OH-0293-[redacted]

146362

ecology and environment, inc.

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

Date Received for Review: 4/29/86 Date Review Completed: 5/5/86

TO: Pat Petrella

FROM: Suzanne Kozlowski

SUBJECT: Chemical Recovery Systems Ohio RD5-8512-06

Sample Description: Case # 5558 five (5) low water organics

Project Data Status: COMPLETE

FIT Data Review Findings:

See Tom Clyne's review

Additional Comments:

Book No. 5
Page No. 108

recycled paper

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: 4/18/86

SUBJECT: Review of Region V CLP Data
Received for Review on ___4 MAR 86_____

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

TO; Data User:_____FIT_____

_____

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

SITE NAME___CHEMICAL RECOVER_SYSTEMS_____SMO Case No. _5558____

EPA Data Set No SF 3031___No. of Samples__5____D.U./Activity Numbers __Y905/C48500____

CRL No.___86FD04S78 TO 86FD04S80_____

SMO TRAFFIC No._____EE993,EE994,EG536 TO EG538_____

CLP Laboratory _____HAZELTON_____Hrs. Required for review:_____4_____

Following are out findings:

A	SURROGATES	VOA AND SV ARE ACCEPTABLE. PESTICIDES HAS A LOW DBC FOR EE994. THE REMAINING SURROGATES ARE ACCEPTABLE.
B	MS/MSD	ENDRIN HAS A 34 AND 42% %R LEVEL. THE REMAINING R%D AND %R ARE ACCEPTABLE.
C	LAB BLANKS	MB-1, 30164 HAD TOLUENE (CRDL. MB-1, 30172 HAD ACETONE (14) AND TOLUENE (1). THE REMAINING BLANKS ARE ACCEPTABLE.
D	TUNING	ACCEPTABLE
E	DETECTION	THIS LAB HAS SV DETECTION LIMITS 2X THE NORMAL CRDL. F. THOMAS IS INVESTIGATING THIS PROBLEM.

( ) Data are acceptable for use.
(✓) Data are acceptable for use with qualifications.
( ) Data are preliminary - pending verification by contractor lab.
( ) Data are unacceptable.

cc: Dr. Alfred Haeber/ Joan Fisk/Gary Ward. EPA Support Services.
Ross K. Robeson, EMSL-LasVegas
Don Trees, CLP/Sample Management Office

<<<< USER"S INFORMATION >>>>

CASE: 5558 SITE: CHEMICAL RECORERY SYSTEMS

DATE: 25 MARCH 86 REVIEWER: TOM CLYNE

EE993 TOLUENE FOUND IN THE BLANK. DO NOT USE TOLUENE.
TOTAL XYLENE FOUND, BUT BELOW CRDL. THERE IS A TIC
LAB ARTIFACT.
NO HRS HITS

EE994 TOLUENE IN THE BLANK, DO NOT USE.
XYLENE IS A --J--. TIC IS AN ARTIFACT.
NO HRS HITS.

EG 536 TOLUENE FOUND IN THE BLANK, DO NOT USE.
TIC ARE ARTIFACTS.
NO HRS HITS.

EG 537 TOLUENE FOUND IN BLANK, DO NOT USE. THE TIC IS A LAB
ARTIFACT FOR SV AND UNKNOWN IN THE VOA.
NO HRS HITS

EG 538 TOLUENE FOUND IN THE BLANK, DO NOT USE.
TOTAL XYLENES FOUND, BUT --J--. THE TIC IS A LAB
ARTIFACT.
NO HRS HITS.

SUMMARY: THERE ARE NO HRS HITS IN THIS DATA PACKAGE.

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HAZLETON LABORATORIES AMERICA, INC.

3301 KINSMAN BLVD. • P.O. BOX 7545 • MADISON, WI 53707 • (608) 241-4471 • TLX 703956 HAZRAL MDS UD

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FEB 21 1986

U.S. EPA CONTRACT LABORATORY PROGRAM

February 21, 1986

Sample Management Office
Viar and Company
300 Noth Lee Street
Alexandria VA 22314

Enclosed please find the data packages for Case No. 5558. These samples were received on February 6, 1986 from U. S. EPA Region V. All samples were analyzed and reported according to the protocols provided under our Contract No. 68-01-7146.

Please note the following summary comments relating to the contractual quality control items in this case:

- o GC-MS Tuning. All tuning requirements for both BFB and DFTPP for samples analyzed in this case were within contract criteria.

- o Instrumental Calibrations. All instrumental calibrations for all fractions analyzed (VOA, BNA, and pesticides) were within contract criteria for both initial and continuing calibrations.

  Please note that on the Pesticide Evaluation Standards Summary (Form VIII), DBC is not added to our individual Mix B, toxaphene, or PCB 1260 standards when co-elution problems interfere with either a specific target compound or a major identifying peak on the column used. We also use an extra standard we call "column check" which contains only DDT and endrin and is used exclusively for the calculation of breakdown.

- o Surrogate Recoveries. The surrogate recoveries calculated and reported for the volatile, semi-volatile and pesticide fractions were found within contract limits with one exception. The DBC surrogate was outside of the advisory limits (low end), for sample EE994 of the pesticide fraction.

- o Method Blanks. All method blanks analyzed with this case were found to be within acceptable contract criteria for all fractions.

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If you have any questions regarding this case or need any further clarifications, please feel free to call.

Sincerely,

David C. Hills

David C. Hills
Manager, Environmental Analysis

DCH/msw

cc: USEPA Region V
USEPA EMSL-LV
Central File

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In Reference to Case No(s): 5558

Contract Laboratory Program
REGIONAL/LABORATORY COMMUNICATION SYSTEM
Telephone Record Log

Date of Call: 25 Mar 86

Laboratory Name: Hazleton Lab (608) 241-4447

Lab Contact: DAVE HILL

Region: V

Regional Contact:

Call Initiated By: ___ Laboratory ✓ Region

In reference to data for the following sample number(s):

(1) DL x2 (SV) have been done for 4 years
(2) Surrogates
(3) Acetone IDL at 37 can see 10

Summary of Questions/Issues Discussed:

(1)

(2) Hand written numbers are % not ug/l

(3) DL for acetone may have reproducibility problems

Summary of Resolution:

Signature [signature] Date 25 Mar 86

Distribution: (1) Lab Copy, (2) Region Copy, (3) SMO Copy

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86FP04578

Sample Number
EE 993

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201135
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Hill
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30165
Date Analyzed: 2-8-86 1317
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
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 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
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~~ ~~5 U~~ NO TC
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	3 J ~~5 U~~ TC

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 action. (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 10 µg/l and a concentration of 3 µg/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 ≥10 ng/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

RECEIVED APR 29 '86

Laboratory Name HAZLETON LABORATORIES

Case No: 5558

Sample Number
EE 993

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-6-86

Conc/Dil Factor: 1

Percent Moisture (Decanted) 1902

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

FRN 27076

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

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

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES

Case No 5558

Sample Number
EE 993

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-12-86

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4, 4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4, 4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4, 4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 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 1000 ml or W_s — V_t 10,000 ul V_i 4.0 ul

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number
EE993

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. 123422	4-hydroxy- 4-methyl - 2- pentanone *	BAN	205	23
2.				
3.	no volatiles found	VOA		
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
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26.				
27.				
28.				
29.				
30.				

* product of the aldol condensation of acetone

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86FP04579

Sample Number
EE 994

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201136
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Wells
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30166
Date Analyzed: 2-8-86 1355
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
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 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
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 ~~5 U~~
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	2 J ~~5 U~~

NO TC

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 action. (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 10 µg/l and a concentration of 3 µg/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 ≥10 ng/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

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Laboratory Name HAZLETON LABORATORIES

Case No: 5558

Sample Number
EE994

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-6-86

Conc/Dil Factor: 1 FRN 27077

Percent Moisture (Decanted) 1950

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

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

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

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES RECEIVED APR 2 9 1986

Case No 5558

Sample Number
EE 994

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-12-86

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		(ug/l or ug/Kg) (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4, 4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4, 4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4, 4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 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 1000 ml or W_s — V_t 10,000 ul V_i 4.0 ul

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number
EE 994

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

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CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 123422	4-hydroxy- 4-methyl - 2- pentanone *	BAN	205	33
2.				
3.	no volatiles found	VOA		
4.				
5.				
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* product of the aldol condensation of acetone

86FP04D78

Sample Number
EG 536

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Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201137
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Wilk
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30169
Date Analyzed: 2-8-86 1551
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		(ug/l or ug/Kg) (Circle One)
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 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		(ug/l or ug/Kg) (Circle One)
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 BJ ~~5 U~~
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	2 J ~~5 U~~

NC TC

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 action. (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 10 µg/l and a concentration of 3 µg/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 ≥10 ng/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

Laboratory Name: HAZLETON LABORATORIES

RECEIVED APR 2 9 1986

Case No: 5558

Sample Number
EG 536

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-6-86

Conc/Dil Factor: 1 FRN 27073

Percent Moisture (Decanted) 1637

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

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

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

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES

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Case No 5558

Sample Number
EG 536

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: Low Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-12-86

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4,4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4,4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4,4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 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 1000 ml or W_s — V_t 10,000 ul V_i 40 ul

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number
EG 536

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. 123422	4-hydroxy-4-methyl-2-pentanone *	BAN	206	26
2.				
3.	no volatiles found	VOA		
4.				
5.				
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29.				
30.				

* product of the aldol condensation of acetone

86FP04 R10

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Sample Number
EG537

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201138
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Wells
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: (Low) Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30170
Date Analyzed: 2-8-86 1630
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
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 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
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	2 BJ ~~5 U~~ NC TC
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 action. (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 10 µg/l and a concentration of 3 µg/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 ≥10 ng/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

Laboratory Name: HAZLETON LABORATORIES

RECEIVED APR 2 9 1986

Case No: 5558

Sample Number
EG 537

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

Concentration: (Low) Medium (Circle One)

GPC Cleanup ☐Yes ☒No

Date Extracted/Prepared: 2-6-86

Separatory Funnel Extraction ☒Yes

Date Analyzed: 2-6-86

Continuous Liquid - Liquid Extraction ☐Yes

Conc/Dil Factor: 1 FRN 27074

Percent Moisture (Decanted) 1726

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

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

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES

Case No 5558

Sample Number
EG 537

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-12-86

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

CAS Number		ug/L or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4, 4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4, 4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4, 4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 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 1000 ml or W_s — V_t 10,000 ul V_i 4.0 ul

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number
EG637

Organics Analysis Data Sheet
(Page 4)

RECEIVED APR 2 9 1985

Tentatively Identified Compounds

CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 123422	4-hydroxy-4-methyl-2-pentanone *	BAN	208	13
2.				
3. —	Unknown	VOA	65	52
4.				
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* product of the aldol condensation of acetone.

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86FP04580

Sample Number
EG 538

Organics Analysis Data Sheet
(Page 1)

Laboratory Name: HAZLETON LABORATORIES
Case No: 5558
Lab Sample ID No: 60201139
QC Report No:
Sample Matrix: WATER
Contract No: 68-01-7146
Data Release Authorized By: David C. Hill
Date Sample Received: 2-6-86

Volatile Compounds

Concentration: Low Medium (Circle One)
Date Extracted/Prepared: 2-8-86 FRN 30171
Date Analyzed: 2-8-86 1710
Conc/Dil Factor: 1 pH
Percent Moisture: (Not Decanted)

CAS Number		ug/l or ug/Kg (Circle One)
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 U
67-64-1	Acetone	10 U
75-15-0	Carbon Disulfide	5 U
75-35-4	1, 1-Dichloroethene	5 U
75-34-3	1, 1-Dichloroethane	5 U
156-60-5	Trans-1, 2-Dichloroethene	5 U
67-66-3	Chloroform	5 U
107-06-2	1, 2-Dichloroethane	5 U
78-93-3	2-Butanone	10 U
71-55-6	1, 1, 1-Trichloroethane	5 U
56-23-5	Carbon Tetrachloride	5 U
108-05-4	Vinyl Acetate	10 U
75-27-4	Bromodichloromethane	5 U

CAS Number		ug/l or ug/Kg (Circle One)
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	2BJ ~~5 U~~
108-90-7	Chlorobenzene	5 U
100-41-4	Ethylbenzene	5 U
100-42-5	Styrene	5 U
	Total Xylenes	4J ~~5 U~~

NO TC

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 action. (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 10 µg/l and a concentration of 3 µg/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 ≥10 ng/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

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number
EG538

Organics Analysis Data Sheet
(Page 2)

Semivolatile Compounds

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Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-6-86

Conc/Dil Factor: 1

Percent Moisture (Decanted) 1814

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

FRN 27075

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

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

(1)-Cannot be separated from diphenylamine

Laboratory Name HAZLETON LABORATORIES

Case No 5558

Sample Number
EG 538

Organics Analysis Data Sheet
(Page 3)

Pesticide/PCBs

Concentration: (Low) Medium (Circle One)

Date Extracted/Prepared: 2-6-86

Date Analyzed: 2-12-86

Conc/Dil Factor: 1

Percent Moisture (decanted) —

GPC Cleanup ☐Yes ☒No

Separatory Funnel Extraction ☒Yes

Continuous Liquid - Liquid Extraction ☐Yes

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CAS Number		ug/l or ug/Kg (Circle One)
319-84-6	Alpha-BHC	0.05 U
319-85-7	Beta-BHC	0.05 U
319-86-8	Delta-BHC	0.05 U
58-89-9	Gamma-BHC (Lindane)	0.05 U
76-44-8	Heptachlor	0.05 U
309-00-2	Aldrin	0.05 U
1024-57-3	Heptachlor Epoxide	0.05 U
959-98-8	Endosulfan I	0.05 U
60-57-1	Dieldrin	0.10 U
72-55-9	4, 4'-DDE	0.10 U
72-20-8	Endrin	0.10 U
33213-65-9	Endosulfan II	0.10 U
72-54-8	4, 4'-DDD	0.10 U
1031-07-8	Endosulfan Sulfate	0.10 U
50-29-3	4, 4'-DDT	0.10 U
72-43-5	Methoxychlor	0.50 U
53494-70-5	Endrin Ketone	0.10 U
57-74-9	Chlordane	0.50 U
8001-35-2	Toxaphene	1.0 U
12674-11-2	Aroclor-1016	0.50 U
11104-28-2	Aroclor-1221	0.50 U
11141-16-5	Aroclor-1232	0.50 U
53469-21-9	Aroclor-1242	0.50 U
12672-29-6	Aroclor-1248	0.50 U
11097-69-1	Aroclor-1254	1.0 U
11096-82-5	Aroclor-1260	1.0 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 1000ml or W_s — V_t 10,000ul V_i 4.0ul

Laboratory Name: HAZLETON LABORATORIES

Case No: 5558

Sample Number
EG538

Organics Analysis Data Sheet
(Page 4)

Tentatively Identified Compounds

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CAS Number	Compound Name	Fraction	RT or Scan Number	Estimated Concentration (ug/l or ug/kg)
1. 123422	4-hydroxy-4-methyl-2-pentanone *	BAN	206	16
2.				
3.	no volatiles found	VOA		
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
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16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				
25.				
26.				
27.				
28.				
29.				
30.				

* product of the aldol condensation of acetone

WATER SURROGATE PERCENT RECOVERY SUMMARY

Case No. 5558 Contract Laboratory HAZLETON LABORATORIES Contract No. 68-01-7146

	VOLATILE			SEMI-VOLATILE								PESTICIDE
SMO TRAFFIC NO.	TOLUENE-D8 (88-110)	BFB (86-115)	1,2 DICHLORO-ETHANE-D4 (76-114)	NITRO-BENZENE-D5 (35-114)	2-FLUORO-BIPHENYL (43-116)	TERPHENYL-D14 (33-141)			PHENOL-D5 (10-94)	2-FLUORO-PHENOL (21-100)	2,4,6 TRIBROMO PHENOL (10-123)	DIBUTYL CHLORENDATE ** (24-154)
EE993	100	106	93	98	92	108			42	62	78	32
EE994	101	110	98	98	91	110			53	67	80	20**
EG536	101	104	101	98	91	118			46	66	76	29
EG537	104	111	97	95	91	124			46	67	73	57
EG538	99	110	99	84	87	116			44	63	78	29
EE994MS	99	107	96	93	92	105			47	64	80	31
EE994MSD	109	114	94	96	88	110			42	63	82	54
MB-1	98	110	95	NR	NR	NR			NR	NR	NR	NR
MB-1	99	106	93	NR	NR	NR			NR	NR	NR	NR
MB-1	NR	NR	NR	92	90	108			49	70	79	NR
MB-1 PEST	NR	NR	NR	NR	NR	NR			NR	NR	NR	100

* VALUES ARE OUTSIDE OF CONTRACT REQUIRED QC LIMITS

**ADVISORY LIMITS ONLY

Volatiles: 0 out of 27 ; outside of QC limits

Semi-Volatiles: 0 out of 48 ; outside of QC limits

Pesticides: 1 out of 8 ; outside of QC limits

Comments:

FORM II 7/85

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WATER MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Case No. 5558 **Contractor** HAZLETON LABORATORIES **Contract No.** 68-01-7146

FRACTION	COMPOUND	CONC. SPIKE ADDED (ug/L)	SAMPLE RESULT	CONC. MS	% REC	CONC. MSD	% REC	RPD	QC LIMITS* RPD	QC LIMITS* RECOVERY
VOA SMO SAMPLE NO. EE994	1,1-Dichloroethene	50	0	56	113	57	114	1.2	14	61-145
	Trichloroethene			55	110	56	112	2.2	14	71-120
	Chlorobenzene			54	108	58	117	8.0	13	75-130
	Toluene		3.3	54	102	59	111	9.2	13	76-125
	Benzene		0	48	96	48	95	0.6	11	76-127
B/N SMO SAMPLE NO. EE994	1,2,4-Trichlorobenzene	100	0	84	84	89	89	5.8	28	39-98
	Acenaphthene			87	87	85	85	2.3	31	46-118
	2,4 Dinitrotoluene			91	91	89	89	2.2	38	24-96
	Pyrene			105	105	103	103	1.9	31	26-127
	N-Nitroso-Di-n-Propylamine			88	88	91	91	3.4	38	41-116
	1,4-Dichlorobenzene			84	84	86	86	2.4	28	36-97
ACID SMO SAMPLE NO. EE994	Pentachlorophenol	200		171	86	192	96	11	50	9-103
	Phenol			81	40	81	40	0	42	12-89
	2-Chlorophenol			170	85	180	90	5.7	40	27-123
	4-Chloro-3-Methylphenol			166	83	165	82	1.2	42	23-97
	4-Nitrophenol			85	42	89	44	4.6	50	10-80
PEST SMO SAMPLE NO. EE994	Lindane	0.20	0	0.13	65	0.13	65	0	15	56-123
	Heptachlor			0.10	50	0.10	50	0	20	40-131
	Aldrin			0.08	40	0.09	45	12	22	40-120
	Dieldrin	0.50		0.36	72	0.37	74	2.7	18	52-126
	Endrin			0.17	34*	0.21	42*	21	21	56-121
	4,4'-DDT			0.31	62	0.32	64	3.2	27	38-127

*ASTERISKED VALUES ARE OUTSIDE QC LIMITS.

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

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

Comments: Pesticides: Calculated using peak height values.

7/85

FORM III

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METHOD BLANK SUMMARY

Case No. 5558 Region V Contractor HAZLETON LABORATORIES Contract No. 68-01-7146

FILE ID	DATE OF ANALYSIS	FRACTION	MATRIX	CONC. LEVEL	INST. ID	CAS NUMBER	COMPOUND (HSL, TIC OR UNKNOWN)	CONC.	UNITS	CRDL
MB-1 27072	2-6-86	BAN	Water	L	HP5985	–	no semi-volatiles found			
MB-1 30164	2-8-86	VOA	Water	L	HP5993	108-88-3	Toluene	2	µg/L	5
MB-1 30172	2-8-86	VOA	Water	L	HP5993	67-64-1	Acetone	14	µg/L	10
↓	↓	↓	↓	↓	↓	108-88-3	Toluene	1	↓	5
MB-1 PEST	2-12-86	PEST	Water	L	10805	—	no pesticides found			

Comments:

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GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

RECEIVED APR 2 3 1986

Case No. 5558 Contractor HAZLETON LABORATORIES Contract No. 68-01-7146

Instrument ID HP 5993 Date 2-7-86 Time 1350

Lab ID 30150 Data Release Authorized By: David C. Kelly

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	27.5
75	30.0 - 60.0% of the base peak	55.8
95	Base peak, 100% relative abundance	100.
96	5.0 - 9.0% of the base peak	7.6
173	Less than 1.0% of the base peak	0.0
174	Greater than 50.0% of the base peak	82.7
175	5.0 - 9.0% of mass 174	7.3 (8.83)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	80.1 (96.9)[1]
177	5.0 - 9.0% of mass 176	5.8 (7.24)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1]Value in parenthesis is % mass 174.
[2]Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
50ppb STD	30152	2-7-86	1507
200ppb STD	30153		1645
150ppb STD	30154		1727
100ppb STD	30155		1806
20ppb STD	30156		1844

GC/MS TUNING AND MASS CALIBRATION

Bromofluorobenzene (BFB)

RECEIVED APR 2 9 1986

Case No. 5558 Contractor HAZLETON LABORATORIES Contract No. 68-01-7146

Instrument ID HP5993 Date 2-8-86 Time 1140

Lab ID 30162 Data Release Authorized By: David C. [illegible]

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
50	15.0 - 40.0% of the base peak	23.4
75	30.0 - 60.0% of the base peak	52.3
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of the base peak	7.8
173	Less than 1.0% of the base peak	0.0
174	Greater than 50.0% of the base peak	98.1
175	5.0 - 9.0% of mass 174	8.3 (8.5)[1]
176	Greater than 95.0%, but less than 101.0% of mass 174	97.6 (99.5)[1]
177	5.0 - 9.0% of mass 176	7.0 (7.2)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1]Value in parenthesis is % mass 174.
[2]Value in parenthesis is % mass 176.

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
50ppb STD	30163	2-8-86	1200
Method Blank	30164		1238
EE 993	30165		1317
EE 994	30166		1355
EE 994 MS	30167		1434
EE 994 MSD	30168		1514
EG 536	30169		1551
EG 537	30170		1630
EG 538	30171		1710
Holding Blank	30172		1800

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

RECEIVED APR 2 9 1986

Case No. 5558 Contractor HAZLETON LABORATORIES Contract No. 68-01-7146

Instrument ID HP5985 Date 1-3-86 Time 1423

Lab ID 26929 Data Release Authorized By: [signature]

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	51.6
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	84.5
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	42.0
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	6.8
275	10.0 - 30.0% of mass 198	22.4
365	greater than 1.00% of mass 198	2.7
441	present, but less than mass 443	13.4
442	greater than 40.0% of mass 198	83.9
443	17.0 - 23.0% of mass 442	19.2 (22.9)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69.
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
50 ppm BAN+DFTPP	26929	1-3-86	1423
160 ppm BAN std	26930	↓	1604
120 ppm BAN std	26931	↓	1652
80 ppm BAN std	26932	↓	1740
50 ppm BAN std	26933	↓	1827
20 ppm BAN std	26934	↓	1914

GC/MS TUNING AND MASS CALIBRATION
Decafluorotriphenylphosphine (DFTPP)

RECEIVED APR 2 9 1986

Case No. 5558 Contractor HAZLETON LABORATORIES Contract No. 68-01-7146

Instrument ID HP5985 Date 2-6-86 Time 1435

Lab ID 27071 Data Release Authorized By: [signature]

m/e	ION ABUNDANCE CRITERIA	%RELATIVE ABUNDANCE
51	30.0 - 60.0% of mass 198	57.7
68	less than 2.0% of mass 69	0 (0)[1]
69	mass 69 relative abundance	91.8
70	less than 2.0% of mass 69	0 (0)[1]
127	40.0 - 60.0% of mass 198	48.0
197	less than 1.0% of mass 198	0
198	base peak, 100% relative abundance	100
199	5.0 - 9.0% of mass 198	5.6
275	10.0 - 30.0% of mass 198	21.7
365	greater than 1.00% of mass 198	3.1
441	present, but less than mass 443	12.3
442	greater than 40.0% of mass 198	89.8
443	17.0 - 23.0% of mass 442	17.2 (19.2)[2]

THIS PERFORMANCE TUNE APPLIES TO THE FOLLOWING SAMPLES, BLANKS AND STANDARDS.

[1] Value in parenthesis is % mass 69.
[2] Value in parenthesis is % mass 442

SAMPLE ID	LAB ID	DATE OF ANALYSIS	TIME OF ANALYSIS
50 ppm std + DFTPP	27071	2-6-86	1435
Blank	27072	↓	1549
EG536	27073		1637
EG537	27074		1726
EG538	27075		1814
EE993	27076		1902
EE994	27077		1950
EE994MS	27078		2038
EE994MSD	27079		2126