SAMPLE PROPOSAL
FIT REGION V

US EPA RECORDS CENTER REGION 5
508723

1. Date Form Completed JULY 15

2. Account # F0H0732 TDD # SITE INSPECTION TDD IS FORTH COMING 8708-043

EPA I.D. # OHD 981 957 913

3. Site Name, City, State NAIMAN CO./CARAVAN CO.
CLEVELAND, OH

4. Team Leader ~~TBD~~ D. Kalsen Sampler ~~TBD~~ Almanza

5. Number and Type of Samples:

Soil/Sediment 6 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): AUG 25

Expected Shipping Date(s): AUG 25

8. Lab Used For Analysis: Organic CAL

Inorganic CAL

SAS

9. Case Number 7953 SAS Number

10. Airbill Numbers: 8/25

Organic Lab 4228774546 # Coolers 1 # Samples 6

Inorganic Lab 4228774546 # Coolers 1 # Samples 6

CRL/SAS Lab # Coolers # Samples

recycled paper

ecology and environment

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co. / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil S1 Background

SAMPLING DATE 8-25-87 SAMPLING TIME 1515

ORGANIC TRAFFIC NUMBER EP021

INORGANIC TRAFFIC NUMBER MEU513

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016011	F7206122 F7132142
8oz	Metals + Cyanide	5-016012	F7112122 F7174082
6 X 40 ml	UOA	5-016013 5-016154 5-016014 5-016151 5-016053 5-016152	B7132151 B7132131

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Light Brown Soil

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil S2

SAMPLING DATE 8-25-87 SAMPLING TIME 1020

ORGANIC TRAFFIC NUMBER EP022

INORGANIC TRAFFIC NUMBER MEUS14

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016015	F7206122 F7132142
8oz	Inorganics	5-016016	F7112122 F7174082
6 X 40ml	UOA	5-016017 5-016156 5-016018 5-016157 5-016155 5-016158	B7132151 B7132131

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

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co. / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil 53

SAMPLING DATE 8-25-87 SAMPLING TIME 1110

ORGANIC TRAFFIC NUMBER EP023

INORGANIC TRAFFIC NUMBER MEU515

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016019	F7206122 F7132142
8oz	Inorganics	5-016020	F7112122 F7174082
6x40ml	VOA	5-016021 5-016162 5-016022 5-016158 5-016161 5-016160	B7132151 B7132131

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark wet, Sediment

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co. / Caravan Co.

CASE NUMBER 4953

SAMPLE #/STATION LOCATION Soil 54

SAMPLING DATE 8-25-87 SAMPLING TIME 1145

ORGANIC TRAFFIC NUMBER EP024

INORGANIC TRAFFIC NUMBER ME U516

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016023	F7206122 F7132142
8oz	Inorganics	5-016024	F7112122 F7174082
6x40ml	VOA	5-016025 5-016164 5-016026 5-016165 5-016163 5-016166	B7132151 B7132131

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark wet, Sediment

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co / Caraugn Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil SS

SAMPLING DATE 8-25-87 SAMPLING TIME 1245

ORGANIC TRAFFIC NUMBER EP025

INORGANIC TRAFFIC NUMBER MEU517

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016027	F7206122 F7132142
8oz	Inorganics	5-016028	F7112122 F7174082
6x40ml	UOA	5-016029 5-016168 5-016030 5-016169 5-016167 5-016170	B7132151 B7132151

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark Black, wet Sediment

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co. / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil S6

SAMPLING DATE 8-25-87 SAMPLING TIME 1315

ORGANIC TRAFFIC NUMBER EP026

INORGANIC TRAFFIC NUMBER MEU518

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	S-016031	F7206122 F7132142
8oz	Inorganics	S-016032	F7112122 F7174082
6 X 40ml	UOA	S-016033 S-016173 S-016034 S-016070 S-016172 S-016174	B7132151 B7132131

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

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

Low Soils

Site Name Daimon Col Caravan Co TDD FS-8708-023 OH0732 Case Number 7953

OTR	ITR	CRL	NEIC TAG NUMBER	ORG CHAIN OF CUSTODY	INO CHAIN OF CUSTODY	SAS NUMBER
EP021	MEU513	See	See	00432	00431	
EP022	MEU514			00432	00431	
EP023	MEU515	LDG	LDG	00432	00431	
EP024	MEU516			00432	00431	
EP025	MEU517	Book	Book	00432	00431	
EP026	MEU518			00432	00431	

CB, KG/df
9-30-81

SMP-002

NAIMAN CO. / CARAVAN CO.
6427 EASTLAND RD. CLEVELAND, OH. 44142
CUYAHOGA COUNTY
COUNTY CODE: 035
CONG. DISTRICT: 20

BROOK PARK LANDFILL
6388 KOLTHOFF DR. CLEVELAND, OH. 44142
CUYAHOGA COUNTY
COUNTY CODE: 035
CONG. DISTRICT: 20

BROOK PARK SERVICE CENTER
6400 KOLTHOFF DR. CLEVELAND, OH 44142
CUYAHOGA COUNTY
COUNTY CODE: 035
CONG. DISTRICT: 20

SITE INSPECTION SUMMARY

SITE: NAIMAN CO. / CARAVAN CO.
ADDRESS: 6410 & 6427 EASTLAND RD.
BROOK PARK, OHIO
CUYAHOGA CO.
DATE: 8/25/87
TIME: 8:00 (AM) PM

SITE CONTACT: TOM DOMORACKI / FRED HITTI
PHONE: (216)292-3636 (NAIMAN) (216)243-4100 (CARAVAN)

TEAM LEADER: DIRK KAISER
SCOPE OF THE SITE INSPECTION:
INTERVIEW: (Y) N
SAMPLING: SOILS/SEDIMENT 6
SURFACE WATER —
MONITOR WELLS —
RESIDENTIAL WELLS —
AIR MONITORING —
LEVEL: A ___ B ___ C ___ ~~D~~ X

PAN #: FOH0732
PRIORITY: HIGH MED (LOW)

TEAM MEMBERS:

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

OHD 981 957 905	OHD 981 957 921	~~OHD 981 957 913~~
BrookPark Landfill	BrookPark Service Center	Naiman Co/Caravan
6388 Kolthoff Drive CD20	6400 Kolthoff Drive CD20	6427 Eastland Road CD20
Cleveland, Ohio 44142	Cleveland, Ohio 44142	Cleveland, Ohio 44142
Cuyahaga County 035	Cuyahaga County 035	Cuyahoga County 035

Preparation of a work plan for OHD 980 704 191, Brook Park Sites, by Ecology and Environment revealed that there are three other sites that should be entered in CERCLIS and investigated separately. Because enough is known that the next step toward a site inspection, preparation of a work plan, is needed, no PA in the usual sense is required. This statement serves as a PA. Ecology and Environment was tasked today to prepare a work plan. Mark Besel, of Ohio EPA, agreed with these actions.

#00974 VB

ecology and environment, inc.

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

International Specialists in the Environment

July 15, 1987

Tom Domoracki
Naiman Co.
26050 Richmond Road
Bedford Hts., OH 44146

Re: Site Name: Naiman Co./Caravan Co.
TDD No.: F05-8707-029

Dear Mr. Domoracki:

This letter is in response to your recent inquiry requesting additional information concerning our firm. Ecology and Environment, Inc. has been retained by the U.S. Environmental Protection Agency under contract 68-01-7347 for the purpose of evaluating candidate sites for the National Priorities List under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act (SARA).

Information supplied to the U.S. EPA through CERCLA notifications as required by Section 103(c) of CERCLA has identified the property in question as a possible candidate for the National Priority List. As part of our evaluation, the U.S. EPA has asked us to perform an on-site inspection of the property in question. This is the reason for my request to visit your facility on August 25, 1987.

I have attached a copy of the Letter of Introduction provided by the U.S. EPA for Ecology and Environment, Inc. employees engaged in field investigation work, which outlines the statutory basis for such inspections. Also, attached is a copy of the confidentiality memorandum that all Ecology and Environment, Inc. employees have signed. So you have a better understanding of the questions we need to ask, I have also attached a copy of the Site Inspection Form.

If you require additional information or if a change in plans is necessary, please do not hesitate to call me.

Sincerely,

Dirk Kaiser

Enclosures

02H:6W

recycled paper

SAMPLE PROPOSAL
FIT REGION V

1. Date Form Completed JULY 15

2. Account # F0H0732 TDD # SITE INSPECTION TDD IS FORTH COMING

EPA I.D. # OHD 981 957 913

3. Site Name, City, State NAIMAN CO./CARAVAN CO.
CLEVELAND, OH

4. Team Leader TBD Sampler TBD

5. Number and Type of Samples:

Soil/Sediment 6 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): AUG 25

Expected Shipping Date(s): AUG 25

8. Lab Used For Analysis: Organic _____

Inorganic _____

SAS _____

9. Case Number _____ SAS Number _____

10. Airbill Numbers:

Organic Lab _____ # Coolers _____ # Samples _____

Inorganic Lab _____ # Coolers _____ # Samples _____

CRL/SAS Lab _____ # Coolers _____ # Samples _____

recycled paper

SAMPLE DESCRIPTION

SITE NAME/TDD# Nairman Co. / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil S1 Background

SAMPLING DATE 8-25-87 SAMPLING TIME 1515

ORGANIC TRAFFIC NUMBER EP021

INORGANIC TRAFFIC NUMBER MEU513

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016011	F7206122 F7132142
8oz	Metals + Cyanide	5-016012	F7112122 F7174082
6 X 40 ml	UOA	5-016013 5-016154 5-016014 5-016151 5-016053 5-016152	B7132151 B7132131

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Light Brown Soil

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil S2

SAMPLING DATE 8-25-87 SAMPLING TIME 1020

ORGANIC TRAFFIC NUMBER EP022

INORGANIC TRAFFIC NUMBER MEUS14

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8 oz	Organics	5-016015	F7206122 F7132142
8 oz	Inorganics	5-016016	F7112122 F7174082
6 X 40ml	UOA	5-016017 5-016156 5-016018 5-016157 5-016155 5-016158	B7132151 B7132131

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

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co. / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil 53

SAMPLING DATE 8-25-87 SAMPLING TIME 1110

ORGANIC TRAFFIC NUMBER EP023

INORGANIC TRAFFIC NUMBER MEUS15

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016019	F7206122 F7132142
8oz	Inorganics	5-016020	F7112122 F7174082
6x40ml	UOA	5-016021 5-016162 5-016022 5-016158 5-016161 5-016160	B7132151 B7132131

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark wet, Sediment

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co. / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil 54

SAMPLING DATE 8-25-87 SAMPLING TIME 1145

ORGANIC TRAFFIC NUMBER EP024

INORGANIC TRAFFIC NUMBER ME U 516

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	S-016023	F7206122 F7132142
8oz	Inorganics	S-016024	F7112122 F7174082
6x40ml	VOA	S-016025 S-016164 S-016026 S-016165 S-016163 S-016166	B7132151 B7132131

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark wet, Sediment

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil SS

SAMPLING DATE 8-25-87 SAMPLING TIME 1245

ORGANIC TRAFFIC NUMBER EP025

INORGANIC TRAFFIC NUMBER MEU 517

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	5-016027	F7206122 F7132142
8oz	Inorganics	5-016028	F7112122 F7174082
6x40ml	UOA	5-016029 5-016168 5-016030 5-016169 5-016167 5-016170	B7132151 B7132151

PHYSICAL DESCRIPTION AT TIME OF COLLECTION: Dark Black, wet Sediment

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: None

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

SAMPLE DESCRIPTION

SITE NAME/TDD# Naiman Co. / Caravan Co.

CASE NUMBER 7953

SAMPLE #/STATION LOCATION Soil S6

SAMPLING DATE 8-25-87 SAMPLING TIME 1315

ORGANIC TRAFFIC NUMBER EP026

INORGANIC TRAFFIC NUMBER MEUS18

BOTTLE	ANALYSIS	TAG NUMBERS	LOT NUMBER
8oz	Organics	S-016031	F7206122 F7132142
8oz	Inorganics	S-016032	F7112122 F7174082
6x40ml	UOA	S-016033 S-016173 S-016034 S-016070 S-016172 S-016174	B7132151 B7132131

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

PHYSICAL CHANGES FROM TIME OF COLLECTION UNTIL SHIPMENT: NONE

INSTRUMENT READINGS N/A

pH

CONDUCTIVITY

TEMPERATURE

Table 4-1
RESULTS OF CHEMICAL ANALYSIS OF
FIT-COLLECTED 8/25/87 SAMPLES

Sample Collection Information and Parameters	Sample Number											
	1	2	3	4	5	6	7	8	9	10	11	12
Date	8/25/87	8/25/87	8/25/87	8/25/87	8/25/87	8/25/87						
Time	1515	1020	1110	1145	1245	1315						
Organic Traffic Report Number	EP021	EP022	EP023	EP024	EP025	EP026						
Inorganic Traffic Report Number	MEU513	MEU514	MEU515	MEU516	MEU517	MEU518						
Temperature												
Specific Conductivity												
pH												
Compound Detected (values in ug/Kg (ppb))												
Volatile Organics												
chloromethane												
bromomethane	3JB	3JB	2JB	3JB	2JB	2JB						
vinyl chloride												
chloroethane												
methylene chloride	5B	32B	8B	6B	8B	13B						
acetone	100B	32B	48B	8B	20B	120B						
carbon disulfide					1J	3JB						
1,1-dichloroethene												
1,1-dichloroethane												
1,2-dichloroethene (total)												
chloroform												
1,2-dichloroethane												
2-butanone (MEK)	4JB	4JB		3JB	3JB	16B						
1,1,1-trichloroethane												
carbon tetrachloride												
vinyl acetate												
bromodichloromethane												
1,2-dichloropropane												
cis-1,3-dichloropropene												
trichloroethene												
dibromochloromethane												
1,1,2-trichloroethane												
benzene												
trans-1,3-dichloropropene												
bromoform												
4-methyl-2-pentanone		2J										
2-hexanone												
tetrachloroethene		3J				1J						
toluene	7B	24B	3JB	3JB	4JB	13B						
1,1,2,2-tetrachloroethane												
chlorobenzene												

Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	≥S1	≥S2	≥S3	≥S4	≥S5	≥S6	≥_7	≥_8	≥_9	≥_10	≥_11	≥_12
Volatile Organics, Cont.												
ethylbenzene												
styrene					1 J							
xylenes (total)						10						
Semivolatile Organics												
phenol	1200 B	1300 B	1500 B	1500 JB	1700 B	3200 JB						
bis(2-chloroethyl)ether												
2-chlorophenol												
1,3-dichlorobenzene												
1,4-dichlorobenzene					68 J							
benzylalcohol												
1,2-dichlorobenzene					190 J							
2-methylphenol	1600 B	1400 B	2000 B	1500 JB	1900 B	1300 JB						
bis(2-chloroisopropyl)ether	2200 B											
4-methylphenol		1800 B	2700 B	1600 B	2500 B	3100 JB						
n-nitroso-di-n-dipropylamine												
hexachloroethane												
nitrobenzene												
isophorone	62 JB	52 JB	81 JB		85 JB							
2-nitrophenol												
2,4-dimethylphenol	790 B	790 B	1200 B	850 JB	1100 B							
benzoic acid												
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene												
naphthalene	48 J	320 J	120 JB		87 J	810 J						
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnaphthalene	69 J	350	130 J		77 J	620 J						
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethylphthalate												
acenaphthylene	51 J		96 J		120 J							
2,6-dinitrotoluene												
3-nitroaniline												
acenaphthene												
2,4-dinitrophenol												
4-nitrophenol												
dibenzofuran		120 J	91 J		100 J	400 J						
2,4-dinitrotoluene												
diethylphthalate					110 J							
4-chlorophenyl-phenylether												
fluorene		53 J	110 J		130 J	550 J						

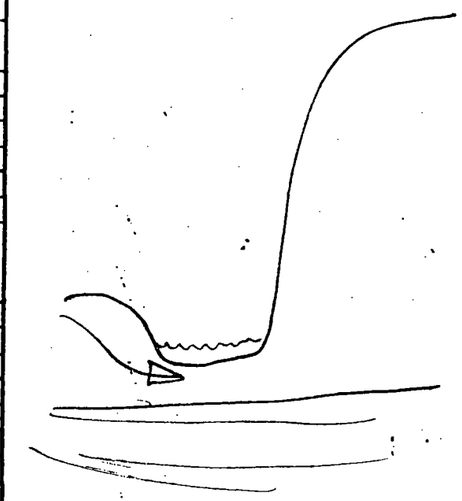
Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	>S1	>S2	>S3	>S4	>S5	>S6	>7	>8	>9	>10	>11	>12
Semivolatile Organics, Cont.												
4-nitroaniline												
4,6-dinitro-2-methylphenol												
n-nitrosodiphenylamine		88J	72J	570		760J						
4-bromophenyl-phenylether												
hexachlorobenzene												
pentachlorophenol												
phenanthrene	250J	500	690	550J	1200	2700J						
anthracene	59J	80J	190J		280J	610J						
di-n-butylphthalate		40J	48J	830JB	76J	540J						
fluoranthene	620	200J	910	700J	1700	2800J						
pyrene	460	180J	720	530J	1000	1800J						
butylbenzylphthalate				810J								
3,3'-dichlorobenzidine												
benzo[a]anthracene	280J	110J	620		640	1100J						
chrysene	320J	180J	510	330J	550	1200J						
bis(2-ethylhexyl)phthalate	330B	220JB	400B	2200B	490B							
di-n-octylphthalate												
benzo[b]fluoranthene	230J	190J	1300	500J	930	1500J						
benzo[k]fluoranthene												
benzo[a]pyrene		99J	910		470	670J						
indeno[1,2,3-cd]pyrene	320J	79J	740		370							
dibenzo[a,h]anthracene	57J	44J	140J		110J							
benzo[g,h,i]perylene	330	130J	630		360							
Pesticides/PCBs												
alpha BHC												
beta BHC												
delta BHC												
gamma BHC (Lindane)												
Heptachlor												
Aldrin												
Heptachlor epoxide												
Endosulfan I												
Dieldrin												
4,4'-DDE	20											
Endrin												
Endosulfan II												
4,4'-DDD												
Endosulfan sulfate												
4,4'-DDT	31											
Methoxychlor (Mariate)												
Endrin ketone												
alpha Chlordane												
gamma Chlordane												
Toxaphene												
Aroclor 1016												
Aroclor 1221												

Table 4- Cont.

Sample Collection Information and Parameters	Sample Number											
	>S1	>S2	>S3	>S4	>S5	>S6	>_7	>_8	>_9	>_10	>_11	>_12
Pesticides/PCBs Cont.												
Aroclor 1232												
Aroclor 1242												
Aroclor 1248												
Aroclor 1254												
Aroclor 1260												
Analyte Detected (values in ug/ [ppm])												
aluzinum	10732	2280	3180	3410	28000	9140						
antimony	7U	6U	7U	10U	8U	[27]						
arsenic	9.3	5.3U	6.1U	8.1U	9.1	8.9						
barium	[97]	[29]	[33]	[39]	[44]	279						
beryllium	[0.6]	[0.3]	0.2U	0.3U	[0.6]	0.4U						
cadmium	1.5U	1.3U	[1.7]	1.9U	1.6U	32.9						
calcium	7200	8010	11700	10300	23100	13900						
chromium	16	14	52	28	38	195						
cobalt	[9]	3U	4U	[6]	[17]	[23]						
copper	18	20	42	28	158	1010						
iron	21902	12547	22000	13000	25000	129000						
lead	57.1	15.01	20.0	18.5	19.2	638						
magnesium	2730	[1600]	[1790]	2540	8270	3170						
manganese	935	246	549	267	469	3144						
mercury	0.1U	0.1U	0.1U	0.2U	0.1U	1.2						
nickel	23	8U	[24]	[52]	35	148						
potassium	1040	172U	[313]	[618]	[1780]	[418]						
selenium	3.0U	2.6U	3.0U	4.0U	3.3U	4.5U						
silver	1.7U	1.5U	1.7U	[3.2]	1.9U	[7.1]						
sodium	[54] E	[135] E	[110] E	[226] E	[175] E	[597] E						
thallium	6U	5U	6U	8U	7U	9U						
vanadium	[22.1]	[4.5]	[8.9]	[7.5]	[23.1]	[350]						
zinc	108	66	88	101	95	2310						
cyanide	0.6U	0.5U	0.6U	0.8U	0.7U	0.9U						

-- Not detected.



COMPOUND FOOTNOTES	DEFINITION	INTERPRETATION
U	Indicates compound was analyzed for but not detected.	Compound was not detected.
J	Indicates an estimated value.	Compound value may be semi-quantitative.
UJ	Quantitation limit is estimated due to a Quality Control (QC) protocol.	Compound was not detected.
C	This flag applies to pesticide results where the identification has been confirmed by GC/MS. Single component pesticides ≥10 ng/ul in the final extract shall be confirmed by GC/MS.	Compound was confirmed by mass spectroscopy
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is <5x the blank concentration (<10x the blank concentrations for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).
E	This flag identifies compounds whose concentrations exceed the calibration range of the GC/MS instrument for that specific analysis. This flag will not apply to pesticides/PCBs analyzed by GC/EC methods.	Compound value may be semi-quantitative.
D	This flag identifies all compounds identified in an analysis at a secondary dilution factor.	Alerts data user to a possible change in the CRQL.
A	This flag indicates that a TIC is a suspected aldol-condensation product.	Alerts data user of a lab artifact.
R	Results are unusable due to a major violation of QC protocol.	Compound value is not usable.

ANALYTE FOOTNOTES		DEFINITION	INTERPRETATION
OLD	NEW		
E	E	Estimated or not reported due to inteference. See laboratory narrative.	Compound or element was not detected or value may be semi-quantitative.
S	S	Analysis by Method of Standard Additions.	Value may be quantitative.
R	N	Spike recoveries outside QC protocols which indicates a possible matrix problem. Data may be biased high or low. See spike results and laboratory narrative.	Value may be quantitative or semi-quantitative.
*	*	Duplicate value outside QC protocols which indicates a possible matrix problem.	Value may be semi-quantitative.
+	+	Correlation coefficient for standard additions in less than 0.995. See review and laboratory narrative.	Data value may be biased.
[ ]	B	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.
UJ		DL is estimated because of a QC protocol. DL is possibly above or below CRDL.	Compound or element was not detected.
J		Value is above CRDL and is an estimated value because of a QC Protocol.	Value may be semi-quantitative.
U	U	Compound was analyzed for but not detected.	Compound was not detected.
	N	Duplicate injection precision not met.	Value may be semi-quantitative.
	W	Post digestion spike for furnance AA analysis is out of control limits (35-115%), while sample absorbance is <50% of spike absorbance.	Value may be semi-quantitative.
NA		Value not available due to insufficient data.	
NR		Value not recommended to be calculated, since chemical has proven to be a human carcinogen.	
( )		Estimated value.	

Source: Ecology and Environment, Inc. 1988.

SITE/INCIDENT FORM 1 (SII)
03/08/88

U.S. E.P.A. SUPERFUND PROGRAM
CERCLIS SITE INFORMATION FORM (SIF)

ENFORCEMENT SENSITIVE INFORMATION
FOR INTERNAL USE ONLY

*SITE NAME: _____
*EPA ID NO: _____

S/I RPM-OSC NAME/PHONE: _____/(___)___-____
OTHER REG CONTACT NAME/PHONE: _____/(___)___-____

ALIAS NAME(S): _____
_____
_____

_____
_____
_____

*LATITUDE:

STREET: _____

*LONGITUDE:
*LL SOURCE: _
*LL ACCURACY: _

*CITY: _____

Change Name (4907)

*COUNTY: _____

From: NAIMAN CO CARAVON
OHD 981 957 913

*STATE: __

To: NAIMAN CO CARAVON AKA BROOK PARK SITES
OHD 981 957 913

*ZIP: _____

CONGRESSIONAL DISTRICT: __

Keep old name as alias !

*FED. FACILITY FLAG: N
*RCRA FACILITY FLAG: _
NO FURTHER ACTION FLAG: _
DIOXIN TIER: _____
SITE NAME SOURCE: _

*COUNTY CODE: ___
*SMSA: ____
USGS HYDRO UNIT: _____

AGGREGATE CASE BUDGET OBLIGATIONS: _____
AGGREGATE FUND OBLIGATIONS: TBD

*SITE/INCIDENT ABSTRACT: _____
_____
_____
_____

*SITE CLASSIFICATION: __

(NG) FUND LEAD/NEGOT
(FE) FEDERAL ENFORCEMENT
(RP) VOLUNTARY/NEGOTIATED RESP
(F) FUND LEAD/NO NEGOT
(SN) STATE NON-FUND
(LT) LIMITED TIME FOR NEGOTIATION
(SE) STATE ENFORCEMENT
(SF) STATE/FUND
(ND) NO DETERMINATION(DEFAULT)

JUN 27 1994

FRESP 39479

ANY QUESTIONS? CALL CSC CERCLIS STAFF

ACTION: A Cather 6-6-94 (CSC ONLY)

SITE/INCIDENT FORM 1 (SI1)
03/08/88

U.S. E.P.A. SUPERFUND PROGRAM
CERCLIS SITE INFORMATION FORM (SIF)

ENFORCEMENT SENSITIVE INFORMATION
FOR INTERNAL USE ONLY

*SITE NAME: NAIMANCO. CARAVON
*EPA ID NO: _____ FMS SITE/SPILL ID: ____

S/I RPM-OSC NAME/PHONE: _____/(___)___-____
OTHER REG CONTACT NAME/PHONE: _____/(___)___-____

ALIAS NAME(S): _____

*LATITUDE: __/__/__.__
*LONGITUDE: __/__/__.__
*LL SOURCE: _
*LL ACCURACY: _

STREET: 6427 EASTLAND RD

*CITY: CLEVELAND

SITE NAME SHOULD BE:
"NAIMAN CO. CARAVON AKA BROOKPARK SITES"

*COUNTY: CUYAHOGA

OHD 981957913

*STATE: OH

*ZIP: 44142

CONGRESSIONAL DISTRICT: __

4907

*COUNTY CODE: 035
*SMSA: ____
USGS HYDRO UNIT: _____

*FED. FACILITY FLAG: N
*RCRA FACILITY FLAG: _
NO FURTHER ACTION FLAG: _
DIOXIN TIER: _____
SITE NAME SOURCE: _

AGGREGATE CASE BUDGET OBLIGATIONS: _____
AGGREGATE FUND OBLIGATIONS: TBD

*SITE/INCIDENT ABSTRACT: _____

*SITE CLASSIFICATION: __

(NG) FUND LEAD/NEGOT
(FE) FEDERAL ENFORCEMENT
(RP) VOLUNTARY/NEGOTIATED RESP
(F) FUND LEAD/NO NEGOT
(SN) STATE NON-FUND
(LT) LIMITED TIME FOR NEGOTIATION
(SE) STATE ENFORCEMENT
(SF) STATE/FUND
(ND) NO DETERMINATION(DEFAULT)

#209 NOV 16 1992

Fr 98 50 3 9479

A Cathy 6-621

*CORE DATA ELEMENT OR CODE

ANY QUESTIONS? CALL CSC CERCLIS STAFF

ACTION: A (CSC ONLY)

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

CRL Receipt Date 10-8-87 FIT Receipt Date 12-29-87 Review Completed 12-30-87

TO: DIRK KAESER

FROM: Jim Mertes

SUBJECT: NAEMAN Cal CARAVAN Co.

PAN: OH0732 CASE # 7953

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
# 6	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:

* — Pages 1 & 2 of sample EP025 OAD's Form I's are missing & have been requested from CRL.

— TCL compds detected in all samples

— TIC's

Check Data Sheets for Transcription Errors

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

Book No. 6 Page No. 285 Date Sampled 8-25-87

26U:001

1 hr. charged to above PAN Q week ending 1-2-88

recycled paper

Rec'd 12/29/87 45 pages

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 12/23/87

SUBJECT: Review of Region V CLP Data Received for Review on 10-8-87

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

TO: Data User: FIT

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

SITE NAME: NAIMAN COL CARAVAN CO SMO case No. 7953

EPA Data Set No. SF 4379 No. of Samples: 6 D.U./Activity Numbers Y905/C72100

CRL No. 87FK 17538-543

SMO Traffic No. EP021 - 026

CLP Laboratory: CAL Hrs. Required for Review: 12+4=16 (TK corrections)

Following are our findings:

No major problems were present in data package. Sample EP026 had a hit for total xylenes of 10 µg/kg. Other VOA hits were qualified due to blank contamination (near CRDL) or low levels (< CRDL).

Sample EP023 had numerous PNA hits near CRDL. Other BN/A hits were qualified due to values below CRDL or Blank contamination.

Sample EP021 had pesticide hits for 4,4'-DDE and 4,4'-DDT of 20 µg/kg and ~~30~~ 31 µg/kg respectively.

SI 12.8.87

( ) Data are acceptable for use.
(✓) 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)

SI 12-8-87

Naiman Col Caravan Co.
Case 7953

This case covers 6 low soil/sediment samples for full CLP TCL analysis.

A.	Holding Times:	Acceptable No samples exceeded holding times.
B.	Surrogates:	Acceptable: volatiles 2 of 27 outside of limits semi-vols 1 of 60 " " " pesticides 1 of 9 " " "
C.	Matrix Spike/MSD:	RPD: Acceptable: 1 acid out of limits Recovery: 1 acid out of limits
D.	Method Blanks:	Pesticides - no pesticide interferences present VOA - Acceptable, contaminants near MDL Semi Vol - Acceptable, Pheonl and Phthalate near MDL
E.	Calibrations:	Acceptable: VOA - no calibration problems effected results. Semi Vol.s - 9-22-87 pyrene %D > 30% EPO21 value of 460 ug/kg received J Flag
F.	GC/MS Tuning:	Acceptable: All criteria were met.
G.	Pesticides:	Linearity/Degradation: Acceptable, Criteria were met. DBC Shift Acceptable (<2% difference) DDT RT Acceptable (>12 minutes).
H.	Samples:	See cover sheet and sample summary.

SI 12-9-87

Case 7953	SAMPLE	DET. LIMIT	9-22 W/A VOA 8-31	9-23 W/A VOA 8-31	9-23 8-31	9-23 8-31	9-23 8-31	9-23 8-31	
COMPOUND			EP021	EP022	EP023	EP024	EP025	EP026	
chloromethane									
bromomethane			(3 UB)	(3 UB)	(2 UB)	(3 UB)	(2 UB)	(2 UB)	
vinyl chloride									
chloroethane									
methylene chloride			(5 UB)	(32 UB)	(8 UB)	(6 UB)	(8 UB)	(13 UB)	
acetone			(100 UB)	(32 UB)	(48 UB)	(81 UB)	(20 UB)	(120 UB)	
carbon disulfide							(1 J)	(3 J)	
1,1-dichloroethene									
1,1-dichloroethane									
trans-1,2,-dichloroethene									
chloroform									
1,2-dichloroethane									
2-butanone			(4 UB)	(4 UB)		(3 UB)	(3 UB)	(16 UB)	
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				(2 J)					
tetrachloroethene				(3 J)				(1 J)	
toluene			(7 UB)	(24 B)	(3 UB)	(3 UB)	(4 UB)	(13 UB)	
chlorobenzene									
ethylbenzene									
styrene							(1 J)		
total xylenes								10	
N-nitrosodimethylamine									
phenol			(1200 UB)	(1300 UB)	(1500 UB)	(1500 UB)	(1700 UB)	(3200 UB)	
aniline									
bis(2-chloroethyl)ether									
2-chlorophenol									
1,3-dichlorobenzene									
1,4-dichlorobenzene							(68 J)		
benzyl alcohol									
1,2-dichlorobenzene							(190 J)		
2-methylphenol			(1600 UB)	(1400 UB)	(2000 UB)	(1500 UB)	(1900 UB)	(1300 UB)	
bis(2-chloroisopropyl)ether + B(?)			(2200 + B)						
4-methylphenol				(1800 UB)	(2700 UB)	(1600 UB)	(2500 UB)	(3100 UB)	
N-nitroso-di-n-propylamine									
hexachloroethane									
nitrobenzene									
isophrone			(62 UB)	(52 UB)	(81 UB)		(85 UB)		
2-nitrophenol									
2,4-dimethylphenol			(790 UB)	(790 UB)	(1200 UB)	(850 UB)	(1100 UB)		
benzoic acid									
bis(2-chloroethoxy)methane									
2,4-dichlorophenol									
1,2,4-trichlorobenzene									
napthalene			(48 J)	(320 J)	(120 J)		(87 J)	(810 J)	
4-chloroaniline									
hexachlorobutadiene									
4-chloro-3-methylphenol									
2-methylnapthalene			(69 J)	350	(30 J)		(77 J)	(620 J)	
hexachlorocyclopentadiene									
2,4,6-trichlorophenol									
2,4,5-trichlorophenol					SP	17-8-87			
2-chloronaphthalene									

Case 7953

	COMPOUND	SAMPLE	DET. LIMIT	EP021	EP022	EP023	EP024	EP025	EP026		
V	dimethyl phthalate										
	acenapthylene			[51 J]		[96]		[120 J]			
	3-nitroaniline										
	acenaphthene										
	2,4-dinitrophenol										
	4-nitrophenol										
	dibenzofuran				[120 J]	[91 J]		[100 J]	[400 J]		
	2,4-dinitrotoluene										
	2,6-dinitrotoluene										
S	diethylphthalate							[110 J]			
	4-chlorophenyl-phenylether										
V	fluorene				[53 J]	[110 J]		[130 J]	[550 J]		
	4-nitroaniline										
	4,6-dinitro-2-methylphenol										
	N-nitrosodiphenylamine				[88 J]	[72 J]	570		[760 J]		
	4-bromophenyl-phenylether										
	hexachlorobenzene										
	pentachlorophenol										
	phenanthrene			[250 J]	500	690	[550 J]	1200	[2700 J]		
	anthracene			[59 J]	[90 J]			[280 J]	[610 J]		
	di-n-butylphthalate				[40 UB]		[830 UB]	[74 UB]	[540 J]		
	fluoranthene	~330		620	[200 J]	910	[700 J]	1900	[2800 J]		
	benzidine	~330		~~460 J~~							
	pyrene	~330		[460 J]	[180 J]	720	[530 J]	1000	[1800 J]		
	butylbenzylphthalate						[810 J]				
	3,3'-dichlorobenzidine										
	benzo(a)anthracene			[280 J]	[110 J]	620		640	[1100 J]		
	bis(2-ethylhexyl)phthalate			[330 UB]	[220 UB]		[2200 UB]	[490 UB]	[3200 UB]		
	chrysene			[320 J]	[180 J]	510	[330 J]	550	[1200 J]		
	di-n-octylphthalate										
	benzo(b&k)fluoranthene			[230 J]	[190 J]	1300	[500 J]	930	[1500 J]		
	benzo(a)pyrene				[99 J]	910		470	[670 J]		
	indeno(1,2,3-cd)pyrene			[320 J]	[79 J]	740		370			
	dibenzo(a,h)anthracene			[57 J]	[44 J]	140 J		[110 J]			
↑	benzo(g,h,i)perylene	~330		330	[130 J]	630		360			
↓	alpha-BHC										
	beta-BHC										
	delta-BHC										
	gamma-BHC(lindane)										
P	heptachlor										
	aldrin										
E	heptachlor epoxide										
	endosulfan I										
S	dieldrin										
T	4,4'-DDE	~16		20							
	endrin										
	endosulfan II										
	4,4'-DDD										
	endrin aldehyde										
	endosulfan sulfate										
	4,4'-DDT	~16		31							
	methoxychlor										
	endrin ketone										
	chlordane										
	toxaphene										
P	Aroclor-1016										
	Aroclor-1221										
C	Aroclor-1232										
B	Aroclor-1242										
	Aroclor-1248										
	Aroclor-1254										
	Aroclor-1260										

SE 12-9-87

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

CASE/SAS # 7953 CONTRACTOR ENSECO/Cal.

Instrument # F9	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME: ~~8-25-87~~	8-25-87			8-31-87/10:17											
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Chloromethane															
Bromomethane															
Vinyl Chloride															
Chloroethane															
Methylene Chloride															
Acetone															
Carbon Disulfide															
1,1-Dichloroethane															
1,1-Dichloroethene															
Trans-1,2-Dichloroethene															
Chloroform															
2-Butanone															
1,2-Dichloroethane															
1,1,1-Trichloroethane															
Carbon Tetrachloride															
Vinyl Acetate					210	J									
Bromodichloromethane															
1,2-Dichloropropane															
Trans-1,3-Dichloropropene															
Trichloroethene															
Dibromochloromethane															
1,1,2-Trichloroethane															
Benzene															
cis-1,3-Dichloropropene		46	J		58	J									
2-Chloroethylvinylether															
Bromoform															
4-Methyl-2-Pentanone															
2-Hexanone															
Tetrachloroethene															
1,1,2,2-Tetrachloroethane															
Toluene															
Chlorobenzene															
Ethylbenzene															
Styrene															
m-Xylene															
o/p-Xylene															

AFFECTED SAMPLES:

Init. Cal.	All Samples	Cal # 7953..
All Samples		

Reviewer's Initials/Date: SI 12-7-87

* 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 1)

CASE/SAS # 7953 CONTRACTOR ENSECO /Cal.

Instrument #	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal		
DATE/TIME:	9.21.87			9.22.87/1438			9.23.87/1:47								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
Phenol															
bis(-2-Chloroethyl)Ether															
2-Chlorophenol															
1,3-Dichlorobenzene															
1,4-Dichlorobenzene															
Benzyl Alcohol															
1,2-Dichlorobenzene															
2-Methylphenol															
bis(2-chloroisopropyl)Ether															
4-Methylphenol															
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															
Hexachlorobutadiene															
4-Chloro-3-Methylphenol															
2-Methylnaphthalene															
Hexachlorocyclopentadiene								32	J						
2,4,6-Trichlorophenol															
2,4,5-Trichlorophenol															
2-Chloronaphthalene															
2-Nitroaniline															
Dimethyl Phthalate															
Acenaphthylene															
3-Nitroaniline		57	J												
Acenaphthene															
2,4-Dinitrophenol		39	J					31	J						
4-Nitrophenol															
Dibenzofuran															

AFFECTED SAMPLES:

All Samples	MB	EP022
Case 7953	EP021 MS	EP023
ENSECO/Cal...	EP021 DS	EP025
	EP021	MB
		EP024
		EP026

Reviewer Initials/Date: 12.7.87 SE

* 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 # 7953 CONTRACTOR ENSECO /Cal

Instrument # F4	Init. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.			Cont. Cal.		
DATE/TIME:	9-21-87			9-22-87/1138			9-23-87/1347								
	RF	%RSD	*	RF	%D	*	RF	%D	*	RF	%D	*	RF	%D	*
2,4-Dinitrotoluene															
2,6-Dinitrotoluene															
Diethylphthalate															
4-Chlorophenyl-phenylether															
Fluorene															
4-Nitroaniline															
4,6-Dinitro-2-Methylphenol															
N-Nitrosodiphenylamine															
4-Bromophenyl-phenylether															
Hexachlorobenzene															
Pentachlorophenol															
Phenanthrene															
Anthracene															
Di-n-Butylphthalate															
Fluoranthene															
Pyrene					37	J									
Butylbenzylphthalate					41	J									
Benzo(a)Anthracene					52	J									
bis(2-Ethylhexyl)Phthalate					36	J									
Chrysene					56	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													
Benzo(g,h,i) Perylene															
aniline					59	J		44	J						
3,3'-dichlorobenzidine					O	R	O		R						

SEE PAGE 1 FOR AFFECTED SAMPLES.

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

Reviewer's Initials/Date: 12-7-87 ST

Case: 7953

Contractor: ENSECO / 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: SI 12-8-87

Enseco

RECEIVED
OCT 05 1987
US EPA CENTRAL REGIONAL LAB.
536 S. CLARK STREET
CHICAGO, ILLINOIS 60605

October 1, 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 7953 of Contract 68-01-7147. These samples were received 8/26/87 and logged in under the following Enseco-Cal Lab numbers:

Enseco-Cal Lab Number	Sample I.D.
31062-1	EP 021
31062-2	EP 022
31062-3	EP 023
31062-4	EP 024
31062-5	EP 025
31062-6	EP 026

The samples were analyzed as low concentration sediment samples.

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 W. Orbanosky
Director of GC/MS Services

Ben. N. Buechler
Director of Chromatography

Michael S. Filigenzi
GC/MS Supervisor

Karin S. Yee
Data Specialist

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

Sample Number
19

LABORATORY INSTRUMENT DETECTION LIMITS

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: California Analytical Laboratories, Inc.

Case No: _____

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/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

Sample Number
16

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	9.4
207-08-9	Benzo(k)Fluoranthene	9.4
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
12

LABORATORY INSTRUMENT DETECTION LIMITS

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: _____

Date Extracted/Prepared: _____

Date Analyzed: _____

Conc/Dil Factor: _____

GPC Cleanup: _____

Separatory Funnel Extraction: _____

Continuous Liquid - Liquid Extraction: _____

CAS Number		PG (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.: 7953 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)**
EP 021	110	98	100	42	66	82	65	55	2*	100
EP 022	116	84	104	56	52	53	57	52	32	115
EP 023	107	98	101	86	74	84	83	75	33	115
EP 024	106	100	106	70	70	80	65	60	75	104
EP 025	104	104	106	76	64	76	76	66	73	112
EP 026	112	98	107	100	80	80	80	70	60	DL*
VVBK9870831	100	104	96	NR	NR	NR	NR	NR	NR	NR
EP 026 MS	118 *	90	114	NR	NR	NR	NR	NR	NR	NR
EP 026 MSD	107	92	122*	NR	NR	NR	NR	NR	NR	NR
31062MB	NR	NR	NR	82	78	100	85	74	87	119
31023MB	NR	NR	NR	62	80	118	83	82	86	NR
EP 021 MS	NR	NR	NR	44	62	62	64	56	72	NR
EP 021 MSD	NR	NR	NR	50	72	88	71	64	94	NR
EP 022 MS	NR	NR	NR	NR	NR	NR	NR	NR	NR	90
EP 022 MSD	NR	NR	NR	NR	NR	NR	NR	NR	NR	100

(CCS repl comm..)

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

VOLATILES: 2 OUT OF 27 : OUTSIDE OF QC LIMITS
SEMI-VOLATILES: 5 OUT OF 60 : OUTSIDE OF QC LIMITS
PESTICIDES: 1 OUT OF 9 : OUTSIDE OF QC LIMITS

COMMENTS:

FORM II DATA PREP/RELEASE BY: 7/85

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

CASE NO.: 7953 CONTRACTOR____CAL____

LOW LEVEL___LOW 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	58.8	58.8	0	39.1	66	36.9	63	4.7	22	59-172
SMO	Trichloroethene	58.8	58.8	0	45.6	78	44.4	76	2.6	24	62-137
SAMPLE NO.	Chlorobenzene	58.8	58.8	0	59.6	101	56.7	96	5.1	21	60-133
	Toluene	58.8	58.8	13.3	69.3	95	60.8	81	15.9	21	59-139
EP 026	Benzene	58.8	58.8	0	55.5	94	51.6	88	6.6	21	66-142
B/N	1,2,4-Trichlorobenzene	2090	2090	0	1380	66	1540	74	11	23	38-107
SMO	Acenaphthene	2090	2090	0	1680	80	1790	86	7	19	31-137
SAMPLE NO.	2,4-Dinitrotoluene	2090	2090	0	1530	73	1720	82	12	47	28-89
	Pyrene	2090	2090	460	1980	73	2150	81	10	36	35-142
	N-Nitrosodi-n-Propylamine	2090	2090	0	1540	74	1650	79	7	38	41-126
EP 021	1,4-Dichlorobenzene	2090	2090	0	1250	60	1320	63	5	27	28-104
ACID	Pentachlorophenol	4170	4170	0	69.5	2 *	1950	47	180 *	47	17-109
SMO	Phenol	4170	4170	1200	4080	69	4400	77	11	35	26-90
SAMPLE NO.	2-Chlorophenol	4170	4170	0	2830	68	2160	52	2.7	50	25-102
	4-Chloro-3-Methylphenol	4170	4170	0	3380	81	3080	74	9	33	26-103
EP 021	4-Nitrophenol	4170	4170	0	1520	36	1630	39	8	50	11-114
PEST	Lindane	28.8	28.8	0	20	69	19	66	4	50	46-127
SMO	Heptachlor	28.8	28.8	0	26	90	25	87	3	31	35-130
SAMPLE NO.	Aldrin	28.8	28.8	0	32	111	31	108	3	43	34-132
	Dieldrin	71.8	71.8	0	55	77	53	74	4	38	31-134
	Endrin	71.8	71.8	0	71	99	70	97	2	45	42-139
EP 022	4,4-DDT	71.8	71.8	0	69	96	75	104	8	50	23-134

* ASTERISKED VALUES ARE OUTSIDE QC LIMITS

RPD: VOAs 0 out of 5 ; outside QC limits
B/Ns 0 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 0 out of 12 ; outside QC limits
ACID 1 out of 10 ; outside QC limits
PEST 0 out of 12 ; outside QC limits

Comments: _____

FORM III

7/85

4

METHOD BLANK SUMMARY

CASE NO. 7953 REGION: 5 CONTRACTOR: Enseco - Cal Lab 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
31062 MB	9/22/87	PEST	SOIL	LOW	GC 12	-	NO PESTICIDES FOUND	-	-	-

COMMENTS:

FORM IV 7/85

METHOD BLANK SUMMARY

CASE NO. 7953 REGION: 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
VVBK9870831	8/31/87	VOA	SOIL	LOW	F9	74-83-9	BROMOMETHANE	1.2	UG/KG	10
						75--09-2	METHYLENE CHLORIDE	1.2	UG/KG	5
						67-64-1	ACETONE	13.3	UG/KG	10
						78-93-3	2-BUTANONE	3	UG/KG	10
						108-88-3	TOLUENE	2.2	UG/KG	5
						78-92-2	2-BUTANOL (ACN)	14.5	UG/KG	
31026MB	9/23/87	ABN	SOIL	LOW	F12	95-48-7	2-METHYLPHENOL	1300	UG/KG	330
						106-44-5	4-METHYLPHENOL	1600	UG/KG	330
						108-95-2	PHENOL	1000	UG/KG	330
						78-59-1	ISOPHORONE	43	UG/KG	330
						105-67-9	2,4-DIMETHYLPHENOL	810	UG/KG	330
						84-74-2	DI-N-BUTYLPTHALATE	240	UG/KG	330
						117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	220	UG/KG	330
						108-88-3	BENZENE, METHYL-	3600	UG/KG	-
						26232-98-4	2-PENTENE, 4,4-DIMETHYL-	2200	UG/KG	-
						126-30-7	1,3-PROPANEDIOL, 2,2-DIMETHYL	200	UG/KG	-
						625-23-0	2-HEXANOL, 2-METHYL-	1900	UG/KG	-
						108-38-3	BENZENE, 1,3-DIMETHYL	360	UG/KG	-
						100-42-5	BENZENE, ETHENYL-	4000	UG/KG	-
						111-84-2	NONANE	200	UG/KG	-
						111-76-2	ETHANOL, 2-BUTOXY	360	UG/KG	-
						111-15-9	2-ETHOXYETHYL ACETATE	280	UG/KG	-
						123-92-2	1-BUTANOL, 3-METHYL-, ACETATE	200	UG/KG	-
						98-82-8	BENZENE, (-METHYLETHYL)-	3700	UG/KG	-
						74421-06-0	2-HEPTENE, 5-ETHYL-2,4-DIMETHY	400	UG/KG	-
						1786-94-3	3,6,9,12,15-PENTAOXANONADECAN-	230	UG/KG	-

COMMENTS:

METHOD BLANK SUMMARY

CASE NO. 7953 REGION: 5 CONTRACTOR: Enseco - Cal Lab 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
31023MB	9/22/87	ABN	SOIL	LOW	F12	108-95-2	PHENOL	1300	UG/KG	330
						95-48-7	2-METHYLPHENOL	1700	UG/KG	330
						106-44-5	4-METHYLPHENOL	2200	UG/KG	330
						78-59-1	ISOPHORONE	69	UG/KG	330
						105-67-9	2,4-DIMETHYLPHENOL	940	UG/KG	330
						117-81-7	BIS(2-ETHYLHEXYL)PHTHALATE	270	UG/KG	330
						108-88-3	BENZENE, METHYL-	5000	UG/KG	-
						126-30-7	1,3-PROPANEDIOL, 2,2-DIMETHYL-	290	UG/KG	-
						56336-06-2	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	2500	UG/KG	-
						126-30-7	1,3-PROPANEDIOL, 2,2-DIMETHYL-	300	UG/KG	-
						3221-61-2	OCTANE, 2-METHYL-	270	UG/KG	-
						625-23-0	2-HEXANOL, 2-METHYL-	1800	UG/KG	-
						108-38-3	BENZENE, 1,3-DIMETHYL-	580	UG/KG	-
						4209-90-9	3-HEXANOL, 2,2-DIMETHYL-	130	UG/KG	-
						629-20-9	1,3,5,7-CYCLOOCTATETRAENE	4900	UG/KG	-
						111-84-2	NONANE	280	UG/KG	-
						111-76-2	ETHANOL, 2-BUTOXY-	570	UG/KG	-
						111-15-9	2-ETHOXYETHYL ACETATE	350	UG/KG	-
						123-92-2	1-BUTANOL, 3-METHYL-, ACETATE	300	UG/KG	-
						98-82-8	BENZENE, (1-METHYLETHYL)-	4400	UG/KG	-
						504-20-1	2,5-HEPTADIEN-4-ONE, 2,6-DIMET	120	UG/KG	-
						56336-06-2	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	1100	UG/KG	-
						526-75-0	PHENOL, 2,3-DIMETHYL-	370	UG/KG	-
						526-75-0	PHENOL,2,3-DIMETHYL-	140	UG/KG	-
						112-34-5	ETHANOL, 2-(2-BUTOXYETHOXY)-	390	UG/KG	-
						54725-73-4	1,8-NONANEDIOL, 8-METHYL-	570	UG/KG	-
						607-99-8	BENZENE, 1,3,5-TRIBROMO-2-METH	79	UG/KG	-
						1786-94-3	3,6,9,12,15-PENTAOXANONADECAN-	330	UG/KG	-

COMMENTS:

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No.:7953

Sample Number
METHOD BLANK

3/062MB

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/29/87

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	1000
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	1300
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	1600
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	43 JB
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	810
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
59-50-7	4-Chloro-3-Methylphenol	330 U
91-57-6	2-Methylnaphthalene	330 U
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	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	330 U
120-12-7	Anthracene	330 U
84-74-2	Di-n-Butylphthalate	240 J
206-44-0	Fluoranthene	330 U
129-00-0	Pyrene	330 U
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	330 U
117-81-7	bis(2-Ethylhexyl)Phthalate	220 J
218-01-9	Chrysene	330 U
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	330 U
207-08-9	Benzo(k)Fluoranthene	330 U
50-32-8	Benzo(a)Pyrene	330 U
193-39-5	Indeno(1,2,3-cd)Pyrene	330 U
53-70-3	Dibenz(a,h)Anthracene	330 U
191-24-2	Benzo(g,h,i)Perylene	330 U

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
METHOD BLANK

~~31023~~ 31023 MB

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/26/87

Date Analyzed: 9/22/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	1300
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	1700
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	2200
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	69 J
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	940
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
59-50-7	4-Chloro-3-Methylphenol	330 U
91-57-6	2-Methylnaphthalene	330 U
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	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	330 U
120-12-7	Anthracene	330 U
84-74-2	Di-n-Butylphthalate	330 U
206-44-0	Fluoranthene	330 U
129-00-0	Pyrene	330 U
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	330 U
117-81-7	bis(2-Ethylhexyl)Phthalate	270 J
218-01-9	Chrysene	330 U
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	330 U
207-08-9	Benzo(k)Fluoranthene	330 U
50-32-8	Benzo(a)Pyrene	330 U
193-39-5	Indeno(1,2,3-cd)Pyrene	330 U
53-70-3	Dibenz(a,h)Anthracene	330 U
191-24-2	Benzo(g,h,i)Perylene	330 U

(1) - Cannot be separated from diphenylamine

5

Sample Number
EP 021

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7953

Lab Sample ID No: 31062-1

QC Report No: 237

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By:

Date Sample Received: 8/26/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/31/87

Date Analyzed: 8/31/87

Conc/Dil Factor: 1 pH:6.8

Percent Moisture: 20

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	3 JB
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 B
67-64-1	Acetone	100 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	4 JB
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	7 B
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/ 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:7953

Sample Number
EP 021

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/26/87

Date Analyzed: 9/22/87

Conc/DiL Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	1200 B
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	1600 B
39638-32-9	bis(2-chloroisopropyl)Ether	2200 B
106-44-5	4-Methylphenol	330 U
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	62 JB
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	790 B
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	48 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	69 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	51 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	250 J
120-12-7	Anthracene	59 J
84-74-2	Di-n-Butylphthalate	330 U
206-44-0	Fluoranthene	620
129-00-0	Pyrene	460
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	280 J
117-81-7	bis(2-Ethylhexyl)Phthalate	330 B
218-01-9	Chrysene	320 J
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	230 J
207-08-9	Benzo(k)Fluoranthene	330 U
50-32-8	Benzo(a)Pyrene	330 U
193-39-5	Indeno(1,2,3-cd)Pyrene	320 J
53-70-3	Dibenz(a,h)Anthracene	57 J
191-24-2	Benzo(g,h,i)Perylene	330

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85 Form I Prepared by: Ld 7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
EP 021

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 8/26/87

Date Analyzed: 9/22/87

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	20
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	31
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 = 1.2 V_t = 5000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. ~~1908~~ 76153 Sample No. EP 021

SDG Report No. 237 Lab Sample No. 3106201AB

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	227	950	6909.1 UG/KG
2.	625-06-9	2-PENTANOL, 2,4-DIMETHYL-	A/BN	373	815	3721.0 UG/KG
3.	106-42-3	BENZENE, 1,4-DIMETHYL-	A/BN	389	942	575.7 UG/KG
4.	629-20-9	1,3,5,7-CYCLOOCTATETRAENE	A/BN	422	968	5611.7 UG/KG
5.	111-76-2	ETHANOL, 2-BUTOXY-	A/BN	449	944	400.3 UG/KG
6.	98-82-8	BENZENE, (1-METHYLETHYL)-	A/BN	470	918	5430.7 UG/KG
7.	526-75-0	PHENOL, 2,3-DIMETHYL-	A/BN	762	901	244.4 UG/KG
8.	625-06-9	2-PENTANOL, 2,4-DIMETHYL-	A/BN	789	476	350.0 UG/KG
9.	57-10-3	HEXADECANOIC ACID	A/BN	1401	741	401.0 UG/KG
10.	74685-30-6	5-EICOSENE, (E)-	A/BN	1429	452	255.8 UG/KG
11.	111-03-5	9-OCTADECENOIC ACID (Z)-, 2,3-	A/BN	1514	627	245.1 UG/KG
12.	1454-85-9	1-HEPTADECANOL	A/BN	1715	796	263.0 UG/KG
13.	7206-19-1	3-OCTADECENE, (E)-	A/BN	1854	807	263.6 UG/KG
14.	6624-79-9	1-DOTRIACONTANOL	A/BN	2058	782	583.9 UG/KG
15.	630-06-8	HEXATRIACONTANE	A/BN	2347	810	207.7 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. BENZENE, METHYL-	1. D	1.
2. 2-PENTANOL, 2,4-DIMETHYL-	2. D	2.
3. BENZENE, 1,4-DIMETHYL-	3. D	3.
4. 1,3,5,7-CYCLOOCTATETRAENE	4. D	4.
5. ETHANOL, 2-BUTOXY-	5. D	5. see blank
6. BENZENE, (1-METHYLETHYL)-	6. D	6.
7. PHENOL, 2,3-DIMETHYL-	7. D	7.
8. 2-PENTANOL, 2,4-DIMETHYL-	8. D	8.
9. HEXADECANOIC ACID	9. A ✓	9. ✓
10. 5-EICOSENE, (E)-	10. B	10.
11. 9-OCTADECENOIC ACID (Z)-, 2,3-	11. B	11.
12. 1-HEPTADECANOL	12. B	12.
13. 3-OCTADECENE, (E)- unk-SI	13. B	13.
14. 1-DOTRIACONTANOL	14. B	14.
15. HEXATRIACONTANE	15. B	15. alkane ✓

UB

M

SI

unk

SI

12-7-87

No volatile compounds

FORM 1, PART B

Sample Number
EP O22

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7953

Lab Sample ID No: 31062-2

QC Report No: 237

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By:

Date Sample Received: 8/26/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/31/87

Date Analyzed: 8/31/87

Conc/Dil Factor: 1 pH:8.1

Percent Moisture: 7.0

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	3 JB
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	32 B
67-64-1	Acetone	32 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	4 JB
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	2 J
127-18-4	Tetrachloroethene	3 J
108-88-3	Toluene	24 B
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/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:7953

Sample Number
EP 022

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/26/87

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	1300 B
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	1400 B
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	1800 B
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	52 JB
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	790 B
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	320 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	350
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	330 U
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	120 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	53 J
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	88 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	500
120-12-7	Anthracene	80 J
84-74-2	Di-n-Butylphthalate	40 J
206-44-0	Fluoranthene	200 J
129-00-0	Pyrene	180 J
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	110 J
117-81-7	bis(2-Ethylhexyl)Phthalate	220 JB
218-01-9	Chrysene	180 J
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	190 J
207-08-9	Benzo(k)Fluoranthene	330 U
50-32-8	Benzo(a)Pyrene	99 J
193-39-5	Indeno(1,2,3-cd)Pyrene	79 J
53-70-3	Dibenz(a,h)Anthracene	44 J
191-24-2	Benzo(g,h,i)Perylene	130 J

(1) - Cannot be separated from Diphenylamine

CLF: 10/11/85

Form I

Prepared by: _____

7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
EP 022

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 8/26/87

Date Analyzed: 9/23/87

Conc/Dil Factor: 10

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	80 U
319-85-7	Beta-BHC	80 U
319-86-8	Delta-BHC	80 U
58-89-9	Gamma-BHC (Lindane)	80 U
76-44-8	Heptachlor	80 U
309-00-2	Aldrin	80 U
1024-57-3	Heptachlor Epoxide	80 U
959-98-8	Endosulfan I	80 U
60-57-1	Dieldrin	160 U
72-55-9	4,4'-DDE	160 U
72-20-8	Endrin	160 U
33213-65-9	Endosulfan II	160 U
72-54-8	4,4'-DDD	160 U
1031-07-8	Endosulfan Sulfate	160 U
50-29-3	4,4'-DDT	160 U
72-43-5	Methoxychlor	800 U
53494-70-5	Endrin Ketone	160 U
57-74-9	Chlordane	800 U
8001-35-2	Toxaphene	1600 U
12674-11-2	Aroclor-1016	800 U
11104-28-2	Aroclor-1221	800 U
11141-16-5	Aroclor-1232	800 U
53469-21-9	Aroclor-1242	800 U
12672-29-6	Aroclor-1248	800 U
11097-69-1	Aroclor-1254	1600 U
11096-82-5	Aroclor-1260	1600 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 = 1.4 V_t = 50000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
PAGE 4
TENTATIVELY IDENTIFIED COMPOUNDS

LAB NAME: CAL CASE NO. 7953 SAMPLE NO. EP 022

QC REPORT NO. 287 LAB SAMPLE NO. 3106202VV

PROBABILITY THAT IDENTIFICATION IS CORRECT:
A= HIGH B= MODERATE C= LOW D= SEE ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	ESTIMATED CONC. J VALUE
1.	75-69-4	METHANE, TRICHLOROFLUORO-	VOA	93	992	6.2 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. METHANE, TRICHLOROFLUORO-	1. A	1.

SI 12.7.87

FORM 1, PART B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7953 Sample No. EP 022

QC Report No. 237 Lab Sample No. 3106202AB

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	210	959	6430.0 UG/KG
2.	26232-98-4	2-PENTENE, 4,4-DIMETHYL-	A/BN	258	882	2740.5 UG/KG
3.	625-23-0	2-HEXANOL, 2-METHYL-	A/BN	360	729	2573.7 UG/KG
4.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	378	937	487.4 UG/KG
5.	629-20-9	1,3,5,7-CYCLOOCTATETRAENE	A/BN	413	967	5043.9 UG/KG
6.	2216-34-4	OCTANE, 4-METHYL-	A/BN	423	752	221.0 UG/KG
7.	111-76-2	ETHANOL, 2-BUTOXY-	A/BN	441	932	262.3 UG/KG
8.	98-82-8	BENZENE, (1-METHYLETHYL)-	A/BN	463	927	5216.4 UG/KG
9.	74421-06-0	2-HEPTENE, 5-ETHYL-2,4-DIMETHY	A/BN	740	711	353.6 UG/KG
10.	17301-32-5	UNDECANE, 4,7-DIMETHYL-	A/BN	889	861	239.0 UG/KG
11.	629-59-4	TETRADECANE	A/BN	979	883	340.0 UG/KG
12.	544-76-3	HEXADECANE	A/BN	1143	853	302.6 UG/KG
13.	629-78-7	HEPTADECANE	A/BN	1219	869	275.3 UG/KG
14.	593-45-3	OCTADECANE	A/BN	1290	848	153.1 UG/KG
15.	629-92-5	NONADECANE	A/BN	1360	875	316.3 UG/KG
16.	57-10-3	HEXADECANOIC ACID	A/BN	1404	756	1578.7 UG/KG
17.	2467-03-9	PHENOL, 2,2'-METHYLENEBIS-	A/BN	1443	790	450.0 UG/KG
18.	620-92-8	PHENOL, 4,4'-METHYLENEBIS-	A/BN	1484	832	681.5 UG/KG
19.	~~12427-38-2 MANEB (ACN)~~ see below		A/BN	1488	614	587.3 UG/KG
20.	72403-15-0	PYRIDINE, (2-METHYLPHENOXY)-	A/BN	1247	405	9.5 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. BENZENE, METHYL-	1. A + D	1.
2. 2-PENTENE, 4,4-DIMETHYL-	2. A D	2. or isomer
3. 2-HEXANOL, 2-METHYL-	3. B D	3.
4. BENZENE, 1,3-DIMETHYL-	4. A + D	4. or isomer
5. 1,3,5,7-CYCLOOCTATETRAENE	5. A D	5. " "
6. OCTANE, 4-METHYL-	6. B D	6.
7. ETHANOL, 2-BUTOXY-	7. A D	7.
8. BENZENE, (1-METHYLETHYL)-	8. A D	8. or isomer
9. 2-HEPTENE, 5-ETHYL-2,4-DIMETHY	9. C D	9.
10. UNDECANE, 4,7-DIMETHYL-	10. ~~B~~ A X	10. alkane ✓
11. TETRADECANE	11. ~~B~~ A X	11. alkane ✓
12. HEXADECANE	12. ~~B~~ A	12. "
13. HEPTADECANE	13. ~~B~~ A	13. "
14. OCTADECANE	14. ~~B~~ A	14. "
15. NONADECANE	15. ~~B~~ A	15. "
16. HEXADECANOIC ACID	16. A	16.
17. PHENOL, 2,2'-METHYLENEBIS-	17. A	17. or isomer → unk SI
18. PHENOL, 4,4'-METHYLENEBIS-	18. A	18. " "
19. ~~MANEB (ACN)~~ see comments	19. C	19. Alkane & sulfur (CAS# 10544-50-0)
20. PYRIDINE, (2-METHYLPHENOXY)-	20. C	20.

see blank

VB

SI 12.7

unk. sat. hydrocarb. SI 12.7

Sample Number
EP 023

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7953

Lab Sample ID No: 31062-3

QC Report No: 237

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By:

Date Sample Received: 8/26/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/31/87

Date Analyzed: 8/31/87

Conc/Dil Factor: 1 pH:7.7

Percent Moisture: 21

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	2 JB
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	8 B
67-64-1	Acetone	48 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/ 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.
6 See cover letter.
NR Not Required.
S Spiked Compound.

Prepared by: EV

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
EP 023

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/26/87

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	1500 B
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	2000 B
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	2700 B
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	81 JB
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	1200 B
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	120 JB
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	130 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	330 U
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	96 J
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	91 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)	72 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	690
120-12-7	Anthracene	190 J
84-74-2	Di-n-Butylphthalate	48 J
206-44-0	Fluoranthene	910
129-00-0	Pyrene	720
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	620
117-81-7	bis(2-Ethylhexyl)Phthalate	400 B
218-01-9	Chrysene	610
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	1300
207-08-9	Benzo(k)Fluoranthene	330 U
50-32-8	Benzo(a)Pyrene	910
193-39-5	Indeno(1,2,3-cd)Pyrene	740
53-70-3	Dibenz(a,h)Anthracene	140 J
191-24-2	Benzo(g,h,i)Perylene	830

(1) - Cannot be separated from Diphenylamine

Prepared by: _____

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
EP 023

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 8/26/87

Date Analyzed: 9/23/87

Conc/Dil Factor: 10

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	80 U
319-85-7	Beta-BHC	80 U
319-86-8	Delta-BHC	80 U
58-89-9	Gamma-BHC (Lindane)	80 U
76-44-8	Heptachlor	80 U
309-00-2	Aldrin	80 U
1024-57-3	Heptachlor Epoxide	80 U
959-98-8	Endosulfan I	80 U
60-57-1	Dieldrin	160 U
72-55-9	4,4'-DDE	160 U
72-20-8	Endrin	160 U
33213-65-9	Endosulfan II	160 U
72-54-8	4,4'-DDD	160 U
1031-07-8	Endosulfan Sulfate	160 U
50-29-3	4,4'-DDT	160 U
72-43-5	Methoxychlor	800 U
53494-70-5	Endrin Ketone	160 U
57-74-9	Chlordane	800 U
8001-35-2	Toxaphene	1600 U
12674-11-2	Aroclor-1016	800 U
11104-28-2	Aroclor-1221	800 U
11141-16-5	Aroclor-1232	800 U
53469-21-9	Aroclor-1242	800 U
12672-29-6	Aroclor-1248	800 U
11097-69-1	Aroclor-1254	1600 U
11096-82-5	Aroclor-1260	1600 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 = 1.2 V_t = 50000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7953 Sample No. EP 023

SDG Report No. 737 Lab Sample No. 3106203AB

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	227	938	5671.9 UG/KG
2.	126-30-7	1,3-PROPANEDIOL, 2,2-DIMETHYL-	A/BN	237	803	381.7 UG/KG
3.	16202-98-4	2-PENTENE, 4,4-DIMETHYL-	A/BN	279	880	3106.0 UG/KG
4.	126-30-7	1,3-PROPANEDIOL, 2,2-DIMETHYL-	A/BN	304	717	401.3 UG/KG
5.	3221-61-2	OCTANE, 2-METHYL-	A/BN	321	907	301.1 UG/KG
6.	625-33-0	2-HEXANOL, 2-METHYL-	A/BN	385	717	2443.9 UG/KG
7.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	390	950	749.2 UG/KG
8.	100-42-5	BENZENE, ETHENYL-	A/BN	425	963	5602.2 UG/KG
9.	111-84-2	NONANE	A/BN	433	847	389.8 UG/KG
10.	111-76-2	ETHANOL, 2-BUTOXY-	A/BN	452	953	670.8 UG/KG
11.	111-15-9	2-ETHOXYETHYL ACETATE	A/BN	455	936	392.5 UG/KG
12.	123-92-2	1-BUTANOL, 3-METHYL-, ACETATE	A/BN	461	798	338.1 UG/KG
13.	98-82-8	BENZENE, (1-METHYLETHYL)-	A/BN	472	912	6142.4 UG/KG
14.	112-40-3	DODECANE	A/BN	791	522	397.5 UG/KG
15.	17301-32-5	UNDECANE, 4,7-DIMETHYL-	A/BN	888	855	285.8 UG/KG
16.	629-59-4	TETRADECANE	A/BN	977	877	226.7 UG/KG
~~17.~~	~~5074-71-5~~	~~PHOSPHINE, BIS(PENTAFLUOROPHEN~~	~~A/BN~~	~~1358~~	~~844~~	~~[illegible] UG/KG~~
18.	57-10-3	HEXADECANOIC ACID	A/BN	1402	615	327.2 UG/KG
19.	~~[illegible]~~	~~[illegible]~~ SULFUR CAS# below	A/BN	1487	675 ~~718~~	496.0 UG/KG
20.	5074-71-5	PHOSPHINE, BIS(PENTAFLUOROPHEN	A/BN	1540	479	428.5 UG/KG

COMPOUND NAME	PROBABILITY		COMMENTS
1. BENZENE, METHYL-	1. D	1.	UB
2. 1,3-PROPANEDIOL, 2,2-DIMETHYL-	2. D	2.	
3. 2-PENTENE, 4,4-DIMETHYL-	3. D	3.	
4. 1,3-PROPANEDIOL, 2,2-DIMETHYL-	4. D	4.	
5. OCTANE, 2-METHYL-	5. D	5.	
6. 2-HEXANOL, 2-METHYL-	6. D	6.	
7. BENZENE, 1,3-DIMETHYL-	7. D	7.	
8. BENZENE, ETHENYL-	8. D	8.	see blank
9. NONANE	9. D	9.	
10. ETHANOL, 2-BUTOXY-	10. D	10.	
11. 2-ETHOXYETHYL ACETATE	11. D	11.	
12. 1-BUTANOL, 3-METHYL-, ACETATE	12. D	12.	No volatile
13. BENZENE, (1-METHYLETHYL)-	13. D	13.	compounds
14. DODECANE	14. D	14.	
15. UNDECANE, 4,7-DIMETHYL-	15. A	15.	Alkanes — UNK
16. TETRADECANE	16. A	16.	
~~17. PHOSPHINE, BIS(PENTAFLUOROPHEN~~	~~17.~~	~~17.~~	DFTPP
18. HEXADECANOIC ACID	18. A	18.	
19. ~~[illegible]~~ SULFUR	19. A	19.	CAS# 10544-50-0
20. PHOSPHINE, BIS(PENTAFLUOROPHEN	20. C	20.	DFTPP Breakdown

SF 12-8-87

Sample Number
EP 024

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7953

Lab Sample ID No: 31062-4

QC Report No: 237

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By:

Date Sample Received: 8/26/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/31/87

Date Analyzed: 8/31/87

Conc/Dil Factor: 1 pH:7.3

Percent Moisture: 36

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	3 JB
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	6 B
67-64-1	Acetone	81 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	3 JB
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/ 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:7953

Sample Number
EP 024

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/29/87

Date Analyzed: 9/22/87

Conc/DiL Factor: 5

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	1500 JB
111-44-4	bis(-2-Chloroethyl)Ether	1700 U
95-57-8	2-Chlorophenol	1700 U
541-73-1	1,3-Dichlorobenzene	1700 U
106-46-7	1,4-Dichlorobenzene	1700 U
100-51-6	Benzyl Alcohol	1700 U
95-50-1	1,2-Dichlorobenzene	1700 U
95-48-7	2-Methylphenol	1500 JB
39638-32-9	bis(2-chloroisopropyl)Ether	1700 U
106-44-5	4-Methylphenol	1600 B
621-64-7	N-Nitroso-Di-n-Propylamine	1700 U
67-72-1	Hexachloroethane	1700 U
98-95-3	Nitrobenzene	1700 U
78-59-1	Isophorone	1700 U
88-75-5	2-Nitrophenol	1700 U
105-67-9	2,4-Dimethylphenol	850 JB
65-85-0	Benzoic Acid	8000 U
111-91-1	bis(-2-Chloroethoxy)Methane	1700 U
120-83-2	2,4-Dichlorophenol	1700 U
120-82-1	1,2,4-Trichlorobenzene	1700 U
91-20-3	Naphthalene	1700 U
106-47-8	4-Chloroaniline	1700 U
87-68-3	Hexachlorobutadiene	1700 U
59-50-7	4-Chloro-3-Methylphenol	1700 U
91-57-6	2-Methylnaphthalene	1700 U
77-47-4	Hexachlorocyclopentadiene	1700 U
88-06-2	2,4,6-Trichlorophenol	1700 U
95-95-4	2,4,5-Trichlorophenol	8000 U
91-58-7	2-Chloronaphthalene	1700 U
88-74-4	2-Nitroaniline	8000 U
131-11-3	Dimethyl Phthalate	1700 U
208-96-8	Acenaphthylene	1700 U
99-09-2	3-Nitroaniline	8000 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	1700 U
51-28-5	2,4-Dinitrophenol	8000 U
100-02-7	4-Nitrophenol	8000 U
132-64-9	Dibenzofuran	1700 U
121-14-2	2,4-Dinitrotoluene	1700 U
606-20-2	2,6-Dinitrotoluene	1700 U
84-66-2	Diethylphthalate	1700 U
7005-72-3	4-Chlorophenyl-phenylether	1700 U
86-73-7	Fluorene	1700 U
100-01-6	4-Nitroaniline	8000 U
534-52-1	4,6-Dinitro-2-Methylphenol	8000 U
86-30-6	N-Nitrosodiphenylamine(1)	570
101-55-3	4-Bromophenyl-phenylether	1700 U
118-74-1	Hexachlorobenzene	1700 U
87-86-5	Pentachlorophenol	8000 U
85-01-8	Phenanthrene	550 J
120-12-7	Anthracene	1700 U
84-74-2	Di-n-Butylphthalate	830 JB
206-44-0	Fluoranthene	700 J
129-00-0	Pyrene	530 J
85-68-7	Butylbenzylphthalate	610 J
91-94-1	3,3'-Dichlorobenzidine	3300 U
56-55-3	Benzo(a)Anthracene	1700 U
117-81-7	bis(2-Ethylhexyl)Phthalate	2200 B
218-01-9	Chrysene	330 J
117-84-0	Di-n-Octyl Phthalate	1700 U
205-99-2	Benzo(b)Fluoranthene	500 J
207-08-9	Benzo(k)Fluoranthene	1700 U
50-32-8	Benzo(a)Pyrene	1700 U
193-39-5	Indeno(1,2,3-cd)Pyrene	1700 U
53-70-3	Dibenz(a,h)Anthracene	1700 U
191-24-2	Benzo(g,h,i)Perylene	1700 U

(1) - Cannot be separated from diphenylamine

Prepared by: _____

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
EP 024

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 8/26/87

Date Analyzed: 9/23/87

Conc/Dil Factor: 5

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	40 U
319-85-7	Beta-BHC	40 U
319-86-8	Delta-BHC	40 U
58-89-9	Gamma-BHC (Lindane)	40 U
76-44-8	Heptachlor	40 U
309-00-2	Aldrin	40 U
1024-57-3	Heptachlor Epoxide	40 U
959-98-8	Endosulfan I	40 U
60-57-1	Dieldrin	80 U
72-55-9	4,4'-DDE	80 U
72-20-8	Endrin	80 U
33213-65-9	Endosulfan II	80 U
72-54-8	4,4'-DDD	80 U
1031-07-8	Endosulfan Sulfate	80 U
50-29-3	4,4'-DDT	80 U
72-43-5	Methoxychlor	400 U
53494-70-5	Endrin Ketone	80 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	400 U
11104-28-2	Aroclor-1221	400 U
11141-16-5	Aroclor-1232	400 U
53469-21-9	Aroclor-1242	400 U
12672-29-6	Aroclor-1248	400 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	800 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 = 1.0 V_t = 25000 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 Sample No. EP 024

SDG Report No. 237 Lab Sample No. 3106204ABRX

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	233	965	7919.1 UG/KG
2.	56336-06-2	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	A/BN	286	880	2748.2 UG/KG
3.	625-06-9	2-PENTANOL, 2,4-DIMETHYL-	A/BN	364	859	14421.7 UG/KG
4.	100-42-5	BENZENE, ETHENYL-	A/BN	425	970	6821.2 UG/KG
5.	98-82-8	BENZENE, (1-METHYLETHYL)-	A/BN	473	935	6417.4 UG/KG
6.	544-63-8	TETRADECANOIC ACID	A/BN	1266	772	947.2 UG/KG
7.	2091-29-4	9-HEXADECENOIC ACID	A/BN	1393	679	3084.7 UG/KG
8.	57-10-3	HEXADECANOIC ACID	A/BN	1405	798	8684.1 UG/KG
9.	111-03-5	9-OCTADECENOIC ACID (Z)-, 2,3-	A/BN	1518	651	3357.4 UG/KG
10.	5074-71-5	PHOSPHINE, BIS(PENTAFLUOROPHEN	A/BN	1540	512	1751.2 UG/KG
11.	54484-14-3	1,2,4-OXADIAZOLE, 5-(2-NITROPH	A/BN	1742	300	14.8 UG/KG
12.	630-06-8	HEXATRIACONTANE	A/BN	2046	840	1561.7 UG/KG
13.	80-97-7	CHOLESTANOL (VAN)	A/BN	2368	504	793.2 UG/KG
14.	80-99-9	CHOLEST-7-EN-3-OL, (3.BETA.,5.	A/BN	2440	456	804.7 UG/KG

	COMPOUND NAME	PROBABILITY	COMMENTS
1.	BENZENE, METHYL-	1. A + D	1.
2.	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	2. A D	2. a isomer
3.	2-PENTANOL, 2,4-DIMETHYL-	3. B D	3.
4.	BENZENE, ETHENYL-	4. A D	4. or isomer
5.	BENZENE, (1-METHYLETHYL)-	5. A D	5.
6.	TETRADECANOIC ACID	6. ~~B~~ A ✓	6. OK SI
7.	9-HEXADECENOIC ACID	7. B	7. → unk SI
8.	HEXADECANOIC ACID	8. A ✓	8. OK SI
9.	9-OCTADECENOIC ACID (Z)-, 2,3-	9. ~~C~~ B	~~9.~~ → unk
10.	PHOSPHINE, BIS(PENTAFLUOROPHEN	10. C	10. DFTPP breakdown ✓
11.	1,2,4-OXADIAZOLE, 5-(2-NITROPH	11. C	11. unk
12.	HEXATRIACONTANE	12. B	12. alkane/unk
13.	CHOLESTANOL (VAN)	13. C	13. unk
14.	CHOLEST-7-EN-3-OL, (3.BETA.,5.	14. C	14.

see blank

UB

SI 12.8.2

SI 12.8.87

No volatile Compounds

FORM 1, PART B

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
EP 025

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

GPC Cleanup: NO

Date Extracted/Prepared: 8/26/87

Separatory Funnel Extraction: NO

Date Analyzed: 9/23/87

Continuous Liquid - Liquid Extraction: NO

Conc/Dil Factor: 10

CAS Number		ug/Kg
319-84-6	Alpha-BHC	80 U
319-85-7	Beta-BHC	80 U
319-86-8	Delta-BHC	80 U
58-89-9	Gamma-BHC (Lindane)	80 U
76-44-8	Heptachlor	80 U
309-00-2	Aldrin	80 U
1024-57-3	Heptachlor Epoxide	80 U
959-98-8	Endosulfan I	80 U
60-57-1	Dieldrin	160 U
72-55-9	4,4'-DDE	160 U
72-20-8	Endrin	160 U
33213-65-9	Endosulfan II	160 U
72-54-8	4,4'-DDD	160 U
1031-07-8	Endosulfan Sulfate	160 U
50-29-3	4,4'-DDT	160 U
72-43-5	Methoxychlor	800 U
53494-70-5	Endrin Ketone	160 U
57-74-9	Chlordane	800 U
8001-35-2	Toxaphene	1600 U
12674-11-2	Aroclor-1016	800 U
11104-28-2	Aroclor-1221	800 U
11141-16-5	Aroclor-1232	800 U
53469-21-9	Aroclor-1242	800 U
12672-29-6	Aroclor-1248	800 U
11097-69-1	Aroclor-1254	1600 U
11096-82-5	Aroclor-1260	1600 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 = 1.1 V_t = 50000 V_i = 5

ORGANICS ANALYSIS DATA SHEET
PAGE 4
TENTATIVELY IDENTIFIED COMPOUNDS

LAB NAME: CAL CASE NO. 7953 SAMPLE NO. EP 025

GC REPORT NO. LAB SAMPLE NO. 3106205VV

PROBABILITY THAT IDENTIFICATION IS CORRECT:
A= HIGH B= MODERATE C= LOW D= SEE ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	ESTIMATED CONC. J VALUE
1.	67-63-0	2-PROPANOL (ACN)	VOA	88	815	12.5 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-PROPANOL (ACN)	1. ~~B~~ A.	1.

FORM 1, PART B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7953 Sample No. EP 025

SDG Report No. 237 Lab Sample No. 310620SAB

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	229	953	6457.9 UG/KG
2.	26171-59-4	1-PENTENE, 4,4-DIMETHYL-	A/BN	281	881	3528.8 UG/KG
3.	126-30-7	1,3-PROPANEDIOL, 2,2-DIMETHYL-	A/BN	306	718	328.3 UG/KG
4.	616-22-0	2-HEXANOL, 2-METHYL-	A/BN	382	720	2125.8 UG/KG
5.	106-42-3	BENZENE, 1,4-DIMETHYL-	A/BN	392	923	752.3 UG/KG
6.	100-42-5	BENZENE, ETHENYL-	A/BN	425	962	6950.6 UG/KG
7.	111-84-2	NONANE	A/BN	434	816	374.1 UG/KG
8.	111-76-2	ETHANOL, 2-BUTOXY-	A/BN	452	933	624.4 UG/KG
9.	111-15-9	2-ETHOXYETHYL ACETATE	A/BN	456	907	372.1 UG/KG
10.	123-92-2	1-BUTANOL, 3-METHYL-, ACETATE	A/BN	461	813	230.1 UG/KG
11.	98-82-8	BENZENE, (1-METHYLETHYL)-	A/BN	473	908	6010.8 UG/KG
12.	18720-65-5	3-HEPTANOL, 5-METHYL-	A/BN	791	526	514.7 UG/KG
13.	17301-32-5	UNDECANE, 4,7-DIMETHYL-	A/BN	889	828	517.3 UG/KG
14.	629-59-4	TETRADECANE	A/BN	979	883	538.8 UG/KG
~~15.~~	~~[illegible]~~	~~[illegible] ACENAPHTHENE~~	~~A/BN~~	~~1084~~	~~[illegible]~~	~~[illegible] UG/KG~~
16.	544-76-3	HEXADECANE	A/BN	1144	551	501.3 UG/KG
17.	112-95-8	EICOSANE	A/BN	1427	687	342.6 UG/KG
18.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	A/BN	1488	349	478.6 UG/KG
19.	5074-71-7	PHOSPHINE, BIS(PENTAFLUOROPHEN	A/BN	1541	495	636.5 UG/KG
20.	100-52-7	BENZALDEHYDE (ACN)(DOT)	A/BN	522	909	390.2 UG/KG

COMPOUND NAME	PROBABILITY		COMMENTS
1. BENZENE, METHYL-	1. D	1.	UB
2. 1-PENTENE, 4,4-DIMETHYL-	2. D	2.	
3. 1,3-PROPANEDIOL, 2,2-DIMETHYL-	3. D	3.	
4. 2-HEXANOL, 2-METHYL-	4. D	4.	
5. BENZENE, 1,4-DIMETHYL-	5. D	5.	
6. BENZENE, ETHENYL-	6. D	6.	
7. NONANE	7. D	7.	
8. ETHANOL, 2-BUTOXY-	8. D	8.	
9. 2-ETHOXYETHYL ACETATE	9. D	9.	see blank
10. 1-BUTANOL, 3-METHYL-, ACETATE	10. D	10.	
11. BENZENE, (1-METHYLETHYL)-	11. D	11.	
12. 3-HEPTANOL, 5-METHYL-	12. D	12.	SI 12.8.87
13. UNDECANE, 4,7-DIMETHYL-	13. ~~D~~ A	13.	unk (sat. hydrocarb) SI
14. TETRADECANE	14. A	14.	>Alkanes "
~~15. [illegible] ACENAPHTHENE~~	~~15.~~	~~15.~~	IS3
16. HEXADECANE	16. A	16.	
17. EICOSANE	17. B	17.	Alkanes unk sat. hydrocarb. SI
18. HEPTADECANE, 2,6-DIMETHYL-	18. B	18.	
19. PHOSPHINE, BIS(PENTAFLUOROPHEN	19. C	19.	DFTPP Breakdown
20. BENZALDEHYDE (ACN)(DOT)	20. A	20.	

SI 12.8.87

Sample Number
EP 026

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7953

Lab Sample ID No: 31062-6

QC Report No: 237

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By:

Date Sample Received: 8/26/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/31/87

Date Analyzed: 8/31/87

Conc/Dil Factor: 1 pH:7.8

Percent Moisture: 15

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	2 JB
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	13 B
67-64-1	Acetone	120 B
75-15-0	Carbon Disulfide	3 JB
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	16 B
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	1 J
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	10

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.

641

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
EP 026

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/26/87

Date Analyzed: 9/23/87

Conc/DiL Factor: 10

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	3200 JB
111-44-4	bis(-2-Chloroethyl)Ether	3300 U
95-57-8	2-Chlorophenol	3300 U
541-73-1	1,3-Dichlorobenzene	3300 U
106-46-7	1,4-Dichlorobenzene	3300 U
100-51-6	Benzyl Alcohol	3300 U
95-50-1	1,2-Dichlorobenzene	3300 U
95-48-7	2-Methylphenol	1300 JB
39638-32-9	bis(2-chloroisopropyl)Ether	3300 U
106-44-5	4-Methylphenol	3100 JB
621-64-7	N-Nitroso-Di-n-Propylamine	3300 U
67-72-1	Hexachloroethane	3300 U
98-95-3	Nitrobenzene	3300 U
78-59-1	Isophorone	3300 U
88-75-5	2-Nitrophenol	3300 U
105-67-9	2,4-Dimethylphenol	3300 U
65-85-0	Benzoic Acid	16000 U
111-91-1	bis(-2-Chloroethoxy)Methane	3300 U
120-83-2	2,4-Dichlorophenol	3300 U
120-82-1	1,2,4-Trichlorobenzene	3300 U
91-20-3	Naphthalene	810 J
106-47-8	4-Chloroaniline	3300 U
87-68-3	Hexachlorobutadiene	3300 U
59-50-7	4-Chloro-3-Methylphenol	3300 U
91-57-6	2-Methylnaphthalene	620 J
77-47-4	Hexachlorocyclopentadiene	3300 U
88-06-2	2,4,6-Trichlorophenol	3300 U
95-95-4	2,4,5-Trichlorophenol	16000 U
91-58-7	2-Chloronaphthalene	3300 U
88-74-4	2-Nitroaniline	16000 U
131-11-3	Dimethyl Phthalate	3300 U
208-96-8	Acenaphthylene	3300 U
99-09-2	3-Nitroaniline	16000 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	3300 U
51-28-5	2,4-Dinitrophenol	16000 U
100-02-7	4-Nitrophenol	16000 U
132-64-9	Dibenzofuran	400 J
121-14-2	2,4-Dinitrotoluene	3300 U
606-20-2	2,6-Dinitrotoluene	3300 U
84-66-2	Diethylphthalate	3300 U
7005-72-3	4-Chlorophenyl-phenylether	3300 U
86-73-7	Fluorene	550 J
100-01-6	4-Nitroaniline	16000 U
534-52-1	4,6-Dinitro-2-Methylphenol	16000 U
86-30-6	N-Nitrosodiphenylamine(1)	760 J
101-55-3	4-Bromophenyl-phenylether	3300 U
118-74-1	Hexachlorobenzene	3300 U
87-86-5	Pentachlorophenol	16000 U
85-01-8	Phenanthrene	2700 J
120-12-7	Anthracene	610 J
84-74-2	Di-n-Butylphthalate	540 J
206-44-0	Fluoranthene	2800 J
129-00-0	Pyrene	1800 J
85-68-7	Butylbenzylphthalate	3300 U
91-94-1	3,3'-Dichlorobenzidine	6600 U
56-55-3	Benzo(a)Anthracene	1100 J
117-81-7	bis(2-Ethylhexyl)Phthalate	3200 JB
218-01-9	Chrysene	1200 J
117-84-0	Di-n-Octyl Phthalate	3300 U
205-99-2	Benzo(b)Fluoranthene	1500 J
207-08-9	Benzo(k)Fluoranthene	3300 U
50-32-8	Benzo(a)Pyrene	670 J
193-39-5	Indeno(1,2,3-cd)Pyrene	3300 U
53-70-3	Dibenz(a,h)Anthracene	3300 U
191-24-2	Benzo(g,h,i)Perylene	3300 U

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85 Form I Prepared by: 7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7953

Sample Number
EP 026

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 8/26/87

Date Analyzed: 9/30/87

Conc/Dil Factor: 10

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
319-84-6	Alpha-BHC	80 U
319-85-7	Beta-BHC	80 U
319-86-8	Delta-BHC	80 U
58-89-9	Gamma-BHC (Lindane)	80 U
76-44-8	Heptachlor	80 U
309-00-2	Aldrin	80 U
1024-57-3	Heptachlor Epoxide	80 U
959-98-8	Endosulfan I	80 U
60-57-1	Dieldrin	160 U
72-55-9	4,4'-DDE	160 U
72-20-8	Endrin	160 U
33213-65-9	Endosulfan II	160 U
72-54-8	4,4'-DDD	160 U
1031-07-8	Endosulfan Sulfate	160 U
50-29-3	4,4'-DDT	160 U
72-43-5	Methoxychlor	800 U
53494-70-5	Endrin Ketone	160 U
57-74-9	Chlordane	800 U
8001-35-2	Toxaphene	1600 U
12674-11-2	Aroclor-1016	800 U
11104-28-2	Aroclor-1221	800 U
11141-16-5	Aroclor-1232	800 U
53469-21-9	Aroclor-1242	800 U
12672-29-6	Aroclor-1248	800 U
11097-69-1	Aroclor-1254	1600 U
11096-82-5	Aroclor-1260	1600 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 = 1.3 V_t = 50000 V_i = 5

Prepared by: [signature]

ORGANICS ANALYSIS DATA SHEET
PAGE 4
TENTATIVELY IDENTIFIED COMPOUNDS

AB NAME: CAL CASE NO. 7953 SAMPLE NO. EP 026

: REPORT NO. LAB SAMPLE NO. 3106206VV

ROBABILITY THAT IDENTIFICATION IS CORRECT:
A= HIGH B= MODERATE C= LOW D= SEE ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	ESTIMATED CONC. J VALUE
1.	67-63-0	2-PROPANOL (ACN)	VOA	89	807	16.2 UG/KG
2.	1066-40-6	SILANOL, TRIMETHYL-	VOA	172	956	7.5 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-PROPANOL (ACN)	1. ~~B~~ A	1. ✓ OK
2. SILANOL, TRIMETHYL-	2. A ✓	2. OK SF 8.8.87

FORM 1, PART B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7953 Sample No. EP 026

SDG Report No. 231 Lab Sample No. 3106206AB

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	217	964	28466.8 UG/KG
2.	56336-06-2	2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	A/BN	265	877	6104.6 UG/KG
3.	625-06-9	2-PENTANOL, 2,4-DIMETHYL-	A/BN	348	859	25723.8 UG/KG
4.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	381	946	2776.2 UG/KG
5.	629-20-9	1,3,5,7-CYCLOOCTATETRAENE	A/BN	415	969	12845.0 UG/KG
6.	98-82-8	BENZENE, (1-METHYLETHYL)-	A/BN	465	930	13146.1 UG/KG
7.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	A/BN	1225	874	3344.8 UG/KG
8.	629-92-5	NONADECANE	A/BN	1490	575	2148.9 UG/KG
9.	10234-91-6	BENZENE, 1,1'-ETHYLIDENEBIS[4-	A/BN	1512	590	9951.5 UG/KG
10.	629-99-2	PENTACOSANE	A/BN	1663	807	4176.9 UG/KG
11.	629-99-2	PENTACOSANE	A/BN	1717	849	5995.9 UG/KG
~~12.~~	~~[illegible]~~	~~IPSN, 1-ETA-5-2,4-CYCLOPENTADI~~	~~A/BN~~	~~1731~~	~~[illegible]~~	~~[illegible] UG/KG~~
13.	629-99-2	PENTACOSANE	A/BN	1779	798	4833.4 UG/KG
14.	629-99-2	PENTACOSANE	A/BN	1853	825	4210.4 UG/KG
15.	630-06-8	HEXATRIACONTANE	A/BN	1942	836	3093.9 UG/KG
16.	629-99-2	PENTACOSANE	A/BN	2050	848	3018.7 UG/KG
~~17.~~	~~[illegible]~~	~~[illegible] (CAS#)~~	~~A/BN~~	~~2097~~	~~[illegible]~~	~~[illegible] UG/KG~~

COMPOUND NAME	PROBABILITY	COMMENTS
1. BENZENE, METHYL-	1. A + D	1.
2. 2-CYCLOHEXEN-1-ONE, 3,5-DIMETH	2. A D	2. or isomer
3. 2-PENTANOL, 2,4-DIMETHYL-	3. B D	3.
4. BENZENE, 1,3-DIMETHYL-	4. A + D	4. or isomer
5. 1,3,5,7-CYCLOOCTATETRAENE	5. A D	5. " "
6. BENZENE, (1-METHYLETHYL)-	6. A D	6. " "
7. HEPTADECANE, 2,6-DIMETHYL-	7. B	7. alkane → unk sat. hydrocarbon
8. NONADECANE	8. B	8. "
9. BENZENE, 1,1'-ETHYLIDENEBIS[4-	9. C	9.
10. PENTACOSANE	10. B	10. alkane
11. PENTACOSANE	11. B	11. alkane
~~12. IPSN, 1-ETA-5-2,4-CYCLOPENTADI~~	~~12. SSS~~ BMB	12.
13. PENTACOSANE	13. B	13. alkane
14. PENTACOSANE	14. B	14. alkane
15. HEXATRIACONTANE	15. B	15. alkane
16. PENTACOSANE	16. B	16. alkane
~~17. [illegible] (CAS#)~~	~~17. C~~	~~17.~~ ISK

see blank

UB (W)

SI

SI
12-8-87

FORM 1, PART B

Sample Number
EP 025

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7953

Lab Sample ID No: 31062-5

QC Report No: 237

Sample Matrix: SOIL

Contract No: 68-01-7147

Data Release Authorized By:

Date Sample Received: 8/26/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 8/31/87

Date Analyzed: 8/31/87

Conc/Dil Factor: 1 pH:8.1

Percent Moisture: 24

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	2 JB
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	8 B
67-64-1	Acetone	20 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	3 JB
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	1 J
	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/ 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.

1-4-88

DIRK
KAISER

Naiman Co/ CARAVAN Co

pages 1,2 Sample EPOZS
Case # 7953
SF # 4379

OH0732

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No: 7953

Sample Number
EP 025

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low
Date Extracted/Prepared: 8/26/87
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	CRQL
108-95-2	Phenol	1700 B	330
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	68 J	
100-51-6	Benzyl Alcohol	330 U	
95-50-1	1,2-Dichlorobenzene	190 J	
95-48-7	2-Methylphenol	1900 B	
39638-32-9	bis(2-chloroisopropyl)Ether	330 U	
106-44-5	4-Methylphenol	2500 B	
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	85 JB	
88-75-5	2-Nitrophenol	330 U	
105-67-9	2,4-Dimethylphenol	1100 B	
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	87 J	330
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	77 J	330
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	CRQL
83-32-9	Acenaphthene	120 J	330
51-28-5	2,4-Dinitrophenol	1600 U	
100-02-7	4-Nitrophenol	1600 U	
132-64-9	Dibenzofuran	100 J	330
121-14-2	2,4-Dinitrotoluene	330 U	
606-20-2	2,6-Dinitrotoluene	330 U	
84-66-2	Diethylphthalate	110 J	330
7005-72-3	4-Chlorophenyl-phenylether	330 U	
86-73-7	Fluorene	130 J	330
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	1200	330
120-12-7	Anthracene	280 J	330
84-74-2	Di-n-Butylphthalate	76 J	
206-44-0	Fluoranthene *	1700	
129-00-0	Pyrene	1000	
85-68-7	Butylbenzylphthalate	330 U	
91-94-1	3,3'-Dichlorobenzidine	660 U	
56-55-3	Benzo(a)Anthracene	640	330
117-81-7	bis(2-Ethylhexyl)Phthalate	490 B	
218-01-9	Chrysene	550	
117-84-0	Di-n-Octyl Phthalate	330 U	
205-99-2	Benzo(b)Fluoranthene	930	
207-08-9	Benzo(k)Fluoranthene	330 U	
50-32-8	Benzo(a)Pyrene	470	
193-39-5	Indeno(1,2,3-cd)Pyrene	370	
53-70-3	Dibenz(a,h)Anthracene	110 J	
191-24-2	Benzo(g,h,i)Perylene	360	

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85 Form I Prepared by: lil

330 x 5 = 1650 * for HRS

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

CRL Receipt Date ~~10/X~~ 9/29/87 FIT Receipt Date 10/28 Review Completed 11/2/87

TO: Dirk Kaiser

FROM: Zena Gold-Kaufman

SUBJECT: Naiman Co.

PAN: OH0732 CASE # 7953

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 6	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:

Check Data Sheets for Transcription Errors

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

Book No. 6 Page No. 284 Date Sampled 8/25/87

26U:001

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

SITE NAME: Naiman Co. PAN#: DATE: 10/28/87

CASE #: 7953 UNITS: mg/Kg REVIEWER: ZCK

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	MED 5B	514	515	516	517	518	
	ALUMINUM									
	ANTIMONY									
	ARSENIC			9.3				9.1	8.9	
	BARIUM									
	BERYLLIUM			[0.6]	[0.3]			[0.6]		
	CADMIUM					[1.7]			32.9	
	CHROMIUM			16	14	52	28	38	-	
	COBALT			[9]		X	[6]	[12]	[23]	
	COPPER			18	20	42	28	158		
	LEAD			57.1	15	20	18.5	19.2	638	
	MERCURY								1.2	
	NICKEL			23		[24]	[52]	135	148	
	SELENIUM									
	SILVER						[3.2]		[7.1]	
	THALLIUM									
	TIN								85	
	VANADIUM			[22.1]	[4.3]	[89]	[7.5]	[23.1]	[31.0]	
	ZINC									
	CYANIDE									

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 10-24-87

RECEIVED OCT 28 1987

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

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

TO: Data User: FIT

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

SITE NAME: NAIMAN COL CARAVAN CO. SMO case No. 7953

EPA Data Set No SF 4379 No. of Samples: 6 D.U./Activity Numbers Y905/C72100

CRL No. 87FK17538-543

SMO Traffic No. ME U513 - 518

CLP Laboratory: CAL Hrs. Required for Review: 24

Following are our findings: The labarotory's portion of case #7953 consisted of 6 soil samples analyzed for metals and cyanide. The laboratory reported no problems with the analysis of the samples.

19 Metals were determined by ICP. Al, Ca, Cr, Cu, Fe, Pb and Zn were found in all the samples.

Mn duplicate sample is flagged w/ an asterisk, the RPD is 21%. The data for Mn is acceptable because the control limits on soil/sediments are ± 35%.

Mn spike %R = 29. A positive hit on Mn along w/ the %R of the spike indicates quantitatively questionable data. The reported concentration is the minimum concentration at which the analyte is present.

Sb spike %R = 47, which indicates an elevated detection limit. This data is estimated (UJ).

GFAA analysis of Pb has a spike %R of 134 on Form V. However, the only spike %R's for Pb in the raw data are 104% & 114%. Reviewer has corrected %R.

(See second page)

( ) 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)

DATA QUALIFIERS

Contractor: CAL

Case # 7953

RECEIVED OCT 28 1987

Below is a summary of the out of control audits and the possible effect on the data for this case:

All Hg analysis by cold vapor method is within limits.

Cyanide spike recovery is 68%. The data for cyanide is estimated (J).

Form I & Form VI contain a number of errors in significant figure convention. Reviewer has corrected

Reviewed by: Margaret Shielke

Phone:

Date: 10/23/87

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 513
DATE:9-15-87

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INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB. CASE NO:7953
SOW NO.: 784 QC RPT.#7953
LAB.SAMPLE NO.: 31061-1

ELEMENTS IDENTIFIED AND MEASURED

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

ELEMENTS..METHOD		MG/KG	DRY WEIGHT
1. ALUMINIUM...P		10732	
2. ANTIMONY....P		7U	R
3. ARSENIC.....F		9.3	
4. BARIUM.....P	[	97]	
5. BERYLLIUM...P	[	0.6]	
6. CADMIUM.....P		1.5U	
7. CALCIUM.....P		72010 mT 10/23/87	
8. CHROMIUM....P		16	
9. COBALT.....P	[	9]	
10.COPPER.....P		18	
11.IRON.....P		21902	
12.LEAD.....F		57.1	
13.MAGNESIUM...P		2729 30 mT 10/23/87	
14.MANGANESE...P		935	R *
15.MERCURY....CV		0.1U	
16.NICKEL.....P		23	
17.POTASSIUM...P	[	1048 mT 10/23/87	
18.SELENIUM....F		3.0U	
19.SILVER.....P		1.7U	
20.SODIUM.....P	[	54] E	
21.THALLIUM....F		6U	
22.TIN.....P		6U	
23.VANADIUM....P	[	22.1]	
24.ZINC.....P		108	
25.CYANIDE.....C		0.6U	R
% SOLID		82	

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 514
DATE:9-15-87

RECEIVED OCT 28 1987

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB. CASE NO:7953
SOW NO.: 784 QC RPT.#7953
LAB.SAMPLE NO.: 31061-2

ELEMENTS IDENTIFIED AND MEASURED

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

ELEMENTS	METHOD		MG/KG	DRY WEIGHT
1. ALUMINIUM	P		227980	MT 10/23/87
2. ANTIMONY	P		6U	R
3. ARSENIC	F		5.3U	
4. BARIUM	P	[	29]	
5. BERYLLIUM	P	[	0.3]	
6. CADMIUM	P		1.3U	
7. CALCIUM	P		80110	MT 10/23/87
8. CHROMIUM	P		14	
9. COBALT	P		3U	
10. COPPER	P		20	
11. IRON	P		12547	
12. LEAD	F		15.0	
13. MAGNESIUM	P	[	16010]	MT 10/23/87
14. MANGANESE	P		246	R *
15. MERCURY	CV		0.1U	
16. NICKEL	P		8U	
17. POTASSIUM	P		172U	
18. SELENIUM	F		2.6U	
19. SILVER	P		1.5U	
20. SODIUM	P	[	133]	E
21. THALLIUM	F		5U	
22. TIN	P		5U	
23. VANADIUM	P	[	4.3]	
24. ZINC	P		66	
25. CYANIDE	C		0.5U	R
% SOLID			95	

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 515
DATE:9-15-87

RECEIVED OCT 28 1987

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB. CASE NO:7953
SOW NO.: 784 QC RPT.#7953
LAB.SAMPLE NO.: 31061-3

ELEMENTS IDENTIFIED AND MEASURED

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

ELEMENTS..METHOD		MG/KG	DRY WEIGHT
1. ALUMINIUM...P		3179 80	mT 10/23/87
2. ANTIMONY....P		7U	R
3. ARSENIC.....F		6.1U	
4. BARIUM.....P	[	33]	
5. BERYLLIUM...P		0.2U	
6. CADMIUM.....P	[	1.7]	
7. CALCIUM.....P		1174100	mT 10/23/87
8. CHROMIUM....P		52	
9. COBALT.....P		4U	
10.COPPER.....P		42	
11.IRON.....P		21982 2000	mT 10/23/87
12.LEAD.....F		20.0	
13.MAGNESIUM...P	[	1790]	
14.MANGANESE...P		549	R *
15.MERCURY....CV		0.1U	
16.NICKEL.....P	[	24]	
17.POTASSIUM...P	[	313]	
18.SELENIUM....F		3.0U	
19.SILVER.....P		1.7U	
20.SODIUM.....P	[	110] E	
21.THALLIUM....F		6U	
22.TIN.....P		6U	
23.VANADIUM....P	[	8.9]	
24.ZINC.....P		88	
25.CYANIDE.....C		0.6U	R
% SOLID		82	

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 516
DATE:9-15-87

RECEIVED
RECEIVED OCT 2 8 1987

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB. CASE NO:7953
SOW NO.: 784 QC RPT.#7953
LAB.SAMPLE NO.: 31061-4

ELEMENTS IDENTIFIED AND MEASURED

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

ELEMENTS..METHOD		MG/KG DRY WEIGHT	
1. ALUMINIUM...P		~~34000~~ 10	MT 10/23/87
2. ANTIMONY....P		10U	R
3. ARSENIC.....F		8.1U	
4. BARIUM.....P	[	39]	
5. BERYLLIUM...P		0.3U	
6. CADMIUM.....P		1.9U	
7. CALCIUM.....P		~~10250~~ 10300	MT 10/23/87
8. CHROMIUM....P		28	
9. COBALT.....P	[	61]	
10.COPPER.....P		28	
11.IRON.....P		~~12968~~ 13000	MT 10/23/87
12.LEAD.....F		18.5	
13.MAGNESIUM...P		2540	
14.MANGANESE...P		267	R *
15.MERCURY....CV		0.2U	
16.NICKEL.....P	[	52]	
17.POTASSIUM...P	[	618]	
18.SELENIUM....F		4.0U	
19.SILVER.....P	[	3.2]	
20.SODIUM.....P	[	226] E	
21.THALLIUM....F		8U	
22.TIN.....P		8U	
23.VANADIUM....P	[	7.5]	
24.ZINC.....P		101	
25.CYANIDE.....C		0.8U	R
% SOLID		62	

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 517
DATE:9-15-87

RECEIVED OCT 28 1987

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB. CASE NO:7953
SOW NO.: 784 QC RPT.#7953
LAB.SAMPLE NO.: 31061-5

ELEMENTS IDENTIFIED AND MEASURED

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

ELEMENTS..METHOD		MG/KG	DRY WEIGHT
1. ALUMINIUM...P		~~27953~~ 28000	MT 10/23/87
2. ANTIMONY....P		8U	R
3. ARSENIC.....F		9.1	
4. BARIUM.....P	[	44]	
5. BERYLLIUM...P	[	0.6]	
6. CADMIUM.....P		1.6U	
7. CALCIUM.....P		~~23093~~ 23100	MT 10/23/87
8. CHROMIUM....P		38	
9. COBALT.....P	[	12]	
10.COPPER.....P		158	
11.IRON.....P		~~24973~~ 25000	MT 10/23/87
12.LEAD.....F		19.2	
13.MAGNESIUM...P		~~8273~~ 8270	MT 10/23/87
14.MANGANESE...P		464	R *
15.MERCURY....CV		0.1U	
16.NICKEL.....P		35	
17.POTASSIUM...P	[	~~1782~~] 1780	MT 10/23/87
18.SELENIUM....F		3.3U	
19.SILVER.....P		1.9U	
20.SODIUM.....P	[	175] E	
21.THALLIUM....F		7U	
22.TIN.....P		7U	
23.VANADIUM....P	[	23.1]	
24.ZINC.....P		95	
25.CYANIDE.....C		0.7U	R
% SOLID		75	

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 518
DATE:9-15-87

RECEIVED OCT 28 1987

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB. CASE NO:7953
SOW NO.: 784 QC RPT.#7953
LAB.SAMPLE NO.: 31061-6

ELEMENTS IDENTIFIED AND MEASURED

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

ELEMENTS..METHOD		MG/KG	DRY WEIGHT
1. ALUMINIUM...P		~~9143~~ 9140	MT 10/23/87
2. ANTIMONY....P	[	27]	R
3. ARSENIC.....F		8.9	
4. BARIUM.....P		279	
5. BERYLLIUM...P		0.4U	
6. CADMIUM.....P		32.9	
7. CALCIUM.....P		~~13884~~ 13900	MT 10/23/87
8. CHROMIUM....P		195	
9. COBALT.....P	[	23]	
10.COPPER.....P		~~1006~~ 1010	MT 10/23/87
11.IRON.....P		~~12857~~ 12900	MT 10/23/87
12.LEAD.....P		638	
13.MAGNESIUM...P	[	~~3167~~ 3170	MT 10/23/87
14.MANGANESE...P		3144	R *
15.MERCURY....CV		1.2	
16.NICKEL.....P		148	
17.POTASSIUM...P	[	418]	
18.SELENIUM....F		4.5U	
19.SILVER.....P	[	7.1]	
20.SODIUM.....P	[	597]	E
21.THALLIUM....F		9U	
22.TIN.....P		85	
23.VANADIUM....P	[	31.0]	
24.ZINC.....P		2314	2310 MT 10/23/87
25.CYANIDE.....C		0.9U	R
% SOLID		56	

COMMENTS:

LAB MANAGER: JRB

Form III

Q. C. Report No. 7953

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7953

DATE 8-31-87

UNITS ug/l

Matrix LS

RECEIVED OCT 28 1987

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. 7953

BLANKS

RECEIVED OCT 28 1987

LAB NAME Enseco Cal Labs CASE NO. 7953

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							
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	~~2.4u~~ 9u

Form III

Q. C. Report No. 7953

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7953

DATE 9-8-87

UNITS ug/l

Matrix LS

RECEIVED OCT 28 1987

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. Aluminum	7.0u	[7.3]	7.0u			[20]	
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	6.7u	6.7u	6.7u			6.7u	
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	2.6u			2.6u	
11. Iron	4.5u	4.5u	4.5u			[14]	
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			[18]	
21. Thallium							
22. Tin	10u	10u	10u			10u	
23. Vanadium	4.2u	4.2u	4.2u			4.2u	
24. Zinc	1.7u	1.7u	1.7u			[3.4]	
Other:							
Cyanide							

Form III

Q. C. Report No. 7953

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7953

DATE 9-8-87

UNITS ug/l

Matrix LS

RECEIVED OCT 8 1987

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			[3.4]	
13. Magnesium							
14. Manganese							
15. Mercury							
16. Nickel							
17. Potassium							
18. Selenium	[1.5]	1.5u	1.5u	1.5u		1.5u	
19. Silver							
20. Sodium							
21. Thallium							
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide							

Form III

Q. C. Report No. 7953

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7953

DATE 4-9-87

UNITS ug/l

Matrix LS

RECEIVED OCT 28 1987

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		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		~~1.9u~~ 9uc	
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	2.6u			2.6u	
22. Tin							
23. Vanadium							
24. Zinc							
Other:							
Cyanide	2.4u	2.4u				2.4u	

Form III

Q. C. Report No. 7953

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7953

DATE 9-10-87

UNITS ug/l

Matrix LS

RECEIVED OCT 28 1987

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							

Form III

Q. C. Report No. 7953

BLANKS

LAB NAME Enseco Cal Labs

CASE NO. 7953

DATE 9-11-87

UNITS ug/l

Matrix LS

RECEIVED OCT 8 1987

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	1.14	1.14					
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							

FORM V
QC REPORT NUMBER: 7953
SPIKE SAMPLE RECOVERY

RECEIVED OCT 28 1987

LAB NAME: CALIF. ANAL. LABS.

CASE NO.: 7953
EPA ID: MEU 513
CAL ID: 31061-1

DATE: 9-15-87
MATRIX: LOW SOIL

UNITS: UG/L

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	279.6	12 U	600	47R
3. ARSENIC.....F	75 TO 125	51.3	15.2	40	90
4. BARIUM.....P	75 TO 125	2131	[159]	2000	107
5. BERYLLIUM...P	75 TO 125	51.1	[1.0]	50	102
6. CADMIUM.....P	75 TO 125	50.8	2.4 U	50	102
7. CALCIUM.....P	75 TO 125	N/R	N/R		
8. CHROMIUM....P	75 TO 125	226.4	26	200	100
9. COBALT.....P	75 TO 125	514.9	[15]	500	103
10.COPPER.....P	75 TO 125	286.9	29.2	250	103
11.IRON.....P	75 TO 125	N/R	N/R		
12.LEAD.....F	75 TO 125	~~120.4~~ 29.1	~~93.6~~ 18.7	~~20~~ 10	~~134~~ 104 * NT 10/23/87
13.MAGNESIUM...P	75 TO 125	N/R	N/R		
14.MANGANESE...P	75 TO 125	1681	1534	500	29R
15.MERCURY....CV	75 TO 125	1.24	0.2 U	1	124
16.NICKEL.....P	75 TO 125	526.9	[37]	500	105
17.POTASSIUM...P	75 TO 125	N/R	N/R		
18.SELENIUM....F	75 TO 125	8	5 U	10	80
19.SILVER.....P	75 TO 125	47.9	2.6 U	50	96
20.SODIUM.....P	75 TO 125	N/R	N/R		
21.THALLIUM....F	75 TO 125	45.2	10 U	50	90
22.TIN.....P	75 TO 125	479.8	10 U	500	96
23.VANADIUM....P	75 TO 125	518.4	[36]	500	104
24.ZINC.....P	75 TO 125	675.1	177.2	500	100
25.CYANIDE.....C	75 TO 125	68	10 U	100	68R

COMMENTS: Cyanide analysis was performed on sample number MEU 517 (31061-5).

* corrected by reviewer

FORM V
QC REPORT NUMBER: 7953
SPIKE SAMPLE RECOVERY

LAB NAME: CALIF. ANAL. LABS.

CASE NO.: 7953
EPA ID: MEU 513
CAL ID: 31061-1

DATE: 9-15-87
MATRIX: LOW SOIL

UNITS: UG/L

RECEIVED OCT 2 8 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				
2. ANTIMONY....P	75 TO 125				
3. ARSENIC.....P	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	94	500	102
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....P	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:

FM VI
QC REPORT NUMBER: 7953
DUPLICATE SAMPLE RECOVERY

LAB NAME: CALIF. ANAL. LABS.

CASE NO.: 7953
EPA ID: MEU 517
CAL ID: 31061-5

DATE: 9-15-87
MATRIX: LOW SOIL

UNITS: UG/L

RECEIVED OCT 28 1987

COMPOUNDS	SAMPLE(S)	DUPLICATES(D)	RPD
METALS:			
ELEMENTS..METHOD			
1. ALUMINIUM...P	17600	~~16720~~ 16700 MT 10/23/87	5
2. ANTIMONY....P	12 U	12 U	NC
3. ARSENIC.....F	15.2	15.6	3
4. BARIUM.....P	[159]	[144]	NC
5. BERYLLIUM...P	[1.0]	[0.9]	NC
6. CADMIUM.....P	2.4 U	2.4 U	NC
7. CALCIUM.....P	~~11810~~ 11800 MT 10/23/87	~~8905~~ 8910 MT 10/23/87	28
8. CHROMIUM....P	26	31.4	19
9. COBALT.....P	[15]	[14]	NC
10.COPPER.....P	29.2	28.1	4
11.IRON.....P	~~35920~~ 35900 MT 10/23/87	~~38190~~ 38200 MT 10/23/87	6
12.LEAD.....F	93.6	99.4	6
13.MAGNESIUM...P	[~~4475~~] 4470 MT	[~~4418~~] 4420 MT	NC
14.MANGANESE...P	~~1534~~ 1530 10/23/87	~~1241~~ 1240 10/23/87	21*
15.MERCURY....CV	0.2 U	0.2 U	NC
16.NICKEL.....P	[37]	[37]	NC
17.POTASSIUM...P	[1710]	[~~1761~~] 1760 MT 10/23/87	NC
18.SELENIUM....F	5 U	5 U	NC
19.SILVER.....P	2.8 U	2.8 U	NC
20.SODIUM.....P	[88]	[69]	NC
21.THALLIUM....F	10 U	10 U	NC
22.TIN.....P	10 U	10 U	NC
23.VANADIUM....P	[36]	[38]	NC
24.ZINC.....P	~~177.2~~ 177 MT 10/23/87	182	3
25.CYANIDE.....C	10 U	10 U	NC

COMMENTS: Cyanide analysis was performed on sample number MEU 517 (31061-5).

FM VI
QC REPORT NUMBER: 7953
DUPLICATE SAMPLE RECOVERY

LAB NAME: CALIF. ANAL. LABS.

CASE NO.: 7953
EPA ID: MEU 513
CAL ID: 31061-1

DATE: 9-15-87
MATRIX: LOW SOIL

UNITS: UG/L

RECEIVED OCT 28 1987

COMPOUNDS	SAMPLE(S)	DUPLICATES(D)	RPD
METALS:			
ELEMENTS..METHOD			
1. ALUMINIUM...P			
2. ANTIMONY....P			
3. ARSENIC.....P			
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.....P	94	101	7
13.MAGNESIUM...P			
14.MANGANESE...P			
15.MERCURY....CV			
16.NICKEL.....P			
17.POTASSIUM...P			
18.SELENIUM....P			
19.SILVER.....P			
20.SODIUM.....P			
21.THALLIUM....F			
22.TIN.....P			
23.VANADIUM....P			
24.ZINC.....P			
25.CYANIDE.....C			

COMMENTS:

Form VII

Q.C. Report No. 7953

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME CAL LABS. CASE NO. 7953

DATE 9-8-87 LCS UNITS ug/L mg/kg

(Circle One)

RECEIVED OCT 28 1987

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	9600	96
2. Antimony	60	12		10000	9600	96
3. Arsenic	10	40	1.1	10000	9710	97
4. Barium	200	0.6		1000	963	96
5. Beryllium	5	0.4		200	201	100
6. Cadmium	5	2.4		1000	941	94
7. Calcium	5000	6.7		40000	39400	98
8. Chromium	10	2.2		1000	945	94
9. Cobalt	50	6.2		1000	958	96
10. Copper	25	2.6		1000	1010	101
11. Iron	100	4.5		10000	9500	95
12. Lead	5	30	1.7	1000	962	96
13. Magnesium	5000	16		40000	39100	98
14. Manganese	15	0.4		1000	929	93
15. Mercury	0.2		.10			
16. Nickel	40	16		1000	932	93
17. Potassium	5000	326		40000	38200	96
18. Selenium	5	45	1.5	10000	9710	97
19. Silver	10	2.8		100	88	88
20. Sodium	5000	12		40000	39200	98
21. Thallium	10	84	2.6	10000	9860	99
22. Tin	40	10		10000	9250	92
23. Vanadium	50	4.2		1000	936	94
24. Zinc	20	1.7		1000	955	96
Other:						
Cyanide	10		2.4			

RECEIVED OCT 28 1987

Form VII

Q.C. Report No. 7953

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME CAL LABS. CASE NO. 7953

DATE 8, 9- 87 -1 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				
2. Antimony	60	12				
3. Arsenic	10	40	1.1	30	32	107
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	19.2	96
13. Magnesium	5000	16				
14. Manganese	15	0.4				
15. Mercury	0.2		.10	4.7	4.0	85
16. Nickel	40	16				
17. Potassium	5000	326				
18. Selenium	5	45	1.5	20	17.7	88
19. Silver	10	2.8				
20. Sodium	5000	12				
21. Thallium	10	84	2.6	50	52.7	105
22. Tin	40	10				
23. Vanadium	50	4.2				
24. Zinc	20	1.7				
Other:						
Cyanide	10		2.4	100	92	92

Form VII

Q.C. Report No. 7953

INSTRUMENT DETECTION LIMITS AND

LABORATORY CONTROL SAMPLE

LAB NAME CAL LABS. CASE NO. 7953

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

(Circle One)

RECEIVED OCT 28 1987

Compound	Required Detection Limits (CRDL)-ug/l	Instrument Detection Limits (IDL)-ug/l ICP/AA	Instrument Detection Limits (IDL)-ug/l Furnace	Lab Control Sample True	Lab Control Sample Found	Lab Control Sample %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			
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	84	84

AUG 31 1987

Environmental and Safety Engineering Staff
Ford Motor Company

Suite 608
15201 Century Drive
Dearborn, Michigan 48120

August 27, 1987

Mr. Dirk Kaiser
Ecology and Environment, Inc.
111 West Jackson Blvd.
Chicago, Illinois 60604

Subject: Ford Cleveland Casting Plant - Scrap Core and Mold Sand

Ref.: Your letter dated June 30, 1987 to Mr. Victor Sussman

Dear Mr. Kaiser:

We have identified on the attached portion of the U.S. Geological Survey topographic map (Lakewood Quadrangle) the approximate location of the "Grayton Road" Ohio site where scrap core and mold sand was used as fill (Attachment I). Because Boyas Excavating Company directed fill operations at the site, we were unable to more precisely identify specific areas where sand from the plant was deposited.

Attachment II is a summary of core and mold sand chemical data obtained from 1984 through 1987 using various analytical methods. In addition to the parameters shown in Attachment II, the TCLP[1] leachate from the March 3, 1987 core sand sample were analyzed for base-neutral and acid extractables. All parameters except phenol were below detection limits. The concentration of phenol in the leachate was reported as 0.08 mg/l. The data indicate that the core and mold sands do not exhibit hazardous waste characteristics under current or proposed EPA criteria. In addition, pursuant to applicable Ohio EPA guidance[2] the analytical results confirm that the mold sand should not be considered a "solid waste" as it is an inert material.

If you have any further information concerning this site or the mold and core sands, please feel free to contact me.

Sincerely,

Jerome S. Amber

Jerome S. Amber
Principal Staff Engineer
Stationary Source Environmental
Control Office
313/322-4646

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[1] U.S. EPA proposed Toxicity Characteristic Leaching Procedure, as published in the January 14, 1986 Federal Register; 51 FR 1750-58.

[2] Ohio EPA Policy for Disposal of Fly Ash and Foundry Sand, October 20, 1982 (Attachment III).

Summary of Core and Mold Sand Analytical Data
Ford Cleveland Casting Plant

Sample Identification Laboratory and Date	Parameter															
	As mg/L	Ba mg/L	Cd mg/L	Cr mg/L	Pb mg/L	Hg mg/L	Ni mg/L	Se mg/L	Ag mg/L	Zn mg/L	Tl mg/L	Fluoride	Total Cyanide	Phenolics	Total Sulfide mg/kg	PCBs mg/kg
Scrap sand/cores																
Hydro Research - 5/18/84																
Analysis on as received basis	---	---	---	---	---	---	---	---	---	---	---	---	<0.7 mg/kg	22 mg/kg	---	---
E.P. Tox. Leachate	<0.005	0.4	<0.01	<0.02	<0.05	<0.0005	0.02	<0.005	<0.02	0.27	0.08	---	<0.02 mg/L	---	---	---
Foundry (mold) sand																
Herron Testing - 7/29/85																
Analysis on as received basis	---	---	---	---	---	---	---	---	---	---	---	0.38 mg/kg	<0.01 mg/kg	<0.3 mg/kg	---	---
E.P. Tox. Leachate	<0.01	<5.0	<0.05	<0.05	<0.20	<0.01	---	<0.01	<0.05	---	---	---	---	---	---	---
Scrap sand/cores																
Wadsworth/Alert - 2/5/87																
Analysis on as received basis	---	---	---	---	---	---	---	---	---	---	---	---	<0.10 mg/kg	150 mg/kg	<50	<1
E.P. Tox. Leachate	<0.001	0.35	<0.01	<0.02	<0.05	<0.005	<0.04	<0.005	<0.01	0.14	<0.1	---	---	---	---	---
Core sand																
SSECO & ENCOTEC - 3/3/87																
TCLP	<0.002	<1.0	<0.010	<0.05	<0.05	<0.0004	---	<0.002	---	---	---	---	---	---	---	---
E.P. Tox. Leachate	<0.002	<1.0	<0.010	<0.05	<0.05	<0.0004	---	<0.002	---	---	---	---	---	---	---	---
D.I./E.P. Tox. Leachate	<0.002	<1.0	<0.010	<0.05	<0.05	<0.0004	---	<0.002	---	---	---	0.10 mg/L	<0.01 mg/L	16 mg/L	---	---
Spent foundry (mold) sand																
SSECO & ENCOTEC - 4/1/87																
E.P. Tox. Leachate	<0.002	<1.0	<0.010	<0.05	<0.05	<0.0004	---	<0.002	---	---	---	---	---	---	---	---
D.I./E.P. Tox. Leachate	<0.002	<1.0	<0.010	<0.05	<0.05	<0.0004	---	<0.002	---	---	---	<0.10 mg/L	0.056 mg/L	0.13 mg/L	---	---

SSECO
August 27, 1987

Attachment III

OhioEPA Inter-Office Communication

TO: Distribution DATE: October 20, 1982

FROM: Wayne S. Nichols, Director Wayne S. Nichols

SUBJECT: Policy for Disposal of Fly Ash and Foundry Sand

NOTE: This supercedes all previous correspondence on this matter.

I have recently indicated that we must live within the law in regulating the disposal of fly ash and foundry sand.

It should be emphasized that for a foundry sand to be regarded as exempted from the definition of a solid waste, it must be both spent and non-toxic. If the sand is spent, its leachate should not exceed 30 times the levels specified in Rule 3745-81-11(B) for any of the parameters enumerated in that rule.

Fly ash will be considered to be non-toxic if its leachate does not exceed 30 times the levels specified in Rule 3745-81-11(B), for any parameter listed in that rule.

Analysis is required for the following metals parameters, which are listed in OAC 3745-81-11(B), for fly ash and foundry sand:

Parameter	(OAC 3745-81-11(B)) Ohio Drinking Water Standards (DWS)	30 x DWS	Federal/State HW Criteria
Arsenic	0.05 mg/l	1.5 mg/l	5 mg/l
Barium	1.00 mg/l	30 mg/l	100 mg/l
Cadmium	0.01 mg/l	0.3 mg/l	1 mg/l
Chromium	0.05 mg/l	1.5 mg/l	5 mg/l
Lead	0.05 mg/l	1.5 mg/l	5 mg/l
Mercury	0.002 mg/l	0.060 mg/l	0.2 mg/l
Selenium	0.01 mg/l	0.3 mg/l	1 mg/l

Additionally, foundry sand leachate shall not contain:

phenolics at levels exceeding 0.3 mg/l
cyanides at levels exceeding 0.2 mg/l
fluorides at levels exceeding 2.4 mg/l

In order to determine toxicity, it will be necessary to use the EP Toxicity test as referenced in Identification and Listing of Hazardous Wastes, CFR 261, Appendix II. This procedure simulates the extraction of an acidic organic leachate as would be found in a sanitary landfill. The procedure must be modified for the analysis of phenolics, cyanides and fluorides by performing the extraction with distilled/deionized water without the adjustment of pH with acetic acid.

If disposal is not to be with refuse in a sanitary landfill, then the modified USEPA procedure using only distilled/deionized water for extraction may also be used for the analysis of metal parameters.

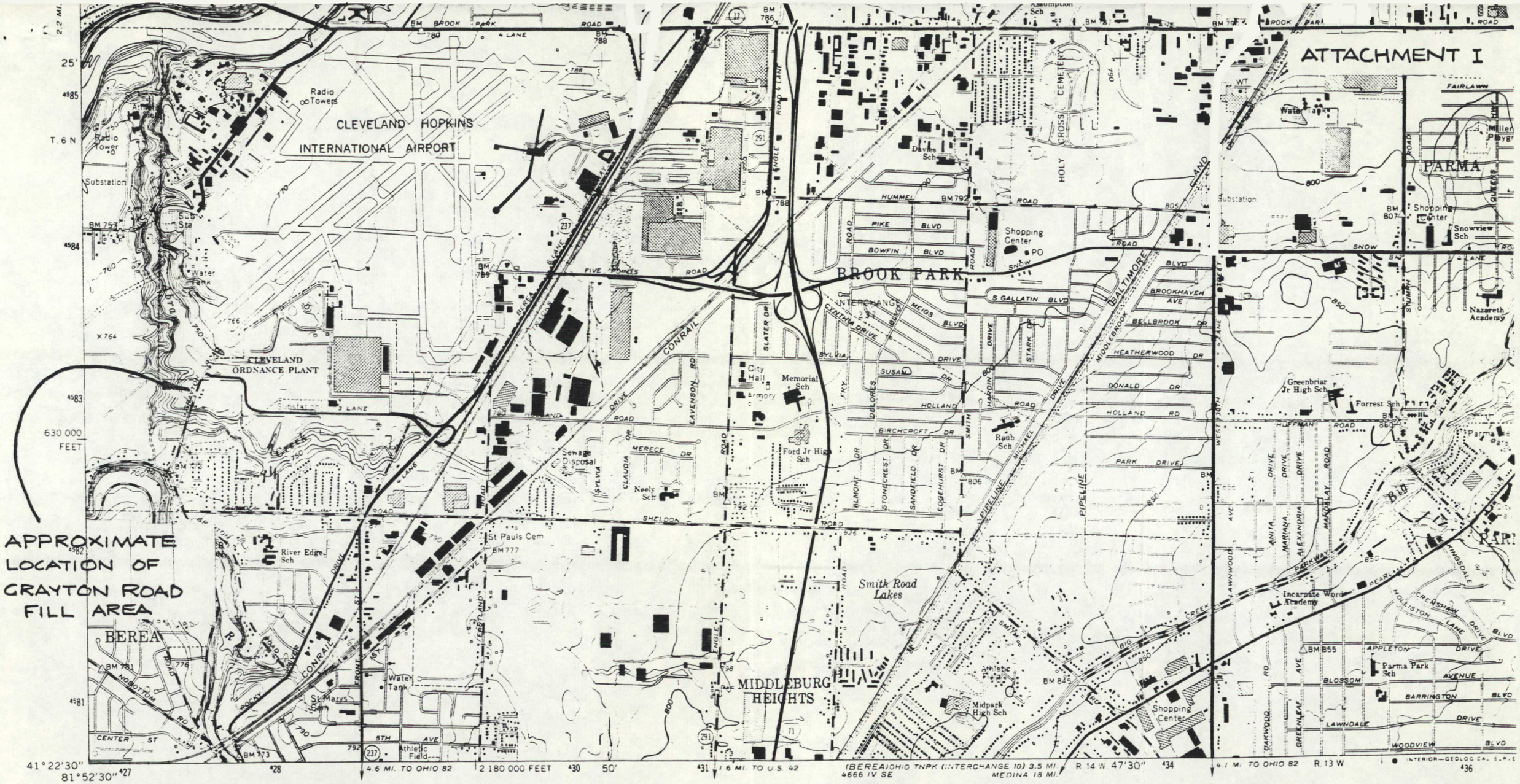
If an analysis demonstrates that the leachate levels are less than those listed above, the wastes are not regulated by ORC Chapter 3734. However, the use of sand and gravel pits, quarries, wetlands, flood plains and other places where disposed wastes could be in intimate contact with ground water should be avoided.

The disposal of non-toxic fly ash and foundry sands must be managed properly so tha violations of the Ohio water pollution and air pollution laws and regulations do not occur. Exemption from the solid waste laws does not exempt the disposal operations from the other appropriate regulations.

Good judgement and discretion should always be practiced.

WSN/pam

ATTACHMENT I



Mapped, edited, and published by the Geological Survey
Revised in cooperation with State of Ohio agencies

Control by USGS, USC&GS, and Cleveland Regional Geodetic Survey

Planimetry by photogrammetric methods from aerial photographs taken 1952. Topography by planetable surveys 1953. Revised from aerial photographs taken 1962. Field checked 1963

Selected hydrographic data compiled from U. S. Lake Survey Chart 35 (1959) This information is not intended for navigational purposes

Polyconic projection. 1927 North American datum
10,000-foot grid based on Ohio coordinate system, north zone
1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue

Fine red dashed lines indicate selected fence and field lines where generally visible on aerial photographs. This information is unchecked

Red tint indicates areas in which only landmark buildings are shown

There may be private inholdings within the boundaries of the National or State reservations shown on this map

MN GN
5° 89 MILS 0°32' 10 MILS
UTM GRID AND 1979 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Entire area lies within the Connecticut Western Reserve. Dotted land lines established by private subdivision of the Connecticut Western Reserve

SCALE 1:24 000

1 MILE — 1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER — 5 0

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET-DATUM IS LOW WATER 570.5 FEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

LAKEWOOD QUADRANGLE

OHIO

QUADRANGLE LOCATION

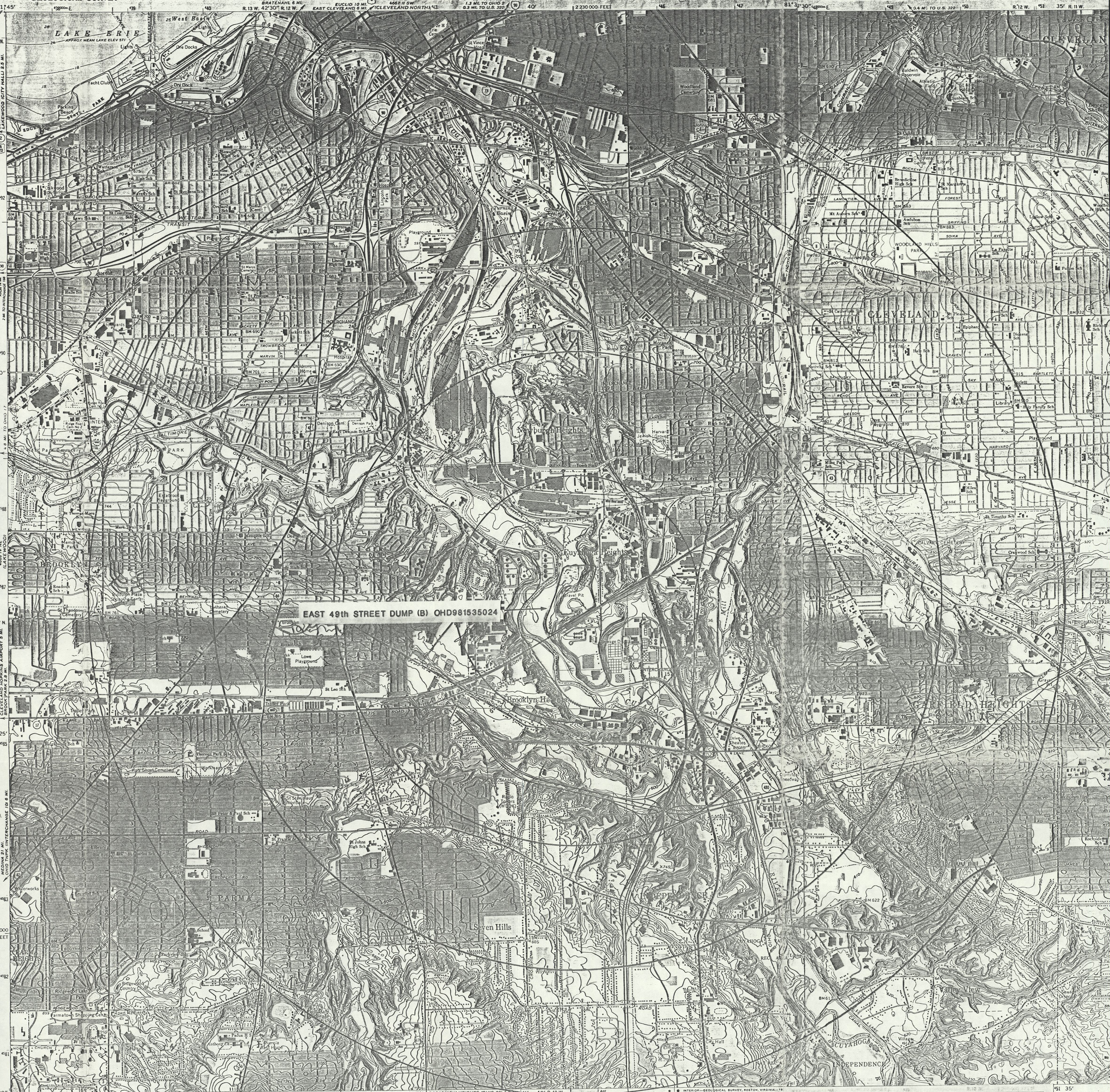
ROAD CLASS
Heavy-duty
Medium-duty
Interstate Route

Boundary lines shown in [illegible] information available from the [illegible] authority

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CLEVELAND SOUTH QUADRANGLE
OHIO–CUYAHOGA CO
7.5 MINUTE SERIES (TOPOGRAPHIC)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Mapped, edited, and published by the Geological Survey
Revised in cooperation with State of Ohio agencies

Control by USGS, NOS/NOAA, and Cleveland Regional Geodetic Survey

Topography by photogrammetric methods from aerial photographs taken 1952, and by Cleveland Regional Geodetic Survey, 1948–49
Field checked 1953. Revised from aerial photographs taken 1962
Field checked 1963

Selected hydrographic data compiled from USLS charts 35 (1959) and 354 (1962). This information is not intended for navigational purposes

Polyconic projection. 10,000-foot grid ticks based on Ohio coordinate system, north zone
1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue
1927 North American Datum
To place on the predicted North American Datum 1983 move the projection lines 2 meters south and 13 meters west as shown by dashed corner ticks

Entire area lies within the Connecticut Western Reserve
Dotted land lines established by private subdivision of the Connecticut Western Reserve

There may be private inholdings within the boundaries of the National or State reservations shown on this map

UTM GRID AND 1984 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Revisions shown in purple and woodland compiled in cooperation with State of Ohio agencies from aerial photographs taken 1982 and other sources. This information not field checked
Map edited 1984

Purple tint indicates extension of urban areas

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS LOW WATER 570.5 FEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

QUADRANGLE LOCATION

ROAD CLASSIFICATION
Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
Interstate Route — U. S. Route — S

CLEVELAND SOUTH
41081-D6-TF-024
1963
PHOTOREVISED 19
DMA 4666 I NW–SERIES V

ecology and environment, inc.

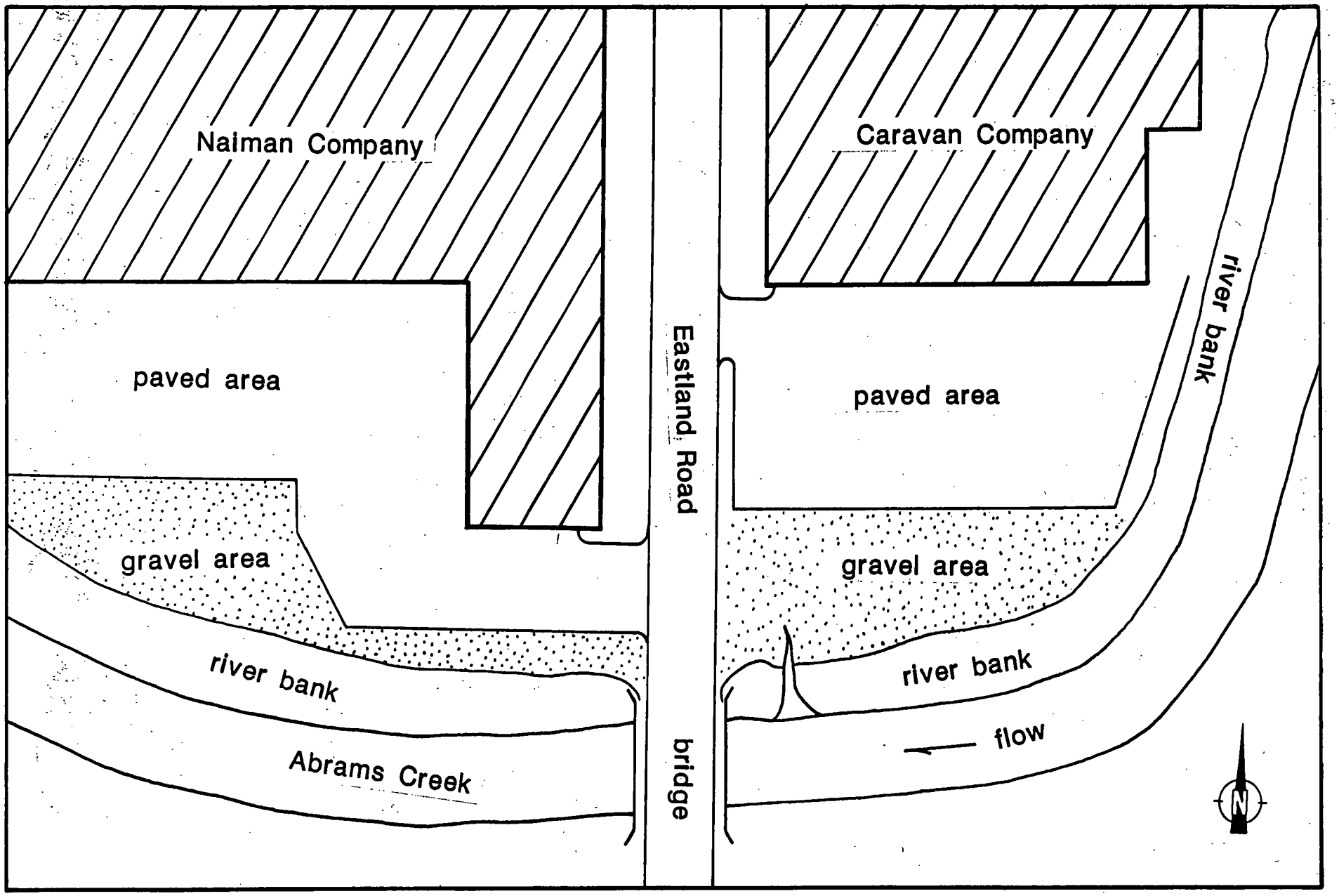
SITE NAME: EAST 49th STREET DUMP (B)
U.S. EPA ID#: OHD981535024

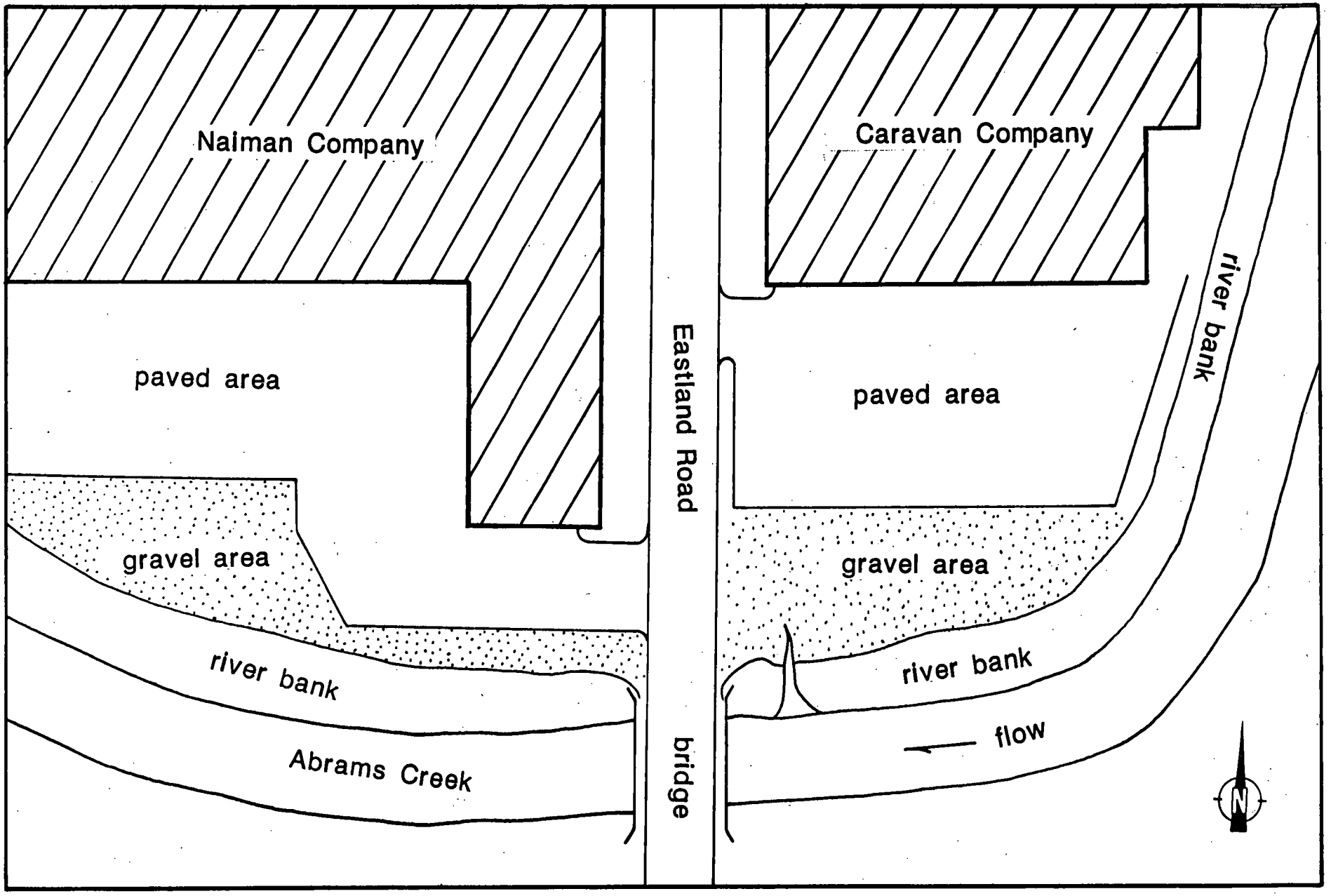
USGS TOPOGRAPHIC MAPS:

NAME CLEVELAND SOUTH	NAME SHAKER HEIGHTS
DATE 1963	DATE 1963
REVISED 1984	REVISED 1979
NAME	NAME
DATE	DATE
REVISED	REVISED

SCALE
0 ½ 1 MILE

QUADRANGLE LOCATION


Naiman Company
Caravan Company
paved area
paved area
Eastland Road
river bank
gravel area
gravel area
river bank
river bank
Abrams Creek
flow
bridge
N


Naiman Company
Caravan Company
paved area
paved area
Eastland Road
bridge
river bank
gravel area
gravel area
river bank
river bank
Abrams Creek
flow
N

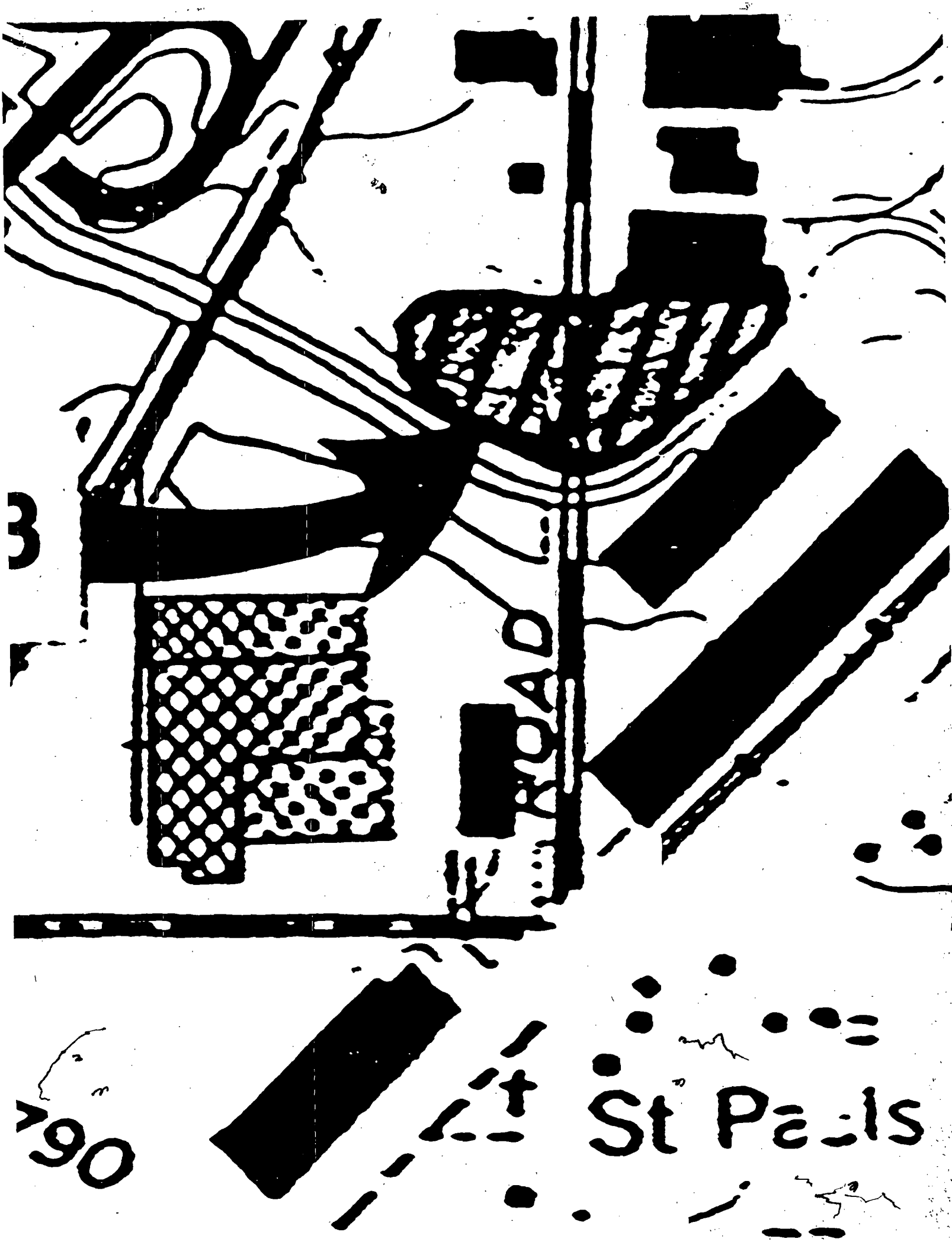

3
ROAD
St Pa ls
90

Table 4-2 (Cont.)

-- Not detected.

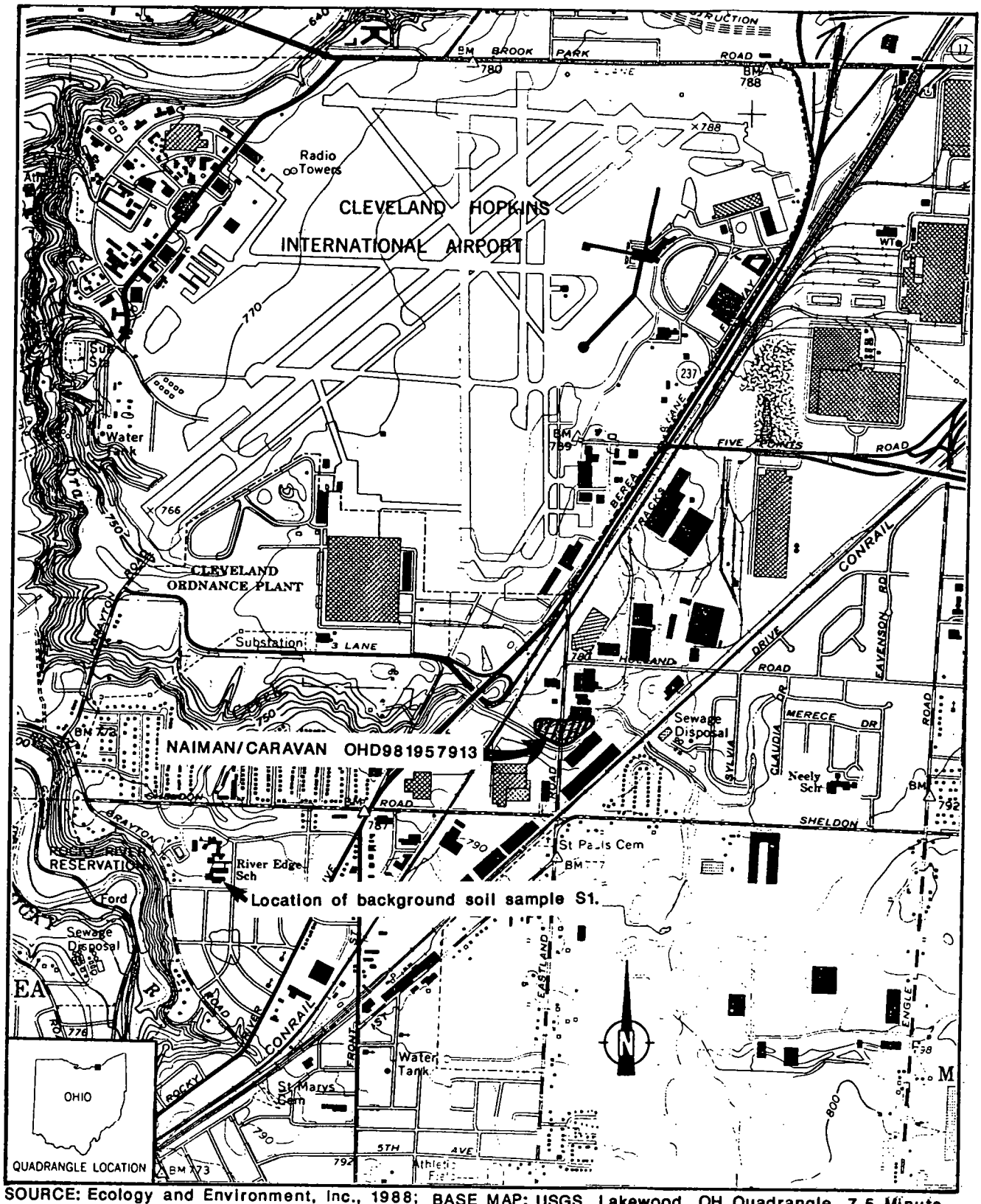
† Variability in the temperatures of the residential well samples exists because all samples were collected prior to sample temperature measurement. Because of low outside ambient temperatures, a longer period between sample collection and temperature measurement resulted in a lower sample temperature (e.g. RW1 was the first sample collected and has the lowest temperature reading).

COMPOUND FOOTNOTES	DEFINITION	INTERPRETATION
J	Indicates an estimated value.	Compound value may be semi-quantitative.
B	This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates possible/ probable blank contamination and warns the data user to take appropriate action.	Compound value may be semi-quantitative if it is < 5x the blank concentration (< 10x the blank concentration for common lab artifacts: phthalates, methylene chloride, acetone, toluene, 2-butanone).

ANALYTE FOOTNOTES	DEFINITION	INTERPRETATION
||	Value is real, but is above instrument DL and below CRDL.	Value may be quantitative or semi-quantitative.

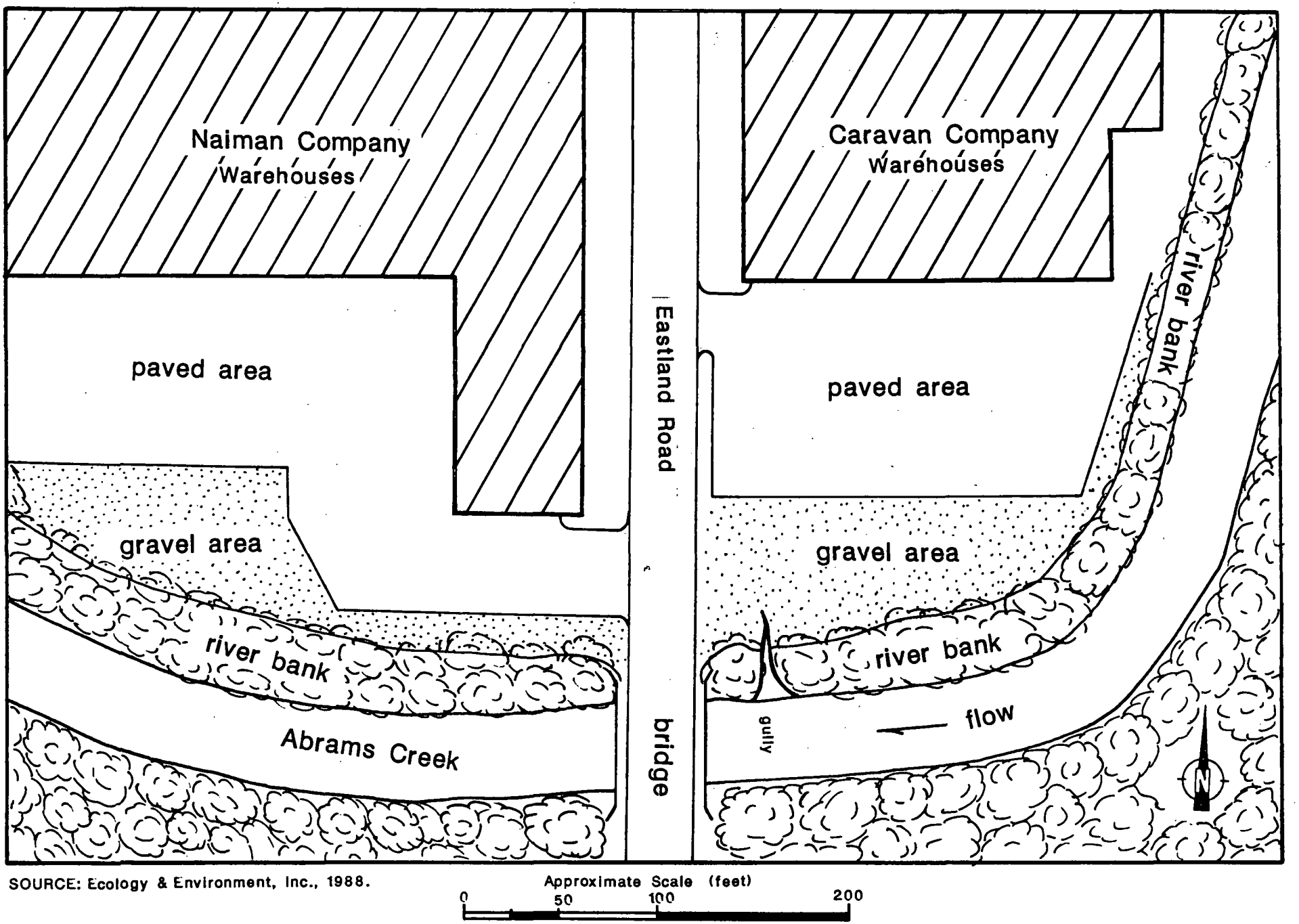
Source: Ecology and Environment, Inc. 1988.

DRAFT CONFIDENTIAL



SOURCE: Ecology and Environment, Inc., 1988; BASE MAP: USGS, Lakewood, OH Quadrangle, 7.5 Minute Series, 1963.

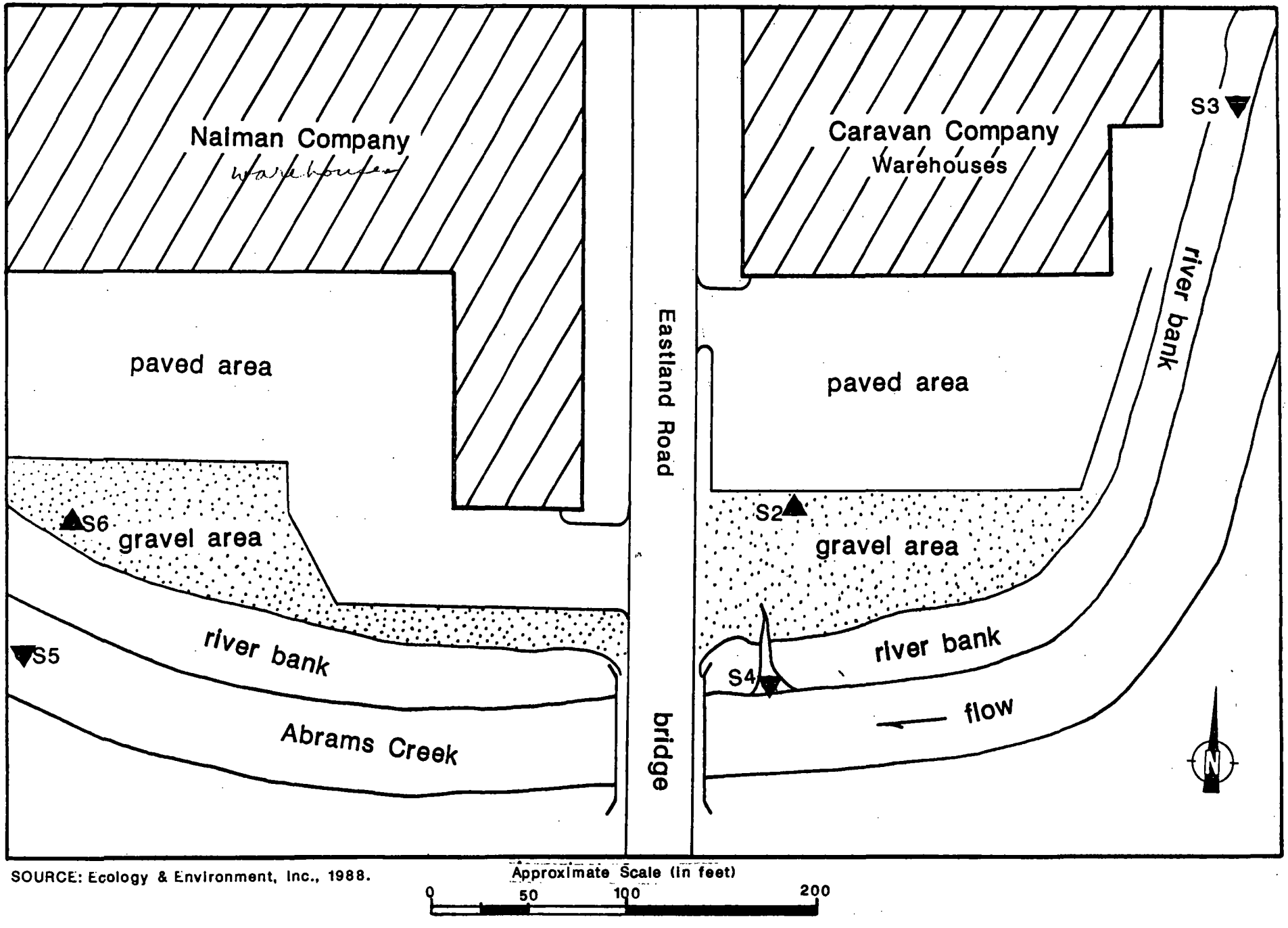
FIGURE 2-1 SITE LOCATION



SOURCE: Ecology & Environment, Inc., 1988.

FIGURE 3-1 SITE FEATURES MAP

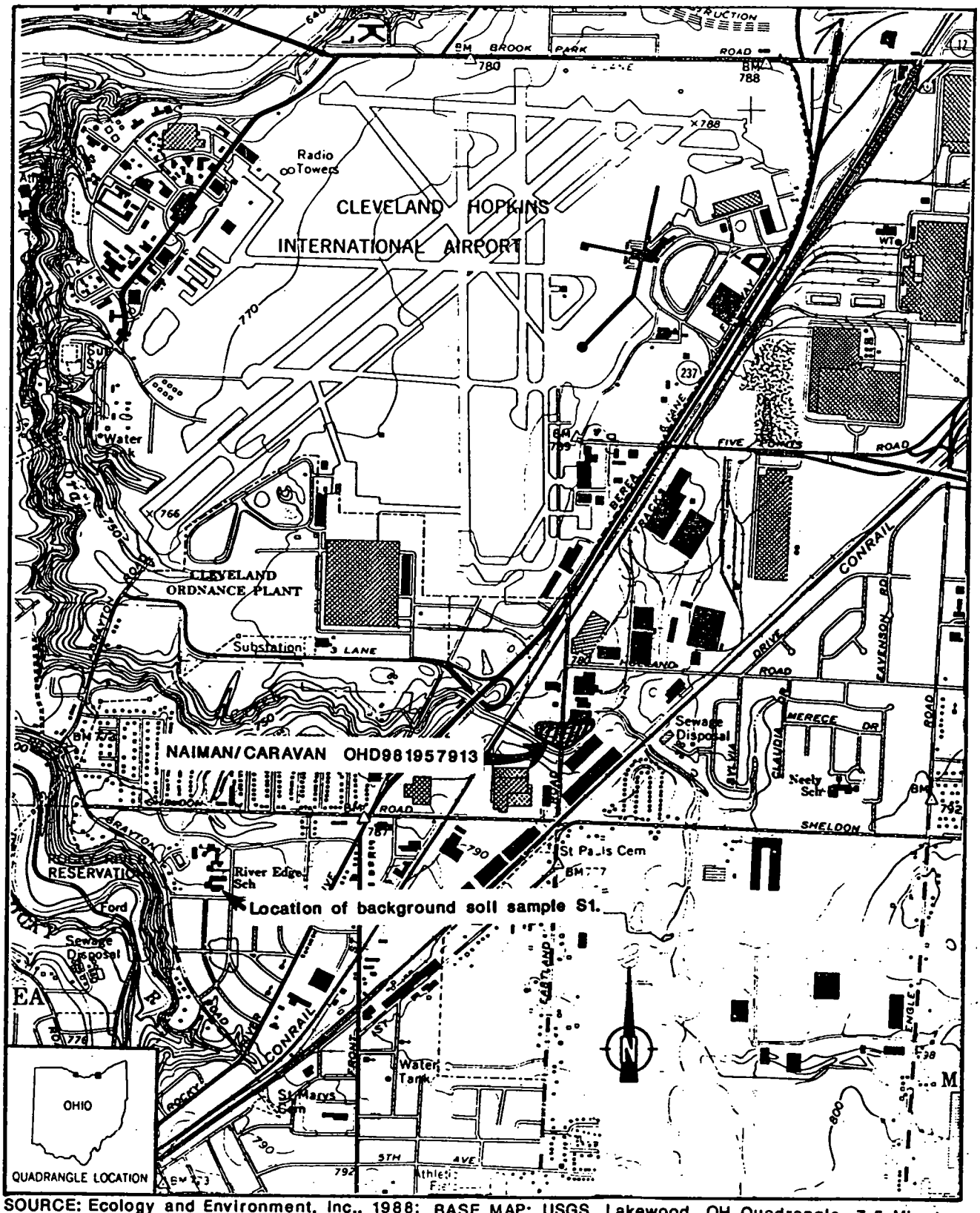
DRAFT CONFIDENTIAL



SOURCE: Ecology & Environment, Inc., 1988.

FIGURE 3-2 SOIL SAMPLING LOCATIONS

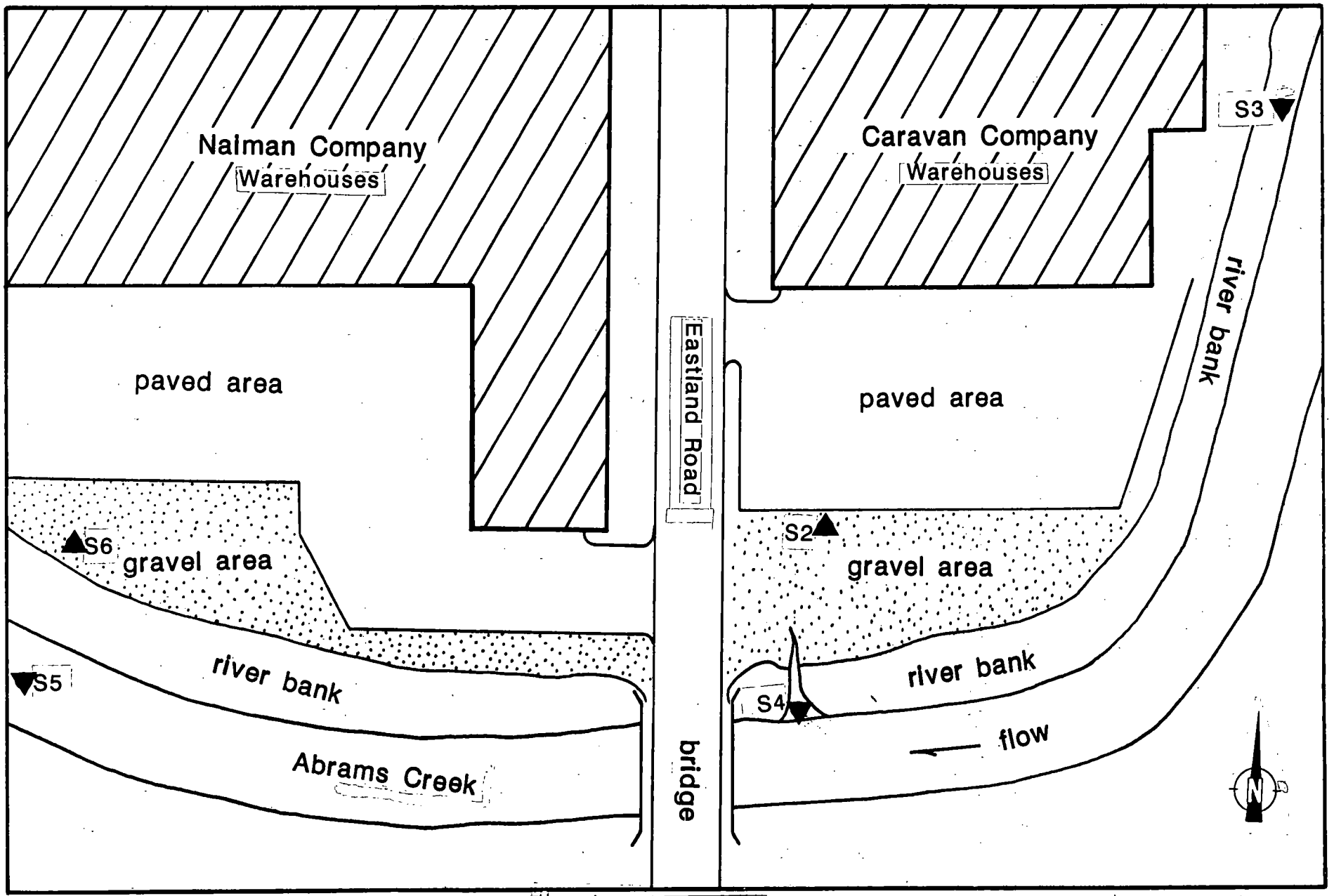
DRAFT CONFIDENTIAL



SOURCE: Ecology and Environment, Inc., 1988; BASE MAP: USGS, Lakewood, OH Quadrangle, 7.5 Minute Series, 1963.

SCALE
0 0.5 1 MILE

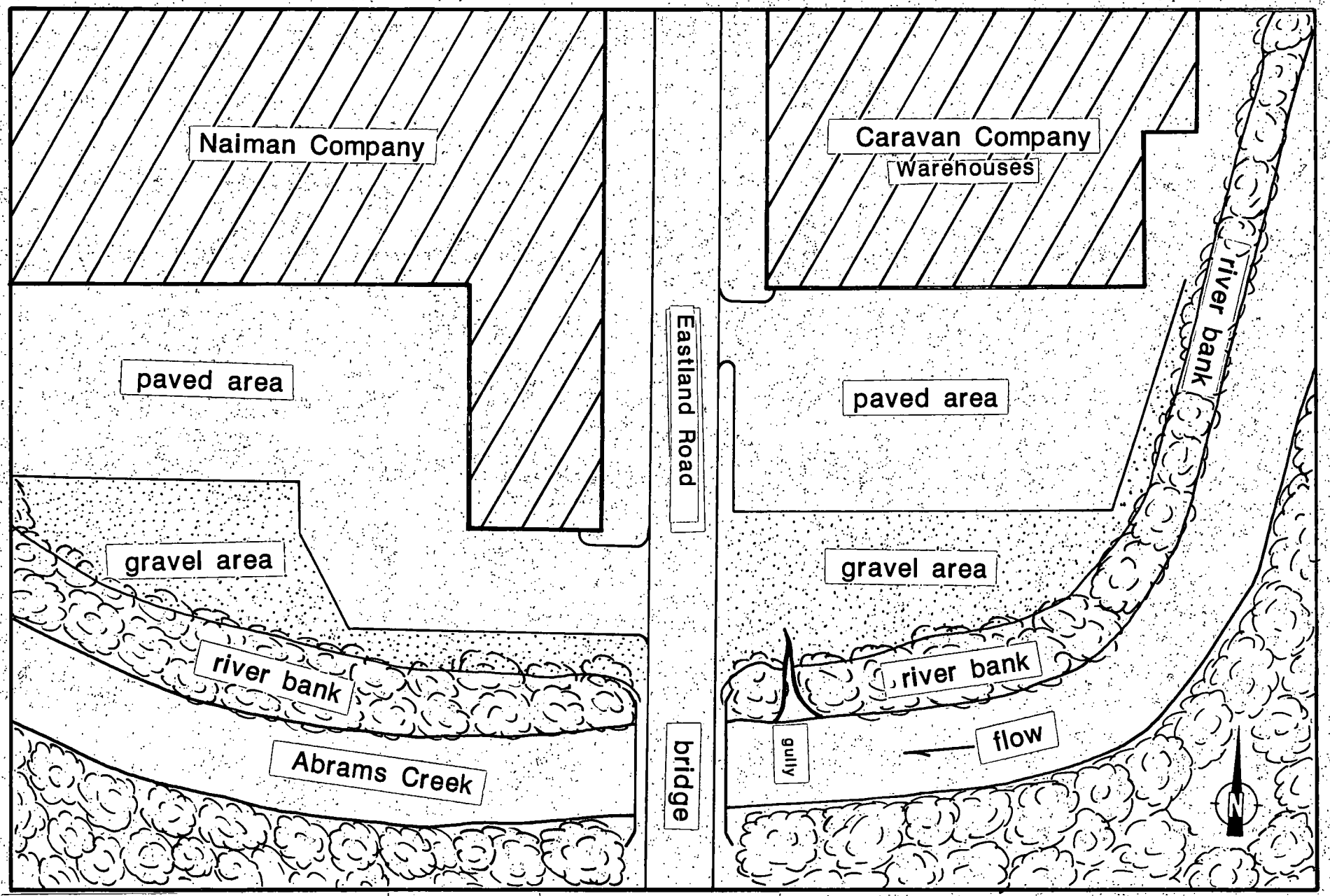
FIGURE 3-3 POTENTIAL BACKGROUND SOIL SAMPLE LOCATION



SOURCE: Ecology & Environment, Inc., 1988.

Approximate Scale (in feet)
0 50 100 200

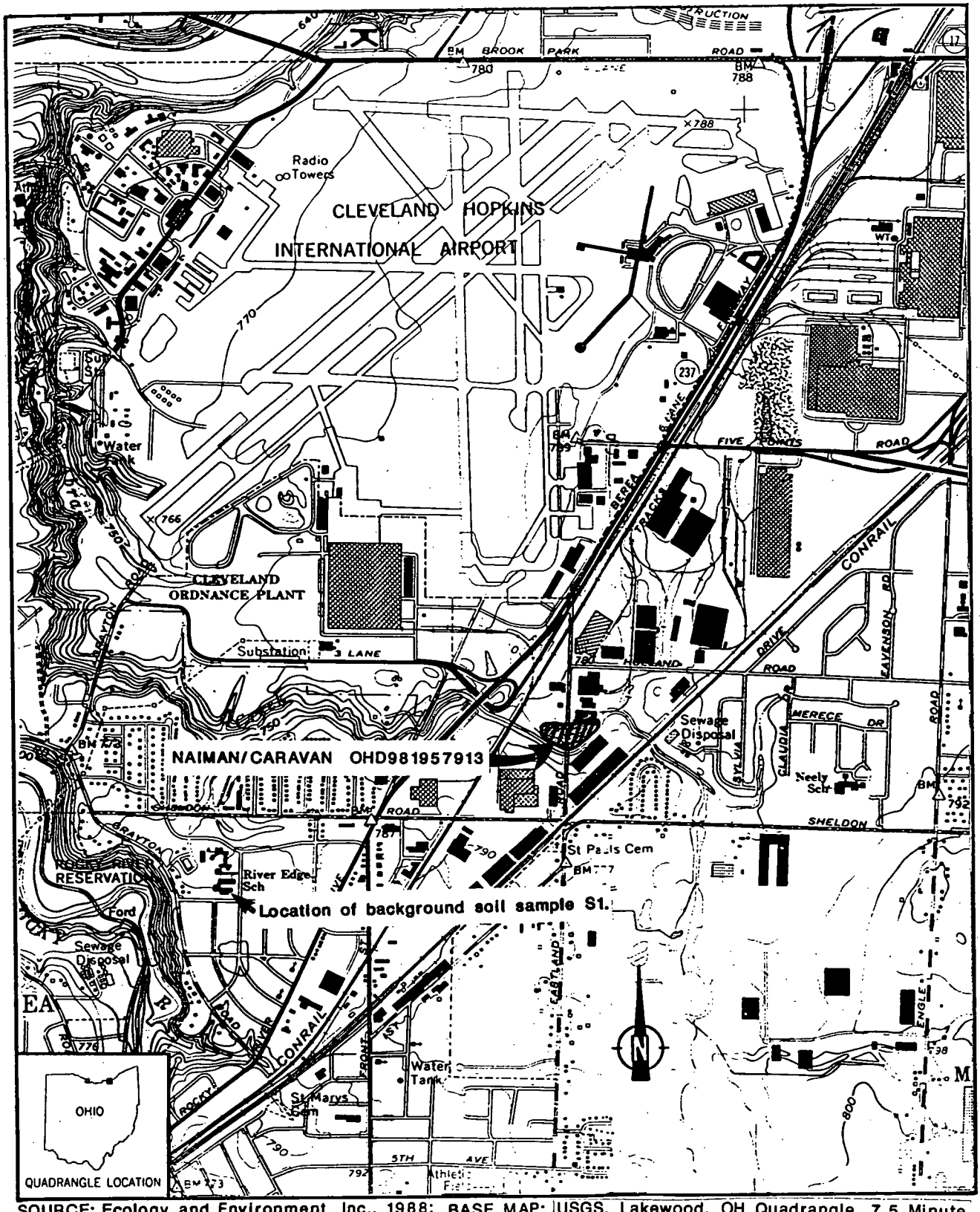
FIGURE 3-2 SOIL SAMPLING LOCATIONS



SOURCE: Ecology & Environment, Inc., 1988.

Approximate Scale (feet)
0 50 100 200

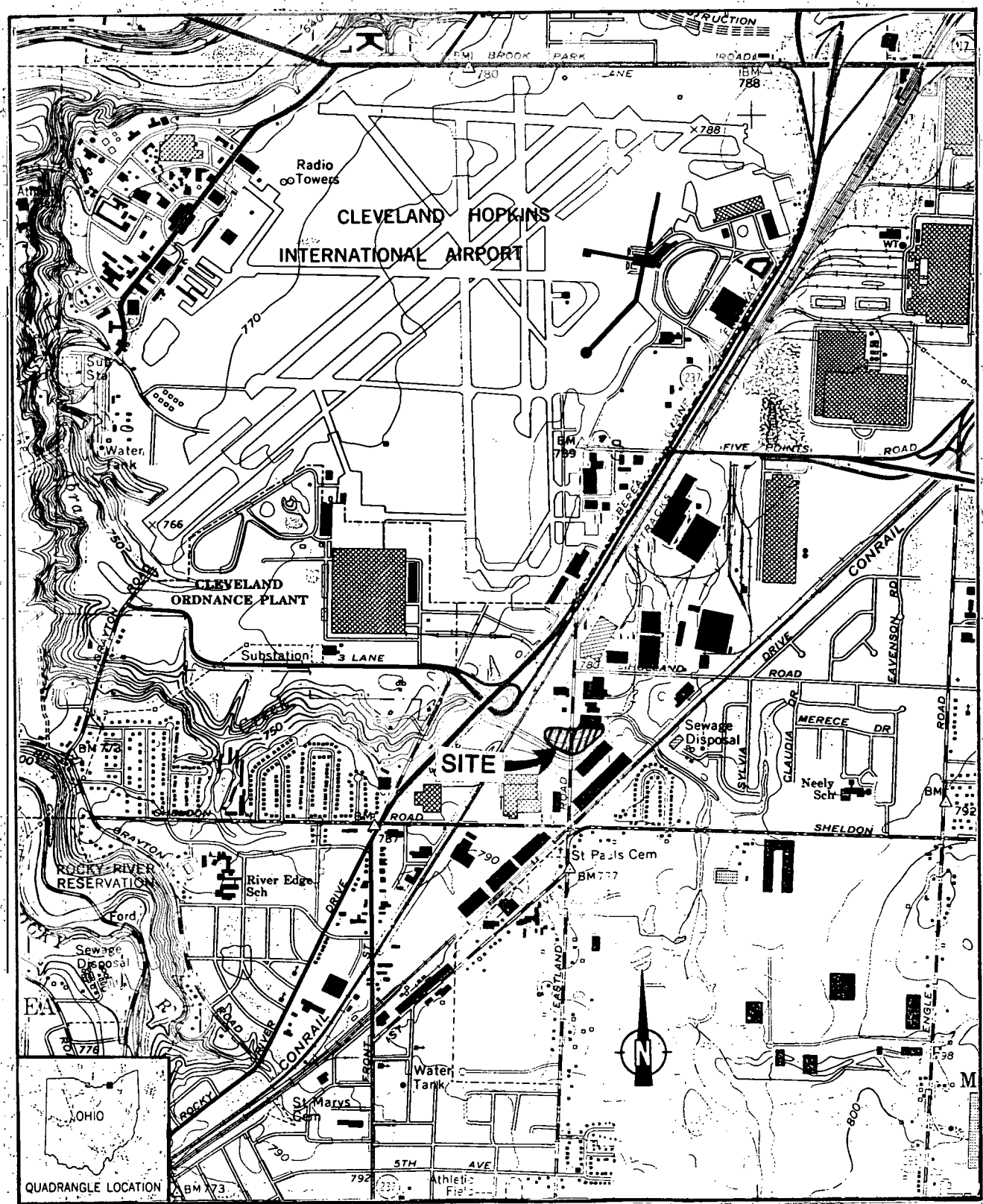
FIGURE 3-1 SITE FEATURES MAP



SOURCE: Ecology and Environment, Inc., 1988; BASE MAP: USGS, Lakewood, OH Quadrangle, 7.5 Minute Series, 1963.

SCALE
0 0.5 1 MILE

FIGURE 3-3 POTENTIAL BACKGROUND SOIL SAMPLE LOCATION



SOURCE: Ecology and Environment, Inc., 1988; BASE MAP: USGS, Lakewood, OH Quadrangle, 7.5 Minute Series, 1963.

SCALE
0 0.5 1 MILE

FIGURE 2-1 SITE LOCATION