CITY OF INDIANAPOLIS

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MAYOR

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2700 SOUTH BELMONT AVENUE
INDIANAPOLIS, INDIANA 46221

AWT INDIANAPOLIS
Department of Public Works

April 25, 1984

Ms. Valerie Jones
Pretreatment Coordinator
U.S. EPA Region V
Attn: Compliance Section
230 South Dearborn Street
Chicago, IL 60604

Dear Valerie:

Enclosed please find the Pretreatment Study Analytical Results, per your request.

Sincerely,

Vicky Keramida /ak

Vicky Keramida, Ph.D.
Manager, Industrial Pretreatment

ak

Enclosure

cc: File

water

MONTGOMERY LABORATORIES

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Broad Ripple	Location 18
Laboratory No.:	CB7427	CB7428
Sampling Date:	November 11, 1982	November 11, 1982
Date Received:	November 16, 1982	November 16, 1982
Date Analyzed:	November 17, 1982	November 17, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)	
Trichlorofluoromethane	0.1	0.7
Methylene chloride	0.6	6.1
Tetrachloroethene	0.2	1.5
1,1-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.2
Chloroform	ND	1.8
1,1,1-Trichloroethane	ND	0.9
1,2-Dichloroethane	ND	0.1
Trichloroethene	ND	0.9

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotty Checked By Robert R Clark

L01RM21123

MONTGOMERY LABORATORIES

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	CB7427	CB7428
Acetone	3.1	3.3
Tetrahydrofuran	ND	5.0
Hexane	(0.1)	(0.1)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schutz Checked By Robert R. Clark

L01RM21123

MONTGOMERY LABORATORIES

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

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Report of Analysis by GC/MS for BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 6	Broad Ripple	Location 7
Laboratory No.:	C81297	C81298	C81171
Sampling Date:	Not Available	Not Available	August 17, 1982
Date Received:	August 25, 1982	August 25, 1982	August 24, 1982
Date Analyzed:	September 16, 1982	September 16, 1982	September 16, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/kilogram)		
Naphthalene	230	290	300
Fluorene	120	190	ND
Phenanthrene	700	1,100	1,000
Anthracene	230	220	140
Fluoranthene	2,100	3,400	2,200
Pyrene	1,700	2,700	1,900
Chrysene	470	510	210
Benzo(a)anthracene	810	1,700	770
Benzo(b)fluoranthene	350	640	730
Benzo(a)pyrene	230	430	ND
Dioctylphthalate	ND	ND	21,000

Note: Revised Report.

ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits

Submitted By [signature] Checked By [signature]

L6RM20926

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/kilogram)		
	C81297	**C81298**	**C81171**
2,6-bis(1,1-dimethylethyl)-4-methylphenol	(1,200)	(2,000)	ND
5-Ethyl-5-methyldecane	(770)	(1,500)	ND
2,6,11-Trimethyldodecane	ND	(1,500)	ND
Undecane	ND	ND	(4,600)
2,4-Dimethylhexane	ND	ND	(2,700)
2,2,4-Trimethylhexane	ND	ND	(3,000)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L6RM20926

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis

Job/P.O. No.: 1180.0030

Sample Description:	Location 6	Broad Ripple
Laboratory No.:	C81297	C81298
Sampling Date:	Not Available	Not Available
Date Received:	August 25, 1982	August 25, 1982
Date Analyzed:	October 12, 1982	October 12, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/kilogram)	
Methylene chloride	44	36

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotty

Checked By Robert R. Clark

L11RM21012
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/kilogram)	
	C81297	C81298
Acetone	510	390

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotte Checked By Robert K. Clark

L11RM21012

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

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Report of Analysis by GC/MS for BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 6	Water Column Location 7	Water Column Location 18
Laboratory No.:	C81143	C81144	C81145
Sampling Date:	August ~~16~~ 17, 1982	August ~~16~~ 17, 1982	August ~~16~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982	September 15, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/[redacted] liter)		
Phenol	ND	0.7	1.0

NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Tony Y. Liu Checked By Robert A. Clark

L5RM20920
1200

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81143	C81144	C81145
Succinic acid	(1.8)	(2.1)	(0.7)
Cyclohexanone	(0.5)	ND	ND
3-Ethyl-3-pentanol	(1.1)	(2.3)	ND
2,6-Bis(1,1-dimethylethyl)-4-methylphenol	(1.5)	ND	ND
1-Ethylhexylbenzene	ND	ND	(4.5)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By Fong-Yi Lee Checked By Robert A. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 35	Water Column Broad Ripple
Laboratory No.:	C81147	C81148
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 1, 1982	September 1, 1982

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
Trichloroethene	ND	740
Bromodichloromethane	17	94
Dibromochloromethane	ND	6
Tetrachloroethene	64	570
m,p-Xylene	ND	20
Ethenylbenzene	ND	2
o-Xylene	ND	32
Propylbenzene	ND	6

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fong-Yi Lien Checked By Robert R. Clark

L5RM20920
700

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
	C81147	C81148
o-Dichlorobenzene	2	21
m-Dichlorobenzene	ND	6
p-Dichlorobenzene	7	43
Naphthalene 55	3	2

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Feng-Yi Liao Checked By Robert R. Ward

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (nanograms/liter)*	
	C81147	C81148
1-Ethyl-2-methylbenzene	ND	(25)
1-Ethyl-4-methylbenzene	ND	(15)
Nonanal	(30)	ND
Decanal	(20)	ND
2-Hexanone	ND	(240)
Dimethyldisulfide 173	ND	(850)
2-Ethyl-4-methyl-1,3-dioxolane	ND	(380)
2-Ethyl-2-methylheptane	ND	(30)
Dimethyltrisulfide	ND	(60)
Nonane	ND	(35)
1-Methyl-4-(1-methylethyl)-7-oxabicyclo /2.2.1/heptane	ND	(200)
1-Methylethylbenzene 152	ND	(90)
1,3,3-Trimethyl-2-oxabicyclo/2.2.2/octane	ND	(80)
2,2,5-Trimethylhexane	ND	(95)
1,4-Diethylbenzene	ND	(60)
2-Ethyl-1,4-dimethylbenzene	ND	(85)
1,3,3-Trimethylbicyclo/2.2.1/-heptan-2-one	ND	(60)
Undecane 172	ND	(23)

* Accurate Quantitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
D: Detected but not quantified
ND: Not Detected

Submitted By Fang-Yi Lien Checked By Robert R. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by
CLOSED-LOOP STRIPPING GC/MS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (nanograms/liter)*	
	C81147	C81148
3,6-Dimethyl-3-octanol	ND	(50)
1-Ethyl-2,4-dimethylbenzene	ND	(22)
5-Methyl-2-(1-methylethyl)cyclohexanol	ND	(54)
Heptadecane	ND	(52)

* Accurate Quantitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
D: Detected but not quantified
ND: Not Detected

Submitted By Fong-Y Lieu Checked By Robert R. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (ng/l)	Compound	Minimum Quantification Limit (ng/l)
1,1,1-Trichloroethane	2.0	1-Chloronaphthalene	0.5
Trichloroethene	100	2-Chloronaphthalene	0.5
Dichlorobromomethane	5.0	Acenaphthene	0.5
1,3-Dichloropropene	2.0	Fluorene	2.0
1,1,2-Trichloroethane	2.0	Diethylphthalate	100
Chlorodibromomethane	1.0	1-Chloro-4-phenoxybenzene	0.5
1,2-Dibromoethane	2.0	N-Phenylbenzamine	20
Tetrachloroethene	100	1,2-Diphenylhydrazine (as Azobenzene)	1.0
Chlorobenzene	10	1-Bromo-4-phenoxybenzene	0.5
Ethylbenzene	50	Hexachlorobenzene	1.0
m,p-Xylene	100	Phenanthrene	10
Bromoform	1.0	Anthracene	50
Ethenylbenzene	5.0	Fluoranthene	20
o-Xylene	50	Pyrene	20
1,1,2,2-Tetrachloro-ethane	50	Chrysene	50
Bromobenzene	0.5	Benzo(a)anthracene	50
Propylbenzene	0.5		
1-Chloro-3-methylbenzene	0.5		
Bis(2-chloroethyl)ether	1.0		
o-Dichlorobenzene	0.1		
m-Dichlorobenzene	10		
p-Dichlorobenzne	10		
Hexachloroethane	20		
N-Nitrosodi-N-propylamine	5.0		
1,3,5-Trichloobenzene	0.1		
1,2,4-Trichlorobenzene	10		
1,2,3-Trichlorobenzene	2.0		
Bis(2-chloroethoxy) methane	10		
Methylisoborenol (MIB)	0.5		
Geosmin	0.2		
Naphthalene	100		
1,1,2,3,4,4-Hexachloro-1,3-butadiene	2.0		

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(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 22	Water Column Location 35	Water Column Broad Ripple
Laboratory No.:	C81146	C81147	C81148
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	August 26, 1982	August 26, 1982	August 26, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Methylene chloride	0.8	0.4	ND
Chloroform 23	0.4	0.2	ND
1,1,1-Trichloroethane	0.1	ND	ND
Trichloroethene	0.3	ND	ND
Toluene	0.1	ND	ND
Tetrachloroethene	0.3	ND	ND
Trichlorofluoromethane 49	ND	0.3	9.6

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert R. Clark

L4RM20913
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81146	C81147	C81148
Acetone 174	2.6	ND	1.4
Tetrahydrofuran 173	3.4	ND	2.5

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schutz Checked By Robert Allal

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 6	Water Column Location 7	Water Column Location 18
Laboratory No.:	C81143	C81144	C81145
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	August 26, 1982	August 26, 1982	August 26, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Trichlorofluoromethane 41	5.5	5.6	ND
Methylene chloride 44	1.4	2.8	1.6
Chloroform 23	0.7	2.6	1.2
1,1,1-Trichloroethane 11	0.2	0.5	0.4
Trichloroethene	2.8	2.5	0.6
Tetrachloroethene	0.5	1.5	1.3
1,1-Dichloroethane 13	ND	0.2	ND
1,2-Dichloroethane 12	ND	ND	0.4
m-Dichlorobenzene	ND	0.1	ND
o-Dichlorobenzene	ND	0.2	ND

( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By H Schutz Checked By Robert R. Ulm

L4RM20913
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81143	C81144	C81145
Acetone 174	3.0	20	4.4
Tetrahydrofuran 175	4.0	4.7	5.7
1,1-Oxybisethane	ND	(9.2)	ND
Thiobismethane 182	ND	(8.7)	(0.8)
m,p-Xylene 179	ND	0.5	ND
o-Xylene 183	ND	0.2	ND
Methylethylketone 176	ND	ND	0.2

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert R. Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

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Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS

Client: Indianapolis

Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 6	Water Column Location 7
Laboratory No.:	C81143	C81144
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	August 30, 1982	August 30, 1982

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
Trichloroethene	(1,800)	63
Bromodichloromethane	96	ND
Dibromochloromethane 51	3	ND
Tetrachloroethene	370	60
1,2-Dichloropropane 52	80	ND
o-Dichlorobenzene	ND	1
p-Dichlorobenzene	4	2
Naphthalene 55	ND	2

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fong-Yi Lai Checked By Robert A. Clark

L3RM20915
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700

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (nanograms/liter)*	
	C81143	C81144
Methylisoborneol	(7)	ND
Geosmin	1	ND
Dimethyldisulfide	(30)	(310)
1-Methyl-3-(1-methylethyl)benzene	ND	(32)
2,3-Dimethyl-2-butanol	ND	(9)

* Accurate Quantitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
D: Detected but not quantified
ND: Not Detected

Submitted By Fong-Yi Lein Checked By Robert R. Ast

L3RM20915

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (ng/l)	Compound	Minimum Quantification Limit (ng/l)
1,1,1-Trichloroethane	2.0	1-Chloronaphthalene	0.5
Trichloroethene	100	2-Chloronaphthalene	0.5
Dichlorobromomethane	5.0	Acenaphthene	0.5
1,3-Dichloropropene	2.0	Fluorene	2.0
1,1,2-Trichloroethane	2.0	Diethylphthalate	100
Chlorodibromomethane	1.0	1-Chloro-4-phenoxybenzene	0.5
1,2-Dibromoethane	2.0	N-Phenylbenzamine	20
Tetrachloroethene	100	1,2-Diphenylhydrazine (as Azobenzene)	1.0
Chlorobenzene	10	1-Bromo-4-phenoxybenzene	0.5
Ethylbenzene	50	Hexachlorobenzene	1.0
m,p-Xylene	100	Phenanthrene	10
Bromoform	1.0	Anthracene	50
Ethenylbenzene	5.0	Fluoranthene	20
o-Xylene	50	Pyrene	20
1,1,2,2-Tetrachloroethane	50	Chrysene	50
Bromobenzene	0.5	Benzo(a)anthracene	50
Propylbenzene	0.5		
1-Chloro-3-methylbenzene	0.5		
Bis(2-chloroethyl)ether	1.0		
o-Dichlorobenzene	0.1		
m-Dichlorobenzene	10		
p-Dichlorobenzne	10		
Hexachloroethane	20		
N-Nitrosodi-N-propylamine	5.0		
1,3,5-Trichloobenzene	0.1		
1,2,4-Trichlorobenzene	10		
1,2,3-Trichlorobenzene	2.0		
Bis(2-chloroethoxy) methane	10		
Methylisoborenol (MIB)	0.5		
Geosmin	0.2		
Naphthalene	100		
1,1,2,3,4,4-Hexachloro-1,3-butadiene	2.0		

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Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 18	Water Column Location 22
Laboratory No.:	C81145	C81146
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	August 30, 1982	August 30, 1982

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
Trichloroethene	480	230
Bromodichloromethane	48	50
Dibromochloromethane	2	ND
Tetrachloroethene	950	290
m,p-Xylene	9	11
1,2-Dichloropropane	62	90
o-Dichlorobenzene	2	3
m-Dichlorobenzene	3	3
p-Dichlorobenzene	47	28

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fong-Yi Lin Checked By Robert R. Clark

L3RM20915
700

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by
CLOSED-LOOP STRIPPING GC/MS
(Continued)

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
	C81145	C81146
1,1,2-Trichloroethane 14	22	ND
1,1,2,2-Tetrachloroethane 15	12	ND

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fang-Yi Lai Checked By Robert R. Clark

L3RM20915

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (nanograms/liter)*	
	C81145	C81146
Geosmin	ND	(4)
Dimethyldisulfide 173	(100)	(70)
Dimethyltrisulfide	(32)	ND
2,3-Dimethyl-2-butanol	(72)	ND
2-Hexanone	(360)	(24)
1-Methyl-4-(1-methylethyl)-7-oxabicyclo /2.2.1/-heptane	(77)	ND
1,3,3-Trimethyl-2-oxabicyclo/2.2.2/octane	(40)	ND
2,2,5-Trimethylhexane	(50)	ND
1,3,3-Trimethylbicyclo/2.2.1/heptan-2-one	(27)	ND
3,7-Dimethyl-6-octen-1-ol	(54)	ND
Pentadecane	(31)	ND
Hexadecane	(54)	ND
Heptadecane	(110)	ND

* Accurate Quantitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
D: Detected but not quantified
ND: Not Detected

Submitted By Fang-Yi Lai Checked By Robert A. Abel

L3RM20915

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (ng/l)	Compound	Minimum Quantification Limit (ng/l)
1,1,1-Trichloroethane	2.0	1-Chloronaphthalene	0.5
Trichloroethene	100	2-Chloronaphthalene	0.5
Dichlorobromomethane	5.0	Acenaphthene	0.5
1,3-Dichloropropene	2.0	Fluorene	2.0
1,1,2-Trichloroethane	2.0	Diethylphthalate	100
Chlorodibromomethane	1.0	1-Chloro-4-phenoxybenzene	0.5
1,2-Dibromoethane	2.0	N-Phenylbenzamine	20
Tetrachloroethene	100	1,2-Diphenylhydrazine (as Azobenzene)	1.0
Chlorobenzene	10	1-Bromo-4-phenoxybenzene	0.5
Ethylbenzene	50	Hexachlorobenzene	1.0
m,p-Xylene	100	Phenanthrene	10
Bromoform	1.0	Anthracene	50
Ethenylbenzene	5.0	Fluoranthene	20
o-Xylene	50	Pyrene	20
1,1,2,2-Tetrachloroethane	50	Chrysene	50
Bromobenzene	0.5	Benzo(a)anthracene	50
Propylbenzene	0.5		
1-Chloro-3-methylbenzene	0.5		
Bis(2-chloroethyl)ether	1.0		
o-Dichlorobenzene	0.1		
m-Dichlorobenzene	10		
p-Dichlorobenzne	10		
Hexachloroethane	20		
N-Nitrosodi-N-propylamine	5.0		
1,3,5-Trichloobenzene	0.1		
1,2,4-Trichlorobenzene	10		
1,2,3-Trichlorobenzene	2.0		
Bis(2-chloroethoxy) methane	10		
Methylisoborenol (MIB)	0.5		
Geosmin	0.2		
Naphthalene	100		
1,1,2,3,4,4-Hexachloro-1,3-butadiene	2.0		

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Report of Analysis by GC/MS for BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 22	Water Column Location 35	Water Column Broad Ripple
Laboratory No.:	C81146	C81147	C81148
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982	September 15, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/liter)		
Phenol 65	1.1	ND	2.6

NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fang-Yi Lin Checked By Robert R. Clark

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1200

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81146	C81147	C81148
Succinic acid	(1.5)	(1.6)	(1.9)
Cyclohexanone	(1.3)	ND	ND
2,6-Bis(1,1-dimethylethyl)-4-methylphenol	(0.7)	ND	(3.7)
1-Ethylhexylbenzene	(5.6)	(4.2)	(1.8)
Dodecanoic acid	ND	(0.4)	ND
Ethylpyridine	ND	ND	(1.7)
N,N-Diethylethanamine	ND	ND	(12)
3-Ethyl-3-pentanol	ND	ND	(3.5)
Phenoxyacetic acid	ND	ND	(50)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By Fong-Yi Lien Checked By Robert R. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Report of Analysis for PESTICIDES/PCBs in SEDIMENT

Client: Indianapolis

Job/P.O. No.: 1180.0030

Sample Description:	Location 7	Location 18
Laboratory No.:	C81171	C81172
Sampling Date:	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982

Pesticides/PCBs Detected:

Compound		Concentration (micrograms/gram)* ~~[illegible]~~ (DRY BASIS)	
Pesticides		ND	ND
PCBs	Aroclor 1260 |||	(0.1)	(0.1)
Moisture (%) =		77%	79%

Technical Note: Sediments were soxhlet extracted wet. A representative sample of each sediment was dried and weighed allowing the concentration above to be computed on a dried gram basis.

* Tentative identification by gas chromatography with selective detectors; confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

L5RM20920
600

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Report of Analysis for
PESTICIDES/PCBs in SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 22	Location 35
Laboratory No.:	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982

Pesticides/PCBs Detected:

Compound		Concentration (micrograms/gram)*	
Pesticides		ND	ND
PCBs	Aroclor 1260 |||	NQ	ND
Moisture (%) =		50%	60%

Technical Note: Sediments were soxhlet extracted wet. A representative sample of each sediment was dried and weighed allowing the concentration above to be computed on a dried gram basis.

* Tentative identification by gas chromatography with selective detectors; confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for
PESTICIDES/PCBs in SEDIMENT
(Continued)

Compounds included in Quantitative Analysis:

Minimum Quantification Limit (µg/g)	Compound	Minimum Quantification Limit (µg/g)	Compound
1.0	Endrin	0.1	Alpha-BHC
1.0	Methoxychlor	1.0	Toxaphene
1.0	Beta-BHC	0.1	Gamma-BHC (Lindane)
0.1	Delta-BHC	0.01	Heptachlor
0.01	Aldrin	1.0	Heptachlor Epoxide
0.01	Dieldrin	0.01	4,4'-DDE
0.1	4,4'-DDD	0.01	4,4'-DDT
0.1	Endosulfan I	0.1	Endosulfan II
1.0	Endosulfan sulfate	1.0	Chlordane
0.1	PCB 1016	0.1	PCB 1221
0.1	PCB 1232	0.1	PCB 1242
0.1	PCB 1248	0.1	PCB 1254
0.1	PCB 1260		

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Report of Analysis for
PESTICIDES/PCBs in SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 7	Location 18
Laboratory No.:	C81171	C81172
Sampling Date:	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982
Pesticides/PCBs Detected:		

Compound		Concentration (micrograms/gram)*	
Pesticides		ND	ND
PCBs	Aroclor 1260 \\\	(0.1)	(0.1)

Technical Note: Sediments were soxhlet extracted wet. A representative sample of each sediment was dried and weighed allowing the concentration above to be computed on a dried gram basis.

* Tentative identification by gas chromatography with selective detectors; confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

L5RM20920
600

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Report of Analysis for
PESTICIDES/PCBs in SEDIMENT

Client: Indianapolis

Job/P.O. No.: 1180.0030

Sample Description:	Location 22	Location 35
Laboratory No.:	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982

Pesticides/PCBs Detected:

Compound		Concentration (micrograms/gram)*	
Pesticides		ND	ND
PCBs	Aroclor 1260	NQ	ND

Technical Note: Sediments were soxhlet extracted wet. A representative sample of each sediment was dried and weighed allowing the concentration above to be computed on a dried gram basis.

* Tentative identification by gas chromatography with selective detectors; confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for
PESTICIDES/PCBs in SEDIMENT
(Continued)

Compounds included in Quantitative Analysis:

Minimum Quantification Limit (µg/g)	Compound	Minimum Quantification Limit (µg/g)	Compound
1.0	Endrin	0.1	Alpha-BHC
1.0	Methoxychlor	1.0	Toxaphene
1.0	Beta-BHC	0.1	Gamma-BHC (Lindane)
0.1	Delta-BHC	0.01	Heptachlor
0.01	Aldrin	1.0	Heptachlor Epoxide
0.01	Dieldrin	0.01	4,4'-DDE
0.1	4,4'-DDD	0.01	4,4'-DDT
0.1	Endosulfan I	0.1	Endosulfan II
1.0	Endosulfan sulfate	1.0	Chlordane
0.1	PCB 1016	0.1	PCB 1221
0.1	PCB 1232	0.1	PCB 1242
0.1	PCB 1248	0.1	PCB 1254
0.1	PCB 1260		

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Report of Analysis for PESTICIDES/PCBs in SEDIMENTS

Client: Indianapolis

Job/P.O. No.: 1180.0030

Sample Description:	Location 6	Location Broad Ripple
Laboratory No.:	C81297	C81298
Sampling Date:	Aug 17 ~~Not Available~~	Aug 17 ~~Not Available~~
Date Received:	August 25, 1982	August 25, 1982
Date Analyzed:	September 20 & 27, 1982	September 20 & 27, 1982

Pesticides/PCBs Detected:

Compound	Concentration (micrograms/gram)* wet basis	
Pesticides 215	ND	ND
PCBs		
Aroclor 1242 105	(0.32)	(0.37)
Aroclor 1260 111	NQ	NQ

Technical Note: Sediments were soxhlet extracted wet.

* Tentative identification by gas chromatography with selective detectors (ECD) and two different columns (SE-54 and OU-1701); confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

L7RM20927
300

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for
PESTICIDES/PCBs in SEDIMENTS
(Continued)

Compounds included in Quantitative Analysis:

Minimum Quantification Limit (µg/g)	Compound	Minimum Quantification Limit (µg/g)	Compound
1.0	Endrin	0.1	Alpha-BHC
1.0	Methoxychlor	1.0	Toxaphene
1.0	Beta-BHC	0.1	Gamma-BHC (Lindane)
0.1	Delta-BHC	0.01	Heptachlor
0.01	Aldrin	1.0	Heptachlor Epoxide
0.01	Dieldrin	0.01	4,4'-DDE
0.1	4,4'-DDD	0.01	4,4'-DDT
0.1	Endosulfan I	0.1	Endosulfan II
1.0	Endosulfan sulfate	1.0	Chlordane
0.1	PCB 1016	0.1	PCB 1221
0.1	PCB 1232	0.1	PCB 1242
0.1	PCB 1248	0.1	PCB 1254
0.1	PCB 1260		

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Sediment?

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 6	Broad Ripple	Location 7
Laboratory No.:	C81297	C81298	C81171
Sampling Date:	8/17 ~~Not Available~~	8/17 Not Available	August 17, 1982
Date Received:	August 25, 1982	August 25, 1982	August 24, 1982
Date Analyzed:	September 16, 1982	September 16, 1982	September 16, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/~~liter~~ kg) (Wet Basis)		
Naphthalene 55	230	290	300
Fluorene 80	120	190	ND
Phenanthrene 81	700	1,100	1,000
Anthracene 78	230	220	140
Fluoranthene 39	2,100	3,400	2,200
Pyrene 84	1,700	2,700	1,900
Chrysene 76	470	510	210
Benzo(a)anthracene 72	810	1,700	770
2 — Benzo(b)fluoranthene 75	350	640	730
Benzo(a)pyrene 73	230	430	ND
Dioctylphthalate ____	ND	ND	21,000

ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits

Submitted By [signature] Checked By [signature]

L6RM20926
1500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81297	**C81298**	**C81171**
2,6-bis(1,1-dimethylethyl)-4-methylphenol	(1,200)	(2,000)	ND
5-Ethyl-5-methyldecane	(770)	(1,500)	ND
2,6,11-Trimethyldodecane	ND	(1,500)	ND
Undecane 172	ND	ND	(4,600)
2,4-Dimethylhexane	ND	ND	(2,700)
2,2,4-Trimethylhexane	ND	ND	(3,000)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L6RM20926

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

1200

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Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 18	Location 22	Location 35
Laboratory No.:	C81172	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	September 16, 1982	September 16, 1982	September 16, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/kilogram)		
Naphthalene	120	ND	ND
Diethylphthalate	600	ND	480
Phenanthrene	360	150	(22)
Anthracene	90	90	ND
Fluoranthene	1,000	270	(56)
Pyrene	1,200	340	(67)
Chrysene	(8)	ND	ND
Benzo(a)anthracene	350	140	ND
Benzo(b)fluoranthene	290	ND	ND

Note: Revised Report

ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits

Submitted By [signature] Checked By [signature]

L6RM20926

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/kilogram)		
	C81172	C81173	C81174
Hexadecanoic acid	(31,000)	ND	ND
2,2,4-Trimethylhexane	(2,600)	ND	ND
Methylpentanoate	(2,100)	ND	ND
Cresol	ND	ND	(2,300)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By [illegible] Checked By [illegible]

L6RM20926

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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sediment?

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS (SEDIMENTS)

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 18	Location 22	Location 35
Laboratory No.:	C81172	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	September 16, 1982	September 16, 1982	September 16, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/~~liter~~ kg) (wet basis)		
Naphthalene 55	120	ND	ND
Diethylphthalate 70	600	ND	480
Phenanthrene 81	360	150	(22)
Anthracene 78	90	90	ND
Fluoranthene 39	1,000	270	(56)
Pyrene 84	1,200	340	(67)
Chrysene 76	(8)	ND	ND
Benzo(a)anthracene 72	350	140	ND
3 — Benzo(b)fluoranthene 75	290	ND	ND

ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits

Submitted By [signature] Checked By [signature]

L6RM20926
1400

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81172	**C81173**	**C81174**
Hexadecanoic acid	(31,000)	ND	ND
2,2,4-Trimethylhexane	(2,600)	ND	ND
163 — ? Methylpentanoate	(2,100)	ND	ND
60 — ? Cresol	ND	ND	(2,300)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By Kayhe Parish Checked By Robert R. Clark

L6RM20926

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS FINAL

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location #7	Location #18	Location #22	Location #35
Laboratory No.:	C81171	C81172	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	Sep. 11, 1982	Sep. 11, 1982	Sep. 11, 1982	Sep. 11, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/kilogram) wet basis			
Toluene 8	0.9	ND	ND	3.7

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotte Checked By Robert A. Clark

L9RM21005
1009

READ 7

MAIL #6

From: RRC 5-MAY-1982 09:39
To: TMG
Subj: RE: Indianapolis voa analyses

The actual assignment of position number is very difficult using a GC/MS unless one runs actual standards of each isomer. Therefore when we say 1-Ethyl-2-methylbenzene it could actually be any isomer of that compound, i.e. 1,2 or 1,3 or 1,4. We try to be consistant in our numbering, in other words name the same peak the same name every time even though it may not be the correct isomer. In many of the later reports we refer to Ethylmethylbenzene isomers, which is the sum of all the Ethylmethylbenzenes in the sample. Therefore for this sample you should either sum the two values and call it Ethylmethylbenzene isomers or call the first one the 1,2 isomer and the second one the 1,4 isomer. If you have any more questions please let me know.

By the way, I would recommend that you sum the two concentrations and call it the Ethylmethylbenzene isomers. That way you will be consistant with the future reports and don't have to worry about the correct assignment of the isomers.

MAIL>

READ 8

MAIL #6

From: RRC 5-MAY-1982 09:39
To: TMG
Subj: RE: Indianapolis voa analyses

The actual assignment of position number is very difficult using a GC/MS unless one runs actual standards of each isomer. Therefore when we say 1-Ethyl-2-methylbenzene it could actually be any isomer of that compound, i.e. 1,2 or 1,3 or 1,4. We try to be consistant in our numbering, in other words name the same peak the same name every time even though it may not be the correct isomer. In many of the later reports we refer to Ethylmethylbenzene isomers, which is the sum of all the Ethylmethylbenzenes in the sample. Therefore for this sample you should either sum the two values and call it Ethylmethylbenzene isomers or call the first one the 1,2 isomer and the second one the 1,4 isomer. If you have any more questions please let me know.

By the way, I would recommend that you sum the two concentrations and call it the Ethylmethylbenzene isomers. That way you will be consistant with the future reports and don't have to worry about the correct assignment of the isomers.

MAIL> DEL MAIL
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MAIL> DEL ALL
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MAIL> READ
No more messages

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water

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Broad Ripple	Location 18
Laboratory No.:	CB7427	CB7428
Sampling Date:	November 11, 1982	November 11, 1982
Date Received:	November 16, 1982	November 16, 1982
Date Analyzed:	November 17, 1982	November 17, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)	
Trichlorofluoromethane	0.1	0.7
Methylene chloride	0.6	6.1
Tetrachloroethene	0.2	1.5
1,1-Dichloroethene	ND	0.2
1,1-Dichloroethane	ND	0.2
Chloroform	ND	1.8
1,1,1-Trichloroethane	ND	0.9
1,2-Dichloroethane	ND	0.1
Trichloroethene	ND	0.9

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert R. Clark

L01RM21123

MONTGOMERY LABORATORIES

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	CB7427	**CB7428**
Acetone	3.1	3.3
Tetrahydrofuran	ND	5.0
Hexane	(0.1)	(0.1)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schutz Checked By Robert R. Clark

L01RM21123

MONTGOMERY LABORATORIES

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

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Report of Analysis by GC/MS for BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 6	Broad Ripple	Location 7
Laboratory No.:	C81297	C81298	C81171
Sampling Date:	Not Available	Not Available	August 17, 1982
Date Received:	August 25, 1982	August 25, 1982	August 24, 1982
Date Analyzed:	September 16, 1982	September 16, 1982	September 16, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/kilogram)		
Naphthalene	230	290	300
Fluorene	120	190	ND
Phenanthrene	700	1,100	1,000
Anthracene	230	220	140
Fluoranthene	2,100	3,400	2,200
Pyrene	1,700	2,700	1,900
Chrysene	470	510	210
Benzo(a)anthracene	810	1,700	770
Benzo(b)fluoranthene	350	640	730
Benzo(a)pyrene	230	430	ND
Dioctylphthalate	ND	ND	21,000

Note: Revised Report.

ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits

Submitted By Gaylee Parlish Checked By Robert N. Clark

L6RM20926

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/kilogram)		
	C81297	C81298	C81171
2,6-bis(1,1-dimethylethyl)-4-methylphenol	(1,200)	(2,000)	ND
5-Ethyl-5-methyldecane	(770)	(1,500)	ND
2,6,11-Trimethyldodecane	ND	(1,500)	ND
Undecane	ND	ND	(4,600)
2,4-Dimethylhexane	ND	ND	(2,700)
2,2,4-Trimethylhexane	ND	ND	(3,000)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By Kayhe Pouliot Checked By Robert R. Clark

L6RM20926

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 6	Broad Ripple
Laboratory No.:	C81297	C81298
Sampling Date:	Not Available	Not Available
Date Received:	August 25, 1982	August 25, 1982
Date Analyzed:	October 12, 1982	October 12, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/kilogram)	
Methylene chloride	44	36

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schultz Checked By Robert R. Clark

L11RM21012
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/kilogram)	
	C81297	C81298
Acetone	510	390

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schatz Checked By Robert K. Clark

L11RM21012

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

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Report of Analysis by GC/MS for BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 6	Water Column Location 7	Water Column Location 18
Laboratory No.:	C81143	C81144	C81145
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982	September 15, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/[redacted] liter)		
Phenol	ND	0.7	1.0

NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Tony G. Liu Checked By Robert A. Clark

L5RM20920
1200

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81143	**C81144**	**C81145**
Succinic acid	(1.8)	(2.1)	(0.7)
Cyclohexanone	(0.5)	ND	ND
3-Ethyl-3-pentanol	(1.1)	(2.3)	ND
2,6-Bis(1,1-dimethylethyl)-4-methylphenol	(1.5)	ND	ND
1-Ethylhexylbenzene	ND	ND	(4.5)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By Fong-Yi Lau Checked By Robert A. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 35	Water Column Broad Ripple
Laboratory No.:	C81147	C81148
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 1, 1982	September 1, 1982

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
Trichloroethene	ND	740
Bromodichloromethane	17	94
Dibromochloromethane	ND	6
Tetrachloroethene	64	570
m,p-Xylene	ND	20
Ethenylbenzene	ND	2
o-Xylene	ND	32
Propylbenzene	ND	6

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fong-Yi Lien Checked By Robert R. Clark

L5RM20920
700

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
	C81147	C81148
o-Dichlorobenzene	2	21
m-Dichlorobenzene	ND	6
p-Dichlorobenzene	7	43
Naphthalene 55	3	2

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fong Yi Liu Checked By Robert R. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (nanograms/liter)*	
	C81147	**C81148**
1-Ethyl-2-methylbenzene	ND	(25)
1-Ethyl-4-methylbenzene	ND	(15)
Nonanal	(30)	ND
Decanal	(20)	ND
2-Hexanone	ND	(240)
Dimethyldisulfide 173	ND	(850)
2-Ethyl-4-methyl-1,3-dioxolane	ND	(380)
2-Ethyl-2-methylheptane	ND	(30)
Dimethyltrisulfide	ND	(60)
Nonane	ND	(35)
1-Methyl-4-(1-methylethyl)-7-oxabicyclo /2.2.1/heptane	ND	(200)
1-Methylethylbenzene 158	ND	(90)
1,3,3-Trimethyl-2-oxabicyclo/2.2.2/octane	ND	(80)
2,2,5-Trimethylhexane	ND	(95)
1,4-Diethylbenzene	ND	(60)
2-Ethyl-1,4-dimethylbenzene	ND	(85)
1,3,3-Trimethylbicyclo/2.2.1/-heptan-2-one	ND	(60)
Undecane 172	ND	(23)

* Accurate Quantitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
D: Detected but not quantified
ND: Not Detected

Submitted By Fang-Yi Lien Checked By Robert R. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (nanograms/liter)*	
	C81147	C81148
3,6-Dimethyl-3-octanol	ND	(50)
1-Ethyl-2,4-dimethylbenzene	ND	(22)
5-Methyl-2-(1-methylethyl)cyclohexanol	ND	(54)
Heptadecane	ND	(52)

* Accurate Quantitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
D: Detected but not quantified
ND: Not Detected

Submitted By Fong-Yi Lieu Checked By Robert R. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (ng/l)	Compound	Minimum Quantification Limit (ng/l)
1,1,1-Trichloroethane	2.0	1-Chloronaphthalene	0.5
Trichloroethene	100	2-Chloronaphthalene	0.5
Dichlorobromomethane	5.0	Acenaphthene	0.5
1,3-Dichloropropene	2.0	Fluorene	2.0
1,1,2-Trichloroethane	2.0	Diethylphthalate	100
Chlorodibromomethane	1.0	1-Chloro-4-phenoxybenzene	0.5
1,2-Dibromoethane	2.0	N-Phenylbenzamine	20
Tetrachloroethene	100	1,2-Diphenylhydrazine (as Azobenzene)	1.0
Chlorobenzene	10	1-Bromo-4-phenoxybenzene	0.5
Ethylbenzene	50	Hexachlorobenzene	1.0
m,p-Xylene	100	Phenanthrene	10
Bromoform	1.0	Anthracene	50
Ethenylbenzene	5.0	Fluoranthene	20
o-Xylene	50	Pyrene	20
1,1,2,2-Tetrachloroethane	50	Chrysene	50
Bromobenzene	0.5	Benzo(a)anthracene	50
Propylbenzene	0.5		
1-Chloro-3-methylbenzene	0.5		
Bis(2-chloroethyl)ether	1.0		
o-Dichlorobenzene	0.1		
m-Dichlorobenzene	10		
p-Dichlorobenzne	10		
Hexachloroethane	20		
N-Nitrosodi-N-propylamine	5.0		
1,3,5-Trichloobenzene	0.1		
1,2,4-Trichlorobenzene	10		
1,2,3-Trichlorobenzene	2.0		
Bis(2-chloroethoxy) methane	10		
Methylisoborenol (MIB)	0.5		
Geosmin	0.2		
Naphthalene	100		
1,1,2,3,4,4-Hexachloro-1,3-butadiene	2.0		

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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 22	Water Column Location 35	Water Column Broad Ripple
Laboratory No.:	C81146	C81147	C81148
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	August 26, 1982	August 26, 1982	August 26, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Methylene chloride	0.8	0.4	ND
Chloroform 23	0.4	0.2	ND
1,1,1-Trichloroethane	0.1	ND	ND
Trichloroethene	0.3	ND	ND
Toluene	0.1	ND	ND
Tetrachloroethene	0.3	ND	ND
Trichlorofluoromethane 49	ND	0.3	9.6

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert R. Clad

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81146	C81147	C81148
Acetone 174	2.6	ND	1.4
Tetrahydrofuran 172	3.4	ND	2.5

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schultz Checked By Robert A Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 6	Water Column Location 7	Water Column Location 18
Laboratory No.:	C81143	C81144	C81145
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	August 26, 1982	August 26, 1982	August 26, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Trichlorofluoromethane	5.5	5.6	ND
Methylene chloride	1.4	2.8	1.6
Chloroform	0.7	2.6	1.2
1,1,1-Trichloroethane	0.2	0.5	0.4
Trichloroethene	2.8	2.5	0.6
Tetrachloroethene	0.5	1.5	1.3
1,1-Dichloroethane	ND	0.2	ND
1,2-Dichloroethane	ND	ND	0.4
m-Dichlorobenzene	ND	0.1	ND
o-Dichlorobenzene	ND	0.2	ND

( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By H Schultz Checked By Robert R. Ulm

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81143	C81144	C81145
Acetone 174	3.0	20	4.4
Tetrahydrofuran 175	4.0	4.7	5.7
1,1-Oxybisethane	ND	(9.2)	ND
Thiobismethane 182	ND	(8.7)	(0.8)
m,p-Xylene 184	ND	0.5	ND
o-Xylene 185	ND	0.2	ND
Methylethylketone 176	ND	ND	0.2

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert R. Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

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Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 6	Water Column Location 7
Laboratory No.:	C81143	C81144
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	August 30, 1982	August 30, 1982

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
Trichloroethene	(1,800)	63
Bromodichloromethane	96	ND
Dibromochloromethane 51	3	ND
Tetrachloroethene	370	60
1,2-Dichloropropane 52	80	ND
o-Dichlorobenzene	ND	1
p-Dichlorobenzene	4	2
Naphthalene 55	ND	2

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fong-Yi Lai Checked By Robert A. Clark

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~~1000~~
700

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (nanograms/liter)*	
	C81143	C81144
Methylisoborneol	(7)	ND
Geosmin	1	ND
Dimethyldisulfide	(30)	(310)
1-Methyl-3-(1-methylethyl)benzene	ND	(32)
2,3-Dimethyl-2-butanol	ND	(9)

* Accurate Quantitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
D: Detected but not quantified
ND: Not Detected

Submitted By Feng-Yi Lein Checked By Robert R. Clark

L3RM20915

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by
CLOSED-LOOP STRIPPING GC/MS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (ng/l)	Compound	Minimum Quantification Limit (ng/l)
1,1,1-Trichloroethane	2.0	1-Chloronaphthalene	0.5
Trichloroethene	100	2-Chloronaphthalene	0.5
Dichlorobromomethane	5.0	Acenaphthene	0.5
1,3-Dichloropropene	2.0	Fluorene	2.0
1,1,2-Trichloroethane	2.0	Diethylphthalate	100
Chlorodibromomethane	1.0	1-Chloro-4-phenoxybenzene	0.5
1,2-Dibromoethane	2.0	N-Phenylbenzamine	20
Tetrachloroethene	100	1,2-Diphenylhydrazine (as Azobenzene)	1.0
Chlorobenzene	10	1-Bromo-4-phenoxybenzene	0.5
Ethylbenzene	50	Hexachlorobenzene	1.0
m,p-Xylene	100	Phenanthrene	10
Bromoform	1.0	Anthracene	50
Ethenylbenzene	5.0	Fluoranthene	20
o-Xylene	50	Pyrene	20
1,1,2,2-Tetrachloroethane	50	Chrysene	50
Bromobenzene	0.5	Benzo(a)anthracene	50
Propylbenzene	0.5		
1-Chloro-3-methylbenzene	0.5		
Bis(2-chloroethyl)ether	1.0		
o-Dichlorobenzene	0.1		
m-Dichlorobenzene	10		
p-Dichlorobenzne	10		
Hexachloroethane	20		
N-Nitrosodi-N-propylamine	5.0		
1,3,5-Trichloobenzene	0.1		
1,2,4-Trichlorobenzene	10		
1,2,3-Trichlorobenzene	2.0		
Bis(2-chloroethoxy) methane	10		
Methylisoborenol (MIB)	0.5		
Geosmin	0.2		
Naphthalene	100		
1,1,2,3,4,4-Hexachloro-1,3-butadiene	2.0		

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Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 18	Water Column Location 22
Laboratory No.:	C81145	C81146
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	August 30, 1982	August 30, 1982

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
Trichloroethene	480	230
Bromodichloromethane	48	50
Dibromochloromethane	2	ND
Tetrachloroethene	950	290
m,p-Xylene	9	11
1,2-Dichloropropane	62	90
o-Dichlorobenzene	2	3
m-Dichlorobenzene	3	3
p-Dichlorobenzene	47	28

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fong-Yi Lin Checked By Robert R. Clark

L3RM20915
700

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Priority Pollutant Closed-Loop Stripping Organics Detected:

Compound	Concentration (nanograms/liter)*	
	C81145	C81146
1,1,2-Trichloroethane 14	22	ND
1,1,2,2-Tetrachloroethane 15	12	ND

*: Accurate Quanitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Feng-Yi Liu Checked By Robert A. Clark

L3RM20915

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (nanograms/liter)*	
	C81145	C81146
Geosmin	ND	(4)
Dimethyldisulfide	(100)	(70)
Dimethyltrisulfide	(32)	ND
2,3-Dimethyl-2-butanol	(72)	ND
2-Hexanone	(360)	(24)
1-Methyl-4-(1-methylethyl)-7-oxabicyclo /2.2.1/-heptane	(77)	ND
1,3,3-Trimethyl-2-oxabicyclo/2.2.2/octane	(40)	ND
2,2,5-Trimethylhexane	(50)	ND
1,3,3-Trimethylbicyclo/2.2.1/heptan-2-one	(27)	ND
3,7-Dimethyl-6-octen-1-ol	(54)	ND
Pentadecane	(31)	ND
Hexadecane	(54)	ND
Heptadecane	(110)	ND

* Accurate Quantitation range 10 - 1000 nanograms/liter
( ): Parentheses indicate tentative number only.
D: Detected but not quantified
ND: Not Detected

Submitted By Fang-Yi Lai Checked By Robert A. Ahl

L3RM20915

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for Semivolatile Organics by CLOSED-LOOP STRIPPING GC/MS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (ng/l)	Compound	Minimum Quantification Limit (ng/l)
1,1,1-Trichloroethane	2.0	1-Chloronaphthalene	0.5
Trichloroethene	100	2-Chloronaphthalene	0.5
Dichlorobromomethane	5.0	Acenaphthene	0.5
1,3-Dichloropropene	2.0	Fluorene	2.0
1,1,2-Trichloroethane	2.0	Diethylphthalate	100
Chlorodibromomethane	1.0	1-Chloro-4-phenoxybenzene	0.5
1,2-Dibromoethane	2.0	N-Phenylbenzamine	20
Tetrachloroethene	100	1,2-Diphenylhydrazine (as Azobenzene)	1.0
Chlorobenzene	10	1-Bromo-4-phenoxybenzene	0.5
Ethylbenzene	50	Hexachlorobenzene	1.0
m,p-Xylene	100	Phenanthrene	10
Bromoform	1.0	Anthracene	50
Ethenylbenzene	5.0	Fluoranthene	20
o-Xylene	50	Pyrene	20
1,1,2,2-Tetrachloroethane	50	Chrysene	50
Bromobenzene	0.5	Benzo(a)anthracene	50
Propylbenzene	0.5		
1-Chloro-3-methylbenzene	0.5		
Bis(2-chloroethyl)ether	1.0		
o-Dichlorobenzene	0.1		
m-Dichlorobenzene	10		
p-Dichlorobenzne	10		
Hexachloroethane	20		
N-Nitrosodi-N-propylamine	5.0		
1,3,5-Trichloobenzene	0.1		
1,2,4-Trichlorobenzene	10		
1,2,3-Trichlorobenzene	2.0		
Bis(2-chloroethoxy) methane	10		
Methylisoborenol (MIB)	0.5		
Geosmin	0.2		
Naphthalene	100		
1,1,2,3,4,4-Hexachloro-1,3-butadiene	2.0		

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Report of Analysis by GC/MS for BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Water Column Location 22	Water Column Location 35	Water Column Broad Ripple
Laboratory No.:	C81146	C81147	C81148
Sampling Date:	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982	August ~~18~~ 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982	September 15, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/liter)		
Phenol 65	1.1	ND	2.6

NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Fang-Yi Lien Checked By Robert R. Clark

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81146	C81147	C81148
Succinic acid	(1.5)	(1.6)	(1.9)
Cyclohexanone	(1.3)	ND	ND
2,6-Bis(1,1-dimethylethyl)-4-methylphenol	(0.7)	ND	(3.7)
1-Ethylhexylbenzene	(5.6)	(4.2)	(1.8)
Dodecanoic acid	ND	(0.4)	ND
Ethylpyridine	ND	ND	(1.7)
N,N-Diethylethanamine	ND	ND	(12)
3-Ethyl-3-pentanol	ND	ND	(3.5)
Phenoxyacetic acid	ND	ND	(50)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

Submitted By Fong-Yi Lin Checked By Robert R. Ward

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Report of Analysis for
PESTICIDES/PCBs in SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 7	Location 18
Laboratory No.:	C81171	C81172
Sampling Date:	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982
Pesticides/PCBs Detected:		

Compound		Concentration (micrograms/gram)* (DRY BASIS)	
Pesticides		ND	ND
PCBs	Aroclor 1260	(0.1)	(0.1)
Moisture (%) =		77%	79%

Technical Note: Sediments were soxhlet extracted wet. A representative sample of each sediment was dried and weighed allowing the concentration above to be computed on a dried gram basis.

* Tentative identification by gas chromatography with selective detectors; confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

L5RM20920
600

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Report of Analysis for
PESTICIDES/PCBs in SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 22	Location 35
Laboratory No.:	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982
Pesticides/PCBs Detected:		

Compound		Concentration (micrograms/gram)*	
Pesticides		ND	ND
PCBs	Aroclor 1260	NQ	ND
	Moisture (%) =	50%	60%

Technical Note: Sediments were soxhlet extracted wet. A representative sample of each sediment was dried and weighed allowing the concentration above to be computed on a dried gram basis.

* Tentative identification by gas chromatography with selective detectors; confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert A. Clark

L5RM20920

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for
PESTICIDES/PCBs in SEDIMENT
(Continued)

Compounds included in Quantitative Analysis:

Minimum Quantification Limit (µg/g)	Compound	Minimum Quantification Limit (µg/g)	Compound
1.0	Endrin	0.1	Alpha-BHC
1.0	Methoxychlor	1.0	Toxaphene
1.0	Beta-BHC	0.1	Gamma-BHC (Lindane)
0.1	Delta-BHC	0.01	Heptachlor
0.01	Aldrin	1.0	Heptachlor Epoxide
0.01	Dieldrin	0.01	4,4'-DDE
0.1	4,4'-DDD	0.01	4,4'-DDT
0.1	Endosulfan I	0.1	Endosulfan II
1.0	Endosulfan sulfate	1.0	Chlordane
0.1	PCB 1016	0.1	PCB 1221
0.1	PCB 1232	0.1	PCB 1242
0.1	PCB 1248	0.1	PCB 1254
0.1	PCB 1260		

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Report of Analysis for
PESTICIDES/PCBs in SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 7	Location 18
Laboratory No.:	C81171	C81172
Sampling Date:	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982
Pesticides/PCBs Detected:		

Compound		Concentration (micrograms/gram)*	
Pesticides		ND	ND
PCBs	Aroclor 1260	(0.1)	(0.1)

Technical Note: Sediments were soxhlet extracted wet. A representative sample of each sediment was dried and weighed allowing the concentration above to be computed on a dried gram basis.

* Tentative identification by gas chromatography with selective detectors; confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

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600

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Report of Analysis for
PESTICIDES/PCBs in SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 22	Location 35
Laboratory No.:	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982
Date Analyzed:	September 15, 1982	September 15, 1982
Pesticides/PCBs Detected:		

Compound		Concentration (micrograms/gram)*	
Pesticides		ND	ND
PCBs	Aroclor 1260	NQ	ND

Technical Note: Sediments were soxhlet extracted wet. A representative sample of each sediment was dried and weighed allowing the concentration above to be computed on a dried gram basis.

* Tentative identification by gas chromatography with selective detectors; confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for
PESTICIDES/PCBs in SEDIMENT
(Continued)

Compounds included in Quantitative Analysis:

Minimum Quantification Limit (µg/g)	Compound	Minimum Quantification Limit (µg/g)	Compound
1.0	Endrin	0.1	Alpha-BHC
1.0	Methoxychlor	1.0	Toxaphene
1.0	Beta-BHC	0.1	Gamma-BHC (Lindane)
0.1	Delta-BHC	0.01	Heptachlor
0.01	Aldrin	1.0	Heptachlor Epoxide
0.01	Dieldrin	0.01	4,4'-DDE
0.1	4,4'-DDD	0.01	4,4'-DDT
0.1	Endosulfan I	0.1	Endosulfan II
1.0	Endosulfan sulfate	1.0	Chlordane
0.1	PCB 1016	0.1	PCB 1221
0.1	PCB 1232	0.1	PCB 1242
0.1	PCB 1248	0.1	PCB 1254
0.1	PCB 1260		

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Report of Analysis for
PESTICIDES/PCBs in SEDIMENTS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 6	Location Broad Ripple
Laboratory No.:	C81297	C81298
Sampling Date:	Aug 17 ~~Not Available~~	Aug 17 ~~Not Available~~
Date Received:	August 25, 1982	August 25, 1982
Date Analyzed:	September 20 & 27, 1982	September 20 & 27, 1982

Pesticides/PCBs Detected:

Compound	Concentration (micrograms/gram)* wet basis	
Pesticides 215	ND	ND
PCBs		
Aroclor 1242 106	(0.32)	(0.37)
Aroclor 1260 111	NQ	NQ

Technical Note: Sediments were soxhlet extracted wet.

* Tentative identification by gas chromatography with selective detectors (ECD) and two different columns (SE-54 and OU-1701); confirmation availble upon request.
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By Dean M. Hartley Checked By Robert R. Clark

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300

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis for
PESTICIDES/PCBs in SEDIMENTS
(Continued)

Compounds included in Quantitative Analysis:

Minimum Quantification Limit (µg/g)	Compound	Minimum Quantification Limit (µg/g)	Compound
1.0	Endrin	0.1	Alpha-BHC
1.0	Methoxychlor	1.0	Toxaphene
1.0	Beta-BHC	0.1	Gamma-BHC (Lindane)
0.1	Delta-BHC	0.01	Heptachlor
0.01	Aldrin	1.0	Heptachlor Epoxide
0.01	Dieldrin	0.01	4,4'-DDE
0.1	4,4'-DDD	0.01	4,4'-DDT
0.1	Endosulfan I	0.1	Endosulfan II
1.0	Endosulfan sulfate	1.0	Chlordane
0.1	PCB 1016	0.1	PCB 1221
0.1	PCB 1232	0.1	PCB 1242
0.1	PCB 1248	0.1	PCB 1254
0.1	PCB 1260		

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Sediment?

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 6	Broad Ripple	Location 7
Laboratory No.:	C81297	C81298	C81171
Sampling Date:	8/17 ~~Not Available~~	8/17 Not Available	August 17, 1982
Date Received:	August 25, 1982	August 25, 1982	August 24, 1982
Date Analyzed:	September 16, 1982	September 16, 1982	September 16, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/~~liter~~ kg) (Wet Basis)		
Naphthalene 55	230	290	300
Fluorene 80	120	190	ND
Phenanthrene 81	700	1,100	1,000
Anthracene 78	230	220	140
Fluoranthene 39	2,100	3,400	2,200
Pyrene 84	1,700	2,700	1,900
Chrysene 76	470	510	210
Benzo(a)anthracene 72	810	1,700	770
2 — Benzo(b)fluoranthene 75	350	640	730
Benzo(a)pyrene 73	230	430	ND
Dioctylphthalate ____	ND	ND	21,000

ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81297	C81298	C81171
2,6-bis(1,1-dimethylethyl)-4-methylphenol	(1,200)	(2,000)	ND
5-Ethyl-5-methyldecane	(770)	(1,500)	ND
2,6,11-Trimethyldodecane	ND	(1,500)	ND
Undecane 172	ND	ND	(4,600)
2,4-Dimethylhexane	ND	ND	(2,700)
2,2,4-Trimethylhexane	ND	ND	(3,000)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

1200

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Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS SEDIMENT

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 18	Location 22	Location 35
Laboratory No.:	C81172	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	September 16, 1982	September 16, 1982	September 16, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/kilogram)		
Naphthalene	120	ND	ND
Diethylphthalate	600	ND	480
Phenanthrene	360	150	(22)
Anthracene	90	90	ND
Fluoranthene	1,000	270	(56)
Pyrene	1,200	340	(67)
Chrysene	(8)	ND	ND
Benzo(a)anthracene	350	140	ND
Benzo(b)fluoranthene	290	ND	ND

Note: Revised Report

ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/kilogram)		
	C81172	C81173	C81174
Hexadecanoic acid	(31,000)	ND	ND
2,2,4-Trimethylhexane	(2,600)	ND	ND
Methylpentanoate	(2,100)	ND	ND
Cresol	ND	ND	(2,300)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Sediment?

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS (SEDIMENTS)

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location 18	Location 22	Location 35
Laboratory No.:	C81172	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	September 16, 1982	September 16, 1982	September 16, 1982

Priority Pollutant Base/Neutral/Acidic Organics Detected:

Compound	Concentration (micrograms/~~liter~~ kg) (wet basis)		
Naphthalene 55	120	ND	ND
Diethylphthalate 70	600	ND	480
Phenanthrene 81	360	150	(22)
Anthracene 78	90	90	ND
Fluoranthene 39	1,000	270	(56)
Pyrene 84	1,200	340	(67)
Chrysene 76	(8)	ND	ND
Benzo(a)anthracene 72	350	140	ND
2 — Benzo(b)fluoranthene 75	290	ND	ND

ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits

Submitted By [signature] Checked By [signature]

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Other Base/Neutral/Acidic Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81172	**C81173**	**C81174**
Hexadecanoic acid	(31,000)	ND	ND
2,2,4-Trimethylhexane	(2,600)	ND	ND
163 —?. Methylpentanoate	(2,100)	ND	ND
60 —?. Cresol	ND	ND	(2,300)

D: Detected but not quantified
ND: Not Detected
NA: Not Analyzed
NQ: Not Quantifiable; detectable but below minimum quantification limits
( ): Parentheses indicate tentative number only.

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
BASE/NEUTRAL/ACIDIC EXTRACTABLE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Location #7	Location #18	Location #22	Location #35
Laboratory No.:	C81171	C81172	C81173	C81174
Sampling Date:	August 17, 1982	August 17, 1982	August 17, 1982	August 17, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	Sep. 11, 1982	Sep. 11, 1982	Sep. 11, 1982	Sep. 11, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/kilogram) wet basis			
Toluene	0.9	ND	ND	3.7

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H. Schotty Checked By Robert R. Clark

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Entered 4-19-82
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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont Primary 803 Effluent	Belmont Primary 817 Influent	Belmont Primary 807 Sludge
Laboratory No.:	C26711	C26712	C26713
Sampling Date:	2/3/82	2/3/82	2/3/82
Date Received:	2/9/82	2/9/82	2/9/82
Date Analyzed:	3/12/82	3/12/82	3/12/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Methylene chloride 44	NQ	NQ	115
Chloroform 23	43	24	64
1,1,1-Trichloroethane 11	7	NQ	23
Benzene 4	56	18	13
Trichloroethene 87	NQ	ND	8
Bromodichloromethane 48	21	ND	
Toluene 86	180	120	430
Tetrachloroethene 85	9	ND	58
Ethylbenzene 38	16	13	75
164 m,p-Xylenes	41	41	160
165 o-Xylene	36	29	110
161 Propylbenzene	NQ	ND	23
1,3-Dichlorobenzene 26	ND	ND	NQ
1,2-Dichlorobenzene 25	ND	ND	NQ
1,4-Dichlorobenzene 27	ND	ND	7
Naphthalene 55	ND	ND	39

WALNUT CREEK
JAMES M. MONTGOMERY CONSULTING ENGINEERS, INC.
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OFFICE

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by Robert R. Clark Date 27 March, 1982

16/mm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

RECEIVED JUN 21 1982 WALNUT CREEK CONSULTING ENGINEERS, INC.

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

	904	906	907
Sample Description:	Filter Effluent	Ozone Effluent #1	Ozone Effluent #2
Laboratory No.:	C65460	C65461	C65462
Sampling Date:	June 2-3, 1982	June 2-3, 1982	June 2-3, 1982
Date Received:	June 10, 1982	June 10, 1982	June 10, 1982
Date Analyzed:	June 11, 1982	June 11, 1982	June 11, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
14	Methylene Chloride	2.3	2.8	ND
23	Chloroform	0.2	0.9	0.5
41	Trichlorofluoro-methane	ND	4.8	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schultz Date June 17, 1982

Checked by Robert R. Clark Date 18 June, 1982

L10/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C65460	C65461	C65462
Butane	(5.9)	ND	ND
Hexane	(1.2)	(2.7)	ND
175 Tetrahydrofuran	11	6.7	ND
Pentane	ND	(2.1)	ND
Trimethyloxymethane	ND	(1.5)	ND
2,4,4-Trimethylpentane	ND	(0.7)	ND
Octane	ND	(0.5)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schultz Date June 17, 1982

Checked by Robert R. Clark Date 18 June, 1982

L10/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L10/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Ozone #2 Influent B	Ozone #2 Effluent B	Ozone #2 Effluent C
Laboratory No.:	C66156	C66157	C66158
Sampling Date:	June 16, 1982	June 16, 1982	June 16-17, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 21, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	ND	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schotty Date July 11, 1982

Checked by Robert A Clark Date 13 July, 1982

L1/rm
75C

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C66156	C66157	C66158
Acetone	17	13	27
Tetrahydrofuran	7	5.3	5.6

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schultz Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

RECEIVED
JUL 19 1982
JAMES M. MONTGOMERY
CONSULTING ENGINEERS, INC.
WALNUT GROVE OFFICE

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

	904	907
Sample Description:	Filter Effluent	Ozone #2 Effluent
Laboratory No.:	C77801	C77802
Sampling Date:	June 30, 1982	June 30, 1982
Date Received:	July 8, 1982	July 8, 1982
Date Analyzed:	July 10, 1982	July 10, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
23	Chloroform	1.6	1.0
11	1,1,1-Trichloroethane	0.1	0.2
48	Bromodichloromethane	0.6	0.3
48	Dibromochloromethane	0.6	ND
85	Tetrachloroethene	0.8	0.5
[illegible]	1,3-Dichlorobenzene	NQ	NQ
25	1,2-Dichlorobenzene	NQ	NQ
27	1,4-Dichlorobenzene	0.2	NQ
30	trans-1,2-Dichloroethene	ND	NQ

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 12, 1982

Checked by [signature] Date 15 July, 1982

L21/rm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter) 904	907
	C77801	C77802
Hexane	(2)	(6)
2,4,4-Trimethyl-1-pentene	NQ	NQ
2,4,4-Trimethyl-2-pentene	NQ	ND
171 Acetone	ND	27

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 12, 1982

Checked by [signature] Date 15 July, 1982

L21/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L21/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis (814) Should have been 807 Job/P.O. No.: 1180.0030

Sample Description:	Primary Sludge	Ozone #2 Influent A	Ozone #2 Effluent A
Laboratory No.:	C66147	C66154	C66155
Sampling Date:	June 16, 1982	June 16, 1982	June 16, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 29, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
4	Benzene	58	ND	ND
86	Trichloroethene	35	ND	ND
11	1,1,1-Trichloroethane	4.0	ND	ND
86	Toluene	36	ND	ND
85	Tetrachloroethene	9.6	ND	ND
38	Ethylbenzene	11	ND	ND
164	m,p-Xylene	43	ND	ND
165	o-Xylene	12	ND	ND

entered 815 case

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schlotty Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		C66147	C66154	C66155
	Sulfur Dioxide	D	ND	ND
150	Methanethiol	(170)	ND	ND
	Butane	(20)	ND	ND
162	Thiobisethane CHECK PG 1	(300)	ND	ND
175	Tetrahydrofuran	79	7.3	5.0
173	Dimethyldisulfide	(400)	ND	ND
153	Ethylmethylbenzene isomers	(76)	ND	ND
151	Trimethylbenzene isomers	(53)	ND	ND
	Decane	(130)	ND	ND
172 ~~159~~	Undecane	(110)	ND	ND
	Dodecane	(77)	ND	ND
	Tridecane	(39)	ND	ND
174	Acetone	ND	16	9.1

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schutte Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

Coded parameter locations entered 10/7 DFW

I Put a copy in the "Non-Standard" file

WALNUT CREEK RECEIVED SEP 20 1982 JAMES M. MONTGOMERY CONSULTING ENGINEERS, INC. OFFICE

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS – ✓

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Ozone #1 Effluent Upset Analysis 906	Influent Sludge T.F.? Discharge 2	Primary Sludge Grab Sample 807
Laboratory No.:	C89637	C80187	C80808
Sampling Date:	July 31, 1982	Grab Sample August 6, 1982	August 16, 1982
Date Received:	August 4, 1982	Do not enter. August 11, 1982	August 18, 1982
Date Analyzed:	August 24, 1982	August 24, 1982	August 24, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter) 906	2	807
Trichlorofluoromethane 49	1.0	ND	ND
Chloroform 23	0.8	16	35
Methylene chloride 44	0.7	52	9
1,1,1-Trichloroethane 11	ND	50	2.4
Benzene 4	ND	12	10
Trichloroethene 87	ND	6.4	5.9
Dichlorobromomethane 48	ND	2.6	10
Toluene 86	ND	62	23
Dibromochloromethane 51	ND	2.1	8.2

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert R. Clark

L4RM20913
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	C89637	C80187	C80808
Tetrachloroethene 85	ND	30	16
Chlorobenzene 7	ND	1.6	ND
Ethylbenzene 38	ND	10	2.2
m,p-Xylene 164	ND	62	12
o-Xylene 165	ND	27	4.8
m-Dichlorobenzene 26	ND	38	2.7
o-Dichlorobenzene 25	ND	46	2.0
Naphthalene 55	ND	190	51
1,2,4-Trimethylbenzene 151	ND (-1)	19 (44)	5.4 (5.4)
1,2,3-Trimethylbenzene	ND	25	ND
1,1-Dichloroethane 13	ND	ND	1.2
Bromoform 47	ND	ND	1.5
~~Ethenylbenzene 159~~ 159	ND	ND	6.7

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert A. Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C89637	**C80187**	**C80808**
Acetone 174	(90)	240	89
Methylethylketone 176	16	28	21
Tetrahydrofuran 175	3.1	120	120
Hexane	13	NA	NA
Octane	0.4	NA	NA
Trimethylhexanes	0.2	NA	NA
Propylbenzene 161	ND	5.3	1.5
Decane	ND	20	170
Dodecane	ND	30	18
Thiobismethane 162	ND	(10)	~~NA~~ Blank
Dimethyldisulfide 173	ND	(65)	(100)
Aceticacid butylester	ND	(50)	ND
Dimethyltrisulfide	ND	(8.4)	(27)
Ethyldimethylbenzene isomers 160	ND	(33)	NA
Tetramethylbenzene 157	ND	(14)	NA
Tridecane	ND	(16)	NA
Methyl(methylethyl)benzene 158	ND	(15)	NA
Carbon disulfide	ND	ND	(12)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schatz Checked By Robert A. Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C89637	**C80187**	**C80808**
1-Propanol	ND	NA	(32)
Aceticacid diethylester	ND	ND	(11)
Propionicacid propylester	ND	ND	(12)
3-Ethyl-3-methylhexane	ND	NA	(15)
Pentanoicacid ethylester	ND	NA	(19)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotty Checked By Robert R. Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

all codes & parameters entered 10/ [illegible]

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS – √

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	WAS Grab 911
Laboratory No.:	C80809
Sampling Date:	August 16, 1982
Date Received:	August 18, 1982
Date Analyzed:	August 24, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter) 911
Methylene chloride 44	4.4
Chloroform 23	8.0
Dichlorobromomethane 48	6.0
Toluene 86	4.6
Dibromochloromethane 51	7.0
Bromoform 47	2.0
Naphthalene 55	2.0

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schutz Checked By Robert R. Clark

L4RM20913
250

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter) 911
	C80809
Acetone 174	41
Methylethylketone 176	6.2
Tetrahydrofuran 175	17
Thiobismethane 162	(4.1)
Dimethyldisulfide 173	(44)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schultz Checked By Robert R. Clark

L4RM20913

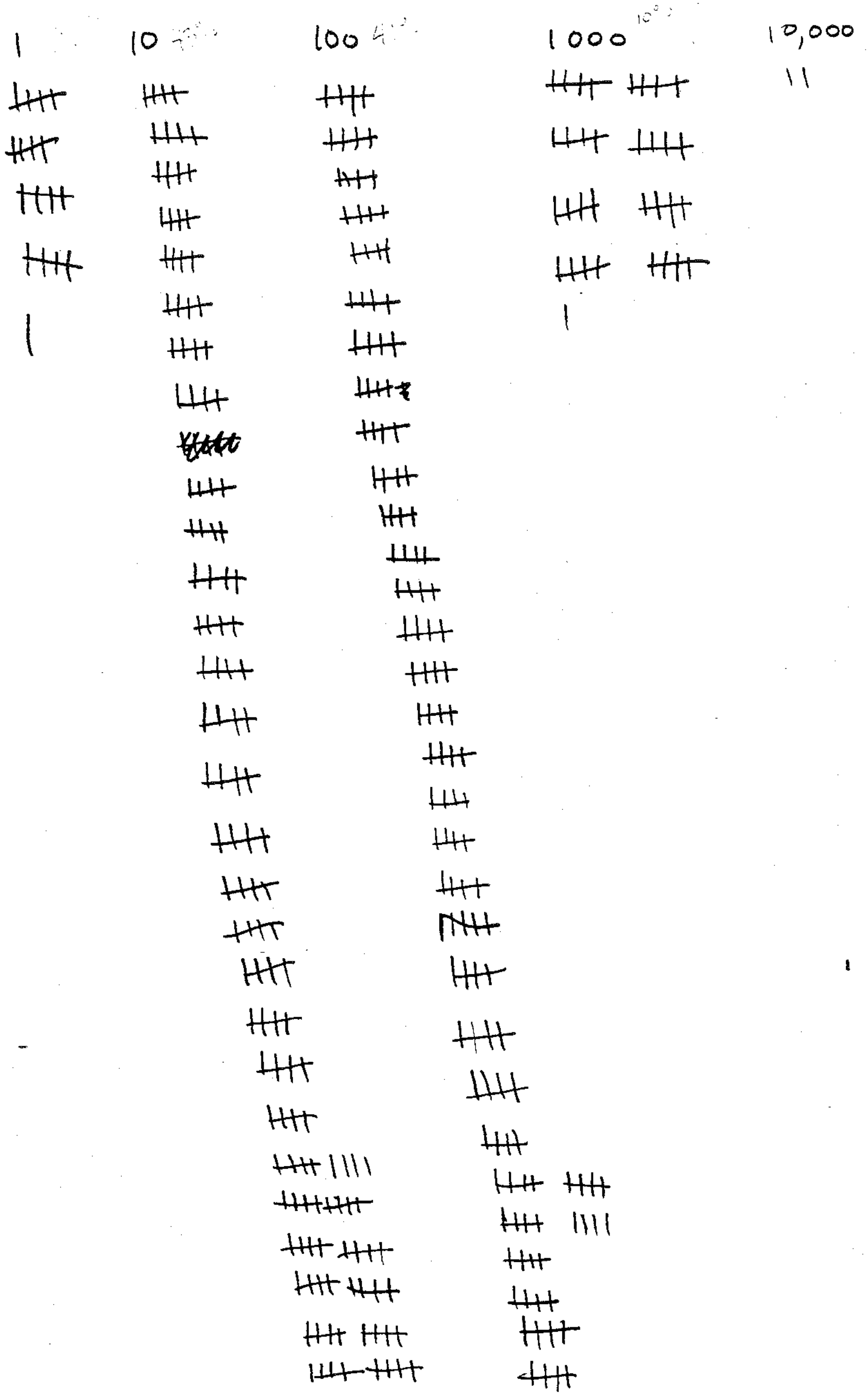
ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

A



6/16

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	920	807	18 911
Sample Description:	Tap Water	Primary Sludge	W.A.S.
Laboratory No.:	C53942	C53541 — ERROR Corrected & entered for 21	C53542
Sampling Date:	May 21, 1982	May 17-18, 1982	May 17-18, 1982 — CHECK corrected
Date Received:	May 25, 1982	May 19, 1982	May 19, 1982
Date Analyzed:	May 26, 1982	May 26, 1982	May 26, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
154	1,3,5-Trichlorobenzene	ND	NQ	ND
	1,2,4-Trichlorobenzene	ND	NQ	ND
	Chloroform	2	ND	ND
48	Bromodichloromethane	NQ	10	ND
51	Dibromochloromethane	NQ	ND	ND
29	1,1-Dichloroethene	ND	4	5
30	trans-1,2-dichloroethene	ND	NQ	ND
	1,1-Dichloroethane	ND	NQ	NQ
	1,1,1-Trichloroethane	ND	10	NQ
	Benzene	ND	50	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 29, 1982

Checked by Robert R. Ward Date 5 June, 1982

L4/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	920	507	711
	C53942	C53541	C53542
87 Trichloroethene	ND	76	ND
33 cis-1,3-dichloropropene	ND	NQ	ND
86 Toluene	ND	150	ND
85 Tetrachloroethene	ND	100	2
38 Ethylbenzene	ND	130	ND
84 m,p-Xylenes	ND	510	ND
85 o-Xylene	ND	120	ND
81 Propylbenzene	ND	46	ND
p-chlorotoluene	ND	1	ND
1,3-Dichlorobenzene	ND	NQ	ND
1,4-Dichlorobenzene	ND	10	ND
1,2-Dichlorobenzene	ND	9	ND
Naphthalene	ND	59	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 29, 1982

Checked by Robert R Clark Date 5 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		920	907	911
		C53942	C53541	C53542
174	Acetone	2	NA	ND
176	Methylethylketone	2	NA	ND
175	Tetrahydrofuran	2	NA	ND
	Dodecane ✓ pg 1+2	ND	(520)	ND
	Nonane	ND	(230)	ND
153	Ethylmethylbenzene isomers	ND	(240)	ND
151	Trimethylbenzene isomers	ND	(400)	ND
	Decane	ND	(760)	ND
	Octane	ND	(58)	ND
172 ~~169~~	Undecane	ND	(810)	ND
173	Dimethyldisulfide	ND	(110)	(660)
152	Tetramethylbenzene	ND	(130)	ND
—	Diethylbenzene	ND	(260)	ND
	Tridecane	ND	(400)	ND
150	Methanethiol	ND	NA	(160)
	Ethanol	ND	NA	(28)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Kayhi Parikh Date May 29, 1982

Checked by Robert A. Clark Date 5 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L4/rm

WALNUT CREEK OFFICE
RECEIVED
APR 19 1982
JAMES M. MONTGOMERY
CONSULTING ENGINEERS, INC.

ENVIRONMENTAL RESEARCH LABORATORY (ERL)
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Effluent Entered 8-23-82 [illegible]

Client: EMS — Job/P.O. No.: 1180.0030

Entered 5-4 [illegible]

Sample Description:	~~Belmont~~ Primary BP-F 803	White Pines BP-F2 WR 830
Laboratory No.:	C38282	C38283
Sampling Date:	Feb. 22, 1982	Feb. 22, 1982
Date Received:	March 5, 1982	March 5, 1982
Date Analyzed:	April 3, 1982	April 3, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)
Vinylchloride	88
Chloromethane	45
Bromomethane	46
Methylene chloride	44
1,1-Dichloroethylene	29
trans-1,2-Dichloroethylene	30
1,1-Dichloroethane	13
Chloroform	23
1,2-Dichloroethane	10
1,1,1-Trichloroethane	11

NOTE #C38282 LABELED AS 803 & 817

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date April 4, 1982

Checked by Robert R. Clark Date 14 April, 1982

L9/mm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Priority Pollutant Purgeable Volatile Organics Detected (cont.)

Compound	Concentration (micrograms/liter)	
	C38282	C38283
Trichloroethylene 87	270	NQ-2
Benzene 4	81	ND-1
Bromodichloromethane 48	NQ-2	ND-1
1,1,2-Trichloroethane 14	NQ-2	ND-1
Toluene 86	62	ND-1
33 cis-1,3-Dichloropropene	1	ND-1
Chlorobenzene 7	NQ-2	ND-1
Tetrachloroethylene 85	8	NQ-2
Ethylbenzene 38	29	ND-1
m,p-Xylene	120	NQ-2
o-Xylene	37	ND-1
Propylbenzene	11	ND-1
p-Chlorotoluene	NQ-2	ND-1
1,3-Dichlorobenzene 26	2	ND-1
1,4-Dichlorobenzene 27	10	ND-1
1,2-Dichlorobenzene 25	13	ND-1
Naphthalene 55	30	ND-1
1,3,5-Trichlorobenzene	NQ-2	ND-1
1,2,4-Trichlorobenzene 8	1	ND-1
1,2,3-Trichlorobenzene	NQ-2	ND-1
Trichlorofluoromethane 49	1	3

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date April 4, 1982

L9/mm Checked by Robert R. Clark Date 14 April, 1982

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	2-22-82 C38282 817	2-22-82 C38283 830
X cis-1,2-Dichloroethylene 30	3	ND
Methylethylketone	33	ND
Tetrahydrofuran	38	ND
Acetone	150	ND
Methylethylbenzene isomers	65	NQ
Trimethylbenzene isomers	81	NQ
Decane	(110)	ND
(1-Methylbutyl)-benzene	(5)	ND
Methanethiol	(85)	ND
Ethanol	(110)	(11)
1,1'-oxy-bis-Ethane	(45)	ND
1-Methyl-4-propylbenzene	(140)	ND
Diethylbenzene	(85)	ND
1-Methyl-3-(1-methyl-ethyl)benzene	(140)	ND
1,1-Dibromo-2-chloro-2-fluorocyclopropane	ND	(45)
Ethylpyridine	ND	(2)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Gaylee Parlish Date April 4, 1982

Checked by Robert R. Clark Date 14 April, 1982

L9/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

WALNUT GROVE
RECEIVED
SEP 7 1982
OFFICE

Report of Analysis by GC/MS for
STEAM DISTILLED, PURGEABLE VOLATILE ORGANICS

NOT ENTERED

Client: Indianapolis Job/P.O. No.: 1180.0030

	906	907	
Sample Description:	Ozone #1 Effluent	Ozone #2 Effluent	Carbon Adsorption
Laboratory No.:	C81119	C81120	C81149
Sampling Date:	August 18-19, 1982	August 18-19, 1982	August 19, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	August 26, 1982	August 26, 1982	August 26, 1982

Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
	Ethanol	(1.1)	(0.7)	(1.4)
	2-Propenal	(0.6)	(0.2)	ND
3	Acrylonitrile	3.8	3.7	0.9
174	Acetone	(1.0)	(0.4)	ND
	2-Methylpropanenitrile	3.9	UTD	1.5
	Butanal	1.4	1.0	0.2
	2-Methyl-2-butanol	ND	0.2	ND
	Propanenitrile	0.2	ND	ND
	2-Butanone	(0.2)	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.
UTD: Unable to determine (interference)

Submitted By [signature] Checked By [signature]

L20RM20829
975

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
STEAM DISTILLED, PURGEABLE VOLATILE ORGANICS
(Continued)

Other Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81119	C81120	C81149
1-Pentanol	0.1	ND	ND
Heptanal	0.6	0.3	ND
1-Hexanol	0.1	ND	ND
2-Methylpropanal	(1.9)	(1.4)	(0.2)
2-Methyl-2-propenenitrile	(0.7)	(0.4)	NA
2-Butenal	(6.6)	(4.4)	(0.6)
3-Methyl-2-butanone	(0.9)	NA	NA
2,3-Dimethyl-2-butanal	(1.1)	(0.8)	(0.04)
3,3-Dimethyl-1-butene	(1.7)	(0.9)	NA
2-Hexanone	(2.2)	(1.0)	NA
3-Methyl-2-pentanone	(0.8)	NA	NA
Ethylmethyldioxolane isomers	(5.2)	(3.0)	(0.04)
170 Methylpyridine isomers	(1.6)	(1.0)	(0.7)
2-Methyl-2-pentenal	(1.2)	NA	NA
171 Ethylpyridine isomers	(1.1)	(1.5)	(1.3)
4-Methyl-4-octanol	(1.3)	(1.1)	NA
3-Methyl-3-octanol	(1.8)	(1.6)	NA
4-Methyl-3-penten-2-one	NA	NA	(0.3)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By _____ Checked By _____

L20RM20829

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
STEAM DISTILLED, PURGEABLE VOLATILE ORGANICS
(Continued)

Other Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81119	C81120	C81149
Hexanal	NA	NA	(0.2)
167 Ethylmethylpyridine	NA	NA	(0.3)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L20RM20829

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
STEAM DISTILLED, PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)
Acetonitrile	0.1
Ethanol	0.5
2-Propenal	0.5
Acrylonitrile	0.01
Acetone	0.5
2-Methylpropanenitrile	0.01
Butanal	0.01
2-Methyl-2-butanol	0.01
Propanenitrile	0.01
2-Butanone	0.1
1-Pentanol	0.01
Heptanal	0.01
1-Hexanol	0.01

Entered
4-19-82

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Southport Primary Effluent 810	Southport Comb. Sludge 813	Lagoon Sludge 816
Laboratory No.:	C26599	C26717	C26718
Sampling Date:	2/2/82	2/3/82	2/5/82
Date Received:	2/8/82	2/9/82	2/9/82
Date Analyzed:	3/12/82	3/15/82	3/15/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Dichloromethane 44	210	240	ND
Chloroform 23	14	15	270
1,1,1-Trichloroethane 11	4	NQ	ND
Benzene 4	ND	ND	ND
Toluene 86	15	45	217
Tetrachloroethylene 85	2	ND	ND
Ethylbenzene 38	3	21	150
104 m,p-Xylenes	37	54	370
105 o-Xylene	11	17	100
1,3-Dichlorobenzene 26	0.1	ND	ND
1,4-Dichlorobenzene 27	1	0.7	6
1,2-Dichlorobenzene 25	0.6	0.5	60
Naphthalene 55	6	31	390
cis-1,2-Dichloroethene	4	116	72
Trichloroethylene 87	34	112	ND

1 ND: Not Detected
2 NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fang-Yi Lien Date March 18, 1982

Checked by Robert R. Clark Date 25 March, 1982

L6/mm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-2-82 C26599 8-10	2-3-82 C26717 8-13	2-5-82 C26718 8-16
Methanethiol	(260)	(3000)	(1930)
Acetone	820	450	(2980)
Trimethylbenzene isomers	(170)	(60)	-
Decane	(70)	(350)	(17260)
1-Ethyl-2-methylbenzene isomers	(80)	-	-
Undecane	(70)	(380)	(8130)
Dodecane	(50)	(160)	(5032)
Dimethyldisulfide	(40)	(2640)	(5900)
Tetrahydrofuran	(24)	-	-
? 4-Methyl-2-pentanone	(10)	-	-
Thiobismethane	-	(909)	-
Nonane	-	(50)	(1630)
? 1-Methyl-4-(1-methylethenyl)cyclohexene	-	(130)	(6410)
Tridecane	-	-	(6280)
Tetradecane	-	-	(6580)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Feng-Yi Liew Date March 18, 1982

Checked by Robert R. Clark Date 25 March, 1982

L6/mm

Entered 4-19-82 Tmb

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont WAS 806	Southport Comb. Sludge 813	Southport Final Effluent 812
Laboratory No.:	C26596	C26597	C26598
Sampling Date:	2/2/82	2/2/82	2/2/82
Date Received:	2/8/82	2/8/82	2/8/82
Date Analyzed:	3/12/82	3/12/82	3/12/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Dichloromethane 44	56	150	25
Chloroform 23	11	21	9
1,1,1-Trichloroethane 11	ND	2	3
Benzene 4	ND	ND	NQ
Toluene 86	5	17	NQ
Tetrachloroethylene 85	ND	ND	6
Ethylbenzene 38	NQ	ND	NQ
164 m,p-Xylenes	7	40	NQ
165 o-Xylene	2	11	NQ
1,3-Dichlorobenzene 26	NQ	ND	0.1
1,4-Dichlorobenzene 27	NQ	0.3	0.8
1,2-Dichlorobenzene 25	NQ	0.3	0.3
Naphthalene 55	3	3	NQ
cis-1,2-Dichloroethene	ND	80	2
Trichloroethylene 87	ND	ND	5

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fong-Yi Lair Date March 18, 1982

Checked by Robert R. Clark Date 26 March, 1982

L6/mm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-2-82 C26596 806	2-2-82 C26597 813	2-2-82 C26598 812
Methanethiol	(2380)	(4380)	(5)
Acetone	110	250	35
Dimethylsulfide	(570)	(2000)	NQ
Thiobismethane	(50)	(30)	(5)
Dimethyltrisulfide	(40)	--	--
(1-Methylethyl)benzene isomers	(10)	--	--
1-Ethyl-2-methylbenzene isomers	--	(130)	--
Trimethylbenzene isomers	--	(90)	--
Undecane	--	(200)	--
Dodecane	--	(60)	--
Nonane	--	(40)	--
Decane	--	(300)	--
4-Methyl-2-pentanone	--	--	(1)
Tetrahydrofuran	--	--	(3)
6,6-Dimethyl-2-methylene-bicyclo/3.1.1/heptane	--	--	(1)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fong-Yi Lien Date March 18, 1982

Checked by Robert R. Clark Date 26 March, 1982

16/mm

Entered
4-19-82

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(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Southport Primary Effluent 810	Southport Comb. Sludge 813	Lagoon Sludge 816
Laboratory No.:	C26599	C26717	C26718
Sampling Date:	2/2/82	2/3/82	2/5/82
Date Received:	2/8/82	2/9/82	2/9/82
Date Analyzed:	3/12/82	3/15/82	3/15/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Dichloromethane 44	210	240	ND
Chloroform 23	14	15	270
1,1,1-Trichloroethane 11	4	NQ	ND
Benzene 4	ND	ND	ND
Toluene 86	15	45	217
Tetrachloroethylene 85	2	ND	ND
Ethylbenzene 38	3	21	150
164 m,p-Xylenes	37	54	370
165 o-Xylene	11	17	100
1,3-Dichlorobenzene 26	0.1	ND	ND
1,4-Dichlorobenzene 27	1	0.7	6
1,2-Dichlorobenzene 25	0.6	0.5	60
Naphthalene 55	6	31	390
cis-1,2-Dichloroethene	4	116	72
Trichloroethylene 87	34	112	ND

1 ND: Not Detected
2 NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fang-Yi Lien Date March 18, 1982

Checked by Robert R. Clark Date 25 March, 1982

L6/mm
750

Entered 4-9-82 Tmb

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(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont WAS 806	Southport Comb. Sludge 813	Southport Final Effluent 812
Laboratory No.:	C26596	C26597	C26598
Sampling Date:	2/2/82	2/2/82	2/2/82
Date Received:	2/8/82	2/8/82	2/8/82
Date Analyzed:	3/12/82	3/12/82	3/12/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Dichloromethane 44	56	150	25
Chloroform 23	11	21	9
1,1,1-Trichloroethane 11	ND	2	3
Benzene 4	ND	ND	NQ
Toluene 86	5	17	NQ
Tetrachloroethylene 85	ND	ND	6
Ethylbenzene 38	NQ	ND	NQ
164 m,p-Xylenes	7	40	NQ
165 o-Xylene	2	11	NQ
1,3-Dichlorobenzene 26	NQ	ND	0.1
1,4-Dichlorobenzene 27	NQ	0.3	0.8
1,2-Dichlorobenzene 25	NQ	0.3	0.3
Naphthalene 55	3	3	NQ
cis-1,2-Dichloroethene	ND	80	2
Trichloroethylene 87	ND	ND	5

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fong-Yi Lair Date March 18, 1982

Checked by Robert R. Clark Date 26 March, 1982

L6/mm
750

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis 8027 Job/P.O. No.: 1180.0030

Sample Description: Belmont Influent

Laboratory No.: BC3569

Sampling Date: 12/15/81

Date Received: 12/17/81

Date Analyzed: 12/20/81

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)
Chloroform 23	34
cis-1,2-Dichloroethene —	3.0
1,1,1-Trichloroethane 11	23
Benzene 4	17
Bromodichloromethane 48	1.1
Trichloroethylene 37	8.6
Toluene 36	109
Dibromochloromethane 51	0.8
Tetrachloroethylene 85	39
Ethylbenzene 38	23
m,p-Xylene	84
o-Xylene	29

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative quantitation based on internal standard

Submitted by [signature] Date January 5, 1982

Checked by Albert R. Turnell Date 7 JAN '82

L2/lk
250

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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555 East Walnut Street, Pasadena, California 91101
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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description: Belmont Influent

Laboratory No.: BC3569

Sampling Date: 12/15/81

Date Received: 12/17/81

Date Analyzed: 12/20/81

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)
1,3-Chlorotoluene	0.8
Propylbenzene	3.4
Naphthalene	7.2
1,3-Dichlorobenzene	0.3
1,4-Dichlorobenzene	2.2
1,2-Dichlorobenzene	6.1
1,3,5-Trichlorobenzene	NQ
1,2,4-Trichlorobenzene	0.2
1,2,3-Trichlorobenzene	0.1

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative quantitation based on internal standard

Submitted by _____ Date January 5, 1982

Checked by Albert R. Trundle Date 7 JAN '82

L2/lk

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description: Belmont Influent 802

Laboratory No.: BC3569

Sampling Date: 12/15/81

Date Received: 12/17/81

Date Analyzed: 12/20/81

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)
Chloroform	34
cis-1,2-Dichloroethene	3.0
1,1,1-Trichloroethane	23
Benzene	17
Bromodichloromethane	1.1
Trichloroethylene	8.6
Toluene	109
Dibromochloromethane	0.8
Tetrachloroethylene	39
Ethylbenzene	23
m,p-Xylene	84
o-Xylene	29

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative quantitation based on internal standard

Submitted by _____ Date January 5, 1982

Checked by Albert R. Trundell Date 7 JAN '82

L2/1k
250

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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description: Belmont Influent

Laboratory No.: BC3569

Sampling Date: 12/15/81

Date Received: 12/17/81

Date Analyzed: 12/20/81

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)
1,3-Chlorotoluene —	0.8
Propylbenzene —	3.4
Naphthalene 55	7.2
1,3-Dichlorobenzene 26	0.3
1,4-Dichlorobenzene 27	2.2
1,2-Dichlorobenzene 25	6.1
1,3,5-Trichlorobenzene —	NQ = -2
1,2,4-Trichlorobenzene 8	0.2
1,2,3-Trichlorobenzene —	0.1

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative quantitation based on internal standard

Submitted by Flora H. Lin Date January 5, 1982

Checked by Albert R. Trundl Date 7 JAN '82

L2/lk

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(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis 909 Job/P.O. No.: 1180.0030 906 817

Sample Description:	Filter Effluent	Ozone #1 Effluent	Primary Influent
Laboratory No.:	C66180	C66181	C66182
Sampling Date:	June 16-17, 1982	June 16-17, 1982	June 16-17, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 21, 1982	June 21, 1982	June 30, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
23	Chloroform	ND	ND	5.5
11	1,1,1-Trichloroethane	ND	ND	8.1
4	Benzene	ND	ND	45
87	Trichloroethene	ND	ND	5.0
86	Toluene	ND	ND	55
85	Tetrachloroethene	ND	ND	7.4
38	Ethylbenzene	ND	ND	7.9
164	m,p-Xylene	ND	ND	34
165	o-Xylene	ND	ND	10

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schutz Date July 11, 1982

Checked by Robert R Clark Date 13 July, 1982

L1/rm
250

Entered 4-20-82 TMB

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Southport Influent 809	Southport Primary Effluent 810
Laboratory No.:	C26715	C26716
Sampling Date:	2/3/82	2/3/82
Date Received:	2/9/82	2/9/82
Date Analyzed:	3/12/82	3/12/82

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
	1,1,1-Trichloroethane 11	NQ	NQ
	Trichloroethene 87	66	60
	Toluene 86	89	21
	Ethylbenzene 38	NQ	ND
164	m,p-Xylenes	13	NQ
165	o-Xylene	15	NQ
	Naphthalene 55	NQ	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by _____ Date March 18, 1982

Checked by Robert R. Clark Date 22 March, 1982

16/mm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Trickling Filter Influent	TRAVEL BLANK
Laboratory No.:	C66183	C65979
Sampling Date:	June 16-17, 1982	Not Available
Date Received:	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
11	1,1,1-Trichloroethane	2.7	ND
4	Benzene	30	ND
87	Trichloroethene	3.7	ND
86	Toluene	45	ND
38	Ethylbenzene	5.0	ND
84	m,p-Xylene	22	ND
85	o-Xylene	6.9	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Sebaltz Date July 11, 1982
Checked by Robert R. Clark Date 13 July, 1982

L1/rm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)	
		901	
		C66183	C65979
	Sulfur dioxide	D	ND
150	Methanethiol	(68)	ND
	Butane CHECK 161	(6)	ND
152	Thiobismethane	(44)	ND
175	Tetrahydrofuran	100	ND
173	Dimethyldisulfide	(63)	ND
153	Ethylmethylbenzene isomer	(10)	ND
151	Trimethylbenzene isomer > ADDED TOGETHER	(3)	ND
151	Trimethylbenzene isomer	(8)	ND
~~172~~ 152	Undecane	(3)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schultz Date July 11, 1982

Checked by Robert A. Olsen Date 13 July, 1982

L1/rm

Entered 4-19-82

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis

Job/P.O. No.: 1180.0030

Sample Description:	Belmont DAF 808	Belmont Influent 802	Belmont W.A.S. 806
Laboratory No.:	C26707	C26709	C26710
Sampling Date:	2/3/82	2/3/82	2/3/82
Date Received:	2/9/82	2/9/82	2/9/82
Date Analyzed:	3/12/82	3/12/82	3/12/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Methylene chloride 44	58	63	ND
1,1-Dichloroethene 29	NQ	ND	ND
Chloroform 23	84	42	39
1,1,1-Trichloroethane 11	NQ	22	ND
Trichloroethene 87	14	7	ND
Bromodichloromethane 48	NQ	NQ	ND
Toluene 86	100	230	ND
Dibromochloromethane 51	NQ	ND	ND
Tetrachloroethene 85	NQ	18	ND
Ethylbenzene 38	NQ	21	ND
154 m,p-Xylenes	20	44	5
155 o-Xylene	22	35	NQ
Benzene 4	ND	120	ND

-1 ND: Not Detected
-2 NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by Robert R. Clark Date 27 March, 1982

16/mm
750

Entered 4-20-82 TMB

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Southport 809 Influent	Belmont 805 Final Effluent	Southport 812 Final Effluent
Laboratory No.:	C26706	C26708	C26714
Sampling Date:	2/2/82	2/3/82	2/3/82
Date Received:	2/9/82	2/9/82	2/9/82
Date Analyzed:	3/12/82	3/12/82	3/12/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
cis-1,2-dichloroethene	20	1	ND
Chloroform 23	32	19	ND
1,1,1-Trichloroethane 11	8	5	ND
Trichloroethene 87	65	1	ND
Toluene 86	50	10	NQ
Ethylbenzene 38	NQ	4	NQ
154 m,p-xylenes	NQ	6	NQ
155 o-xylene	NQ	7	NQ
Naphthalene 55	9	NQ	NQ
Methylene chloride 44	45	12	ND
1,1-Dichloroethene 29	ND	3	ND
1,2-Dichloroethane 10	ND	NQ	12
Benzene 4	ND	1	ND
Tetrachloroethene 85	NQ	4	29
1,3-Dichlorobenzene 26	NQ	NQ	NQ
1,2-Dichlorobenzene 25	NQ	1	1
1,4-Dichlorobenzene 27	NQ	1	NQ

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by Robert R. Clark Date 27 March 1982

L6/mm 750

Entered 4-19-82

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

Entered

Sample Description:	Belmont Primary Influent 817	Belmont Primary Sludge 807	Belmont Solids DAF & IS 808
Laboratory No.:	C26593	C26594	C26595
Sampling Date:	2/2/82	2/2/82	2/2/82
Date Received:	2/8/82	2/8/82	2/8/82
Date Analyzed:	3/12/82	3/12/82	3/12/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Dichloromethane 44	450	1770	420
Chloroform 23	29	55	21
1,1,1-Trichloroethane 11	4	10	2
Benzene 4	3	4	ND
Toluene 86	22	87	26
Tetrachloroethylene 85	4	21	5
Ethylbenzene 38	10	32	6
m,p-Xylenes	60	200	58
o-Xylene	17	55	16
1,3-Dichlorobenzene 26	NQ	NQ	ND
1,4-Dichlorobenzene 27	0.4	1.6	0.3
1,2-Dichlorobenzene 25	0.6	2.8	0.6
Naphthalene 55	3	48	6
cis-1,2-Dichloroethene	ND	ND	6

Entered?

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-1 ND: Not Detected
-2 NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fong-Yi Lien — Date March 18, 1982

Checked by Robert R. Clark — Date 25 March 1982

L6/mm
750

Entered 4-20-82

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(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont Effluent 805	Belmont Influent 802	Belmont Primary Effluent 803
Laboratory No.:	C26590	C26591	C26592
Sampling Date:	2/2/82	2/2/82	2/2/82
Date Received:	2/8/82	2/8/82	2/8/82
Date Analyzed:	3/11/82	3/11/82	3/11/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Chloroform 23	175	320	280
1,1,1-Trichloroethane 11	13	37	38
Benzene 4	NQ	44	42
Bromodichloromethane 48	92	75	57
Toluene 86	ND	270	150
Dibromochloromethane 51	63	48	43
Tetrachloroethene 85	NQ	46	40
Trichloroethene 87	ND	11	10
Ethylbenzene 38	ND	68	53
m,p-Xylenes	ND	100	71
o-Xylene	ND	90	67
Propylbenzene	ND	NQ	NQ
Naphthalene 55	ND	58	14

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Leyhe Pavlich Date March 18, 1982

Checked by Robert R. Clark Date 30 March, 1982

L6/mm
750

Entered
4-20-82
TMB

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Southport Influent 809	Belmont Influent 802	Belmont Primary Effluent 803
Laboratory No.:	C26336	C26337	C26338
Sampling Date:	1/28/82	1/30/82	1/30/82
Date Received:	2/2/82	2/2/82	2/2/82
Date Analyzed:	3/11/82	3/11/82	3/11/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Chloroform 23	100	140	27
1,1,1-Trichloroethane 11	210	17	NQ
Benzene 4	31	87	53
Trichloroethylene 87	100	10	NQ
Bromodichloromethane 48	57	76	18
Toluene 86	150	NQ	11
Dibromochloromethane 51	44	51	NQ
Ethylbenzene 38	26	73	76
m,p-Xylenes	53	75	120
o-Xylene	42	65	55
Propylbenzene	25	ND	ND
Naphthalene 55	30	NQ	NQ
Tetrachloroethene 85	NQ	NQ	NQ

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Gayle Parlish Date March 18, 1982

Checked by Robert R. Clark Date 30 March, 1982

L6/mm
950

Entered 4-20-82 TMB

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Rec APR 2 Job/P.O. No.: 1180.0030

Sample Description:	Belmont ~~Primary Effluent~~ 803	Southport Influent 809
Laboratory No.:	C26335	C26589
Sampling Date:	1/28/82	1/30/82
Date Received:	2/2/82	2/8/82
Date Analyzed:	3/11/82	3/11/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)	
Chloroform 23	140	76
1,1,1-Trichloroethane 11	78	10
Benzene 4	210	37
Trichloroethene 87	72	23
Bromodichloromethane 48	86	50
Toluene 86	260	ND
Dibromochloromethane 51	42	35
Ethylbenzene 38	84	85
165 m,p-Xylenes	120	160
155 o-Xylene	115	79
151 Propylbenzene	12	ND
Naphthalene 55	18	15

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by [signature] Date 29 March, 1982

16/mm
5-20

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a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
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See March 4 Status Summary

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont Influent 802	Belmont ~~Final~~ Primary Effluent 805? 803	Belmont Influent 802
Laboratory No.:	C26332	C26333	C26334
Sampling Date:	1/26/82	1/26/82 7/15/82	1/28/82
Date Received:	2/2/82	2/2/82	2/2/82
Date Analyzed:	3/11/82	3/11/82	3/11/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Methylene chloride 44	850	ND	ND
Benzene 4	130	67	260
Toluene 86	850	730	330
Ethyl benzene 38	340	200	110
m,p-xylenes	410	190	200
o-xylene	400	250	120
Propyl benzene	45	22	9
Chloroform 23	29	130	140
Trichloroethylene 87	27	33	28
Bromodichloromethane 48	ND	55	57
Dibromochloromethane 51	ND	55	57
Naphthalene 55	34	16	11
1,1,1-Trichloroethane 11	18	31	52
Tetrachloroethene 85	19	20	43

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Kathe Parlish Date March 18, 1982

Checked by Robert A. Clark Date 30 March, 1982

L6/mm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont Primary Effluent	Belmont Influent	~~Belmont~~ Influent
Laboratory No.:	C15943	C15944	C15945
Sampling Date:	1/24/82	1/24/82	1/24/82
Date Received:	1/26/82	1/26/82	1/26/82
Date Analyzed:	1/28/82	1/28/82	1/28/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Chloroform 23	3	2	1
1,1,1-Trichloroethane 11	5	6	7
Benzene 4	22	24	6
Cis-1,2-Dichloroethene —	2	2	4
Toluene 86	13	12	10
Tetrachloroethylene 85	16	14	27
Ethyl benzene 38	66	75	6
m,p-Xylene —	310	330	32
o-Xylene —	130	130	14
Propyl benzene —	2	1	ND
Naphthalene 55	ND	ND	8

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fong-Yi Lin Date February 12, 1982

Checked by Robert R. Clark Date 17 Feb, 1982

L10/mm
750

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont Primary Effluent 803	Belmont Influent 802	Southport Influent 807
Laboratory No.:	C15771	C15772	C15773
Sampling Date:	January 20, 1982	January 20, 1982	January 20, 1982
Date Received:	January 22, 1982	January 22, 1982	January 22, 1982
Date Analyzed:	January 28, 1982	January 28, 1982	January 28, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Dichloromethane	9	ND	ND
Chloroform	14	15	5
1,1,1-Trichloroethane	28	30	45
Benzene	43	50	5
Trichloroethylene	21	11	65
Toluene	140	330	26
Tetrachloroethylene	19	20	27
Ethylbenzene	70	94	6
m,p-Xylene	180	330	26
o-Xylene	80	110	10
Propylbenzene	14	20	5
Naphthalene	9	4	7
1,3-Dichlorobenzene	NQ	ND	ND
1,4-Dichlorobenzene	1	ND	ND
1,2-Dichlorobenzene	1	ND	ND
Cis-1,2-Dichloroethene	2	2	8

( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
ND: Not Detected

Submitted by [illegible] Date February 12, 1982

L11/mm 750 Checked by Robert R. Clark Date 23 Feb, 1982

Entered

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555 East Walnut Street, Pasadena, California 91101
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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont Primary Effluent	Belmont Influent	Southport Influent
Laboratory No.:	C15771	C15772	C15773
Sampling Date:	January 20, 1982	January 20, 1982	January 20, 1982
Date Received:	January 22, 1982	January 22, 1982	January 22, 1982
Date Analyzed:	January 28, 1982	January 28, 1982	January 28, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Dichloromethane 44	9	ND = -1	ND = -1
Chloroform 23	14	15	5
1,1,1-Trichloroethane 11	28	30	45
Benzene 4	43	50	5
Trichloroethylene 87	21	11	65
Toluene 86	140	330	26
Tetrachloroethylene 85	19	20	27
Ethylbenzene 38	70	94	6
m,p-Xylene —	180	330	26
o-Xylene —	80	110	10
Propylbenzene —	14	20	5
Naphthalene 55	9	4	7
1,3-Dichlorobenzene 26	NQ = -2	ND = -1	ND = -1
1,4-Dichlorobenzene 27	1	ND = -1	ND = -1
1,2-Dichlorobenzene 25	1	ND = -1	ND = -1
Cis-1,2-Dichloroethene —	2	2	8

( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
ND: Not Detected

Submitted by Fong-Yi Lin Date February 12, 1982

L11/mm 750 Checked by Robert R. Clark Date 23 Feb. 1982

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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Belmont Primary Effluent 803	Belmont Influent 802	Belmont Influent 809
Laboratory No.:	C15943	C15944	C15945
Sampling Date:	1/24/82	1/24/82	1/24/82
Date Received:	1/26/82	1/26/82	1/26/82
Date Analyzed:	1/28/82	1/28/82	1/28/82

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Chloroform	3	2	1
1,1,1-Trichloroethane	5	6	7
Benzene	22	24	6
Cis-1,2-Dichloroethene	2	2	4
Toluene	13	12	10
Tetrachloroethylene	16	14	27
Ethyl benzene	66	75	6
m,p-Xylene	310	330	32
o-Xylene	130	130	14
Propyl benzene	2	1	ND
Naphthalene	ND	ND	8

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by _____ Date February 12, 1982

Checked by Robert R. Clark Date 17 Feb, 1982

L10/mm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Other Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)
	BC3569
1-Ethyl-3,5-dimethylbenzene	(25)
1,2,3,5-Tetramethylbenzene	(27)
1,2,4,5-Tetramethylbenzene	(33)
2-Ethyl-1,4-dimethylbenzene	(35)
1-Ethyl-2,4,5-trimethylbenzene	(29)
2-Methylnaphthalene	(15)
1-Methylnaphthalene	(14)
2-Butanone	300
Acetone	390
Limonene	(28)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative quantitation based on internal standard

Submitted by _____ Date January 5, 1982

Checked by Albert R. Trundell Date 7 JAN '82

L2/lk

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Other Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)
	12-15-81 BC3569 302
Methanethiol	(168)
Ethanol	(152)
2-Propanol	(39)
Diethylether	(24)
Thiobismethane	(29)
Diisopropylether	(30)
Methylcyclohexane	(6.8)
2-Nitropropane	(3.1)
4-Methyl-2-pentanone	(39)
Dimethyldisulfide	(25)
Octane	(4.3)
Nonane	(18)
X 2-Methylpropyl-2-methylpropionate	(14)
1-Methylethylbenzene	(12)
Propylcyclohexane	(9)
5-Ethyl-2-methylheptane	(11)
3-Ethyl-2-methylheptane	(11)
1-Ethyl-2-methylbenzene	(162)
1,3,5-Trimethylbenzene	(58)
1-Ethyl-2-methylbenzene	(37)
1,2,4-Trimethylbenzene	(191)
Decane	(62)
1,2,3-Trimethylbenzene	(91)
1,4-Diethylbenzene	(94)
1,2-Diethylbenzene	(65)
X 1-Methyl-3-(1-methylethyl)benzene	(44)
X 1-Methyl-4-(1-methylethyl)benzene	(104)
1-Ethyl-3,5-dimethylbenzene	(35)
Undecane	(58)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative quantitation based on internal standard

Submitted by _____ Date January 5, 1982

Checked by Albert R. Trundell Date 7 JAN '82

L2/lk

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Other Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)
	12-15-81 BC3569 802
~~Methanethiol~~	(168)
~~Ethanol~~	(152)
2-Propanol	(39)
Diethylether	(24)
~~Thiobismethane~~	(29)
Diisopropylether	(30)
Methylcyclohexane	(6.8)
2-Nitropropane	(3.1)
~~4-Methyl-2-pentanone~~	(39)
~~Dimethyldisulfide~~	(25)
~~Octane~~	(4.3)
Nonane	(18)
2-Methylpropyl-2-methylpropionate	(14)
1-Methylethylbenzene	(12)
Propylcyclohexane	(9)
5-Ethyl-2-methylheptane	(11)
3-Ethyl-2-methylheptane	(11)
1-Ethyl-2-methylbenzene	(162)
1,3,5-Trimethylbenzene	(58)
1-Ethyl-2-methylbenzene	(37)
1,2,4-Trimethylbenzene	(191)
Decane	(62)
1,2,3-Trimethylbenzene	(91)
1,4-Diethylbenzene	(94)
1,2-Diethylbenzene	(65)
1-Methyl-3-(1-methylethyl)benzene	(44)
1-Methyl-4-(1-methylethyl)benzene	(104)
~~1-Ethyl-3,5-dimethylbenzene~~	(35)
Undecane	(58)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative quantitation based on internal standard

Submitted by [signature] Date January 5, 1982

Checked by Albert R. Trunell Date 7 JAN '82

L2/lk

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	2-22-82 C38282 817	2-22-82 C38283 830
X cis-1,2-Dichloroethylene 30	3	ND
Methylethylketone	33	ND
Tetrahydrofuran	38	ND
Acetone	150	ND
Methylethylbenzene isomers	65	NQ
Trimethylbenzene isomers	81	NQ
Decane	(110)	ND
(1-Methylbutyl)-benzene	(5)	ND
Methanethiol	(85)	ND
Ethanol	(110)	(11)
1,1'-oxy-bis-Ethane	(45)	ND
1-Methyl-4-propylbenzene	(140)	ND
Diethylbenzene	(85)	ND
1-Methyl-3-(1-methyl-ethyl)benzene	(140)	ND
1,1-Dibromo-2-chloro-2-fluorocyclopropane	ND	(45)
Ethylpyridine	ND	(2)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only

Submitted by Gayle Parlish Date April 4, 1982

Checked by Robert R. Clark Date 14 April, 1982

L9/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten largest non-priority pollutants detected:

Compound	Concentration (micrograms/liter)		
	C15943 803 1-24-82	C15944 802 1-24-82	C15945 809 1-24-82
1-Butene	(140)	—	(20)
2-Methyl-1-propanol	(510)	(140)	(60)
Acetic acid butyl ester	(4900)	(13600)	(1800)
1-Ethyl-2-methyl benzene isomers	(80)	(30)	(30)
Decane	(70)	(50)	(120)
Undecane	(100)	(100)	(250)
Dodecane	(110)	(150)	(320)
Tridecane	(100)	(190)	(290)
Tetradecane	(100)	(200)	(210)
Trimethyl benzene isomers	(200)	(50)	(100)
(1-Methyl ethyl) benzene isomer	—	(30)	—

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.
—: Not one of the ten largest non-priority pollutants detected.

Submitted by _____ Date February 12, 1982

Checked by _____ Date _____

L10/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten largest non-priority pollutants detected:

Compound	Concentration (micrograms/liter)		
	1-20-82 C15771 803	1-20-82 C15772 802	1-20-82 C15773 809
Methanethiol	(200)	(90)	(210)
Ethanol	(70)	—	—
Acetone	(780)	(710)	(490)
2-Propanol	(70)	—	—
4-Methyl-2-pentanone	(270)	(120)	(20)
1-Ethyl-2-methylbenzene isomers	(850)	(680)	(280)
Trimethylbenzene isomers	(1060)	(1120)	(600)
1,4-Diethylbenzene isomer	(210)	(140)	—
Decane	(220)	(180)	(360)
* 1-Methyl-3-(1-methylethyl) benzene isomer	(230)	(180)	—
Undecane	—	(160)	(440)
(1-Methylethyl)benzene isomer	—	(40)	—
Dodecane	—	—	(510)
Tridecane	—	—	(570)
Tetradecane	—	—	(490)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.
—: Not one of the ten largest non-priority pollutants detected.

Submitted by [illegible] Date February 12, 1982

Checked by Robert R. Clark Date 24 Feb, 1982

L11/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-2-82 C26590 805	2-2-82 C26591 802	2-2-82 C26592 803
Propane	(23)	-	-
Undecane	(7)	(90)	(27)
Methylethylbenzene isomers	-	(170)	(93)
Trimethylbenzene isomers	-	(320)	(170)
Decane	-	(55)	(47)
Dimethylethylbenzene isomers	-	(420)	(59)
Methylpropylbenzene isomers	(7)	(42)	-
Tetramethylbenzene isomers	-	(180)	-
Methanethiol	-	-	(290)
Hexanone	-	(35)	(23)
Dimethyldisulfide	-	-	(52)
? Pentane	-	-	(41)
Methylethylketone	-	140	-
Acetone	-	730	1800
Hexadecane	(55)	-	-
? Hexane	(9)	-	-

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Sophie Parlesh Date March 18, 1982

Checked by Robert R. Clark Date 30 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	1-26-82 C26332 SO2	1-26-82 C26333	1-28-82 C26334 SO2
Methylethylbenzene isomers	(1600)	(800)	(330)
Trimethylbenzene isomers	(1300)	(650)	(280)
Ethenylmethylbenzene isomers	(100)	—	—
Diethylbenzene isomers	(340)	—	—
Dimethylethylbenzene isomers	(480)	(160)	(45)
Methanethiol	—	(250)	(140)
? 4-Methyl-2-pentanone	—	(220)	—
Dimethyldisulfide	—	(350)	(190)
? Butane	—	—	(135)
Undecane	(190)	(30)	(16)
Methylethylketone	500	340	50
Acetone	1700	1600	680
Decane	(120)	(50)	(30)
1-Butene	(50)	—	—

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Rayhe Pavlich Date March 18, 1982

Checked by Robert A. Clark Date 30 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-2-82 C26593 817	2-2-82 C26594 807	2-2-82 C26595 808
Methanethiol	(670)	(940)	(2640)
Acetone	750	1100	320
Dimethylsulfide	(190)	(470)	(480)
Trimethylbenzene isomers	(180)	—	(90)
1-Ethyl-2-methylbenzene isomers	(100)	—	(110)
1-Ethyl-2,4-dimethylbenzene isomers	(160)	—	—
Tetramethylbenzene isomers	(100)	—	—
? 4-Methyl-2-pentanone	(40)	—	—
Thiobismethane	(40)	—	(50)
Tetrahydrofuran	30	—	—
Ethanol	—	(640)	(50)
Nonane	—	(570)	—
Decane	—	(1720)	(160)
Undecane	—	(1830)	(140)
Dodecane	—	(1380)	(40)
Tridecane	—	(1410)	—
Tetradecane	—	(1240)	—

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Feng-Yi Liu Date March 18, 1982

Checked by Robert R. Clark Date 23 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	1-28-82 C26335 803	1-30-82 C26589 809
Methanethiol	(240)	—
Isopropylbenzene	(22)	—
Methylethylbenzene isomers	(400)	(60)
Trimethylbenzene isomers	(350)	(89)
Ethyldimethylbenzene	(74)	(30)
? Butane	—	(30)
Dimethyldisulphide	(210)	(47)
Decane	—	(51)
Undecane	(25)	(115)
Methylethylketone	130	20
Acetone	3500	ND
Tetramethylbenzene	(30)	(15)
Dimethylhexane	—	(9)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by Robert R. Clark Date 29 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-2-82 C26599 S10	2-3-82 C26717 S13	2-5-82 C26718 S16
Methanethiol	(260)	(3000)	(1930)
Acetone	820	450	(2980)
Trimethylbenzene isomers	(170)	(60)	-
Decane	(70)	(350)	(17260)
1-Ethyl-2-methylbenzene isomers	(80)	-	-
Undecane	(70)	(380)	(8130)
Dodecane	(50)	(160)	(5032)
Dimethyldisulfide	(40)	(2640)	(5900)
Tetrahydrofuran	(24)	-	-
? 4-Methyl-2-pentanone	(10)	-	-
Thiobismethane	-	(909)	-
Nonane	-	(50)	(1630)
? 1-Methyl-4-(1-methylethenyl)cyclohexene	-	(130)	(6410)
Tridecane	-	-	(6280)
Tetradecane	-	-	(6580)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Feng-Yi Liu Date March 18, 1982

Checked by Robert R. Clark Date 25 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-3-82 C26707 808	2-3-82 C26709 802	2-3-82 C26710 806
Methanethiol	(1100)	(520)	(2200)
Dimethyldisulfide	(150)	—	(540)
Methylethylbenzene	(140)	(110)	—
Trimethylbenzene	(120)	(130)	—
Decane	(70)	-	—
Ethyldimethylbenzene	(35)	(32)	—
Undecane	(45)	(18)	—
Methylethylketone	60	52	—
Acetone	ND	280	—
Isopropylbenzene	-	(12)	—
? 1-Methyl-4-(1-methylethenyl)cyclohexene	-	(25)	—
Tetramethylbenzene	(24)	(18)	—
Dimethyltrisulfide	-	-	(57)
? 2-Propyl-1-heptanol	(23)	—	—
Dimethyltrisulfide	—	—	(57)
? Pentane	—	—	(20)
Tetramethylpentane	—	—	(13)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by Robert R. Clark Date 27 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	1-28-82 C26336 809	1-30-82 C26337 802	1-30-82 C26338 803
Hexanone	(54)	-	-
Dimethyldisulphide	(140)	(56)	-
Methylethylbenzene isomers	(1200)	(35)	(56)
Trimethylbenzene isomers	(1000)	(60)	(66)
1-Methyl-4-(1-methylethenyl)cyclohexene	(160)	(15)	-
Indan	(84)	-	-
Dimethylethylbenzene isomers	(140)	-	(20)
Isopropylbenzene	-	(13)	(20)
Methanethiol	(60)	(94)	(94)
Acetone	990	230	(30)
Undecane	(45)	-	-
Tetramethylbenzene isomers	-	-	(10)
Carbon disulfide	-	(50)	-
Hexane	-	(25)	-
2-Methyltridecane	-	(25)	-

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Ruth Parlish Date March 18, 1982

Checked by Robert R. Clark Date 30 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-3-82 C26711 503	2-3-82 C26712 517	2-3-82 C26713 [illegible]
Acetone	450	410	-
Isopropylbenzene	(12)	-	-
Ethylmethylbenzene	(120)	(170)	(1200)
Trimethylbenzene	(170)	(240)	(890)
Ethyldimethylbenzene	(32)	(48)	-
Methanethiol	(430)	(630)	(840)
Decane	(35)	(60)	(2000)
Undecane	-	(40)	(1800)
Ethanol	-	-	(460)
? Octane	-	-	(100)
Nonane	-	-	(770)
? 2,6-Dimethyloctane	-	-	(420)
4-Methyldecane	-	-	(910)
Tetramethylbenzene	(20)	(30)	--
Nonane	—	(15)	--
* (1,1-Dimethylethyl)benzene	(15)	—	--
o-Decylhydroxylamine	—	(35)	--

D: Detected but not quantified
ND: Not Detected
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NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by Robert R. Clark Date 27 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-2-82 C26596 SC6	2-2-82 C26597 S13	2-2-82 C26598 S12
Methanethiol	(2380)	(4380)	(5)
Acetone	110	250	35
Dimethylsulfide	(570)	(2000)	NQ
Thiobismethane	(50)	(30)	(5)
Dimethyltrisulfide	(40)	--	--
(1-Methylethyl)benzene isomers	(10)	--	--
1-Ethyl-2-methylbenzene isomers	--	(130)	--
Trimethylbenzene isomers	--	(90)	--
Undecane	--	(200)	--
Dodecane	--	(60)	--
Nonane	--	(40)	--
Decane	--	(300)	--
4-Methyl-2-pentanone	--	--	(1)
Tetrahydrofuran	--	--	(3)
6,6-Dimethyl-2-methylene-bicyclo/3.1.1/heptane	--	--	(1)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Feng-Yi Liu Date March 18, 1982

Checked by Robert R. Clark Date 26 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	2-2-82 C26706 809	2-2-82 C26708 805	2-3-82 C26714 812
Methanethiol	(190)	(28)	—
Acetone	2000	310	—
Dimethylhexane	(54)	—	—
Ethylmethylbenzene isomers	(300)	(20)	—
Trimethylbenzene isomers	(470)	(11)	—
Decane	(220)	—	—
Ethyldimethyl benzene	(100)	(5)	—
Undecane	(150)	—	—
Hexanone	—	(8)	—
Dihydroindene	—	(4)	—
cis-1,2-dichloroethene	—	—	(5)
1,1'-oxy-bis-ethane	—	—	(21)
2,2,5,5-tetramethyl-3-hexene	—	—	(1)
Methyl ethyl ketone	98	5	1.5
Tetrahydrofuran	47	24	—

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by Robert N. Clark Date 27 March, 1982

L6/mm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Ten Largest Non-priority Pollutants Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	2-3-82 C26715 809	2-3-82 C26716 810
Methanethiol	(300)	(260)
Acetone	420	85
Nonane	(40)	-
4-Methyldecane	(100)	-
1-Methyl-4-(1-methylethenyl)cyclohexene	(60)	-
Undecane	(190)	(50)
Methylethylketone	-	60
Ethylmethylbenzene	-	(70)
Trimethylbenzene	(100)	(80)
Decane	(190)	(40)
Ethyldimethylbenzene	(95)	(35)
Tetramethylbenzene	(25)	(25)
1-Methyl-4-(1-methylethenyl)cyclohexane	—	(25)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date March 18, 1982

Checked by Robert R. Clark Date 22 March, 1982

L6/mm

READ 7

MAIL #6

From: RRC 5-MAY-1982 09:39
To: TMG
Subj: RE: Indianapolis voa analyses

The actual assisnment of position number is very difficult using a GC/MS unless one runs actual standards of each isomer. Therefore when we say 1-Ethyl-2-methylbenzene it could actually be any isomer of that compound, i.e. 1,2 or 1,3 or 1,4. We try to be consistant in our numbering, in other words name the same peak the same name every time even though it may not be the correct isomer. In many of the later reports we refer to Ethylmethylbenzene isomers, which is the sum of all the Ethylmethylbenzenes in the sample. Therefore for this sample you should either sum the two values and call it Ethylmethylbenzene isomers or call the first one the 1,2 isomer and the second one the 1,4 isomer. If you have any more questions please let me know.

By the way, I would recommend that you sum the two concentrations and call it the Ethylmethylbenzene isomers. That way you will be consistant with the future reports and don't have to worry about the correct assisnment of the isomers.

MAIL>

READ 8

MAIL #6

From: RRC 5-MAY-1982 09:39
To: TMG
Subj: RE: Indianapolis voa analyses

The actual assisnment of position number is very difficult using a GC/MS unless one runs actual standards of each isomer. Therefore when we say 1-Ethyl-2-methylbenzene it could actually be any isomer of that compound, i.e. 1,2 or 1,3 or 1,4. We try to be consistant in our numbering, in other words name the same peak the same name every time even though it may not be the correct isomer. In many of the later reports we refer to Ethylmethylbenzene isomers, which is the sum of all the Ethylmethylbenzenes in the sample. Therefore for this sample you should either sum the two values and call it Ethylmethylbenzene isomers or call the first one the 1,2 isomer and the second one the 1,4 isomer. If you have any more questions please let me know.

By the way, I would recommend that you sum the two concentrations and call it the Ethylmethylbenzene isomers. That way you will be consistant with the future reports and don't have to worry about the correct assisnment of the isomers.

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MAIL> DEL ALL
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No more messages

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7A

1	10	100	1000	10,000

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

WALNUT OFFICE
RECEIVED
SEP 7 1982
JAMES M. MONTGOMERY CONSULTING ENGINEERS, INC.

Report of Analysis by GC/MS for
STEAM DISTILLED, PURGEABLE VOLATILE ORGANICS

NOT ENTERED

Client: Indianapolis Job/P.O. No.: 1180.0030

	906	907	
Sample Description:	Ozone #1 Effluent	Ozone #2 Effluent	Carbon Adsorption
Laboratory No.:	C81119	C81120	C81149
Sampling Date:	August 18-19, 1982	August 18-19, 1982	August 19, 1982
Date Received:	August 24, 1982	August 24, 1982	August 24, 1982
Date Analyzed:	August 26, 1982	August 26, 1982	August 26, 1982

Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
	Ethanol	(1.1)	(0.7)	(1.4)
	2-Propenal	(0.6)	(0.2)	ND
3	Acrylonitrile	3.8	3.7	0.9
174	Acetone	(1.0)	(0.4)	ND
	2-Methylpropanenitrile	3.9	UTD	1.5
	Butanal	1.4	1.0	0.2
	2-Methyl-2-butanol	ND	0.2	ND
	Propanenitrile	0.2	ND	ND
	2-Butanone	(0.2)	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.
UTD: Unable to determine (interference)

Submitted By [signature] Checked By [signature]

L20RM20829
975

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
STEAM DISTILLED, PURGEABLE VOLATILE ORGANICS
(Continued)

Other Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81119	C81120	C81149
1-Pentanol	0.1	ND	ND
Heptanal	0.6	0.3	ND
1-Hexanol	0.1	ND	ND
2-Methylpropanal	(1.9)	(1.4)	(0.2)
2-Methyl-2-propenenitrile	(0.7)	(0.4)	NA
2-Butenal	(6.6)	(4.4)	(0.6)
3-Methyl-2-butanone	(0.9)	NA	NA
2,3-Dimethyl-2-butanal	(1.1)	(0.8)	(0.04)
3,3-Dimethyl-1-butene	(1.7)	(0.9)	NA
2-Hexanone	(2.2)	(1.0)	NA
3-Methyl-2-pentanone	(0.8)	NA	NA
Ethylmethyldioxolane isomers	(5.2)	(3.0)	(0.04)
170 Methylpyridine isomers	(1.6)	(1.0)	(0.7)
2-Methyl-2-pentenal	(1.2)	NA	NA
171 Ethylpyridine isomers	(1.1)	(1.5)	(1.3)
4-Methyl-4-octanol	(1.3)	(1.1)	NA
3-Methyl-3-octanol	(1.8)	(1.6)	NA
4-Methyl-3-penten-2-one	NA	NA	(0.3)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By _____ Checked By _____

L20RM20829

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
STEAM DISTILLED, PURGEABLE VOLATILE ORGANICS
(Continued)

Other Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C81119	C81120	C81149
Hexanal	NA	NA	(0.2)
167 Ethylmethylpyridine	NA	NA	(0.3)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L20RM20829

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
STEAM DISTILLED, PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)
Acetonitrile	0.1
Ethanol	0.5
2-Propenal	0.5
Acrylonitrile	0.01
Acetone	0.5
2-Methylpropanenitrile	0.01
Butanal	0.01
2-Methyl-2-butanol	0.01
Propanenitrile	0.01
2-Butanone	0.1
1-Pentanol	0.01
Heptanal	0.01
1-Hexanol	0.01

all codes parameters entered 10/1 JFW

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS – √

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	WAS Grab 911
Laboratory No.:	C80809
Sampling Date:	August 16, 1982
Date Received:	August 18, 1982
Date Analyzed:	August 24, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter) 911
Methylene chloride 44	4.4
Chloroform 23	8.0
Dichlorobromomethane 48	6.0
Toluene 86	4.6
Dibromochloromethane 51	7.0
Bromoform 47	2.0
Naphthalene 55	2.0

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schutz Checked By Robert R. Clark

L4RM20913
25C

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter) 911
	C80809
Acetone 174	41
Methylethylketone 176	6.2
Tetrahydrofuran 175	17
Thiobismethane 162	(4.1)
Dimethyldisulfide 173	(44)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Scholtz Checked By Robert R. Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

Coded parameters & locations entered 10/7 DFW

I Put a copy in the "Non-Standard" file

WALNUT CREEK RECEIVED SEP 20 1982 JAMES M. MONTGOMERY CONSULTING ENGINEERS, INC. OFFICE

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS – V

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Ozone #1 Effluent Upset Analysis 906	T.F.? Influent Sludge 2 Discharge	Primary Sludge 807 Grab Sample
Laboratory No.:	C89637	C80187	C80808
Sampling Date:	July 31, 1982	Grab Sample August 6, 1982	August 16, 1982
Date Received:	August 4, 1982	Do not enter. August 11, 1982	August 18, 1982
Date Analyzed:	August 24, 1982	August 24, 1982	August 24, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter) 906	2	807
Trichlorofluoromethane 49	1.0	ND	ND
Chloroform 23	0.8	16	35
Methylene chloride 44	0.7	52	9
1,1,1-Trichloroethane 11	ND	50	2.4
Benzene 4	ND	12	10
Trichloroethene 87	ND	6.4	5.9
Dichlorobromomethane 48	ND	2.6	10
Toluene 86	ND	62	23
Dibromochloromethane 51	ND	2.1	8.2

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert R. Clark

L4RM20913
750

Coded parameters & locations entered 10/7 DFN

I Put a copy in the "Non-Standard" file

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS ~ V

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Ozone #1 Effluent Upset Analysis 906	Influent Sludge T.F.? 2 Discharge	Primary Sludge 807 Grab Sample
Laboratory No.:	C89637	C80187	C80808
Sampling Date:	July 31, 1982	Grab Sample August 6, 1982	August 16, 1982
Date Received:	August 4, 1982	Do not enter. August 11, 1982	August 18, 1982
Date Analyzed:	August 24, 1982	August 24, 1982	August 24, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter) 906	2	807
Trichlorofluoromethane 49	1.0	ND	ND
Chloroform 23	0.8	16	35
Methylene chloride 44	0.7	52	9
1,1,1-Trichloroethane 11	ND	50	2.4
Benzene 4	ND	12	10
Trichloroethene 87	ND	6.4	5.9
Dichlorobromomethane 48	ND	2.6	10
Toluene 86	ND	62	23
Dibromochloromethane 51	ND	2.1	8.2

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NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotty Checked By Robert R. Clark

L4RM20913
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	C89637	C80187	C80808
Tetrachloroethene 85	ND	30	16
Chlorobenzene 7	ND	1.6	ND
Ethylbenzene 38	ND	10	2.2
m,p-Xylene 164	ND	62	12
o-Xylene 165	ND	27	4.8
m-Dichlorobenzene 26	ND	38	2.7
o-Dichlorobenzene 25	ND	46	2.0
Naphthalene 55	ND	190	51
1,2,4-Trimethylbenzene 151	ND (-1)	19 (44)	5.4 (5.4)
1,2,3-Trimethylbenzene	ND	25	ND
1,1-Dichloroethane 13	ND	ND	1.2
Bromoform 47	ND	ND	1.5
~~Ethenylbenzene 159~~ 159	ND	ND	6.7

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotz Checked By Robert A. Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C89637	**C80187**	**C80808**
Acetone 174	(90)	240	89
Methylethylketone 176	16	28	21
Tetrahydrofuran 175	3.1	120	120
Hexane	13	NA	NA
Octane	0.4	NA	NA
Trimethylhexanes	0.2	NA	NA
Propylbenzene 161	ND	5.3	1.5
Decane	ND	20	170
Dodecane	ND	30	18
Thiobismethane 162	ND	(10)	~~NA~~ blank
Dimethyldisulfide 173	ND	(65)	(100)
Aceticacid butylester	ND	(50)	ND
Dimethyltrisulfide	ND	(8.4)	(27)
Ethyldimethylbenzene isomers 160	ND	(33)	NA
Tetramethylbenzene 157	ND	(14)	NA
Tridecane	ND	(16)	NA
Methyl(methylethyl)benzene 158	ND	(15)	NA
Carbon disulfide	ND	ND	(12)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schatz Checked By Robert R Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C89637	**C80187**	**C80808**
1-Propanol	ND	NA	(32)
Aceticacid diethylester	ND	ND	(11)
Propionicacid propylester	ND	ND	(12)
3-Ethyl-3-methylhexane	ND	NA	(15)
Pentanoicacid ethylester	ND	NA	(19)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotty Checked By Robert R. Clark

L4RM20913

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

Compound	Minimum Quantification Limit (µg/l)	Compound	Minimum Quantification Limit (µg/l)
Acrolein	0.1	Acetone	0.1
Acrylonitrile	0.1	Methylethylketone	0.1
Benzene	0.1	Tetrahydrofuran	0.1
Bromoform	0.1	m,p-Xylene	0.1
Carbon tetrachloride	0.1	o-Xylene	0.1
Chlorobenzene	0.1	Propylbenzene	0.1
Chlorodibromomethane	0.1	p-Chlorotoluene	0.1
Chloroethane	0.1	Styrene	0.1
2-Chloroethylvinyl ether	0.1	m-Dichlorobenzene	0.1
Chloroform	0.1	o-Dichlorobenzene	0.1
Dichlorobromomethane	0.1	p-Dichlorobenzene	0.1
Dichlorodifluoromethane	0.1	1,2-Dibromo-3-chloropropane	0.1
1,1-Dichloroethane	0.1	Hexachloroethane	0.1
1,2-Dichloroethane	0.1	Trichlorobenzene	0.1
1,1-Dichloroethene	0.1	Naphthalene	0.1
1,2-Dichloropropane	0.1	Hexachlorobutadiene	0.1
1,2-Dichloropropene	0.1	Chloronaphthalene	0.1
Ethylbenzene	0.1		
Bromomethane	0.1		
Chloromethane	0.1		
Dichloromethane	0.1		
1,1,2,2-Tetrachloroethane	0.1		
Tetrachloroethene	0.1		
Toluene	0.1		
1,2-trans-Dichloroethene	0.1		
1,1,1-Trichloroethane	0.1		
1,1,2-Trichloroethane	0.1		
Trichloroethene	0.1		
Trichlorofluoromethane	0.1		
Vinyl chloride	0.1		

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis 901 Job/P.O. No.: 1180.0030

Sample Description:	Trickling Filter Influent	TRAVEL BLANK
Laboratory No.:	C66183 entered	C65979
Sampling Date:	June 16-17, 1982	Not Available
Date Received:	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
11	1,1,1-Trichloroethane	2.7	ND
4	Benzene	30	ND
87	Trichloroethene	3.7	ND
86	Toluene	45	ND
38	Ethylbenzene	5.0	ND
	m,p-Xylene	22	ND
	o-Xylene	6.9	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schultz Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	C66183	C65979
Sulfur dioxide	D	ND
Methanethiol	(68)	ND
Butane	(6)	ND
Thiobismethane	(44)	ND
Tetrahydrofuran	100	ND
Dimethyldisulfide	(63)	ND
Ethylmethylbenzene isomer	(10)	ND
Trimethylbenzene isomer	(3)	ND
Trimethylbenzene isomer	(8)	ND
Undecane	(3)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schultz Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

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Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis (814) Should have been 807 Job/P.O. No.: 1180.0030

Sample Description:	Primary Sludge	Ozone #2 Influent A	Ozone #2 Effluent A
Laboratory No.:	C66147	C66154	C66155
Sampling Date:	June 16, 1982	June 16, 1982	June 16, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 29, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
9	Benzene	58	ND	ND
87	Trichloroethene	35	ND	ND
11	1,1,1-Trichloroethane	4.0 entered 815 one	ND	ND
86	Toluene	36	ND	ND
85	Tetrachloroethene	9.6	ND	ND
38	Ethylbenzene	11	ND	ND
164	m,p-Xylene	43	ND	ND
165	o-Xylene	12	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schutte Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

507

	Compound	Concentration (micrograms/liter)		
		C66147	C66154	C66155
	Sulfur Dioxide	D	ND	ND
150	Methanethiol	(170)	ND	ND
	Butane	(20)	ND	ND
162	Thiobisethane CHECK PG 1	(300)	ND	ND
175	Tetrahydrofuran	79	7.3	5.0
173	Dimethyldisulfide	(400)	ND	ND
153	Ethylmethylbenzene isomers	(76)	ND	ND
151	Trimethylbenzene isomers	(53)	ND	ND
	Decane	(130)	ND	ND
172 ~~159~~	Undecane	(110)	ND	ND
	Dodecane	(77)	ND	ND
	Tridecane	(39)	ND	ND
174	Acetone	ND	16	9.1

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schutte Date July 11, 1982

Checked by Robert D. Clark Date 13 Jul, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

RECEIVED AUG 3 1982 JAMES M. MONTGOMERY CONSULTING ENGINEERS, INC. WALNUT CREEK OFFICE

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C77919	C77920	C77921
Sampling Date:	July 7, 1982	July 7, 1982	July 7, 1982
Date Received:	July 9, 1982	July 9, 1982	July 9, 1982
Date Analyzed:	July 11, 1982	July 10, 1982	July 10, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Methylene chloride	6.2	ND	ND
Bromodichloromethane	1.0	ND	ND
Dibromochloromethane	1.4	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By _____ Checked By _____

L3RM20720
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	902	903	904
	C77919	C77920	C77921
162 Thiobismethane	(14)	(3)	(1)
Hexane	NA	(2)	(2)
2-ethyl-1-Hexanol	NA	(2)	(3)
2,6-Dimethyloctane	NA	(2)	ND
Trimethylhexane isomers	NA	ND	(3)
Trimethylheptane isomers	NA	ND	(1)
174 Acetone	350	ND	ND
Tridecane	(0.5)	ND	ND
173 Dimethyldisulfide	(19)	ND	ND
Nonane	(0.4)	ND	ND
3-ethyl-2-methylheptane	(1.1)	ND	ND
Decane	3.4	ND	ND
172 Undecane	(1.9)	ND	ND
52 Tetramethylbenzene	(3.1)	ND	ND
Dodecane	(1.5)	ND	ND

D: Detected but not quantified
( ): Parentheses indicate tentative number only.
NQ: Not Quantifiable; detectable but below minimum quantification limits
ND: Not Detected
NA: Not Analyzed

Submitted By [signature] Checked By [signature]

L3RM20720

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis 901 Job/P.O. No.: 1180.0030

Sample Description: Trickling Filter Influent

Laboratory No.: C78312

Sampling Date: July 6-7, 1982

Date Received: July 14, 1982

Date Analyzed: July 30, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)
29	1,1-Dichloroethene	4.2
13	1,1-Dichloroethane	1.2
23	Chloroform	16
11	1,1,1-Trichloroethane	3.7
4	Benzene	25
87	Trichloroethene	6.7
48	Dichlorobromomethane	6.8
86	Toluene	21
51	Dibromochloromethane	5.7

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By N Schutty Checked By Robert R. Clar

L14RM20810
250

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)
		C78312
85	Tetrachloroethene	4.8
38	Ethylbenzene	2.7
26	m-Dichlorobenzene	1.0
25	o-Dichlorobenzene	3.7
55	Naphthalene	3.0

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotty Checked By Robert R Carl

L14RM20810

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

901

	Compound	Concentration (micrograms/liter)
		C78312
150	Methanethiol	(32)
174	Acetone	16
175	Tetrahydrofuran	34
173	Dimethyldisulfide	(8.4)
164	m,p-Xylene	14
165	o-Xylene	4.5
161	Propylbenzene	7.1
151	Trimethylbenzene isomers	14
	Decane	2.9

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schutty Checked By Robert A Clark

L14RM20810

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C77373	C77374	C77375
Sampling Date:	June 30, 1982	June 30, 1982	June 30, 1982
Date Received:	July 2, 1982	July 2, 1982	July 2, 1982
Date Analyzed:	July 11, 1982	July 10, 1982	July 10, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
55 Tetrachloroethene	1.5	1.0	0.6

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L3RM20719
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter) 902	903	904
		C77373	C77374	C77375
	Hexane	ND	(3)	(2)
	2,4,4-Trimethyl-1-pentene	ND	(1)	(0.9)
174	Acetone	(1,400)	ND	ND
162	Thiobismethane	(16)	ND	ND
153	Ethylmethylbenzene isomers	0.8	ND	ND
151	Trimethylbenzene isomers	1.4	ND	ND
	Methanethiol	(56)	ND	ND
173	Dimethyldisulfide	(97)	ND	ND
	Decane	(2.8)	ND	ND
	2-Ethyl-1-hexanol	(42)	ND	ND
	Undecane	(2.7)	ND	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By Kayla Pavlich Checked By Robert R. Clark

L3RM20719

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L3RM20719

RECEIVED
JUL 19 1982
JAMES M. MONTGOMERY
CONSULTING ENGINEERS, INC.
WALNUT CREEK OFFICE

ENVIRONMENTAL RESEARCH LABORATORY (ERL)
a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

	904	907
Sample Description:	Filter Effluent	Ozone #2 Effluent
Laboratory No.:	C77801	C77802
Sampling Date:	June 30, 1982	June 30, 1982
Date Received:	July 8, 1982	July 8, 1982
Date Analyzed:	July 10, 1982	July 10, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
23	Chloroform	1.6	1.0
11	1,1,1-Trichloroethane	0.1	0.2
? 48	Bromodichloromethane	0.6	0.3
48	Dibromochloromethane	0.6	ND
[illegible]	Tetrachloroethene	0.8	0.5
[illegible]	1,3-Dichlorobenzene	NQ	NQ
25	1,2-Dichlorobenzene	NQ	NQ
27	1,4-Dichlorobenzene	0.2	NQ
30	trans-1,2-Dichloroethene	ND	NQ

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 12, 1982

Checked by [signature] Date 15 July, 1982

L21/rm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter) 904	907
	C77801	C77802
Hexane	(2)	(6)
2,4,4-Trimethyl-1-pentene	NQ	NQ
2,4,4-Trimethyl-2-pentene	NQ	ND
174 Acetone	ND	27

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 12, 1982

Checked by [signature] Date 15 July, 1982

L21/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L21/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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(213) 796-9141/(213) 681-4255 Telex: 67-5420

RECEIVED
JUL 29 1982
WALNUT CREEK OFFICE
JAMES M. MONTGOMERY CONSULTING ENGINEERS, INC.

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	906	907	817
Sample Description:	Ozone #1 Effluent	Ozone #2 Effluent	Primary Influent
Laboratory No.:	C77376	C77377	C77378
Sampling Date:	June 30, 1982	June 30, 1982	June 30, 1982
Date Received:	July 2, 1982	July 2, 1982	July 2, 1982
Date Analyzed:	July 10, 1982	July 10, 1982	July 11, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
85	Tetrachloroethene	ND	ND	46
44	Methylene chloride	ND	ND	37
29	1,1-Dichloroethene	ND	ND	5.6
13	1,1-Dichloroethane	ND	ND	0.4
23	Chloroform	ND	ND	7.0
11	1,1,1-Trichloroethane	ND	ND	9.2
4	Benzene	ND	ND	17
87	Trichloroethene	ND	ND	95
56	Toluene	ND	ND	77

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L3RM20720
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
		C77376	C77377	C77378
	Ethylbenzene	ND	ND	6.6
164	m,p-Xylenes	ND	ND	31
165	o-Xylene	ND	ND	9.2
7	Chlorobenzene ✓ TO SEE IF A PRIORITY POLL ENTERED 8/27	ND	ND	1.2
161	Propylbenzene	ND	ND	3.4
	1,3-Dichlorobenzene	ND	ND	0.2
	1,4-Dichlororbenzene	ND	ND	2.3
	1,2-Dichlorobenzene	ND	ND	9.3
	Naphthalene	ND	ND	13

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By _____ Checked By _____

L3RM20720

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		906	907	917
		C77376	C77377	C77378
	Hexane	(3)	(2)	ND
	2,4,4-Trimethyl-2-pentene	ND	ND	ND
174	Acetone CHECK pg 2	ND	ND	(3,500)
	cis-1,2-Dichloroethene	ND	ND	5.4
153	Ethylmethylbenzene isomers	ND	ND	42
151	Trimethylbenzene isomers	ND	ND	67
162	Thiobismethane	ND	ND	(94)
150	Methanethiol	ND	ND	(65)
173	Dimethyldisulfide	ND	ND	(260)
	Butyl acetate	ND	ND	(62)
152	Tetramethylbenzene isomers	ND	ND	(17)
	Dodecane	ND	ND	(7)
161 ?	1-methyl-3-propylbenzene	ND	ND	(10)

CHECK w/ CRC ?

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L3RM20720

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

901

Sample Description:	Trickling Filter Influent	Travel Blank
Laboratory No.:	C77379	C77380
Sampling Date:	June 30, 1982	June 30, 1982
Date Received:	July 2, 1982	July 2, 1982
Date Analyzed:	July 11, 1982	July 10, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
44	Methylene chloride	39	8.3
23	Chloroform	9.0	0.5
87	Trichloroethene	24	ND
86	Toluene	63	ND
85	Tetrachloroethene	52	ND
38	Ethylbenzene	5.6	ND
164	m,p-Xylenes	2.8	ND
165	o-Xylene	0.8	ND
7	Chlorobenzene ✓ TO SEE IF A PRIORITY POLL	1.2	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L3RM20720

500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
		C77379	**C77380**
	p-Chlorotoluene	2.3	ND
26	1,3-Dichlorobenzene	0.1	ND
27	1,4-Dichlorobenzene	2.2	ND
25	1,2-Dichlorobenzene	6.3	ND
55	Naphthalene	9.5	ND
29	1,1-Dichloroethene	5.1	ND
11	1,1,1-Trichloroethane	11	ND
4	Benzene	34	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L3RM20720

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)	
		C77379	C77380
	Hexane	NA	(3)
174	Acetone	(1,900)	ND
162	Thiobismethane	(95)	ND
153	Ethylmethylbenzene isomers	24	ND
151	Trimethylbenzene isomers	41	ND
	1,1'-Oxybisethane	(26)	ND
	Pentane	3.6	ND
173	Dimethyldisulfide	(69)	ND
152	Tetramethylbenzene	(5)	ND
	Dodecane	(3.5)	ND
	1-methyl-4-(1-methylethenyl)cyclohexene	(76)	ND
172 ~~169~~	Undecane	(5)	ND

C7EC2 pg 1

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L3RM20720

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

Sample Description:	Ozone #1 Effluent	Trickling Filter Influent	Travel Blank
Laboratory No.:	C66742	C66743	C66744
Sampling Date:	June 23-24, 1982	June 23-24, 1982	June 23-24, 1982
Date Received:	June 25, 1982	June 25, 1982	June 25, 1982
Date Analyzed:	June 29, 1982	June 29, 1982	June 29, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
49 Trichlorofluoromethane	NQ	ND	ND
30 trans-1,2-dichloroethene	NQ	ND	ND
23 Chloroform	NQ	10	ND
4 Benzene	NQ	58	ND
85 Tetrachloroethene	NQ	15	ND
29 1,1-Dichloroethene	ND	4	ND
11 1,1,1-Trichloroethane	ND	8	ND
87 Trichloroethene	ND	17	ND
cis-1,3-dichloropropane	ND	1	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 1, 1982

Checked by Robert R. Clark Date 6 July, 1982

L18/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
		C66742	C66743	C66744
48	Bromodichloromethane	ND	1	ND
86	Toluene	ND	60	ND
38	Ethylbenzene	ND	5	ND
164	m,p-Xylenes	ND	10	ND
165	o-Xylene	ND	9	ND
	Chlorobenzene — Priority Poll?	ND	2	ND
161	Propylbenzene	ND	3	ND
26	1,3-Dichlorobenzene	ND	NQ	ND
27	1,4-Dichlorobenzene	ND	2	ND
25	1,2-Dichlorobenzene	ND	4	ND
55	Naphthalene	ND	8	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Kathe Parlish Date July 1, 1982

Checked by Robert R. Clark Date 6 July, 1982

L18/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		906	901	
		C66742	C66743	C66744
	Trimethoxymethane	(1)	NA	ND
174	Acetone	ND	550	ND
172 ~~169~~	Undecane CHECK	ND	(32)	ND
	cis-1,2-dichloroethene	ND	3	ND
151	Trimethylbenzene isomers	ND	(74)	ND
153	Ethylmethylbenzene isomers	ND	(59)	ND
	3-ethyl-2,3-dimethylpentane	ND	(33)	ND
162	Thiobismethane	ND	(59)	ND
	2-Methylbutane	ND	(7)	ND
	2-Hexanone	ND	(20)	ND
	Nonane	ND	(10)	ND
158	(1-methylethyl)benzene	ND	(3)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 1, 1982

Checked by Robert R. Clark Date 6 July, 1982

L18/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L18/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

WALNUT CREEK RECEIVED JUL 12 1982 JAMES M. MONTGOMERY CONSULTING ENGINEERS OFFICE

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C66739	C66740	C66741
Sampling Date:	June 23-24, 1982	June 23-24, 1982	June 23-24, 1982
Date Received:	June 25, 1982	June 25, 1982	June 25, 1982
Date Analyzed:	June 29, 1982	June 29, 1982	June 29, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
29	1,1-Dichloroethene	NQ	NQ	NQ
23	Chloroform	NQ	ND	NQ
45	Dibromochloromethane	NQ	NQ	NQ
85	Tetrachlorethene	NQ	NQ	NQ
4	Benzene	NQ	ND	ND
38	Ethylbenzene	NQ	ND	ND
164	m,p-Xylenes	NQ	ND	ND
155	o-Xylene	NQ	ND	ND
47	Bromoform	NQ	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 1, 1982

Checked by [signature] Date 6 July, 1982

L18/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter) 902	901	904
		C66739	C66740	C66741
161	Propylbenzene	NQ	ND	ND
26	1,3-Dichlorobenzene	NQ	ND	ND
27	1,4-Dichlorobenzene	NQ	ND	ND
25	1,2-Dichlorobenzene	NQ	ND	ND
35	Naphthalene	NQ	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 1, 1982

Checked by [signature] Date 6 July, 1982

L18/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C66739	C66740	C66741
175 Tetrahydrofuran	ND	ND	3
2,4,4-Trimethyl-2-pentene	NA	(1)	ND
2,2,4,6,6-Pentamethylheptane	NA	NQ	ND
174 Acetone CHECK pg 1 + 2	140	ND	ND
2-Methylpyridine	(6)	ND	ND
4-Methylpyridine	(22)	ND	ND
153 Ethylmethylbenzene isomers	NQ	ND	ND
162 Thiobismethane	(5)	ND	ND
172 ~~159~~ Undecane	(1)	ND	ND
173 ~~170~~ Dimethyldisulfide	(19)	ND	ND
Tridecane	NQ	ND	ND
Nonane	NQ	ND	ND
2,2,3-Trimethylhexane	(1)	ND	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 1, 1982

Checked by Robert R. Clark Date 6 July 1982

L18/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis 101 Job/P.O. No.: 1180.0030

Sample Description:	Trickling Filter Influent	TRAVEL BLANK
Laboratory No.:	C66183 filtered	C65979
Sampling Date:	June 16-17, 1982	Not Available
Date Received:	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
11	1,1,1-Trichloroethane	2.7	ND
4	Benzene	30	ND
87	Trichloroethene	3.7	ND
86	Toluene	45	ND
38	Ethylbenzene	5.0	ND
75	m,p-Xylene	22	ND
75	o-Xylene	6.9	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schultz Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter) 901	
		C66183	C65979
	Sulfur dioxide	D	ND
150	Methanethiol	(68)	ND
	Butane CHECK 161	(6)	ND
162	Thiobismethane	(44)	ND
175	Tetrahydrofuran	100	ND
173	Dimethyldisulfide	(63)	ND
152	Ethylmethylbenzene isomer	(10)	ND
151	Trimethylbenzene isomer ADDED TOGETHER	(3)	ND
151	Trimethylbenzene isomer	(8)	ND
172 ~~162~~	Undecane	(3)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schultz Date July 11, 1982

Checked by Robert A. Oak Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis 901 Job/P.O. No.: 1180.0030

Sample Description:	Trickling Filter Influent	TRAVEL BLANK
Laboratory No.:	C66183 entered	C65979
Sampling Date:	June 16-17, 1982	Not Available
Date Received:	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
11	1,1,1-Trichloroethane	2.7	ND
4	Benzene	30	ND
87	Trichloroethene	3.7	ND
86	Toluene	45	ND
38	Ethylbenzene	5.0	ND
	m,p-Xylene	22	ND
	o-Xylene	6.9	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schultz Date July 11, 1982

Checked by Robert A. Clark Date 13 July, 1982

L1/rm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	C66183	C65979
Sulfur dioxide	D	ND
Methanethiol	(68)	ND
Butane	(6)	ND
Thiobismethane	(44)	ND
Tetrahydrofuran	100	ND
Dimethyldisulfide	(63)	ND
Ethylmethylbenzene isomer	(10)	ND
Trimethylbenzene isomer	(3)	ND
Trimethylbenzene isomer	(8)	ND
Undecane	(3)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schultz Date July 11, 1982

Checked by Robert R. Clark Date 13 July 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis (814) Should have been 807 Job/P.O. No.: 1180.0030

Sample Description:	Primary Sludge	Ozone #2 Influent A	Ozone #2 Effluent A
Laboratory No.:	C66147	C66154	C66155
Sampling Date:	June 16, 1982	June 16, 1982	June 16, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 29, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
4	Benzene	58	ND	ND
87	Trichloroethene	35 entered 815 one	ND	ND
11	1,1,1-Trichloroethane	4.0	ND	ND
86	Toluene	36	ND	ND
85	Tetrachloroethene	9.6	ND	ND
38	Ethylbenzene	11	ND	ND
164	m,p-Xylene	43	ND	ND
165	o-Xylene	12	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schultz Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

507

	Compound	Concentration (micrograms/liter)		
		C66147	C66154	C66155
	Sulfur Dioxide	D	ND	ND
150	Methanethiol	(170)	ND	ND
	Butane	(20)	ND	ND
162	Thiobisethane CHECK PG 1	(300)	ND	ND
175	Tetrahydrofuran	79	7.3	5.0
173	Dimethyldisulfide	(400)	ND	ND
153	Ethylmethylbenzene isomers	(76)	ND	ND
151	Trimethylbenzene isomers	(53)	ND	ND
	Decane	(130)	ND	ND
172 ~~150~~	Undecane	(110)	ND	ND
	Dodecane	(77)	ND	ND
	Tridecane	(39)	ND	ND
174	Acetone	ND	16	9.1

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schutt Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis

Job/P.O. No.: 1180.0030

	909	906	817
Sample Description:	Filter Effluent	Ozone #1 Effluent	Primary Influent
Laboratory No.:	C66180	C66181	C66182
Sampling Date:	June 16-17, 1982	June 16-17, 1982	June 16-17, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 21, 1982	June 21, 1982	June 30, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
23	Chloroform	ND	ND	5.5
11	1,1,1-Trichloroethane	ND	ND	8.1
4	Benzene	ND	ND	45
87	Trichloroethene	ND	ND	5.0
86	Toluene	ND	ND	55
85	Tetrachloroethene	ND	ND	7.4
38	Ethylbenzene	ND	ND	7.9
164	m,p-Xylene	ND	ND	34
165	o-Xylene	ND	ND	10

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schutz Date July 11, 1982

Checked by Robert R Clark Date 13 July, 1982

L1/rm
757

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C66180	C66181	C66182
Sulfur dioxide	ND	ND	D
Methanethiol	ND	ND	(20)
Tetrahydrofuran	2.4	2.4	56
Dimethyldisulfide	ND	ND	(57)
Propylbenzene	ND	ND	1.5
Ethylmethylbenzene isomer	ND	ND	(13)
Trimethylbenzene isomer	ND	ND	(4.2)
Trimethylbenzene isomer	ND	ND	(9.6)
Undecane	ND	ND	(4.8)
Ethyldimethylbenzene	ND	ND	(4.1)
Acetone	8.1	22	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schatz Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

Sample Description:	Ozone #2 Influent B	Ozone #2 Effluent B	Ozone #2 Effluent C
Laboratory No.:	C66156	C66157	C66158
Sampling Date:	June 16, 1982	June 16, 1982	June 16-17, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 30, 1982	June 21, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	ND	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schatz Date July 11, 1982

Checked by Robert R Clark Date 13 July 1982

L1/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C66156	C66157	C66158
Acetone	17	13	27
Tetrahydrofuran	7	5.3	5.6

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schultz Date July 11, 1982

Checked by Robert R. Ward Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

		902	903
Sample Description:	Ozone #2 Influent C	Aeration Influent	Clarifier Effluent
Laboratory No.:	C66159	C66178	C66179
Sampling Date:	June 16, 1982	June 16-17, 1982	June 16-17, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 29, 1982	June 30, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	ND	ND	ND
4 Benzene	-1	-1 entered 8/5	-1 entered 8/5
23 Chloro	-1	-1 "	-1 "
11 1,1,1 Tri	"	"	"

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C66159	C66178	C66179
174 Acetone	22	560	37
173 Dimethyldisulfide	ND	(23)	ND
175 Tetrahydrofuran	7	ND	2.7

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schultz Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

		902	903
Sample Description:	Ozone #2 Influent C	Aeration Influent	Clarifier Effluent
Laboratory No.:	C66159	C66178	C66179
Sampling Date:	June 16, 1982	June 16-17, 1982	June 16-17, 1982
Date Received:	June 18, 1982	June 18, 1982	June 18, 1982
Date Analyzed:	June 29, 1982	June 30, 1982	June 21, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	ND	ND	ND
4 Benzene	-1	-1 entered 8/5	-1 entered 8/5
23 Chloro	-1	-1 "	-1 "
11 1,1,1,Tri	"	"	"

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by N Schatty — Date July 11, 1982

Checked by Robert R. Clark — Date 13 July, 1982

L1/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C66159	C66178	C66179
Acetone	22	560	37
Dimethyldisulfide	ND	(23)	ND
Tetrahydrofuran	7	ND	2.7

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schultz Date July 11, 1982

Checked by Robert R. Clark Date 13 July, 1982

L1/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis

Job/P.O. No.: 1180.0030

	906	901
Sample Description:	Ozone #1 Effluent	Trickling Filter Influent
Laboratory No.:	C65630	C65631
Sampling Date:	June 9-10, 1982	June 9-10, 1982
Date Received:	June 11, 1982	June 11, 1982
Date Analyzed:	June 19, 1982	June 19, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
49	Trichlorofluoromethane	NQ	ND
23	Chloroform	NQ	2
11	1,1,1-Trichloroethane	NQ	6
44	Methylene chloride	ND	40
29	1,1-Dichloroethene	ND	16
13	1,1-Dichloroethane	ND	NQ
10	1,2-Dichloroethane	ND	NQ
9	Benzene	ND	52
87	Trichloroethene	ND	5

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 21, 1982

Checked by Robert R. Clark Date 22 June, 1982

L12/rm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
		906	901
		C65630	C65631
56	Toluene	ND	54
85	Tetrachloroethene	ND	12
38	Ethylbenzene	ND	11
164	m,p-Xylenes	ND	44
165	o-Xylene	ND	11
161	Propylbenzene	ND	1
26	1,3-Dichlorobenzene	ND	NQ
27	1,4-Dichlorobenzene	ND	NQ
25	1,2-Dichlorobenzene	ND	1
55	Naphthalene	ND	19

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 21, 1982

Checked by [signature] Date 23 June, 1982

L12/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)	
		C65630	C65631
175	Tetrahydrofuran	7	ND
	Trimethoxymethane	(6)	NA
174	Acetone	ND	500
176	Methylethylketone	ND	40
151	Trimethylbenzene isomers	ND	(14)
153	Ethylmethylbenzene isomers	ND	(14)
155	Dimethyl(methylethyl)benzene	ND	(4)
172	Undecane	ND	(4)
152	Tetramethylbenzene	ND	(3)
—	Diethylbenzene	ND	(2)
—	(1,1-dimethylethyl)benzene	ND	(2)
173	Dimethyldisulfide	ND	(34)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 21, 1982

Checked by [signature] Date 23 June, 1982

L12/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L12/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C65627	C65628	C65629
Sampling Date:	June 9-10, 1982	June 9-10, 1982	June 9-10, 1982
Date Received:	June 11, 1982	June 11, 1982	June 11, 1982
Date Analyzed:	June 19, 1982	June 19, 1982	June 19, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
49	Trichlorofluoromethane	ND	NQ	1
33	Chloroform	1	NQ	NQ
11	1,1,1-Trichloroethane	NQ	NQ	NQ
86	Toluene	NQ	NQ	ND
85	Tetrachloroethene	NQ	NQ	NQ
38	Ethylbenzene	NQ	NQ	NQ
164	m,p-Xylenes	NQ	NQ	NQ
165	o-Xylene	NQ	NQ	NQ
27	1,4-Dichlorobenzene	NQ	NQ	NQ

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 21, 1982

Checked by Robert R. Clark Date 23 June, 1982

L12/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter) 902	903	904
		C65627	C65628	C65629
25	1,2-Dichlorobenzene	NQ	NQ	NQ
13	1,1-Dichloroethene	NQ	ND	NQ
44	Methylene chloride	3	ND	ND
4	Benzene	NQ	ND	ND
57	Trichloroethene	NQ	ND	ND
55	Naphthalene	1	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 21, 1982

Checked by Robert R. Wash Date 23 June, 1982

L12/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		902	903	904
		C65627	C65628	C65629
174	Acetone	170	ND	ND
176	Methylethylketone	15	ND	ND
175	Tetrahydrofuran	23	12	12
	2,4,4-trimethyl-1-pentene	NA	(3)	(3)
	Hexane	NA	(3)	(4)
	2-ethyl-4-pentanal	NA	(2)	(2)
	3,5,5-trimethyl-1-hexene	(13)	(3)	(2)
162	Thiobismethane	(22)	(4)	ND
173	Dimethyldisulfide	(37)	ND	ND
	Decane	(1)	ND	ND
172 ~~49~~	Undecane	(1)	ND	ND
	Isooctanol	(3)	ND	ND
151	Trimethylbenzene isomers	NQ	ND	ND
159	Ethylbenzene isomers	NQ	ND	ND

✓ pg 1

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 21, 1982

Checked by Robert R. Clark Date 23 June, 1982

L12/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L12/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	911	902	903
Sample Description:	W.A.S. Grab	Aeration Influent	Clarifier Effluent
Laboratory No.:	C65349	C65458	C65459
Sampling Date:	June 7, 1982	June 2-3, 1982	June 2-3, 1982
Date Received:	June 9, 1982	June 10, 1982	June 10, 1982
Date Analyzed:	June 11, 1982	June 11, 1982	June 11, 1982

	Compound	Concentration (micrograms/liter)		
44	Methylene Chloride	46	64	1.1
23	Chloroform	6.3	6.1	0.7
43	Dichlorobromomethane	3.8	4.2	ND
51	Dibromochloromethane	2.5	2.0	ND
85	Tetrachloroethylene	2.1	2.2	0.1

Submitted by N Schotty Date June 17, 1982

Checked by Robert R. Clark Date 13 July 1982

L10/rm
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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

	Compound	911	902	903
		Concentration (micrograms/liter)		
		C65349	C65458	C65459
150	Methanethiol	(180)	(330)	ND
	Butane	(17)	(67)	ND
162	Thiobismethane	(18)	(11)	ND
	Hexane	(27)	(13)	(1.4)
173	Dimethyldisulfide	(110)	(24)	ND
	2,4,4-Trimethylpentene	ND	ND	(3.3)

Submitted by H Schultz Date June 17, 1982

Checked by Peter R. Clark Date 13 July, 1982

L10/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1B	Acenaphthene	0.1	30B	1,2-Diphenyl hydrazine (as Azobenzene)	0.5
2B	Acenaphthylene	0.1	31B	Fluoranthene	0.5
3B	Anthracene	0.5	32B	Fluorene	0.1
4B	Benzidine	10	33B	Hexachlorobenzene	0.5
5B	Benzo(a)anthracene	1.0	34B	Hexachlorobutadiene	1.0
6B	Benzo(a)pyrene	1.0	35B	Hexachlorocyclo-pentadiene	1.0
7B	3,4-Benzofluoranthene	1.0	36B	Hexachloroethane	0.5
8B	Benzo(g,h,i)perylene	1.0	37B	Indeno (1,2,3-c,d) pyrene	1.0
9B	Benzo(k)fluoranthene	1.0	38B	Isophorone	0.5
10B	Bis(2-Chloroethoxy) methane	0.5	39B	Naphthalene	0.1
11B	Bis(2-Chloroethyl) ether	0.5	40B	Nitrobenzene	0.5
12B	Bis(2-Chloroisopropyl) ether	0.5	41B	N-Nitrosodimethylamine	0.5
13B	Bis(2-Ethylhexyl) Phthalate	1.0	42B	N-Nitrosodi-N-propylamine	0.5
14B	4-Bromophenyl phenyl ether	0.5	43B	N-Nitrosodiphenylamine	0.1
15B	Butyl benzyl Phthalate	5.0	44B	Phenanthrene	0.5
16B	2-Chloronaphthalene	0.1	45B	Pyrene	0.5
17B	4-Chlorophenyl phenyl Ether	0.5	46B	1,2,4-Trichlorobenzene	0.1
18B	Chrysene	1.0	1A	2-Chlorophenol	0.5
19B	Dibenzo(a,h)anthracene	1.0	2A	2,4-Dichlorophenol	0.5
20B	1,2-Dichlorobenzene	0.1	3A	2,4-Dimethylphenol	0.5
21B	1,3-Dichlorobenzene	0.1	4A	4,6-Dinitro-o-cresol	10
22B	1,4-Dichlorobenzene	0.1	5A	2,4-Dinitrophenol	10
23B	3,3-Dichlorobenzidine	1.0	6A	2-Nitrophenol	10
24B	Diethyl Phthalate	0.1	7A	4-Nitrophenol	0.5
25B	Dimethyl Phthalate	0.5	8A	P-Chloro-m-cresol	0.5
26B	Di-N-butyl Phthalate	0.5	9A	Pentachlorophenol	5.0
27B	2,4-Dinitrotoluene	1.0	10A	Phenol	0.5
28B	2,6-Dinitrotoluene	1.0	11A	2,4,6-Trichlorophenol	0.5
29B	Di-N-octyl Phthalate	0.5			

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis 817 Job/P.O. No.: 1180.0030 901

Sample Description:	Primary Influent	Travel Blank	Trickling Filter Influent
Laboratory No.:	C65463 entered	C65465	C65464 entered
Sampling Date:	June 2-3, 1982	May 25, 1982	June 2-3, 1982
Date Received:	June 10, 1982	June 10, 1982	June 10, 1982
Date Analyzed:	June 14, 1982	June 14, 1982	June 14, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
46	Bromomethane	3.5	ND	ND
44	Methylene Chloride	70	ND	20
23	Chloroform	16	ND	8
11	1,1,1-Trichloroethane	9.6	ND	ND
9	Benzene	68	ND	110
87	Trichloroethylene	21	ND	6.9
48	Dichlorobromomethane	3.5	ND	ND
56	Toluene	110	ND	34
85	Tetrachloroethylene	15	ND	9.3
38	Ethylbenzene	7.2	ND	3.4

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schatz Date June 17, 1982

Checked by Robert R. Clark Date 21 June, 1982

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C65463	C65465	C65464
Thiobismethane	(48)	ND	(58)
Methanethiol	(830)	ND	(1000)
2-Propanone	(230)	ND	(200)
2,3-Dimethylbutane	(14)	ND	ND
m,p-Xylene	28	ND	15
o-Xylene	11	ND	6.1
2,4-Dimethylhexane	(22)	ND	(25)
Methlyethylbenzene isomers	(270)	ND	(170)
Propylcyclohexane	(11)	ND	(15)
Propylbenzene	2.6	ND	1.2
Trimethylbenzene	(340)	ND	(160)
Methyl(methylethenyl)cyclohexene	(37)	ND	(25)
Diethylbenzene	(30)	ND	(17)
Methyl(methylethenyl)benzene	(28)	ND	(24)
Ethyldimethylbenzene	(47)	ND	(39)
Undecane	(70)	ND	(110)
1,1'-Oxybismethane	ND	ND	(7.4)
Dimethyldisulfide	ND	ND	(57)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schotz Date June 17, 1982

Checked by Robert R. Clark Date 21 June, 1982

L10/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C65463	C65465	C65464
Methylethylheptane	ND	ND	(25)
Propanenitrile	ND	ND	(11)
Octanol	ND	ND	(19)
Butylcyclohexane	ND	ND	(19)
Diethylbenzene ✓ w/ CBC	ND	ND	(17)
Methylpropylbenzene	ND	ND	(17)
Dimethyloctane	ND	ND	(34)
Butylnonane	ND	ND	(13)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schutte Date June 17, 1982

Checked by Robert R. Clark Date 21 June, 1982

L10/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L10/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

RECEIVED JUN 21 1982 WALNUT CREEK

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	904	906	907
Sample Description:	Filter Effluent	Ozone Effluent #1	Ozone Effluent #2
Laboratory No.:	C65460	C65461	C65462
Sampling Date:	June 2-3, 1982	June 2-3, 1982	June 2-3, 1982
Date Received:	June 10, 1982	June 10, 1982	June 10, 1982
Date Analyzed:	June 11, 1982	June 11, 1982	June 11, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
14	Methylene Chloride	2.3	2.8	ND
23	Chloroform	0.2	0.9	0.5
44	Trichlorofluoromethane	ND	4.8	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schotz — Date June 17, 1982

Checked by Robert R. Clark — Date 18 June 1982

L10/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C65460	C65461	C65462
Butane	(5.9)	ND	ND
Hexane	(1.2)	(2.7)	ND
175 Tetrahydrofuran	11	6.7	ND
Pentane	ND	(2.1)	ND
Trimethyloxymethane	ND	(1.5)	ND
2,4,4-Trimethylpentane	ND	(0.7)	ND
Octane	ND	(0.5)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by H Schultz Date June 17, 1982

Checked by Robert R. Clark Date 18 June, 1982

L10/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L10/rm

checked OK 6/5

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

JUN 21 1982

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clairifier Effluent	Filter Effluent
Laboratory No.:	C54427 entered	C54428 entered	C54429 entered
Sampling Date:	May 26-27, 1982	May 26-27, 1982	May 26-27, 1982
Date Received:	May 28, 1982	May 28, 1982	May 28, 1982
Date Analyzed:	June 7, 1982	June 7, 1982	June 7, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
29	1,1-Dichloroethene	2	NQ	ND
11	1,1,1-Trichloroethane	6	13	4
44	Methylene chloride	ND	44	ND
87	Trichloroethene	ND	NQ	ND
86	Tetrachloroethene	ND	NQ	ND
27	1,4-Dichlorobenzene	ND	NQ	NQ
25	1,2-Dichlorobenzene	ND	NQ -1	NQ -1
23	Chloroform	ND	ND	NQ

OK BUT [illegible] DATA

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 13, 1982

Checked by Robert R. Clark Date 17 June, 1982

L8/rm
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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C54427	C54428	C54429
172 ~~+64~~ Undecane	(6)	ND	ND
173 Dimethyldisulfide	(35)	ND	ND
Dodecane	(5)	ND	ND
2,4,4-trimethyl-1-pentene	ND	(6)	ND
3,3-dimethylbutanoic acid	ND	(3)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Kayle Parlich Date June 13, 1982

Checked by Robert R Clark Date 17 June 1982

L8/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	906	901	920
Sample Description:	Ozone Effluent #1	Trickling Filter Influent	Tap Water
Laboratory No.:	C54430	C54431	C54432
Sampling Date:	May 26-27, 1982	May 26-27, 1982	May 26-27, 1982
Date Received:	May 28, 1982	May 28, 1982	May 28, 1982
Date Analyzed:	June 5, 1982	June 5, 1982	June 5, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
29	1,1-Dichloroethene	ND	7	ND
12	1,1-Dichloroethane	ND	NQ	ND
23	Chloroform	NQ	15	47
11	1,1,1-Trichloroethane	ND	12	ND
4	Benzene	ND	350	ND
57	Trichloroethene	ND	10	ND
85	Tetrachloroethene	ND	19	NQ
38	Ethylbenzene	ND	7	ND
164	m,p-Xylenes	ND	28	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 13, 1982

Checked by [signature] Date 17 June 1982

L8/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	C54430	C54431	C54432
165 — o-Xylene	ND	12	ND
26 1,3-Dichlorobenzene	ND	NQ	ND
1,4-Dichlorobenzene	ND	2	ND
25 1,2-Dichlorobenzene	ND	4	ND
Naphthalene	ND	12	ND
49 Trichlorofluoromethane	NQ	ND	NQ
45 Bromodichloromethane	ND	ND	19
Dibromochloromethane	ND	ND	2

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 13, 1982

Checked by [signature] Date 17 June, 1982

L8/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		906	907	908
		C54430	C54431	C54432
174	Acetone ✓ pg 1 + 2	ND	300	ND
176	Methylethylketone	ND	100	ND
152	Methylethylbenzene isomers	ND	(14)	ND
151	Trimethylbenzene isomers	ND	(24)	ND
	Decane	ND	(74)	ND
172 ~~167~~	Undecane	ND	(89)	ND
173	Dimethyldisulfide	ND	(65)	ND
	2,2,3,4-Tetramethylpentane	ND	(27)	ND
? —	1-methyl-4-(1-methylethyl)benzene	ND	(4)	ND
152	Tetramethylbenzene	ND	(2)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date June 13, 1982

Checked by [signature] Date 17 June, 1982

L8/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L8/rm

6/16

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	920	807	911
Sample Description:	Tap Water	Primary Sludge	W.A.S.
Laboratory No.:	C53942	C53541	C53542
Sampling Date:	May 21, 1982	May 17-18, 1982	May 17-18, 1982
Date Received:	May 25, 1982	May 19, 1982	May 19, 1982
Date Analyzed:	May 26, 1982	May 26, 1982	May 26, 1982

corrections 18 ERROR Entered for 21

ERROR CORRECTED

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
154 1,3,5-Trichlorobenzene	ND	NQ	ND
1,2,4-Trichlorobenzene	ND	NQ	ND
Chloroform	2	ND	ND
48 Bromodichloromethane	NQ	10	ND
51 Dibromochloromethane	NQ	ND	ND
29 1,1-Dichloroethene	ND	4	5
30 trans-1,2-dichloroethene	ND	NQ	ND
1,1-Dichloroethane	ND	NQ	NQ
1,1,1-Trichloroethane	ND	10	NQ
Benzene	ND	50	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 29, 1982

Checked by Robert R. Clark Date 5 June 1982

L4/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	920	507	911
	C53942	C53541	C53542
87 Trichloroethene	ND	76	ND
33 cis-1,3-dichloropropene	ND	NQ	ND
86 Toluene	ND	150	ND
85 Tetrachloroethene	ND	100	2
38 Ethylbenzene	ND	130	ND
39 m,p-Xylenes	ND	510	ND
35 o-Xylene	ND	120	ND
61 Propylbenzene	ND	46	ND
p-chlorotoluene	ND	1	ND
26 1,3-Dichlorobenzene	ND	NQ	ND
27 1,4-Dichlorobenzene	ND	10	ND
25 1,2-Dichlorobenzene	ND	9	ND
55 Naphthalene	ND	59	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 29, 1982

Checked by Robert R Clark Date 5 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		920	907	911
		C53942	C53541	C53542
174	Acetone	2	NA	ND
176	Methylethylketone	2	NA	ND
175	Tetrahydrofuran	2	NA	ND
	Dodecane ✓ pg 1+2	ND	(520)	ND
	Nonane	ND	(230)	ND
152	Ethylmethylbenzene isomers	ND	(240)	ND
151	Trimethylbenzene isomers	ND	(400)	ND
	Decane	ND	(760)	ND
	Octane	ND	(58)	ND
172 ~~169~~	Undecane	ND	(810)	ND
173	Dimethyldisulfide	ND	(110)	(660)
152	Tetramethylbenzene	ND	(130)	ND
—	Diethylbenzene	ND	(260)	ND
	Tridecane	ND	(400)	ND
150	Methanethiol	ND	NA	(160)
	Ethanol	ND	NA	(28)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 29, 1982

Checked by Robert A. Clark Date 5 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L4/rm

E-116

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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JUN 7 1982
CONSULTING ENGINEERS, INC.

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

	906	817	901
Sample Description:	Ozone Effluent #1	Primary Influent	Trickling Filter Influent
Laboratory No.:	C53711	C53712	C53713
Sampling Date:	May 19-20, 1982	May 19-20, 1982	May 19-20, 1982
Date Received:	May 21, 1982	May 21, 1982	May 21, 1982
Date Analyzed:	May 24, 1982	May 24, 1982	May 24, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
44 Dichloromethane	0.2	34	24
Chloroform	1.0	10	6.4
Benzene	ND	37	20
1,1,1-Trichloroethane	0.2	15	9.4
Trichloroethylene	NQ	5.8	2.9
Dichlorobromo-methane	NQ	0.3	ND
Toluene	0.1	54	37
Tetrachloroethylene	0.2	15	9.1

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fang-Yi Lai Date May 27, 1982

Checked by Robert R. Clark Date 2 June, 1982

L4/rm
950

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	C53711	C53712	C53713
Ethylbenzene	ND	9	4.6
m,p-Xylene	ND	38	21
o-Xylene	ND	14	8.1
Propylbenzene	ND	4.4	2.6
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	NQ	2.3	1.0
1,2-Dichlorobenzene	NQ	3.8	1.8
Naphthalene	ND	7.1	5.8

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fong-Yi Lui Date May 27, 1982

Checked by Robert R. Clark Date 2 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		C53711	C53712	C53713
179	Acetone	8.6	180	106
	Diethylether	(1.8)	(31)	ND
176	Methylethylketone	(1.4)	(20)	(7.1)
	Dissopropylether	(1.2)	(1.1)	ND
175	Tetrahydrofuran	4.6	30	ND
	Sulfur dioxide	ND	(81)	(24)
155	Methanethiol	ND	(255)	(36)
	Ethanol	ND	(39)	ND
	2-Propanol	ND	(217)	(64)
152	Thiobismethane	ND	(40)	(17)
	1-Propanol	ND	(12)	ND
	Cis-1,2-dichloroethene	ND	2	1.1
	Methylcyclohexane	ND	(16)	(0.7)
	4-Methyl-2-pentanone	ND	(21)	(7.1)
173	Dimethyldisulfide	ND	(48)	(10)
	Octane	ND	(0.8)	ND
	Ethylcyclohexane	ND	(1.1)	ND
	1,1,3-Trimethylcyclohexane	ND	(1.1)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Tony-Yi Lin Date May 27, 1982

Checked by Robert A. Clark Date 2 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		C53711	C53712	C53713
	Nonane	ND	(4.3)	(1.0)
153	Methylethylbenzene isomers	ND	(48)	(29)
	2,6-Dimethyloctane	ND	(2.6)	ND
151	Trimethylbenzene isomers	ND	(43)	(22)
	Decane	ND	(12)	(2.8)
10	Ethyldimethylbenzene isomers	ND	(25)	(17)
172 ~~147~~	Undecane	ND	(6.2)	(1.9)
152	Tetramethylbenzene isomers	ND	(10)	(5.6)
157	Diethylmethylbenzene	ND	(4.2)	ND
	Dodecane	ND	(5.2)	(2.0)
	Tridecane	ND	(3.4)	(1.0)
	Tetradecane	ND	(1.7)	(0.5)
	2-Butanol	ND	ND	(5.1)
	2,4-Dimethylheptane	ND	ND	(0.3)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Tony-Yi Lein Date May 27, 1982

Checked by Robert R. Clark Date 2 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L4/rm

EG/14

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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(213) 796-9141/(213) 681-4255 Telex: 67-5420

JUN 4 1982

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C53708	C53709	C53710
Sampling Date:	May 19-20, 1982	May 19-20, 1982	May 19-20, 1982
Date Received:	May 21, 1982	May 21, 1982	May 21, 1982
Date Analyzed:	May 24, 1982	May 24, 1982	May 24, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
44 Dichloromethane	4.4	0.9	1.4
Chloroform	1.1	3.0	1.0
Benzene	0.8	ND	ND
1,1,1-Trichloroethane	ND	0.5	0.4
Trichloroethylene	ND	0.3	0.2
Toluene	1.8	0.3	2.7
Tetrachloroethylene	0.3	0.9	0.6
Ethylbenzene	0.2	ND	ND
165 m,p-Xylene	1.2	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fong-Yi Lin — Date May 27, 1982

Checked by Robert R. Clark — Date 29 May, 1982

L4/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
	C53708	C53709	C53709
o-Xylene	0.6	ND	ND
1,4-Dichlorobenzene	0.1	0.2	NQ
1,2-Dichlorobenzene	0.3	0.1	NQ
Naphthalene	1.5	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Feng-Yi Lien Date May 27, 1982

Checked by Robert R. Clark Date 29 May, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		C53708	C53709	C53710
	Sulfur dioxide	(35)	ND	ND
14	Methanethiol	(40)	ND	ND
14	Acetone	211	0.8	0.5
162	Thiobismethane	(9.4)	ND	(1.1)
176	Methylethylketone	(11)	ND	ND
175	Tetrahydrofuran	10	5.2	6.6
	4-Methyl-2-pentanone	(4.2)	ND	ND
173	Dimethyldisulfide	(6.9)	(1.6)	(0.6)
15	Methylethylbenzene	(1.9)	ND	ND
15	Trimethylbenzene	(1.6)	ND	ND
	Decane	(1.4)	ND	ND
172	Undecane	(1.3)	ND	ND
	Ethyldimethylbenzene	(0.9)	ND	ND
152	Tetramethylbenzenes	(0.8)	ND	ND
	Diethylether	ND	(3.4)	(4.1)
	Diisopropylether	ND	(2.1)	(1.3)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by Fang-Yi Lein Date May 27, 1982

Checked by Robert R. Clark Date 25 May, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L4/rm

E'11-

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C53174	C53175	C53176
Sampling Date:	May 12-13, 1982	May 12-13, 1982	May 12-13, 1982
Date Received:	May 14, 1982	May 14, 1982	May 14, 1982
Date Analyzed:	May 26, 1982	May 26, 1982	May 26, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Trichlorofluoromethane	ND	NQ	NQ
29 1,1-Dichloroethene	13	NQ	NQ
1,1-Dichloroethane	ND	NQ	ND
Chloroform	ND	1	1
1,1,1-Trichloroethane	1	NQ	NQ
85 Tetrachloroethene	NQ	NQ	NQ
15 1,1,2,2-Tetrachloroethane	ND	NQ	ND
1,4-Dichlorobenzene	NQ	NQ	NQ
1,2-Dichlorobenzene	NQ	NQ	NQ
87 Trichloroethene	ND	ND	NQ

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 29, 1982

Checked by Robert R. Clark Date 5 June, 82

L4/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
		952	957	954
		C53174	C53175	C53176
46	Bromomethane	1	ND	ND
10	1,2-Dichloroethane	NQ	ND	ND
4	Benzene	1	ND	ND
33	cis-1,3-dichloropropene	NQ	ND	ND
86	Toluene	7	ND	ND
38	Ethylbenzene	NQ	ND	ND
16	m,p-Xylenes	4	ND	ND
17	o-Xylene	1	ND	ND
51	Propylbenzene	NQ	ND	ND
55	Naphthalene	NQ	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by _____ Date May 29, 1982

Checked by Robert R. Clark Date 5 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		902	903	904
		C53174	C53175	C53176
162	Thiobismethane	(145)	NQ	ND
	1-Hexene 152	ND	(1)	ND
	Ethanol	ND	(9)	(9)
	Isopropanol	ND	(1)	ND
175	Tetrahydrofuran	60	20	16
	2-ethyl-4-methyl-dioxolane	ND	NQ	NQ
	Dodecane	NQ	ND	ND
174	Acetone	430	ND	ND
	3-methyl-2-heptanone	(16)	ND	ND
153	Methylethylbenzene isomers	(3)	ND	ND
151	Trimethylbenzene	(3)	ND	ND
	Decane	(2)	ND	ND
	Dimethyltrisulfide	(19)	ND	ND
	5-ethyl-2-methyl-heptane	(13)	ND	ND
172 ~~47~~	Undecane	(1)	ND	ND
173	Dimethyldisulfide	(77)	ND	ND
? ———	Ethyldimethylbenzene	NQ	ND	ND
152	Tetramethylbenzene	NQ	ND	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 29, 1982

Checked by [signature] Date 5 June, 1982

L4/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L4/rm

E 61.0

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

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JAMES M. MONTGOMERY
CONSULTING ENGINEERS, INC.

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C52541	C52542	C52543
Sampling Date:	May 5-6, 1982	May 5-6, 1982	May 5-6, 1982
Date Received:	May 10, 1982	May 10, 1982	May 10, 1982
Date Analyzed:	May 12, 1982	May 12, 1982	May 12, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

see par 2 / corrected

Compound	Concentration (micrograms/liter)		
Trichlorofluoromethane	ND	ND	NQ
29 1,1-Dichloroethene	4	NQ	NQ
1,2-Dichloroethane	ND	NQ	NQ
check Chloroform	7	4	4
87 Trichloroethene	2	1	NQ
Toluene	37	NQ	NQ
85 Tetrachloroethene	4	3	2
Ethylbenzene	2	ND	NQ

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 14, 1982

Checked by [signature] Date 20 May, 1982

L19/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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555 East Walnut Street, Pasadena, California 91101
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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
		C52541	C52542	C52543
164	m,p-Xylenes	10	ND	NQ
165	o-Xylene	6	ND	NQ
26	1,3-Dichlorobenzene	NQ	NQ	NQ
27	1,4-Dichlorobenzene	1	NQ	NQ
28	1,2-Dichlorobenzene	4	NQ	NQ
154	1,3,5-Trichlorobenzene	ND	ND	NQ
5	1,2,4-Trichlorobenzene	ND	ND	NQ
155	1,2,3-Trichlorobenzene	ND	ND	NQ
11	1,1,1-Trichloroethane	1	1	ND
45	Bromodichloromethane	ND	NQ	ND
4	Benzene	NQ	ND	ND
-	Cis-1,3-Dichloropropene	NQ	ND	ND
55	Naphthalene	6	ND	ND
161	Propylbenzene	NQ	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 14, 1982

Checked by Robert R. Clark Date 20 May, 1982

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C52541	C52542	C52543
175 Tetrahydrofuran	40	20	22
1-Hexene √ PG-2	ND	(1)	NQ
174 Acetone	480	ND	ND
176 Methylethylketone	10	ND	ND
4-Methyl-2-pentanone	(38)	ND	ND
173 Dimethyldisulfide	(200)	ND	ND
153 Methylethylbenzene-isomers	(38)	ND	ND
151 Trimethylbenzene isomers	(57)	ND	ND
172 Undecane	(24)	ND	ND
150 Methanethiol	(140)	ND	ND
162 Thiobismethane	(41)	ND	ND
Dimethyltrisulfide	(88)	ND	ND
152 Tetramethylbenzene	(7)	ND	ND
Decane	(31)	ND	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 14, 1982

Checked by Robert R. Clark Date 20 May, 1982

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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E 61

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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WALNUT CREEK MAY 2 1982 OFFICE

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: Indianapolis 906 Job/P.O. No.: 1180.0030 817 901

Sample Description:	Ozone Effluent	Primary Influent	Trickling Filter Influent
Laboratory No.:	C52544	C52545	C52546
Sampling Date:	May 5-6, 1982	May 5-6, 1982	May 5-6, 1982
Date Received:	May 10, 1982	May 10, 1982	May 10, 1982
Date Analyzed:	May 12, 1982	May 12, 1982	May 12, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)		
Trichlorofluoromethane	20	ND	ND
29 1,1-Dichloroethene	NQ	ND	ND
30 Trans-1,2-dichloroethene	NQ	ND	ND
1,2-Dichloroethane	NQ	NQ	ND
Chloroform	10	27	19
11 1,1,1-Trichloroethene	NQ	13	8
Benzene	NQ	6	4
87 Trichloroethene	NQ	16	9
48 Bromodichloromethane	NQ	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 14, 1982

Checked by Robert R. Clark Date 18 May, 1982

L19/rm
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
		906	907	901
		C52544	C52545	C52546
86	Toluene	NQ	480	210
85	Tetrachloroethene	NQ	27	19
38	Ethylbenzene	NQ	26	12
164	m,p-Xylenes	NQ	95	56
165	o-Xylene	NQ	33	22
161	Propylbenzene	NQ	7	6
26	1,3-Dichlorobenzene	NQ	NQ	NQ
27	1,4-Dichlorobenzene	NQ	5	4
[illegible]	1,2-Dichlorobenzene	NQ	13	10
33	Cis-1,3-Dichloropropene	ND	9	3
95	Naphthalene	ND	19	16
44	Methylene chloride	ND	33	12

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 14, 1982

Checked by [signature] Date 18 May, 1982

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		C52544	C52545	C52546
174	Acetone	55	450	430
176	Methylethylketone	12	13	ND
175	Tetrahydrofuran	12	69	62
	1-Butene	NQ	ND	ND
	Ethenylbenzene	(2)	ND	ND
	cis-1,2-dichloroethene	ND	5	2
173	Dimethyldisulfide	ND	(120)	(105)
	2,4-Dimethylhexane	ND	ND	(10)
155	(1-methylethyl)benzene	ND	(12)	(10)
152	Ethylmethylbenzene isomers	ND	(310)	(250)
151	Trimethylbenzene isomers	ND	(450)	(330)
	1-methyl-4-(1-methyl-ethenyl),-(R)-cyclohexene	ND	(34)	(24)
160	Ethyldimethylbenzene	ND	ND	(40)
	Decane	ND	(59)	(50)
	Butyl acetate	ND	(670)	(27)
	Methylcyclohexane	ND	(31)	(22)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 14, 1982

Checked by [signature] Date 18 May, 1982

L19/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		C52544	C52545	C52546
	1-Butanol	ND	ND	(18)
162	Thiobismethane	ND	(51)	(56)
150	Methanethiol	ND	(550)	(68)
	1-Methylethylacetate	ND	(46)	ND
	Nonane	ND	(14)	ND
152	Tetramethylbenzene isomers	ND	(57)	ND
	Dodecane	ND	(35)	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date May 14, 1982

Checked by [signature] Date 18 May, 1982

L19/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L19/rm

E 16

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis

Job/P.O. No.: 437

901

Sample Description: Trickling Filter Influent

Laboratory No.: C52349

Sampling Date: May 3-4, 1982

Date Received: May 5, 1982

Date Analyzed: May 9, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)
29	1,1-Dichloroethene	11
	Chloroform	70
	1,1,1-Trichloroethane	25
	Benzene	17
87	Trichloroethene	27
	Toluene	51
85	Tetrachloroethene	11
	Ethylbenzene	8.
164	m,p-Xylenes	34
165	o-Xylene	14

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only

Submitted by [signature] Date May 12, 1982

Checked by Robert R. Clark Date 15 May 1982

L19/rm
250

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)
	C52349
Acetone	180
cis-1,2-Dichloroethene	NQ
Dimethyldisulfide	(430)
Nonane	(12)
Methylethylbenzene	(120)
Trimethylbenzene	(90)
Undecane	(34)
1-methyl-4-(1-methylethenyl) benzene	(28)
Dodecane	(19)
Tridecane	(19)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by _____ Date May 12, 1982

Checked by _____ Date _____

L19/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (!g/l)	#	Compound	Minimum Quantification Limit (!g/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS

Client: EMS — Entered 8-23-82 — Job/P.O. No.: 1180.0030

Sample Description:	Belmont ~~#14~~ Primary BP-F 803	White Pines BP-F2 WR 830
Laboratory No.:	C38282	C38283
Sampling Date:	Feb. 22, 1982	Feb. 22, 1982
Date Received:	March 5, 1982	March 5, 1982
Date Analyzed:	April 3, 1982	April 3, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

Compound	Concentration (micrograms/liter)	
Vinylchloride 88	1	ND-1
Chloromethane 45	NQ-2	ND-1
Bromomethane 46	NQ-2	ND-1
Methylene chloride 44	560	ND-1
1,1-Dichloroethylene 29	6	ND-1
trans-1,2-Dichloroethylene 30	NQ-2	ND-1
1,1-Dichloroethane 13	7	ND-1
Chloroform 23	10	NQ-2
1,2-Dichloroethane 70	NQ-2	ND-1
1,1,1-Trichloroethane 11	44	NQ-2

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date April 4, 1982

Checked by Robert R. Clark Date 14 April, 1982

L9/mm
500

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(continued)

Priority Pollutant Purgeable Volatile Organics Detected (cont.)

Compound	Concentration (micrograms/liter)	
	C38282	C38283
Trichloroethylene 87	270	NQ-2
Benzene 4	81	ND-1
Bromodichloromethane 48	NQ-2	ND-1
1,1,2-Trichloroethane 14	NQ-2	ND-1
Toluene 86	62	ND-1
33 cis-1,3-Dichloropropene	1	ND-1
Chlorobenzene 7	NQ-2	ND-1
Tetrachloroethylene 85	8	NQ-2
Ethylbenzene 38	29	ND-1
m,p-Xylene	120	NQ-2
o-Xylene	37	ND-1
Propylbenzene	11	ND-1
p-Chlorotoluene	NQ-2	ND-1
1,3-Dichlorobenzene 26	2	ND-1
1,4-Dichlorobenzene 27	10	ND-1
1,2-Dichlorobenzene 25	13	ND-1
Naphthalene 55	30	ND-1
1,3,5-Trichlorobenzene	NQ-2	ND-1
1,2,4-Trichlorobenzene 8	1	ND-1
1,2,3-Trichlorobenzene	NQ-2	ND-1
Trichlorofluoromethane 49	1	3

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date April 4, 1982

L9/mm Checked by Robert R. Clark Date 14 April, 1982

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RECEIVED JUL 1 0 1982 WALNUT CREEK JAMES CONSULTING ENGINEERS OFFICE

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C66739	C66740	C66741
Sampling Date:	June 23-24, 1982	June 23-24, 1982	June 23-24, 1982
Date Received:	June 25, 1982	June 25, 1982	June 25, 1982
Date Analyzed:	June 29, 1982	June 29, 1982	June 29, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
79	1,1-Dichloroethene	NQ	NQ	NQ
23	Chloroform	NQ	ND	NQ
48	Dibromochloromethane	NQ	NQ	NQ
85	Tetrachlorethene	NQ	NQ	NQ
4	Benzene	NQ	ND	ND
38	Ethylbenzene	NQ	ND	ND
164	m,p-Xylenes	NQ	ND	ND
155	o-Xylene	NQ	ND	ND
47	Bromoform	NQ	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 1, 1982

Checked by [signature] Date 6 July 1982

L18/rm
950

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter) 902	901	904
		C66739	C66740	C66741
161	Propylbenzene	NQ	ND	ND
26	1,3-Dichlorobenzene	NQ	ND	ND
27	1,4-Dichlorobenzene	NQ	ND	ND
25	1,2-Dichlorobenzene	NQ	ND	ND
35	Naphthalene	NQ	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted by [signature] Date July 1, 1982

Checked by [signature] Date 6 July, 1982

L18/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)		
	C66739	C66740	C66741
175 Tetrahydrofuran	ND	ND	3
2,4,4-Trimethyl-2-pentene	NA	(1)	ND
2,2,4,6,6-Pentamethylheptane	NA	NQ	ND
174 Acetone	140	ND	ND
2-Methylpyridine	(6)	ND	ND
4-Methylpyridine	(22)	ND	ND
153 Ethylmethylbenzene isomers	NQ	ND	ND
162 Thiobismethane	(5)	ND	ND
172 ~~159~~ Undecane	(1)	ND	ND
170 ~~159~~ Dimethyldisulfide	(19)	ND	ND
Tridecane	NQ	ND	ND
Nonane	NQ	ND	ND
2,2,3-Trimethylhexane	(1)	ND	ND

CHECK pg 1 + 2

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
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Submitted by [signature] Date July 1, 1982

Checked by Robert R. Clark Date 6 July 1982

L18/rm

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

L18/rm

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(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis

Job/P.O. No.: 1180.0030

	906	901
Sample Description:	Ozone #1 Effluent	Trickling Filter Influent
Laboratory No.:	C77922	C77923
Sampling Date:	July 7, 1982	July 7, 1982
Date Received:	July 9, 1982	July 9, 1982
Date Analyzed:	July 10, 1982	July 11, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
44	Methylene chloride	ND	51
29	1,1-Dichloroethene	ND	6.1
23	Chloroform	ND	3.4
10	1,2-Dichloroethane	ND	7.5
11	1,1,1-Trichloroethane	ND	2.9
4	Benzene	ND	22
57	Trichloroethene	ND	4.1
86	Toluene	ND	32
55	Tetrachloroethene	ND	8.5

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By _____ Checked By _____

L3RM20720
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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)	
		906	921
		C77922	C77923
38	Ethylbenzene	ND	3.7
159	m,p-Xylenes	ND	19
165	o-Xylene	ND	4.9
161	Propylbenzene	ND	1.0
26	1,3-Dichlorobenzene	ND	0.06
27	1,4-Dichlorobenzene	ND	1.3
28	1,2-Dichlorobenzene	ND	2.9
31	Naphthalene	ND	10

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L3RM20720

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)	
		906	901
		C77922	C77923
174	Acetone (CHECK PAGE 2)	110	400
178	Methylethylketone	8	NA
	2-Methylpropanal	(3)	NA
	Hexane	(4)	(1.9)
	2-Hexanone	(2)	NA
	Hexanal	(8)	NA
	Heptanal	(34)	NA
	2-ethyl-1-hexanol	(2)	NA
	Trimethylhexane isomers	(2)	NA
	2,2-Dimethylpentanal	(4)	NA
	Nonanal	(18)	NA
153	Ethylmethylbenzene isomers	NA	17
151	Trimethylbenzene isomers	NA	23
150	Methanethiol	NA	(170)
	2-methyl-1-propanol	NA	(36)
	cis-1,2-Dichloroethene	NA	2.3
170	Dimethyldisulfide	NA	(67)
	Nonane	NA	(1.5)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

Compound	Concentration (micrograms/liter)	
	906	901
	C77922	**C77923**
152 Tetramethylbenzene	NA	(10)
1-methyl-4-(1-methylethenyl)cyclohexene	NA	(120)
Decane	NA	6.6
Dodecane	NA	(3.3)
172 Undecane	NA	(4.3)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By [signature] Checked By [signature]

L3RM20720

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	906	907	901
Sample Description:	Ozone #1 Effluent	Ozone #2 Effluent	Trickling Filter Influent
Laboratory No.:	C78421	C78422	C78423
Sampling Date:	July 14, 1982	July 14, 1982	July 14, 1982
Date Received:	July 16, 1982	July 16, 1982	July 16, 1982
Date Analyzed:	July 30, 1982	July 30, 1982	July 30, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
44	Methylenechloride	5.0	2.8	130
29	1,1-Dichloroethene	ND	NQ	3.3
23	Chloroform	3.0	3.5	16
11	1,1,1-Trichloroethane	ND	NQ	3.3
4	Benzene	ND	ND	30
87	Trichloroethene	ND	ND	3.2
48	Dichlorobromomethane	1.0	1.2	4.2
86	Toluene	NQ	NQ	45
51	Dibromochloromethane	0.7	1.0	3.1

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schutz Checked By Robert R. Clark

L14RM20810
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
		C78421	**C78422**	**C78423**
85	Tetrachloroethene	ND	ND	6.7
38	Ethylbenzene	ND	ND	2.1
47 —	Bromoform	ND	ND	NQ
26	M-Dichlorobenzene	ND	ND	1.0
25	O-Dichlorobenzene	ND	ND	2.0
55	Naphthalene	ND	ND	4.8

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Scholtz Checked By Robert R. Cook

L14RM20810

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

	Compound	Concentration (micrograms/liter)		
		906	907	701
		C78421	C78422	C78423
174	Acetone	41	39	(400)
175	Tetrahydrofuran	9.2	8.2	30
162	Thiobismethane	ND	ND	(29)
173	Dimethyldisulfide	ND	ND	(4.8)
167	m,p-Xylene	ND	ND	11
165	o-Xylene	ND	ND	3.6
161	Propylbenzene	ND	ND	6.6
151	Trimethylbenzene	ND	ND	(6.5)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotty Checked By Robert R. Clark

L14RM20810

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis — Job/P.O. No.: 1180.0030

	902	903	904
Sample Description:	Aeration Influent	Clarifier Effluent	Filter Effluent
Laboratory No.:	C78418	C78419	C78420
Sampling Date:	July 14, 1982	July 14, 1982	July 14, 1982
Date Received:	July 16, 1982	July 16, 1982	July 16, 1982
Date Analyzed:	July 30, 1982	July 30, 1982	July 30, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)		
44	Methylenechloride	ND	2.4	3.2
23	Chloroform	28	NQ	2.4
11	1,1,1-Trichloroethane	ND	NQ	ND
86	Toluene	2.3	NQ	NQ
4	Benzene	2.2	ND	ND
48	Dichlorobromomethane	12	ND	ND
51	Dibromochloromethane	10	ND	ND
47	Bromoform	2.1	ND	ND
55	Naphthalene	1.4	ND	ND

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schotty — Checked By Robert R. Clark

L14RM20810
750

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Other Purgeable Volatile Organics Tentatively Identified:

		902	903	904
	Compound	Concentration (micrograms/liter)		
		C78418	**C78419**	**C78420**
174	Acetone	(560)	ND	ND
175	Tetrahydrofuran	ND	9.1	12
150	Methanethiol	(24)	ND	ND
173	Dimethyldisulfide	(3.8)	ND	ND

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schultz Checked By Robert R. Clark

L14RM20810

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
15V	1,2-Dichloroethane	0.1	ERL15	Hexachloroethane	0.1
16V	1,1-Dichloroethylene	0.1	ERL16	Trichlorobenzene	0.1
17V	1,2-Dichloropropane	0.1	ERL17	Naphthalene	0.1
18V	1,2-Dichloropropylene	0.1	ERL18	Hexachlorobutadiene	0.1
19V	Ethylbenzene	0.1	ERL19	Chloronaphthalene	0.1
20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

ENVIRONMENTAL RESEARCH LABORATORY (ERL)

a division of James M. Montgomery, Consulting Engineers, Inc.
555 East Walnut Street, Pasadena, California 91101
(213) 796-9141/(213) 681-4255 Telex: 67-5420

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS

Client: Indianapolis Job/P.O. No.: 1180.0030

901

Sample Description: Trickling Filter Influent

Laboratory No.: C79114

Sampling Date: July 26, 1982

Date Received: July 28, 1982

Date Analyzed: July 30, 1982

Priority Pollutant Purgeable Volatile Organics Detected:

	Compound	Concentration (micrograms/liter)
29	1,1-Dichloroethene	1.2
23	Chloroform	5.3
11	1,1,1-Trichloroethane	1.0
4	Benzene	13
87	Trichloroethene	1.8
48	Dichlorobromomethane	1.0
86	Toluene	7.6
51	Dibromochloromethane	NQ
85	Tetrachloroethene	2.0

ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schalty Checked By Robert R. Clark

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for
PURGEABLE VOLATILE ORGANICS
(Continued)

Other Purgeable Volatile Organics Tentatively Identified:

901

Compound	Concentration (micrograms/liter)
	C79114
162 Thiobismethane	(17)
174 ~~171~~ Acetone	(120)
173 ~~170~~ Dimethyldisulfide	(1.4)

D: Detected but not quantified
ND: Not Detected
NQ: Not Quantifiable; detectable but below minimum quantification limits
NA: Not Analyzed
( ): Parentheses indicate tentative number only.

Submitted By H Schultz Checked By Robert A. Clark

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ENVIRONMENTAL RESEARCH LABORATORY (ERL)

Report of Analysis by GC/MS for PURGEABLE VOLATILE ORGANICS (Continued)

Compounds included in Quantitative Analysis by GC/MS:

#	Compound	Minimum Quantification Limit (µg/l)	#	Compound	Minimum Quantification Limit (µg/l)
1V	Acrolein	0.1	ERL1	Acetone	0.1
2V	Acrylonitrile	0.1	ERL2	Methylethylketone	0.1
3V	Benzene	0.1	ERL3	Tetrahydrofuran	0.1
4V	Bis(chloromethyl) ether	D*	ERL4	trans-1,3-Dichloropropene	0.1
5V	Bromoform	0.1	ERL5	cis-1,3-Dichloropropene	0.1
6V	Carbon tetrachloride	0.1	ERL6	m,p-Xylene	0.1
7V	Chlorobenzene	0.1	ERL7	o-Xylene	0.1
8V	Chlorodibromomethane	0.1	ERL8	Propylbenzene	0.1
9V	Chloroethane	0.1	ERL9	p-Chlorotoluene	0.1
10V	2-Chloroethylvinyl ether	0.1	ERL10	Styrene	0.1
11V	Chloroform	0.1	ERL11	m-Dichlorobenzene	0.1
12V	Dichlorobromomethane	0.1	ERL12	o-Dichlorobenzene	0.1
13V	Dichlorodifluoromethane	0.1	ERL13	p-Dichlorobenzene	0.1
14V	1,1-Dichloroethane	0.1	ERL14	1,2-Dibromo-3-chloropropane	0.1
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20V	Methyl bromide	0.1			
21V	Methyl chloride	0.1			
22V	Methylene chloride	0.1			
23V	1,1,2,2-Tetrachloroethane	0.1			
24V	Tetrachloroethylene	0.1			
25V	Toluene	0.1			
26V	1,2-trans-Dichloroethylene	0.1			
27V	1,1,1-Trichloroethane	0.1			
28V	1,1,2-Trichloroethane	0.1			
29V	Trichloroethylene	0.1			
30V	Trichlorofluoromethane	0.1			
31V	Vinyl chloride	0.1			

*D = Decomposes

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