Erler & Kalinowski, Inc.
Consulting Engineers and Scientists
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DATE: 9 May 1996 TIME: 3:00

FROM: Andy Safford PAGES (including cover sheet): 10

PROJECT: 4200 Alameda PROJECT #: 930040.00

TO THE FOLLOWING:

NAME: Barney Chan
COMPANY: Alameda County
FAX NO.: (510) 337-9335

NAME: Sum Arigala
COMPANY: RWQCB
FAX NO.: (510) 286-1380

NAME: Mike Webster
COMPANY: C/o Amberwick
FAX NO.: (310) 595-0740

NAME:
COMPANY:
FAX NO.:

NAME:
COMPANY:
FAX NO.:

NAME:
COMPANY:
FAX NO.:

☐ REPORT ☐ AS REQUESTED

☐ LETTER/MEMORANDUM ☐ FOR APPROVAL

☐ SPECIFICATIONS: ☐ FOR REVIEW & COMMENTS

☐ OTHER: ☐ FOR INFORMATION & COORDINATION

MESSAGE:

FOR VOICE CONTACT CALL: (415) 578-1172
FOR RETURN FACSIMILE: (415) 578-9131

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9 May 1996

Mr. Barney M. Chan
Hazardous Materials Specialist
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Subject: Transmittal of Analytical Data of Soil Samples
Collected During Demolition Activities
4200 Alameda Avenue, Oakland, California
(EKI 930040.00)

Dear Mr. Chan:

This letter transmits the analytical results of soil samples collected to date during demolition activities at the former oil recycling facility, located at 4200 Alameda Avenue, Oakland, California. EKI collected these samples in accordance with your requests. As shown on Figure 1, Erler & Kalinowski, Inc. ("EKI") collected a soil sample from each of the excavations resulting from the removal of three underground tanks. These excavation samples are identified as T-1, T-2, and T-3. EKI also collected three shallow soil samples from the former above-grade tank farm. These tank farm samples are identified as FTFS-1, FTFS-2, and FTFS-3.

Collected soil samples were analyzed for waste oil parameters as specified in the *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tanks*, updated 2 October 1990. The following analyses were performed:

- Total purgeable petroleum hydrocarbons with benzene, toluene, ethylbenzene, and total xylenes ("BTEX") by modified EPA Method 8015 and EPA Method 8020
- Fuel fingerprint as diesel and motor oil by modified EPA Method 8015
- Volatile organic compounds by EPA Method 8260
- Semi-volatile organic compounds by EPA Method 8270

Erler & Kalinowski, Inc.

- Polychlorinated biphenyls ("PCBs") by EPA Method 8080
- Selected metals (cadmium, total chromium, lead, nickel, and zinc) by atomic absorption

Analytical results are summarized in attached Tables 1 through 6. Comparison of these analytical data with sampling results obtained by EKI from the on-site Preliminary Investigation in July 1995 indicates there are no appreciable differences between the two data sets.

Please call if you have questions or wish to discuss this matter in greater detail.

Very truly yours,

ERLER & KALINOWSKI, INC.

Andrew N. Safford, P.E.
Project Manager

attachments

cc: Mr. Sum Arigala, Regional Water Quality Control Board
Mike Webster, c/o Amberwick Corporation

TABLE 1

TOTAL PETROLEUM HYDROCARBON (TPH) ANALYTICAL RESULTS OF SOIL SAMPLES

4200 Alameda Avenue, Oakland, California

(EKI 930040.00)

Sample ID	Depth (ft, bgs)	Sample Date	TPH (as gasoline) Concentration		TPH (as diesel) Concentration		TPH (as motor oil) Concentration	
			(mg/kg)	Description of Chromatogram Pattern	(mg/kg)	Description of Chromatogram Pattern	(mg/kg)	Description of Chromatogram Pattern
T-1	4 - 4.5	4/3/96	**4,000**	Pattern characteristic of weathered gasoline less than C_8	**7,000**	Pattern characteristic of weathered diesel and unidentified hydrocarbons in C_9-C_{14} range	**6,100**	Pattern characteristic of motor oil
T-2	5.5 - 6	4/3/96	**2,700**	Pattern characteristic of weathered gasoline less than C_8	**11,000**	Pattern characteristic of diesel and unidentified hydrocarbons in C_9-C_{14} range	**9,800**	Pattern characteristic of motor oil
T-3	5.5 - 6	4/3/96	**1,700**	Pattern characteristic of weathered gasoline less than C_8	**2,400**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range	**2,600**	Unidentifiable pattern of hydrocarbons in C_{16}-C_{36} range
FTFS-1	2 - 3	4/18/96	**600**	Pattern characteristic of weathered gasoline	**1,300**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range	**2,600**	Pattern characteristic of motor oil
FTFS-2	2 - 3	4/18/96	**89**	Pattern characteristic of weathered gasoline	**2,700**	Pattern characteristic of weathered diesel in C_{16}-C_{24} range	**7,000**	Pattern characteristic of weathered diesel in C_{16}-C_{40} range
FTFS-3	2 - 3	4/18/96	**330**	Pattern characteristic of weathered gasoline less than C_8	**330**	Unidentifiable pattern of hydrocarbons in C_9-C_{24} range	**12,000**	Pattern characteristic of motor oil

TABLE 2
BENZENE, TOLUENE, ETHYL BENZENE, TOTAL XYLENES (BTEX)
ANALYTICAL RESULTS OF SOIL SAMPLES

4200 Alameda Avenue, Oakland, California
(EKI 930040.00)

Sample ID	Sample Depth (ft, bgs)	Sample Date	BTEX Concentration (mg/kg)			
			Benzene	Toluene	Ethyl Benzene	Total Xylenes
T-1	4 - 4.5	4/3/96	<10 (a)	86	30	190
T-2	5.5 - 6	4/3/96	<8.0	84	33	190
T-3	5.5 - 6	4/3/96	<2.5	14	5.6	58
FTFS-1	2 - 3	4/18/96	<0.50	57	11	74
FTFS-2	2 - 3	4/18/96	<0.50	54	40	74
FTFS-3	2 - 3	4/18/96	220	460	1,800	7,700

← high

Notes:

(a) Less than symbol ("<") denotes that compound was not present above the detection limit shown.

TABLE 3
VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS OF SOIL SAMPLES

4200 Alameda Avenue, Oakland, California
(EKI 930040.00)

	Volatile Organic Compound Concentration (ug/kg)					
Sample ID:	T-1	T-2	T-3	FTFS-1	FTFS-2	FTFS-3
Sample Depth (ft, bgs):	4 - 4.5	5.5 - 6	5.5 - 6	2 - 3	2 - 3	2 - 3
Sample Date:	4/3/96	4/3/96	4/3/96	4/18/96	4/18/96	4/18/96
1,2-dichloroethane	<6,670 (a)	<6,670	<4,000	<667	<500	<500
1,2-dichloropropane	<6,670	<6,670	<4,000	<667	<500	<500
1,2-dichlorobenzene	<6,670	**11,000**	<4,000	**700**	<500	**340; 680**
1,3-dichlorobenzene	<6,670	<6,670	<4,000	<667	**58**	**680**
1,4-dichlorobenzene	<6,670	<6,670	<4,000	<667	<500	<500
1,1,1-trichloroethane	<6,670	<6,670	<4,000	<667	<500	<500
1,1-dichloroethane	<6,670	<6,670	<4,000	<667	<500	<500
Chlorobenzene	NA (b)	NA (b)	NA (b)	**260**	<50	<200
Chloroethane	<6,670	<6,670	<4,000	<667	<500	<500
Tetrachloroethene	<6,670	**7,600**	<4,000	<667	<500	<500
Trichloroethene	<6,670	<6,670	<4,000	<667	**62**	<500
cis-1,2-dichloroethene	<6,670	**8,500**	<4,000	<667	<500	<500
trans-1,2-dichloroethene	<6,670	<6,670	<4,000	<667	<500	<500
p-Isopropyltoluene	**8,400**	**6,800**	<4,000	**1,300**	**500**	**870**
Naphthalene	**67,000**	**66,000**	**29,000**	**6,000**	**1,100**	**4,300**
n-Propylbenzene	**17,000**	**19,000**	<4,000	**1,900**	**650**	**1,600**
Toluene	**61,000**	**98,000**	**10,000**	<667	<500	<500
1,2,4-Trichlororbenzene	**9,600**	**9,800**	**5,800**	<667	<500	<500
1,2,4-Trimethylbenzene	**130,000**	**140,000**	**68,000**	**14,000**	**3,400**	**9,200**
1,3,5-Trimethylbenzene	**42,000**	**43,000**	**23,000**	**4,700**	**690**	**2,500**
Total Xylenes	**160,000**	**200,000**	**56,000**	**8,100**	**2,100**	**7,300**
n-Butylbenzene	**18,000**	**19,000**	<4,000	**1,400**	**580**	**1,100**
sec-Butylbenzene	<6,670	<6,670	<4,000	960	<500	**660**
2-Chlorotoluene	<6,670	**22,000**	**9,900**	<667	<500	**530**
Ethylbenzene	**27,000**	**36,000**	**4,400**	**1,600**	**580**	<500
Vinyl Chloride	<6,670	<6,670	<4,000	<667	<500	<500

Notes:

(a) Less than symbol ("<") denotes that compound was not present above the detection limit shown.

(b) "NA" - Not Analyzed. Soil samples FTFS-1, FTFS-2, and FTFS-3 were analyzed for volatile organic compounds ("VOCs") by both EPA Method 8010 and 8260. Soil samples T-1, T-2, and T-3 were analyzed for VOCs by EPA Method 8260 only. Chlorobenzene is not reported by EPA Method 8260.

TABLE 4
SEMIVOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS OF SOIL SAMPLES

4200 Alameda Avenue, Oakland, California
(EKI 930040.01)

Sample ID	Sample Depth (ft, bgs)	Sample Date	Semivolatile Organic Compound Concentration (ug/kg)								
			1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2,4-dimethylphenol	2-methylnaphthalene	2-methylphenol	4-methylphenol	Naphthalene	Phenol
T-1	4 - 4.5	4/3/96	<50,000 (a)	<50,000	<50,000	<50,000	**76,000**	<50,000	<50,000	**56,000**	<50,000
T-2	5.5 - 6	4/3/96	<12,500	<12,500	<12,500	<12,500	**22,000**	<12,500	<12,500	**18,000**	<12,500
T-3	5.5 - 6	4/3/96	<25,000	<25,000	<25,000	<25,000	**51,000**	<25,000	<25,000	<25,000	<25,000
FTFS-1	2 - 3	4/18/96	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000
FTFS-2	2 - 3	4/18/96	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000
FTFS-3	2 - 3	4/18/96	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000	<25,000

Notes:

(a) Less than symbol ("<") denotes that compound was not present above the detection limit shown.

TABLE 5
POLYCHLORINATED BIPHENYL (PCB) ANALYTICAL RESULTS OF SOIL SAMPLES

4200 Alameda Avenue, Oakland, California
(EKI 930040.00)

Sample ID	Sample Depth (ft, bgs)	Sample Date	PCB Arochlor Concentration (ug/kg)		
			PCB-1242	PCB-1254	PCB-1260
T-1	4 - 4.5	4/3/96	<100	<100	**1,300**
T-2	5.5 - 6	4/3/96	<100	<100	**740**
T-3	5.5 - 6	4/3/96	<100	<100	**390**
FTFS-1	2 - 3	4/18/96	<100	<100	**280**
FTFS-2	2 - 3	4/18/96	<100	<100	**260**
FTFS-3	2 - 3	4/18/96	<100	<100	**620**

Notes:

(a) Less than symbol ("<") denotes that compound was not present above the detection limit shown.

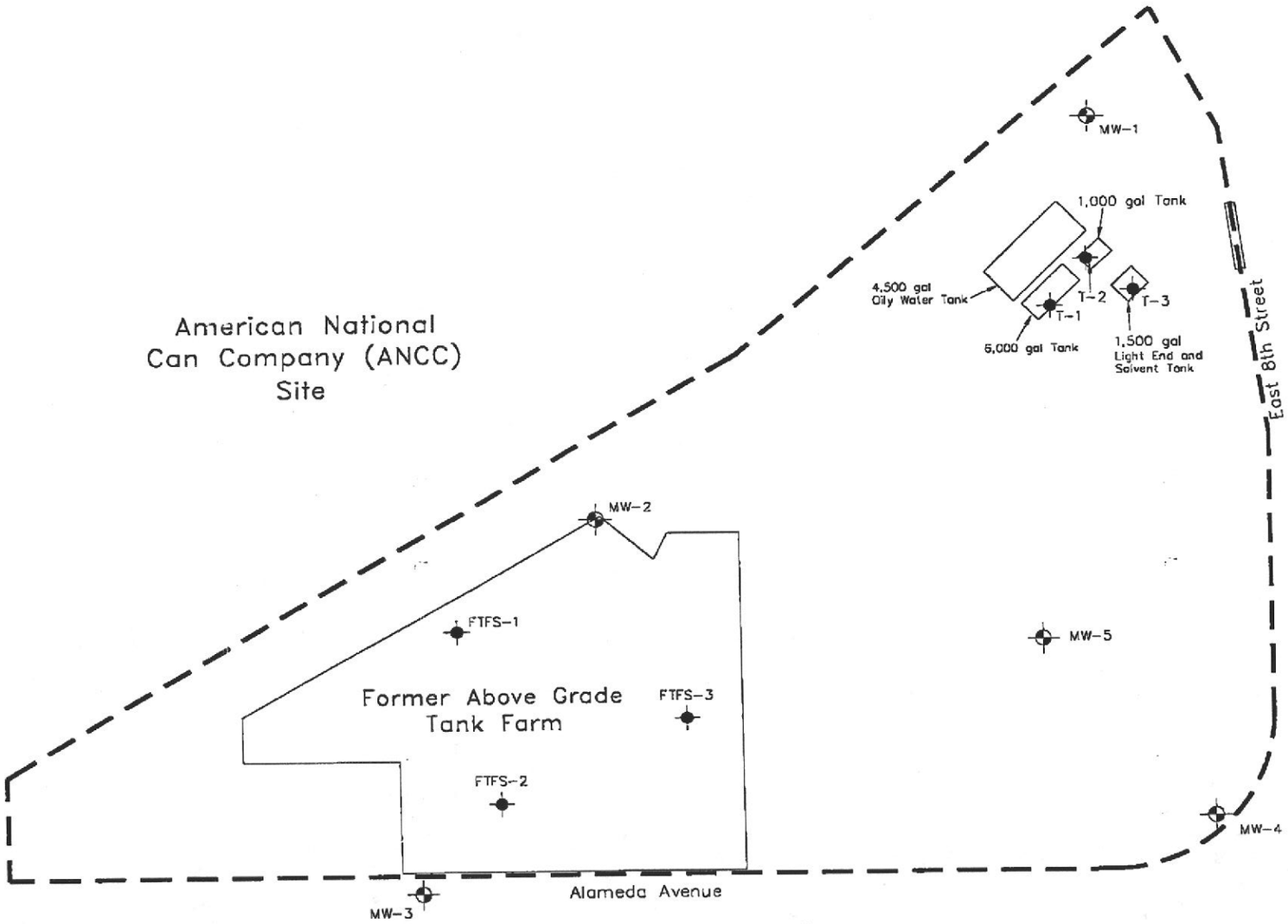
TABLE 6
SELECTED METAL ANALYTICAL RESULTS OF SOIL SAMPLES

4200 Alameda Avenue, Oakland, California
(EKI 930040.00)

Sample ID	Sample Depth (ft, bgs)	Sample Date	Metal Concentration (mg/kg)				
			Cadmium	Chromium	Lead	Nickel	Zinc
T-1	4 - 4.5	4/3/96	<0.50 (a)	80	90	130	100
T-2	5.5 - 6	4/3/96	1.3	110	230	83	560
T-3	5.5 - 6	4/3/96	0.53	48	100	61	95
FTFS-1	2 - 3	4/18/96	<0.50	57	11	74	31
FTFS-2	2 - 3	4/18/96	<0.50	54	40	74	44
FTFS-3	2 - 3	4/18/96	<0.50	56	18	78	43

Notes:

(a) Less than symbol ("<") denotes that compound was not present above the detection limit shown.



N

0 30 60

(Approximate Scale in Feet)

LEGEND

- Site Boundary
- Monitoring Well
- Soil Sample Location
- Approximate Limits of Underground Tank Excavations

Notes:

1. All locations are approximate.
2. The 4,500 gallon oily water tank still remains on-site. A soil sample will be collected from the excavation when this tank is removed in the near future.

Erler & Kalinowski, Inc.

Locations of Soil Samples Collected During Demolition Activities
4200 Alameda Avenue
Oakland, CA
May 1996
EKI 930040.00
Figure 1

ACCULAB
ENVIRONMENTAL SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 FAX: (707) 763-4065

Bruce Scarborough
Dames & Moore
221 Main Street, Ste. 600
San Francisco, CA 94105

Client Code: DAME28
Survey # AM.GAS CO.

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 893904
Date Received: 08/23/89
Date Reported: 09/11/89

Date Analyzed: 09/06/89

TOTAL PETROLEUM HYDROCARBONS(EPA 418.1)

MATRIX:SOIL

LABNO	SMPLNO	COMPOUND	FOUND mg/kg	DET.LIM. mg/kg
48890	GW5-2C	TPH	ND	6
48891	GW1-2C	TPH	130	6
48892	GW1-3C	TPH	138	6
48893	GW1-4C	TPH	464	6

ANALYST:JAN TOISTER

THIS REPORT HAS BEEN REVIEWED
AND APPROVED FOR RELEASE

TABLE 9

DETECTION OF TOTAL PETROLEUM HYDROCARBONS AND PCBs IN SOIL SAMPLES

BORING	TOTAL PETROLEUM HYDROCARBONS (mg/kg)	DETECTION LIMIT (mg/kg)	PCBs (mg/kg)	CATTLC (mg/kg)	DETECTION LIMIT (mg/kg)
GW-1-2C	130	6	0.43 AROCHLOR 1242	50	0.029
GW-1-3C	138	6	ND	-	ND
GW-1-4C	464	6	ND	-	ND
GW-2-2C	289	6	0.38 AROCHLOR 1242	50	0.030
GW-2-3C	1,560	30	ND	-	ND
SC-2-2C	3,200	60	NA	-	NA

ND = NOT DETECTED
NA = NOT ANALYZED
CATTLC = CALIFORNIA TOTAL THRESHOLD LIMIT CONCENTRATION

TABLE 6

SUMMARY OF SOIL SAMPLING AND ANALYSIS PROGRAM

SAMPLE NO.	DEPTH (IN FEET)	ANALYSES PERFORMED
Groundwater Monitoring Well Borings		
GW-1-2C	5.25	TPH, VOLATILE ORGANICS, PCBs
GW-1-3C	10.25	TPH, VOLATILE ORGANICS
GW-1-4C	15.25	TPH, VOLATILE ORGANICS
GW-2-2C	5.25	TPH, VOLATILE ORGANICS, PCBs
GW-2-3C	10.25	TPH, VOLATILE ORGANICS
GW-3-1C	9.25	TPH, VOLATILE ORGANICS
GW-4-2C	5.25	TPH, VOLATILE ORGANICS
GW-5-1C	2.25	NA
GW-5-2C	5.25	TPH, VOLATILE ORGANICS
Underground Gasoline Storage Tank		
GT-1-2C	5.25	NA
GT-1-3C	10.25	TPH AS GASOLINE, BTEX, ORGANOLEAD
GT-1-4B	15.0	NA
Former Resin Tank		
RT-1-1C	15.25	VOLATILE ORGANICS
Steam Cleaning Area		
SC-1-1C	2.25	TPH, VOLATILE ORGANICS
SC-1-2C	3.75	TPH, VOLATILE ORGANICS
SC-1-3C	5.25	NA
SC-2-1C	2.25	TPH, VOLATILE ORGANICS
SC-2-2C	3.75	TPH, VOLATILE ORGANICS
SC-2-3C	5.25	NA
Railroad Drainage Area		
RD-1-1C	1.75	VOLATILE ORGANICS, CAM METALS
RD-2-1C	1.75	VOLATILE ORGANICS, CAM METALS
RD-3-1C	1.75	VOLATILE ORGANICS, CAM METALS
Drum Storage Area		
DS-1-1C	2.25	VOLATILE ORGANICS, CAM METALS
DS-2-1C	2.25	VOLATILE ORGANICS, CAM METALS
DS-3-1C	2.25	VOLATILE ORGANICS, CAM METALS
Solvent Pipeline Area		
SP-1-1C	2.25	VOLATILE ORGANICS
SP-2-1C	2.25	VOLATILE ORGANICS
SP-3-1C	2.25	VOLATILE ORGANICS
SP-4-1C	2.25	VOLATILE ORGANICS
SP-5-1C	2.25	VOLATILE ORGANICS

NA = NOT ANALYZED
TPH = TOTAL PETROLEUM HYDROCARBONS
BTEX = BENZENE, TOLUENE, ETHYL BENZENE, TOTAL XYLENE

ACCULABS
ENVIRONMENTAL SERVICES

3700 Lakeville Highway, Petaluma, CA 94954
P.O. Box 808024, Petaluma, CA 94975-8024
Telephone: (707) 763-8245 FAX: (707) 763-4065

L A B O R A T O R Y R E S U L T S

Laboratory Job No.: 893904

COMPOUNDS:	LAB#	48890	DET.	48891	DET.	48892	DET.
	SMP#	GW5-2C	LIM.	GW1-2C	LIM.	GW1-3C	LIM.
	dil.	1		5		100	
PURGEABLES		ug/kg		ug/kg		ug/kg	
TRICHLOROETHENE		ND	2.5	120	12.5	ND	250.0
TRICHLOROFLUOROMETHANE		ND	2.5	ND	12.5	ND	250.0
VINYL CHLORIDE		ND	5.0	110	25.0	ND	500.0
XYLENES		ND	2.5	ND	12.5	ND	250.0
ACETONE		ND	50.0	ND	250.0	ND	5000.0
2-BUTANONE		ND	5.0	ND	25.0	ND	500.0
CARBON DISULFIDE		ND	5.0	ND	25.0	ND	500.0
2-HEXANONE		ND	5.0	ND	25.0	ND	500.0
4-METHYL-2-PENTANONE		ND	5.0	ND	25.0	ND	500.0
STYRENE		ND	5.0	ND	25.0	ND	500.0
VINYL ACETATE		ND	5.0	ND	25.0	ND	500.0
SURROGATE RECOVERIES-QC							
1,2-DICHLOROETHANE-D4		128%		128%		127%	
TOLUENE-D8		102%		108%		104%	
4-BROMOFLUOROBENZENE		106%		67%		84%	