8/30/84
N.

Eugene A Hickok and Associates, Inc
Hydrologists — Engineers

545 Indian Mound
Wayzata, Minnesota 55391

(612) 473-4224

US EPA RECORDS CENTER REGION 5
513933

August 30, 1984

Mr. Paul Bitter
U.S. EPA 5HR-13
230 South Dearborn
Chicago, IL 60604

Dear Mr. Bitter:

Enclosed are four tables which were enclosed with a letter which was transmitted to Mark Simonett, MPCA, on November 10, 1983.

Hopefully, this information will be helpful to you.

Sincerely,

EUGENE A. HICKOK AND ASSOCIATES

Paul D. Josephson

Paul D. Josephson, P.E.

enclosures

TABLE 1

WATER QUALITY DATA
ST. LOUIS PARK - W23

Date	10/28/82	12/7/82
Hour		
Formation	10" casing	12" casing
Packer		
Depth, Inlet	air jet at 667'	air at 270'

	Compound	Concentration ug/l (ppb)	
I17	2,3-dihydroindene	220	330
I15	Indene	280	610
I28	Naphthalene	2600	4400
I34	Benzo(b)thiophene	160	270
I29	Quinoline	<20*	<10**
I42	2-methylnaphthalene	2500	2400
I17	Indole	<20*	<10**
I42	I-methlnaphthalene	1600	1600
I54	I,1-biphenyl	450	500
I52	Acenaphthylene	200	330
I54	Acenaphthene	1600	1400
I66	Fluorene	1700	1600
I78	Phenanthrene	4000	3600
I78	Anthracene	900	600
I79	Acridine	100	75
I79	Phenanthridine	30	12
I67	Carbazole	230	180
202	Fluoranthene	1500	1600
202	Pyrene	1300	1200
228	Benz(a)anthracene	400	180
228	Chrysene	530	130
252	Benzo (b) fluoranthene	400	30
252	Benzo(k) fluoranthene	330	43
252	Benzo(e)pyrene	280	21
252	Benzo(a)pyrene	470	30
252	Perylene	70	3
276	Indeno (1,2,3 cd)pyrene	190	<10**
278	Dibenz(a,h) anthracene	210	<10**
276	Benzo(g,h,i) perylene	260	<10**

* Compound present, but below quantitation limits

** High detection limits due to presence of large amounts of other compounds

TABLE 2

WATER QUALITY DATA

ST. LOUIS PARK - W23

Sampled - October 28, 1982

Compounds Identified

2,3-Dihydroindene
Indene
Naphthalene
Benzo[b]thiophene
`-Methylnaphthalene
-Methylnaphthalene
1,1'-Biphenyl
Acenaphthylene
Acenaphthene
Fluorene
Phenanthrene
Anthracene
Acridine
Phenanthridine
Carbazole
Fluoranthene
Pyrene
Benz[a]anthracene
Chrysene
Benzo[b]fluoranthene
Benzo[k]fluoranthene
enzo[j]fluoranthene
enzo[e]pyrene
Benzo[a]pyrene
Perylene
Indeno[1,2,3 cd]pyrene
Dibenz[a,h]anthracene
Benzo[g,h,i]perylene
Ethylbenzene
Dimethylbenzenes (xylenes)
Ethenylbenzene
Nonane
Methylethylbenzene
Propylbenzene
Dimethylnonane
Methyl-ethylbenzenes
Methylcyclodecane
Trimethylbenzene
Methyldecane
Ethyl-dimethylbenzenes
Methyl-2,3-dihydroindenes
Undecane
Ethenyl-dimethylbenzenes
Phenylpropenal
Tetramethylbenzenes
Tetramethylpentane
Trimethyloctane
Dimethyldecanes
Hydroxybenzaldehyde
Methylphenols
Ethylphenols
Dimethylphenols
Methylindene
Methoxybenzaldehyde
Trimethylphenols
Ethyl-methylphenols
Hydroxybenzoic Acid
Isofurandione
Diethylphenol
Ethylnaphthalenes
Dimethylnaphthalenes
Dimethylbenzofuran
Cyclopentylbenzene
Dihydromethylnaphthalenes
Dimethyl-2,3-dihydroindene
Tridecane
Methylethylnaphthalene
Trimethylnaphthalenes
Methyl-1,1'-biphenyl
Methyldibenzofuran
Dibenzofuran
2,3 Dihydroindenediol
Biphenylene
Methylphthalazinone
Naphthalenol
Methylnaphthalenols
[1,1'biphenyl]-ols
Dimethylnaphthol
Dibenzofuranol
Methoxy-1,1'-biphenyl
Methyl-phenoxybenzene
Dibenzodioxins
Methyldibenzothiophenes
Methylphenanthrenes
Methylpyridoindolols
Dimethylnaphthothiophene
Dimethylethyl-[1,1'biphenyl]-ol
Methylphenylcinnolines
Methylbenzo[c]cinnoline
Phenanthrenol
Benzofluorenes
Dimethylbenzo[c]cinnolines
Dimethyl-1,1'-biphenyl
Methylfluorenes
Dihydromethylbenzofuran
Phenylnaphthalenes
Methylphenanthrenes
Dimethylphenanthrenes
Ethylphenanthrene
Phenanthroimidazole
Methylpyrenes
Terphenyls
Benzo[b]naphthothiophenes
Cyclopentaphenanthrene
Methyltriphenylenes
Binaphthalenes
Dimethylbenzo[c]phenanthrene
Methylbenz[j]aceanthrylenes

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TABLE 3

WATER QUALITY DATA
ST. LOUIS PARK - W23

Date	12/14/82
Hour	1:00
Formation	Platteville
Packer	None
Depth, Inlet	72.5'

Compound	Concentration ug/l(ppb)
117 2,3-dihydroindene	160
115 Indene	310
128 Naphthalene	1,000
134 Benzo(b)thiophene	100
129 Quinoline	<10*
142 2-methylnaphthalene	580
117 Indole	<10*
142 1-methlnaphthalene	480
154 1,1-biphenyl	120
152 Acenaphthylene	82
154 Acenaphthene	390
166 Fluorene	400
178 Phenanthrene	930
178 Anthracene	150
179 Acridine	22
179 Phenanthridine	5
167 Carbazole	93
202 Fluoranthene	410
202 Pyrene	330
228 Benz(a)anthracene	53
228 Chrysene	32
252 Benzo (b) fluoranthene	26
252 Benzo(k) fluoranthene	26
252 Benzo(e)pyrene	12
252 Benzo(a)pyrene	18
252 Perylene	2
276 Indeno (1,2,3 cd)pyrene	12
278 Dibenz(a,h) anthracene	14
276 Benzo(g,h,i) perylene	4

* High limits due to presence of large amounts of other compounds

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TABLE 4

WATER QUALITY DATA
ST. LOUIS PARK - W23

Date:	9/28/83	9/28/83	10/26/83	10/26/83
Hour:	0:15	8	0:30	8
Formation:	Prairie du Chien - Jordan	Prairie du Chien - Jordan	Prairie du Chien - Jordan	Prairie du Chien - Jordan
Packer:	Good at 280'	Good at 280'	Good at 280'	Good at 280'
Depth, Inlet:	362'	362'	362'	362'
Compound	Concentration ug/l (ppb)			
117 2,3-dihydroindene	1600	1370	78	57
115 Indene	14,700	786	145	106
128 Naphthalene	82	2	335	338
134 Benzo(b)thiophene	324	130	43	35
129 Quinoline	<1	11	4	2
142 2-methylnaphthalene	1230	310	74	43
117 Indole	<1	<1	<1	<1
142 1-methylnaphthalene	1970	910	145	106
154 1,1'-biphenyl	760	480	19	20
152 Acenaphthylene	<1	290	24	22
154 Acenaphthene	860	970	99	81
166 Fluorene	1530	720	76	64
178 Phenanthrene	1300	640	86	61
178 Anthracene	340	110	13	9
179 Acridine	63	33	4	3
179 Phenanthridine	6	<1	<1	<1
167 Carbazole	810	470	32	20
202 Fluoranthene	600	110	18	10
202 Pyrene	500	73	12	7
228 Benz(a)anthracene	170	5	<1	<1
228 Chrysene	200	6	<1	<1
252 Benzo(b)fluoranthene	100	2	<1	<1
252 Benzo(k)fluoranthene	80	1	<1	<1
252 Benzo(e)pyrene	72	1	<1	<1
252 Benzo(a)pyrene	120	2	<1	<1
252 Perylene	21	<1	<1	<1
276 Indeno(1,2,3CD)pyrene	12	<1	<1	<1
278 Dibenz(a,h)anthracene	52	<1	<1	<1
276 Benzo(g,h,i)perylene	<1	<1	<1	<1

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