US EPA RECORDS CENTER REGION 5
552869

SAMPLE DESCRIPTION

SITE NAME/TDD# Brook Park Service Center

CASE NUMBER 7954

SAMPLE #/STATION LOCATION Soil S1 Background

SAMPLING DATE 8-26-87 SAMPLING TIME 1215

ORGANIC TRAFFIC NUMBER ET 194

INORGANIC TRAFFIC NUMBER ME U 820

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016051	F7174082
8oz	Inorganics	5-016052	"
6 X 40ml	VOA	5-016053 5-016176 5-016054 5-016177 5-016175 5-016178	B7132141 B7132151

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Moist, Light Brown, Clay

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Brook Park Service Center

CASE NUMBER 7954

SAMPLE #/STATION LOCATION Soil 52

SAMPLING DATE 8-26-87 SAMPLING TIME 1445

ORGANIC TRAFFIC NUMBER ET195

INORGANIC TRAFFIC NUMBER MEU821

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016055	F7174082
8oz	Inorganics	5-016056	"
6 x 40ml	UOA	5-016057 5-016182 5-016058 5-016179 5-016181 5-016180	B7132141 B7132151

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dry, Brown, Clay

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Brook Park Service Center

CASE NUMBER 7954

SAMPLE #/STATION LOCATION Soil S3

SAMPLING DATE 8-26-87 SAMPLING TIME 1545

ORGANIC TRAFFIC NUMBER ET 196

INORGANIC TRAFFIC NUMBER MEU 822

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016060	F717 4082
8oz	Inorganics	5-016061	"
6x 40ml	VOA	5-016062 5-016186 5-016063 5-016193 5-016185 5-016184	B7132141 B7132151

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dry, Dark, Course, Soil

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Brook Park Service Center

CASE NUMBER 7954

SAMPLE #/STATION LOCATION Soil 54

SAMPLING DATE 8-26-87 SAMPLING TIME 1515

ORGANIC TRAFFIC NUMBER ET 197

INORGANIC TRAFFIC NUMBER MEU 501

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016064	F7174082
8oz	Inorganics	5-016065	"
6 x 40ml	UOA	5-016066 5-016190 5-016087 5-016187 5-016189 5-016188	B7132141 B7132151

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark, wet, clay

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Brook Park Service Center

CASE NUMBER 7954

SAMPLE #/STATION LOCATION Soil 55

SAMPLING DATE 8-26-87 SAMPLING TIME 1550

ORGANIC TRAFFIC NUMBER ET 198

INORGANIC TRAFFIC NUMBER MEU 502

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016068	F7174082
8oz	Inorganics	5-016069	"
6x40ml	VOA	5-016070 5-016194 5-016071 5-016191 5-016193 5-016192	B7132141 B7132151

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark, wet, Clay

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Brook Park Service Center

CASE NUMBER 7954

SAMPLE #/STATION LOCATION Soil 56

SAMPLING DATE 8-26-87 SAMPLING TIME 1700

ORGANIC TRAFFIC NUMBER ET199

INORGANIC TRAFFIC NUMBER MEU503

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016072	
8oz	Inorganics	5-016073	
6x40ml	UOA	5-016074 5-016098 5-016075 5-016195 5-016197 5-016196	

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark, wet, Clay

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Brook Park Service Center

CASE NUMBER 7954

SAMPLE #/STATION LOCATION Soil S9

SAMPLING DATE 8-26-87 SAMPLING TIME 1630

ORGANIC TRAFFIC NUMBER ET200

INORGANIC TRAFFIC NUMBER MEU504

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016058	F7174082
8oz	Inorganics	5-016076	"
6x40ml	UOA	5-016077 5-0152466 5-016078 5-016199 5-0152465 5-016200	B7132141 B7132151

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark, Black, Dry Sand

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

FIELD PHOTOGRAPHY LOG SHEET

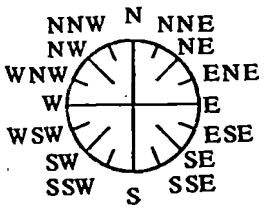
PAGE OF

SITE NAME Brook Park Service PAN: F O H O 7 3 I S A R

DATE

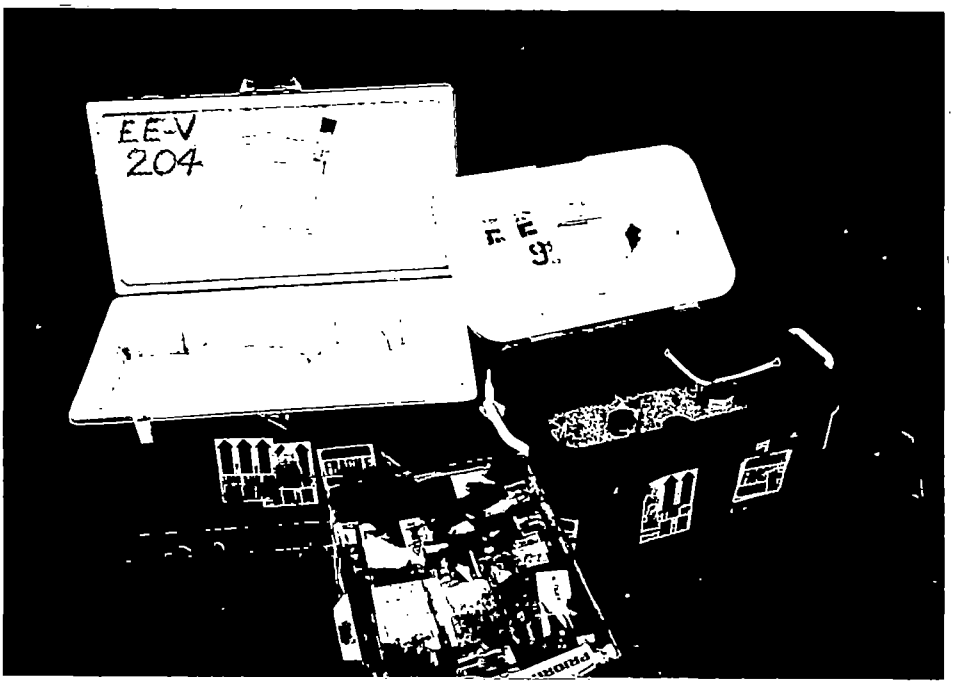
TIME (2400)

PHOTO DIRECTION



PHOTOGRAPHED BY:

SAMPLE ID#
(if applicable)

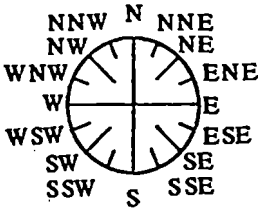


DESCRIPTION:

DATE

TIME (2400)

PHOTO DIRECTION



PHOTOGRAPHED BY:

SAMPLE ID#
(if applicable)

DESCRIPTION:

Post Site Inspection

Site Name: BROOK PARK LDFL I.D. Number OHD981957905

Date of Inspection: AUG 26, 87

Was Work Plan Followed (Y) N
If no, explain briefly:

Were Samples Collected? (Y) N
Residential Wells Sampled? Y (N)

Anticipated Analysis Report From:

CRL N/A

CLP 11/4/87

Anticipated SI Completion: 11/30/87

Removal Investigation Recommended Y (N)
If yes, explain briefly:

Unanticipated Problems Encountered Y (N)
If yes, explain briefly:

Follow-up site work necessary Y (N)
If yes, explain briefly:

SAMPLE PROPOSAL
FIT REGION V

DIRK KAISER HAS FILE

1. Date Form Completed JULY 15

2. Account # FOH0730/FT1305 TDD # SITE INSPECTION TDD IS FORTHCOMING

EPA I.D. # OHD 981957 905

3. Site Name, City, State BROOK PARK LANDFILL
BROOK PARK, OH

4. Team Leader TBD Sampler TBD

5. Number and Type of Samples:

Soil/Sediment 8 Surface Water – Ground Water –

Residential/Municipal Wells – Other –

Number of Blanks – Number of Duplicates –

6. RAS Parameters Requested:

A/B/N X Pest/PCB X Volatiles X Metals X Cyanide X

SAS Parameters Requested: –

7. Expected Sampling Date(s):

Expected Shipping Date(s):

8. Lab Used For Analysis: Organic AUG 26

Inorganic AUG 26

SAS

9. Case Number SAS Number

10. Airbill Numbers:

Organic Lab # Coolers # Samples

Inorganic Lab # Coolers # Samples

CRL/SAS Lab # Coolers # Samples

SITE INSPECTION SUMMARY

SITE: BROOK PARK LDFL.
ADDRESS: 6388 KOLTHOFF DR.
BROOK PARK, OH
CUYAHOGA CO.
DATE: 8/26/87
TIME: 8:00 (AM) PM

SITE CONTACT: DON KAMINSKI
PHONE: (216) 749-1555

TEAM LEADER: DIRK KAISER
SCOPE OF THE SITE INSPECTION:
INTERVIEW: (Y) N
SAMPLING: SOILS/SEDIMENT 8
SURFACE WATER —
MONITOR WELLS —
RESIDENTIAL WELLS —
AIR MONITORING —
LEVEL: A ___ B ___ C ___ D X

PAN #: FOH0730
PRIORITY: HIGH MED (LOW)

TEAM MEMBERS:

	SAFETY OFF	SAMPLER	EQUIPMENT	TEAM MEMBER		
C. ALMANZA	☐	■	☐	☐	☐	☐
C. SCHLESINGER	☐	☐	☐	■	☐	☐
D. CLARK	☐	☐	☐	■	☐	☐
R. SHORT	■	☐	■	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415
International Specialists in the Environment

CRL Receipt Date 10-15-87 FIT Receipt Date 12-15-87 Review Completed 12-16-87

TO: J. KAISER

FROM: Jim Mertes

SUBJECT: Brook Park Service Center

PAN: OH 0731 CASE # 7954

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 7	Low Soil	#	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status X Completed!!

Incomplete, awaiting:

FIT Data Review Findings:

- TCL cmpds detected above & below CRDL
- TICs in most samples

Check Data Sheets for Transcription Errors

X Compounds were detected in sample(s); see enclosed sheet.

Book No. 6 Page No. 285 Date Sampled 8-26-87

26U:001

Ln. changed to above pan Q week ending 12-26-87

recycled paper

Rec'd 12/15/87
48 pages 1 of 12

DRAFT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 12/14/87

SUBJECT: Review of Region V CLP data
Received for Review on 10-15-87

FROM: Curtis Ross, Director (5SCRL) Patrick J. Chuilla for
Central Regional Laboratory

TO: DATA USER: FIT

We have reviewed the data for the following case(s).

SITE NAME: BROOK PARK SERVICE CENTER SMO case No. 7954

EPA Data Set No. SF 4380 No. of Samples: 7 D.U./Activity Numbers Y905/C72100

CRL No. 87FK17S44-S50

SMO Traffic No. ET194-200

CLP Laboratory: CAL Hrs. Required Review: 5

Following are our findings:

Reviewed by
Tom Clyne
11 Dec 87

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending validation by Contractor Laboratory.
( ) Data are unacceptable.

cc: Duane Geuder, Quality Assurance Officer, EPA Support Services
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

EPA form 1320-6 (Rev.5/87)

Case: 7954 Site Brook Park Service Center
Date December 9, 1987

This case consisted of 7 soil sample for VOA, SV and Pest/PCBs.

A.	Holding Times	Acceptable
B.	Tuning	Acceptable
C.	Surrogates	Acceptable
D.	MS/MSD	Acceptable
E.	Lab Blank	VOA lab blank has normal artifacts, plus bromomethane. SV lab blank had two pentanol (not phenol) TICS. Pest lab blank had no hits. Lab blanks acceptable
F.	Standards	Acceptable See outlier form and note on standards
G.	Pesticides	Acceptable DBC %D Acceptable DDT RT > 13 min Acceptable

TC
11 Dec 87

MEMORANDUM

Mass~~pectra~~ SPECTRA

ET197

The standards for the MS were run in 09/16/83 except for Benzo (b or K) fluoranthene 11/28/83 and 4-methylphenol 11/28/83
Spectra are not labeled.
Standard spectra are not placed with sample spectra.
Standard spectra M/E do not match sample M/E in some area, scan numbers and RT do match standard to sample spectra.
Page 380 is a smaple spectra. What kind of spectra, sample, enhanced,??
Standard spectra do not have an instrument identification.
The OADS results Form I for TICs is not the official TIC reporting form.

TC
11 Dec 87

USER'S INFORMATION FORM

Three are seven soil samples in case 7954. There are numerous phenol type homologs and numerous PAHs hits above CRQL, ~~but none are high enough for HRS rise.~~

The TICs contain hits of long chain hydrocarbons and phenol homologs.

42J:0018:4

TC
11Dec87

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
VOLATILE HSL COMPOUNDS

CASE/SAS # 7954 CONTRACTOR Cal

Instrument # F9	Init. Cal. 6:00			Cont. Cal. 9:16			Cont. Cal. 21:07			Cont. Cal.			Cont. Cal.		
DATE/TIME:	9/1/87			9/3/87			9/3/87								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane								69	J						
Bromomethane					26	J		53	J						
Vinyl Chloride															
Chloroethane					83	J		30	J						
Methylene Chloride								43	J						
Acetone		35	J					42	J						
Carbon Disulfide					38	J		53	J						
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene		30	J												
Chloroform															
2-Butanone				0.04		J	039	~~0.039~~ 2	J						
1,2-Dichloroethane															
1,1,1-Trichloroethane								32	J						
Carbon Tetrachloride								36	J						
Vinyl Acetate															
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene															
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone					29	J									
2-Hexanone					31	J									
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															
	50 BFB			50 BFB			50 BFB								
	50 STD			5 PPB Std			50 Std								
AFFECTED SAMPLES:	20			[illegible]			[illegible]								
	100			[illegible]			[illegible]								
	150			[illegible]			[illegible]								
	200			"	196		Holding Blank								
Reviewer's Initials/Date: 9/Dec87	VOA Blank			"	197										
				"	198										
				"	199										
				"	200										

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
(Page 1)

CASE/SAS # 7954 CONTRACTOR Cal

Instrument # F12	Init. Cal. 8:03			Cont. Cal. 1839			Cont. Cal. 7128			Cont. Cal. 2116			Cont. Cal. 838		
DATE/TIME:	9/21/87			9/23/87			9/24/87			9/24/87			9/25/87		
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether											91	J			
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol											39	J			
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol											31	J			
N-Nitroso-Di-n-Propylamine															
Hexachloroethane															
Nitrobenzene															
Isophorone															
2-Nitrophenol															
2,4-Dimethylphenol															
Benzoic Acid															
bis(2-Chloroethoxy)Methane															
2,4-Dichlorophenol															
1,2,4-Trichlorobenzene															
Naphthalene															
4-Chloroaniline											54	J	~~36~~ 22	36	J
Hexachlorobutadiene					37	J									
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene											441	J			
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline		58	J								42	J		93	J
Acenaphthene															
2,4-Dinitrophenol		34	J		73	J									
4-Nitrophenol											44	J		65	J
Dibenzofuran															

AFFECTED SAMPLES:

50 DFTPP	ET194	ET195	ET198	ET199
~~50 Hy SD~~		196		200
20 "		ET19A MS		
80 "		ET19A DS		
120 "				
160 "				

Reviewer Initials/Date: 29 Dec 87

* These flags should be applied to the analytes on the sample data sheets.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY REGION V
CALIBRATION OUTLIERS
SEMIVOLATILE HSL COMPOUNDS
Page 2

CASE/SAS # 7954 CONTRACTOR Cal

Instrument # F12	Init. Cal. 8:03			Cont. Cal. 18:39			Cont. Cal. 7:28			Cont. Cal. 21:16			Cont. Cal. 8:38		
DATE/TIME:	9/21/87			9/23/87			9/24/87			9/24/87			9/25/87		
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene		~~[illegible]~~			27	J					48	J			
2,6-Dinitrotoluene		70													
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline		30	J					35	J					137	J
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene		29	J											30	J
Butylbenzylphthalate					44	J					46	J			
Benzo(a)Anthracene					71	J		70	J		175	J			
bis(2-Ethylhexyl)Phthalate					48	J					379	J			
Chrysene					65	J		81	J		65	J			
Di-n-Octyl Phthalate															
Benzo(b)Fluoranthene															
Benzo(k)Fluoranthene															
Benzo(a)Pyrene															
Indeno(1,2,3-cd)Pyrene															
Dibenz(a,h)Anthracene		33	J		47	J		47	J		38	J		49	J
Benzo(g,h,i) Perylene															

SEE PAGE 1 FOR AFFECTED SAMPLES.

* These flags should be applied to the analytes on the sample data sheets.

Reviewer's Initials/Date: [illegible] 9 Dec 87

Case: Co 19984

Contractor: Cal

TENTATIVELY IDENTIFIED COMPOUNDS
WATCH ASSESSMENT

NOTE: Reviewer should note directly on Organic Analysis Data Sheet (OADS) those matches that in his opinion (based on contract criteria) are unreasonable.

CRITERIA

(1) Relative intensities of major ions (>10%) reference spectrum should be present in the sample spectrum.

(2) Relative intensities of major ions in sample spectrum should agree to within ± 20% of reference spectrum intensities.

(3) Molecular ions present in reference spectrum should be present in sample spectrum.

(4) Ions present in sample spectrum, but not in reference spectrum should be reviewed for possible background contamination or presence of coeluting interferences.

(5) Ions present in reference spectrum, but not in the sample spectrum should be reviewed for possible subtraction from the sample spectrum because of background contamination or coeluting interferences.

(6) If, in the reviewer's opinion, no valid identification can be made the compound should be labelled as "unknown" and the initials and date of the reviewer placed on the OADS.

Reviewer's Initials/Date: [illegible]

7954 COMPOUND	SAMPL	ET 194		ET 195		ET 196		ET 197	
		Water	CRQL	Water	CRQL	Water	CRQL	Water	CRQ.
chloromethane									
bromomethane									
vinyl chloride									
chloroethane								9/0	12
methylene chloride									
acetone									
carbon disulfide									
1,1-dichloroethene									
1,1-dichloroethane									
trans-1,2,-dichloroethene									
chloroform									
1,2-dichloroethane									
2-butanone									
1,1,1-trichloroethane									
carbon tetrachloride									
vinyl acetate									
bromodichloromethane									
1,1,2,2-tetrachloroethane									
1,2-dichloropropane									
trans-1,3-dichloropropene									
trichloroethene									
dibromochloromethane									
1,1,2-trichloroethane									
benzene									
cis-1,3-dichloropropene									
2-chloroethylvinylether									
bromoform									
2-hexanone									
4-methyl-2-pentanone									
tetrachloroethene									
toluene									
chlorobenzene									
ethylbenzene									
styrene									
total xylenes									
N-nitrosodimethylamine									
phenol		550	330	170J	330	570	330		
aniline									
bis(2-chloroethyl)ether									
2-chlorophenol									
1,3-dichlorobenzene									
1,4-dichlorobenzene									
benzyl alcohol									
1,2-dichlorobenzene									
2-methylphenol		590	"	180J	"	610	"		
bis(2-chloroisopropyl)ether									
4-methylphenol		490	"	250J	"	950	"		
N-nitroso-di-n-propylamine									
hexachloroethane									
nitrobenzene									
isophrone									
2-nitrophenol									
2,4-dimethylphenol		270	"	160J	"	450	"		
benzoic acid									
bis(2-chloroethoxy)methane									
2,4-dichlorophenol									
1,2,4-trichlorobenzene									
nepthalene				290J	"	71J	330 / ~~71J~~		
4-chloroaniline									
hexachlorobutadiene									
4-chloro-3-methylphenol							390		
2-methylnapthalene				400	"	93J	~~93J~~		
hexachlorocyclopentadiene									
2,4,6-trichlorophenol									
2,4,5-trichlorophenol									
2-chloronaphthalene									
2-nitroaniline									

	7954 COMPOUND	SAMPLE	DET. LIMIT	ET 194 hits	ET 194 CRQL	ET 195 hits	ET 195 CRQL	ET 196 hits	ET 196 CRQL	~~ET 197 hits~~	~~ET 197 CRQL~~
V	dimethyl phthalate										
	acenapthylene			150J	330	64J	330	78J	330		
	3-nitroaniline										
	acenaphthene				1400			73J	"		
	2,4-dinitrophenol										
	4-nitrophenol										
	dibenzofuran					130J	"	70J	"		
	2,4-dinitrotoluene										
	2,6-dinitrotoluene										
S	diethylphthalate										
	4-chlorophenyl-phenylether										
	fluorene							110J	"		
V	4-nitroaniline										
	4,6-dinitro-2-methylphenol										
	N-nitrosodiphenylamine							120J	"		
	4-bromophenyl-phenylether										
	hexachlorobenzene										
	pentachlorophenol										
	phenanthrene			260J	330	560	"	610	"		
	anthracene			150J	"	160J	"	230J	"		
	di-n-butylphthalate										
	fluoranthene			700	"	700	"	1100	"		
	~~benzidine~~			~~570~~	~~"~~						
	pyrene			570	"	710	"	900	"		
	butylbenzylphthalate										
	3,3'-dichlorobenzidine										
	benzo(a)anthracene			370	"	510	"	650	"		
	bis(2-ethylhexyl)phthalate										
	chrysene			440	"	430	"	540	"		
	di-n-octylphthalate										
	benzo(b&k)fluoranthene			790	"	600	"	1000	"		
	benzo(a)pyrene			290J	"	390	"	500	"		
	indeno(1,2,3-cd)pyrene			370	"	290J	"	300J	"		
	dibenzo(a,h)anthracene			68J	"	100J	"	67J	"		
T	benzo(g,h,i)perylene			290J	"	280J	"	290J			
I	alpha-BHC										
	beta-BHC										
	delta-BHC										
	gamma-BHC(lindane)										
P	heptachlor										
	aldrin										
E	heptachlor epoxide										
	endosulfan I										
S	dieldrin										
T	4,4'-DDE										
	endrin										
	endosulfan II										
	4,4'-DDD										
	[illegible]										
	[illegible]										
	4,4'-DDT										
	methoxychlor										
	endrin ketone										
	chlordane ~~CRQL~~ HSL = ~~200~~ 400					87	~~140~~ 80	170	80		
	toxaphene										
P	Aroclor-1016										
	Aroclor-1221										
C	Aroclor-1232										
B	Aroclor-1242										
	Aroclor-1248										
	Aroclor-1254										
	Aroclor-1260										

10 of 12

7954 COMPOUND	SAMPL	MDL LIMIT	ET 197		ET 198		ET 199		ET 200	
			Info	CRQL	Info	CRQL	Info	CRQL	Info	CRQL
L chloromethane										
bromomethane										
vinyl chloride			ug/kg		ug/kg		ug/kg		ug/kg	
chloroethane										
methylene chloride										
acetone										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
V trans-1,2,-dichloroethene										
chloroform									11 J	13
O 1,2-dichloroethane										
A 2-butanone										
1,1,1-trichloroethane										
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform										
2-hexanone										
4-methyl-2-pentanone										
tetrachloroethene										
toluene found in blank									13 B	
chlorobenzene										
ethylbenzene										
styrene										
total xylenes									3 J	5
N-nitrosodimethylamine							1400	330	940	330
phenol					44 J					
aniline										
bis(2-chloroethyl)ether										
2-chlorophenol										
1,3-dichlorobenzene										
1,4-dichlorobenzene										
benzyl alcohol										
1,2-dichlorobenzene							120 J			
2-methylphenol					43 J		1200		650	
bis(2-chloroisopropyl)ether										
4-methylphenol			110 J	330			1400	~~440~~	810	
N-nitroso-di-n-propylamine										
hexachloroethane										
nitrobenzene										
isophorone										
2-nitrophenol										
2,4-dimethylphenol							230		120	
benzoic acid					270 J					
bis(2-chloroethoxy)methane										
2,4-dichlorophenol										
1,2,4-trichlorobenzene										
napthalene			140 J	330	97 J		160 J		870	
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol				330						
2-methylnapthalene			150 J		140 J		120 J		830	
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										
2,4,5-trichlorophenol										
2-chloronaphthalene										
2-nitroaniline										

	79J4 COMPOUND	SAMPLE	DET. LIMIT	ET 197 hits	ET 197 CRQL	ET 198 hits	ET 198 CRQL	ET 199 hits	ET 199 CRQL	ET 200 hits	ET 200 CRQL
V	dimethyl phthalate										
	acenapthylene			77J	330	99J		100J	330		
	3-nitroaniline										
	acenaphthene			140J	330	120J		110J	"	73J	330
	2,4-dinitrophenol										
	4-nitrophenol										
	dibenzofuran			130J	"	100J		85J	"	260J	"
	2,4-dinitrotoluene										
	2,6-dinitrotoluene										12 of 12
S	diethylphthalate										
	4-chlorophenyl-phenylether										
V	fluorene			180J	"	140J		140J	"	140J	"
	4-nitroaniline										
	4,6-dinitro-2-methylphenol										
	N-nitrosodiphenylamine										
	4-bromophenyl-phenylether										
	hexachlorobenzene										
	pentachlorophenol										
	phenanthrene HRS hit *			1600*	330	1400*	330	640		980	"
	anthracene			310J	330	300J	"	231J		150J	"
	di-n-butylphthalate										
	fluoranthene			2200*	330	2500*	"	1200		410	"
	~~benzidine~~										
	pyrene HRS hit			2200*	330	2400*	"	1100			
	butylbenzylphthalate										
	3,3'-dichlorobenzidine										
	benzo(a)anthracene			1300	330	1200	"	650		280J	"
	bis(2-ethylhexyl)phthalate										
	chrysene			1100	330	1300	"	700		300J	"
	di-n-octylphthalate										
	benzo(bk)fluoranthene			1900	330	2300*	"	1300		320J	"
	benzo(a)pyrene		760	~~1400~~ 770	"	780	"	700		120J	"
	indeno(1,2,3-cd)pyrene			590	"	770	"	600		77J	"
	dibenzo(a,h)anthracene			110J	"	170J	"	200J			
↑	benzo(g,h,i)perylene			525	"	770	"	500		140J	"
↓	alpha-BHC										
	beta-BHC										
	delta-BHC										
	gamma-BHC(lindane)										
P	heptachlor										
	aldrin										
E	heptachlor epoxide										
	endosulfan I										
S	dieldrin										
	4,4'-DDE										
T	endrin										
	endosulfan II										
	4,4'-DDD										
	endrin aldehyde										
	endosulfan sulfate										
	4,4'-DDT										
	methoxychlor										
	endrin ketone										
	chlordane										
	toxaphene										
	Aroclor-1016										
P	Aroclor-1221										
C	Aroclor-1232										
B	Aroclor-1242										
	Aroclor-1248										
	Aroclor-1254										
	Aroclor-1260										

California Analytical Laboratory

Enseco Incorporated

Enseco

RECEIVED

OCT 14 1987

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGIONAL LABORATORY
CHICAGO, ILLINOIS 60605

October 13, 1987

Joan Fisk
U.S. EPA
Hazardous Waste Investigation
401 M Street, SW
Washington, DC 20460

Dear Ms. Fisk:

Enclosed are data summary sheets and documentation for samples and QA/QC comprising case 7954 of Contract 68-01-7147. These samples were received 8/27/87 and logged in under the following Enseco-Cal Lab numbers:

Enseco-Cal Lab Number	Sample I.D.
31099-1	ET 194
31099-2	ET 195
31099-3	ET 196
31099-4	ET 197
31099-5	ET 198
31099-6	ET 199
31099-7	ET 200

The samples were analyzed as low concentration sediment samples. No problems were encountered.

This report was checked for contractual compliance, assembled, paginated then printed and assembled by a Kodak copier/assembler. Each copy has been checked for completeness. This check may miss some individual pages. **Please request by page number if any page is missing.**

If you have any questions, please give us a call.

Sincerely,

Michael J. Mills, Ph.D.
Director of GC/MS Services

Karin S. Yee
Karin S. Yee
Data Specialist

Ben N. Buechler
Director of Chromatography

2544 Industrial Boulevard
West Sacramento, California 95691
916/372-1393 Facsimile: 916/372-1059

Sample Number
F9

LABORATORY INSTRUMENT DETECTION LIMITS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: California Analytical Laboratories, Inc.

Case No: 7954

Lab Sample ID No: _____

QC Report No: _____

Sample Matrix: _____

Contract No: 68-01-6958, 68-01-6965, 68-01-7140, 68-01-7147

Data Release Authorized By: _____

Date Sample Received: _____

Volatile Compounds

Concentration: _____

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

Percent Moisture: _____

Percent Moisture (Decanted): _____

CAS Number		NG
74-87-3	Chloromethane	48
74-83-9	Bromomethane	22
75-01-4	Vinyl Chloride	23
75-00-3	Chloroethane	19
75-09-2	Methylene Chloride	6.0
67-64-1	Acetone	8.5
75-15-0	Carbon Disulfide	7.4
75-35-4	1,1-Dichloroethene	7.9
75-34-3	1,1-Dichloroethane	8.7
156-60-5	Trans-1,2-Dichloroethene	7.5
67-66-3	Chloroform	7.7
107-06-2	1,2-Dichloroethane	10
78-93-3	2-Butanone	4.6
71-55-6	1,1,1-Trichloroethane	6.0
56-23-5	Carbon Tetrachloride	4.1
108-05-4	Vinyl Acetate	4.1
75-27-4	Bromodichloromethane	2.3

CAS Number		NG
78-87-5	1,2-Dichloropropane	8.1
10061-02-6	Trans-1,3-Dichloropropene	8.3
79-01-6	Trichloroethene	4.4
124-48-1	Dibromochloromethane	2.1
79-00-5	1,1,2-Trichloroethane	4.4
71-43-2	Benzene	6.5
10061-01-5	cis-1,3-Dichloropropene	8.2
110-75-8	2-Chloroethylvinylether	3.1
75-25-2	Bromoform	2.4
108-10-1	4-Methyl-2-Pentanone	9.7
591-78-6	2-Hexanone	10
127-18-4	Tetrachloroethene	4.9
79-34-5	1,1,2,2-Tetrachloroethane	6.2
108-88-3	Toluene	4.9
108-90-7	Chlorobenzene	3.7
100-41-4	Ethylbenzene	2.1
100-42-5	Styrene	3.3
	Total Xylenes	2.9

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration or dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read. U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample, indicating possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.

See cover letter.

NR Not Required.

S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:

Sample Number
FB

LABORATORY INSTRUMENT DETECTION LIMITS

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: _____

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/DiL Factor: _____

GPC Cleanup: _____

Separatory Funnel Extraction: _____

Continuous Liquid - Liquid Extraction: _____

CAS Number		NG
108-95-2	Phenol	5.1
111-44-4	bis(-2-Chloroethyl)Ether	1.7
95-57-8	2-Chlorophenol	4.6
541-73-1	1,3-Dichlorobenzene	0.80
106-46-7	1,4-Dichlorobenzene	1.9
100-51-6	Benzyl Alcohol	7.0
95-50-1	1,2-Dichlorobenzene	1.8
95-48-7	2-Methylphenol	2.3
39638-32-9	bis(2-chloroisopropyl)Ether	3.0
106-44-5	4-Methylphenol	4.3
621-64-7	N-Nitroso-Di-n-Propylamine	5.9
67-72-1	Hexachloroethane	2.9
98-95-3	Nitrobenzene	3.9
78-59-1	Isophorone	2.1
88-75-5	2-Nitrophenol	5.2
105-67-9	2,4-Dimethylphenol	5.5
65-85-0	Benzoic Acid	12
111-91-1	bis(-2-Chloroethoxy)Methane	2.6
120-83-2	2,4-Dichlorophenol	3.3
120-82-1	1,2,4-Trichlorobenzene	2.3
91-20-3	Naphthalene	4.4
106-47-8	4-Chloroaniline	5.3
87-68-3	Hexachlorobutadiene	2.0
59-50-7	4-Chloro-3-Methylphenol	3.0
91-57-6	2-Methylnaphthalene	2.7
77-47-4	Hexachlorocyclopentadiene	7.2
88-06-2	2,4,6-Trichlorophenol	10
95-95-4	2,4,5-Trichlorophenol	3.7
91-58-7	2-Chloronaphthalene	1.3
88-74-4	2-Nitroaniline	5.0
131-11-3	Dimethyl Phthalate	2.2
208-96-8	Acenaphthylene	0.97
99-09-2	3-Nitroaniline	18

CAS Number		NG
83-32-9	Acenaphthene	3.3
51-28-5	2,4-Dinitrophenol	8.7
100-02-7	4-Nitrophenol	7.5
132-64-9	Dibenzofuran	2.5
121-14-2	2,4-Dinitrotoluene	3.2
606-20-2	2,6-Dinitrotoluene	3.8
84-66-2	Diethylphthalate	2.0
7005-72-3	4-Chlorophenyl-phenylether	3.6
86-73-7	Fluorene	3.1
100-01-6	4-Nitroaniline	4.3
534-52-1	4,6-Dinitro-2-Methylphenol	8.2
86-30-6	N-Nitrosodiphenylamine(1)	4.1
101-55-3	4-Bromophenyl-phenylether	3.8
118-74-1	Hexachlorobenzene	3.1
87-86-5	Pentachlorophenol	6.8
85-01-8	Phenanthrene	2.5
120-12-7	Anthracene	3.9
84-74-2	Di-n-Butylphthalate	0.78
206-44-0	Fluoranthene	1.4
129-00-0	Pyrene	3.3
85-68-7	Butylbenzylphthalate	6.0
91-94-1	3,3'-Dichlorobenzidine	0.0
56-55-3	Benzo(a)Anthracene	7.3
117-81-7	bis(2-Ethylhexyl)Phthalate	3.1
218-01-9	Chrysene	5.6
117-84-0	Di-n-Octyl Phthalate	6.3
205-99-2	Benzo(b)Fluoranthene	6.4
207-08-9	Benzo(k)Fluoranthene	6.4
50-32-8	Benzo(a)Pyrene	4.6
193-39-5	Indeno(1,2,3-cd)Pyrene	4.7
53-70-3	Dibenz(a,h)Anthracene	6.2
191-24-2	Benzo(g,h,i)Perylene	6.7

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:

Sample Number
BC6

LABORATORY INSTRUMENT DETECTION LIMITS

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: _____ GPC Cleanup: _____

Date Extracted/Prepared: _____ Separatory Funnel Extraction: _____

Date Analyzed: _____ Continuous Liquid - Liquid Extraction: _____

Conc/Dil Factor: _____

CAS Number		PQ (On Column)
319-820-6	Alpha-BHC	5
319-85-7	Beta-BHC	5
319-86-8	Delta-BHC	5
58-89-9	Gamma-BHC (Lindane)	5
76-2020-8	Heptachlor	5
309-00-10	Aldrin	5
501020-57-3	Heptachlor Epoxide	5
959-98-8	Endosulfan I	10
60-57-1	Dieldrin	10
710-55-9	20,20'-DDE	10
710-100-8	Endrin	10
331013-65-9	Endosulfan II	10
72-520-8	20,20'-DDD	20
1031-07-8	Endosulfan Sulfate	20
50-29-3	20,20'-DDT	20
72-203-5	Methoxychlor	100
5320920-70-5	Endrin Ketone	20
57-720-9	Chlordane	100
8001-35-2	Toxaphene	1000
126720-11-2	Aroclor-1016	100
11104-28-2	Aroclor-1221	100
11141-16-5	Aroclor-1232	100
53469-21-9	Aroclor-1242	100
12672-29-6	Aroclor-1248	100
11097-69-1	Aroclor-1254	100
11096-82-5	Aroclor-1260	100

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = or W_s = NR V_t = V_i =

SOIL SURROGATE PERCENT RECOVERY SUMMARY

CASE NO.: 7954 CONTRACT LABORATORY: ENSECO CAL LAB CONTRACT NO.: 68-01-7147

LOW CONCENTRAION

SMO TRAFFIC NO.	VOLATILE: TOLUENE D8 (81-117)	VOLATILE: BFB (74-121)	VOLATILE: 1,2 DICHLORO-ETHANE D4 (70-121)	SEMI-VOLATILE: NITRO-BENZENE D5 (23-121)	SEMI-VOLATILE: 2-FLUORO-BIPHENYL (30-115)	SEMI-VOLATILE: TERPHENYL D14 (18-137)	SEMI-VOLATILE: PHENOL-D5 (24-113)	SEMI-VOLATILE: 2-FLUORO-PHENOL (25-121)	SEMI-VOLATILE: 2,4,6 TRIBROMO-PHENOL (19-122)	SEMI-VOLATILE: DIBUTYL-CHLORENDATE (20-150)**
ET 194	104	94	92	52	62	76	57	50	0 *	98
ET 195	110	92	98	78	84	104	81	74	69	87
ET 196	107	94	100	76	78	86	82	70	91	86
ET 197	101	96	100	72	74	98	73	71	87	89
ET 198	101	104	100	56	74	88	59	52	45	86
ET 199	101	110	101	82	80	78	86	77	99	100
ET 200	114	94	114	82	82	88	82	78	75	104
ET 196 MS	107	92	84	NR	NR	NR	NR	NR	NR	NR
ET 196 MSD	107	94	86	NR	NR	NR	NR	NR	NR	NR
VBK9870903	98	100	82	NR	NR	NR	NR	NR	NR	NR
VVBK9870903	101	NR	98	NR	NR	NR	NR	NR	NR	NR
ET 194 MS	NR	NR	NR	66	62	84	64	61	54	NR
ET 194 MSD	NR	NR	NR	64	66	94	63	59	70	NR
31099MB	NR	NR	NR	68	76	116	64	73	53	94
ET 195MS	NR	NR	NR	NR	NR	NR	NR	NR	NR	88
ET 195 MSD	NR	NR	NR	NR	NR	NR	NR	NR	NR	89

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

VOLATILES: 0 OUT OF 33 : OUTSIDE OF QC LIMITS
SEMI-VOLATILED: 0 OUT OF 11 : OUTSIDE OF QC LIMITS
PESTICIDES: 0 OUT OF 11 : OUTSIDE OF QC LIMITS

COMMENTS:

3

FORM II DATA PREP/RELEASE BY: 7/85

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

CASE NO.: 7954 CONTRACTOR____CAL____

LOW LEVEL__X_____ MEDIUM LEVEL_____ CONTRACT NO:68-01-7147

FRACTION	COMPOUND	CONC.SPIKE ADDED(ug/Kg) SPIKE	DUPLICATE	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	%RPD	QC LIMITS* RPD	RECOVERY
VOA	1,1-Dichloroethene	56.8	56.8	0	51.9	91	51.8	91	0	22	59-172
SMO	Trichloroethene	56.8	56.8	0	54.1	95	54.1	95	0	24	62-137
SAMPLE NO.	Chlorobenzene	56.8	56.8	0	56.8	100	57.2	101	1	21	60-133
	Toluene	56.8	56.8	3.75	58.5	96	59.5	98	2	21	59-139
ET 196	Benzene	56.8	56.8	0	55.9	98	57.3	101	3	21	66-142
B/N	1,2,4-Trichlorobenzene	2380	2380	0	1460	61	1500	63	3	23	38-107
SMO	Acenaphthene	2380	2380	0	1990	84	2080	87	4	19	31-137
SAMPLE NO.	2,4-Dinitrotoluene	2380	2380	0	1950	82	1980	83	2	47	28-89
	Pyrene	2380	2380	573	2860	96	4102	148 *	43 *	36	35-142
	N-Nitrosodi-n-Propylamine	2380	2380	0	1190	50	1160	49	3	38	41-126
ET 194	1,4-Dichlorobenzene	2380	2380	0	1120	47	1150	48	2	27	28-104
ACID	Pentachlorophenol	4760	4760	0	0	0 *	640	13 *	200 *	47	17-109
SMO	Phenol	4760	4760	545	4050	74	4230	77	4	35	26-90
SAMPLE NO.	2-Chlorophenol	4760	4760	0	3150	66	3140	66	0	50	25-102
	4-Chloro-3-Methylphenol	4760	4760	0	4100	86	3560	75	14	33	26-103
ET 194	4-Nitrophenol	4760	4760	0	3750	79	3860	81	3	50	11-114
PEST	Lindane	32	32	0	16.1	50	15.5	48	4	50	46-127
SMO	Heptachlor	32	32	0	24.8	78	23.9	75	4	31	35-130
SAMPLE NO.	Aldrin	32	32	0	29.4	92	28.5	89	3	43	34-132
	Dieldrin	80	80	0	57.3	72	56.3	70	3	38	31-134
	Endrin	80	80	0	58.3	73	56.3	70	4	45	42-139
ET 195	4,4-DDT	80	80	0	56.5	71	56	70	1	50	23-134

* ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs 0 out of 5 ; outside QC limits
B/Ns 1 out of 6 ; outside QC limits
ACID 1 out of 5 ; outside QC limits
PEST 0 out of 6 ; outside QC limits

RECOVERY: VOAs 0 out of 10 ; outside QC limits
B/Ns 1 out of 12 ; outside QC limits
ACID 2 out of 10 ; outside QC limits
PEST 0 out of 12 ; outside QC limits

Comments: _____

FORM III 7/85

METHOD BLANK SUMMARY

CASE NO. 7954 SDG NO.: 5 CONTRACTOR: ENSECO - CALIFORNIA ANALYTICAL LABS,INC CONTRACT NO. 68-01-7147

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL.TIC OR UNKNOWN)	CONC.	UNITS	CRDL
VBK9870903	9/3/87	VOA	SOIL	LOW	F9	75-09-2	METHYLENE CHLORIDE	3	UG/KG	5
						67-64-1	ACETONE	14	UG/KG	10
						108-88-3	TOLUENE	2	UG/KG	5
VVBK9870903	9/3/87	VOA	SOIL	LOW	F9	74-83-9	BROMOMETHANE	1	UG/KG	10
						75-09-2	METHYLENE CHLORIDE	2	UG/KG	5
						67-64-1	ACETONE	17	UG/KG	10
						108-64-1	TOLUENE	2	UG/KG	5
31099MB	9/23/87	ABN	SOIL	LOW	F12	117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	78	UGLKG	330
						108-11-2	2-PENTANOL, 4-METHYL	280	UG/KG	-
						625-06-9	2-PENTANOL, 2,4-DIMETHYL	2800	UG/KG	-
						52628-37-2	BENZENAMINE,AR,AR,AR-TRIBROMO	290	UG/KG	-
31099MB	10/5/87	PEST	SOIL	LOW	GC6	-	NO PESTICIDES FOUND	-	-	-

COMMENTS:

Sample Number
ET 197

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7954

Lab Sample ID No: 31099-4

QC Report No: 239

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By: [illegible]

Date Sample Received: 8/27/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/3/87

Date Analyzed: 9/3/87

Conc/Dil Factor: 1 pH:7.9

Percent Moisture: 28

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	1 JB
67-64-1	Acetone	25 B
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
156-60-5	Trans-1,2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	5 U
108-88-3	Toluene	1 JB
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

Hark

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U; based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides >= 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.

See cover letter.

NR Not Required.

S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 197

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/2/87

Date Analyzed: 9/24/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CRQL

CAS Number		ug/Kg
108-95-2	Phenol	170 J
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	330 U
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	110 J
621-64-7	N-Nitroso-Di-n-Propylamine	330 U
67-72-1	Hexachloroethane	330 U
98-95-3	Nitrobenzene	330 U
78-59-1	Isophorone	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	330 U
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	140 J
106-47-8	4-Chloroaniline	330 U
87-68-3	Hexachlorobutadiene	330 U
59-50-7	4-Chloro-3-Methylphenol	330 U
91-57-6	2-Methylnaphthalene	150 J
77-47-4	Hexachlorocyclopentadiene	330 U
88-06-2	2,4,6-Trichlorophenol	330 U
95-95-4	2,4,5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	330 U
88-74-4	2-Nitroaniline	1600 U
131-11-3	Dimethyl Phthalate	330 U
208-96-8	Acenaphthylene	77 J
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	140 J
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	130 J
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	180 J
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	1600
120-12-7	Anthracene	310 J
84-74-2	Di-n-Butylphthalate	~~140 J~~
206-44-0	Fluoranthene	2200
129-00-0	Pyrene	2200
85-68-7	Butylbenzylphthalate	760
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	1300
117-81-7	bis(2-Ethylhexyl)Phthalate	930 B
218-01-9	Chrysene	1100
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	1900
207-08-9	Benzo(k)Fluoranthene	1900
50-32-8	Benzo(a)Pyrene	760
193-39-5	Indeno(1,2,3-cd)Pyrene	590
53-70-3	Dibenz(a,h)Anthracene	110 J
191-24-2	Benzo(g,h,i)Perylene	525

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 197

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 9/2/87

Date Analyzed: 10/8/87

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = NR or W_s = 1.5 V_t = 5000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7954 Sample No. ET 197

C Report No. 239 Lab Sample No. 3109904ABRI

robability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
1.	108-11-2	2-PENTANOL, 4-METHYL-	A/BN	307	668	425.7 UG/KG
2.	625-06-9	2-PENTANOL, 2,4-DIMETHYL-	A/BN	352	859	2478.3 UG/KG
3.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	384	948	181.0 UG/KG
4.	17301-32-5	UNDECANE, 4,7-DIMETHYL-	A/BN	892	814	322.0 UG/KG
5.	629-59-4	TETRADECANE	A/BN	982	861	233.7 UG/KG
6.	544-76-3	HEXADECANE	A/BN	1149	765	305.0 UG/KG
7.	629-78-7	HEPTADECANE	A/BN	1225	872	339.5 UG/KG
8.	1921-70-6	PENTADECANE, 2,6,10,14-TETRAME	A/BN	1230	885	359.0 UG/KG
9.	203-64-5	4H-CYCLOPENTA[DEF]PHENANTHRENE	A/BN	1407	521	435.1 UG/KG
0.	57-10-3	HEXADECANOIC ACID	A/BN	1411	665	703.7 UG/KG
1.	2467-02-9	PHENOL, 2,2'-METHYLENEBIS-	A/BN	1457	749	573.6 UG/KG
2.	2926-77-4	L-ASPARTIC ACID, N-(TRIFLUOROA	A/BN	1882	481	443.6 UG/KG
3.	629-99-2	PENTACOSANE	A/BN	2070	456	542.2 UG/KG
4.	18769-46-5	CHOLESTAN-3-OL, (3.ALPHA.)-	A/BN	2412	361	199.7 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-PENTANOL, 4-METHYL-	1. C	1.
2. 2-PENTANOL, 2,4-DIMETHYL-	2. A	2.
3. BENZENE, 1,3-DIMETHYL-	3. A+D	3. or isomer
4. UNDECANE, 4,7-DIMETHYL-	4. B	4. alkane
5. TETRADECANE	5. BA	5. "
6. HEXADECANE	6. B	6. "
7. HEPTADECANE	7. BA	7. "
8. PENTADECANE, 2,6,10,14-TETRAME	8. B	8. "
9. 4H-CYCLOPENTA[DEF]PHENANTHRENE	9. B	9.
10. HEXADECANOIC ACID	10. BA	10.
11. PHENOL, 2,2'-METHYLENEBIS-	11. A	11. or isomer
12. L-ASPARTIC ACID, N-(TRIFLUOROA	12. C	12.
13. PENTACOSANE	13. B	13. alkane
14. CHOLESTAN-3-OL, (3.ALPHA.)-	14. C	14.

No volatile compounds

FORM 1, PART B

Sample Number
ET 198

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7954

Lab Sample ID No: 31099-5

QC Report No: 239

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By: MAM

Date Sample Received: 8/27/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/3/87

Date Analyzed: 9/3/87

Conc/Dil Factor: 1 pH:7.9

Percent Moisture: 11

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	2 JB
67-64-1	Acetone	21 B
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
156-60-5	Trans-1,2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	5 U
108-88-3	Toluene	1 JB
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

in blank

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration/dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 198

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/2/87

Date Analyzed: 9/24/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

330 x 5 / 1650 = CRQL

CAS Number		ug/Kg
108-95-2	Phenol	44 J
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	330 U
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	53 J
621-64-7	N-Nitroso-Di-n-Propylamine	330 U
67-72-1	Hexachloroethane	330 U
98-95-3	Nitrobenzene	330 U
78-59-1	Isophorone	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	330 U
65-85-0	Benzoic Acid	270 J
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	97 J
106-47-8	4-Chloroaniline	330 U
87-68-3	Hexachlorobutadiene	330 U
59-50-7	4-Chloro-3-Methylphenol	330 U
91-57-6	2-Methylnaphthalene	160 J
77-47-4	Hexachlorocyclopentadiene	330 U
88-06-2	2,4,6-Trichlorophenol	330 U
95-95-4	2,4,5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	330 U
88-74-4	2-Nitroaniline	1600 U
131-11-3	Dimethyl Phthalate	330 U
208-96-8	Acenaphthylene	69 J
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	120 J
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	100 J
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	180 J
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	1700 HRS
120-12-7	Anthracene	300 J
84-74-2	Di-n-Butylphthalate	~~51 J~~
206-44-0	Fluoranthene	2500 HRS
129-00-0	Pyrene	2400 HRS
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	1200
117-81-7	bis(2-Ethylhexyl)Phthalate	170 BJ
218-01-9	Chrysene	1300
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	2300
207-08-9	Benzo(k)Fluoranthene	2300
50-32-8	Benzo(a)Pyrene	780
193-39-5	Indeno(1,2,3-cd)Pyrene	770
53-70-3	Dibenz(a,h)Anthracene	170 J
191-24-2	Benzo(g,h,i)Perylene	770

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 198

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW
Date Extracted/Prepared: 9/2/87
Date Analyzed: 10/8/87
Conc/Dil Factor: 1

GPC Cleanup: NO
Separatory Funnel Extraction: NO
Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = NR or W_s = 1.5 V_t = 5000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: CAL Case No. 7954 Sample No. ET 198

C Report No. 239 Lab Sample No. 3109905AB

robability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
1.	108-11-2	2-PENTANOL, 4-METHYL-	A/BN	299	676	276.4 UG/KG
2.	625-06-9	2-PENTANOL, 2,4-DIMETHYL-	A/BN	345	857	2090.1 UG/KG
3.	17302-23-7	NONANE, 4,5-DIMETHYL-	A/BN	685	874	352.4 UG/KG
4.	6044-71-9	DODECANE, 6-METHYL-	A/BN	806	857	312.3 UG/KG
5.	26730-14-3	TRIDECANE, 7-METHYL-	A/BN	863	789	286.1 UG/KG
6.	17301-32-5	UNDECANE, 4,7-DIMETHYL-	A/BN	890	812	397.3 UG/KG
7.	629-59-4	TETRADECANE	A/BN	980	883	332.1 UG/KG
8.	544-76-3	HEXADECANE	A/BN	1146	895	263.6 UG/KG
9.	1921-70-6	PENTADECANE, 2,6,10,14-TETRAME	A/BN	1226	879	278.0 UG/KG
10.	57-10-3	HEXADECANOIC ACID	A/BN	1409	752	447.1 UG/KG
~~11.~~	~~27554-26-3~~	~~1,2-BENZENEDICARBOXYLIC ACID,~~	~~A/BN~~	~~1781~~	~~897~~	~~401.6 UG/KG~~

COMPOUND NAME	PROBABILITY		COMMENTS
2-PENTANOL, 4-METHYL-	1. C	1.	
2-PENTANOL, 2,4-DIMETHYL-	2. B	2.	
NONANE, 4,5-DIMETHYL-	3. B	3.	
DODECANE, 6-METHYL-	4. B	4.	
TRIDECANE, 7-METHYL-	5. B	5.	Alkanes
UNDECANE, 4,7-DIMETHYL-	6. A	6.	
TETRADECANE	7. A	7.	
HEXADECANE	8. A	8.	
PENTADECANE, 2,6,10,14-TETRAME	9. A	9.	
HEXADECANOIC ACID	10. A	10.	
~~1,2-BENZENEDICARBOXYLIC ACID,~~	~~11.~~	~~11.~~	

No volatile compounds

FORM 1, PART B

Sample Number
ET 199

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7954

Lab Sample ID No: 31099-6

QC Report No: 239

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By: MM

Date Sample Received: 8/27/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/3/87

Date Analyzed: 9/3/87

Conc/Dil Factor: 1 pH:7.7

Percent Moisture: 48

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	6 B
67-64-1	Acetone	350 B
75-15-0	Carbon Disulfide	4 J
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
156-60-5	Trans-1,2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	73
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	5 U
108-88-3	Toluene	2 JB
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

in lab blank

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit that has been adjusted with the U (e.g. 10U) based on necessary concentration or dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C [illegible]

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.

See cover letter.

NR Not Required.

S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 199

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/2/87

Date Analyzed: 9/25/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

330 X 5 = 1650 = ~~CRQL~~ for HRS

CAS Number		ug/Kg
108-95-2	Phenol	1400
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	120 J
95-48-7	2-Methylphenol	1200
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	1400
621-64-7	N-Nitroso-Di-n-Propylamine	330 U
67-72-1	Hexachloroethane	330 U
98-95-3	Nitrobenzene	330 U
78-59-1	Isophorone	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	730
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	100 J
106-47-8	4-Chloroaniline	330 U
87-68-3	Hexachlorobutadiene	330 U
59-50-7	4-Chloro-3-Methylphenol	330 U
[illegible]	2-Methylnaphthalene	[illegible]
77-47-4	Hexachlorocyclopentadiene	330 U
88-06-2	2,4,6-Trichlorophenol	330 U
95-95-4	2,4,5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	330 U
88-74-4	2-Nitroaniline	1600 U
131-11-3	Dimethyl Phthalate	330 U
208-96-8	Acenaphthylene	100 J
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	110 J
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	85 J
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	140 J
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	640
120-12-7	Anthracene	230 J
84-74-2	Di-n-Butylphthalate	150 J
206-44-0	Fluoranthene	1200
129-00-0	Pyrene	1100
85-68-7	Butylbenzylphthalate	110 J
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	650
[illegible]	bis(2-Ethylhexyl)Phthalate	2000 B
218-01-9	Chrysene	700
[illegible]	Di-n-Octyl Phthalate	[illegible]
205-99-2	Benzo(b)Fluoranthene	[illegible]
207-08-9	Benzo(k)Fluoranthene	[illegible]
50-32-8	Benzo(a)Pyrene	700
193-39-5	Indeno(1,2,3-cd)Pyrene	600
53-70-3	Dibenz(a,h)Anthracene	200 J
191-24-2	Benzo(g,h,i)Perylene	580

(1) - Cannot be separated from diphenylamine

Prepared by: [illegible]

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 199

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 9/2/87

Date Analyzed: 10/6/87

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = NR or W_s = 1.5 V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: 7/85

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7954 Sample No. ET 199

QC Report No. 239 Lab Sample No. 3109906AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
1.	108-88-3	BENZENE, METHYL-	A/BN	222	964	3875.5 UG/KG
2.	26232-98-4	2-PENTENE, 4,4-DIMETHYL-	A/BN	271	877	655.0 UG/KG
3.	108-11-2	2-PENTANOL, 4-METHYL-	A/BN	313	617	262.3 UG/KG
4.	625-06-9	2-PENTANOL, 2,4-DIMETHYL-	A/BN	359	842	3160.9 UG/KG
5.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	385	939	235.0 UG/KG
6.	544-76-3	HEXADECANE	A/BN	1035	744	285.6 UG/KG
7.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	A/BN	1227	844	512.3 UG/KG
8.	2467-02-9	PHENOL, 2,2'-METHYLENEBIS-	A/BN	1431	797	602.9 UG/KG
9.	2467-03-0	PHENOL, 2-I(4-HYDROXYPHENYL)ME	A/BN	1445	807	362.2 UG/KG
10.	2467-02-9	PHENOL, 2,2'-METHYLENEBIS-	A/BN	1450	843	2540.6 UG/KG
11.	620-92-8	PHENOL, 4,4'-METHYLENEBIS-	A/BN	1491	847	1848.4 UG/KG
12.	2439-35-2	2-PROPENOIC ACID, 2-(DIMETHYLA	A/BN	1503	729	579.9 UG/KG
13.	4455-26-9	1-OCTANAMINE, N-METHYL-N-OCTYL	A/BN	1514	426	517.9 UG/KG
14.	5074-71-5	PHOSPHINE, BIS(PENTAFLUOROPHEN	A/BN	1546	487	481.3 UG/KG
15.	492-22-8	THIOXANTHONE	A/BN	1625	630	397.5 UG/KG
16.	40801-44-3	1,3-CYCLOHEXADIENE-1-CARBOXYLI	A/BN	1879	562	1110.3 UG/KG
17.	77683-10-4	ESTRA-1,3,5(10)-TRIEN-17-ONE,	A/BN	2089	395	755.4 UG/KG
18.	620-92-8	PHENOL, 4,4'-METHYLENEBIS-	A/BN	2329	429	367.8 UG/KG
19.	55030-60-9	S-INDACENE, 1,2,3,5,6,7-HEXAHY	A/BN	2487	359	370.9 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. BENZENE, METHYL-	1. D	1.
2. 2-PENTENE, 4,4-DIMETHYL-	2. A	2.
3. 2-PENTANOL, 4-METHYL-	3. B	3.
4. 2-PENTANOL, 2,4-DIMETHYL-	4. A	4.
5. BENZENE, 1,3-DIMETHYL-	5. D	5.
6. HEXADECANE	6. A	6. Alkanes
7. HEPTADECANE, 2,6-DIMETHYL-	7. A	7.
8. PHENOL, 2,2'-METHYLENEBIS-	8. A	8.
9. PHENOL, 2-I(4-HYDROXYPHENYL)ME	9. A	9.
10. PHENOL, 2,2'-METHYLENEBIS-	10. A	10. or Isomers
11. PHENOL, 4,4'-METHYLENEBIS-	11. A	11.
12. 2-PROPENOIC ACID, 2-(DIMETHYLA	12. C	12.
13. 1-OCTANAMINE, N-METHYL-N-OCTYL	13. B	13.
14. PHOSPHINE, BIS(PENTAFLUOROPHEN	14. C	14. DFTPP Breakdown
15. THIOXANTHONE	15. B	15.
16. 1,3-CYCLOHEXADIENE-1-CARBOXYLI	16. C	16.
17. ESTRA-1,3,5(10)-TRIEN-17-ONE,	17. C	17.
18. PHENOL, 4,4'-METHYLENEBIS-	18. B	18.
19. S-INDACENE, 1,2,3,5,6,7-HEXAHY	19. C	19.

No volatile Compounds

Sample Number
ET 200

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7954

Lab Sample ID No: 31099-7

QC Report No: 239

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By: [signature]

Date Sample Received: 8/27/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/3/87

Date Analyzed: 9/3/87

Conc/Dil Factor: 1 pH:10

Percent Moisture: 13

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 B
67-64-1	Acetone	36 B
75-15-0	Carbon Disulfide	1 J
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
156-60-5	Trans-1,2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	5 U
108-88-3	Toluene	13 B
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	3 J

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value

U Indicates compound was analyzed for but not detected. Report the minimum [illegible] detection limit. (If the sample [illegible] detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10ng/ul in the final extract should be confirmed by GC/MS

B [illegible] blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.

e See cover letter.

NR Not Required.

S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 200

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/2/87

Date Analyzed: 9/25/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	840
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	650
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	810
621-64-7	N-Nitroso-Di-n-Propylamine	330 U
67-72-1	Hexachloroethane	330 U
98-95-3	Nitrobenzene	330 U
78-59-1	Isophorone	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	520
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	870
106-47-8	4-Chloroaniline	330 U
87-68-3	Hexachlorobutadiene	330 U
59-50-7	4-Chloro-3-Methylphenol	330 U
91-57-6	2-Methylnaphthalene	630
77-47-4	Hexachlorocyclopentadiene	330 U
88-06-2	2,4,6-Trichlorophenol	330 U
95-95-4	2,4,5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	330 U
88-74-4	2-Nitroaniline	1600 U
131-11-3	Dimethyl Phthalate	330 U
208-96-8	Acenaphthylene	330 U
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	73 J
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	260 J
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	140 J
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	980
120-12-7	Anthracene	150 J
84-74-2	Di-n-Butylphthalate	150 J
206-44-0	Fluoranthene	410
129-00-0	Pyrene	420
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	230 J
117-81-7	bis(2-Ethylhexyl)Phthalate	540 B
218-01-9	Chrysene	300 J
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	320 J
207-08-9	Benzo(k)Fluoranthene	320 J
50-32-8	Benzo(a)Pyrene	120 J
193-39-5	Indeno(1,2,3-cd)Pyrene	77 J
53-70-3	Dibenz(a,h)Anthracene	330 U
191-24-2	Benzo(g,h,i)Perylene	140 J

(1) - Cannot be separated from Diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 200

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 9/2/87

Date Analyzed: 10/6/87

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = NR or W_s = 1.5 V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: 698 7/85

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7955 Sample No. ET 200

QC Report No. 239 Lab Sample No. 3109907AB

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
1.	108-88-3	BENZENE, METHYL-	A/BN	214	963	4465.7 UG/KG
2.	56336-06-2	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	A/BN	261	877	735.5 UG/KG
3.	625-23-0	2-HEXANOL, 2-METHYL-	A/BN	353	796	1941.3 UG/KG
4.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	380	947	614.5 UG/KG
5.	17302-23-7	NONANE, 4,5-DIMETHYL-	A/BN	686	886	926.6 UG/KG
6.	17301-32-5	UNDECANE, 4,7-DIMETHYL-	A/BN	794	852	992.6 UG/KG
7.	88-69-7	PHENOL, 2-(1-METHYLETHYL)-	A/BN	797	830	488.0 UG/KG
8.	6044-71-9	DODECANE, 6-METHYL-	A/BN	808	764	376.0 UG/KG
9.	99-89-8	PHENOL, 4-(1-METHYLETHYL)-	A/BN	825	763	320.3 UG/KG
10.	26730-14-3	TRIDECANE, 7-METHYL-	A/BN	865	769	769.9 UG/KG
11.	62108-26-3	DECANE, 2,6,8-TRIMETHYL-	A/BN	892	846	1823.1 UG/KG
12.	629-59-4	TETRADECANE	A/BN	983	899	2452.8 UG/KG
13.	581-40-8	NAPHTHALENE, 2,3-DIMETHYL-	A/BN	1014	862	709.4 UG/KG
14.	544-76-3	HEXADECANE	A/BN	1036	846	1825.8 UG/KG
15.	544-76-3	HEXADECANE	A/BN	1148	886	1993.6 UG/KG
16.	629-78-7	HEPTADECANE	A/BN	1225	910	1493.1 UG/KG
17.	1921-70-6	PENTADECANE, 2,6,10,14-TETRAME	A/BN	1228	901	1374.9 UG/KG
18.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1297	840	1487.6 UG/KG
19.	629-92-5	NONADECANE	A/BN	1366	882	1193.4 UG/KG
20.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1433	860	827.6 UG/KG
21.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1496	824	824.9 UG/KG
22.	629-97-0	DOCOSANE	A/BN	1556	652	802.9 UG/KG

	COMPOUND NAME	PROBABILITY		COMMENTS
1.	BENZENE, METHYL-	1. A+D	1.	
2.	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	~~B 2. C, A, (BA)~~	2. or isomer	
3.	2-HEXANOL, 2-METHYL-	3. in blank	3.	
4.	BENZENE, 1,3-DIMETHYL-	4. A+D	4.	
5.	NONANE, 4,5-DIMETHYL-	5. B	5. alkane	
6.	UNDECANE, 4,7-DIMETHYL-	6. B	6. alkane	
7.	PHENOL, 2-(1-METHYLETHYL)-	7. A	7. or isomer	
8.	DODECANE, 6-METHYL-	8. B	8. alkane	
9.	PHENOL, 4-(1-METHYLETHYL)-	9. A	9. or isomer	
10.	TRIDECANE, 7-METHYL-	10. B	10. alkane	
11.	DECANE, 2,6,8-TRIMETHYL-	11. B	11. "	
12.	TETRADECANE	12. BA	12. "	
13.	NAPHTHALENE, 2,3-DIMETHYL-	13. A	13. or isomer	
14.	HEXADECANE	14. B	14. alkane	
15.	[illegible]	15. BA	15. "	
16.	HEPTADECANE	16. B	16. "	
17.	PENTADECANE, 2,6,10,14-TETRAME	17. B	17. "	
18.	IRON, TRICARBONYL[N-(PHENYL-2-	18. B	18. "	
19.	NONADECANE	19. B	19. "	
20.	IRON, TRICARBONYL[N-(PHENYL-2- (W)	20. BC	20. "	
21.	IRON, TRICARBONYL[N-(PHENYL-2- (W)	21. BC	21. "	
22.	DOCOSANE	22. B	22. "	

(W)

No usable compounds

Sample Number
ET 194

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7954

Lab Sample ID No: 31099-1

QC Report No: 239

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By: [illegible]

Date Sample Received: 8/27/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/3/87

Date Analyzed: 9/3/87

Conc/Dil Factor: 1 pH:8.0

Percent Moisture: 29

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	4 JB
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	3 JB
67-64-1	Acetone	55 B
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
156-60-5	Trans-1,2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	5 U
108-88-3	Toluene	4 JB
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the [illegible] detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides ≥ 10ng/ul in the final extract should be confirmed by GC/MS

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.

See cover letter.

NR Not Required.

S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 194

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/2/87

Date Analyzed: 9/23/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	550
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	590
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	480
621-64-7	N-Nitroso-Di-n-Propylamine	330 U
67-72-1	Hexachloroethane	330 U
98-95-3	Nitrobenzene	330 U
78-59-1	Isophorone	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	270
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	330 U
106-47-8	4-Chloroaniline	330 U
87-68-3	Hexachlorobutadiene	330 U
[illegible]	4-Chloro-3-Methylphenol	330 U
[illegible]	[illegible]	[illegible]
77-47-4	Hexachlorocyclopentadiene	330 U
88-06-2	2,4,6-Trichlorophenol	330 U
95-95-4	2,4,5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	330 U
88-74-4	2-Nitroaniline	1600 U
131-11-3	Dimethyl Phthalate	330 U
208-96-8	Acenaphthylene	150 J
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	330 U
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	330 U
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	330 U
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	260 J
120-12-7	Anthracene	150 J
84-74-2	Di-n-Butylphthalate	520
206-44-0	Fluoranthene	700
129-00-0	Pyrene	570
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	370
117-81-7	bis(2-Ethylhexyl)Phthalate	260 BJ
218-01-9	Chrysene	410
[illegible]	[illegible]	[illegible]
205-99-2	Benzo(b)Fluoranthene	730
207-08-9	Benzo(k)Fluoranthene	730
50-32-8	Benzo(a)Pyrene	290 J
193-39-5	Indeno(1,2,3-cd)Pyrene	370
53-70-3	Dibenz(a,h)Anthracene	68 J
191-24-2	Benzo(g,h,i)Perylene	290 J

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 194

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 9/2/87

Date Analyzed: 10/5/87

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = NR or W_s = 1.5 V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: 7/85

ORGANICS ANALYSIS DATA SHEET
PAGE 4
TENTATIVELY IDENTIFIED COMPOUNDS

LAB NAME: CAL CASE NO. ~~7953~~ 7954 SAMPLE NO. ET 194

QC REPORT NO. 239 LAB SAMPLE NO. 3109901AB

PROBABILITY THAT IDENTIFICATION IS CORRECT:
A= HIGH B= MODERATE C= LOW D= SOLVENT IMPURITY, SEE VOA

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	ESTIMATED CONC. J VALUE
1.	108-88-3	BENZENE, METHYL-	A/BN	228	960	2894.7 UG/K(
2.	594-56-9	1-BUTENE, 2,3,3-TRIMETHYL-	A/BN	281	885	584.3 UG/K(
3.	108-11-2	2-PENTANOL, 4-METHYL-	A/BN	318	653	284.6 UG/K(
4.	625-06-9	2-PENTANOL, 2,4-DIMETHYL-	A/BN	362	851	4001.7 UG/K(
5.	57-10-3	HEXADECANOIC ACID	A/BN	1408	775	630.1 UG/K(
6.	111-03-5	9-OCTADECENOIC ACID (Z)-, 2,3-	A/BN	1521	606	219.4 UG/K(
7.	36653-82-4	1-HEXADECANOL	A/BN	1876	765	376.7 UG/K(
8.	630-06-8	HEXATRIACONTANE	A/BN	2370	773	288.1 UG/K(

COMPOUND NAME	PROBABILITY	COMMENTS
1. BENZENE, METHYL-	1. A	1. toluene
2. 1-BUTENE, 2,3,3-TRIMETHYL-	2. A	2. or isomer
3. 2-PENTANOL, 4-METHYL-	3. B	3.
4. 2-PENTANOL, 2,4-DIMETHYL-	4. B	4.
5. HEXADECANOIC ACID	5. A	5.
6. 9-OCTADECENOIC ACID (Z)-, 2,3-	6. B	6. related
7. 1-HEXADECANOL	7. B	7. alcohol or alkene
8. HEXATRIACONTANE	8. B	8. alkane

No volatile compounds

FORM 1, PART B

Sample Number
ET 195

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7954

Lab Sample ID No: 31099-2

QC Report No: 239

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By: [illegible]

Date Sample Received: 8/27/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/3/87

Date Analyzed: 9/3/87

Conc/Dil Factor: 1 pH:7.7

Percent Moisture: 16

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	2 JB
67-64-1	Acetone	130 B
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
156-60-5	Trans-1,2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	23
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	5 U
108-88-3	Toluene	5 B
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

Found in Lab Blank

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U), unless it is modified by dilution actions. (This is not necessarily the instrument detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for the sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide/PCB where the identification has been confirmed by GC/MS. Single component pesticides where the final extract should be confirmed by GC/MS.

B This flag is used when the analyte is found in the blank as well as a sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 195

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/2/87

Date Analyzed: 9/24/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	170 J
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	180 J
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	250 J
621-64-7	N-Nitroso-Di-n-Propylamine	330 U
67-72-1	Hexachloroethane	330 U
98-95-3	Nitrobenzene	330 U
78-59-1	Isophorone	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	160 J
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	290 J
106-47-8	4-Chloroaniline	330 U
87-68-3	Hexachlorobutadiene	330 U
59-50-7	4-Chloro-3-Methylphenol	330 U
91-57-6	2-Methylnaphthalene	600
77-47-4	Hexachlorocyclopentadiene	330 U
88-06-2	2,4,6-Trichlorophenol	330 U
95-95-4	2,4,5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	330 U
88-74-4	2-Nitroaniline	1600 U
131-11-3	Dimethyl Phthalate	330 U
208-96-8	Acenaphthylene	64 J
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	330 U
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	130 J
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	330 U
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	560
120-12-7	Anthracene	160 J
84-74-2	Di-n-Butylphthalate	120 J
206-44-0	Fluoranthene	700
129-00-0	Pyrene	710
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	510
117-81-7	bis(2-Ethylhexyl)Phthalate	480 B
218-01-9	Chrysene	400
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	500
207-08-9	Benzo(k)Fluoranthene	600
50-32-8	Benzo(a)Pyrene	390
193-39-5	Indeno(1,2,3-cd)Pyrene	290 J
53-70-3	Dibenz(a,h)Anthracene	100 J
191-24-2	Benzo(g,h,i)Perylene	280 J

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 195

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 9/2/87

Date Analyzed: 10/8/87

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	87
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

80 x 5 = 400
= HCL
Not usable for HCL

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = NR or W_s = 1.5 V_t = 5000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: CAL Case No. 7953 Sample No. ET 195

C Report No. 239 Lab Sample No. 3109902AB

robability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
1.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	416	928	146.6 UG/KG
2.	17312-76-4	UNDECANE, 6,6-DIMETHYL-	A/BN	865	716	121.6 UG/KG
3.	90-12-0	NAPHTHALENE, 1-METHYL-	A/BN	915	899	285.2 UG/KG
4.	629-59-4	TETRADECANE	A/BN	981	848	209.4 UG/KG
5.	575-41-7	NAPHTHALENE, 1,3-DIMETHYL-	A/BN	1013	903	248.5 UG/KG
6.	544-76-3	HEXADECANE	A/BN	1035	718	256.5 UG/KG
7.	544-76-3	HEXADECANE	A/BN	1147	829	260.5 UG/KG
8.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	A/BN	1228	885	721.8 UG/KG
9.	529-05-5	AZULENE, 7-ETHYL-1,4-DIMETHYL-	A/BN	1269	607	147.7 UG/KG
0.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1296	826	256.5 UG/KG
1.	5074-71-5	PHOSPHINE, BIS(PENTAFLUOROPHEN	A/BN	1373	823	573.2 UG/KG
2.	12427-38-2	MANEB (ACN)	A/BN	1494	735	521.0 UG/KG
3.	129-00-0	PYRENE	A/BN	1535	841	566.1 UG/KG
4.	5074-71-5	PHOSPHINE, BIS(PENTAFLUOROPHEN	A/BN	1546	487	597.1 UG/KG
5.	629-92-5	NONADECANE	A/BN	1722	823	262.2 UG/KG
6.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1861	758	250.3 UG/KG
7.	1454-85-9	1-HEPTADECANOL	A/BN	1879	754	260.9 UG/KG
8.	629-99-2	PENTACOSANE	A/BN	2065	824	600.6 UG/KG
9.	629-99-2	PENTACOSANE	A/BN	2376	788	476.8 UG/KG

	COMPOUND NAME	PROBABILITY		COMMENTS
.	BENZENE, 1,3-DIMETHYL-	1. D	1.	
2.	UNDECANE, 6,6-DIMETHYL-	2. B	2.	alkane
3.	NAPHTHALENE, 1-METHYL-	3. A	3.	
4.	TETRADECANE	4. B	4.	alkane
5.	NAPHTHALENE, 1,3-DIMETHYL-	5. A	5.	or isomer
6.	HEXADECANE	6. B	6.	alkane
7.	HEXADECANE	7. A	7.	
8.	HEPTADECANE, 2,6-DIMETHYL-	8. B	8.	alkane
9.	AZULENE, 7-ETHYL-1,4-DIMETHYL-	9. B	9.	
0.	IRON, TRICARBONYL[N-(PHENYL-2-	10. C	10.	alkane
1.	PHOSPHINE, BIS(PENTAFLUOROPHEN	11. A	11.	DFTPP
2.	MANEB (ACN)	12. C	12.	Probably sulfur
3.	PYRENE	13. A	13.	HSL
4.	PHOSPHINE, BIS(PENTAFLUOROPHEN	14. C	14.	DFTPP artifact
5.	NONADECANE	15. B	15.	alkane
6.	IRON, TRICARBONYL[N-(PHENYL-2-	16. C	16.	"
7.	1-HEPTADECANOL	17. B	17.	alcohol
8.	PENTACOSANE	18. B	18.	alkane
9.	PENTACOSANE	19. B	19.	"

No volatile compounds

FORM I Part B

Sample Number
ET 196

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7954

Lab Sample ID No: 31099-3

QC Report No: 239

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By: [illegible]

Date Sample Received: 8/27/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/3/87

Date Analyzed: 9/3/87

Conc/Dil Factor: 1 pH:8.4

Percent Moisture: 12

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	2 JB
67-64-1	Acetone	25 B
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
156-60-5	Trans-1,2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1,1,1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/Kg
79-34-5	1,1,2,2-Tetrachloroethane	5 U
78-87-5	1,2-Dichloropropane	5 U
10061-02-6	Trans-1,3-Dichloropropene	5 U
79-01-6	Trichloroethene	5 U
124-48-1	Dibromochloromethane	5 U
79-00-5	1,1,2-Trichloroethane	5 U
71-43-2	Benzene	5 U
10061-01-5	cis-1,3-Dichloropropene	5 U
110-75-8	2-Chloroethylvinylether	10 U
75-25-2	Bromoform	5 U
591-78-6	2-Hexanone	10 U
108-10-1	4-Methyl-2-Pentanone	10 U
127-18-4	Tetrachloroethene	5 U
108-88-3	Toluene	3 JB
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

Data Reporting Qualifiers

For reporting results to EPA, the following results qualifiers are used. Additional flags or footnotes explaining results are encouraged. However, the definition of each flag must be explicit.

Value If the result is a value greater than or equal to the detection limit, report the value.

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the sample with the U (e.g. 10U) based on necessary concentration and sample aliquot. (For [illegible] the minimum detection limit.) The footnote should read: U - Compound was analyzed for but not detected. The number is the minimum attainable detection limit for this sample

J Indicates an estimated value. This flag is used either when estimating a concentration for tentatively identified compounds where a 1:1 response is assumed or when the mass spectral data indicated the presence of a compound that meets the identification criteria but the result is less than the specified detection limit but greater than zero. (e.g. 10J). If limit of detection is 10ug/l and a concentration of 3ug/l is calculated, report as 3J

C This flag applies to pesticide parameters where the identification has been confirmed by GC/MS. Single component pesticides that meet identification criteria.

B [illegible] blank contamination and where the data user to make appropriate action.

Other Other specific flags and footnotes may be required to properly define the results. If used, they must be fully described and such description attached to the data summary report.

NA Not Analyzed.
See cover letter.
NR Not Required.
S Spiked Compound.

225

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 196

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 9/2/87

Date Analyzed: 9/24/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	870
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	610
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	950
621-64-7	N-Nitroso-Di-n-Propylamine	330 U
67-72-1	Hexachloroethane	330 U
98-95-3	Nitrobenzene	330 U
78-59-1	Isophorone	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	450
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	71 J
[illegible]	4-Chloroaniline	330 U
[illegible]	Hexachlorobutadiene	[illegible]
[illegible]	4-Chloro-3-Methylphenol	[illegible]
[illegible]	2-Methylnaphthalene	[illegible]
77-47-4	Hexachlorocyclopentadiene	330 U
88-06-2	2,4,6-Trichlorophenol	330 U
95-95-4	2,4,5-Trichlorophenol	1600 U
91-58-7	2-Chloronaphthalene	330 U
88-74-4	2-Nitroaniline	1600 U
131-11-3	Dimethyl Phthalate	330 U
208-96-8	Acenaphthylene	78 J
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	73 J
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	70 J
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	110 J
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	120 J
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	610
120-12-7	Anthracene	230 J
84-74-2	Di-n-Butylphthalate	86 J
206-44-0	Fluoranthene	1100
129-00-0	Pyrene	900
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	[illegible]
117-81-7	Bis(2-Ethylhexyl)Phthalate	[illegible]
218-01-9	Chrysene	[illegible]
117-84-0	Di-n-Octyl Phthalate	[illegible]
205-99-2	Benzo(b)Fluoranthene	1000
207-08-9	Benzo(k)Fluoranthene	1000
50-32-8	Benzo(a)Pyrene	500
193-39-5	Indeno(1,2,3-cd)Pyrene	300 J
53-70-3	Dibenz(a,h)Anthracene	67 J
191-24-2	Benzo(g,h,i)Perylene	290 J

(1) - Cannot be separated from diphenylamine

226

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7954

Sample Number
ET 196

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 9/2/87

Date Analyzed: 10/6/87

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	8.0 U
319-85-7	Beta-BHC	8.0 U
319-86-8	Delta-BHC	8.0 U
58-89-9	Gamma-BHC (Lindane)	8.0 U
76-44-8	Heptachlor	8.0 U
309-00-2	Aldrin	8.0 U
1024-57-3	Heptachlor Epoxide	8.0 U
959-98-8	Endosulfan I	8.0 U
60-57-1	Dieldrin	16 U
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	170
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

9(=CRLL

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = NR or W_s = 1.5 V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by: hw

227

7/85

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

ab Name: CAL Case No. ~~1953~~ 1954 Sample No. ET 196

C Report No. 239 Lab Sample No. 3109903AB

robability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= SOLVENT IMPURITY, see VOA

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
1.	108-88-3	BENZENE, METHYL-	A/BN	230	964	6834.6 UG/KG
2.	56336-06-2	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	A/BN	282	876	1254.3 UG/KG
3.	625-23-0	2-HEXANOL, 2-METHYL-	A/BN	364	792	7006.3 UG/KG
4.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	392	943	434.7 UG/KG
5.	629-59-4	TETRADECANE	A/BN	983	852	354.5 UG/KG
6.	1921-70-6	PENTADECANE, 2,6,10,14-TETRAME	A/BN	1037	544	434.0 UG/KG
7.	544-76-3	HEXADECANE	A/BN	1149	845	426.4 UG/KG
8.	629-78-7	HEPTADECANE	A/BN	1225	848	463.0 UG/KG
9.	1921-70-6	PENTADECANE, 2,6,10,14-TETRAME	A/BN	1230	835	397.4 UG/KG
0.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	A/BN	1298	721	290.2 UG/KG
1.	610-48-0	ANTHRACENE, 1-METHYL-	A/BN	1407	688	318.9 UG/KG
2.	57-10-3	HEXADECANOIC ACID	A/BN	1410	670	663.7 UG/KG
3.	5074-71-5	PHOSPHINE, BIS(PENTAFLUOROPHEN	A/BN	1548	500	1049.9 UG/KG
4.	629-99-2	PENTACOSANE	A/BN	1724	824	378.5 UG/KG
5.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1864	667	350.7 UG/KG
6.	661-19-8	1-DOCOSANOL	A/BN	1882	710	360.2 UG/KG
7.	629-99-2	PENTACOSANE	A/BN	2068	804	486.4 UG/KG
8.	50-32-8	BENZO[A]PYRENE	A/BN	2097	620	810.1 UG/KG
9.	629-99-2	PENTACOSANE	A/BN	2380	630	329.9 UG/KG

	COMPOUND NAME	PROBABILITY	COMMENTS
.	BENZENE, METHYL-	1. A+D	1.
2.	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	2. A	2. C_7H_{14} isomer
3.	2-HEXANOL, 2-METHYL-	3. B	3.
.	BENZENE, 1,3-DIMETHYL-	4. A+D	4. or isomer
5.	TETRADECANE	5. B	5. alkane
.	PENTADECANE, 2,6,10,14-TETRAME	6. B	6. alkane
.	HEXADECANE	7. B	7. alkane
.	HEPTADECANE	8. B	8. alkane
.	PENTADECANE, 2,6,10,14-TETRAME	9. B	9. "
.	HEPTADECANE, 2,6-DIMETHYL-	10. B	10. "
.	ANTHRACENE, 1-METHYL-	11. B	11.
.	HEXADECANOIC ACID	12. A	12.
.	PHOSPHINE, BIS(PENTAFLUOROPHEN	13. C	13. DFTPP breakdown
.	PENTACOSANE	14. B	14. alkane
.	IRON, TRICARBONYL[N-(PHENYL-2-	15. ~~A~~ C	15. alkane
.	1-DOCOSANOL	16. B	16.
.	PENTACOSANE	17. B	17. alkane
.	BENZO[A]PYRENE	18. A	18. ~~or~~ isomer
.	PENTACOSANE	19. B	19. alkane

No volatile compounds

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111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

International Specialists in the Environment

CRL Receipt Date 9/29/87 FIT Receipt Date 10/21/87 Review Completed 10/22/87

TO: ~~Margaret Bettin~~ Dirk Kaiser

FROM: Brenda R. Jones

SUBJECT: Brook Park Service Center

PAN: OH0731 CASE # 7954

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#____	Low Soil	#7	Low Soil
____	Low Water	____	Low Water
____	Drinking Water	____	Drinking Water
____	Other	____	Other

Project Data Status ____ Completed!!

✓ Incomplete, awaiting: ____

FIT Data Review Findings:

1) Missing form I for MEU 820
2) See attached memo

Check Data Sheets for Transcription Errors

✓ Compounds were detected in sample(s); see enclosed sheet.

Book No. 6 Page No. ~~215~~ 284 Date Sampled 9/26/87

26U:001

OCT 21 1987

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International Specialists in the Environment

MEMORANDUM

DATE: 22 Oct. 87
TO: File
FROM: Brenda Robbins Jones BRJ
SUBJECT: Brook Park Service Center
PAN #: OH0731 CASE #: 7954

The reviewer of this inorganic/~~organic~~ data package correctly notes that spike recoveries for the ~~compounds~~/elements listed below are all biased low and should be considered estimated (i.e. qualified with a J). However, the data, at worst, underestimates the actual concentrations found in the sample.

It is my opinion that this data is usable for HRS purposes.

99N:5X

element	%R
Arsenic	72%

OCT 21 1987

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CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: Brook Park Service Center
PAN#: OH0731
DATE: 22 Oct. 87
CASE #: 7954
UNITS: mg/kg
REVIEWER: BRJ

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	MEU 821	822	501	502	503	504	
	ALUMINUM									
	ANTIMONY									
	ARSENIC	2		12.3	10.4		9.2	12.3		
	BARIUM									
	BERYLLIUM	1		1.1	2.4	0.4	1.0		1.0	
	CADMIUM	1							11.3	
	CHROMIUM	2		20	17	28	29	31	93	
	COBALT	10		10	6	5	8	11	4	
	COPPER	5		33	25	29	23	63	79	
	LEAD	1		106.7	82.9	121.2	54.7	135.2	395	
	MERCURY	.008		0.2		0.22	0.5		0.4	
	NICKEL	8		28	16	31	31	32	37	
	SELENIUM									
	SILVER	2						2.6	2.7	
	THALLIUM									
	TIN	8							40	
	VANADIUM	10		25.2	18.3	12.9	19	21.7	8.2	
	ZINC									
	CYANIDE	2					0.94			

OCT 21 1987

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 10/16/87

SUBJECT: Review of Region V CLP Data Received for Review on 9/29/87

OCT 21 1987

FROM: Curtis Ross, Director (5SCRL) Central Regional Laboratory Jay Thakkar

TO: Data User: FIT

We have reviewed the data for the following case(s).

SITE NAME: BROOK PARK SERVICE CENTER SMO case No. 7954

EPA Data Set No. SF4380 No. of Samples: 7 D.U./Activity Numbers Y905/C72100

CRL No. 87FK17S44 -50

SMO Traffic No. MEU820-822, MEU501-504

CLP Laboratory: CAL Hrs. Required for Review: 2

Following are our findings: This review covers 7 low soil samples analyzed for metals and cyanide. Spike recoveries for Sb (44%), As (72%) are low. Detection limits for Sb may be bias low. All Sb, As data are estimate. Duplicate analysis case high RPD's for Al (29%), Pb (110%, 38%), mg (46%), Zn (43%). Limits of ± 35% apply for soil duplicate analysis. All Pb, mg, Zn data are estimated. All other QC audits are acceptable.

Ada Lesia
10.16.87

( ) Data are acceptable for use.
(X) Data are acceptable for use with qualifications noted above.
( ) Data are preliminary - pending verification by Contractor Laboratory.
( ) Data are unacceptable.

cc: Duane Geuder, Quality Assurance Officer, EPA Support Services
James Petty, Chief Quality Assurance Research, EMSL, Las Vegas

EPA FORM 1320-6 (Rev. 5/87)

California Analytical Laboratory
Enseco Incorporated

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818--Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

REPORTED: 9-24-87
Received: 8-27-87

OCT 21 1987

COVER PAGE
INORGANIC ANALYSES DATA PACKAGE

SF 4380

Lab Name: ENSECO-California Analytical Labs, Inc.
Case No.: 7954
Q.C. Report No.: 7954
SOW No.: 784
Contract No.: 68-01-7070 Lot A

Enseco

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEU 820	31100-1	MEU 821	31100-2
MEU 822	31100-3	MEU 501	31100-4
MEU 502	31100-5	MEU 503	31100-6
MEU 504	31100-7		

ICP Interelement and background corrections applied? Yes.

AA corrections consist of Zeeman effect background correction on Perkin-Elmer 3030 instruments and correction of background absorption by D2 lamp on Varian 875 instruments. Corrections are applied before generation of raw data.

FOOTNOTES:
NR - not required by contract at this time
Value - If the result is a value greater than or equal to the instrument detection limit but less than the contract required detection limit, report the value in brackets (ie.[10]). Indicate the analytical method used with P (for ICP/Flame AA), F (for furnace), or CV (for cold vapor).
U - Indicates element was analyzed for but not detected. Report with the detection limit value (e.g., <10U).
E - Indicates a value estimated or not reported due to the presence of interference. Explanatory note included on cover page.
S - Indicates value determined by Method of Standard Addition.
R - Indicates spike sample recovery is not within control limits.
* - Indicates duplicate analysis is not within control limits.
+ - Indicates the correlation coefficient for method of standard addition is less than 0.995.

2544 Industrial Boulevard
West Sacramento, California 95691
916/372-1393

Facsimile: 916/372-1059

Case No: 7954
REPORTED: 9-24-87
Page 2

OCT 21 1987

COMMENTS: The Initial Calibration Verification (ICV) for ICP analysis of the elements Ag, Ba, Al, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Ni, K, Na, V, and Zn is labelled ICV I. The ICV for ICP analysis of the element Sb is labelled ICV 3. We prepare our own standard labelled "Reference Standard" and use this as the ICP ICV for the elements As, Se, Tl and Sn. We do this because there is no standard available from EPA which is at the appropriate concentration of these four elements for ICP analysis.

For the furnace analysis of As, Se, Tl and Pb, our lab uses the appropriate ICV standards supplied by U.S. EPA-EMSL-LV.

Sample MEU 820 (31100-1) was not flagged for poor lead (furnace) spike recovery, because the concentration of lead in the sample was greater than four times the spike value (See SOW 784 E-6.5).

Sample MEU 820 (31100-1) was not flagged with "*" for chromium, because the sample was less than five times CRDL, and the difference between MEU 820 (31100-1) and MEU 820 (31100-1) Dup was less than one CRDL (See SOW 784 E-9.6).

John R. Barnett
Inorganic Laboratory
Manager

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MEU 820
DATE: 9-24-87

INORGANIC ANALYSIS SHEET

Received
29 Oct. 87
BRJ

LAB NAME: CALIF.ANAL.LAB. CASE NO: 7954
SOW NO.: 784 QC RPT.# 7954
LAB.SAMPLE NO.: 31100-1

ELEMENTS IDENTIFIED AND MEASURED

CONC.: LOW: XX MEDIUM:
MATRIX: SOIL: XX

ELEMENTS..METHOD		MG/KG		DRY WEIGHT
1. ALUMINIUM...P		17636		*
2. ANTIMONY....P		7U		R
3. ARSENIC.....F		11.9		R
4. BARIUM.....P	[	104		
5. BERYLLIUM...P	[	1.1]		
6. CADMIUM.....P		1.5U		
7. CALCIUM.....P		25469		
8. CHROMIUM....P		22		
9. COBALT.....P	[	12]		
10.COPPER.....P		21		
11.IRON.....P		27321		
12.LEAD.....F		82.1	S	*
13.MAGNESIUM...P		8914		*
14.MANGANESE...P		722		
15.MERCURY....CV		0.1U		
16.NICKEL.....P	[	24		
17.POTASSIUM...P	[	2134]		
18.SELENIUM....F		3.1U		
19.SILVER.....P		1.7U		
20.SODIUM.....P	[	115]		
21.THALLIUM....F		6U		
22.TIN.....P	[	13]		
23.VANADIUM....P		34.1		
24.ZINC.....P		112		*
25.CYANIDE.....C		0.6U		
% SOLID		81		

COMMENTS:

LAB MANAGER: JRB

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MEU 821
DATE: 9-24-87

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB.
SOW NO.: 784
LAB.SAMPLE NO.: 31100-2

CASE NO: 7954
QC RPT.# 7954

ELEMENTS IDENTIFIED AND MEASURED

OCT 21 1987

CONC.: LOW: XX MEDIUM:
MATRIX: SOIL: XX

ELEMENTS..METHOD		MG/KG	DRY WEIGHT
1. ALUMINIUM...P		12127	*
2. ANTIMONY....P		7U	R
3. ARSENIC.....F		12.3	R
4. BARIUM.....P		104	
5. BERYLLIUM...P	[	1.1]	
6. CADMIUM.....P		1.5U	
7. CALCIUM.....P		11193	
8. CHROMIUM....P		20	
9. COBALT.....P	[	10]	
10.COPPER.....P		33	
11.IRON.....P		28753	
12.LEAD.....F		106.7	*
13.MAGNESIUM...P		4262	*
14.MANGANESE...P		384	
15.MERCURY....CV		0.2	
16.NICKEL.....P		28	
17.POTASSIUM...P	[	1586]	
18.SELENIUM....F		3.0U	
19.SILVER.....P		1.7U	
20.SODIUM.....P	[	440]	
21.THALLIUM....F		6U	
22.TIN.....P		6U	
23.VANADIUM....P		25.2	
24.ZINC.....P		180	*
25.CYANIDE.....C		~~0.1U~~ 0.5U	
% SOLID		83	

COMMENTS:

LAB MANAGER: JRB

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MEU 822
DATE: 9-24-87

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB.
SOW NO.: 784
LAB.SAMPLE NO.: 31100-3

CASE NO: 7954
QC RPT.# 7954

ELEMENTS IDENTIFIED AND MEASURED

OCT 21 1987

CONC.: LOW: XX MEDIUM:
MATRIX: SOIL: XX

ELEMENTS..METHOD		MG/KG	DRY WEIGHT
1. ALUMINIUM...P		15500	*
2. ANTIMONY....P		7U	R
3. ARSENIC.....F		10.4	R
4. BARIUM.....P		134	
5. BERYLLIUM...P	[	2.4]	
6. CADMIUM.....P		1.4U	
7. CALCIUM.....P		80730	
8. CHROMIUM....P		17	
9. COBALT.....P	[	6]	
10.COPPER.....P		25	
11.IRON.....P		17983	
12.LEAD.....F		82.9	*
13.MAGNESIUM...P		17612	*
14.MANGANESE...P		1006	
15.MERCURY....CV		0.1U	
16.NICKEL.....P	[	16]	
17.POTASSIUM...P	[	1416]	
18.SELENIUM....F		2.8U	
19.SILVER.....P		1.6U	
20.SODIUM.....P	[	1026]	
21.THALLIUM....F		6U	
22.TIN.....P		6U	
23.VANADIUM....P	[	18.3]	
24.ZINC.....P		100	*
25.CYANIDE.....C		0.6U	
% SOLID		89	

COMMENTS:

LAB MANAGER: JRB

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MEU 501
DATE:9-24-87

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB.
SOW NO.: 784
LAB.SAMPLE NO.: 31100-4

CASE NO: 7954
QC RPT.# 7954

ELEMENTS IDENTIFIED AND MEASURED

OCT 21 1987

CONC.: LOW: XX MEDIUM:
MATRIX: SOIL: XX

ELEMENTS..METHOD		MG/KG		DRY WEIGHT
1. ALUMINIUM...P		6163		*
2. ANTIMONY....P		9U		R
3. ARSENIC.....F		7.2U		R
4. BARIUM.....P	[	60]		
5. BERYLLIUM...P	[	0.4]		
6. CADMIUM.....P		1.7U		
7. CALCIUM.....P		15123		
8. CHROMIUM....P		28		
9. COBALT.....P	[	5]		
10.COPPER.....P		29		
11.IRON.....P		14594		
12.LEAD.....F		121.2	S	*
13.MAGNESIUM...P		3827		*
14.MANGANESE...P		305		
15.MERCURY....CV		0.22		
16.NICKEL.....P		31		
17.POTASSIUM...P	[	891]		
18.SELENIUM....F		3.6U		
19.SILVER.....P		2.0U		
20.SODIUM.....P	[	623]		
21.THALLIUM....F		7U		
22.TIN.....P		7U		
23.VANADIUM....P	[	12.9]		
24.ZINC.....P		127		*
25.CYANIDE.....C		0.7U		
% SOLID		69		

COMMENTS:

LAB MANAGER: JRB

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MEU 502
DATE: 9-24-87

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB. CASE NO: 7954
SOW NO.: 784 QC RPT.# 7954
LAB.SAMPLE NO.: 31100-5

ELEMENTS IDENTIFIED AND MEASURED

CONC.: LOW: XX MEDIUM:
MATRIX: SOIL: XX

OCT 21 1987

ELEMENTS..METHOD		MG/KG		DRY WEIGHT
1. ALUMINIUM...P		10590		*
2. ANTIMONY....P		8U		R
3. ARSENIC.....F		9.2		R
4. BARIUM.....P	[	104		
5. BERYLLIUM...P	[	1.0]		
6. CADMIUM.....P		1.5U		
7. CALCIUM.....P		32019		
8. CHROMIUM....P		29		
9. COBALT.....P	[	8]		
10.COPPER.....P		23		
11.IRON.....P		18744		
12.LEAD.....F		54.7	S	*
13.MAGNESIUM...P		7269		*
14.MANGANESE...P		730		
15.MERCURY....CV		0.5		
16.NICKEL.....P		31		
17.POTASSIUM...P	[	1466]		
18.SELENIUM....F		3.2U		
19.SILVER.....P		1.8U		
20.SODIUM.....P	[	1929]		
21.THALLIUM....F		6U		
22.TIN.....P		6U		
23.VANADIUM....P	[	19.0]		
24.ZINC.....P		141		*
25.CYANIDE.....C		0.94		
% SOLID		78		

COMMENTS:

LAB MANAGER: JRB

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MEU 503
DATE: 9-24-87

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB. CASE NO: 7954
SOW NO.: 784 QC RPT.# 7954
LAB.SAMPLE NO.: 31100-6

ELEMENTS IDENTIFIED AND MEASURED

CONC.: LOW: XX MEDIUM:
MATRIX: SOIL: XX

OCT 21 1987

ELEMENTS..METHOD		MG/KG		DRY WEIGHT
1. ALUMINIUM...P		12089		*
2. ANTIMONY....P		11U		R
3. ARSENIC.....F		12.3		R
4. BARIUM.....P		226		
5. BERYLLIUM...P	[	0.9]		
6. CADMIUM.....P		2.1U		
7. CALCIUM.....P		24964		
8. CHROMIUM....P		31		
9. COBALT.....P	[	11]		
10.COPPER.....P		63		
11.IRON.....P		28366		
12.LEAD.....F		135.2	S	*
13.MAGNESIUM...P		5879		*
14.MANGANESE...P		493		
15.MERCURY....CV		0.2U		
16.NICKEL.....P		32		
17.POTASSIUM...P	[	1509]		
18.SELENIUM....F		4.5U		
19.SILVER.....P	[	2.6]		
20.SODIUM.....P	[	246]		
21.THALLIUM....F		9U		
22.TIN.....P		9U		
23.VANADIUM....P	[	21.7]		
24.ZINC.....P		328		*
25.CYANIDE.....C		0.9U		
% SOLID		56		

COMMENTS:

LAB MANAGER: JRB

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MEU 504
DATE: 9-24-87

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB.
SOW NO.: 784
LAB.SAMPLE NO.: 31100-7

CASE NO: 7954
QC RPT.# 7954

ELEMENTS IDENTIFIED AND MEASURED

CONC.: LOW: XX MEDIUM:
MATRIX: SOIL: XX

OCT 21 1987

ELEMENTS..METHOD		MG/KG	DRY WEIGHT
1. ALUMINIUM...P		9142	*
2. ANTIMONY....P		7U	R
3. ARSENIC.....F		5.7U	R
4. BARIUM.....P		205	
5. BERYLLIUM...P	[	1.0]	
6. CADMIUM.....P		11.3	
7. CALCIUM.....P		32057	
8. CHROMIUM....P		93	
9. COBALT.....P	[	4]	
10.COPPER.....P		79	
11.IRON.....P		36977	
12.LEAD.....P		395	*
13.MAGNESIUM...P	[	2388]	*
14.MANGANESE...P		2110	
15.MERCURY....CV		0.4	
16.NICKEL.....P		37	
17.POTASSIUM...P	[	777]	
18.SELENIUM....F		2.8U	
19.SILVER.....P	[	2.7]	
20.SODIUM.....P	[	1935]	
21.THALLIUM....F		6U	
22.TIN.....P		40	
23.VANADIUM....P	[	8.2]	
24.ZINC.....P		1752	*
25.CYANIDE.....C		1.9	
% SOLID		88	

COMMENTS:

LAB MANAGER: JRB

QC EXCEPTION SUMMARY REPORT

CASE # 7954
DATA SET # 4380
LAB Q.C.# 7954
DATE: 10.16.87

SITE Brook Park Site
LAB Cal
REVIEWED BY [illegible]

MATRIX: S
CONC. : L

WATER SAMPLE SPK.
WATER SAMPLE DUP.
SOIL SAMPLE SPK.
SOIL SAMPLE DUP.

	OVERALL CASE QC									MATRIX SPECIFIC QC						SAMPLE SPECIFIC QC		FIELD QC			REGIONAL QC			OTHER/ COMMENTS
	Holding Time	Cal Blanks	Init Calver	Contin. Calver	Prep Blk AQ	Prep Blk SOL	ICS %R	LCS % AQ	LCS % SOL	Sol Dup RPD	Sol Spk. %R	AQ Dup RPD	AQ Spk. %R	Ser Diln AQ	Ser Diln SOL	GFAA Dup	GFAA Spike	Blank	Dup RPD	Spike %R	Blind Blank	Blind Spike %R	Split Sample RPD	
Aluminum										29														
Antimony											44													
Arsenic											72													
Barium																								
Beryllium																								
Cadmium																								
Calcium																								
Chromium																								
Cobalt																								
Copper																								
Iron																								
Lead										38/10														
Magnesium										46														
Manganese																								
Mercury																								
Nickel																								
Potassium																								
Selenium																								
Silver																								
Sodium																								
Thallium																								
Tin																								
Vanadium																								
Zinc										43														
Cyanide																								

OCT 21 1987

FORM V
QC REPORT NUMBER: 7954
SPIKE SAMPLE RECOVERY

LAB NAME: CALIF. ANAL. LABS.

CASE NO.: 7954
EPA SAMPLE NO.: MEU 820
LAB SAMPLE NO.: 31100-1

DATE: 9-24-87
MATRIX: LOW SOIL

UNITS: UG/L OCT 21 1987

COMPOUNDS METALS:	CONTROL LIMIT % R	SPIKED SAMPLE RESULT (SSR)	SAMPLE RESULT (SR)	SPIKED ADDED (SA)	% R
ELEMENTS..METHOD					
1. ALUMINIUM...P	75 TO 125	N/R	N/R		
2. ANTIMONY....P	75 TO 125	261.2	12 U	600	44R
3. ARSENIC.....F	75 TO 125	48.2	19.3	40	72R
4. BARIUM.....P	75 TO 125	2187	[168]	2000	109
5. BERYLLIUM...P	75 TO 125	51	[1.8]	50	102
6. CADMIUM.....P	75 TO 125	46.5	2.4 U	50	93
7. CALCIUM.....P	75 TO 125	N/R	N/R		
8. CHROMIUM....P	75 TO 125	232.4	36.3	200	98
9. COBALT.....P	75 TO 125	509.8	[19]	500	102
10.COPPER.....P	75 TO 125	293.8	34.7	250	104
11.IRON.....P	75 TO 125	N/R	N/R		
12.LEAD.....F	75 TO 125	495	133	20	1810
13.MAGNESIUM...P	75 TO 125	N/R	N/R		
14.MANGANESE...P	75 TO 125	1597	1169	500	86
15.MERCURY....CV	75 TO 125	1.23	0.2 U	1	123
16.NICKEL.....P	75 TO 125	518.7	[39]	500	104
17.POTASSIUM...P	75 TO 125	N/R	N/R		
18.SELENIUM....F	75 TO 125	8.5	5 U	10	85
19.SILVER.....P	75 TO 125	45.9	2.8 U	50	92
20.SODIUM.....P	75 TO 125	N/R	N/R		
21.THALLIUM....F	75 TO 125	47.6	[22] ~~15~~	50	95 ~~6~~
22.TIN.....P	75 TO 125	477	~~10 U~~ [21.5]	500	~~93~~ 91
23.VANADIUM....P	75 TO 125	533.9	55.3	500	96
24.ZINC.....P	75 TO 125	639	180.9	500	92
25.CYANIDE.....C	75 TO 125	97	5 U	100	97

COMMENTS:

FORM V
QC REPORT NUMBER: 7954
SPIKE SAMPLE RECOVERY

LAB NAME: CALIF. ANAL. LABS.

CASE NO.: 7954
EPA SAMPLE NO.: MEU 820
LAB SAMPLE NO.: 31100-1

DATE: 9-24-87
MATRIX: LOW SOIL

UNITS: UG/L

OCT 21 1987 R

COMPOUNDS METALS:	CONTROL LIMIT % R	SPIKED SAMPLE RESULT (SSR)	SAMPLE RESULT (SR)	SPIKED ADDED (SA)	
ELEMENTS..METHOD					
1. ALUMINIUM...P	75 TO 125				
2. ANTIMONY....P	75 TO 125				
3. ARSENIC.....F	75 TO 125				
4. BARIUM.....P	75 TO 125				
5. BERYLLIUM...P	75 TO 125				
6. CADMIUM.....P	75 TO 125				
7. CALCIUM.....P	75 TO 125				
8. CHROMIUM....P	75 TO 125				
9. COBALT.....P	75 TO 125				
10.COPPER.....P	75 TO 125				
11.IRON.....P	75 TO 125				
12.LEAD.....P	75 TO 125	604	108	500	99
13.MAGNESIUM...P	75 TO 125				
14.MANGANESE...P	75 TO 125				
15.MERCURY....CV	75 TO 125				
16.NICKEL.....P	75 TO 125				
17.POTASSIUM...P	75 TO 125				
18.SELENIUM....F	75 TO 125				
19.SILVER.....P	75 TO 125				
20.SODIUM.....P	75 TO 125				
21.THALLIUM....F	75 TO 125				
22.TIN.....P	75 TO 125				
23.VANADIUM....P	75 TO 125				
24.ZINC.....P	75 TO 125				
25.CYANIDE.....C	75 TO 125				

COMMENTS:

OCT 21 1987

Form III

Q. C. Report No. 7954

BLANKS

LAB NAME Enseco Cal Labs CASE NO. 7954

DATE 9-12-87 UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum	[7.5]	[15]	7.0u			[15]	
2. Antimony	12u	12u	12u			12u	
3. Arsenic							
4. Barium	0.6u	0.6u	0.6u			0.6u	
5. Beryllium	0.4u	0.4u	0.4u			0.4u	
6. Cadmium	2.4u	2.4u	2.4u			2.4u	
7. Calcium	[7.6]	[14]	6.7u			[12]	
8. Chromium	2.2u	2.2u	2.2u			2.2u	
9. Cobalt	6.2u	6.2u	6.2u			6.2u	
10. Copper	2.6u	2.6u	[3.8]			2.6u	
11. Iron	4.5u	[5.4]	4.5u			4.5u	
12. Lead	30u	30u	30u			30u	
13. Magnesium	16u	16u	16u			16u	
14. Manganese	0.4u	0.4u	0.4u			0.4u	
15. Mercury							
16. Nickel	16u	16u	16u			16u	
17. Potassium	326u	326u	326u			326u	
18. Selenium							
19. Silver	2.8u	2.8u	2.8u			2.8u	
20. Sodium	12u	12u	12u			12u	
21. Thallium							
22. Tin	10u	10u	10u			10u	
23. Vanadium	4.2u	4.2u	4.2u			4.2u	
24. Zinc	1.7u	1.7u	[1.8]			[13]	
Other:							
Cyanide							

Form III

Q. C. Report No. 7954

BLANKS

OCT 21 1987

LAB NAME Enseco Cal Labs

CASE NO. 7954

DATE 9-13-87

UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide	2.4u	2.4u				2.4u	

Sn only

Form III

Q. C. Report No. 7954

OCT 21 1987

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7954

DATE 9-14-87

UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin	10u	10u	10u	10u		10u	
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. 7954

BLANKS

OCT 21 1987

LAB NAME Enseco Cal Labs

CASE NO. 7954

DATE 9-16-87

UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium	2.6u	2.6u	2.6u	2.6u	2.6u	2.6u	
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. 7954

BLANKS

OCT 21 1987

LAB NAME Enseco Cal Labs

CASE NO. 7954

DATE 9-17-87 -1

UNITS ug/L

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	1.7u	1.7u	1.7u			1.7u	
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	1.5u	1.5u	1.5u	[1.8]	1.5u	1.5u	
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

OCT 21 1987

Form III

Q. C. Report No. 7954

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7954

DATE 9-17-87-2

UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium		1.54	1.54				
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

OCT 21 1987

Form III

Q. C. Report No. 7954

BLANKS

LAB NAME Enseco Cal Labs CASE NO. 7954

DATE 9-18-87 -1 UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic	1.1u	1.1u				1.1u	
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	1.7u	1.7u	1.7u	1.7u			
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	1.5u	1.5u					
19. Silver							
20. Sodium							
21. Thallium	2.6u	2.6u					
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. 7954

BLANKS

OCT 21 1987

LAB NAME Enseco Cal Labs CASE NO. 7954

DATE 9-18-87-2 UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic	1.1u	1.1u	1.1u	1.1u			
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

OCT 21 1987

Form III

Q. C. Report No. 7954

BLANKS

LAB NAME Enseco Cal Labs CASE NO. 7954

DATE 9-21-87 UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron	1mc						
12. Lead	1.7u	1.7u	1.7u				
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

OCT 21 1987

Form III

Q. C. Report No. 7954

BLANKS

LAB NAME Enseco Cal Labs CASE NO. 7954

DATE 9-22-87 UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	1.5u	1.5u	1.5u				
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

OCT 21 1987

Form III

Q. C. Report No. 7954

BLANKS

LAB NAME Enseco Cal Labs CASE NO. 7954

DATE 9-23-87 UNITS ug/L

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead	1.7u	1.7u	1.7u				
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

OCT 21 1987

Q. C. Report No. 1954

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 1954

DATE 9-2-87

UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury	.2u	.2u				.2u	
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

OCT 21 1987

Form III

Q. C. Report No. 7954

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7954

DATE 9-1-87

UNITS ug/l

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury	.2u	.2u	.2u			.2u	
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. 7954

BLANKS

OCT 21 1987

LAB NAME Enseco Cal Labs

CASE NO. 7954

DATE 9-9-87

UNITS ug/L

Matrix LS

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum							
2. Antimony							
3. Arsenic							
4. Barium							
5. Beryllium							
6. Cadmium							
7. Calcium							
8. Chromium							
9. Cobalt							
10. Copper							
11. Iron							
12. Lead							
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium							
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide	2.4u	2.4u	2.4u			2.4u	

OCT 21 1987

FORM VI
QC REPORT NUMBER: 7954
DUPLICATE SAMPLE RECOVERY

LAB NAME: CALIF. ANAL. LABS.

CASE NO.: 7954
EPA SAMPLE NO.: MEU 820
LAB SAMPLE NO.: 31100-1

DATE: 9-24-87
MATRIX: LOW SOIL

UNITS: UG/L

COMPOUNDS METALS:	SAMPLE(S)	DUPLICATES(D)	RPD
ELEMENTS..METHOD			
1. ALUMINIUM...P	28570	21360	29*
2. ANTIMONY....P	12 U	12 U	NC
3. ARSENIC.....F	19.3	18.3	5
4. BARIUM.....P	[168]	[152]	NC
5. BERYLLIUM...P	[1.8]	[1.4]	NC
6. CADMIUM.....P	2.4 U	2.4 U	NC
7. CALCIUM.....P	41260	35190	16
8. CHROMIUM....P	36.3	29.3	21
9. COBALT.....P	[19]	[15]	NC
10.COPPER.....P	34.7	30	15
11.IRON.....P	44260	46990	6
12.LEAD.....F	133	458	110*
13.MAGNESIUM...P	14440	9082	46*
14.MANGANESE...P	1169	1055	10
15.MERCURY....CV	0.2 U	0.2 U	NC
16.NICKEL.....P	[39]	44	NC
17.POTASSIUM...P	[3457]	[1553]	NC
18.SELENIUM....F	5 U	5 U	NC
19.SILVER.....P	2.8 U	2.8 U	NC
20.SODIUM.....P	[186]	[101]	NC
21.THALLIUM....F	10 U	10 U	NC
22.TIN.....P	[22]	[43]	NC
23.VANADIUM....P	55.3	[43]	NC
24.ZINC.....P	180.9	116.7	43*
25.CYANIDE.....C	.5 U	.5 U	NC

COMMENTS:

OCT 21 1987

FORM VI
QC REPORT NUMBER: 7954
DUPLICATE SAMPLE RECOVERY

LAB NAME: CALIF. ANAL. LABS.

CASE NO.: 7954
EPA SAMPLE NO.: MEU 820
LAB SAMPLE NO.: 31100-1

DATE: 9-24-87
MATRIX: LOW SOIL

UNITS: UG/L

COMPOUNDS	SAMPLE(S)	DUPLICATES(D)	RPD
METALS:			
ELEMENTS..METHOD			
1. ALUMINIUM...P			
2. ANTIMONY....P			
3. ARSENIC.....F			
4. BARIUM.....P			
5. BERYLLIUM...P			
6. CADMIUM.....P			
7. CALCIUM.....P			
8. CHROMIUM....P			
9. COBALT.....P			
10.COPPER.....P			
11.IRON.....P			
12.LEAD.....F	107	73	38 *
13.MAGNESIUM...P			
14.MANGANESE...P			
15.MERCURY....CV			
16.NICKEL.....P			
17.POTASSIUM...P			
18.SELENIUM....F			
19.SILVER.....P			
20.SODIUM.....P			
21.THALLIUM....F			
22.TIN.....P			
23.VANADIUM....P			
24.ZINC.....P			
25.CYANIDE.....C			

COMMENTS:

OCT 21 1987

Form VII

Q.C. Report No. 7954

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME CAL LABS. CASE NO. 7954

DATE 9-87-1 LCS UNITS ug/L mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
		ICP/AA	Furnace	True	Found	%R
Metals:						
1. Aluminum	200	7.0				
2. Antimony	60	12				
3. Arsenic	10	40	1.1	30	27.2	91
4. Barium	200	0.6				
5. Beryllium	5	0.4				
6. Cadmium	5	2.4				
7. Calcium	5000	6.7				
8. Chromium	10	2.2				
9. Cobalt	50	6.2				
10. Copper	25	2.6				
11. Iron	100	4.5				
12. Lead	5	30	1.7	20	18.6	93
13. Magnesium	5000	16				
14. Manganese	15	0.4				
15. Mercury	0.2		.10	4.7	5.2	111
16. Nickel	40	16				
17. Potassium	5000	326				
18. Selenium	5	45	1.5	20	20.6	103
19. Silver	10	2.8				
20. Sodium	5000	12				
21. Thallium	10	84	2.6	50	45.6	91
22. Tin	40	10				
23. Vanadium	50	4.2				
24. Zinc	20	1.7				
Other:						
Cyanide	10		2.4	100	98	98

OCT 21 1987

Form VII

Q.C. Report No. 7954

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME CAL LABS. CASE NO. 7954

DATE 9-87-2 LCS UNITS ug/L mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l		Lab Control Sample		
		ICP/AA	Furnace	True	Found	%R
Metals:						
1. Aluminum	200	7.0				
2. Antimony	60	12				
3. Arsenic	10	40	1.1	30		
4. Barium	200	0.6				
5. Beryllium	5	0.4				
6. Cadmium	5	2.4				
7. Calcium	5000	6.7				
8. Chromium	10	2.2				
9. Cobalt	50	6.2				
10. Copper	25	2.6				
11. Iron	100	4.5				
12. Lead	5	30	1.7	20		
13. Magnesium	5000	16				
14. Manganese	15	0.4				
15. Mercury	0.2		.10	4.7	5.1	109
16. Nickel	40	16				
17. Potassium	5000	326				
18. Selenium	5	45	1.5	20		
19. Silver	10	2.8				
20. Sodium	5000	12				
21. Thallium	10	84	2.6	50		
22. Tin	40	10				
23. Vanadium	50	4.2				
24. Zinc	20	1.7				
Other:						
Cyanide	10		2.4	100	97	97

OCT 21 1987

Form VII

Q.C. Report No. 7954

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME CAL LABS. CASE NO. 7954

DATE 9-12-87 LCS UNITS ug/L mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
Metals:						
1. Aluminum	200	7.0		10000	10100	101
2. Antimony	60	12		10000	9770	98
3. Arsenic	10	40	1.1	10000	7640	76
4. Barium	200	0.6		1000	1000	100
5. Beryllium	5	0.4		200	196	98
6. Cadmium	5	2.4		1000	983	98
7. Calcium	5000	6.7		40000	41300	103
8. Chromium	10	2.2		1000	983	98
9. Cobalt	50	6.2		1000	998	100
10. Copper	25	2.6		1000	1050	105
11. Iron	100	4.5		10000	9750	98
12. Lead	5	30	1.7	1000	1020	102
13. Magnesium	5000	16		40000	41400	104
14. Manganese	15	0.4		1000	974	97
15. Mercury	0.2		.10			
16. Nickel	40	16		1000	954	95
17. Potassium	5000	326		40000	39200	98
18. Selenium	5	45	1.5	10000	9680	97
19. Silver	10	2.8		100	98	98
20. Sodium	5000	12		40000	41500	104
21. Thallium	10	84	2.6	10000	10400	104
22. Tin	40	10		10000	4673	47
23. Vanadium	50	4.2		1000	979	98
24. Zinc	20	1.7		1000	1010	101
Other:						
Cyanide	10		2.4			

Sn only

OCT 21 1987

Form VII

Q.C. Report No. 7954

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME CAL LABS. CASE NO. 7954

DATE 9-14-87 LCS UNITS ug/L mg/kg

(Circle One)

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Furnace	Lab Control Sample True	Found	%R
Metals:						
1. Aluminum	200	7.0		10000		
2. Antimony	60	12		10000		
3. Arsenic	10	40	1.1	10000		
4. Barium	200	0.6		1000		
5. Beryllium	5	0.4		200		
6. Cadmium	5	2.4		1000		
7. Calcium	5000	6.7		40000		
8. Chromium	10	2.2		1000		
9. Cobalt	50	6.2		1000		
10. Copper	25	2.6		1000		
11. Iron	100	4.5		10000		
12. Lead	5	30	1.7	1000		
13. Magnesium	5000	16		40000		
14. Manganese	15	0.4		1000		
15. Mercury	0.2		.10			
16. Nickel	40	16		1000		
17. Potassium	5000	326		40000		
18. Selenium	5	45	1.5	10000		
19. Silver	10	2.8		100		
20. Sodium	5000	12		40000		
21. Thallium	10	84	2.6	10000		
22. Tin	40	10		10000	9020	90
23. Vanadium	50	4.2		1000		
24. Zinc	20	1.7		1000		
Other:						
Cyanide	10		2.4			

THESE ARE

ORIGINAL

DRAWINGS

Please:

Keep them clean

- Don't mark on them
- Don't bend, fold, staple, mutilate

If corrections are needed:

- Make a copy of each one to be corrected, or of the entire set, then
- Mark on the copy the corrections to be done (use color!)
- Submit to Graphics

recycled paper
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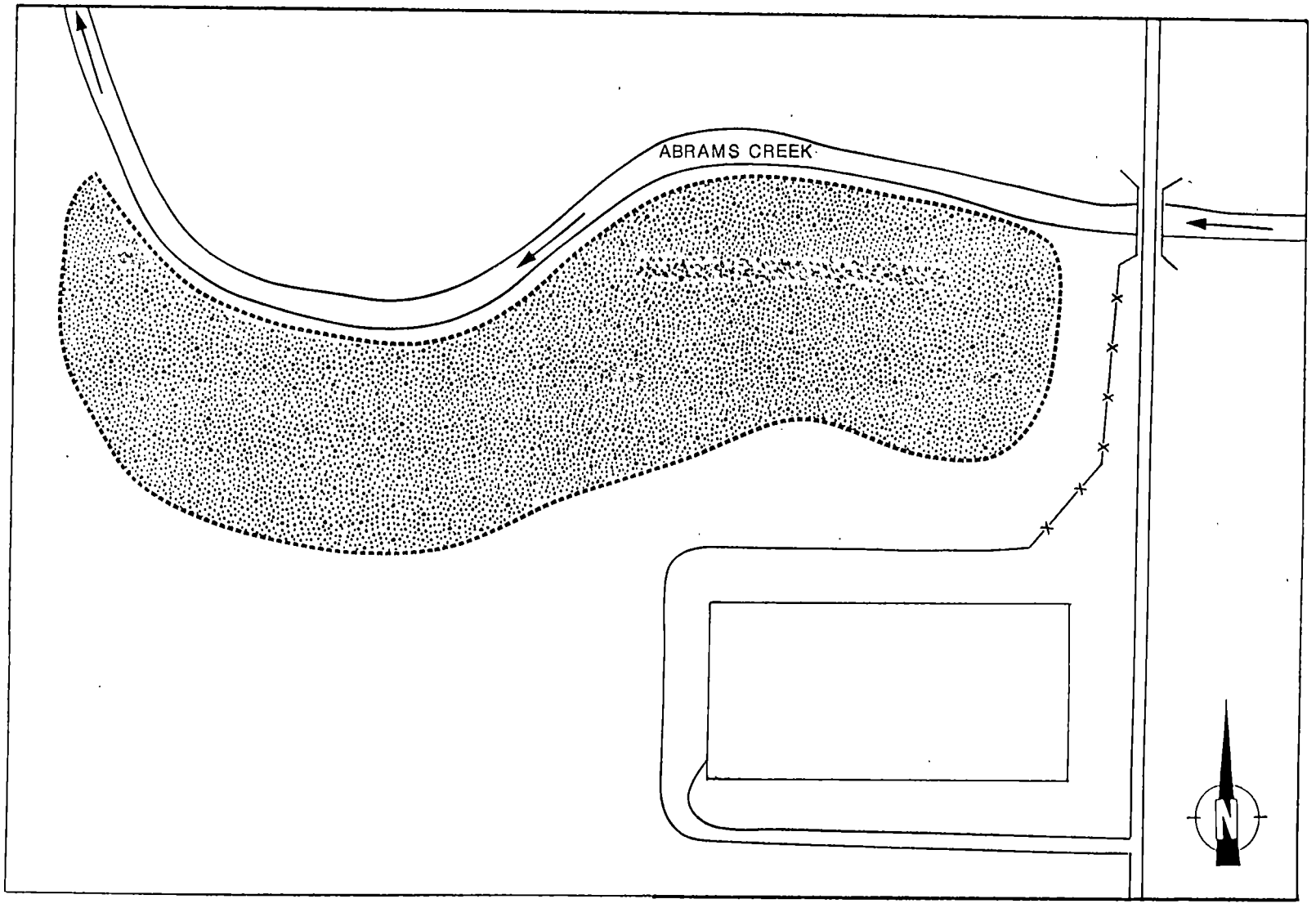
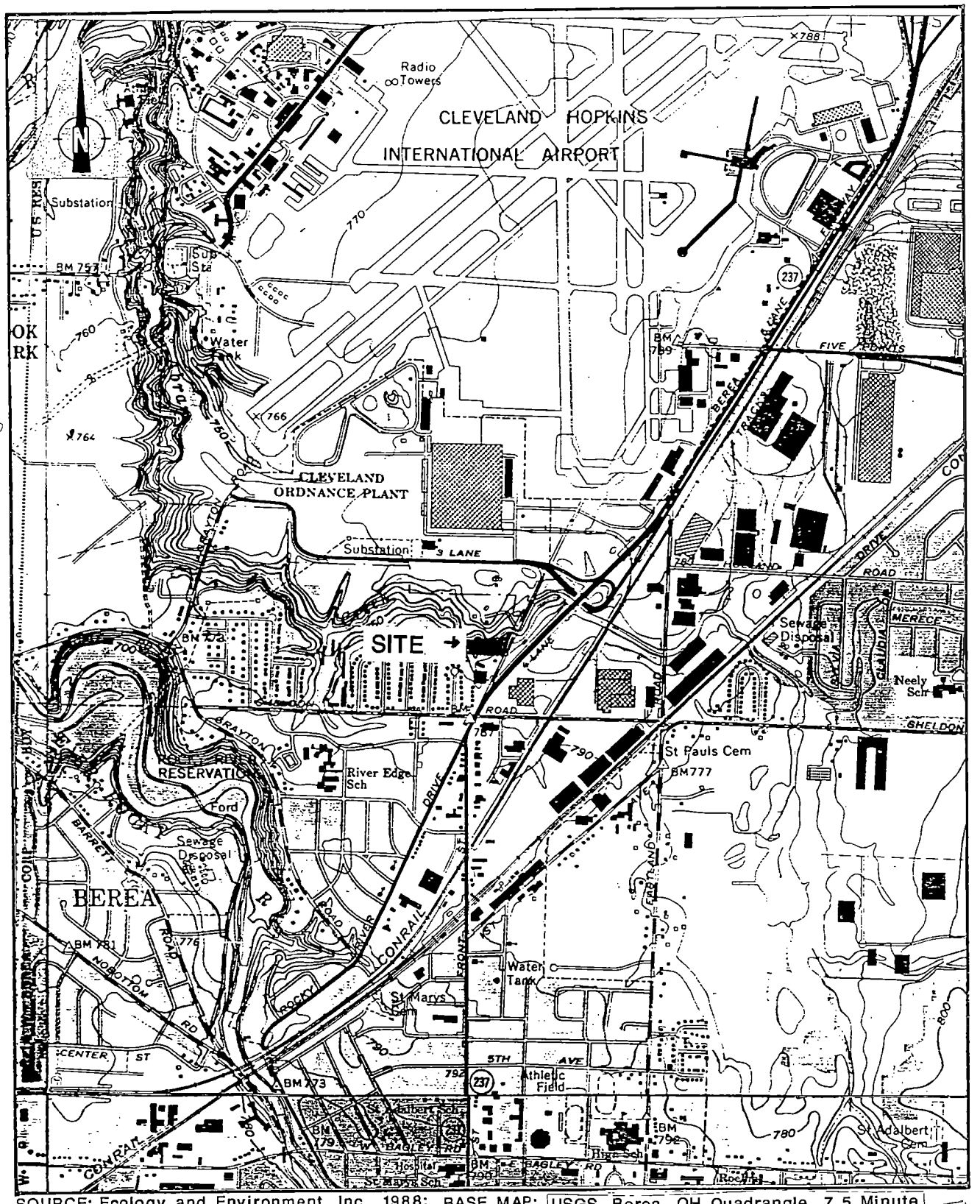


SOURCE: Ecology and Environment, Inc., 1988.

APPROXIMATE SCALE

0 50 100 150 200 FEET

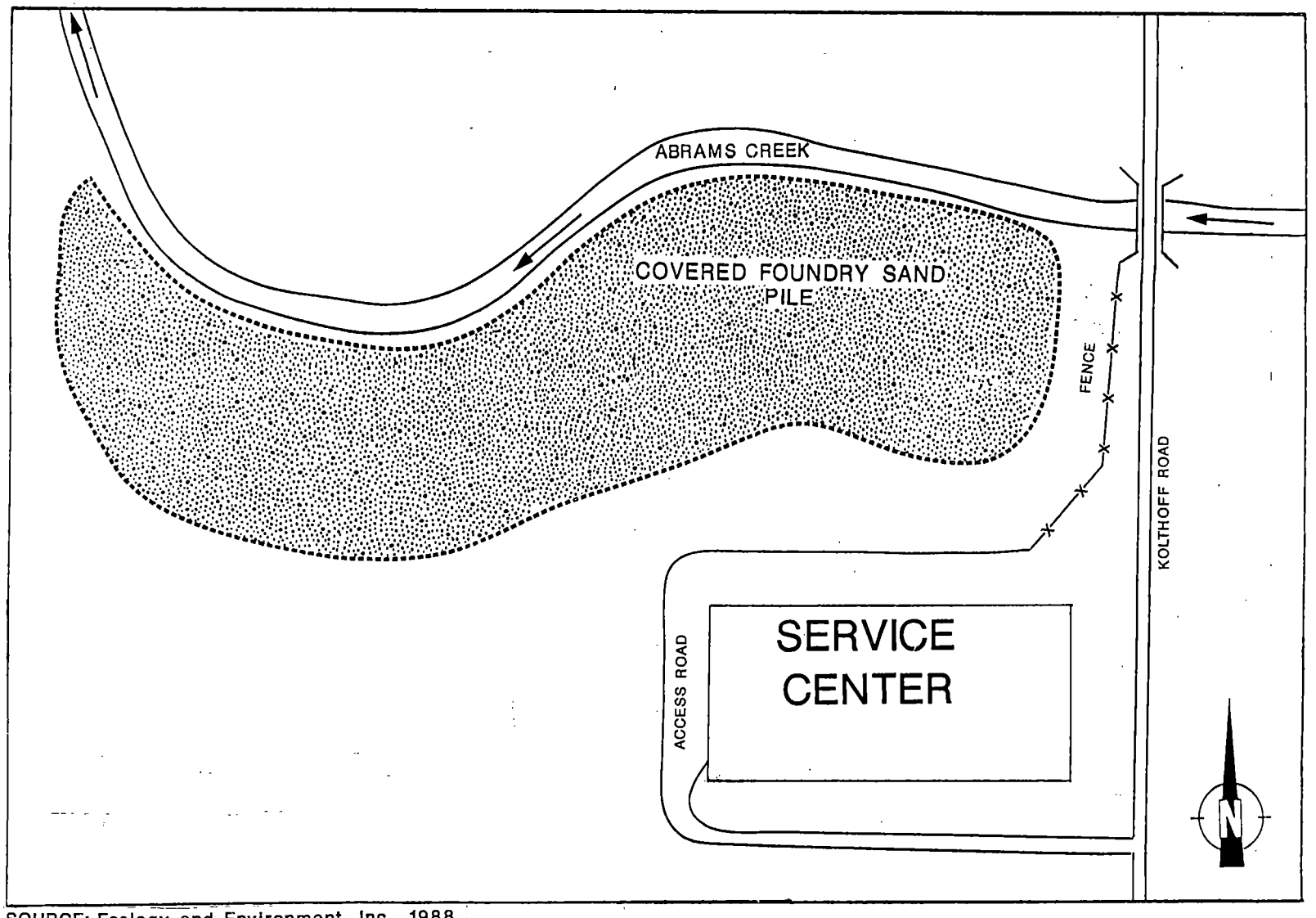


SOURCE: Ecology and Environment, Inc., 1988; BASE MAP: USGS, Berea, OH Quadrangle, 7.5 Minute Series, 1979; USGS Lakewood, OH Quadrangle, 7.5 Minute Series, 1979. S1

SCALE

0 0.5 1 MILE

FIGURE 2-1 SITE LOCATION

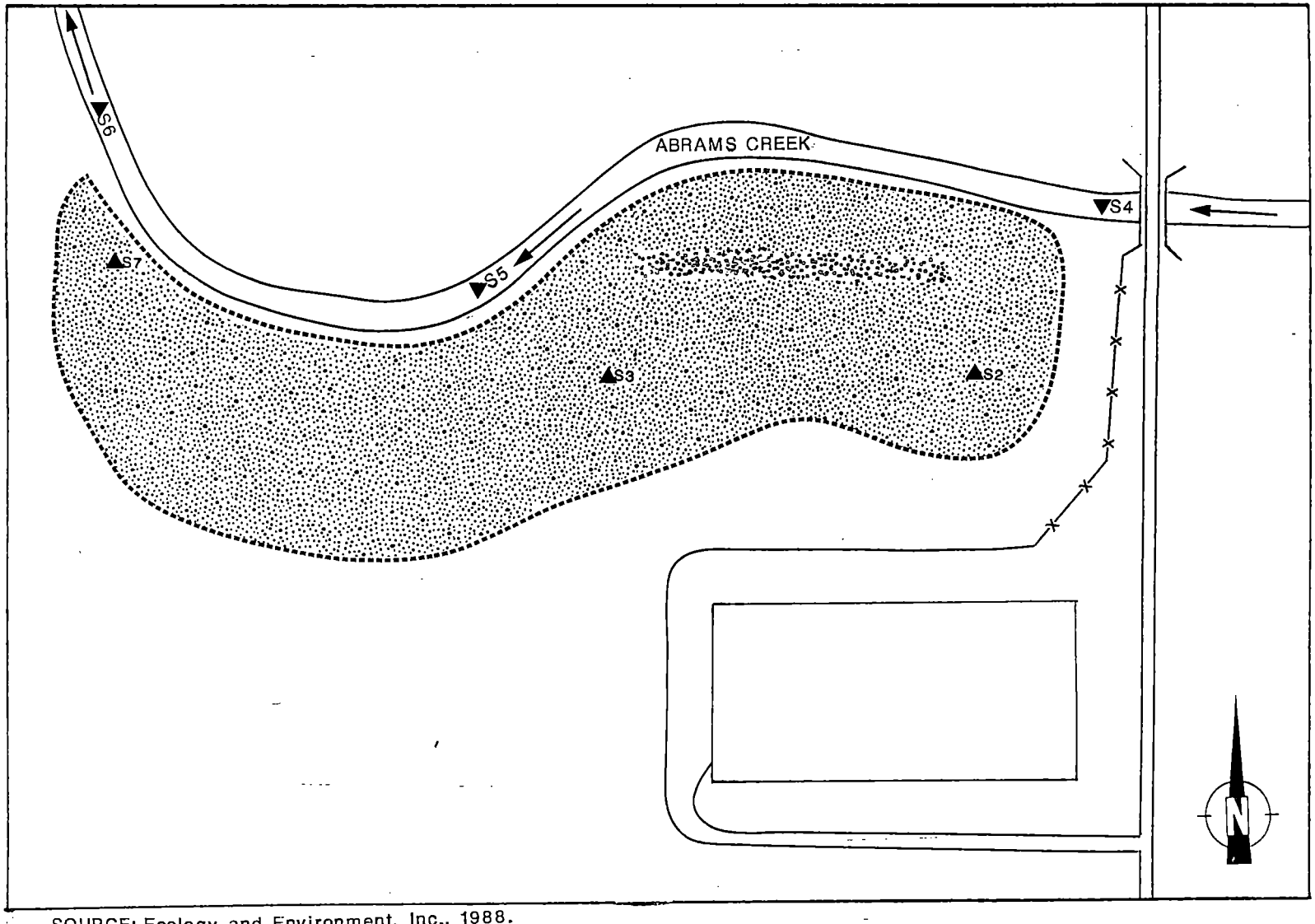


SOURCE: Ecology and Environment, Inc., 1988.

APPROXIMATE SCALE

0 50 100 150 200 FEET

FIGURE 3-1 SITE FEATURES

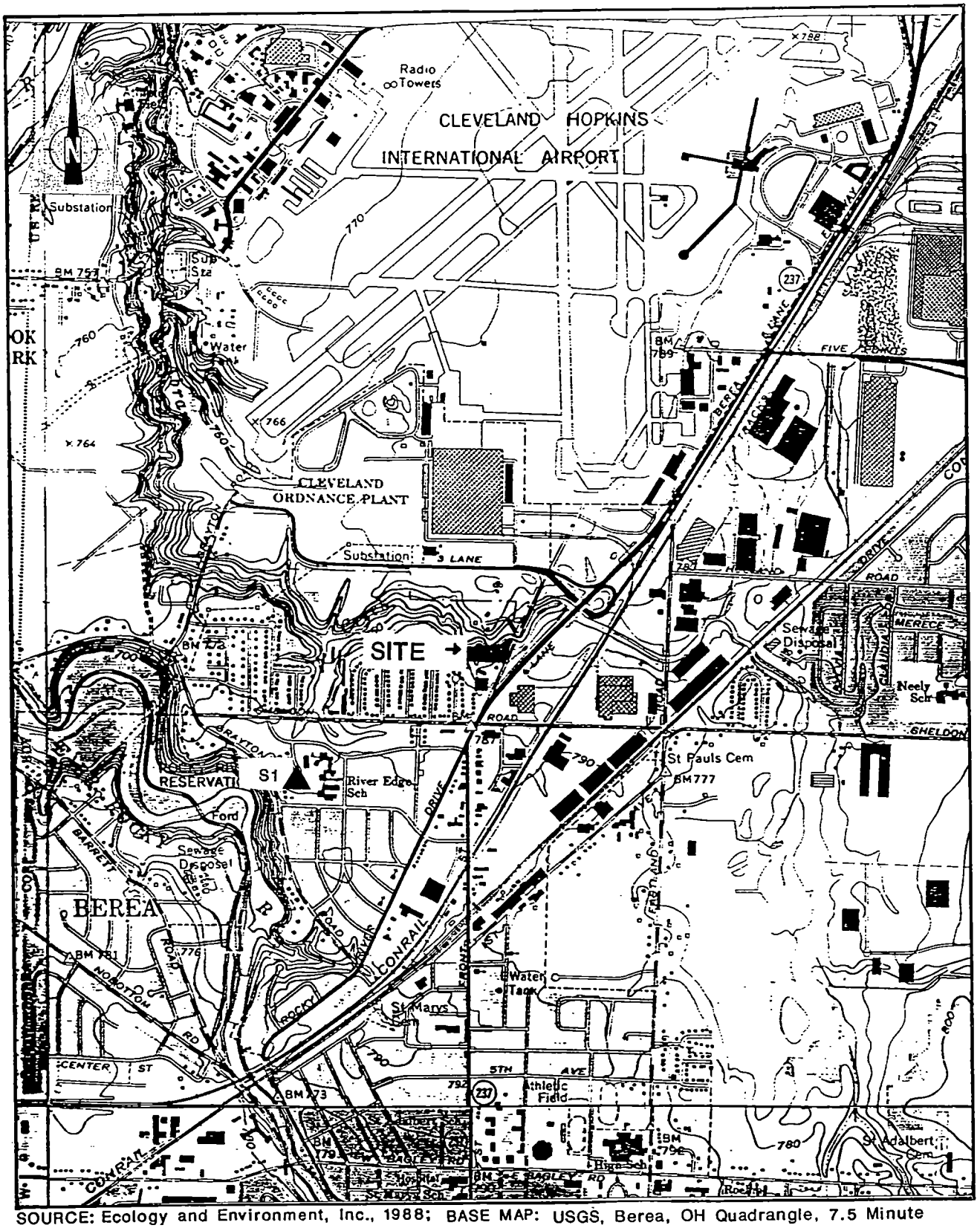


SOURCE: Ecology and Environment, Inc., 1988.

APPROXIMATE SCALE

0 50 100 150 200 FEET

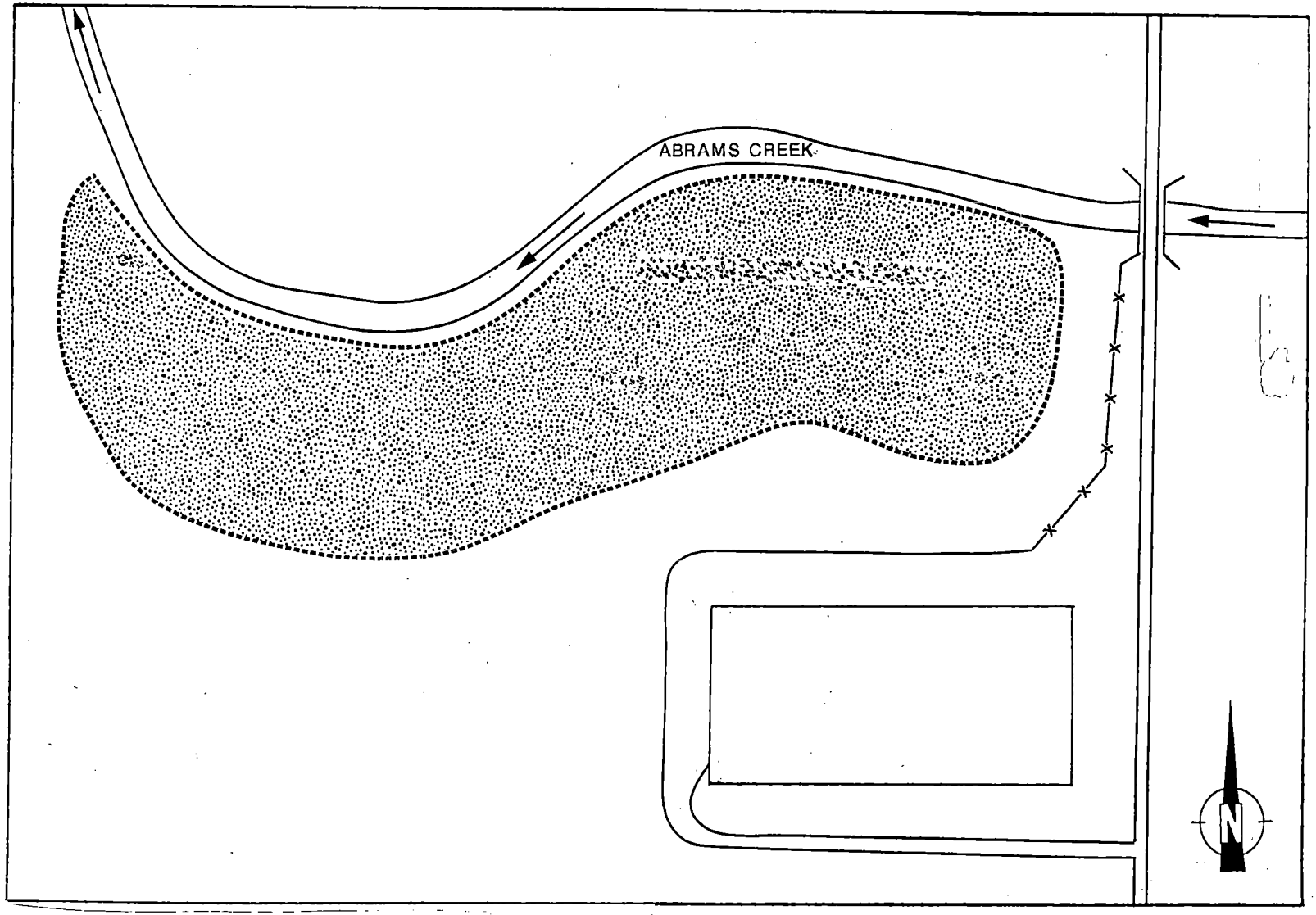
FIGURE 3-2 ON-SITE SOIL SAMPLING LOCATIONS



SOURCE: Ecology and Environment, Inc., 1988; BASE MAP: USGS, Berea, OH Quadrangle, 7.5 Minute Series, 1979; USGS Lakewood, OH Quadrangle, 7.5 Minute Series, 1979. S1

SCALE
0 0.5 1 MILE

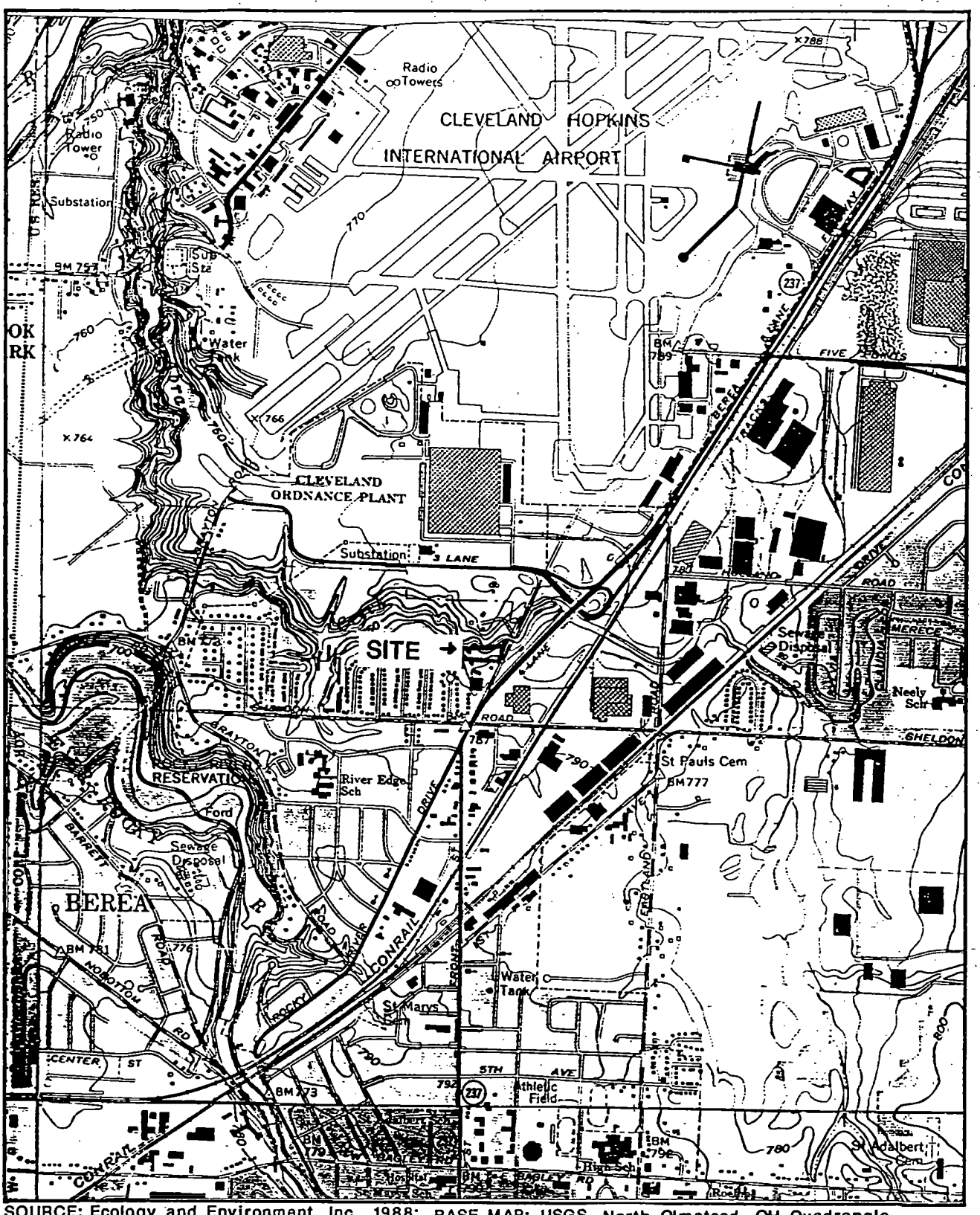
FIGURE 3-3 OFF-SITE SOIL SAMPLING LOCATION



SOURCE: Ecology and Environment, Inc., 1988.

APPROXIMATE SCALE

0 50 100 150 200 FEET

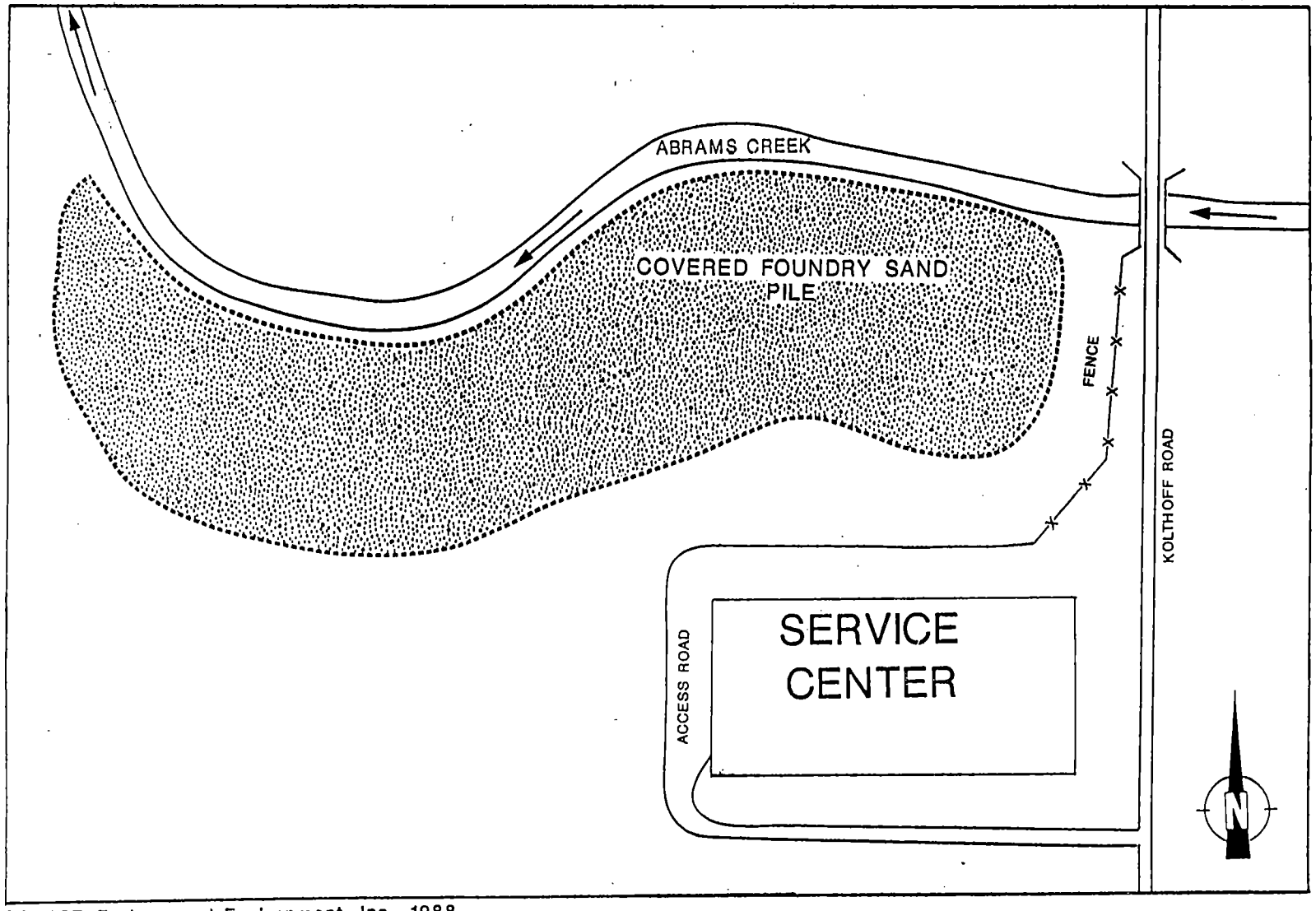


SOURCE: Ecology and Environment, Inc., 1988; BASE MAP: USGS North Olmstead, OH Quadrangle, 7.5 Minute Series, 1979; USGS Lakewood, OH Quadrangle, 7.5 Minute Series, 1979; USGS West View, OH Quadrangle, 7.5 Minute Series, 1970; USGS Berea, OH Quadrangle, 7.5 Minute Series, 1979.

SCALE

0 0.5 1 MILE

FIGURE 2-1 SITE LOCATION

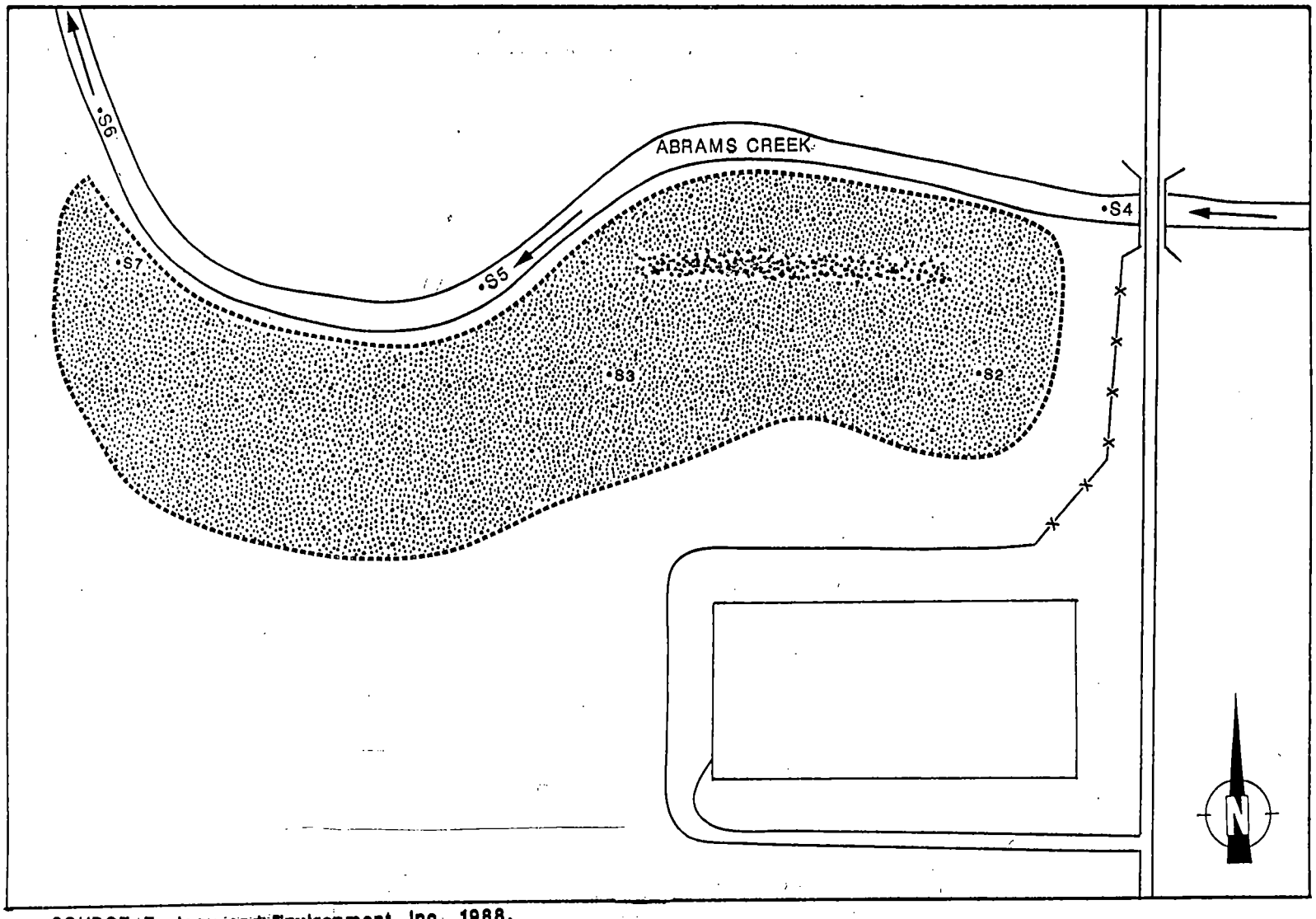


SOURCE: Ecology and Environment, Inc., 1988.

APPROXIMATE SCALE

0 50 100 150 200 FEET

FIGURE 3-1 SITE FEATURES ~~MAP~~

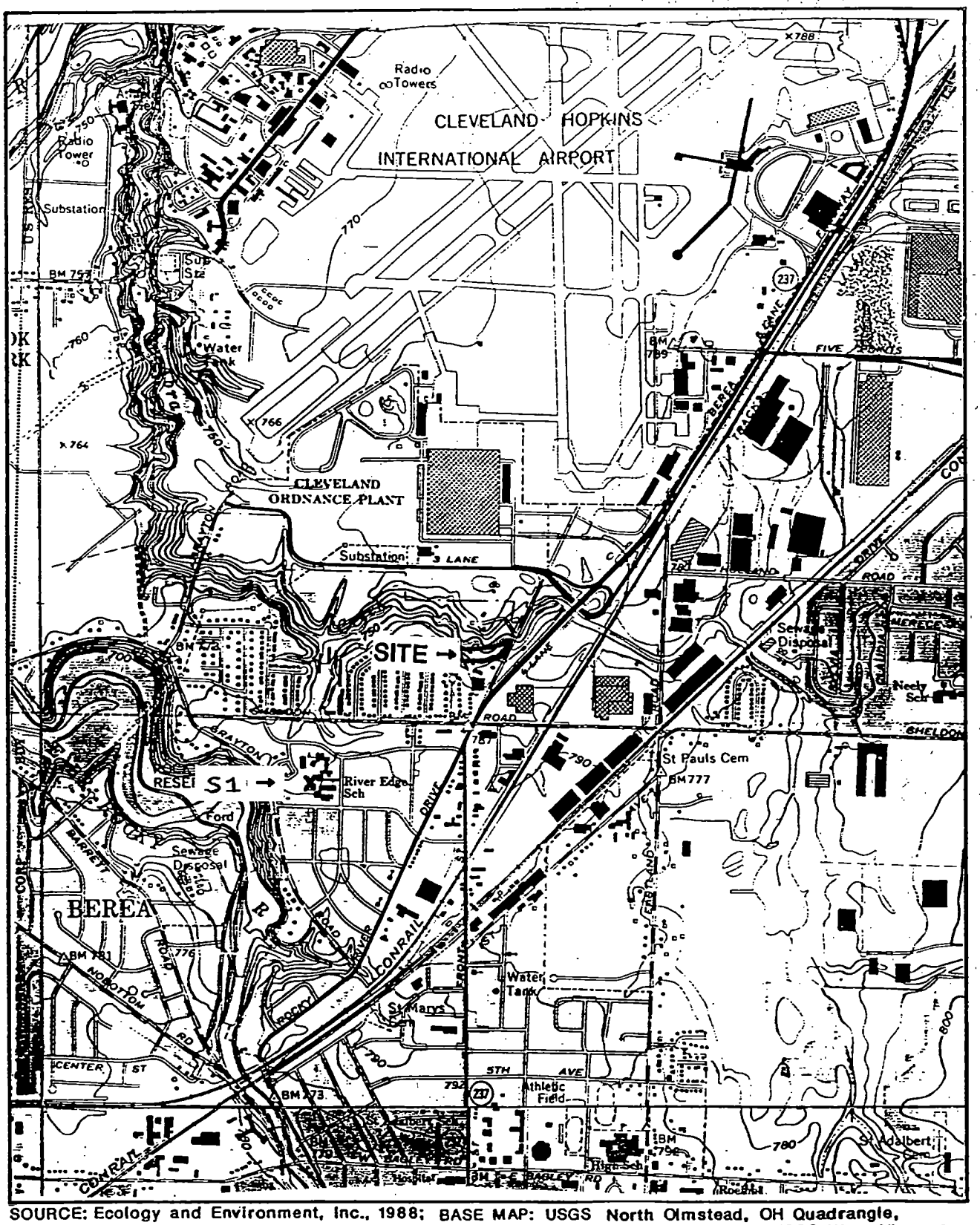


SOURCE: Ecology and Environment, Inc., 1988.

APPROXIMATE SCALE

0 50 100 150 200 FEET

FIGURE 3-2 SOIL SAMPLING LOCATIONS ~~MAP~~



SOURCE: Ecology and Environment, Inc., 1988; BASE MAP: USGS North Olmstead, OH Quadrangle, 7.5 Minute Series, 1979; USGS Lakewood, OH Quadrangle, 7.5 Minute Series, 1979; USGS West View, OH Quadrangle, 7.5 Minute Series, 1970; USGS Berea, OH Quadrangle, 7.5 Minute Series, 1979.

SCALE

0 0.5 1 MILE

FIGURE ~~3-3~~ Potential BACKGROUND/Soil Sampling LOCATION

3-3

LOW soils

Site Name Brook Park Service Center TDD FS-8708-021 Ohio 71 Case Number 7954

OTR	ITR	CRL	NEIC TAG NUMBER	ORG CHAIN OF CUSTODY	INO CHAIN OF CUSTODY	SAS NUMBER
ET194	MEU820	See	See	00428	00427	
ET195	MEU821			00428	00427	
ET196	MEU822	Low	Low	00428	00427	
ET197	MEU501			00428	00427	
ET198	MEU502	Book	Book	00428	00427	
ET199	MEU503			00428	00427	
ET200	MEU504			00428	00427	

CB, KG/df
9-30-81

SMP-002