations in mg/L)					
Chlordane	0.03	<0.0060	<0.0060	<0.0060	NA
Endrin	0.02	<0.0010	<0.0010	<0.0010	NA
Heptachlor	0.008	<0.00060	<0.00060	<0.00060	NA
Heptachlor Epoxide	0.008	<0.00060	<0.00060	<0.00060	NA
Lindane (g-BHC)	0.4	<0.00060	<0.00060	<0.00060	NA
Methoxychlor	10	<0.025	<0.025	<0.025	NA
Toxaphene	0.5	<0.050	<0.050	<0.050	NA
Herbicides (concentrations in mg/L)					
2,4-D	10	<0.050	<0.050	<0.050	NA
Silvex (2,4,5-TP)	1	<0.010	<0.010	<0.010	NA
Metals (concentrations in mg/L)					
Arsenic	5	<0.20	<0.20	<0.20	NA
Barium	100	1.8 (1.7)*	1.4 (1.3)*	3.7 (3.6)*	NA
Cadmium	1	0.066 (0.060)*	0.021 (0.019)*	0.067 (0.031)*	NA
Chromium	5	<0.050	<0.050	<0.050	NA
Lead	5	0.24 (0.22)*	<0.20	0.52 (0.44)*	NA
Mercury	0.2	<0.020	<0.020	<0.020	NA
Selenium	1.0	<0.50	<0.50	<0.50	NA
Silver	5.0	<0.010	<0.010	<0.010	NA

NA Not analyzed.
mg/L Milligrams per liter.
mg/kg dw Milligrams per kilogram, dry weight.
< Less than.
> Greater than.
* Methods SW-846-1311 - TCLP results which are above the quantitation limit have been corrected by analytical bias per instructions in Section 8.2.5 of Method 1311 (Federal Register, June 29, 1990). The first number reported is the corrected TCLP value (used to determine if the sample is hazardous) and the value in parentheses ( ) is the uncorrected analytical results.

Table 1. Summary of PCB Data for Dead Creek-Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Sample Location:	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek
Sample Identification:	A-B1	A-B2	A-B3	B-B1	B-B3	B-B2	C-B1	C-B2
Sample Depth:	0-2 ft	2-4 ft	5-6 ft	0-2 ft	2-4 ft	4-6 ft	0-1.5 ft	1.5-3.5 ft
Sample Date:	10/18/91	10/18/91	10/18/91	10/18/91	10/18/91	10/18/91	10/21/91	10/21/91
Parameters (concentrations in ug/kg dw)								
Aroclor 1016	< 150,000	< 110	< 110	< 120,000	< 100	< 110	< 60,000	< 120
Aroclor 1221	< 150,000	< 110	< 110	< 120,000	< 100	< 110	< 60,000	< 120
Aroclor 1232	< 150,000	< 110	< 110	< 120,000	< 100	< 110	< 60,000	< 120
Aroclor 1242	< 150,000	< 110	< 110	< 120,000	< 100	< 110	< 60,000	< 120
Aroclor 1248	< 150,000	200	< 110	250,000	140	< 110	440,000	420
Aroclor 1254	180,000 J	125 J	310	< 230,000	< 200	< 220	< 120,000	< 250
Aroclor 1260	130,000 J	< 220	< 210	< 230,000	< 200	< 220	< 120,000	< 250

ug/kg Micrograms per liter.
dw Dry weight.
J Estimated value.
X Due to the presence of Aroclor 1248, 1254 and 1260, the quantitation is based on one peak only.

EPA/CERRO COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

CER 006614

Table 1. Summary of PCB Data for Dead Creek-Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Sample Location:	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek
Sample Identification:	C-B3	D-B1	D-B2	D-B3	E-B1	E-B3	E-B2	F-B1
Sample Depth:	3.5-5.5 ft	0-1.5 ft	2.0-4.0 ft	4.0-6.0 ft	0.-2.0 ft	2.0-4.0 ft	4.0-6.0 ft	0-2 ft
Sample Date:	10/21/91	10/21/91	10/21/91	10/21/91	10/21/91	10/21/91	10/21/91	10/22/91
Parameters (concentrations in ug/kg dw)								
Aroclor 1016	<120	<31,000	<120	<110	<41,000	<110	<110	<39,000
Aroclor 1221	<120	<31,000	<120	<110	<41,000	<110	<110	<39,000
Aroclor 1232	<120	<31,000	<120	<110	<41,000	<110	<110	<39,000
Aroclor 1242	<120	<31,000	<120	<110	<41,000	<110	<110	<39,000
Aroclor 1248	<120	95,000	<120	<110	68,000	<110	<110	92,000
Aroclor 1254	220 J	53,000 J	<240	<210	46,000 J	<230	<230	55,000 J
Aroclor 1260	<240	<63,000	<240	<210	<82,000	<230	<230	<78,000

ug/kg Micrograms per liter.
dw Dry weight.
J Estimated value.
X Due to the presence of Aroclor 1248, 1254 and 1260, the quantitation is based on one peak only.

CER 006615

EPA/CERRC COPPER/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Table 1. Summary of PCB Data for Dead Creek-Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Sample Location:	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek
Sample Identification:	F-B2	F-B3	G-B1	G-B2	G-B3	H-B1	H-B2	H-B3
Sample Depth:	2-4 ft	4-6 ft	0-2 ft	2-4 ft	4-6 ft	0-2 ft	2-4 ft	4-6 ft
Sample Date:	10/22/91	10/22/91	10/22/91	10/23/91	10/23/91	10/23/91	10/23/91	10/23/91
Parameters (concentrations in ug/kg dw)								
Aroclor 1016	<120	<110	<21,000	<110	<110	<16,000	<110	<120
Aroclor 1221	<120	<110	<21,000	<110	<110	<16,000	<110	<120
Aroclor 1232	<120	<110	<21,000	<110	<110	<16,000	<110	<120
Aroclor 1242	<120	<110	<21,000	<110	<110	<16,000	<110	<120
Aroclor 1248	<120	<110	28,000 J	<110	120	54,000	120	<120
Aroclor 1254	<260	<210	38,000 J	400	910	13,000 J	<220	<240
Aroclor 1260	<260	<210	42,000	<220	260	<32,000	<220	<240

ug/kg Micrograms per liter.
dw Dry weight.
J Estimated value.
X Due to the presence of Aroclor 1248, 1254 and 1260, the quantitation is based on one peak only.

CER 006616

PCB-DEAD.XLS

GERAGHTY & MILLER, INC.

EPA/CERRO COPPER/TIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Table 1. Summary of PCB Data for Dead Creek-Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Sample Location:	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Dead Creek	Site L	Site L
Sample Identification:	I-B2	I-B3	I-B1	J-B2	J-B3	J-B1	L1	L1
Sample Depth:	0-2 ft	1.5-3 ft	3-5 ft	0-1.5 ft	1.5-3 ft	3-5 ft	3-8 ft	8-14 ft
Sample Date:	10/24/91	10/24/91	10/24/91	10/24/91	10/24/91	10/24/91	10/16/91	10/16/91
Parameters (concentrations in ug/kg dw)								
Aroclor 1016	<16,000	<330	<110	<250,000	<120	<120	<160,000	<18,000
Aroclor 1221	<16,000	<330	<110	<250,000	<120	<120	<160,000	<18,000
Aroclor 1232	<16,000	<330	<110	<250,000	<120	<120	<160,000	<18,000
Aroclor 1242	<16,000	<330	<110	<250,000	<120	<120	<160,000	<18,000
Aroclor 1248	12,000 J	330	300	90,000 J	230	<120	120,000 J	<18,000
Aroclor 1254	16,000 J	600 X	220 X	110,000 J	300 X	<230	<310,000	<35,000
Aroclor 1260	23,000 J	370 J	210 J	90,000 J	200 J	<230	300,000	16,000 J

ug/kg Micrograms per liter.
dw Dry weight.
J Estimated value.
X Due to the presence of Aroclor 1248, 1254 and 1260, the quantitation is based on one peak only.

EPA/CERRO COPPER/ETL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE

Table 1. Summary of PCB Data for Dead Creek-Sector B, and Sites L and M, Sauget-Cahokia, Illinois.

Sample Location:	Site M	Site M	Site M
Sample Identification:	M1	M2	M3
Sample Depth:	0-8 ft	0-8.5 ft	0-8 ft
Sample Date:	11/5/91	11/5/91	11/5/91
Parameters (concentrations in ug/kg dw)			
Aroclor 1016	<2,000	<1,400	<110,000
Aroclor 1221	<2,000	<1,400	<110,000
Aroclor 1232	<2,000	<1,400	<110,000
Aroclor 1242	<2,000	<1,400	<110,000
Aroclor 1248	13,000	6,000	210,000
Aroclor 1254	8,000 X	4,200 X	61,000 J
Aroclor 1260	8,300	3,000	72,000 J

ug/kg Micrograms per liter.
dw Dry weight.
J Estimated value.
X Due to the presence of Aroclor 1248, 1254 and 1260, the quantitation is based on one peak only.

CER 006618

EPA/CERRC COPPERY/EIL/PCB ATTORNEY WORK PRODUCT / ATTORNEY CLIENT PRIVILEGE