UNITE TATES ENVIRONMENTAL PROTECTIO GENCY

SITE BIG RIVER MINE
ID# MOD981126899
BREAK 13
OTHER DT
10 13 88
07CR

OCT 13 1988

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

40108303

SUPERFUND RECORDS

Mr Bryant AuBuchon
Landfill Manager
St Francois County Environmental Corp
Desloge, Missouri 63601

Dear Mr AuBuchon

Enclosed is a copy of the analytical data, Data Qualification Codes sheet, and field sheets for the soil samples collected from the landfill area The samples were collected at the time of the inspection of the Big River Mine Tailings site in May 1988 by Ecology and Environment, Inc , a contractor for the U S Environmental Protection Agency (EPA).

Silver and cadmium were detected in all the samples collected on the site at levels up to 1 7 mg/kg (milligram per kilogram) and 19 mg/kg (milligrams per kilograms), respectively Zinc was detected in sample #002 at a level of 1000 mg/kg and in sample #005 at a level of 1100 mg/kg Lead was detected in all samples at levels ranging from 880 to 1400 mg/kg None of the other metals were detected at levels significantly (10x) above typical medium background levels

This information is forwarded to you in accordance with the provisions of Section 3007(a) of the Resource Conservation and Recovery Act of 1976 (RCRA), and Section 104(e)(4)(B) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 If you have any questions regarding this analytical data, please contact Cecilia Tapia of my staff at (913) 236-2856

Sincerely yours,

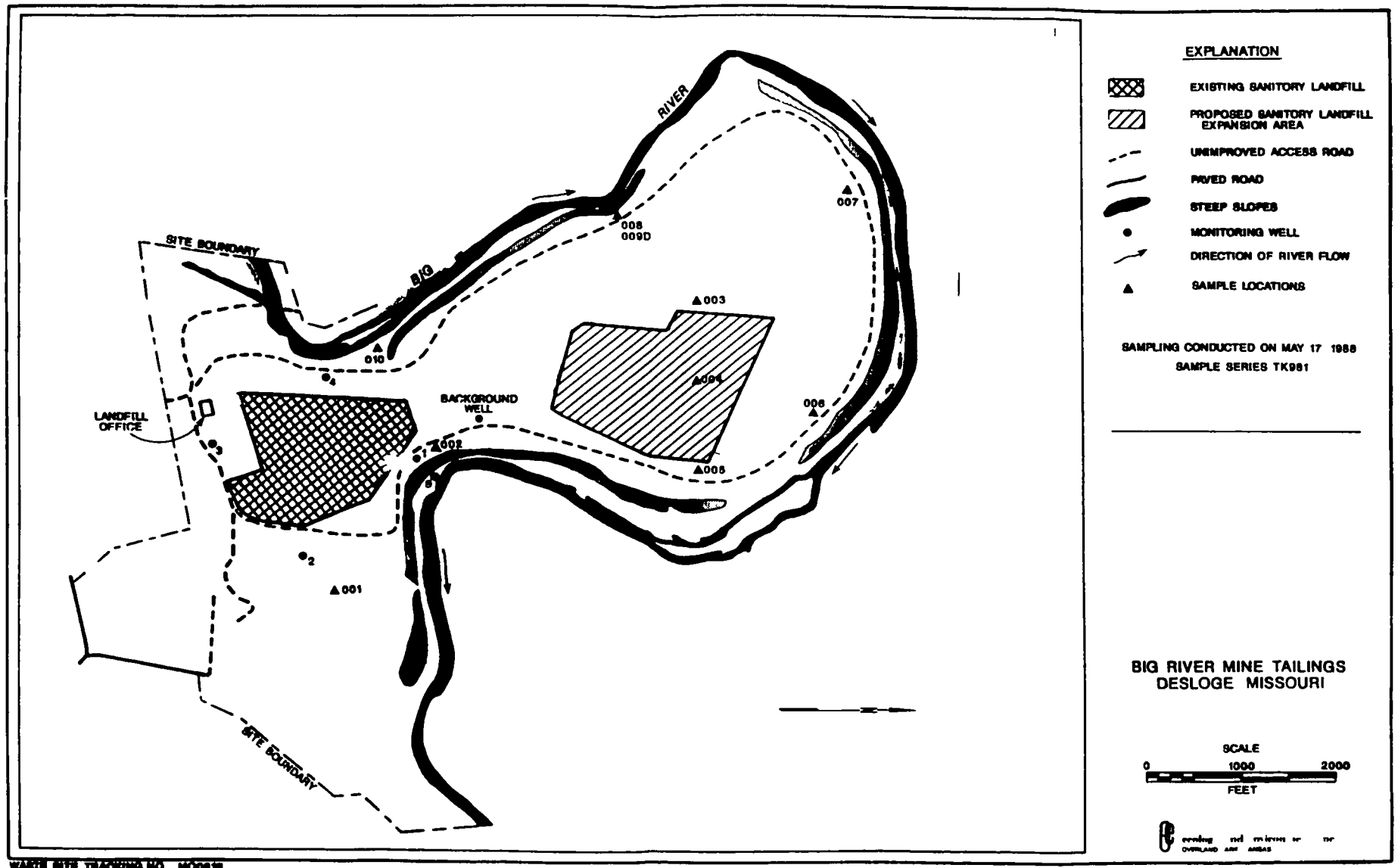
Robert L Morby
Chief, Superfund Branch
Waste Management Division

Enclosure

cc. June Sullens, MDNR

WSTM SPFD PREP TAPIA ka X752 9/27/88 Tapia's Disk #1 DESLOGE

PREP	ATSDR	PREP	WATR	SPFD
TAPIA	PARKER	HERNDON	LANGEMEIER	MORBY
9/27/88			10/6/88	10/11/88



WASTE SITE TRACKING NO MO0619
PREPARED BY C WILLIAMS

FIGURE 2 ON-SITE SAMPLE LOCATION MAP

Number
Code

5 16 1600

0-6 5
Sharon Martin

Southeast
#1 See field Map

FIELD SHEET

ENVIRONMENTAL PROTECTION AND [illegible]

[illegible] ENVIRONMENTAL SERVICES DIVISION [illegible]

Site Area: BIG RIVER MINE TAILINGS — Site Number

Section: RESCUE 10 — Site Code

Collected: 8 38 MO 5 Day 16 Time 1610 Leader E OFFETT

Sample Number: TI981002 SMO 4

Sample Media circle one

OIL DUST RINSATE SEDIMENT WATER OTHER _____

Total Solids circle one: YES NO

Container	Number	Tag Color	Preservative	Analysis Requested
	45	WHITE		TOTAL METALS

Depth 0-6" Bag # _____ Aliquots 5

Sampler Ted Faile

COMMENTS OF FIELD PERSONNEL

Site Description: Southeast bend of Big River near monitoring well #2 See field Map

IBM-PC

FIELD SHEET

ENVIRONMENTAL PROTECTION AGENCY REGION VII
ENVIRONMENTAL SERVICES DIV. EXECUTIVE DRIVE TRANSMITTAL SHEET

Site Name PIL RIVER MINE TAILINGS Site Number
Location FREDERICKTOWN MO Site Code

Collected YR 88 MO 5 Day 16 Time 1620 Leader B OVERFELT

Sample Number TI981003 SMO #

Sample Media (circle one)
SOIL DUST FINSATE SEDIMENT WATER OTHER ____

Sample Split (circle one) YES NO

Container	Top Color	Preservative	Analysis Required
1	WHITE		TOTAL METALS

Page 0-6 Fan # _____ Aliquots 5

Sampler Sharon Martin

COMMENTS OF FIELD PERSONNEL

Site Description See field Map
#1 #2 #3

IBM-PC

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION II
ENVIRONMENTAL SERVICES DIV 25 FUNSTON RD KANSAS CITY KS 66115

Site Name BIG RIVER MINE TAILINGS Site Number
Site Code PELOSE MO Site Code

Collected 8 88 MO 5 Day 16 Time 1630 Leader B OVERFELT

Sample Number TI 981004 SMO #

Sample Media (circle one)
(DS) DUST MINSATE SEDIMENT WATER OTHER _____

Composite (circle one) YES (NO)

Container Number	Type Color	Preservative	Analysis Requested
HF	WHITE		TOTAL METALS

Depth 0-6" Fan # _____ Aliquots 5

Sampler Ted Faile

COMMENTS OF FIELD PERSONNEL

Site Description #4 See field map

IBM-PC

FIELD SHEET

U S ENVIRONMENTAL PROTECTION AGENCY REGION II
ENVIRONMENTAL SERVICES DIV 25 FUNSTON RD KANSAS CITY KS 66115

Site Name BIG RIVER MINE TAILINGS Site Number
Location DESLOGE MO Site Code

Collected YR 88 MO 5 Day 16 Time 1640 Leader B OVERFELT

Sample Number TI 981005 SMD #

Sample Media (circle one)
SOIL DUST RINSATE SEDIMENT WATER OTHER _____

Sample Split (circle one) YES NO

Sample	Container	Tag Color	Preservative	Analysis Requested
	8 OZ JAR	WHITE		TOTAL METALS

Depth 0-6 Fan # _____ Aliquots 5

Samplers Sharon Martin

COMMENTS OF FIELD PERSONNEL

Site Description #5 See field Map

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FIELD SHEET

U S ENVIRONMENTAL PROTECTION AGENCY REGION II
ENVIRONMENTAL SERVICES DIV 2E HUNSTON RD ANNIS PIT Sec115

Site Name BIG RIVER MINE TAILINGS Site Number
Location DESLOGE MO Site Code

Collected YR 98 MO 5 Day 16 Time 1645 Leader P OVERFELT

Sample Number TI 981006 SMO #

Sample Media (circle one)
(SOIL) DUST RINSATE SEDIMENT WATER OTHER _____

Sample Split (circle one) YES (NO)

Sample Number	Container	Tag Color	Preservative	Analysis Requested
SC2	JAR	WHITE		TOTAL METALS

Depth 0-6 Fan # _____ Aliquots 5

Samplers Sharon Martin

COMMENTS OF FIELD PERSONNEL

Site Description #6 See field Map

IBM-PC

FIELD SHEET

U.S. ENVIRONMENTAL PROTECTION AGENCY REGION II

ENVIRONMENTAL SERVICES DIV 25 FUNSTON RD KANSAS CITY KS 66115

Site Name BIG RIVER MINE TAILINGS Site Number

Location DESLOGE MO Site Code

Collected YR 88 MO 5 Day 16 Time 1650 Leader B OVERFELT

Sample Number TI881007 SMO #

Sample Media (circle one)

(SOIL) DUST RINSATE SEDIMENT WATER OTHER _____

Sample Split (circle one) YES (NO)

Sample	Container	Tag Color	Preservative	Analysis Requested
5 J	JAR	WHITE		TOTAL METALS

Depth 0-6 Bar # _____ Aliquots 5

Sampler Ted Faile

COMMENTS OF FIELD PERSONNEL

Site Description #7 See field Map

IBM-PC

FIELD SHEET

U S ENVIRONMENTAL PROTECTION AGENCY REGION II

ENVIRONMENTAL SERVICES DIV 25 FUNSTON RD KANSAS CITY KS 66115

Site Name BIG RIVER MINE TAILINGS Site Number

Location TESLOGE MO Site Code

Collected YR 88 MO 5 Day 16 Time 1655 Leader B OVERFELT

Sample Number TI 981008 SMO #

Sample Media (circle one)

(SOIL) DUST RINSATE SEDIMENT WATER OTHER _____

Split (circle one) YES (NO)

Depth	Container	Top Color	Preservative	Analysis Requested
0-6	1qt	WHITE		TOTAL METALS

Depth 0-6 Fan # _____ Aliquots 5

Samplers Sharon Martin

COMMENTS OF FIELD PERSONNEL

Site Description #8

See field Map

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FIELD SHEET

U S ENVIRONMENTAL PROTECTION AGENCY REGION II
ENVIRONMENTAL SERVICES DIV 25 FUNSTON RD KANSAS CITY KS 66115

Site Name BIG RIVER MINE TAILINGS Site Number
Location DESLOGE MO Site Code

Collected YR 88 MO 165 Day 16 Time 1700 Leader B OVERFELT

Sample Number TI 981000 D SMO #

Sample Media (circle one)
SOIL DUST RINSATE SEDIMENT WATER OTHER _____

Sample Split (circle one) YES NO

Sample Container	Tag Color	Preservative	Analysis Requested
8 OZ JAR	WHITE		TOTAL METALS

Depth 0-6" Fan # _____ Aliquots 5

Samplers Sharon Martin

COMMENTS OF FIELD PERSONNEL

Site Description #8 See field Map

IBM-PC

FIELD SHEET

U S ENVIRONMENTAL PROTECTION AGENCY REGION VII
ENVIRONMENTAL SERVICES DIV 25 FUNSTON RD KANSAS CITY KS 66115

Site Name BIG RIVER MINE TAILINGS Site Number
Location DESLOGE MO Site Code

Collected YR 88 MO 5 Day 16 Time 1705 Leader B OVERFELT

Sample Number TI 981010 SMO #

Sample Media (circle one)
(SOIL) DUST RINSATE SEDIMENT WATER OTHER _____

Sample Split (circle one) YES (NO)

Sample Container	Tag Color	Preservative	Analysis Requested
8 oz JAR	WHITE		TOTAL METALS

Depth 0-6" Fan # _____ Aliquots 5

Samplers Ted Faile

COMMENTS OF FIELD PERSONNEL

Site Description #9 See field Map

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ANALYSIS TYPE TOTAL METALS

TITLE BIG RIVER MINE
LAB EPA REGION VII
SAMPLE PREP ___ ANALYST/ENTRY CRS
YAS

MATRIX: SEDIMENT
METHOD: 6010S/
REVIEWER: ___
DATA FILE: GS1

UNITS MG/KG
CASE
DATE: 05/19/88

		TK981001	TK981002	TK981003	TK981004
SILVER	MG/KG	1.3	1.7	1.2	1.5
ALUMINUM	MG/KG	690.0	620.0	650.0	790.0
ARSENIC	MG/KG	10.0U	10.0U	10.0U	12.0U
BARIUM	MG/KG	2.3	1.9	2.1	2.5
BERYLLIUM	MG/KG	.71	.57	.62	.77
CADMIUM	MG/KG	15.0	17.0	12.0	16.0
COBALT	MG/KG	14.0	9.8	12.0	15.0
CHROMIUM	MG/KG	1.4	1.2	1.4	1.7
COPPER	MG/KG	64.0	35.0	47.0	56.0
IRON	MG/KG	35000.0	22000.0	31000.0	33000.0
MANGANESE	MG/KG	1100.0	3900.0	3900.0	4200.0
MOLYBDENUM	MG/KG	4.6	3.7	4.3	4.9
NICKEL	MG/KG	12.0	6.9	9.7	13.0
LEAD	MG/KG	1200.0	1300.0	1100.0	880.0
ANTIMONY	MG/KG	10.0U	1.0U	10.0U	12.0U
SELENIUM	MG/KG	100.0U	100.0U	100.0U	120.0U
TITANIUM	MG/KG	N/A	N/A	N/A	N/A
THALLIUM	MG/KG	530.0U	500.0U	500.0U	720.0U
VANADIUM	MG/KG	5.2	1.5	4.6	5.6
ZINC	MG/KG	830.0	1000.0	680.0	900.0
CALCIUM	MG/KG	200000.0	190000.0	200000.0	190000.0
MAGNESIUM	MG/KG	96000.0	97000.0	98000.0	96000.0
SODIUM	MG/KG	5800.0	5400.0	5500.0	6900.0
POTASSIUM	MG/KG	170.0	120.0	140.0	260.0

ANALYSIS TYPE TOTAL METALS

TITLE PIG RIVER MINE
LAB EPA REGION VII
SAMPLE PREP ANALYST/ENTRY CRS
MATRIX: SEDIMENT
METHOD 2001S
REVIEWER:
DATA FILE: GS1
UNITS MG/KG
CASE
DATE: 05/19/88

		TR981005	TR981006	TR981007	TR981008
SILVER	MG/KG	1.7	1.4	85	1 1
ALUMINUM	MG/KG	730.0	780 0	670.0	590 0
ARSENIC	MG/KG	10 0U	11.0U	10 0U	10 0U
BARIUM	MG/KG	2 2	2.4	2 0	1 8
BERYLLIUM	MG/KG	.70	.76	.70	61
CADMIUM	MG/KG	19 0	16.0	8 4	11 0
COBALT	MG/KG	14 0	17 0	18 0	14 0
CHROMIUM	MG/KG	1 6	1.4	1 ^	1 3
COPPER	MG/KG	70.0	100 0	87 0	64 0
IRON	MG/KG	32000 0	35000 0	33000 0	31000 0
MANGANESE	MG/KG	4000 0	4200.0	4000.0	3900 0
MOLYBDENUM	MG/KG	4 8	4.9	4 5	4 2
NICKEL	MG/KG	12 0	14 0	17 0	12 0
LEAD	MG/KG	1000 0	1300 0	970 0	1200 0
ANTIMONY	MG/KG	10 0U	11 0U	10 0U	10 0U
SELENIUM	MG/KG	100.0U	110 0U	100 0U	100 0U
TITANIUM	MG/KG	N/A	N/A	N/A	N/A
THALLIUM	MG/KG	610 0U	650 0U	550 0U	500 0U
VANADIUM	MG/KG	5 0	5.5	5 1	4 0
ZINC	MG/KG	1100 0	810 0	370 0	610 0
CALCIUM	MG/KG	200000 0	190000 0	180000 0	190000 0
MAGNESIUM	MG/KG	97000 0	92000 0	90000 0	92000 0
SODIUM	MG/KG	6400 0	6500 0	5900.0	5400 0
POTASSIUM	MG/KG	190 0	270 0	180 0	130 0

ANALYSIS TYPE TOTAL METALS

TITLE' BIG RIVER MINE
LAB EPA REGION VII
SAMPLE PREP ANALYST/ENTRY GRS

MATRIX' SEDIMENT
METHOD 2001S77
REVIEWER'
DATA FILE GS1

UNITS MG/KG
CASE
DATE 05/19/88

		TK981009D	TK981010
SILVER	MG/KG	1.2	1.5
ALUMINUM	MG/KG	620.0	670.0
ARSENIC	MG/KG	10.0U	10 0U
BARIUM	MG/KG	1.9	2.2
BERYLLIUM	MG/KG	65	71
CADMIUM	MG/KG	13 0	17 0
COBALT	MG/KG	15 0	16.0
CHROMIUM	MG/KG	1 3	1 4
COPPER	MG/KG	78 0	92 0
IRON	MG/KG	32000 0	35000 0
MANGANESE	MG/KG	3800 0	4100 0
MOLYBDENUM	MG/KG	4.4	4 6
NICKEL	MG/KG	13 0	14 0
LEAD	MG/KG	1300 0	1400 0
ANTIMONY	MG/KG	10 0U	10 0U
SELENIUM	MG/KG	100 0U	100.0U
TITANIUM	MG/KG	N/A	N/A
THALLIUM	MG/KG	500 0U	520 0U
VANADIUM	MG/KG	4 7	5 2
ZINC	MG/KG	700 0	870 0
CALCIUM	MG/KG	190000 0	190000 0
MAGNESIUM	MG/KG	92000.0	92000 0
SODIUM	MG/KG	5500 0	5800 0
POTASSIUM	MG/KG	140 0	140.0

Table 1
Soil Sample Summary
Big River Mine Tailings Site
Desloge, Missouri
E & E/FIT, May 1986
Sample Series TK981

Sample #	Lead (Pb)	Cadmium (Cd)	Zinc (Zn)
001	1,200	15	830
002	1,300	17	1,000
003	1,100	12	680
004	880	16	900
005	1,000	19	1,100
006	1,300	16	810
007	970	8 4	370
008	1,200	11	610
009D	1,300	13	700
010	1,400	17	870

NOTE Only detected levels are reported All concentration are reported in mg/kg See Figure 2 for sample locations and data transmittal for complete analytical results