0000063

U.S. ENVIRONMENTAL PROTECTION AGENCY

TECHNICAL ENFORCEMENT SUPPORT
AT
HAZARDOUS WASTE SITES

FIELD ACTIVITIES AND ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED MAY 11, 1992 AT SATELLITE SITE TO BENNETT'S DUMP AND QUARRY

WESTINGHOUSE SITES
BLOOMINGTON, INDIANA

U.S. EPA REGION V

CONTRACT NO. 68-W9-0007
TES X

Metcalf & Eddy, Inc.

M&E

ENVIRONMENTAL PROTECTION AGENCY

TECHNICAL ENFORCEMENT SUPPORT
AT
HAZARDOUS WASTE SITES

TES X

CONTRACT #68-W9-0007

WORK ASSIGNMENT NO. C05039

FIELD ACTIVITIES AND ANALYTICAL RESULTS FOR SOIL SAMPLES COLLECTED MAY 11, 1992 AT SATELLITE SITE TO BENNETT'S DUMP AND QUARRY

WESTINGHOUSE SITES
BLOOMINGTON, INDIANA

U.S. EPA REGION V

METCALF & EDDY, INC.
PROJECT NUMBER: 270039.0001.003

WORK PERFORMED BY:
TETRA TECH, INC.
10 E CAMBRIDGE CIRCLE DRIVE
SUITE 130
KANSAS CITY, KANSAS 66103

TC 4811

January 7, 1993

TETRA TECH, INC.
10 East Cambridge Circle Drive
Suite 130
Kansas City, KS 66103
Telephone (913) 621-6041

January 7, 1993

Mr. Dan Hopkins
U.S. EPA, Region V
77 West Jackson
Sixth Floor
Chicago, IL 60604

Subject: Field Activities Reports for Bennetts Dump and Quarry Satellite Site, Bloomington, Indiana
Work Assignment No. C05039

Dear Dan:

Enclosed for your review is the Field Activities Reports (with CLP Data Packages) for the May 11, 1992 soil sampling at the Bennetts Dump and Quarry Satellite site. Your previous comments have been incorporated into the report, which is also being forwarded to Tom Lentzen, Metcalf & Eddy, for concurrent review.

If you have any additional comments or changes, please call so that we can incorporate them into the final report. If you have no comments, this report will be considered final.

Please call if you have any questions or comments.

Sincerely,

Jenna Mead
Contractor Project Manager

Enclosures

TC 4811

cc: Tom Lentzen

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1.0 INTRODUCTION

Tetra Tech, Inc. was requested by the U.S. Environmental Protection Agency (U.S. EPA) Region V to collect soil samples from an area immediately west of a fenced area previously identified as a satellite site of the Bennett's Dump and Quarry site in Bloomington, Indiana (Figure 1). Field activities were under the direction of Tetra Tech, as a subcontractor to Metcalf & Eddy, Inc., within the U.S. EPA Technical Enforcement Support (TES) X contract. The sampling crew and equipment were provided by Tetra Tech's subsidiary GeoTrans in Louisville, Kentucky.

2.0 PROJECT DESCRIPTION AND BACKGROUND

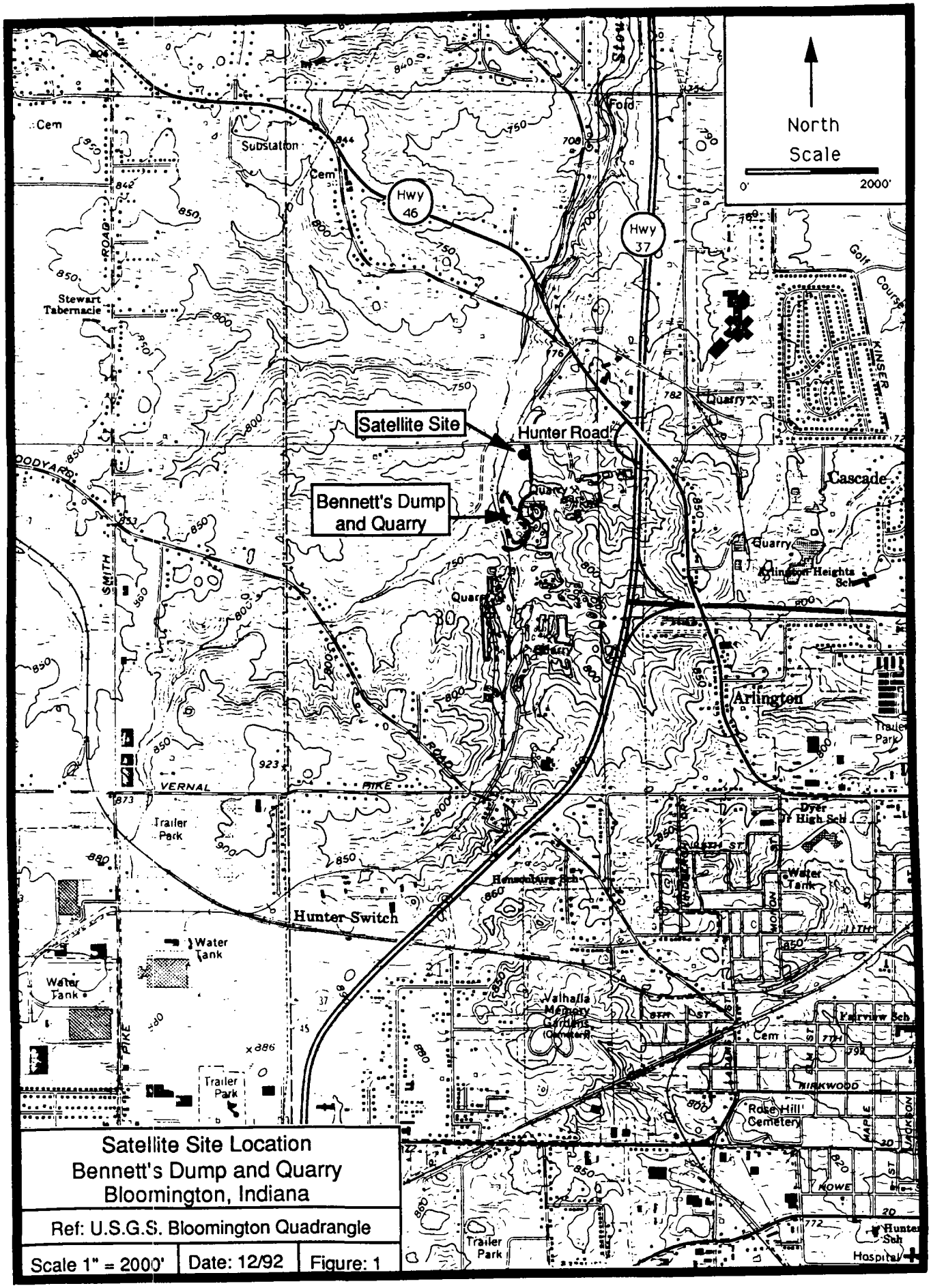
This sampling activity was requested by the U.S. EPA to determine whether PCBs were present in the soils outside of the fenced area previously identified as a satellite site of the Bennett's Dump and Quarry site. This area had been sampled in November 1991 by the U.S. EPA Technical Assistance Team (TAT) (Figure 2). It had been capped with clay and fenced in the early 1980s. A verbal report from an interested citizen suggested that the satellite dump site extended outside of the previously sampled and fenced area. The resident reported capacitor debris and the odor of PCB oil in the area to the west of the fence.

3.0 SAMPLE COLLECTION

TES X representative Jenna Mead met John McNulty and Steve Osborne of GeoTrans, Mike McCann and Jim Patrick of Westinghouse, and U.S. EPA consultant Dr. Richard Powell at the satellite site at approximately 0940 hours on May 11, 1992. Ms. Mead left the site shortly thereafter to collect the weekly well water samples for the Neal's Landfill Dye Tracer Study, and did not return until approximately 1245 hours, by which time the soil sampling had been completed. Soil sampling at the satellite area began upon arrival of the U.S. EPA Work Assignment Manager (WAM) Dan Hopkins at approximately 1025 hours. Mr. Hopkins identified the locations where samples should be collected.

GeoTrans had provided a small, truck-mounted drill rig, but the area was too overgrown with vegetation for this rig to be used. The six borings were hand augered to various depths and sampled for PCBs. Figure 3 shows the locations of the hand-augered soil borings in relation to the fence around the previously sampled portion of the satellite site, and to each other. Borings HB-1 and HB-2 were augered through the clay fill that had been placed over the satellite site. Samples were collected from what appeared to be the native soil beneath the fill. HB-1 was augered to four feet, and HB-2 was augered to 2.5 feet. Borings HB-3 through HB-6 were in native soil and were only augered to one foot. Boring HB-3 was of the soil beneath a pile of ceramic wire insulators; HB-4 was from beneath a log that had marked a location where the odor of PCB oil had been noted by the citizen; HB-5 was collected from beneath a pile of broken ceramics and other trash; and HB-6 was collected at the southern perimeter of the fill material.

The samples were preserved on ice and shipped Federal Express overnight to PACE Laboratories in Lenexa, Kansas for analyses. Only the upper sample from each boring was initially ordered to be analyzed. The deeper samples were archived, with future analyses dependent upon the analytical results obtained from the upper sample.


North
Scale
0'
2000'
Satellite Site
Hunter Road
Bennett's Dump
and Quarry
Hwy 46
Hwy 37
Cascade
Arlington
Hunter Switch
Stewart
Tabernacle
Substation
Cem
Quarry
Trailer Park
Water Tank
Walhalla Memory Gardens (Cemetery)
Rose Hill Cemetery
Dyer High Sch
Fairview Sch
Hunter Sch
Hospital
VERNAL PIKE
SMITH ROAD
KINSER PIKE
MORTON ST
MAPLE ST
JACKSON ST
KIRKWOOD
ROWE
Satellite Site Location
Bennett's Dump and Quarry
Bloomington, Indiana
Ref: U.S.G.S. Bloomington Quadrangle
Scale 1" = 2000'
Date: 12/92
Figure: 1

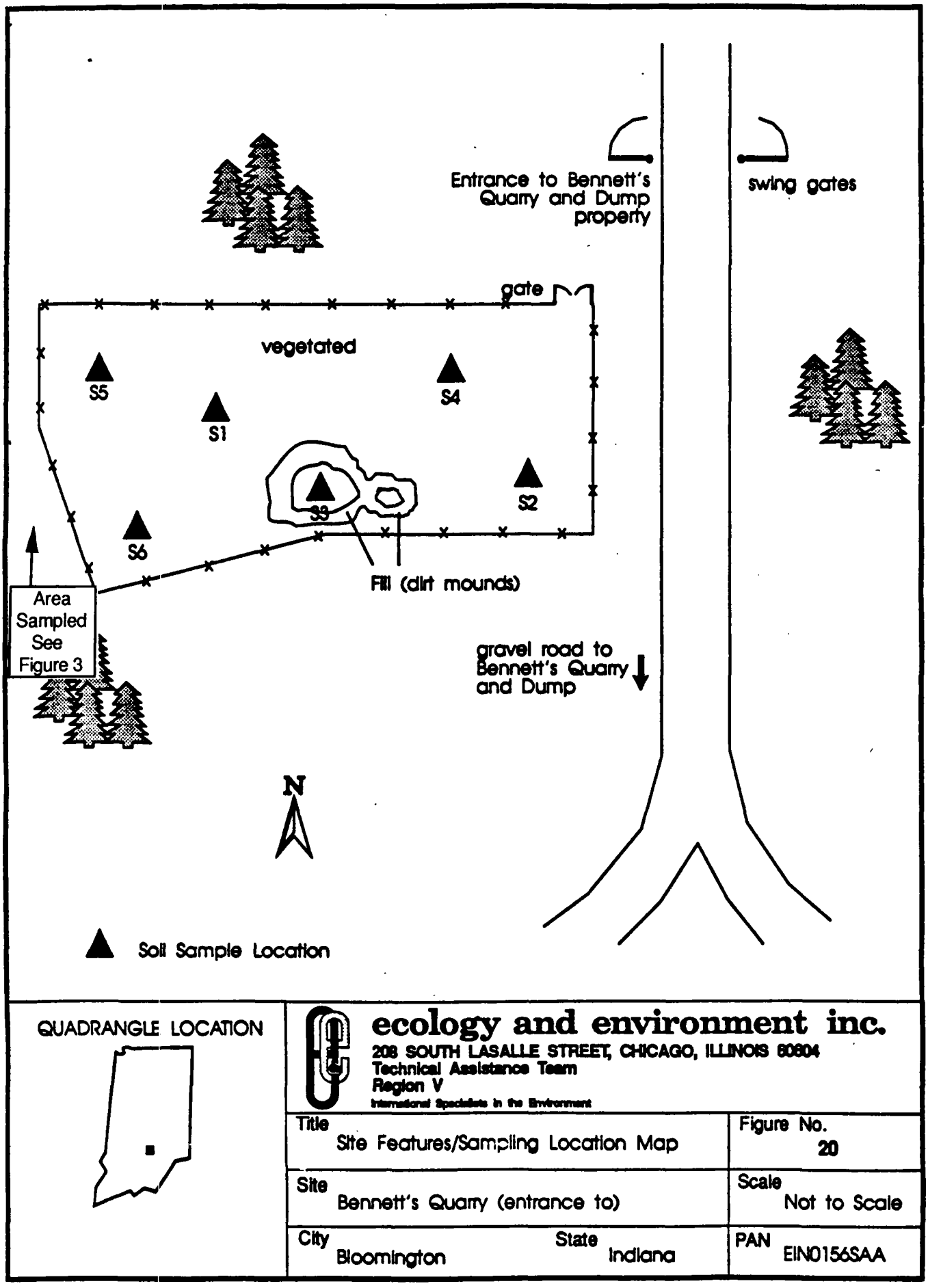
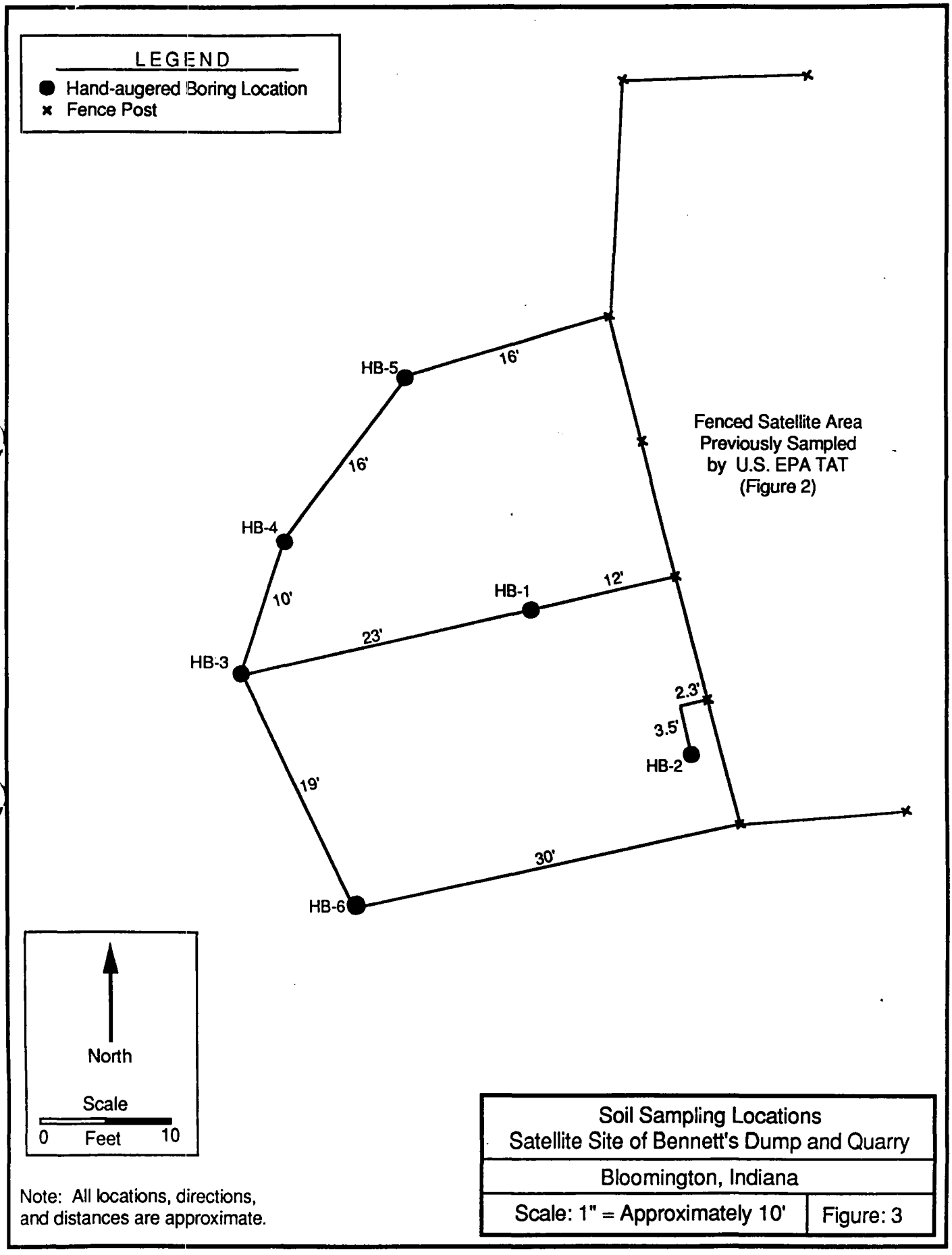


Figure 2: Ecology and Environment Site Map of Bennett's Dump and Quarry Satellite Site



Note: All locations, directions, and distances are approximate.

Soil Sampling Locations Satellite Site of Bennett's Dump and Quarry	
Bloomington, Indiana	
Scale: 1" = Approximately 10'	Figure: 3

4.0 ANALYTICAL RESULTS

Table 1 is a summary of the PCB Aroclor results for the soil samples collected from the satellite location and indicates the samples analyzed, as well as those archived. Only the upper samples from HB-2 and HB-4 were found to contain detectable concentrations of PCBs. HB-2 was collected from just beneath the fill at a depth of 1 to 1.5 feet, and contained 1.2 mg/kg (ppm) of Aroclor 1248. Sample HB-4 was collected from the native soil at a depth of 0 to 0.5 feet, and contained 1.9 mg/kg (ppm) of Aroclor 1248. This soil sample was collected from beneath the log that had marked the location where the PCB oil odor had been reported. Both of the deeper samples (1.5 to 2.0 feet and 2.0 to 2.5 feet) from HB-2 and the 0.5 to 1.0 foot sample from HB-4 were analyzed based on the presence of PCBs in the shallow sample. These additional samples were extracted and analyzed outside of the acceptable holding time. No PCBs were detected in any of these deeper samples from HB-2 or HB-4. No Aroclors other than 1248 were detected in any of the satellite site soil samples.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

The surrogate and matrix spike/matrix spike duplicate recoveries were within QC limits, as were the corresponding relative percent differences (RPDs). Laboratory control sample results were acceptable. Samples from HB-2 (1.5 to 2.0 feet and 2.0 to 2.5 feet) and HB-4 (0.5 to 1.0 feet) were analyzed outside of the acceptable holding time of 30 days for PCB analysis; as PCBs are not volatile, this delay is not believed to be significant.

6.0 CONCLUSIONS

PCBs were detected in two of the samples analyzed; however the amounts of PCBs detected are <2 mg/kg. Samples HB-2 (1 to 1.5 feet) and HB-4 (0 to 0.5 feet) were found to contain the PCB Aroclor 1248 at concentrations of 1.2 mg/kg and 1.9 mg/kg, respectively. Deeper samples from these two borings were not found to contain PCBs at detection limits of 1.0 mg/kg (ppm). Upper samples from borings HB-1, HB-3, HB-5, and HB-6 were not found to contain detectable PCBs at 1.0 mg/kg detection limits. The lower samples collected from these four borings were not analyzed.

Table 1: PCB Results for Soil Samples Collected on May 11, 1992 at Bennett's Dump and Quarry Satellite Site, Bloomington, Indiana.

Hand-augered Boring Number	HB-1	HB-2	HB-3	HB-4	HB-5	HB-6
First Depth Collected	2-2.5'	1-1.5'	0-0.5'	0-0.5'	0-0.5'	0-0.5'
PCB Aroclor 1248 Concentration (mg/kg)*	1U	1.2	1U	1.9	1U	1U
Second Depth Collected	2.5-3.5'	1.5-2.0'	0.5-1.0'	0.5-1.0'	0.5-1.0'	0.5-1.0'
PCB Aroclor 1248 Concentration (mg/kg)	NA	1U	NA	1U	NA	NA
Third Depth Collected	3.5-4.0'	2-2.5'	NC	NC	NC	NC
PCB Aroclor 1248 Concentration (mg/kg)	NA	1U				

Notes:

* Aroclor 1248 was the only PCB detected in the samples collected on May 11, 1992.

NA = Not Analyzed (Sample was archived for possible analysis based on results of sample from overlying interval.)

NC = Not Collected (Underlying soil was not sampled.)

U = Undetected at indicated value.

HB-1 Location: central fill area approximately 12 feet west of fence. Samples collected below fill.

HB-2 Location: southern fill area approximately two feet west of fence.

HB-3 location: western perimeter of fill area under pile of ceramic insulators.

HB-4 Location: northwestern perimeter of fill area under log.

HB-5 Location: northern perimeter of fill area under pile of broken ceramics and trash.

HB-6 Location: southern perimeter of fill area approximately 30 feet west of fence.

APPENDIX A

Field Notes, Field Sheets, and Chain-of-Custody Forms

GeoTrans, inc.
GROUNDWATER SPECIALISTS

4350 Brownsboro Road, Suite 307, Louisville, KY 40207
Phone: (502) 894-9392 Fax: (502) 893-0152

DAILY FIELD REPORT

PROJECT IETAA TECH-BENNETT'S DUMP SHEET 1 of 1

TT# 4811-06 GT# 3901-003 LOCATION BLOOMINGTON, IN

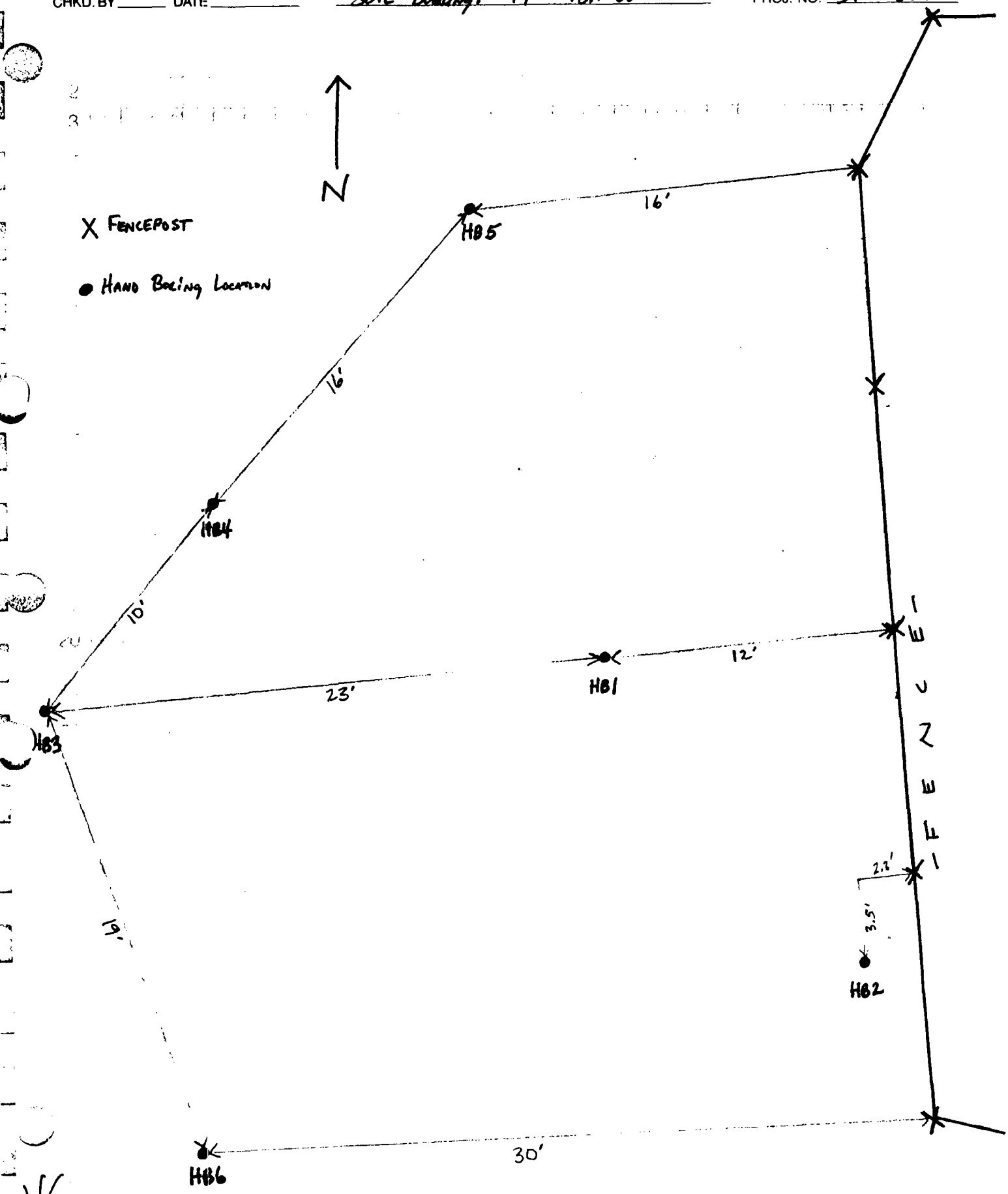
CLIENT _____ DATE 5/11/92

0645 CDT - Left Louisville in Rig
0725 - P/u John McNulty @ I-65 Harrodsburg exit
0900 - Arrive Bloomington, Get H_2O @ gas station
0920 - Meet Westinghouse Reps. - DICK, JIM, MIKE - @ site
- Shown sample points - No Access for Rig ∴ decide to use hand augers
- [redacted]
0940 - John Arrives, told to wait for DAN Hopkins - EPA to show exact sample locations + protocol to follow
1025 - DAN Hopkins - EPA arrives w/ JOHN (?) of EPA
1040 - Begin Boring HB1
1115 - Boring HB2
1135 - Boring HB3
1250 - Boring HB4
1210 - Boring HB5
1225 - Boring HB6
1230 - John & Mike prepare samples for shipment - Mike takes split of exact sample submitted.
↓
1300 - Leave for Fed X + ice
1335 - Drop off samples @ Fed X
1350 - Lunch @ Wendy's - Meet JENNA there
1420 - Leave for LOUISVILLE
1650 - Arrive LOUISVILLE

Observer, Company, GT

BY SCO DATE 5/12/92 PROJECT TETRA TECH – BENNETT'S DUMP SHEET NO. 1 OF 1

CHKD. BY ____ DATE ____ SOIL BORINGS TT# 4811-06 PROJ. NO. 3701-003



NOTE: ALL LOCATIONS, DIRECTIONS, and DISTANCES ARE APPROXIMATE.

GeoTrans, inc.

pace INCORPORATED
THE ASSURANCE OF QUALITY

84650

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: TETRA TECH, INC.
Address: 10 E Cambridge Cr. Dr.
KANSA City, KS
Phone:

Report To: JENNA MEAD
Bill To:
P.O. # / Billing Reference
Project Name / No.: Bennett's Dump 4811-06

Pace Client No.
Pace Project Manager
Pace Project No.
*Requested Due Date:

Sampled By (PRINT): Steve Osborne
Sampler Signature: [signature] Date Sampled: 04/11/52

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	VOA	ANALYSES REQUEST: PCB	REMARKS
1	HB1 - 2.5	12:00	Soil		1					X	
2	HB1 - 4.0				1					X	
3	HB2 - 1.5				1					X	
4	HB3 - 1.0				1					X	
5	HB3 - 0.5				1					X	
6	HB2 - 2				1					X	
7	HB1 - 3.5				1					X	
8	HB2 - 2.5				1					X	

COOLER NOS	BAILERS	SHIPMENT METHOD OUT DATE	SHIPMENT METHOD RETURNED DATE	ITEM NUMBER	RELINQUISHED BY AFFILIATION	ACCEPTED BY AFFILIATION	DATE	TIME
					[signature]	[signature] X		

Additional Comments

SEE REVERSE SIDE FOR INSTRUCTIONS

pace INCORPORATED
THE ASSURANCE OF QUALITY

84651

CHAIN-OF-CUSTODY RECORD
Analytical Request

Client: Tetra Tech, Inc
Address: 10 E. Cambridge Cr. Dr.
Kansas City, KS
Phone:

Report To: Jenny Meyer
Bill To:
P.O. # / Billing Reference:
Project Name / No.: Beaumont Dump 4811-06

Pace Client No.:
Pace Project Manager:
Pace Project No.:
*Requested Due Date:

Sampled By (PRINT): Steve Osborne
Sampler Signature: [signature]
Date Sampled: 5/11/92

ITEM NO.	SAMPLE DESCRIPTION	TIME	MATRIX	PACE NO.	NO. OF CONTAINERS	UNPRESERVED	H_2SO_4	HNO_3	VOA		ANALYSES REQUEST: PCB	REMARKS
1	HB5 - 0.5	12:00	Soil		1						X	
2	HB5 - 1.0	↓	↓								X	
3	HB4 - 0.5	↓	↓								X	
4	HB4 - 1.0	↓	↓								X	
5	HB6 - 0.5	↓	↓								X	
6	HB6 - 1.0	↓	↓								X	
7												
8												

COOLER NOS.	BAILERS	SHIPMENT METHOD OUT DATE	RETURNED DATE

ITEM NUMBER	RELINQUISHED BY AFFILIATION	ACCEPTED BY AFFILIATION	DATE	TIME
All	[signature] / TT	[signature]	5/12	5:40

Additional Comments

SEE REVERSE SIDE FOR INSTRUCTIONS

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB1-2.5

Sample Location Hand Boring 1

Collected: 5/11/92 - 1200
(Date & Time)

Sample Depth 2.5' BGS

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne + John McNulty / GeoTrans

FIELD NOTES:

Sample appeared to be original ~~top~~ top soil below ≈ 2-2.5 feet of fill material

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB1 - 3.5

Sample Location Head Bunker 1

Collected: 5/11/92 — 1200 (Date & Time)

Sample Depth 3.5' BGS

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne / Joan McNulty / GeoTrans

FIELD NOTES:

Sample appeared to be ± 1' below original ground surface prior to fill.

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HBL - 4.0

Collected: 5/11/92 - 1200 (Date & Time)

Sample Location Head Basin 1

Sample Depth 4.0' BGS

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne & John McNulty / GeoTrans

FIELD NOTES:

Sample appeared to be ≈ ~~4~~ SVO 1.5 feet below original ground surface prior to fill.

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB2 - 1.5

Sample Location Hand Boring 2

Collected: 5/11/92 1200
(Date & Time)

Sample Depth 1.5' BGS

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne + John McNulty / GeoTrans

FIELD NOTES:

Sample appeared to be taken at or just below original ground surface prior to fill material addition

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB2-2

Sample Location Hand Boring 2

Collected: 5/11/92 *(Date & Time)*

Sample Depth 2.0' BGS

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne + Joan McNulty / GeoTrans

FIELD NOTES:

Sample appeared to be taken 0.5 - 1.0 ft. below original ground surface ∅ prior to fill

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB2-2.5

Collected: 5/4/92 - 1200
(Date & Time)

Sample Location Hand Boring 2

Sample Depth 2.5' BGS

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne & John McNulty / GeoTrans

FIELD NOTES:

Sample appeared to be taken ≈ 1-1.5' below original ground surface prior to fill

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB3-0.5

Collected: 5/11/92 – 1200 (Date & Time)

Sample Location [redacted] Hand Boring 3

Sample Depth 0.5' BGS

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne + John McNulty / GeoTrans

FIELD NOTES:

Sample taken from a soil located underneath pile of old ceramic wire insulators as directed by Dan Hopkins - EPA

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB3-1.0

Sample Location Hand Boring 3

Collected: 5/4/92 - 1200
(Date & Time)

Sample Depth 1.0'

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne & Tom McNulty / Geotrans

FIELD NOTES:

Sample taken from soil located beneath pile of old ceramic wire insulators as directed by Dan Hopkins - EPA

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB4-0.5

Collected: 5/11/92 1200 (Date & Time)

Sample Location Hand Boring 4

Sample Depth 0.5'

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne + John McNulty / GeoTrans

FIELD NOTES:

Sample taken from soil underneath log that was rolled away, as directed by Dan Hopkins - EPA

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB4 - 1.0

Collected: 5/11/92 - 1200 (Date & Time)

Sample Location Head Bank 4

Sample Depth 1.0'

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne & John McNulty / GeoTrans

FIELD NOTES:

Sample taken from soil underneath old log that was moved away, As directed by Dan Hopkins - EPA

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB5-0.5

Sample Location Hand Boring 5

Collected: 5/11/92 - 1700
(Date & Time)

Sample Depth 0.5'

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne & John McNulty / GeoTrans

FIELD NOTES:

Sample taken from underneath pile of broken ceramic pieces and other trash, as directed by Dan Hopkins - EPA

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HBS-1.0 **Sample Location** Hand Boring 5

Collected: 5/11/92 - 1200 (Date & Time)

Sample Depth 1.0'

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne & John McNulty / GeoTrans

FIELD NOTES:

Sample taken from underneath pile of broken ceramic pieces and other trash, as directed by Dan Hopkins - EPA

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB6-0.5 **Sample Location** Hand Boring 6

Collected: 5/11/92 - 1200 (Date & Time)

Sample Depth 0.5'

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Steve Osborne & John McNulty / GeoTrans

FIELD NOTES:

Sample taken ~~along~~ southern perimeter of fill material mound, as directed by Dan Hopkins - EPA

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

FIELD SHEET
TETRA TECH, INC.

Tetra Tech, Inc.
10 E. Cambridge Circle Dr. Ste. 130
Kansas City, KS 66103
(913) 621-6041

SITE NAME: Bennett's Dump

Sample Number: HB6-1.0

Sample Location Hand Boring 6

Collected: 5/11/92 - 1200
(Date & Time)

Sample Depth 1.0'

Sample Media: Soil

SAMPLE CONTAINER	PRESERVATIVE	COMPOSITE OR DISCRETE	ANALYSIS REQUESTED
4 oz. glass	none	Discrete	PCBs

Samplers/Affiliation: Glen Osborne & John McNulty / GeoTrans

FIELD NOTES:

Sample taken along Southern perimeter of fill material mound, as directed by Dan Hopkins - EPA

COMMENTS/SITE DESCRIPTION:
(Location Sketch)

See Sketch

APPENDIX B

Analytical Data

pace INCORPORATED
THE ASSURANCE OF QUALITY

REPORT OF LABORATORY ANALYSIS

Tetra Tech Inc.
10 East Cambridge Circle
Kansas City, KS 66103

June 08, 1992
PACE Project Number: 520512505

Attn: Ms. Michelle Beckman

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062870	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB1 - 2.5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	05/23/92
Aroclor 1221	mg/kg	1.0	ND	05/23/92
Aroclor 1232	mg/kg	1.0	ND	05/23/92
Aroclor 1242	mg/kg	1.0	ND	05/23/92
Aroclor 1248	mg/kg	1.0	ND	05/23/92
Aroclor 1254	mg/kg	1.0	ND	05/23/92
Aroclor 1260	mg/kg	1.0	ND	05/23/92
Dibutylchlorendate (Surrogate)	%		66	05/23/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062897	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB2 - 1.5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	05/23/92
Aroclor 1221	mg/kg	1.0	ND	05/23/92
Aroclor 1232	mg/kg	1.0	ND	05/23/92
Aroclor 1242	mg/kg	1.0	ND	05/23/92
Aroclor 1248	mg/kg	1.0	1.2	05/23/92
Aroclor 1254	mg/kg	1.0	ND	05/23/92
Aroclor 1260	mg/kg	1.0	ND	05/23/92
Dibutylchlorendate (Surrogate)	%		69	05/23/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062919	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB3 - 0.5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	05/23/92
Aroclor 1221	mg/kg	1.0	ND	05/23/92
Aroclor 1232	mg/kg	1.0	ND	05/23/92
Aroclor 1242	mg/kg	1.0	ND	05/23/92
Aroclor 1248	mg/kg	1.0	ND	05/23/92
Aroclor 1254	mg/kg	1.0	ND	05/23/92
Aroclor 1260	mg/kg	1.0	ND	05/23/92
Dibutylchlorendate (Surrogate)	%		67	05/23/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062927	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB2 - 2	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	06/05/92
Aroclor 1221	mg/kg	1.0	ND	06/05/92
Aroclor 1232	mg/kg	1.0	ND	06/05/92
Aroclor 1242	mg/kg	1.0	ND	06/05/92
Aroclor 1248	mg/kg	1.0	ND	06/05/92
Aroclor 1254	mg/kg	1.0	ND	06/05/92
Aroclor 1260	mg/kg	1.0	ND	06/05/92
Dibutylchlorendate (Surrogate)	%		100	06/05/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062943	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB2 - 2.5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	06/05/92
Aroclor 1221	mg/kg	1.0	ND	06/05/92
Aroclor 1232	mg/kg	1.0	ND	06/05/92
Aroclor 1242	mg/kg	1.0	ND	06/05/92
Aroclor 1248	mg/kg	1.0	ND	06/05/92
Aroclor 1254	mg/kg	1.0	ND	06/05/92
Aroclor 1260	mg/kg	1.0	ND	06/05/92
Dibutylchlorendate (Surrogate)	%		93	06/05/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062951	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB5 - 0.5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	05/23/92
Aroclor 1221	mg/kg	1.0	ND	05/23/92
Aroclor 1232	mg/kg	1.0	ND	05/23/92
Aroclor 1242	mg/kg	1.0	ND	05/23/92
Aroclor 1248	mg/kg	1.0	ND	05/23/92
Aroclor 1254	mg/kg	1.0	ND	05/23/92
Aroclor 1260	mg/kg	1.0	ND	05/23/92
Dibutylchlorendate (Surrogate)	%		64	05/23/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062978	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB4 - 0.5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	05/23/92
Aroclor 1221	mg/kg	1.0	ND	05/23/92
Aroclor 1232	mg/kg	1.0	ND	05/23/92
Aroclor 1242	mg/kg	1.0	ND	05/23/92
Aroclor 1248	mg/kg	1.0	1.9	05/23/92
Aroclor 1254	mg/kg	1.0	ND	05/23/92
Aroclor 1260	mg/kg	1.0	ND	05/23/92
Dibutylchlorendate (Surrogate)	%		73	05/23/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062986	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB4 - 1.0	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	06/05/92
Aroclor 1221	mg/kg	1.0	ND	06/05/92
Aroclor 1232	mg/kg	1.0	ND	06/05/92
Aroclor 1242	mg/kg	1.0	ND	06/05/92
Aroclor 1248	mg/kg	1.0	ND	06/05/92
Aroclor 1254	mg/kg	1.0	ND	06/05/92
Aroclor 1260	mg/kg	1.0	ND	06/05/92
Dibutylchlorendate (Surrogate)	%		100	06/05/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

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June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PACE Sample Number:			60 0062994	
Date Collected:			05/11/92	
Date Received:			05/12/92	
Client Sample ID:			HB6 - 0.5	
Parameter	Units	MDL		DATE ANALYZED
ORGANIC ANALYSIS				
PCBS IN SOLIDS/LIQUIDS/SOLVENTS				
Aroclor 1016	mg/kg	1.0	ND	05/24/92
Aroclor 1221	mg/kg	1.0	ND	05/24/92
Aroclor 1232	mg/kg	1.0	ND	05/24/92
Aroclor 1242	mg/kg	1.0	ND	05/24/92
Aroclor 1248	mg/kg	1.0	ND	05/24/92
Aroclor 1254	mg/kg	1.0	ND	05/24/92
Aroclor 1260	mg/kg	1.0	ND	05/24/92
Dibutylchlorendate (Surrogate)	%		70	05/24/92

MDL Method Detection Limit
ND Not detected at or above the MDL.

These data have been reviewed and are approved for release.

Neal R. Hudson
Manager, Organic Chemistry

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QUALITY CONTROL DATA

June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PCBS IN SOLIDS/LIQUIDS/SOLVENTS
Batch: 60 13724
Samples: 60 0062870, 60 0062897, 60 0062919, 60 0062951, 60 0062978
60 0062994

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Aroclor 1016	mg/kg	1.0	ND
Aroclor 1221	mg/kg	1.0	ND
Aroclor 1232	mg/kg	1.0	ND
Aroclor 1242	mg/kg	1.0	ND
Aroclor 1248	mg/kg	1.0	ND
Aroclor 1254	mg/kg	1.0	ND
Aroclor 1260	mg/kg	1.0	ND
Dibutylchlorendate (Surrogate)	%		69

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	60 0051089	Spike	Spike Recv	Spike Dupl Recv	RPD
Aroclor 1242	mg/kg	1.0	ND	4.0	103%	88%	15%

LABORATORY CONTROL SAMPLE:

Parameter	Units	MDL	Reference Value	Recv
Aroclor 1254	mg/kg	1.0	25	100%

MDL Method Detection Limit
RPD Relative Percent Difference

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QUALITY CONTROL DATA

June 08, 1992
PACE Project Number: 520512505

Client Reference: Bennett's Dump 4811-06

PCBS IN SOLIDS/LIQUIDS/SOLVENTS
Batch: 60 13960
Samples: 60 0062927, 60 0062943, 60 0062986

METHOD BLANK:

Parameter	Units	MDL	Method Blank
Aroclor 1016	mg/kg	1.0	ND
Aroclor 1221	mg/kg	1.0	ND
Aroclor 1232	mg/kg	1.0	ND
Aroclor 1242	mg/kg	1.0	ND
Aroclor 1248	mg/kg	1.0	ND
Aroclor 1254	mg/kg	1.0	ND
Aroclor 1260	mg/kg	1.0	ND
Dibutylchlorendate (Surrogate)	%		100

SPIKE AND SPIKE DUPLICATE:

Parameter	Units	MDL	60 0073570	Spike	Spike Recv	Spike Dupl Recv	RPD
Aroclor 1242	mg/kg	1.0	ND	3.39	127%	127%	0%

LABORATORY CONTROL SAMPLE:

Parameter	Units	MDL	Reference Value	Recv
Aroclor 1254	mg/kg	1.0	25	99%

MDL Method Detection Limit
RPD Relative Percent Difference

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