US EPA RECORDS CENTER REGION 5
457710

City Dump

SITE INSPECTION REPORT FOR
LAIDLAW CITY DUMP
CINCINNATI, OHIO
F05-8704-029
OHD00810176
PAN: F0H0577SA

September 22, 1987

OneStep®
INDEX SYSTEM

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ecology and environment, inc.

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

International Specialists in the Environment

MEMORANDUM

DATE: September 22, 1987

TO: File

FROM: Margaret A. Hein MAH

SUBJECT: Ohio/F05-8704-029/F0H0577SA
Cincinnati/Laidlaw City Dump
OHD000810176

The Laidlaw City Dump site is an inactive landfill located on approximately 5 acres of land in sec.11,T.3N.,R.2W., Cincinnati, Ohio (see Figure 1). The site was discovered by the Eckhardt Report on October 15, 1979, and later identified and described by the Ohio Environmental Protection Agency (OEPA) in the form of a preliminary assessment in 1980.

The City of Cincinnati owned and operated the landfill from 1938 to 1956. In 1956, however, the landfill was closed and remained dormant for 6 years until its purchase by Proctor and Gamble (P & G) in 1962.

While the City of Cincinnati owned the site, the on-site lagoon was the principal method of disposal. The lagoon, as described by the OEPA's preliminary assessment, was a 7 foot by 300 foot, shallow, unlined lagoon. The City of Cincinnati allegedly disposed of solid and industrial wastes at the site for a 24-year period. However, no records were kept by the city regarding the exact waste quantities accepted at the landfill.

In 1962, P & G purchased the property and, according to site representatives, ceased using the lagoon for disposal. Upon purchase of the property the lagoon was filled in with fly ash and building rubble. The principal disposal method implemented by P & G was open

recycled paper

dumping and landfilling. Wastes accepted during P & G operation of the landfill consisted of carbon bleach, fly ash, building rubble (possibly containing asbestos), glycerine residues, scrap metals, glass, and plastics. The specific amounts of these wastes are unknown. At one point, according to P & G representatives, some construction waste was accepted from a company other than P & G. The majority of waste, however, was generated solely by P & G.

The P & G landfill was active from 1962 through late 1979. While active, the site operated under a clean fill permit (#2011) from the City of Cincinnati. In 1979, P & G initiated closure of the landfill. The fill area was covered and closed, because, according to site representatives, the site had reached capacity.

During the 1960s, the fill had a history of fires resulting from the spontaneous combustion of carbon bleach. The presence of an unlabelled drum (contents unknown) on-site indicates illegal dumping at the landfill.

On June 17, 1987, an Ecology and Environment Field Investigation Team (E & E-FIT) conducted an inspection of the Laidlaw City Dump site. P & G representatives were interviewed and the site was visually inspected. Four on-site soil samples were collected as outlined in the work plan. During the visual inspection, the site was observed to have a locked gate with "No Trespassing" signs clearly posted. A fence at the perimeter and adjacent to a 10-foot deep ditch was observed surrounding the site. Also noted were two on-site buildings: a P & G training center and a pilot products building. Both of these buildings were located north of the fill area. The buildings were constructed in 1980 (after closure of the landfill).

E & E-FIT did not observe any evidence of trespassing, which is unlikely because of the thick overgrowth of vegetation in most areas of the fill area. There is, however, potential for the site to be

accessed by the public because the gate is inadequate (see Part 4). Areas of stressed vegetation were observed around the supposed area of the old lagoon. No surface debris or leachate seeps were observed by E & E- FIT.

The entire population within 3 miles of the site (22,242) is supplied by the municipal water system. The City of Cincinnati derives its water from the Ohio River. The intake point for the city is greater than 3 miles from the site. The only major aquifer in the St. Bernard area is the sand and gravel valley fill aquifer. Bedrock is a shaley limestone at a depth of 130 to 134 feet. The wells in this area are approximately 80 feet deep. All of these wells, however, serve industry and are only used for manufacturing processes.

Organic analysis of on-site soil samples indicates elevated levels of 2-methylnapthalene, phenanthrene, napthalene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b&k)fluoranthene, benzo(a)pyrene, dieldrin, and 4,4'-DDT.

Results of inorganic analysis of on-site soil samples showed high levels of aluminum, arsenic, copper, beryllium, chromium, lead, mercury, nickel, selenium, tin, vanadium, and zinc.

However, due to organic contamination of the background sample by phenanthrene, fluoranthene, pyrene, benzo(a)anthracene, chrysene, benzo(b&k)fluoranthene, benzo(a)pyrene, and 4,4'-DDT, these contaminants cannot be attributed to the site.

Also, analysis of the inorganic fraction of the background sample revealed contamination by aluminum, copper, arsenic, chromium, lead, mercury, and zinc. Therefore, these elements may not be considered as site contaminants.

In conclusion, according to the guidelines set forth in the Hazard Ranking System (HRS), the compounds napthalene, dieldrin, beryllium, and selenium can be considered site contaminants.

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EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 1 - SITE LOCATION AND INSPECTION INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D000810176

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
LAIDLAW CITY DUMP	735 LAIDLAW AVE.

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
CINCINNATI	OH	45217	Hamilton	061	1

09 COORDINATES LATITUDE	LONGITUDE	10 TYPE OF OWNERSHIP (Check one)
39°10'31.5"	084°29'12.0"	[X] A. PRIVATE [ ] B. FEDERAL ____ [ ] C. STATE [ ] D. COUNTY [ ] E. MUNICIPAL [ ] F. OTHER ____ [ ] G. UNKNOWN

III. INSPECTION INFORMATION

01 DATE OF INSPECTION (MONTH DAY YEAR)	02 SITE STATUS	03 YEARS OF OPERATION (BEGINNING YEAR, ENDING YEAR)
06 17 87	[ ] ACTIVE [X] INACTIVE	1962 / 1979 ___ UNKNOWN — Prior to 1962 the site was owned by the city and used as an open dump.

04 AGENCY PERFORMING INSPECTION (Check all that apply)

[ ] A. EPA [X] B. EPA CONTRACTOR Ecology & Environment (Name of firm) [ ] C. MUNICIPAL [ ] D. MUNICIPAL CONTRACTOR ____ (Name of firm)
[ ] E. STATE [ ] F. STATE CONTRACTOR ____ (Name of firm) [ ] G. OTHER ____ (Specify)

05 CHIEF INSPECTOR	06 TITLE	07 ORGANIZATION	08 TELEPHONE NO.
Margaret A. Hein	Biologist	Ecology & Environment	(312)663-9415

09 OTHER INSPECTORS	10 TITLE	11 ORGANIZATION	12 TELEPHONE NO.
Ron Short	Field Technician	Ecology & Environment	(312)663-9415
Steve Anderson	Geologist	Ecology & Environment	(312)663-9415
Cathy Schlesinger	Soil Scientist	Ecology & Environment	(312)663-9415
			( )
			( )

13 SITE REPRESENTATIVES INTERVIEWED	14 TITLE	15 ADDRESS	16 TELEPHONE NO
Steven A. Shedroff	Environmental Control Eng.	Procter & Gamble 6110 Center Hill Rd. Cincinnati, Ohio 45224	(513)659-2365
John Duke	Senior Engineer	Procter & Gamble 6110 Center Hill Rd Cincinnati, OH 45224	(513)659-7096
James E. Chezem	Env. Control Mgr.	Procter & Gamble 5201 Spring Grove Ave Cincinnati, OH 45217	(513)627-5633
Ann K. Bailey	Attorney	Procter & Gamble 49 E. Fourth Street Cincinnati, OH 45202	(513)562-4154
			( )
			( )

17 ACCESS GAINED BY (Check one)	18 TIME OF INSPECTION	19 WEATHER CONDITIONS
[X] PERMISSION [ ] WARRANT	11:00 AM	Sunny, Hot & Humid Mid 80s

IV. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NO.
Dr. Don Josif	U.S. EPA/FIT	(312)886-0393

04 PERSON RESPONSIBLE FOR SITE INSPECTION FORM	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NO.	08 DATE (MONTH DAY YEAR)
Margaret A. Hein	U.S. EPA FIT	Ecology & Environment	(312)663-9415	09 14 87

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D000810176

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- [X] A. SOLID
- [X] B. POWDER, FINES
- [X] C. SLUDGE
- [ ] D. OTHER _____ (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS unknown
CUBIC YARDS unknown
NO. OF DRUMS unknown

03 WASTE CHARACTERISTICS (Check all that apply)

- [X] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [X] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [X] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [ ] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	unknown	unknown	Carbon bleach, fly-ash, building rubble (possible asbestos), animal by-products and consumer products were disposed by Procter & Gamble at the site.
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS	unknown	unknown	
IOC	INORGANIC CHEMICALS	unknown	unknown	
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS	unknown	unknown	

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
OCC	napthalene	91-20-3	Sample S3	770 ppb	µg/kg
OCC	4-methylnapthalene	999	Sample S3	1100 ppb	µg/kg
OCC	phenanthrene	999	Samples S1, S3	1800 ppb	µg/kg
OCC	fluoranthene	206-44-0	Samples S1, S3, S4	3600 ppb	µg/kg
OCC	pyrene	999	Samples S1, S3, S4	6200 ppb	µg/kg
OCC	benzo(a)anthracene	999	Samples S1, S3	2800 ppb	µg/kg
OCC	chrysene	999	Samples S1, S3, S4	2100 ppb	µg/kg
OCC	benzo(b&k)fluoranthene	999	Samples S1, S3, S4	4100 ppb	µg/kg
OCC	benzo(a)pyrene	999	Samples S1, S3	2300 ppb	µg/kg
PSD	dieldrin	60-57-1	Samples S2, S4	49 ppb	µg/kg
PSD	4,4'-DDT	50-29-3	Samples S3, S4	140 ppb	µg/kg
MES	Aluminum	999	Samples S1, S2, S3, S4, S5	16000 ppm	mg/kg
	Arsenic	7440-38-2	Samples S1, S2, S3, S4, S5	59 ppm	mg/kg
MES	Beryllium	7440-41-7	Sample S2	3.8 ppm	mg/kg
MES	Chromium	7440-47-3	Samples S1-S5	20 ppm	mg/kg
MES	Copper	1317-38-0	Samples S1-S5	67 ppm	mg/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers) IV. contd. on next pg. N/A

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS	N/A		FDS		
FDS	N/A		FDS		
FDS	N/A		FDS		
FDS	N/A		FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E&E Site Inspection 6-17-87, Organic & Inorganic Data Pkgs. for Soil Samples

. HAZARDOUS SUBSTANCES (See Appendix for most frequently cited CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
MES	LEAD	1335-25-7	Samples S1-S5	142ppm	mg/kg
MES	Mercury	7439-97-6	Samples S1-S5	.34ppm	mg/kg
MES	Nickel	7440-02-0	Samples S2,S3,S4	28ppm	mg/kg
MES	Selenium	7446-08-4	Samples S2,S5	4.8ppm	mg/kg
MES	TIN	999	Samples S3	25ppm	mg/kg
MES	Vanadium	999	Samples S2,S5	61ppm	mg/kg
MES	Zinc	999	Samples S1-S5	309ppm	mg/kg

V. FEEDSTOCKS (See Appendix for CAS Numbers) N/A

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: OH | 02 SITE NUMBER: D008101776

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: ____) — ☐ POTENTIAL — [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: ____ — 04 NARRATIVE DESCRIPTION
The on-site lagoon was never used by Procter & Gamble for waste disposal. Procter & Gamble filled in the lagoon with fly ash and construction rubble shortly after purchasing the land from the city of Cincinnati. The City may have used the lagoon for liquid waste disposal.

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: ____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Ø — 04 NARRATIVE DESCRIPTION
It is unlikely that site waste will migrate from site to the Ohio River due to the intervening terrain and the distance from site

01 [X] C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: ____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 39,548 — 04 NARRATIVE DESCRIPTION
The disposal of asbestos at the site (derived from construction waste) is potentially hazardous if fibers were not properly covered and moistened they could have become airborne

01 [X] D. FIRE/EXPLOSIVE CONDITIONS — 02 [X] OBSERVED (DATE: unknown) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 9,890 — 04 NARRATIVE DESCRIPTION
Fires from the spontaneous combustions of carbon bleach in the early 1960s were observed by site representatives.

01 [X] E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: ____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: 2,470 — 04 NARRATIVE DESCRIPTION
The site is fenced and locked, however there was evidence of illegal entry into the site after closure. The utility road on site goes directly to the gate and the gate is very inadequate.

01 [X] F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: 6-17-87) — ☐ POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: 5 (Acres) — 04 NARRATIVE DESCRIPTION
Sample results from SI by FIT (E&E) Revealed organic and inorganic contaminants (See Part 5).

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: ____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Ø — 04 NARRATIVE DESCRIPTION
Due to the intervening terrain it is unlikely that site contamination will affect the area's drinking water. The majority of the population is supplied by Cincinnati's Municipal Water Corp. (Source is the Ohio River).

01 [X] H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: ____) — [X] POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: 2 — 04 NARRATIVE DESCRIPTION
In its active phase the landfill maintained 2 full-time employees which may have been exposed to the asbestos disposed of at the Laidlaw City Dump or to the fly ash.

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: ____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: Ø — 04 NARRATIVE DESCRIPTION
The site is fenced and there is a locked gate at the entrance. "No trespassing" signs are clearly posted and the landfill has an enormous vegetative overgrowth. Although the gate is inadequate, waste now lies below the overgrowth.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: OH | 02 SITE NUMBER: D000810176

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 [X] J. DAMAGE TO FLORA — 02 [X] OBSERVED (DATE: 6-17-87) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
Some vegetative stress was observed in the alleged area of the lagoon.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*
Damage to the local fauna has not been documented nor was it observed during the site inspection.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There is no evidence of food chain contamination.

01 [X] M. UNSTABLE CONTAINMENT OF WASTES *(Spills/Runoff/Standing liquids, Leaking drums)* — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL [X] ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
Waste was contained by cover and now by the thick vegetative overgrowth. No leachate seeps were observed at the time of the site inspection. However state reports cited leachate from lagoon.

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There is no evidence of damage to off-site property that can be attributed to the site.

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
There is no evidence of sewer, storm drain or WWTP contamination.

01 [X] P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: unknown) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
According to site representatives there was 1 instance of illegal dumping as a drum of unknown contents was observed on-site.

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
No other hazards have been documented or were observed.

III. TOTAL POPULATION POTENTIALLY AFFECTED: 22,227

IV. COMMENTS
The former on-site lagoon was not used for waste disposal by Procter and Gamble. Procter and Gamble did dispose of glycerine waste on-site. However, the amounts were unknown.

V. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*
E&E Site Inspection 6-17-87, Organic and Inorganic data pkgs, Preliminary Assessment 8-17-84 Ohio EPA

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION
PART 4 - PERMIT AND DESCRIPTIVE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D000810176

II. PERMIT INFORMATION

01 TYPE OF PERMIT ISSUED (Check all that apply)	02 PERMIT NUMBER	03 DATE ISSUED	04 EXPIRATION DATE	05 COMMENTS
☐ A. NPDES				
☐ B. UIC				
☐ C. AIR				
☐ D. RCRA				
☐ E. RCRA INTERIM STATUS				
☐ F. SPCC PLAN				
☐ G. STATE (Specify)				
☐ H. LOCAL (Specify) Cy of Cincinnati	#2011	Now expired. The fill is inactive.		
☐ I. OTHER (Specify)		The permit was for disposal of		
☐ J. NONE		clean fill on-site.		

III. SITE DESCRIPTION

01 STORAGE/DISPOSAL (Check all that apply)	02 AMOUNT	03 UNIT OF MEASURE
X A. SURFACE IMPOUNDMENT	unknown	unknown
X B. PILES	unknown	unknown
☐ C. DRUMS, ABOVE GROUND		
☐ D. TANK, ABOVE GROUND		
☐ E. TANK, BELOW GROUND		
X F. LANDFILL	unknown	unknown
☐ G. LANDFARM		
X H. OPEN DUMP	unknown	unknown
☐ I. OTHER (Specify)		

04 TREATMENT (Check all that apply) N/A
- ☐ A. INCENERATION
- ☐ B. UNDERGROUND INJECTION
- ☐ C. CHEMICAL/PHYSICAL
- ☐ D. BIOLOGICAL
- ☐ E. WASTE OIL PROCESSING
- ☐ F. SOLVENT RECOVERY
- ☐ G. OTHER RECYCLING/RECOVERY
- ☐ H. OTHER (Specify)

05 OTHER
- X A. BUILDINGS ON SITE: 2

06 AREA OF SITE: 5 (Acres)

07 COMMENTS Previous to Procter & Gambles purchase of the site, an on-site lagoon was used for waste disposal. After 1962 the site was used for building rubble debris (possibly asbestos), fly ash and carbon bleach. This debris was kept in piles, or in a landfill or open dump type fashion.

IV. CONTAINMENT

01 CONTAINMENT OF WASTES (Check one)

☐ A. ADEQUATE, SECURE ☒ B. MODERATE ☐ C. INADEQUATE, POOR ☐ D. INSECURE, UNSOUND, DANGEROUS

02 DESCRIPTION OF DRUMS, DIKING, LINERS, BARRIERS, ETC. Drummed waste was not accepted on-site. The lagoon was unlined and at one time, was alleged to be the source of leachate seeps. At the time of inspection by FIT the lagoon was filled-in (Apparently since 1962) and leachate was not evident.

V. ACCESSIBILITY

01 WASTE EASILY ACCESSIBLE: ☐ YES X NO

02 COMMENTS Currently waste is buried below approximately 2 feet of cover and overgrown with vegetation. The site is poorly fenced however.

VI. SOURCES OF INFORMATION (Cite specific references, e.g. state files, sample analysis, reports)

E&E Site Inspection 6-17-87, State Files-Ohio EPA, Procter & Gamble files of Cy permits

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D000810176

II. DRINKING WATER SUPPLY

01 TYPE OF DRINKING SUPPLY (Check as applicable)

	SURFACE	WELL
COMMUNITY	A. ☒	B. ☐
NON-COMMUNITY	C. ☒	D. ☐

02 STATUS

ENDANGERED	AFFECTED	MONITORED
A. ☐ N/A	B. ☐ N/A	C. ☐ N/A
D. ☐ N/A	E. ☐ N/A	F. ☐ N/A

03 DISTANCE TO SITE

A. >3 (mi)
B. >3 (mi)

III. GROUNDWATER

01 GROUNDWATER USE IN VICINITY (Check one)

☐ A. ONLY SOURCE FOR DRINKING ☐ B. DRINKING (Other sources available) COMMERCIAL, INDUSTRIAL, IRRIGATION (No other water sources available) ☒ C. COMMERCIAL, INDUSTRIAL, IRRIGATION (Limited other sources available) ☐ D. NOT USED, UNUSEABLE

02 POPULATION SERVED BY GROUND WATER used for industrial purposes within 3 miles DISTANCE TO NEAREST DRINKING WATER WELL N/A >3mi (mi)

04 DEPTH TO GROUNDWATER	05 DIRECTION OF GROUNDWATER FLOW	06 DEPTH TO AQUIFER OF CONCERN	07 POTENTIAL YIELD OF AQUIFER	08 SOLE SOURCE AQUIFER
82 (ft)	northeast	82-114 (ft)	500 gpm (gpd)	☐ YES ☒ NO

09 DESCRIPTION OF WELLS (Including useage, depth, and location relative to population and buildings) The only major aquifer in the St. Bernard area is the sand and gravel valley fill aquifer. Bedrock is a shaley limestone at a depth of 130 to 134 ft. Wells are about 80 ft deep and can pump up to 500 gpm. All wells in section 17 serve industry. Depth to water surface is 82 to 114'. These wells are located within 3 miles of the site.

10 RECHARGE AREA		11 DISCHARGE AREA	
☐ YES ☐ NO	COMMENTS unknown	☒ YES ☐ NO	COMMENTS Most likely the Ohio River.

IV. SURFACE WATER

01 SURFACE WATER USE (Check one)

☒ A. RESERVOIR, RECREATION DRINKING WATER SOURCE ☐ B. IRRIGATION, ECONOMICALLY IMPORTANT RESOURCES ☐ C. COMMERCIAL, INDUSTRIAL ☐ D. NOT CURRENTLY USED

02 AFFECTED/POTENTIALLY AFFECTED BODIES OF WATER

NAME:	AFFECTED	DISTANCE TO SITE
Ohio River	☐	>3 (mi)
	☐	(mi)
	☐	(mi)

V. DEMOGRAPHIC AND PROPERTY INFORMATION

01 TOTAL POPULATION WITHIN

ONE (1) MILE OF SITE	TWO (2) MILES OF SITE	THREE (3) MILES OF SITE
A. 2470 NO. OF PERSONS	B. 9890 NO. OF PERSONS	C. 22,242 NO. OF PERSONS

02 DISTANCE TO NEAREST POPULATION <.6 (mi)

03 NUMBER OF BUILDINGS WITHIN TWO (2) MILES OF SITE 2602

04 DISTANCE TO NEAREST OFF-SITE BUILDING .09 (mi)

05 POPULATION WITHIN VICINITY OF SITE (Provide narrative description of nature of population within vicinity of site, e.g., rural, village, densely populated urban area)

The site is located in an industrial Park in the city of Cincinnati. Outside of the industrial Park the population can be considered primarily urban. The nearest population is .6 of a mile from site.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 5 - WATER, DEMOGRAPHIC, AND ENVIRONMENTAL DATA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D008810176

VI. ENVIRONMENTAL INFORMATION

01 PERMEABILITY OF UNSATURATED ZONE (Check one)

☐ A. $10^{-6} - 10^{-8}$ cm/sec ☐ B. $10^{-4} - 10^{-6}$ cm/sec ☐ C. $10^{-4} - 10^{-3}$ cm/sec ☒ D. GREATER THAN 10^{-3} cm/sec

02 PERMEABILITY OF BEDROCK (Check one)

☐ A. IMPERMEABLE (Less than 10^{-6} cm/sec) ☒ B. RELATIVELY IMPERMEABLE ($10^{-4} - 10^{-6}$ cm/sec) ☐ C. RELATIVELY PERMEABLE ($10^{-2} - 10^{-4}$ cm/sec) ☐ D. VERY PERMEABLE (Greater than 10^{-2} cm/sec)

03 DEPTH TO BEDROCK	04 DEPTH OF CONTAMINATED SOIL ZONE	05 SOIL pH
130-134 (ft)	unknown (ft)	unknown

06 NET PRECIPITATION	07 ONE YEAR 24 HOUR RAINFALL	08 SLOPE: SITE SLOPE	DIRECTION OF SITE SLOPE	TERRAIN AVERAGE SLOPE
6" (in)	2.5" (in)	<1 %	northeast	<3 %

09 FLOOD POTENTIAL

SITE IS IN unknown YEAR FLOODPLAIN

10 N/A ☐ SITE IS ON BARRIER ISLAND, COASTAL HIGH HAZARD AREA, RIVERINE FLOODWAY

11 DISTANCE TO WETLANDS (5 acre minimum)

ESTUARINE: A. N/A (mi) OTHER: B. >3 (mi)

12 DISTANCE TO CRITICAL HABITAT (of endangered species)

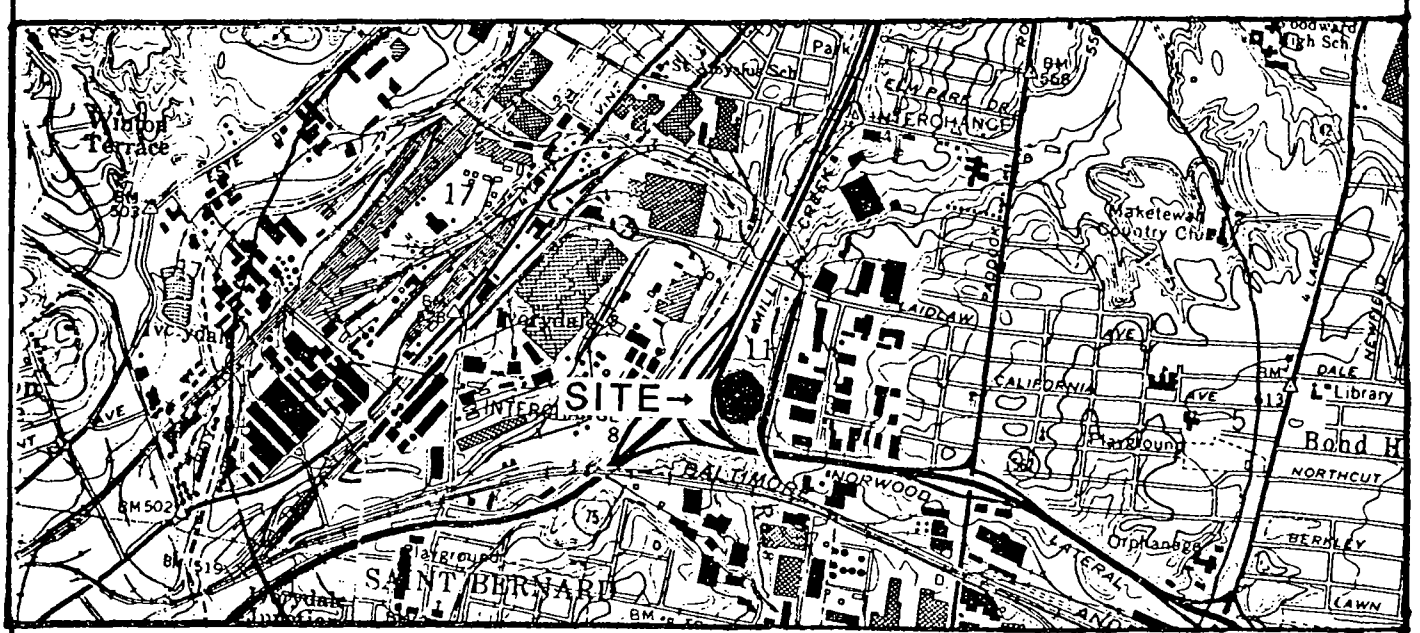
N/A (mi)

ENDANGERED SPECIES: N/A None

13 LAND USE IN VICINITY

DISTANCE TO:

COMMERCIAL/INDUSTRIAL	RESIDENTIAL AREAS; NATIONAL/STATE PARKS, FORESTS, OR WILDLIFE RESERVES	AGRICULTURAL LANDS: PRIME AG LAND	AGRICULTURAL LANDS: AG LAND
A. <.01 (mi)	B. <.6 (mi)	C. N/A (mi)	D. >3 (mi)



VII. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E&E Site Inspection 6-17-87, 3 mile Radius Map of Site, Well logs from a 3-mile radius of site, OEPA Files, E&E files.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 6 - SAMPLE AND FIELD INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D000810176

II. SAMPLES TAKEN

SAMPLE TYPE	01 NUMBER OF SAMPLES TAKEN	02 SAMPLES SENT TO	03 ESTIMATED DATE RESULTS AVAILABLE
GROUNDWATER			
SURFACE WATER			
WASTE			
AIR			
RUNOFF			
SPILL		4 on-site, 1 background	9-1-87
SOIL	5 Samples	Inorganics - Rocky Mtn. Analytical Labs.	
VEGETATION		Organics - California Analytical Labs.	
OTHER			

III. FIELD MEASUREMENTS TAKEN

01 TYPE	02 COMMENTS
Organic Vapor Analyzer	No readings above background (0ppm) were recorded.
Rad-mini	No readings above background (12-15 tones/min) were recorded.
Explosimeter	No readings above background (0% LEL) were recorded
Oxygen Meter	No readings above background (21.5%) were recorded.
Draeger Tubes	No color change was observed.

IV. PHOTOGRAPHS AND MAPS

01 TYPE ☒ GROUND ☐ AERIAL

02 IN CUSTODY OF Ecology & Environment Inc. (Name of organization or individual)

03 MAPS ☒ YES ☐ NO

04 LOCATION OF MAPS Ecology & Environment Inc. Files

V. OTHER FIELD DATA COLLECTED (Provide narrative description)

With the aid of the split-spoon fly-ash was observed to be approximately 2-5ft deep in most areas of the site.

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E & E Site Inspection 6-17-87

EPA FORM 2070-13 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 7 - OWNER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D000810176

II. CURRENT OWNER(S)

01 NAME	02 D+B NUMBER
Procter & Gamble	unknown

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
5201 Spring Grove Ave.	unknown

05 CITY	06 STATE	07 ZIP CODE
Cincinnati	OH	45224

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

PARENT COMPANY (If applicable)

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

08 NAME	09 D+B NUMBER

10 STREET ADDRESS (P.O. Box, RFD #, etc.)	11 SIC CODE

12 CITY	13 STATE	14 ZIP CODE

III. PREVIOUS OWNER(S) (List most recent first)

01 NAME	02 D+B NUMBER
City of Cincinnati	unknown

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
4747 Spring Grove Ave	unknown

05 CITY	06 STATE	07 ZIP CODE
Cincinnati	OH	45232

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

IV. REALTY OWNER(S) (If applicable; list most recent first)

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E&E Site Inspection 6-17-87

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 8 - OPERATOR INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D000810176

II. CURRENT OPERATOR (Provide if different from owner)

01 NAME	02 D+B NUMBER
INACTIVE: Procter & Gamble is owner	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER

OPERATOR'S PARENT COMPANY (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

III. PREVIOUS OPERATOR(S) (List most recent first; provide only if different from owner)

01 NAME	02 D+B NUMBER
City of Cincinnati	unknown

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
4747 Spring Grove Ave	unknown

05 CITY	06 STATE	07 ZIP CODE
Cincinnati	OH	45232

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD
previous to 1962	Same as Operator

PREVIOUS OPERATORS' PARENT COMPANIES (If applicable)

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

08 YEARS OF OPERATION	09 NAME OF OWNER DURING THIS PERIOD

10 NAME	11 D+B NUMBER

12 STREET ADDRESS (P.O. Box, RFD #, etc.)	13 SIC CODE

14 CITY	15 STATE	16 ZIP CODE

IV. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E & E Site Inspection 6-17-87

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 9 - GENERATOR/TRANSPORTER INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
OH	D000810176

II. ON-SITE GENERATOR

01 NAME	02 D+B NUMBER
N/A	

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE

III. OFF-SITE GENERATOR(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
Procter & Gamble	unknown		

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE
5201 Spring Grove Ave	unknown		

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE
Cincinnati	OH	45217			

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

IV. TRANSPORTER(S)

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER
N/A			

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

01 NAME	02 D+B NUMBER	01 NAME	02 D+B NUMBER

03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE	03 STREET ADDRESS (P.O. Box, RFD #, etc.)	04 SIC CODE

05 CITY	06 STATE	07 ZIP CODE	05 CITY	06 STATE	07 ZIP CODE

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

E&E Site Inspection 6-17-87

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OH	D000810176

II. PAST RESPONSE ACTIVITIES

01 ☐ A. WATER SUPPLY CLOSED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ B. TEMPORARY WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ C. PERMANENT WATER SUPPLY PROVIDED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ D. SPILLED MATERIAL REMOVED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ E. CONTAMINATED SOIL REMOVED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ F. WASTE REPACKAGED 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ G. WASTE DISPOSED ELSEWHERE 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ H. ON SITE BURIAL 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ I. IN SITU CHEMICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ J. IN SITU BIOLOGICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ K. IN SITU PHYSICAL TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ L. ENCAPSULATION 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ M. EMERGENCY WASTE TREATMENT 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ N. CUTOFF WALLS 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ O. EMERGENCY DIKING/SURFACE WATER DIVERSION 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ P. CUTOFF TRENCHES/SUMP 04 DESCRIPTION N/A	02 DATE	03 AGENCY
01 ☐ Q. SUBSURFACE CUTOFF WALL 04 DESCRIPTION N/A	02 DATE	03 AGENCY

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 10 - PAST RESPONSE ACTIVITIES

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OH	D000810176

II PAST RESPONSE ACTIVITIES *(Continued)*

01 ☐ R. BARRIER WALLS CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ S. CAPPING/COVERING — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ T. BULK TANKAGE REPAIRED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ U. GROUT CURTAIN CONSTRUCTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ V. BOTTOM SEALED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ W. GAS CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ X. FIRE CONTROL — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ Y. LEACHATE TREATMENT — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ Z. AREA EVACUATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ 1. ACCESS TO SITE RESTRICTED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ 2. POPULATION RELOCATED — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION N/A

01 ☐ 3. OTHER REMEDIAL ACTIVITIES — 02 DATE _____ — 03 AGENCY _____
04 DESCRIPTION None

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

E&E Site Inspection 6-17-87, Preliminary Assessment 8-17-84

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT
PART 11 - ENFORCEMENT INFORMATION

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
OH	000081017 6

II. ENFORCEMENT INFORMATION

01 PAST REGULATORY/ENFORCEMENT ACTION ☐ YES ☒ NO

02 DESCRIPTION OF FEDERAL, STATE, LOCAL REGULATORY/ENFORCEMENT ACTION

Other than voluntary closure by Procter & Gamble in 1979 there has not been any federal, state, or local regulatory action.

III. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

EPA FORM 2070-13 (7-81)

Immediate Removal Action Check Sheet

	High	Moderate	Low
Fire and Explosion Hazard			
Flammable Materials Carbon bleach			X
Explosives			X
Incompatable Chemicals			X
Direct Contact with Acutely Toxic Chemicals			
Site Security fenced		X	
Leaking Drums or Tanks N/A			X
Open Lagoons or pits Lagoon now filled with fly ash and building rubble.			X
Materials on Surface			X
Proximity of Population			X
Evidence of Casual Site Use			X
Contaminated Water Supply			
Exceeds 10 Day Snarl N/A			
Gross Taste or Odors N/A			
Alternate Water Available N/A			
Potential Contamination None			
Is the site abandoned or active? INACTIVE			

Comments The former on-site lagoon is now filled by fly-ash and building rubble. The lagoon no longer exists, however during its use (previous to Procter & Gambles purchase of site) there was potential for leachate seeps as the lagoon was unlined.

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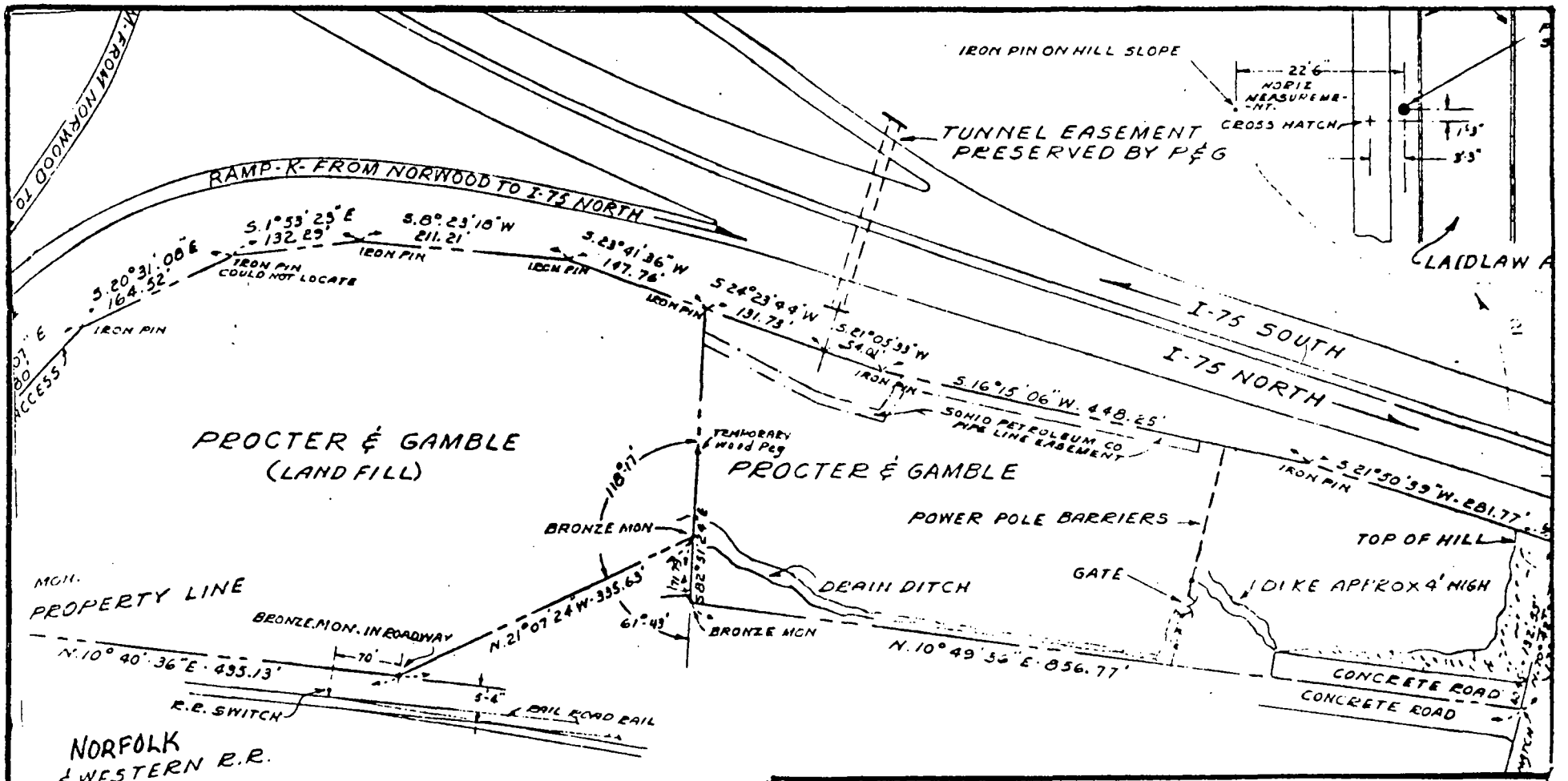
ecology and environment, inc.

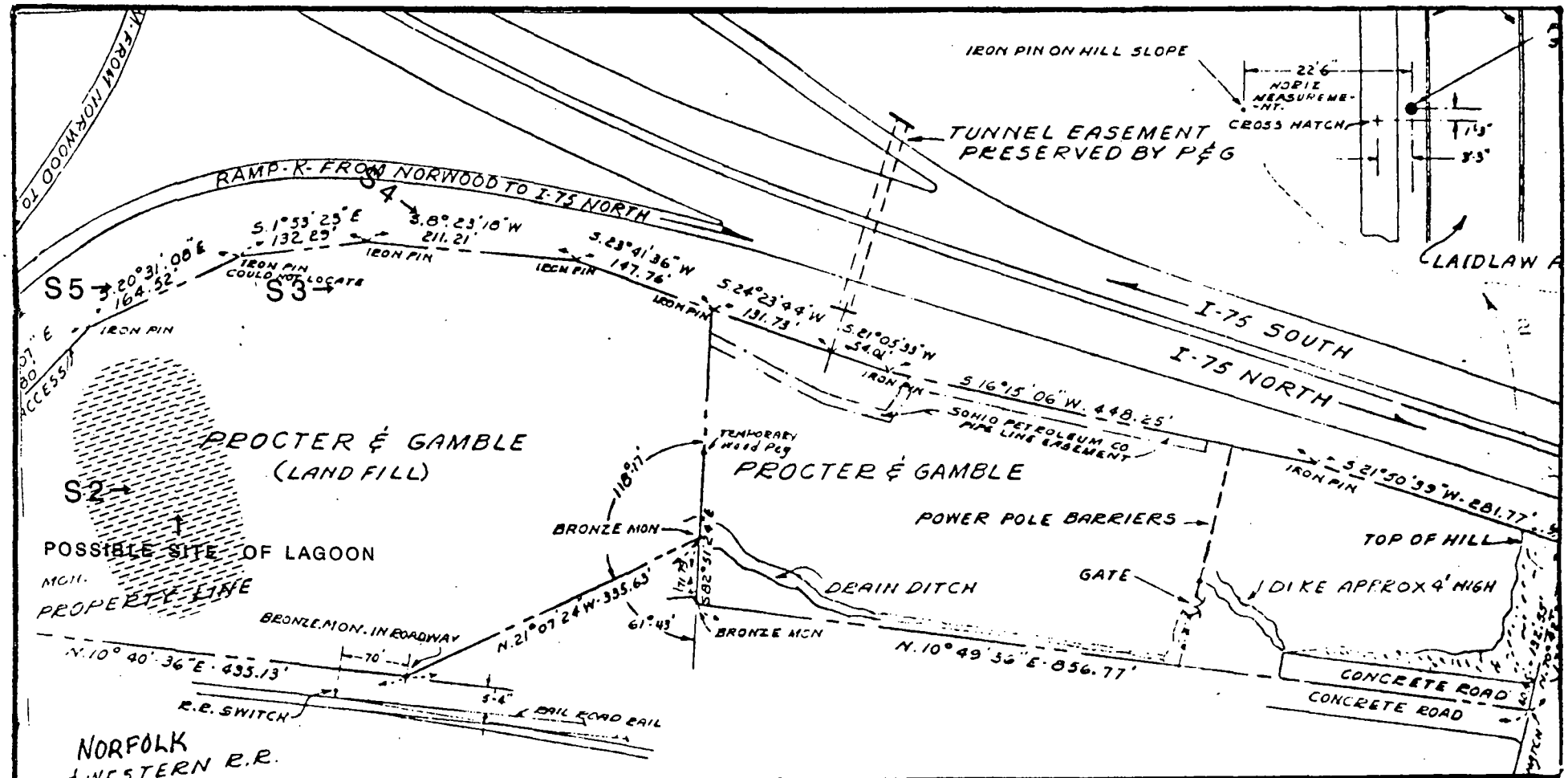
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

TITLE SITE LOCATION MAP	FIGURE # #1
SITE LAIDLAW CITY DUMP	SCALE 1:24,000
CITY CINCINNATI STATE OHIO	P.A.N. FOHO577
SOURCE USGS TOPO	DATE N/A
	REVISED N/A



ecology and environment, inc.
111 WEST JACKSON BLVD., CHICAGO, ILLINOIS 60604, TEL. 312-663-9415

TITLE: SITE SKETCH	FIGURE #: #2
SITE: LAIDLAW CITY DUMP	SCALE: NOT TO SCALE
CITY: CINCINNATI STATE: OHIO	P.A.N.: FOH0577
SOURCE: SITE INSPECTION	DATE: 6-17-87
	REVISED: N/A



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

TITLE: SAMPLE LOCATION MAP	FIGURE #: #3
SITE: LAIDLAW CITY DUMP	SCALE: NOT TO SCALE
CITY: CINCINNATI STATE: OHIO	P.A.N.: FOHO577
SOURCE: SITE INSPECTION	DATE: 6-17-87
	REVISED: N/A

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International Specialists in the Environment

MEMORANDUM

DATE: September 15, 1987

TO: File

FROM: Margaret A. Hein

SUBJECT: Ohio/F05-8704-029/OH0577SI
Laidlaw City Dump
OHD000810176
Loss of Site Inspection Photographs

On June 17, 1987 at the Site Inspection of Laidlaw City Dump, Cincinnati, Ohio photographs of the background sample taken at St. Mary's Cemetery and those of the sample shipments with ice and closed with custody seals were destroyed. Due to camera malfunction the film could not be developed.

22E:1T

recycled paper

FIELD PHOTOGRAPHY LOG SHEET

DATE 6/17/87

TIME 12:12 A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S (SSW) SW WSW
W WNW NW NNW

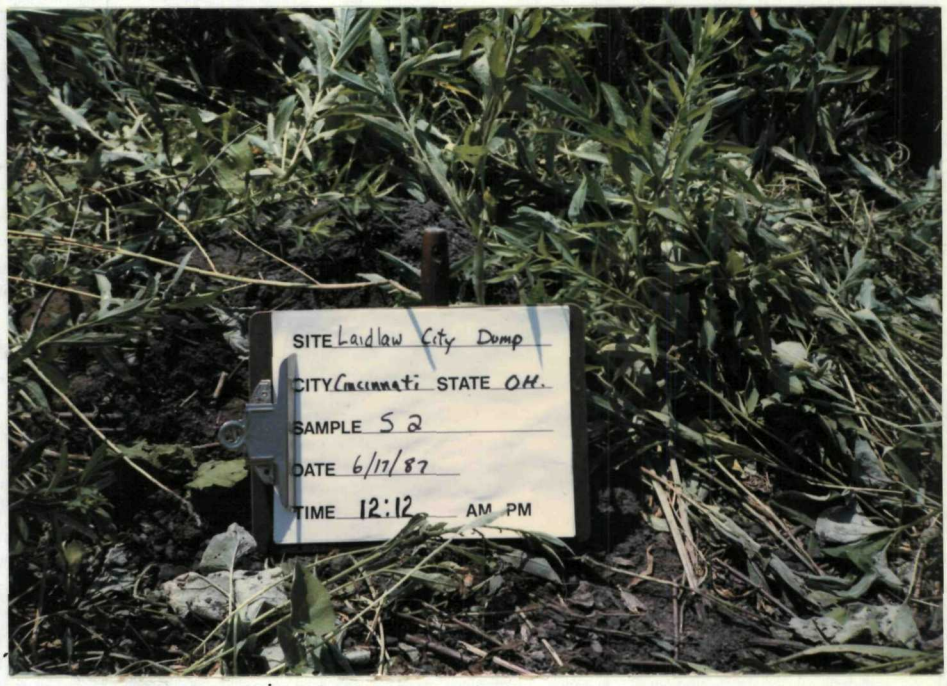
WEATHER Hot, humid
High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY:
Margaret A. Hein

SAMPLE ID# (if applicable)
S2



DESCRIPTION: Sample S2 was taken on the southeast side of the landfill in an area which was the alleged location of a lagoon.

DATE 6/17/87

TIME 12:12 A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S (SSW) SW WSW
W WNW NW NNW

WEATHER Hot, humid
High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY:
Margaret A. Hein

SAMPLE ID# (if applicable)
S2

DESCRIPTION: This is a panoramic view of the sample location for sample 2.

FIELD PHOTOGRAPHY LOG SHEET

DATE 6/17/87

TIME 12:45 A.M. (P.M.)

DIRECTION: N NNE NE ENE
(E) ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Hot, humid High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY: Margaret A. Hein

SAMPLE ID# (if applicable) S3

DESCRIPTION: Sample S3 was taken on the western border of the landfill just before the land began to slope westward.

DATE 6/17/87

TIME 12:45 A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Hot, humid High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY: Margaret A. Hein

SAMPLE ID# (if applicable) S3

DESCRIPTION: This is a panoramic view of the sample location for Sample 3.

FIELD PHOTOGRAPHY LOG SHEET

DATE 6/17/87

TIME 1:50 A.M. (P.M.)

DIRECTION: N NNE NE (ENE) E ESE SE SSE S SSW SW WSW W WNW NW NNW

WEATHER Hot, humid High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY: Margaret A. Hein

SAMPLE ID# (if applicable) S4

DESCRIPTION: Sample S4 was taken on the western slope of the landfill parallel with Ramp K.

DATE 6/17/87

TIME 2:07 A.M. (P.M.)

DIRECTION: N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW (NW) NNW

WEATHER Hot, humid High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY: Margaret A. Hein

SAMPLE ID# (if applicable) S5

DESCRIPTION: Sample S5 was taken on the southwest corner of the landfill parallel to Ramp M and on the southern slope of the fill area.

FIELD PHOTOGRAPHY LOG SHEET

DATE 6/17/87

TIME 2:30 A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
(S) SSW SW WSW
W WNW NW NNW

WEATHER Hot, humid
High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY: Margaret A. Hein

SAMPLE ID# (if applicable)

DESCRIPTION: Pictured above is the entry gate to Laidlaw City Dump.

DATE 6/17/87

TIME 2:40 A.M. (P.M.)

DIRECTION: (N) NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Hot, humid
High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY: Margaret A. Hein

SAMPLE ID# (if applicable)

DESCRIPTION: Pictured above is the entry road to Laidlaw City Dump.

FIELD PHOTOGRAPHY LOG SHEET

DATE 6/17/87

TIME 2:45 A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

WEATHER Hot, humid High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY: Margaret A. Hein

SAMPLE ID# (if applicable)

DESCRIPTION: Photographed above is the Bar Soap Pilot Plant that is one of the on-site buildings.

DATE 6/17/87

TIME _____ A.M. (P.M.)

DIRECTION: N NNE NE ENE
E ESE SE SSE
S SSW SW WSW
W WNW NW NNW

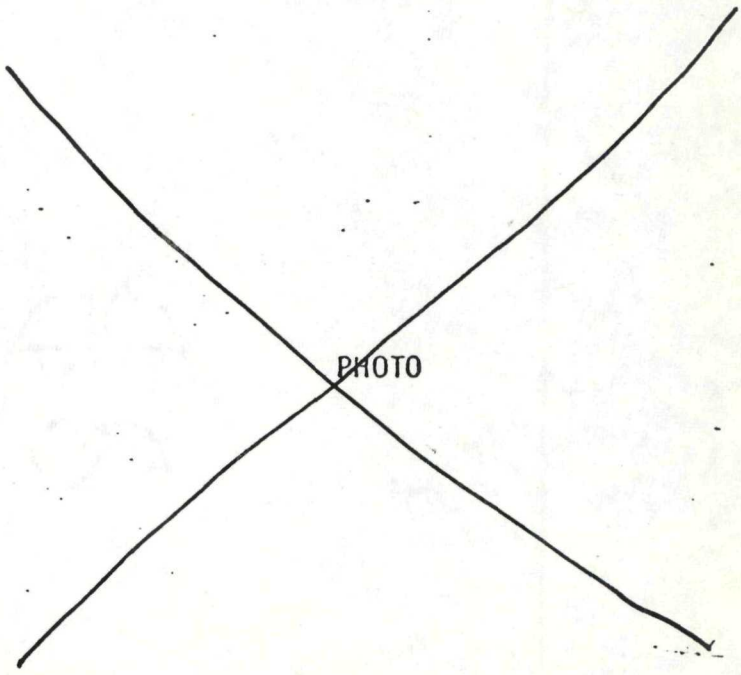
WEATHER Hot, humid High 80s

SITE Laidlaw Cy. Dump

TDD# F05-8704-029

PHOTOGRAPHED BY: Margaret A. Hein

SAMPLE ID# (if applicable)



DESCRIPTION:

SURVEY OF THE ANALYTICAL RESULTS FOR SAMPLES WHICH WERE TAKEN DURING FIELD ACTIVITIES CAN BE FOUND IN THE FOLLOWING TABLES. ONLY DETECTABLE CONCENTRATIONS ARE REPORTED. HOWEVER, IF THE COMPOUND HAS A FOOTNOTE FOLLOWING THE VALUE, CONSULT THE DEFINITION OF THE FOOTNOTE PROVIDED BELOW. ADDITIONAL QA/QC INFORMATION IS PROVIDED IN THE ATTACHED DATA SHEETS.

I. REPORTING UNITS

A. Organics

1. Water Samples - ug/L or ppb (parts per billion)
2. Soils or Sediments - ug/kg or ppb (parts per billion)

B. Metals

1. Water Samples - ug/L or ppb
2. Soils or Sediments - mg/kg or ppm

II. DEFINITION OF FOOTNOTES TO ANALYTICAL DATA

A. Organics

FOOTNOTE	DEFINITION	INTERPRETATION
UJ	Detection Limit (DL) is estimated because of a Quality Control (QC) protocol. DL is possibly above or below Contract Required Detection Limit (CRDL).	Compound was not detected
UB	Compound found in laboratory blank. No value above CRDL.	Compound was not detected
UJB	Compound found in laboratory blank, but not detected in sample. CRDL is estimated because of a QC protocol.	Compound was not detected
B	Compound found in blank. Two interpretations are possible:	
	a. If sample value is equivalent to DL to 5x blank concentration;	Compound value is semi-quantitative
	b. If sample value is greater than 5x the blank concentration.	Compound value is quantitative
JB	Compound found in blank, value is estimated because of QC protocol.	Compound value is semi-quantitative
R	Do Not Use Value. Major Violation of QC Protocol.	Compound value is not usable
C	Value adjusted for blank (an unacceptable procedure).	Compound value is semi-quantitative
J	Value is above CRDL and is an estimated value because of a QC protocol.	Compound value is semi-quantitative
Q	No Analytical Result.	Compound was not detected
N	Presumptive evidence for the presence of a compound as used for a Tentatively Identified Compound (TIC).	Compound value is semi-quantitative

B. Metals

FOOTNOTE	DEFINITION	INTERPRETATION
E	Estimated or not reported due to interference. See laboratory narrative.	Compound or element was not detected or value is semi-quantitative
s	Analysis by Method of Standard Additions (Look for a "+" footnote).	Value is quantitative
R	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 is semi-quantitative
+	Correlation coefficient for standard additions is less than 0.995. See review and laboratory narrative.	Data value is biased
[ ]	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 is semi-quantitative

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED SEP 17 1987

DATE: 9/16/87

SUBJECT: Review of Region V CLP Data
Received for Review on 9-16-87

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

TO: Data User: FIT

COPY

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

SITE NAME: LAIDLAW CITY DUMP SMO case No. 7467

EPA Data Set No. SF4131 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No.

SMO Traffic No. EM536 - 540

CLP Laboratory: CAL Hrs. Required for Review:

Following are our findings:

CORRECTED DATA FORM

- PJC
9-16-87

( ) 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

CHNIA ANALYTICAL LABORATORIES, INC.

Sample Number
EM 537

RECEIVED SEP 17 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW

Date Extracted/Prepared: 6/19/87

Date Analyzed: 7/17/87

Conc/DiL Factor: 2

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	660 U
111-44-4	bis(-2-Chloroethyl)Ether	660 U
95-57-8	2-Chlorophenol	660 U
541-73-1	1,3-Dichlorobenzene	660 U
106-46-7	1,4-Dichlorobenzene	660 U
100-51-6	Benzyl Alcohol	660 U
95-50-1	1,2-Dichlorobenzene	660 U
95-48-7	2-Methylphenol	660 U
39638-32-9	bis(2-chloroisopropyl)Ether	660 U
106-44-5	4-Methylphenol	660 U
621-64-7	N-Nitroso-Di-n-Propylamine	660 U
67-72-1	Hexachloroethane	660 U
98-95-3	Nitrobenzene	660 U
78-59-1	Isophorone	660 U
88-75-5	2-Nitrophenol	660 U
105-67-9	2,4-Dimethylphenol	660 U
65-85-0	Benzoic Acid	560 J
111-91-1	bis(-2-Chloroethoxy)Methane	660 U
120-83-2	2,4-Dichlorophenol	660 U
120-82-1	1,2,4-Trichlorobenzene	~~1200~~ 660 U
91-20-3	Naphthalene	~~660 U~~ 120 J
106-47-8	4-Chloroaniline	660 U
87-68-3	Hexachlorobutadiene	660 U
59-50-7	4-Chloro-3-Methylphenol	660 U
91-57-6	2-Methylnaphthalene	180 J
77-47-4	Hexachlorocyclopentadiene	660 U
88-06-2	2,4,6-Trichlorophenol	660 U
95-95-4	2,4,5-Trichlorophenol	3200 U
91-58-7	2-Chloronaphthalene	660 U
88-74-4	2-Nitroaniline	3200 U
131-11-3	Dimethyl Phthalate	660 U
208-96-8	Acenaphthylene	660 U
99-09-2	3-Nitroaniline	3200 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	660 U
51-28-5	2,4-Dinitrophenol	3200 U
100-02-7	4-Nitrophenol	330 J
132-64-9	Dibenzofuran	660 U
121-14-2	2,4-Dinitrotoluene	660 U
606-20-2	2,6-Dinitrotoluene	660 U
84-66-2	Diethylphthalate	660 U
7005-72-3	4-Chlorophenyl-phenylether	660 U
86-73-7	Fluorene	660 U
100-01-6	4-Nitroaniline	3200 U
534-52-1	4,6-Dinitro-2-Methylphenol	3200 U
86-30-6	N-Nitrosodiphenylamine(1)	660 U
101-55-3	4-Bromophenyl-phenylether	660 U
118-74-1	Hexachlorobenzene	660 U
87-86-5	Pentachlorophenol	~~1000~~ 3200 U
85-01-8	Phenanthrene	660 U
120-12-7	Anthracene	660 U
84-74-2	Di-n-Butylphthalate	660 U
206-44-0	Fluoranthene	660 U
129-00-0	Pyrene	660 U
85-68-7	Butylbenzylphthalate	660 U
91-94-1	3,3'-Dichlorobenzidine	1300 U
56-55-3	Benzo(a)Anthracene	660 U
117-81-7	bis(2-Ethylhexyl)Phthalate	420 J B
218-01-9	Chrysene	660 U
117-84-0	Di-n-Octyl Phthalate	660 U
205-99-2	Benzo(b)Fluoranthene	660 U
207-08-9	Benzo(k)Fluoranthene	660 U
50-32-8	Benzo(a)Pyrene	660 U
193-39-5	Indeno(1,2,3-cd)Pyrene	660 U
53-70-3	Dibenz(a,h)Anthracene	660 U
191-24-2	Benzo(g,h,i)Perylene	660 U

(1) - Cannot be separated from diphenylamine

Organic Concentrations Measured in µg/kg (ppb)

J-estimated values
[ ]- above instument DL below CRDL

	ITC	MEM191	MEM192	MEM193	MEM194	MEM195						
	OTC	EM536	EM537	EM538	EM539	EM540						
	SAMPLE	S1 BACKGRO.	S2	S3	S4	S5						
COMPOUND												
chloromethane												
bromomethane												
vinyl chloride												
chloroethane												
methylene chloride												
acetone												
carbon disulfide												
1,1-dichloroethene												
1,1-dichloroethane												
trans-1,2,-dichloroethene												
chloroform												
1,2-dichloroethane												
2-butanone												
1,1,1-trichloroethane												
carbon tetrachloride												
vinyl acetate												
bromodichloromethane												
1,1,2,2-tetrachloroethane												
1,2-dichloropropane												
trans-1,3-dichloropropene												
trichloroethene												
dibromochloromethane												
1,1,2-trichloroethane												
benzene												
cis-1,3-dichloropropene												
2-chloroethylvinylether												
bromoform												
2-hexanone												
4-methyl-2-pentanone												
tetrachloroethene												
toluene												
chlorobenzene												
ethylbenzene												
styrene												
total xylenes												
N-nitrosodimethylamine												
phenol												
aniline												
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												
isophrone												
2-nitrophenol												
2,4-dimethylphenol												
benzoic acid		460J	560J									
bis(2-chloroethoxy)methane												
2,4-dichlorophenol												
1,2,4-trichlorobenzene			120J	69J								
napthalene		77J		770	98J							
4-chloroaniline												
hexachlorobutadiene												
4-chloro-3-methylphenol												
2-methylnapthalene			180J	1100	170J	440J						
hexachlorocyclopentadiene												
2,4,6-trichlorophenol												
2,4,5-trichlorophenol												
2-chloronaphthalene												
2-nitroaniline												
dimethyl phthalate												
acenapthylene		120J		71J								
3-nitroaniline												
acenaphthene		110J		66J								
2,4-dinitrophenol												
4-nitrophenol												
dibenzofuran		31J		320J	52J	100J						
2,4-dinitrotoluene												
2,6-dinitrotoluene												
diethylphthalate												
4-chlorophenyl-phenylether												
fluorene		160J		45J								
4-nitroaniline												
4,6-dinitro-2-methylphenol												
N-nitrosodiphenylamine												
4-bromophenyl-phenylether												
hexachlorobenzene												

STATE OHIO SITE LAIDLAW CY. DUMP TDD F05-8704-029 PAGE 1 OF 2, SET # 1

J-estimated value
[ ]-above instrument DL
below CRDL

Inorganic Concentrations Measured in mg/kg (ppm)

ITC	MEM191	MEM192	MEM193	MEM194	MEM195						
OTC	EM536	EM537	EM538	EM539	EM540						
SAMPLE	S_1 BACKGRD	S_2	S_3	S_4	S_5						
COMPOUND											
pentachlorophenol		100J									
phenanthrene	1800		520	320J	450J						
anthracene	520J		96J	68J	88J						
di-n-butylphthalate			81J	64J							
fluoranthene	3600		770	530	540J						
benzidine											
pyrene	6200		620	540	490J						
butylbenzylphthalate											
3,3'-dichlorobenzidine											
benzo(a)anthracene	2800		410	300J	250J						
bis(2-ethylhexyl)phthalate											
chrysene	2100		390	340	340J						
di-n-octylphthalate											
benzo(b&k)fluoranthene	4100		670	580	460J						
benzo(a)pyrene	2300		450	300J	210J						
indeno(1,2,3-cd)pyrene	1300		290J	180J	120J						
dibenzo(a,h)anthracene	330J		95J	57J							
benzo(g,h,i)perylene	1400		310J	180J	110J						
alpha-BHC											
beta-BHC											
delta-BHC											
gamma-BHC(lindane)											
heptachlor											
aldrin											
heptachlor epoxide											
endosulfan I											
dieldrin		49		19							
4,4'-DDE	23										
endrin											
endosulfan II											
4,4'-DDD											
endrin aldehyde											
endosulfan sulfate											
4,4'-DDT	140		41	110							
methoxychlor											
endrin ketone											
chlordane											
toxaphene											
Aroclor-1016											
Aroclor-1221											
Aroclor-1232											
Aroclor-1242											
Aroclor-1248											
Aroclor-1254											
Aroclor-1260											
ELEMENT											
aluminum	9770	11900	5360	10800	16000						
antimony											
arsenic	21	59	14	20	42						
barium	[105]			[96]							
beryllium	[.92]	3.8	[1.1]	[.9]	[3.2]						
cadmium											
calcium											
chromium	15	20	12	16	21						
cobalt	[8.3]	[12]	[3.8]	[5.7]	[12]						
copper	24	48	67	34	42						
iron											
lead	149	62	68	67	142						
magnesium											
manganese											
mercury	.11	.27	.34	.27	.24						
nickel	[19]	28	31	25	[25]						
potassium											
selenium		4.8			3.5						
silver											
sodium											
thallium											
tin			25								
vanadium	[26]	61	[18]	[25]	58						
zinc	309	64	95	109	59						
cyanide CHECK IF ANALYZED (✓)											
TENTATIVELY IDENTIFIED ORGANICS											

STATE OHIO SITE LAIDLAW CY. DUMP TDD F05-8704-029 PAGE 2 OF 2, SET # 1

ecology and environment, inc.

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

International Specialists in the Environment

Date Received for Review 8/13 Date Review Completed 8/17

To: ~~Tom Sullivan~~ Margie Hein

From: Zena Gold-Kaufman ZGK

Subject: Laidlaw City Dump

COPY

PAN: OH0577 Case # 7467

Sample Description

Organics (VOA, ABN, Pest/PCB)		Inorganics (Metals, Cyanide)	
#	Low Soil	# 5	Low Soil
	Low Water		Low Water
	Drinking Water		Drinking Water
	Other		Other

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: 5 organic soils

FIT Data Review Findings:

Sb is biased low due to low spike recovery.

✓ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. ~~182~~ 170 sampled 6/17

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

RECEIVED AUG 13 1987

DATE: 8-11-87

SUBJECT: Review of Region V CLP Data
Received for Review on 7-28-87

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

TO: Data User: FIT

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

SITE NAME: LAIDLAW CITY DUMP SMO case No. 7467

EPA Data Set No. SF 4131 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No. 87FH10S83 - S87

SMO Traffic No. MEM 191 - 195

CLP Laboratory: RMAL Hrs. Required for Review: /

Following are our findings: This review covers 5 low soil samples analyzed for metals and cyanide.
Spike recovery for Sb (38%) is low. Detection limit could be elevated. All Sb data are estimated.
All other QC audits are acceptable.

8.12.87

Ada Lean

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

ecology and environment, inc.
CHICAGO, ILLINOIS

CHEMICAL EVALUATION FORM

COPY

SITE NAME: Laidlaw PAN# OH0577 DATE: 8/16

CASE # 7467 UNITS: mg/kg REVIEWER: ZGK

TOX/ PERS	COMPOUND	CRDL	3-5xCRDL	MEM 191	MEM 192	MEM 193	MEM 194	MEM 195		
	ALUMINUM	40	120-200	9770	11900	5360	18800 ~~18000~~	16000		
	ANTIMONY	~~2~~								
	ARSENIC	2	6-10	21	59	14	20	42		
	BARIUM	40	120-200	[105]			[96]			
	BERYLLIUM	1	3-5	[0.92]	3.8	[1.1]	[0.9]	[3.2]		
	CADMIUM	~~2~~ 1								
	CHROMIUM	2	6-10	15	20	12	16	21		
	COBALT	10	30-50	[8.3]	[12]	[8]	[5.7]	[12]		
	COPPER	5	15-25	24	48	67	34	42		
	LEAD	1	3-5	149	62	68	67	142		
	MERCURY	.008	.024-.04	0.11	0.27	0.34	0.27	0.24		
	NICKEL	8	~~16~~ 24-40	[19]	28	31	25	[25]		
	SELENIUM	1	3-5		4.8			3.5		
	SILVER	2	6-10							
	THALLIUM									
	TIN	8	24-40			25				
	VANADIUM	10	30-50	[26]	61	[18]	[25]	58		
	ZINC	4	12-20	309	61	95	109	59		
	CYANIDE	~~0.5~~								

00001

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

JUL 28 1987

RECEIVED AUG 13 1987

Date 7-23-87

COVER PAGE
INORGANIC ANALYSIS DATA PACKAGE

Lab Name ROCKY MOUNTAIN ANALYTICAL
SOW No. 784

Case No. 7467
QC Report No. 57017

Sample Numbers

EPA No.	Lab ID No.	EPA No.	Lab ID No.
MEM191D			
MEM191			
MEM191S			
MEM192			
MEM193			
MEM194			
MEM195			
[MEM999]			

Comments: 5 LOW SOILS FOR TOTAL METALS AND CYANIDE ANALYSIS
SERIAL DILUTION OF SAMPLE MEM195 IS IDENTIFIED AS [MEM999]

ICP Interelement and background corrections applied? Yes X No ___
If yes, corrections applied before X or after ___ generation of raw data.

Footnotes:

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

00002

Form I

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.
MEM191

RECEIVED AUG 13 1987

Date 7-23-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7467
QC REPORT NO. 57017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	9770	P	13.	MAGNESIUM	3270	P
2.	ANTIMONY	12U	P R UJ	14.	MANGANESE	649	P
3.	ARSENIC	21	F	15.	MERCURY	0.11	CV
4.	BARIUM	[105]	P	16.	NICKEL	[19]	P
5.	BERYLLIUM	[0.92]	P	17.	POTASSIUM	[673]	P
6.	CADMIUM	2.9U	P	18.	SELENIUM	2.9U	F
7.	CALCIUM	6540	P	19.	SILVER	2.3U	P
8.	CHROMIUM	15	P	20.	SODIUM	516U	P
9.	COBALT	[8.3]	P	21.	THALLIUM	5.7U	F
10.	COPPER	24	P	22.	TIN	9.2U	P
11.	IRON	18300	P	23.	VANADIUM	[26]	P
12.	LEAD	149 ~~147~~	F S	24.	ZINC	309	P
Cyanide		0.57U	AS	Percent Solids (%) 87			

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Lead value determined by MSA

Lab Manager [illegible]

RECEIVED AUG 13 1987

Form I

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.
MEM192

Date 7-23-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7467
QC REPORT NO. 57017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	11900	P	13.	MAGNESIUM	4590	P
2.	ANTIMONY	14U	P R UJ	14.	MANGANESE	171	P
3.	ARSENIC	59	FS	15.	MERCURY	0.27	CV
4.	BARIUM	455	P	16.	NICKEL	28	P
5.	BERYLLIUM	3.8	P	17.	POTASSIUM	[1400]	P
6.	CADMIUM	3.4U	P	18.	SELENIUM	4.8	FS
7.	CALCIUM	16900	P	19.	SILVER	2.7U	P
8.	CHROMIUM	20	P	20.	SODIUM	615U	P
9.	COBALT	[12]	P	21.	THALLIUM	6.8U	F
10.	COPPER	48	P	22.	TIN	11U	P
11.	IRON	8260	P	23.	VANADIUM	61	P
12.	LEAD	62	FS	24.	ZINC	64	P

Cyanide 0.68U AS Percent Solids (%) 73

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Arsenic, lead & Selenium values determined by MSA

Lab Manager [illegible]

RECEIVED AUG 13 1987

Form I

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.
MEM193

Date 7-23-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7467
QC REPORT NO. 57017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	5360	P	13.	MAGNESIUM	36100	P
2.	ANTIMONY	12U	P R W	14.	MANGANESE	476	P
3.	ARSENIC	14	F	15.	MERCURY	0.34	CV
4.	BARIUM	[106]	P	16.	NICKEL	31	P
5.	BERYLLIUM	[1.1]	P	17.	POTASSIUM	[835]	P
6.	CADMIUM	2.8U	P	18.	SELENIUM	2.8U	F
7.	CALCIUM	97500	P	19.	SILVER	2.3U	P
8.	CHROMIUM	12	P	20.	SODIUM	510U	P
9.	COBALT	[3.8]	P	21.	THALLIUM	5.7U	F
10.	COPPER	67	P	22.	TIN	25	P
11.	IRON	13600	P	23.	VANADIUM	[18]	P
12.	LEAD	68	F	24.	ZINC	95	P

Cyanide 0.57U AS Percent Solids (%) 88

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Lead Value reported at an additional 10x dilution

Lab Manager [illegible]

00005

RECEIVED AUG 13 1987

Form I

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.
MEM194

Date 7-23-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL CASE NO. 7467
SOW NO. 784
LAB SAMPLE ID. NO. - QC REPORT NO. 57017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	10800	P	13.	MAGNESIUM	7210	P
2.	ANTIMONY	12U	P R W	14.	MANGANESE	352	P
3.	ARSENIC	20	F	15.	MERCURY	0.27	CV
4.	BARIUM	[96]	P	16.	NICKEL	25	P
5.	BERYLLIUM	[0.9]	P	17.	POTASSIUM	[1300]	P
6.	CADMIUM	2.8U	P	18.	SELENIUM	2.8U	F
7.	CALCIUM	24600	P	19.	SILVER	2.2U	P
8.	CHROMIUM	16	P	20.	SODIUM	505U	P
9.	COBALT	[5.7]	P	21.	THALLIUM	5.6U	F
10.	COPPER	34	P	22.	TIN	9U	P
11.	IRON	20900	P	23.	VANADIUM	[25]	P
12.	LEAD	67	F	24.	ZINC	109	P

Cyanide 0.56U AS Percent Solids (%) 89

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Lead Value reported at an additional 10x dilution

Lab Manager [illegible]

00006

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Form I

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.
MEM195

Date 7-23-87

INORGANIC ANALYSIS DATA SHEET

LAB NAME ROCKY MOUNTAIN ANALYTICAL
SOW NO. 784
LAB SAMPLE ID. NO. -

CASE NO. 7467
QC REPORT NO. 57017

Elements Identified and Measured

Concentration: Low X Medium ____
Matrix: Water ____ Soil X Sludge ____ Other ____

mg/kg dry weight

1.	ALUMINUM	16000	P	13.	MAGNESIUM	3510	P
2.	ANTIMONY	14U	P R UJ	14.	MANGANESE	179	P
3.	ARSENIC	42	F S	15.	MERCURY	0.24	CV
4.	BARIUM	722	P	16.	NICKEL	[25]	P
5.	BERYLLIUM	[3.2]	P	17.	POTASSIUM	[1310]	P
6.	CADMIUM	3.4U	P	18.	SELENIUM	3.5	F
7.	CALCIUM	18400	P	19.	SILVER	2.7U	P
8.	CHROMIUM	21	P	20.	SODIUM	607U	P
9.	COBALT	[12]	P	21.	THALLIUM	6.8U	F
10.	COPPER	42	P	22.	TIN	11U	P
11.	IRON	9460	P	23.	VANADIUM	58	P
12.	LEAD 142	~~143~~ UJ	F S	24.	ZINC	59	P

Cyanide 0.68U AS Percent Solids (%) 74

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Arsenic + Lead Values determined by MSA

Lab Manager [illegible]

Form III

1/2

00010

Q.C. Report No. 57017

RECEIVED Aug 1 1987

BLANKS

LAB NAME ROCKY MOUNTAIN ANALYTICAL

CASE NO. 7947

DATE 7-23-87

UNITS ug/L

Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM		24u					
2. ANTIMONY		[227					
3. ARSENIC							
4. BARIUM		2u					
5. BERYLLIUM		1u					
6. CADMIUM		5u					
7. CALCIUM		69u					
8. CHROMIUM		4u					
9. COBALT		5u					
10. COPPER		4u					
11. IRON		20u					
12. LEAD							
13. MAGNESIUM		51u					
14. MANGANESE		5u					
15. MERCURY							
16. NICKEL		8u					
17. POTASSIUM		151u					
18. SELENIUM							
19. SILVER		4u					
20. SODIUM		898u					
21. THALLIUM							
22. TIN		16u					
23. VANADIUM		4u					
24. ZINC		3u					
Other:							
Cyanide							

2/2
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Form III

Q.C. Report No. 57017

BLANKS

LAB NAME ROCKY MOUNTAIN ANALYTICAL
DATE 7-23-87
CASE NO. 7467
UNITS ug/L
Matrix SOIL

Preparation Compound	Initial Calibration Blank Value	Continuing Calibration Blank Value 1	2	3	4	Preparation Blank 1	2
Metals:							
1. ALUMINUM	[35]	24U				24U	
2. ANTIMONY	21U	21U				21U	
3. ARSENIC	10U	10U	10U	10U		10U	
4. BARIUM	2U	2U				2U	
5. BERYLLIUM	1U	1U				1U	
6. CADMIUM	5U	5U				5U	
7. CALCIUM	69U	69U				69U	
8. CHROMIUM	4U	4U				4U	
9. COBALT	5U	5U				5U	
10. COPPER	4U	4U				[4.1]	
11. IRON	20U	20U				20U	
12. LEAD	5U	5U	5U	5U	5U	5U	
13. MAGNESIUM	51U	51U				51U	
14. MANGANESE	5U	5U				5U	
15. MERCURY	0.2U	0.2U				0.2U	
16. NICKEL	8U	8U				8U	
17. POTASSIUM	151U	151U				151U	
18. SELENIUM	5U	5U	5U	5U		5U	
19. SILVER	4U	4U				4U	
20. SODIUM	898U	898U				898U	
21. THALLIUM	10U	10U	10U			10U	
22. TIN	16U	16U				16U	
23. VANADIUM	4U	4U				4U	
24. ZINC	3U	[3.8]				[8]	
Other:							
Cyanide	10U	10U	10U	10U		10U	

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Form V

Q.C. Report No. 57017

SPIKE SAMPLE RECOVERY

LAB NAME ROCKY MOUNTAIN ANALYTICAL

DATE 7-23-87

CASE NO. 7467
EPA Sample No. MEM191
Lab Sample ID No. -
Units mg/kg

MATRIX SOIL

Compound	Control Limit %R	Spiked Sample Result (SSR)	Sample Result (SR)	Spike Added (SA)	%R[1]	
Metals:						
1. ALUMINUM	75-125	7690	8500	NR		
2. ANTIMONY	75-125	95	10U	250	38	R
3. ARSENIC	75-125	34 S	18	20	80	
4. BARIUM	75-125	1060	[91]	1000	97	
5. BERYLLIUM	75-125	25	[0.8]	25	97	
6. CADMIUM	75-125	26	2.5U	25	104	
7. CALCIUM	75-125	6840	5690	NR		
8. CHROMIUM	75-125	107	13	100	94	
9. COBALT	75-125	253	[7.2]	250	98	
10. COPPER	75-125	144	21	125	98	
11. IRON	75-125	14400	15900	NR		
12. LEAD	75-125	130 ~~129~~ S	130 ~~128~~ S	10	~~10~~	
13. MAGNESIUM	75-125	3800	2850	NR		
14. MANGANESE	75-125	782	565	250	87	
15. MERCURY	75-125	0.57	0.10	0.5	94	
16. NICKEL	75-125	264	[17]	250	99	
17. POTASSIUM	75-125	[597]	[586]	NR		
18. SELENIUM	75-125	4.3	2.5U	5	86	
19. SILVER	75-125	25	2U	25	100	
20. SODIUM	75-125	449U	449U	NR		
21. THALLIUM	75-125	22	5U	25	88	
22. TIN	75-125	232	8U	250	93	
23. VANADIUM	75-125	266	[23]	250	97	
24. ZINC	75-125	519	269	250	100	
Other:						
Cyanide	75-125	4.9	0.5U	5	98	

[1] %R = [(SSR - SR)/SA] x 100
"R"- out of control

Comments: Arsenic matrix spike Result determined by MSA
Lead matrix spike & Sample Results determined by MSA

The following elements reported unflagged due to sample concentration greater than 4 times the Spike Added value:

Form VI

Q.C. Report No. 57017

DUPLICATES

RECEIVED AUG 13 1987

LAB NAME ROCKY MOUNTAIN ANALYTICAL

DATE 7-23-87

CASE NO. 7467
EPA Sample No. MEM191
Lab Sample ID No. -
Units mg/kg

Matrix SOIL

Compound	Control Limit[1]	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. ALUMINUM		8500	8580	0.94
2. ANTIMONY		10U	10U	NC
3. ARSENIC		18	18	0
4. BARIUM		[91]	[88]	NC
5. BERYLLIUM		[0.8]	[0.8]	NC
6. CADMIUM		2.5U	2.5U	NC
7. CALCIUM		5690	4560	22
8. CHROMIUM		13	17	27
9. COBALT		[7.2]	[6.1]	NC
10. COPPER		21	21	0
11. IRON		15900	16500	3.7
12. LEAD		130 ~~128~~ 140 S	135	3.8 ~~5.8~~ 140
13. MAGNESIUM		2850	2710	5
14. MANGANESE		565	567	0.35
15. MERCURY		0.10	0.11	9.5
16. NICKEL		[17]	26	NC
17. POTASSIUM		[586]	[594]	NC
18. SELENIUM		2.5U	2.5U	NC
19. SILVER		2U	2U	NC
20. SODIUM		449U	449U	NC
21. THALLIUM		5U	5U	NC
22. TIN		8U	8U	NC
23. VANADIUM		[23]	[23]	NC
24. ZINC		269	265	1.5
Other:				
%Solids		87	82	5.9
Cyanide		0.5U	0.5U	NC

X Out of Control

[1] To be added at a later date.

[2] RPD = [|S-D|/((S+D)/2)] x 100

NC - Non calculable RPD due to value(s) less than CRDL

The following elements reported unflagged due to sample and/or duplicate concentration less than 5 times the CRDL and +/- CRDL:
CALCIUM, CHROMIUM

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Form VII

Q.C. Report No. 57017
INSTRUMENT DETECTION LIMITS AND
LABORATORY CONTROL SAMPLE

LAB NAME ROCKY MOUNTAIN ANALYTICAL
DATE 7-23-87

CASE NO 7467
UNITS ug/L

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	24		1980	1990	100
2. ANTIMONY	60	21		1090	1030	95
3. ARSENIC	10	35	1	49	40	82
4. BARIUM	200	2		1980	1900	96
5. BERYLLIUM	5	1		481	474	99
6. CADMIUM	5	5		489	464	95
7. CALCIUM	5000	69		49800	50300	101
8. CHROMIUM	10	4		506	451	89
9. COBALT	50	5		474	480	101
10. COPPER	25	4		542	531	98
11. IRON	100	20		1990	1910	96
12. LEAD	5	28	1	98	82.5	84
13. MAGNESIUM	5000	51		25000	25000	100
14. MANGANESE	15	5		513	521	102
15. MERCURY	0.2		0.2CV	1.0	0.96	96
16. NICKEL	40	8		496	480	97
17. POTASSIUM	5000	151		50200	49200	98
18. SELENIUM	5		2	98	95.5	97
19. SILVER	10	4		509	473	93
20. SODIUM	5000	898		50700	50500	100
21. THALLIUM	10		1	97	84	87
22. TIN	40	16		2000	1940	97
23. VANADIUM	50	4		511	509	100
24. ZINC	20	3		3100	2860	92
Other:						
Cyanide	10		10AS	58	60	103

CV - Cold Vapor
AS - Automated Spectrophotometric
Lead & Selenium values determined by MSA

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

Date Received for Review 8/28/87 Date Review Completed 8/31/87

To: Margie Hein

From: Zena Gold-Kaufman

Subject: Laidlaw City Dump

PAN: OH0577 Case # 7467

Sample Description

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

Project Data Status _____ Completed!!

_____ Incomplete, awaiting: _____

FIT Data Review Findings:

- Check OADS forms for transcription errors
- Reviewer did not J data
- Several compounds detected (PAH's, Pesticides)

✓ Compounds were detected in sample(s); see enclosed Chemical Evaluation Form.

Book No. 6 Page No. ~~172~~ 170

sampled 6/17

recycled paper

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 8/25/87

SUBJECT: Review of Region V CLP Data Received for Review on 7-27-87

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

TO: Data User: FIT

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

SITE NAME: LAIDLAW CITY DUMP SMO case No. 7467

EPA Data Set No. SF 4131 No. of Samples: 5 D.U./Activity Numbers Y905/C72100

CRL No. 87FH10583

SMO Traffic No. EM 536 - 540

CLP Laboratory: CAL Hrs. Required for Review: 1 Hr

Following are our findings:

SEE ATTACHED REVIEW. - PSC

( ) 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)

E & E Copy

RECEIVED AUG 28 1987

MEMORANDUM

DATE: August 19, 1987

TO: Chuck Elly
USEPA Region V

FROM: Peter Isaacson
SMO Data Review Team

SUBJECT: QA/QC Compliance Review Summary for a Contract Laboratory Program Organic Sample Data Package: Case No. 7467

As requested, quality control and performance measures for the data packages noted have been examined and compared to EPA standards for compliance. Measures for the following general areas were evaluated:

Data Completeness	Blanks
Spectra Matching Quality	DFTPP and BFB Tuning
Surrogate Spikes	Chromatography
Matrix Spikes/Duplicates	Holding Times
Calibration	Compound ID, (HSL, TIC)

Any statistical measures used to support the following conclusions are attached so that the review may be reviewed by others.

Summary of Results

	Volatile	B/N/A	Pesticide
Acceptable as Submitted			
Acceptable with Comments	✓	✓	✓
Unacceptable, Action Pending			
Unacceptable	/		

Data Reviewed By: IWE for Zohreh Hamidzadeh Date: 8/19/87

Reviewed Authorized By: Peter Isaacson Date: 8/19/87

Signature: Peter Isaacson

Area Code/Phone No.: 703 684 5678

FTS Line: 557 2490

NARRATIVE

CASE NO. 7467

RECEIVED AUG 28 1987

SITE NAME Laidlaw City Dump

LABORATORY NAME California Analytical Laboratory

Laboratory

The laboratory's portion of this Case consisted of five low concentration sediment samples collected on June 17, 1987.

The laboratory reported no problems with the receipt of these samples.

The laboratory reported a problem with the analysis of acetone. In the narrative, the laboratory stated that the variation in results for acetone is due to the inhomogeneity of the samples.

The evaluator has commented on the criteria specified under each fraction heading. All criteria have been assessed, but no discussion is given where the evaluator has determined that criteria were adequately performed or require no comment. Details relevant to these comments are given on the forms in Appendix A. Amounts of detected compounds are summarized in Appendix B.

Evaluation by Fraction

I. Volatiles (VOAs)

____	Holding Times
____	GC/MS Tuning
X	Calibration, Initial
X	Calibration, Continuing
____	Blank
X	Surrogate Recovery
____	MS/MSD
X	Compound ID (HSL, TIC)
____	Spectra Quality
____	Standards
____	Chromatography
____	Data Completeness

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Comments:

Low concentrations of five common TCL compounds were reported. The variation in results of acetone is reported in the narrative. Results for TCL compounds are grouped under their specific analyses' tune and are shown in appendix B. All TCLs found were also in the associated blanks or in the background sample (EM536). All positive results should be treated as detection limits (UJ).

Naphthalene and 2-Pentanol were detected in very low concentrations. The blank was free of these compounds.

Compounds with %RSD and %D greater than 30% and 25% respectively are listed in appendix B.

Toluene-D_8 surrogate recovery for samples EM537 and EM540 was higher than the acceptable window range. The reanalyses of these two samples demonstrated a matrix effect. Also, Toluene-D_8 and 1,2-Dichloroethane-D_4 had slightly high recoveries in samples EM539 and EM537 respectively. The analyses of the spike and duplicate for sample EM539 showed recoveries inside the QC limits. Therefore, this slight deviation should be considered as a laboratory artifact, and does not affect the usability of the data.

II. Base/Neutral/Acids (BNAs)

____	Holding Times
____	GC/MS Tuning
X	Calibration, Initial
X	Calibration, Continuing
____	Blank
X	Surrogate Recovery
____	MS/MSD
X	Compound ID (HSL, TIC)
____	Standards
____	Chromatography
____	Data Completeness

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Comments:

Low concentrations of twenty three TCL compounds were reported. Most of these compounds were polycyclic aromatic compounds. Only Bis (2-ethylhexyl) phthalate was detected in the blank. The concentrations of these compounds are listed in appendix B. The background sample (EM536) had generally the highest concentrations.

Many TICs were found in the samples, and the compounds with high concentration are specified in appendix B.

Compounds with %RSD and %D greater than QC limits are flagged in appendix B. Data for 3,3-dichlorobenzidine are not usable due to the low RF. This compound is flagged R in appendix B.

Nitrobenzene-D_5 had high surrogate recovery in sample EM-537.

III. Pesticides/PCBs

_____ Holding Times
_____ Instrument Performance
_____ DDT RT/12 Minute?
_____ Retention Time Window
_____ Analytical Sequence
_____ DDT/Endrin Degradation
_____ RT Check for DBC
_____ Resolution Check
_____ Calibration Linearity
_____ Calibration, Continuing
_____ Blank
_____ Surrogate Recovery
_____ MS/MSD
_X_ Compound ID (HSL, TIC)
_____ Standards
_____ Chromatography
_____ Data Completeness

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Comments:

Three TCL compounds (Dieldrin, 4,4'-DDE and 4,4'-DDT) were reported in the samples. The presence of the compounds in the samples was confirmed by second column analysis. The compounds were not found in the blanks. The highest levels of DDE and DDT were reported in EM536, the background sample.

Degradation of DDT and Endrin during the analyses was not reported.

REVIEW MATRIX

APPENDIX B - VOA COMPOUNDS

Case No. 7467

Laboratory Name California Analytical

RECEIVED NOV 2 4 1987

Compounds	Samples								Blanks		
	EM536	*							B		
Chloromethane											
Bromomethane											
Vinyl Chloride											
Chloroethane											
Methylene Chloride	2 JB								3 J		
Acetone J	3 JB								4 J		
Carbon Disulfide	2 JB								3 J		
1,1-Dichloroethene											
1,1-Dichloroethane											
Trans-1,2-Dichloroethene											
Chloroform											
1,2-Dichloroethane											
2-Butanone J	4 JB								6 J		
1,1,1-Trichloroethane											
Carbon Tetrachloride											
Vinyl Acetate											
Bromodichloromethane											
1,2-Dichloropropane											
Trans-1,3-Dichloropropene											
Trichloroethene											
Dibromochloromethane											
1,1,2-Trichloroethane											
Benzene											
cis-1,3-Dichloropropene											
2-Chloroethylvinylether											
Bromoform											
4-Methyl-2-Pentanone											
2-Hexanone											
Tetrachloroethene											
1,1,2,2-Tetrachloroethane											
Toluene											
Chlorobenzene											
Ethylbenzene											
Styrene											
Total Xylenes											
	Sample/Blank Association										

* "background" sample

REVIEW MATRIX

APPENDIX B - VOA COMPOUNDS

Case No. 7467

Laboratory Name California Analytical

RECEIVED AUG 28 1987

Compounds	Samples								Blanks	
	EM537	EM538	EM539	EM540					MB	
Chloromethane										
Bromomethane										
Vinyl Chloride										
Chloroethane										
Methylene Chloride	4 JB	48 B	3 JB	31 B					3 J	
Acetone	6 JB	460 B	130 B	510 B					8 J	
Carbon Disulfide	4 J									
1,1-Dichloroethene										
1,1-Dichloroethane										
Trans-1,2-Dichloroethene										
Chloroform										
1,2-Dichloroethane										
2-Butanone J	16 B	5 JB	5 JB	10 B					8 J	
1,1,1-Trichloroethane										
Carbon Tetrachloride UJ										
Vinyl Acetate UJ										
Bromodichloromethane										
1,2-Dichloropropane										
Trans-1,3-Dichloropropene										
Trichloroethene										
Dibromochloromethane UJ										
1,1,2-Trichloroethane										
Benzene										
cis-1,3-Dichloropropene										
2-Chloroethylvinylether										
Bromoform UJ									1 J	
4-Methyl-2-Pentanone									4 J	
2-Hexanone									7 J	
Tetrachloroethene										
1,1,2,2-Tetrachloroethane										
Toluene	3 JB	1 JB		4 JB					1 J	
Chlorobenzene										
Ethylbenzene									2 J	
Styrene									2 J	
Total Xylenes									2 J	
	Sample/Blank Association									

REVIEW MATRIX

APPENDIX B BNA COMPOUNDS

Case No. 7467

Laboratory Name California Analytical

Compounds	Samples								Blanks		
	Em 536 ("background" sample)								MB		
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	460 J										
bis(2-Chloroethoxy)Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene											
Naphthalene	77 J										
4-Chloroaniline											
Hexachlorobutadiene											
4-Chloro-3-Methylphenol											
2-Methylnaphthalene											
Hexachlorocyclopentadiene (UJ)											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethyl Phthalate											
Acenaphthylene	160 J										
3-Nitroaniline											
Acenaphthene	110 J										
2,4-Dinitrophenol											
4-Nitrophenol											
Dibenzofuran	81 J										
2,4-Dinitrotoluene											
2,6-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene	160 J										
4-Nitroaniline (UJ)											
4,6-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine(1)											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol											
Phenanthrene	1800										
Anthracene	520 J										
Di-n-Butylphthalate (UJ)											
Fluoranthene	3600										
Pyrene	6200										
Butylbenzylphthalate											
3,3-Dichlorobenzidiene (R)											
Benzo(a)Anthracene	2800										
bis(2-Ethylhexyl)Phthalate	330 JB								100 J		
Chrysene	2100										
Di-n-Octyl Phthalate											
Benzo(b)Fluoranthene	4100										
Benzo(k)Fluoranthene (K)	↓										
Benzo(a)Pyrene	2300										
Indeno(1,2,3-cd)Pyrene	1300										
Dibenz(a-h)Anthracene	330 J										
Benzo(g,h,i)Perylene	400										
	Sample/Blank Association										

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REVIEW MATRIX

APPENDIX B BNA COMPOUNDS

Case No. 7467

Laboratory Name California Analytical

RECEIVED AUG 28 1987

Compounds	Samples								Blanks		
	EM537	EM538	EM539	EM540							
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	560 J										
bis(2-Chloroethoxy)Methane											
2,4-Dichlorophenol											
1,2,4-Trichlorobenzene	120 J	69 J									
Naphthalene		770	98 J	260 J							
4-Chloroaniline											
Hexachlorobutadiene											
4-Chloro-3-Methylphenol											
2-Methylnaphthalene	180 J	1100	170 J	440 J							
Hexachlorocyclopentadiene											
2,4,6-Trichlorophenol											
2,4,5-Trichlorophenol											
2-Chloronaphthalene											
2-Nitroaniline											
Dimethyl Phthalate											
Acenaphthylene		71 J									
3-Nitroaniline											
Acenaphthene		66 J									
2,4-Dinitrophenol											
4-Nitrophenol	330 J										
Dibenzofuran		320 J	52 J	100 J							
2,4-Dinitrotoluene											
2,6-Dinitrotoluene											
Diethylphthalate											
4-Chlorophenyl-phenylether											
Fluorene		45 J									
4-Nitroaniline (UJ)											
4,4-Dinitro-2-Methylphenol											
N-Nitrosodiphenylamine(1)											
4-Bromophenyl-phenylether											
Hexachlorobenzene											
Pentachlorophenol	100 J										
Phenanthrene		520	320 J	450 J							
Anthracene		96 J	68 J	88 J							
Di-n-Butylphthalate		81 J	64 J								
Fluoranthene		770	530	540 J							
Pyrene		620	540	490 J							
Butylbenzylphthalate											
3,3-Dichlorobenzidiene (B)											
Benzo(a)Anthracene		410	300 J	250 J							
bis(2-Ethylhexyl)Phthalate	420 JB	220 JB	180 JB	630 JB					100 J		
Chrysene		390	340	340 J							
Di-n-Octyl Phthalate											
Benzo(b)Fluoranthene		670	550	460 J							
Benzo(k)Fluoranthene (K)		↓	↓	↓							
Benzo(a)Pyrene		450	380 J	210 J							
Indeno(1,2,3-cd)Pyrene		290 J	180 J	120 J							
Dibenz(a-h)Anthracene		95 J	57 J								
Benzo(g,h,i)Perylene		310 J	180 J	110 J							

Sample/Blank Association

REVIEW MATRIX

APPENDIX B - PESTICIDE/PCB COMPOUNDS

Case No. 7467

Laboratory Name California Analytical

Compounds	Samples								Blanks	
	EM536	EM537	EM538	EM539	EM540				MB	
Alpha-BHC										
Beta-BHC										
Delta-BHC										
Gamma-BHC										
Heptachlor										
Aldrin										
Heptachlor Epoxide										
Endosulfan I										
Dieldrin		49								
4,4-DDE	23			19						
Endrin										
Endosulfan II										
4,4-DDD										
Endosulfan Sulfate										
4,4-DDT	140		41	110						
Methoxychlor										
Endrin Ketone										
Chlordane										
Toxephene										
Aroclor-1016										
Aroclor-1221										
Aroclor-1232										
Aroclor-1242										
Aroclor-1248										
Aroclor-1254										
Aroclor-1260										
	Sample/Blank Association									

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APPENDIX B - TIC COMPOUNDS

Case No. 7467

Laboratory Name California Analytical

µg/kg

TIC Compound	Em536	Em537	Em538	Em539	Em540		
2-methyl-2-hexanol	1666	1498	8328	988	1008		
prometon (ACN)	2935						
1-hexadecanol					6940		

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Laidlaw City Dump #7467

COMPOUND	SAMPLE	DET. LIMIT	6th S36	S37	S38	S39	S40			
chloromethane										
bromomethane										
vinyl chloride										
chloroethane										
methylene chloride										
acetone J										
carbon disulfide										
1,1-dichloroethene										
1,1-dichloroethane										
trans-1,2,-dichloroethene										
chloroform										
1,2-dichloroethane										
2-butanone J										
1,1,1-trichloroethane										
carbon tetrachloride										
vinyl acetate										
bromodichloromethane										
1,1,2,2-tetrachloroethane										
1,2-dichloropropane										
trans-1,3-dichloropropene										
trichloroethene										
dibromochloromethane										
1,1,2-trichloroethane										
benzene										
cis-1,3-dichloropropene										
2-chloroethylvinylether										
bromoform										
2-hexanone										
4-methyl-2-pentanone										
tetrachloroethene										
toluene										
chlorobenzene										
ethylbenzene										
styrene										
total xylenes										
N-nitrosodimethylamine										
phenol										
aniline										
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										
isophrone										
2-nitrophenol										
2,4-dimethylphenol										
benzoic acid			460J	560J						
bis(2-chloroethoxy)methane										
2,4-dichlorophenol										
1,2,4-trichlorobenzene				120J	69J					
napthalene			77J		770	98J				
4-chloroaniline										
hexachlorobutadiene										
4-chloro-3-methylphenol										
2-methylnapthalene				180J	1100	170J	440J			
hexachlorocyclopentadiene										
2,4,6-trichlorophenol										
2,4,5-trichlorophenol										
2-chloronaphthalene										
2-nitroaniline										

Laidlaw City Dump #7467

	COMPOUND	SAMPLE	DET. LIMIT	EM 536	537	538	539	540			
V	dimethyl phthalate										
	acenapthylene			120J		71J					
	3-nitroaniline										
	acenaphthene			110J		66J					
	2,4-dinitrophenol										
	4-nitrophenol										
	dibenzofuran			31J		320J	52J	100J			
	2,4-dinitrotoluene										
	2,6-dinitrotoluene										
S	diethylphthalate										
	4-chlorophenyl-phenylether										
	fluorene			160J		45J					
V	4-nitroaniline										
	4,6-dinitro-2-methylphenol										
	N-nitrosodiphenylamine										
	4-bromophenyl-phenylether										
	hexachlorobenzene										
	pentachlorophenol				100J						
	phenanthrene			1800		520	320J	450J			
	anthracene			520J		96J	68J	88J			
	di-n-butylphthalate					81J	69J				
	fluoranthene			3600		770	530	510J			
	benzidine										
	pyrene			6200		620	540	490J			
	butylbenzylphthalate										
	3,3'-dichlorobenzidine										
	benzo(a)anthracene			2800		410	300J	250J			
	bis(2-ethylhexyl)phthalate										
	chrysene			2100		390	340	340J			
	di-n-octylphthalate										
	benzo(b&k)fluoranthene			4100		670	580	460J			
	benzo(a)pyrene		2ppb	4100		450	300J	210J			
	indeno(1,2,3-cd)pyrene			1300		290J	180J	120J			
	dibenzo(a,h)anthracene			330J		95J	57J				
↑	benzo(g,h,i)perylene			1400		310J	180J	110J			
↓	alpha-BHC										
	beta-BHC										
	delta-BHC										
	gamma-BHC(lindane)										
P	heptachlor										
	aldrin										
E	heptachlor epoxide										
	endosulfan I										
S	dieldrin				49		19				
T	4,4'-DDE			23							
	endrin										
	endosulfan II										
	4,4'-DDD										
	endrin aldehyde										
	endosulfan sulfate										
	4,4'-DDT			140		41	110				
	methoxychlor										
	endrin ketone										
	chlordane										
	toxaphene										
P	Aroclor-1016										
	Aroclor-1221										
C	Aroclor-1232										
B	Aroclor-1242										
	Aroclor-1248										
	Aroclor-1254										
	Aroclor-1260										

Enseco

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July 23, 1987

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

Dear Joan Fisk:

Enclosed are data summary sheets and documentation for samples and QA/QC comprising case 7467 of Contract 68-01-7140. These samples were received 06/18/87 and logged in under the following Enseco Cal Lab numbers:

Enseco Cal Lab Number	Sample I.D.
L3415	EM536
L3416	EM537
L3417	EM538
L3418	EM539
L3419	EM540

The samples were analyzed as low concentration sediment samples. Due to matrix effect samples EM537 and EM540 were repeated and in all instances yielded high volatile surrogate recoveries. The variation in results for the acetone we feel is also due to the inhomogeneity of the matrix.

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

Michael S. Filigenzi for
GC/MS Supervisor

Ben N. Buechler
Director of
Chromatography Services

Karin S. Yee
Data Specialist

mbw

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

RIC LABEL KEY

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ABN

D4-1,4-Dichlorobenzene	-	IS-1
2-Fluorophenol	-	SA-1
D5-Phenol	-	SA-2
D8-Naphthalene	-	IS-2
D5-Nitrobenzene	-	SB-1
D10-Acenaphthene	-	IS-3
2-Fluorobiphenyl	-	SB-2
2,4,6-Tribromophenol	-	SA-3
D10-Phenanthrene	-	IS-4
D14-Terphenyl	-	SB-3
D12-Chrysene	-	IS-5
D12-Perylene	-	IS-6
DFTPP	-	SB-4

VOA

Bromochloromethane	-	IS-1
1,4-Difluorobenzene	-	IS-2
D5-Chlorobenzene	-	IS-3
D4-1,2-Dichloroethane	-	S-1
D8-Toluene	-	S-2
4-Bromofluorobenzene	-	S-3

SOIL SURROGATE PERCENT RECOVERY SUMMARY

CASE NO.: 7467 CONTRACT LABORATORY: CALIFORNIA ANALYTICAL LABS, INC. CONTRACT NO.: 68-01-7140

LOW CONCENTRAION

SMO TRAFFIC NO.	[VOLATILE] TOLUENE D8 (81-117)	BFB (74-121)	1,2 DICHLORO-ETHANE D4 (70-121)	[SEMI-VOLATILE] NITRO-BENZENE D5 (23-121)	2-FLUORO-BIPHENYL (30-115)	TERPHENYL D14 (18-137)	PHENOL-D5 (24-113)	2-FLUORO-PHENOL (25-121)	2,4,6 TRIBROMO-PHENOL (19-122)	[ ] DIBUTYL-CHLOREMDATE (20-150)**
EM 536	97	109	82	84	68	92	82	78	88	108
EM 537	214 *	93	122 *	136*	112	84	101	94	68	85
EM 538	111	95	87	68	68	70	61	64	61	104
EM 539	120 *	107	91	64	70	74	59	65	67	83
EM 540	148 *	80	91	76	72	76	48	44	30	83
VBK4870624A	103	107	92	NR	NR	NR	NR	NR	NR	NR
VVBK4870626	102	105	94	NR	NR	NR	NR	NR	NR	NR
EM 539 MS	109	91	89	NR	NR	NR	NR	NR	NR	NR
EM 539 MSD	110	88	90	NR	NR	NR	NR	NR	NR	NR
EM 537RE	179 *	108	102	NR	NR	NR	NR	NR	NR	NR
EM 540RE	157 *	92	100	NR	NR	NR	NR	NR	NR	NR
L3415MB	NR	NR	NR	92	80	94	91	92	80	102
EM 537 MS	NR	NR	NR	NR	NR	NR	NR	NR	NR	74
EM 537 MSD	NR	NR	NR	NR	NR	NR	NR	NR	NR	112
EM 536 MS	NR	NR	NR	84	76	100	86	82	106	NR
EM 536 MSD	NR	NR	NR	88	80	92	82	80	96	NR

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

** ADVISORY LIMITS ONLY

VOLATILES: 6 OUT OF 33 : OUTSIDE OF QC LIMITS
SEMI-VOLATILED: 6 OUT OF 48 : OUTSIDE OF QC LIMITS
PESTICIDES: 6 OUT OF 8 : OUTSIDE OF QC LIMITS

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COMMENTS:

FORM, II DATA PREP/RELEASE BY: 7/85

SOIL MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

CASE NO.: 7467 CONTRACTOR ENSECO - CAL LAB

LOW LEVEL x MEDIUM LEVEL CONTRACT NO:68-01-7140

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	58.1	58.1	0	53.1	91	57.4	99	8.4	22	59-172
SMO	Trichloroethene	58.1	58.1	0	51.4	88	54.2	93	5.5	24	62-137
SAMPLE NO.	Chlorobenzene	58.1	58.1	0	57.3	99	61.5	106	6.8	21	60-133
	Toluene	58.1	58.1	0	58.6	101	63	108	6.7	21	59-139
EM 539	Benzene	58.1	58.1	0	55	95	58	100	5.2	21	66-142
B/N	1,2,4-Trichlorobenzene	1930	1930	0	1870	97	1870	97	0	23	38-107
SMO	Acenaphthene	1930	1930	110	1970	96	1860	91	5.3	19	31-137
SAMPLE NO.	2,4-Dinitrotoluene	1930	1930	0	2200	114 *	2120	110 *	3.7	47	28-89
	Pyrene	1930	1930	6200	8120	99	7970	92	7.3	36	35-142
	N-Nitrosodi-n-Propylamine	1930	1930	0	2040	106	1860	96	9	38	41-126
EM 536	1,4-Dichlorobenzene	1930	1930	0	1780	92	1660	86	6.7	27	28-104
ACID	Pentachlorophenol	3850	3850	0	1500	39	480	12 *	108 *	47	17-109
SMO	Phenol	3850	3850	0	3800	99 *	3440	89	11	35	26-90
SAMPLE NO.	2-Chlorophenol	3850	3850	0	3310	86	3100	81	6	50	25-102
	4-Chloro-3-Methylphenol	3850	3850	0	3900	101	3730	97	4	33	26-103
EM 536	4-Nitrophenol	3850	3850	0	3980	103	3930	102	1	50	11-114
PEST	Lindane	38.8	38.8	0	27	70	25.3	65	7	50	46-127
SMO	Heptachlor	38.8	38.8	0	27.4	71	24.7	64	10	31	35-130
SAMPLE NO.	Aldrin	38.8	38.8	0	29.6	76	27.7	71	6.8	43	34-132
	Dieldrin	96.8	96.8	0	136	140 *	136	140 *	0	38	31-134
	Endrin	96.8	96.8	0	84.8	88	76.9	79	10	45	42-139
EM 537	4,4-DDT	96.8	96.8	0	90.1	93	78.6	81	14	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 2 out of 12 ; outside QC limits
ACID 2 out of 10 ; outside QC limits
PEST 0 out of 12 ; outside QC limits

Comments:

FORM III 7/85

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EV

METHOD BLANK SUMMARY

CASE NO. 7467 REGION: 5 CONTRACTOR: ENSECO - CALIFORNIA ANALYTICAL LABS,INC CONTRACT NO. 68-01-7140

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL,TIC OR UNKNOWN)	CONC.	UNITS	CRDL
VBK4870624A	6/24/87	VOA	SOIL	LOW	F4	75-09-2	METHYLENE CHLORIDE	2.5	UG/KG	5
						67-64-1	ACETONE	4.1	UG/KG	10
						75-15-0	CARBON DISULFIDE	2.7	UG/KG	5
						78-93-3	2-BUTANONE	5.7	UG/KG	10
VVBK4870626	6/26/87	VOA	SOIL	LOW	F4	75-09-2	METHYLENE CHLORIDE	2.9	UG/KG	5
						67-64-1	ACETONE	7.6	UG/KG	10
						78-93-3	2-BUTANONE	7.9	UG/KG	10
						75-25-2	BROMOFORM	1.0	UG/KG	5
						591-78-6	2-HEXANONE	6.8	UG/KG	10
						108-10-1	4-METHYL-2-PENTANONE	3.6	UG/KG	10
						79-34-5	1,1,2,2-TETRACHLOROETHANE	3.1	UG/KG	5
						108-88-3	TOLUENE	1.4	UG/KG	5
						100-41-4	ETHYLBENZENE	1.6	UG/KG	5
						100-42-5	STYRENE	1.5	UG/KG	5
							XYLENE	2.1	UG/KG	5
L3415MB	7/15/87	PEST	SOIL	LOW	GC6	-	NO PESTICIDES FOUND	-	-	-
L3415MB	7/17/87	ABN	SOIL	LOW	F12	117-81-7	BIS(2ETHYLHEXYL)PHTHALATE	100	UG/KG	330
						625-23-0	2HEXANOL,2METHYL	2900	UG/KG	-
						607-99-8	BENZENE, 1,3,5-TRIBROMO-2-METHYL	200	UG/KG	-

COMMENTS:

FORM IV 7/85

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Sample Number
EM 536

Organics Analysis Data Sheet
(Page 1)

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Laboratory Name: ENSECO CAL LAB
Case No: 7457
Lab Sample ID No: L3415
QC Report No: 220
Sample Matrix: SOIL
Contract No: 68-01-7140
Data Release Authorized By:
Date Sample Received: 6/16/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 6/24/87
Date Analyzed: 6/24/87
Conc/Dil Factor: 1 pH: 7.5
Percent Moisture: 13
Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	2 JB
67-64-1	Acetone	3 JB
75-15-0	Carbon Disulfide	2 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	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
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
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	5 U
108-88-3	Toluene	5 U
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:7467

Sample Number
EM 536

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Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW

Date Extracted/Prepared: 5/19/87

Date Analyzed: 7/17/87

Conc/Dil. Factor: 2

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	660 U
111-44-4	bis(-2-Chloroethyl)Ether	660 U
95-57-8	2-Chlorophenol	660 U
541-73-1	1,3-Dichlorobenzene	660 U
106-46-7	1,4-Dichlorobenzene	660 U
100-51-6	Benzyl Alcohol	660 U
95-50-1	1,2-Dichlorobenzene	660 U
95-48-7	2-Methylphenol	660 U
39638-32-9	bis(2-chloroisopropyl)Ether	660 U
106-44-5	4-Methylphenol	660 U
621-64-7	N-Nitroso-Di-n-Propylamine	660 U
67-72-1	Hexachloroethane	660 U
98-95-3	Nitrobenzene	660 U
78-59-1	Isophorone	660 U
88-75-5	2-Nitrophenol	660 U
105-67-9	2,4-Dimethylphenol	660 U
65-85-0	Benzoic Acid	450 J
111-91-1	bis(-2-Chloroethoxy)Methane	660 U
120-83-2	2,4-Dichlorophenol	660 U
120-82-1	1,2,4-Trichlorobenzene	660 U
91-20-3	Naphthalene	77 J
106-47-8	4-Chloroaniline	660 U
87-68-3	Hexachlorobutadiene	660 U
59-50-7	4-Chloro-3-Methylphenol	660 U
91-57-6	2-Methylnaphthalene	660 U
77-47-4	Hexachlorocyclopentadiene	660 U
88-06-2	2,4,6-Trichlorophenol	660 U
95-95-4	2,4,5-Trichlorophenol	3200 U
91-58-7	2-Chloronaphthalene	660 U
88-74-4	2-Nitroaniline	3200 U
131-11-3	Dimethyl Phthalate	660 U
208-96-8	Acenaphthylene	120 J
99-09-2	3-Nitroaniline	3200 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	110 J
51-28-5	2,4-Dinitrophenol	3200 U
100-02-7	4-Nitrophenol	3200 U
132-64-9	Dibenzofuran	81 J
121-14-2	2,4-Dinitrotoluene	660 U
606-20-2	2,6-Dinitrotoluene	660 U
84-66-2	Diethylphthalate	660 U
7005-72-3	4-Chlorophenyl-phenylether	660 U
86-73-7	Fluorene	160 J
100-01-6	4-Nitroaniline	3200 U
534-52-1	4,6-Dinitro-2-Methylphenol	3200 U
86-30-5	N-Nitrosodiphenylamine(1)	660 U
101-55-3	4-Bromophenyl-phenylether	660 U
118-74-1	Hexachlorobenzene	660 U
87-86-5	Pentachlorophenol	3200 U
85-01-8	Phenanthrene	1800
120-12-7	Anthracene	520 J
84-74-2	Di-n-Butylphthalate	660 U
206-44-0	Fluoranthene	3600
129-00-0	Pyrene	6200
85-68-7	Butylbenzylphthalate	660 U
91-94-1	3,3'-Dichlorobenzidine	1300 U
56-55-3	Benzo(a)Anthracene	2800
117-81-7	bis(2-Ethylhexyl)Phthalate	330 JB
218-01-9	Chrysene	2100
117-84-0	Di-n-Octyl Phthalate	660 U
205-99-2	Benzo(b)Fluoranthene	4100
207-08-9	Benzo(k)Fluoranthene	4100
50-32-8	Benzo(a)Pyrene	2300
193-39-5	Indeno(1,2,3-cd)Pyrene	1300
53-70-3	Dibenz(a,h)Anthracene	330 J
191-24-2	Benzo(g,h,i)Perylene	1400

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7467

Sample Number
EM 536

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

GPC Cleanup: NO

Date Extracted/Prepared: 6/19/87

Separatory Funnel Extraction: NO

Date Analyzed: 7/16/87

Continuous Liquid - Liquid Extraction: NO

Conc/Dil Factor: 1

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	23
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	140
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 = 1.3 V_t = 5000 V_i = 5

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

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7467 Sample No. EM536

QC Report No. 220 Lab Sample No. L341501AB

RECEIVED AUG 2 8 1989

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.	625-23-0	2-HEXANOL, 2-METHYL-	A/BN	295	813	1666.0 UG/KG
2.	544-76-3	HEXADECANE	A/BN	1093	760	821.5 UG/KG
3.	544-76-3	HEXADECANE	A/BN	1130	696	409.7 UG/KG
4.	629-78-7	HEPTADECANE	A/BN	1168	890	1228.7 UG/KG
5.	1921-70-6	PENTADECANE, 2,6,10,14-TETRAME	A/BN	1173	843	518.0 UG/KG
6.	1610-18-0	PROMETON (ACN)	A/BN	1209	878	2925.9 UG/KG
7.	629-92-5	NONADECANE	A/BN	1307	845	1293.0 UG/KG
8.	832-64-4	PHENANTHRENE, 4-METHYL-	A/BN	1338	760	382.2 UG/KG
9.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1373	652	907.5 UG/KG
10.	3353-12-6	PYRENE, 4-METHYL-	A/BN	1523	786	297.8 UG/KG
11.	195-19-7	BENZO[C]PHENANTHRENE	A/BN	1626	775	317.5 UG/KG
12.	205-82-3	BENZO[J]FLUORANTHENE	A/BN	1921	850	281.2 UG/KG
13.	630-06-8	HEXATRIACONTANE	A/BN	2158	783	232.8 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-HEXANOL, 2-METHYL-	1. D	1. see blank
2. HEXADECANE	2. A	2. Alkanes
3. HEXADECANE	3. B	3.
4. HEPTADECANE	4. A	4.
5. PENTADECANE, 2,6,10,14-TETRAME	5. B	5.
6. PROMETON (ACN)	6. A	6.
7. NONADECANE	7. A	7. alkane
8. PHENANTHRENE, 4-METHYL-	8. C	8.
9. IRON, TRICARBONYL[N-(PHENYL-2-	9. B	9. alkane
10. PYRENE, 4-METHYL-	10. B	10. or isomer
11. BENZO[C]PHENANTHRENE	11. B	11. or isomer
12. BENZO[J]FLUORANTHENE	12. A	12. or isomer
13. HEXATRIACONTANE	13. B	13. alkane

FORM 1, PART B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7467 Sample No. 1536,

GC Report No. 200 Lab Sample No. L341503VV

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= see ABN

RECEIVED AUG 2 8 1987

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated Conc. J VALUE
1.	91-20-3	NAPHTHALENE (ACN)(DOT)	VOA	471	803	5.9 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. NAPHTHALENE (ACN)(DOT)	1. A → D - see ABN analysis.	1. Match seems O.K. Rgg

FORM 1, Part B

Sample Number
EM 537

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB
Case No: 7467
Lab Sample ID No: L3415
QC Report No: 220
Sample Matrix: SOIL
Contract No: 68-01-7140
Data Release Authorized By:
Date Sample Received: 8/18/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 8/25/87
Date Analyzed: 8/25/87
Conc/Dil Factor: 1 pH: 7.6
Percent Moisture: 31
Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	4 JB
67-64-1	Acetone	6 JB
75-15-0	Carbon Disulfide	4 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
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
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	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.

Sample Number
EM 537 RE

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB
Case No: 7359
Lab Sample ID No: L2416 RE
QC Report No: 220
Sample Matrix: SOIL
Contract No: 68-01-7140
Data Release Authorized By:
Date Sample Received: 6/18/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 6/26/87
Date Analyzed: 6/26/87
Conc/Dil Factor: 1 pH: 7.6
Percent Moisture: 31
Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	4 JB
67-64-1	Acetone	63 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	13 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
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
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	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:

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7467

Sample Number
EM [illegible]

RECEIVED AUG 2 8 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW

Date Extracted/Prepared: 5/12/87

Date Analyzed: 7/17/87

Conc/DiL Factor: 2

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	660 U
111-44-4	bis(-2-Chloroethyl)Ether	660 U
95-57-8	2-Chlorophenol	660 U
541-73-1	1,3-Dichlorobenzene	660 U
106-46-7	1,4-Dichlorobenzene	660 U
100-51-6	Benzyl Alcohol	660 U
95-50-1	1,2-Dichlorobenzene	660 U
95-48-7	2-Methylphenol	660 U
39638-32-9	bis(2-chloroisopropyl)Ether	660 U
106-44-5	4-Methylphenol	660 U
621-64-7	N-Nitroso-Di-n-Propylamine	660 U
67-72-1	Hexachloroethane	660 U
98-95-3	Nitrobenzene	660 U
78-59-1	Isophorone	660 U
88-75-5	2-Nitrophenol	660 U
105-67-9	2,4-Dimethylphenol	660 U
65-85-0	Benzoic Acid	560 J
111-91-1	bis(-2-Chloroethoxy)Methane	660 U
120-83-2	2,4-Dichlorophenol	660 U
120-82-1	1,2,4-Trichlorobenzene	120 J
91-20-3	Naphthalene	660 U
106-47-8	4-Chloroaniline	660 U
87-68-3	Hexachlorobutadiene	660 U
59-50-7	4-Chloro-3-Methylphenol	660 U
91-57-6	2-Methylnaphthalene	180 J
77-47-4	Hexachlorocyclopentadiene	660 U
88-06-2	2,4,6-Trichlorophenol	660 U
95-95-4	2,4,5-Trichlorophenol	3200 U
91-58-7	2-Chloronaphthalene	660 U
88-74-4	2-Nitroaniline	3200 U
131-11-3	Dimethyl Phthalate	660 U
208-96-8	Acenaphthylene	660 U
99-09-2	3-Nitroaniline	3200 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	660 U
51-28-5	2,4-Dinitrophenol	3200 U
100-02-7	4-Nitrophenol	330 J
132-64-9	Dibenzofuran	660 U
121-14-2	2,4-Dinitrotoluene	660 U
606-20-2	2,6-Dinitrotoluene	660 U
84-66-2	Diethylphthalate	660 U
7005-72-3	4-Chlorophenyl-phenylether	660 U
86-73-7	Fluorene	660 U
100-01-6	4-Nitroaniline	3200 U
534-52-1	4,6-Dinitro-2-Methylphenol	3200 U
86-30-6	N-Nitrosodiphenylamine(1)	660 U
101-55-3	4-Bromophenyl-phenylether	660 U
118-74-1	Hexachlorobenzene	660 U
87-86-5	Pentachlorophenol	100 J
85-01-8	Phenanthrene	660 U
120-12-7	Anthracene	660 U
84-74-2	Di-n-Butylphthalate	660 U
206-44-0	Fluoranthene	660 U
129-00-0	Pyrene	660 U
85-68-7	Butylbenzylphthalate	660 U
91-94-1	3,3'-Dichlorobenzidine	1300 U
56-55-3	Benzo(a)Anthracene	660 U
117-81-7	bis(2-Ethylhexyl)Phthalate	420 J B
218-01-9	Chrysene	660 U
117-84-0	Di-n-Octyl Phthalate	660 U
205-99-2	Benzo(b)Fluoranthene	660 U
207-08-9	Benzo(k)Fluoranthene	660 U
50-32-8	Benzo(a)Pyrene	660 U
193-39-5	Indeno(1,2,3-cd)Pyrene	660 U
53-70-3	Dibenz(a,h)Anthracene	660 U
191-24-2	Benzo(g,h,i)Perylene	660 U

(1) - Cannot be separated from diphenylamine

CLF: 10/11/85 Form I Prepared by: [signature] 7/85

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7467

Sample Number
EM 537

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 6/19/87

Date Analyzed: 7/15/87

Conc/Dil Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ng/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	49
72-55-9	4,4'-DDE	16 U
72-20-8	Endrin	16 U
33213-65-9	Endosulfan II	16 U
72-54-8	4,4'-DDD	16 U
1031-07-8	Endosulfan Sulfate	16 U
50-29-3	4,4'-DDT	16 U
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

V_s = NR or W_s = 1.0 V_t = 5000 V_i = 5

CLF: 11/14/85 Form I Prepared by [signature] 7/85

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7467 Sample No. ~~EM27~~ EM537 RE

GC Report No. 220 Lab Sample No. L341603VVR

RECEIVED 2 28 1987

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= see ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated Conc. J VALUE
1.	6032-29-7	2-PENTANOL	VOA	90	829	102.8 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-PENTANOL	1. A	1.

FORM 1, Part B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7469 Sample No. EM5[illegible]

GC Report No. 220 Lab Sample No. L341603VV

RECEIVED AUG 2 1987

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= see ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated Conc J VALUE
1.	34[illegible]28-80-5	BICYCLO[4.4.1]UNDECA-1,3,5,7,9	VOA	470	606	2.6 UG/KG

COMPOUND NAME	PROBABILITY	COMMENTS
1. BICYCLO[4.4.1]UNDECA-1,3,5,7,9	1: A	1. D could be naphthalene

FORM 1, Part B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7467 Sample No. EM537

QC Report No. 220 Lab Sample No. L341601AB

RECEIVED AUG 28 1987

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.	625-23-0	2-HEXANOL, 2-METHYL-	A/BN	315	B14	1498.3 UG/KG
2.	57-10-3	HEXADECANOIC ACID	A/BN	1349	761	493.9 UG/KG
3.	10544-50-0	SULFUR, MOL. (S8)	A/BN	1423	933	225.3 UG/KG
4.	111-03-5	9-OCTADECENOIC ACID (Z)-, 2,3-	A/BN	1459	594	157.9 UG/KG
~~5.~~	~~[illegible]~~	~~1,2-BENZENEDICARBOXYLIC ACID,~~	~~A/BN~~	~~1459~~	~~922~~	~~149.7 UG/KG~~

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-HEXANOL, 2-METHYL-	1. AO	1. see blank
2. HEXADECANOIC ACID	2. C Acid	2.
3. SULFUR, MOL. (S8)	3. A	3.
4. 9-OCTADECENOIC ACID (Z)-, 2,3-	4. B/C Acid	4.
~~5. 1,2-BENZENEDICARBOXYLIC ACID,~~	~~5. C~~ Acid	5. HSL

FORM 1, PART B

Sample Number
EM 538

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB

Case No: 7467

Lab Sample ID No: L3417

QC Report No: 220

Sample Matrix: SOIL

Contract No: 68-01-7140

Data Release Authorized By:

Date Sample Received: 6/18/87

Volatile Compounds

Concentration: Low

Date Extracted/Prepared: 6/25/87

Date Analyzed: 6/26/87

Conc/Dil Factor: 1 pH: 7.8

Percent Moisture: 12

Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	43 B
67-64-1	Acetone	650 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	5 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
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
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	5 U
108-88-3	Toluene	1 JB
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

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:7467

Sample Number
EM 536

RECEIVED [illegible] 0 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

Date Extracted/Prepared: 6/19/87

Date Analyzed: 7/13/87

Conc/Dil. Factor: 1

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	330 U
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	330 U
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	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	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	330 U
65-85-0	Benzoic Acid	180 J
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	69 J
91-20-3	Naphthalene	770
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	1100
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	71 J
99-09-2	3-Nitroaniline	1600 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	65 J
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	220 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	45 J
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	520
120-12-7	Anthracene	96 J
84-74-2	Di-n-Butylphthalate	81 J
206-44-0	Fluoranthene	770
129-00-0	Pyrene	620
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	410
117-81-7	bis(2-Ethylhexyl)Phthalate	220 JB
218-01-9	Chrysene	390
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	670
207-08-9	Benzo(k)Fluoranthene	670
50-32-8	Benzo(a)Pyrene	450
193-39-5	Indeno(1,2,3-cd)Pyrene	290 J
53-70-3	Dibenz(a,h)Anthracene	95 J
191-24-2	Benzo(g,h,i)Perylene	310 J

(1) - Cannot be separated from Diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7467

Sample Number
EM 538

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 8/19/87

Date Analyzed: 7/15/87

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	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	41
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 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

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

220

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7467 Sample No. EM5

QC Report No. 220 Lab Sample No. L341703VV

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= see ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated Conc. J VALUE
1.	67-63-0	2-PROPANOL (ACN)	VOA	91	956	12.4 UG/KG

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

FORM 1, Part B

RECEIVED AUG 28 1987

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7467 Sample No. EM538,

QC Report No. 220 Lab Sample No. L341701ABF1

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

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	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated CONC. J VALUE
1.	26232-98-4	2-PENTENE, 4,4-DIMETHYL-	A/BN	221	88	UG/KG
2.	625-23-0	2-HEXANOL, 2-METHYL-	A/BN	305	81	UG/KG
3.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	335	95	UG/KG
4.	108-38-3	BENZENE, 1,3-DIMETHYL-	A/BN	372	93	UG/KG
~~5.~~	~~[illegible]~~	~~2-HEPTYNE, 5-METHYL-~~	~~A/BN~~	~~411~~	~~63~~	~~UG/KG~~
6.	108-67-8	BENZENE, 1,3,5-TRIMETHYL-	A/BN	548	63	UG/KG
7.	112-40-3	DODECANE	A/BN	745	67	UG/KG
8.	61141-72-8	DODECANE, 4,6-DIMETHYL-	A/BN	815	80	UG/KG
9.	90-12-0	NAPHTHALENE, 1-METHYL-	A/BN	860	92	UG/KG
10.	629-59-4	TETRADECANE	A/BN	930	68	UG/KG
11.	571-61-9	NAPHTHALENE, 1,5-DIMETHYL-	A/BN	943	95	UG/KG
12.	569-41-5	NAPHTHALENE, 1,6-DIMETHYL-	A/BN	957	94	UG/KG
13.	573-98-8	NAPHTHALENE, 1,2-DIMETHYL-	A/BN	974	78	UG/KG
14.	2131-42-2	NAPHTHALENE, 1,4,6-TRIMETHYL-	A/BN	1097	91	UG/KG
15.	1921-70-6	PENTADECANE, 2,6,10,14-TETRAME	A/BN	1173	84	UG/KG
16.	529-05-5	AZULENE, 7-ETHYL-1,4-DIMETHYL-	A/BN	1208	57	UG/KG
17.	629-92-5	NONADECANE	A/BN	1306	77	UG/KG
18.	5129-60-2	PENTADECANOIC ACID, 14-METHYL-	A/BN	1325	38	UG/KG
19.	57-10-3	HEXADECANOIC ACID	A/BN	1350	78	UG/KG
20.	74724-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1371	43	UG/KG
21.	57-11-4	OCTADECANOIC ACID	A/BN	1473	65	UG/KG
22.	629-99-2	PENTACOSANE	A/BN	1550	76	UG/KG
23.	92-94-4	1,1':4',1''-TERPHENYL	A/BN	1606	49	UG/KG
24.	629-99-2	PENTACOSANE	A/BN	1768	77	UG/KG
25.	205-82-3	BENZO[J]FLUORANTHENE	A/BN	1861	89	UG/KG
26.	75163-99-4	NONADECANE, 2,3-DIMETHYL-	A/BN	1926	63	UG/KG
27.	40710-31-5	NONAHEXACONTANOIC ACID	A/BN	2028	41	UG/KG
28.	630-01-3	HEXACOSANE	A/BN	2160	69	UG/KG

(CSH)

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-PENTENE, 4,4-DIMETHYL-	1. A	1.
2. 2-HEXANOL, 2-METHYL-	2. B	2.
3. BENZENE, 1,3-DIMETHYL-	3. ~~A~~ D Sat	3. see VOA
4. BENZENE, 1,3-DIMETHYL-	4. ~~A~~ D	4.
~~5. 2-HEPTYNE, 5-METHYL-~~	~~5. B~~	~~5. too weak~~ Sat
6. BENZENE, 1,3,5-TRIMETHYL-	6. ~~C~~ B	6.
7. DODECANE	7. ~~B~~ A Sat	7.
8. DODECANE, 4,6-DIMETHYL-	8. A	8.
9. NAPHTHALENE, 1-METHYL-	9. A	9.
10. TETRADECANE	10. ~~B~~ A Sat	10.
11. NAPHTHALENE, 1,5-DIMETHYL-	11. A	11.
12. NAPHTHALENE, 1,6-DIMETHYL-	12. A	12.
13. NAPHTHALENE, 1,2-DIMETHYL-	13. ~~B~~ A Sat	13. or isomers
14. NAPHTHALENE, 1,4,6-TRIMETHYL-	14. A	14.
15. PENTADECANE, 2,6,10,14-TETRAME	15. A	15.
16. AZULENE, 7-ETHYL-1,4-DIMETHYL-	16. ~~C~~ B Sat	16.
17. NONADECANE	17. A	17.
18. PENTADECANOIC ACID, 14-METHYL-	18. ~~C~~ B Sat	18.
19. HEXADECANOIC ACID	19. ~~B~~ A	19.
20. IRON, TRICARBONYL[N-(PHENYL-2-	20. ~~[illegible]~~ C3	20. Alkane
21. OCTADECANOIC ACID	21. B	21.
22. PENTACOSANE	22. A B	22. Alkane
23. 1,1':4',1''-TERPHENYL	23. ~~C~~ B Sat	23. and an Alkane
24. PENTACOSANE	24. A	24.
25. BENZO[J]FLUORANTHENE	25. A	25. or isomer
26. NONADECANE, 2,3-DIMETHYL-	26. ~~C~~ B Sat	26. Alkane and isomer of #25
27. NONAHEXACONTANOIC ACID	27. C	27.
28. HEXACOSANE	28. A	28. Alkane

(CSH)

FORM 1, PART B

Sample Number
EM 539

Organics Analysis Data Sheet
(Page 1)

RECEIVED AUG 2 8 1987

Laboratory Name: ENSECO CAL LAB
Case No: 7457
Lab Sample ID No: L3418
QC Report No: 220
Sample Matrix: SOIL
Contract No: 68-01-7040
Data Release Authorized By:
Date Sample Received: 6/18/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 6/26/87
Date Analyzed: 6/26/87
Conc/Dil Factor: 1 pH: 7.6
Percent Moisture: 14
Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	3 JB
67-64-1	Acetone	130 B
75-15-0	Carbon Disulfide	5 U
75-35-4	1,1-Dichloroethene	5 U
75-34-3	1,1-Dichloroethane	5 U
156-60-5	Trans-1,2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1,2-Dichloroethane	5 U
78-93-3	2-Butanone	5 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
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
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	5 U
108-88-3	Toluene	5 U
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:7467

Sample Number
EH 539

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: Low

GPC Cleanup: NO

Date Extracted/Prepared: 6/19/87

Separatory Funnel Extraction: NO

Date Analyzed: 7/19/87

Continuous Liquid - Liquid Extraction: NO

Conc/DiL Factor: 1

CAS Number		ug/Kg
108-95-2	Phenol	330 U
111-44-4	bis(-2-Chloroethyl)Ether	330 U
95-57-8	2-Chlorophenol	330 U
541-73-1	1,3-Dichlorobenzene	330 U
106-46-7	1,4-Dichlorobenzene	330 U
100-51-6	Benzyl Alcohol	330 U
95-50-1	1,2-Dichlorobenzene	330 U
95-48-7	2-Methylphenol	330 U
39638-32-9	bis(2-chloroisopropyl)Ether	330 U
106-44-5	4-Methylphenol	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	330 U
88-75-5	2-Nitrophenol	330 U
105-67-9	2,4-Dimethylphenol	330 U
65-85-0	Benzoic Acid	1600 U
111-91-1	bis(-2-Chloroethoxy)Methane	330 U
120-83-2	2,4-Dichlorophenol	330 U
120-82-1	1,2,4-Trichlorobenzene	330 U
91-20-3	Naphthalene	98 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	170 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	330 U
51-28-5	2,4-Dinitrophenol	1600 U
100-02-7	4-Nitrophenol	1600 U
132-64-9	Dibenzofuran	52 J
121-14-2	2,4-Dinitrotoluene	330 U
606-20-2	2,6-Dinitrotoluene	330 U
84-66-2	Diethylphthalate	330 U
7005-72-3	4-Chlorophenyl-phenylether	330 U
86-73-7	Fluorene	330 U
100-01-6	4-Nitroaniline	1600 U
534-52-1	4,6-Dinitro-2-Methylphenol	1600 U
86-30-6	N-Nitrosodiphenylamine(1)	330 U
101-55-3	4-Bromophenyl-phenylether	330 U
118-74-1	Hexachlorobenzene	330 U
87-86-5	Pentachlorophenol	1600 U
85-01-8	Phenanthrene	320 J
120-12-7	Anthracene	69 J
84-74-2	Di-n-Butylphthalate	64 J
206-44-0	Fluoranthene	530
129-00-0	Pyrene	540
85-68-7	Butylbenzylphthalate	330 U
91-94-1	3,3'-Dichlorobenzidine	660 U
56-55-3	Benzo(a)Anthracene	300 J
117-81-7	bis(2-Ethylhexyl)Phthalate	180 J B
218-01-9	Chrysene	540
117-84-0	Di-n-Octyl Phthalate	330 U
205-99-2	Benzo(b)Fluoranthene	580
207-08-9	Benzo(k)Fluoranthene	580
50-32-8	Benzo(a)Pyrene	300 J
193-39-5	Indeno(1,2,3-cd)Pyrene	160 J
53-70-3	Dibenz(a,h)Anthracene	57 J
191-24-2	Benzo(g,h,i)Perylene	160 J

(1) - Cannot be separated from diphenylamine

Laboratory Name: CALIFORNIA ANALYTICAL LABORATORIES, INC.
Case No:7467

Sample Number
BM 539

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Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

GPC Cleanup: NO

Date Extracted/Prepared: 6/19/87

Separatory Funnel Extraction: NO

Date Analyzed: 7/15/87

Continuous Liquid - Liquid Extraction: NO

Conc/Dil Factor: 1

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	10
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	110
72-43-5	Methoxychlor	80 U
53494-70-5	Endrin Ketone	16 U
57-74-9	Chlordane	80 U
8001-35-2	Toxaphene	160 U
12674-11-2	Aroclor-1016	80 U
11104-28-2	Aroclor-1221	80 U
11141-16-5	Aroclor-1232	80 U
53469-21-9	Aroclor-1242	80 U
12672-29-6	Aroclor-1248	80 U
11097-69-1	Aroclor-1254	160 U
11096-82-5	Aroclor-1260	160 U

V_i = Volume of extract injected (ul)

V_s = Volume of water extracted (ml)

W_s = Weight of sample extracted (g)

V_t = Volume of total extract (ul)

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

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

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7467 Sample No. EM539

QC Report No. 220 Lab Sample No. L341802VV

RECEIVED AUG 28 1987

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= see ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated Conc. J VALUE
1.	67-63-0	2-PROPANOL (ACN)	VOA	90	943	7.2 UG/KG

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

FORM 1, Part B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: CAL Case No. 7467 Sample No. EM539,

QC Report No. 220 Lab Sample No. L341801ABRI

RECEIVED AUG 28 1987

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.	108-11-2	2-PENTANOL, 4-METHYL-	A/BN	230	708 65.8	~~[illegible]~~ UG/KG
2.	625-23-0	2-HEXANOL, 2-METHYL-	A/BN	276	820 98.5	~~[illegible]~~ UG/KG
3.	~~[illegible]~~	~~1H-INDENE, 1-ETHYLIDENE~~ see #3 below	A/BN	859	941 93	~~[illegible]~~ UG/KG
4.	569-41-5	NAPHTHALENE, 1,8-DIMETHYL-	A/BN	956	961 58.0	~~[illegible]~~ UG/KG
5.	829-26-5	NAPHTHALENE, 2,3,6-TRIMETHYL-	A/BN	1063	554 59.6	~~[illegible]~~ UG/KG
6.	55045-08-4	DODECANE, 2-METHYL-6-PROPYL-	A/BN	1093	523 50.5	~~[illegible]~~ UG/KG
7.	1921-70-6	PENTADECANE, 2,6,10,14-TETRAME	A/BN	1173	858 105.6	~~[illegible]~~ UG/KG
8.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1372	490 69.9	~~[illegible]~~ UG/KG
9.	56909-18-3	BENZO[C]PHENANTHRENE-1-CARBOXA	A/BN	1448	194 81.6	~~[illegible]~~ UG/KG
10.	761-35-3	HEXADECANOIC ACID, 1-(HYDROXYM	A/BN	1487	436 212.5	~~[illegible]~~ UG/KG
11.	2381-21-7	PYRENE, 1-METHYL-	A/BN	1524	618 66.9	~~[illegible]~~ UG/KG
12.	74764-11-7	IRON, TRICARBONYL[N-(PHENYL-2-	A/BN	1551	512 72.6	~~[illegible]~~ UG/KG
13.	646-13-9	OCTADECANOIC ACID, 2-METHYLPRO	A/BN	1600	713 200.4	~~[illegible]~~ UG/KG
14.	75163-99-4	NONADECANE, 2,3-DIMETHYL-	A/BN	1924	603 295.8	~~[illegible]~~ UG/KG
~~15.~~	~~[illegible]~~	~~2-PYRAZOLIN-5-ONE, 4-[[P-(METH~~	~~A/BN~~	~~2154~~	~~[illegible]~~	~~6.7 UG/KG~~

(CGH)

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-PENTANOL, 4-METHYL-	1. C	1.
2. 2-HEXANOL, 2-METHYL-	2. ~~B~~ D	2. see blank
3. ~~1H-INDENE, 1-ETHYLIDENE~~ NAPHTHALENE, 1-METHYL-	3. A	3. CAS# 90-12-0
4. NAPHTHALENE, 1,8-DIMETHYL-	4. A	4. } or isomers
5. NAPHTHALENE, 2,3,6-TRIMETHYL-	5. ~~C~~ B	5.
6. DODECANE, 2-METHYL-6-PROPYL-	6. ~~C~~ B	6. Alkane & Fluorene
7. PENTADECANE, 2,6,10,14-TETRAME	7. ~~A~~ B	7. Alkane
8. IRON, TRICARBONYL[N-(PHENYL-2-	8. ~~C~~ B	8. Alkane
9. BENZO[C]PHENANTHRENE-1-CARBOXA	9. C	9.
10. HEXADECANOIC ACID, 1-(HYDROXYM	10. C	10.
11. PYRENE, 1-METHYL-	11. ~~C~~ B	11. or isomer
12. IRON, TRICARBONYL[N-(PHENYL-2-	12. ~~C~~ B	12. Alkane
13. OCTADECANOIC ACID, 2-METHYLPRO	13. B	13.
14. NONADECANE, 2,3-DIMETHYL-	14. B	14. Alkane & isomer of Benzo(a)Pyrene
~~15. 2-PYRAZOLIN-5-ONE, 4-[[P-(METH~~	~~15. C~~	15.

(CGH)

FORM 1, PART B

Sample Number
EM 540

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB
Case No: 7467
Lab Sample ID No: L2419
QC Report No: 220
Sample Matrix: SOIL
Contract No: 68-01-7140
Data Release Authorized By:
Date Sample Received: 6/18/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 6/26/87
Date Analyzed: 6/26/87
Conc/Dil Factor: 1 pH: 7.8
Percent Moisture: 26
Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	31 B
67-64-1	Acetone	510 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 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
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
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	5 U
108-88-3	Toluene	4 JB
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	5 U

Data Reporting Qualifiers

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

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

U Indicates compound was analyzed for but not detected. Report the minimum detection limit for the 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:7467

Sample Number
EM 54

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: LOW

Date Extracted/Prepared: 5/19/87

Date Analyzed: 7/17/87

Conc/DIL Factor: 2

GPC Cleanup: NO

Separatory Funnel Extraction: NO

Continuous Liquid - Liquid Extraction: NO

CAS Number		ug/Kg
108-95-2	Phenol	660 U
111-44-4	bis(-2-Chloroethyl)Ether	660 U
95-57-8	2-Chlorophenol	660 U
541-73-1	1,3-Dichlorobenzene	660 U
106-46-7	1,4-Dichlorobenzene	660 U
100-51-6	Benzyl Alcohol	660 U
95-50-1	1,2-Dichlorobenzene	660 U
95-48-7	2-Methylphenol	660 U
39638-32-9	bis(2-chloroisopropyl)Ether	660 U
106-44-5	4-Methylphenol	660 U
621-64-7	N-Nitroso-Di-n-Propylamine	660 U
67-72-1	Hexachloroethane	660 U
98-95-3	Nitrobenzene	660 U
78-59-1	Isophorone	660 U
88-75-5	2-Nitrophenol	660 U
105-67-9	2,4-Dimethylphenol	660 U
65-85-0	Benzoic Acid	3200 U
111-91-1	bis(-2-Chloroethoxy)Methane	660 U
120-83-2	2,4-Dichlorophenol	660 U
120-82-1	1,2,4-Trichlorobenzene	660 U
91-20-3	Naphthalene	260 J
106-47-8	4-Chloroaniline	660 U
87-68-3	Hexachlorobutadiene	660 U
59-50-7	4-Chloro-3-Methylphenol	660 U
91-57-6	2-Methylnaphthalene	440 J
77-47-4	Hexachlorocyclopentadiene	660 U
88-06-2	2,4,6-Trichlorophenol	660 U
95-95-4	2,4,5-Trichlorophenol	3200 U
91-58-7	2-Chloronaphthalene	660 U
88-74-4	2-Nitroaniline	3200 U
131-11-3	Dimethyl Phthalate	660 U
208-96-8	Acenaphthylene	660 U
99-09-2	3-Nitroaniline	3200 U

CAS Number		ug/Kg
83-32-9	Acenaphthene	660 U
51-28-5	2,4-Dinitrophenol	3200 U
100-02-7	4-Nitrophenol	3200 U
132-64-9	Dibenzofuran	100 J
121-14-2	2,4-Dinitrotoluene	660 U
606-20-2	2,6-Dinitrotoluene	660 U
84-66-2	Diethylphthalate	660 U
7005-72-3	4-Chlorophenyl-phenylether	660 U
86-73-7	Fluorene	660 U
100-01-6	4-Nitroaniline	3200 U
534-52-1	4,6-Dinitro-2-Methylphenol	3200 U
86-30-6	N-Nitrosodiphenylamine(1)	660 U
101-55-3	4-Bromophenyl-phenylether	660 U
118-74-1	Hexachlorobenzene	660 U
87-86-5	Pentachlorophenol	3200 U
85-01-8	Phenanthrene	450 J
120-12-7	Anthracene	88 J
84-74-2	Di-n-Butylphthalate	660 U
206-44-0	Fluoranthene	640 J
129-00-0	Pyrene	600 J
85-68-7	Butylbenzylphthalate	660 U
91-94-1	3,3'-Dichlorobenzidine	1300 U
56-55-3	Benzo(a)Anthracene	250 J
117-81-7	bis(2-Ethylhexyl)Phthalate	630 J B
218-01-9	Chrysene	340 J
117-84-0	Di-n-Octyl Phthalate	660 U
205-99-2	Benzo(b)Fluoranthene	460 J
207-08-9	Benzo(k)Fluoranthene	460 J
50-32-8	Benzo(a)Pyrene	210 J
193-39-5	Indeno(1,2,3-cd)Pyrene	120 J
53-70-3	Dibenz(a,h)Anthracene	660 U
191-24-2	Benzo(g,h,i)Perylene	110 J

(1) - Cannot be separated from diphenylamine

Sample Number
EM 540 RE

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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: ENSECO CAL LAB
Case No: 7467
Lab Sample ID No: L3415 RE
GC Report No: 320
Sample Matrix: SOIL
Contract No: 68-01-7140
Data Release Authorized By:
Date Sample Received: 6/18/87

Volatile Compounds

Concentration: Low
Date Extracted/Prepared: 6/26/87
Date Analyzed: 6/26/87
Conc/Dil Factor: 1 pH: 7.8
Percent Moisture: 28
Percent Moisture (Decanted): NR

CAS Number		ug/Kg
74-87-3	Chloromethane	10 U
74-83-9	Bromomethane	10 U
75-01-4	Vinyl Chloride	10 U
75-00-3	Chloroethane	10 U
75-09-2	Methylene Chloride	5 B
67-64-1	Acetone	9 JB
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	12 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
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
108-10-1	4-Methyl-2-Pentanone	10 U
591-78-6	2-Hexanone	10 U
127-18-4	Tetrachloroethene	5 U
79-34-5	1,1,2,2-Tetrachloroethane	5 U
108-88-3	Toluene	4 JB
108-90-7	Chlorobenzene	4 J
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:7467

Sample Number
EM 540

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: LOW

Date Extracted/Prepared: 6/19/87

Date Analyzed: 7/16/87

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 = 1.1 V_t = 50000 V_i = 5

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

ENSECO

Laboratory Name Cal Labs

Case No 7467

Sample Number EM540RC

RECEIVED AUG 28 1987

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1.	No volatile compounds found			
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

RECEIVED AUG 28 1987

Lab Name: CAL Case No. 7467 Sample No. EM5

QC Report No. 220 Lab Sample No. L341903VV

Probability that Identification is Correct:
A= HIGH B= MODERATE C= UNKNOWN D= see ABN

	CAS#	COMPOUND NAME	FRACTION	SCAN NUMBER	PURITY	Estimated Conc. J VALUE
1.	67-63-0	2-PROPANOL (ACN)	VOA	91	944	10.1 UG/KG

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

FORM 1, Part B

ORGANICS ANALYSIS DATA SHEET
Page 4
TENTATIVELY IDENTIFIED COMPOUNDS

RECEIVED ... 2 8 1987

Lab Name: CAL Case No. 7467 Sample No. EM540,

QC Report No. 770 Lab Sample No. L341901ABRI

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.	625-23-0	2-HEXANOL, 2-METHYL-	A/BN	307	817	1008.0 UG/KG
2.	54105-67-8	HEPTADECANE, 2,6-DIMETHYL-	A/BN	1173	855	202.5 UG/KG
3.	36653-82-4	1-HEXADECANOL	A/BN	1300	858	694.3 UG/KG
4.	57-10-3	HEXADECANOIC ACID	A/BN	1350	769	451.8 UG/KG
5.	638-66-4	OCTADECANAL	A/BN	1388	753	227.0 UG/KG
6.	36653-82-4	1-HEXADECANOL	A/BN	1430	835	6940.0 UG/KG
7.	112-88-9	1-OCTADECENE	A/BN	1551	718	304.5 UG/KG
~~8.~~	~~27554-26-3~~	~~1,2-BENZENEDICARBOXYLIC ACID,~~	~~A/BN~~	~~1689~~	~~906~~	~~230.9 UG/KG~~

Qat

COMPOUND NAME	PROBABILITY	COMMENTS
1. 2-HEXANOL, 2-METHYL-	1. ~~B~~ D	1. see blank
2. HEPTADECANE, 2,6-DIMETHYL-	Qat 2. ~~A~~ B	2. Alkane
3. 1-HEXADECANOL	3. A	3.
4. HEXADECANOIC ACID	A 4. Qat ~~D~~ ~~(Blank)~~	4.
5. OCTADECANAL	5. B	5.
6. 1-HEXADECANOL	6. ~~A~~ B Qat	6.
7. 1-OCTADECENE	7. ~~C~~ B	7.
~~8. 1,2-BENZENEDICARBOXYLIC ACID,~~	~~8. A~~	~~8.~~ HSL

Qat

(CSH)

FORM 1, PART B