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SEMI-ANNUAL GROUNDWATER SAMPLING & REMEDIATION STATUS REPORT

Incident No. 10119, Priority Ranking 70/B
Former Unocal Corporation Site #9787-214
1342 Trollingwood Road, Mebane, NC
S&ME Project No. 1354-94-603

Prepared For:

North Carolina Department of Environment,
Health and Natural Resources
Winston-Salem Regional Office-Groundwater Section
8025 North Point Blvd., Suite 100
Winston-Salem, NC 27106

Prepared By:

S&ME, Inc.
9751 Southern Pine Blvd., PO Box 7668
Charlotte, NC 28273

August 1996

S&ME

August 19, 1996

Mr. Waddell Watters
North Carolina Department of Environment,
Health and Natural Resources
Winston-Salem Regional Office-Groundwater Section
8025 North Point Blvd., Suite 100
Winston-Salem, NC 27106

Reference: August 1996 Semi-Annual Groundwater Sampling and Remediation Status Report
Incident No. 10119, Proposed Priority Ranking 70/B
Unocal Corporation
Former Unocal Corporation Site #9787-214
1342 Trollingwood Road, Mebane, NC
S&ME Project No. 1354-94-603

Dear Mr. Watters:

The purpose of this letter is to provide you with the semi-annual groundwater sampling results and status of remediation activities at the subject site. This letter includes groundwater elevation data and August 1996 semi-annual groundwater analytical results for the five monitor wells on-site (MW-3, MW-4, DMW-5, MW-7 and MW-8) and for the adjacent Williams private water supply well. The documented release was from an unleaded gasoline and diesel source, and therefore, lead analysis was not performed.

Figure 1 is a revised site map illustrating the new Emro Marketing Company (Speedway/Starvin Marvin) truck stop, monitor well and Unocal Corporation remediation system network, new utilities, property lines and minor changes made to the Unocal remediation system. These changes included closing three monitor wells (MW-1, MW-2 and MW-6) and four air sparge wells (AS-2, AS-3, AS-4 and AS-7). These seven wells were closed with grout due to interference with the construction of the new Speedway truck stop. Closing these wells should not dramatically affect our ability to monitor or remediate the remaining Unocal hydrocarbon plume. None of the existing subsurface remediation piping was removed. Five vertical air sparging wells (AS-1, AS-5, AS-6, MW-4

and DMW-5) are still in use on a daily 12-hour cyclic basis. Monitor wells MW-4 and DMW-5 were converted into dual monitor/sparge wells on August 19, 1994 and May 9, 1996, respectively. A 3/4-inch rubber air line was placed under ground from AS-6 to MW-4, as shown in Figure 1.

A downgradient, Type II monitor well (MW-8) was installed at the northwest property corner (see Figure 1) on August 5, 1996 to monitor the downgradient extent of the groundwater plume, per the State. Attached is a completed well construction record (GW-1 form) for MW-8.

S&ME submitted a request for re-ranking the site from a 70/D to a 70/B site. S&ME confirmed that the adjacent Williams well is in use, within 1500 feet of the Unocal site, and that the Williams are not served by public water supply. S&ME also submitted a response letter on June 26, 1996 to the State's letter of June 11, 1996 on June 26, 1996. We would appreciate your response to these two letters.

Groundwater Surface Levels

Groundwater surface levels were measured on August 4, 1996 prior to well sampling with the sparging system off. The groundwater surface level data obtained on this date is summarized in Table 1 during static (sparging off) conditions. Groundwater flow on August 16, 1996 is northwesterly under a hydraulic gradient of 0.04.

Groundwater Quality

S&ME sampled groundwater from five monitor wells (MW-3, MW-4, DMW-5, MW-7 and MW-8) on August 5 and 12, 1996, as part of the semi-annual sampling event. Individual, disposable polyethylene bailers and clean nylon rope were used for sampling groundwater from each of the monitor wells. A water sample was also collected from the

spigot closest to the Williams well. The water was purged for approximately 5 minutes prior to sampling.

The groundwater samples were analyzed for aromatic organics [including benzene, toluene, ethylbenzene, xylenes (BTEX), methyl-tert-butylether (MTBE) and isopropylether (IPE)] by EPA Method 602, halogenated organics by EPA Method 601 and polynuclear aromatic hydrocarbons by EPA Method 610. All analyses were performed by a NC certified laboratory (#296); Flowers Chemical Laboratory of Altamonte Springs, FL. A copy of the laboratory results is attached. Table 2 summarizes historical and the most recent groundwater quality data.

The recent groundwater quality data compared to the February 1996 event, indicates reduced dissolved hydrocarbon concentrations at MW-4 and a slight increase at MW-3. Monitor wells MW-3 and MW-4 contained low concentrations of dissolved hydrocarbons, as indicated in Table 2. BTEX concentrations continued to decrease in MW-4 from 4490 ug/L on February 21, 1996 to 47.2 ug/L on August 12, 1996 due to sparging in this well. MTBE concentrations also continued to decrease in MW-4 from 1810 ug/L on February 21, 1996 to 165 ug/L on August 12, 1996. A slight increase in dissolved hydrocarbons was noticed in groundwater sampled from MW-3. Benzene concentrations increased from <0.5 ug/L on February 21, 1996 to 85 ug/L on August 12, 1996. IPE concentrations also increased slightly from <1 ug/L on February 21, 1996 to 9.58 ug/L on August 12, 1996. Low levels of 1,2-dichloroethane (31.4 ug/L), methylene chloride (1.41 ug/L), naphthalene (12.6 ug/L), 1-methyl-naphthalene (5.86 ug/L), and 2-methyl-naphthalene (2.35 ug/L) were also detected in groundwater from MW-3. Groundwater 2L violations are indicated by shaded values on Table 2. Dissolved hydrocarbons in the remaining wells were below laboratory detection limits this sampling event. Phase separated hydrocarbons have not been detected on site, since December 7, 1994.

Remediation System Status

At present, site remediation is performed by air sparging only. Airsparging has been very effective in remediation of subsurface hydrocarbons in groundwater on-site, as evidenced at MW-4. Combined BTEX and MTBE concentrations have been reduced from 110,000 ug/L on January 18, 1993 to 212.5 ug/L on August 12, 1996. The sparged air volatilizes and increases bioremediation of subsurface hydrocarbons by promoting growth of indigenous hydrocarbon degrading microorganisms.

The existing air sparging system continues to operate as designed with no mechanical problems. The air compressor is presently operating at 80 psi and 65 scfm (at compressor). Each of the five operating air sparge wells is operating at 35-40 psi and 10-20 scfm. The air sparging system has operated a total of approximately 9642 hours (402 days) as of August 19, 1996. The air sparging radius of influence for each of the five vertical air sparge wells is approximately 50 to 80 feet, as measured by change in dissolved oxygen levels. The air sparging system is cycled for 12 hours per day by a single channel electronic timer.

The air sparging system willcontinue to be inspected on a bi-weekly basis. Groundwater sampling is scheduled on a semi-annual basis. No fugitive hydrocarbon sparge vapors have been reported inside any utilities or the on-site building. Emro Marketing Co. is currently building a new Speedway Truck Stop at the site, which has not interrupted our modified air sparging system.

If you have any questions or need additional information, please do not hesitate to call us at 704-523-4726.

Sincerely,

S&ME, Inc.

NORTH CAROLINA LICENSED SEAL 1199 GEOLOGIST STEWART MARTIN HINES

Stewart M. Hines, L.G.
Senior Hydrogeologist

Al Quarles, L.G.
Senior Hydrogeologist

Enclosures
cc: Mr. Wayne Holt - Unocal Corporation
Rick Holshouser - S&ME, Inc.
Carol Wrenn - Emro Marketing Company
Mr. Williams-adjacent property owner (analyses only)

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TABLE 2
HISTORICAL GROUNDWATER QUALITY DATA

FORMER UNOCAL FACILITY #9787-214
1342 TROLLINGWOOD ROAD, MEBANE, NC
S&ME PROJECT #1354-94-603

MONITOR WELL	DATE	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	MTBE	IPE	METHOD 601 COMPONDS	METHOD 625/610 COMPOUNDS
MW-1	1/7/93	BQL	120	BQL	120	240	NA	NA	NA	NA
	1/18/93	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
(CLOSED)	11/10/94	BQL	BQL	BQL	BQL	BQL	BQL	NA	BQL	BQL
	3/12/95	BQL	BQL	BQL	BQL	BQL	1.11	BQL	BQL	BQL
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	2/21/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	5/4/96	MONITOR WELL CLOSED WITH GROUT DUE TO CONFLICT WITH NEW SPEEDWAY STATION PUMP ISLAND								
MW-2	1/7/93	810	20,000	17,000	95,000	132,810	NA	NA	NA	NA
	1/18/93	120	65	4.2	160	349.2	BQL	BQL	7.9	28
(CLOSED)	11/10/94	BQL	BQL	BQL	BQL	BQL	BQL	NA	BQL	BQL
	3/12/95	BQL	BQL	BQL	BQL	BQL	1.5	BQL	BQL	BQL
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	2/21/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	5/4/96	MONITOR WELL CLOSED WITH GROUT DUE TO CONFLICT WITH NEW SPEEDWAY STATION PUMP ISLAND								
MW-3	1/7,11/93	BQL	1300	2100	13,000	16,400	NA	NA	NA	NA
	1/26/93	84	82	5.1	590	761.1	BQL	BQL	8.4	22
	11/10/94	BQL	BQL	18.5	184	203	BQL	NA	13.2	BQL
	3/12/95	BQL	BQL	BQL	1.52	1.52	0.54	1.73	3.38	BQL
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	7.53	<1
	2/21/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	5.53	<1
	8/5/96	**85**	4.01	3.34	465	557	11.7	**9.58**	**31.4 - 1,2-DCA** 1.41 - m. chloride	12.6 - naphthalene **5.86 - 1-m.-napth** **2.35 - 2-m.-napth**
MW-4	1/11/93	BQL	1700	4900	31,000	37,600	NA	NA	NA	NA
	1/18/93	26,800	42,000	5200	24,000	98,000	12,000	BQL	6.8	6600
	11/10/94	22,100	40,100	4710	20,500	87,400	15,700	NA	29.3	431.5
	3/12/95	3150	4480	1830	2250	11,700	4370	<1	33.09	2710
	12/18/95	2840	5700	1170	5310	15000	3750	<1	<5-50	787.58
	2/21/96	821	1340	344	1990	4490	1810	<1	<5-50	119.3
	5/9/96	WELL CONVERTED TO AN AIR SPARGE/MONITOR WELL								
	8/12/96	**6.1**	13.5	<5	27.6	47.2	165	<10	<5-50	<1
DMW-5 (TYPE III MW)	3/24/93	55	95	20	120	290	NA	NA	NA	NA
	8/19/94	WELL CONVERTED TO AN AIR SPARGE/MONITOR WELL								
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	8/5/96	0.5	0.5	0.5	0.5	0.5	0.5	<1	<0.5-5	<1
MW-6	3/8,17/93	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL	BQL
	11/10/94	BQL	BQL	BQL	BQL	BQL	BQL	NA	BQL	BQL
(CLOSED)	3/12/95	BQL	1.61	0.754	4.16	6.52	BQL	BQL	BQL	BQL
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	2/21/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	5/4/96	MONITOR WELL CLOSED WITH GROUT DUE TO CONFLICT WITH NEW SPEEDWAY STATION PRODUCT LINES								
MW-7	3/8,17/93	BQL	BQL	BQL	BQL	BQL	BQL	BQL	6.5	BQL
	11/10/94	BQL	BQL	BQL	BQL	BQL	BQL	NA	1.4	BQL
	3/12/95	BQL	BQL	BQL	BQL	BQL	BQL	NA	1.25	BQL
	12/18/95	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	2/21/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
	8/5/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
MW-8	8/12/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
WILLIAMS PRIVATE WELL	8/12/96	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5-5	<1
15A NCAC 2L STANDARD (IN UG/L)		**1**	**1000**	**29**	**530**	**NA**	**200**	**MDL OR 1**	**0.38 - 1,2-DCA** **5 - M. CHLORIDE**	**21 - naphthalene** **1 or MDL - 1-m.-napth** **1 or MDL - 2-m.-napth**

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NOTES:

* ALL CONCENTRATIONS IN GROUNDWATER ARE IN UG/L (PPB)
* ANALYSES PERFORMED=METHODS 602 (BTEX, MTBE AND IPE)
  METHOD 601 (PURGEABLE HALOCARBONS)
  METHOD 625 OR 610 (SEMI-VOLATILES)
* NA = NOT ANALYZED
* MDL = METHOD DETECTION LIMIT
* BQL = BELOW QUANTITATION LIMIT
* THE 15A NCAC 2L GROUNDWATER STANDARD FOR COMPOUNDS NOT INCLUDED IN THE STANDARD IS THE LABORATORY METHOD DETECTION LIMIT

85 = 15A NCAC 2L GROUNDWATER EXCEEDANCE CONCENTRATION

1,2-DCA = 1,2-dichlorethane
m. chloride = methylene chloride
1-m.-napth = 1-methyl-naphthalene
2-m.-napth = 2-methyl-naphthalene

TABLE 1

S&ME, INC.
LIQUID LEVELS
DATE: 8/16/96

SITE: UNOCAL–MEBANE #9787–214
JOB# 1354–94–603
RECORDED BY: GARY SIMCOX (S&ME)

ID #	DTW	DTP	PT	ETW	ETP	ETC	WTE
MW–3	14.93	0.00	0.00	84.35	NA	99.28	**84.35**
MW–4	16.98	0.00	0.00	81.62	NA	98.60	**81.62**
DMW–5	16.58	0.00	0.00	80.53	NA	97.11	**80.53**
MW–7	16.61	0.00	0.00	81.60	NA	98.21	**81.60**
MW–8	20.75	0.00	0.00	79.72	NA	100.47	**79.72**

COMMENTS: Topographic survey of all wells was re–evaluated on 8/16/96

ALL MEASUREMENTS IN FEET
DTW=depth to water from top of casing
DTP=depth to product
ETC=elevation of top of casing (usu. assumed datum of 98.21 feet from the former professional survey of MW–7)
ETP=elevation of top of product
ETW=elevation of top of water
PT=product thickness
WTE=elevation of water table
NA = Not Available
Density of product = 0.70 g/ml (assumed) for gasoline
BENCH MARK = MW–7, also elevation of fire hydrant bolt (black) is 100.83

North Carolina Department of Natural Resources and Community Development
Division of Environmental Management - Groundwater Section
P.O. Box 27687-Raleigh, NC 27611, Phone (919) 733-8043

FOR OFFICE USE ONLY
Quad. No. _____ Serial No.
Lat. _____ Long. _____ P
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1

MW-8

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR S&ME, Inc.

DRILLER REGISTRATION NUMBER 482

STATE WELL CONSTRUCTION PERMIT NUMBER: 000-0361-WM-0130

1. WELL LOCATION (Show sketch on the location below)

NEAREST TOWN: Mebane
1342 Trollingwood Road, Mebane, NC
(Road, Community, or Subdivision and Lot No.)

County: Alamance

2. OWNER Unocal Corporation

Address 13 Corporate Square, NE
(Street or Route No.)
Atlanta, GA 30302
City or Town State Zip Code

Date Drilled 8/5/96 Use of Well Monitor

Total Depth 25.5 Cuttings Collected X Yes _ No

Does Well Replace Existing Well? ___ Yes X No

3. STATIC WATER LEVEL: 15 Ft. _ above Top of Casing. x below

Top of Casing is 0 Ft. Above Land Surface.

4. YIELD (gpm): <1 Method of Test Bailer

5. WATER ZONES (depth): 1 at approximately 15'

6. CHLORINATION: Type NA Amount NA

7. CASING

Depth From	To	Diameter or Wall Thickness Weight/Ft	Material
0	10	2 SCH40	PVC

1. GROUT

Depth From	To	Material	Method
0	5.8	Portland	Mannual

2. SCREEN

Depth From	To	Diameter	Slot Size	Material
10	25	2 in.	0.010 in.	PVC, Sch 40

3. GRAVEL PACK

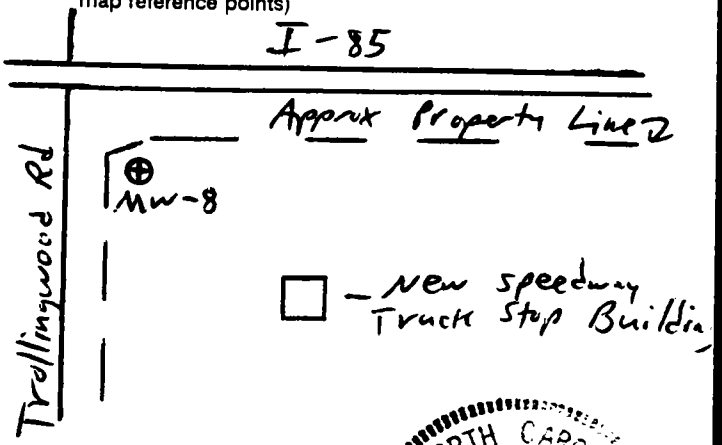
Depth From	To	Size	Material
8.5		Fine	Sand

Drilling Log Depth From To	Formation Description
0 - 25.5	Orange Fine Sandy Silt, Residuum

If additional space is needed use back of form

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or c map reference points)



4. REMARKS: Bentonite from 5.8 to 8.5 feet (MW-8) well locked in 8" manhole.

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C. WELL CONSTRUCTION STANDARDS, AND T A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER

Signature of Contractor or Agent

NORTH CAROLINA LICENSED GEOLOGIST STEWART MARTIN HIN

GW-1 Form

FLOWERS

CHEMICAL LABORATORIES INCORPORATED

Received From:
S&ME-Charlotte
P.O. Box 7668
Charlotte,NC 28241

Date Reported : Aug12 1996
Project Number : UNOCAFE#35927785
PO Number : 9787-214
FDHRSDW Number : 83139
FHRS ENVNumber : E83018
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

For: IPE602 EPA601 PAH
Date Sampled:Aug 5 1996 Date Received:Aug 8 1996 Lab Numbers: 7611-7614

REPORT OF ANALYSIS

Parameter	Unit	Method Detection Limit	%ACC	%PRC	7611 MW3	7612 MW7	7613 MW8	7614 DMW5
Dilution_Factor		-	-	-	1.00	1.00	1.00	1.00
o-dichlorobenzene	ug/L	0.500	99.7	4.44	<0.500	<0.500	<0.500	<0.500
m-dichlorobenzene	ug/L	0.500	105.	6.10	<0.500	<0.500	<0.500	<0.500
Para-dichlorobenzene	ug/L	0.500	109.	6.04	<0.500	<0.500	<0.500	<0.500
Benzene	ug/L	0.500	118.	.160	85.0	<0.500	<0.500	<0.500
Chlorobenzene	ug/L	0.500	93.4	6.54	<0.500	<0.500	<0.500	<0.500
Ethylbenzene	ug/L	0.500	116.	2.32	3.34	<0.500	<0.500	<0.500
Toluene	ug/L	0.500	117.	.480	4.01	<0.500	<0.500	<0.500
Xylene	ug/L	0.500	102.	4.88	465.	<0.500	<0.500	<0.500
Methyl-tert-butyleth	ug/L	0.500	103.	1.30	11.7	<0.500	<0.500	<0.500
Total_BTEX	ug/L	0.500	110.	1.75	557.	<0.500	<0.500	<0.500
Isopropylether	ug/L	1.00			9.58	<1.00	<1.00	<1.00
PID_Spike	ug/L	0.500	111.	8.45	126.	107.	108.	110.
- -		-	-	-	-	-	-	-
Dilution_Factor		-	-	-	1.00	1.00	1.00	1.00
1,1,1-trichloroethan	ug/L	1.00	112.	2.48	<1.00	<1.00	<1.00	<1.00
1,1,2,2-tetrachloroe	ug/L	1.00	110.	1.42	<1.00	<1.00	<1.00	<1.00
1,1,2-trichloroethan	ug/L	1.00	108.	5.35	<1.00	<1.00	<1.00	<1.00
1,1-dichloroethane	ug/L	1.00	108.	3.54	<1.00	<1.00	<1.00	<1.00
1,1-dichloroethene	ug/L	1.00	106.	2.82	<1.00	<1.00	<1.00	<1.00
1,2-dichloroethane	ug/L	1.00	112.	4.11	31.4	<1.00	<1.00	<1.00
1,2-dichloropropane	ug/L	1.00	112.	4.47	<1.00	<1.00	<1.00	<1.00
2-chloroethylvinylet	ug/L	1.00			<1.00	<1.00	<1.00	<1.00
Bromodichloromethane	ug/L	1.00	108.	7.63	<1.00	<1.00	<1.00	<1.00
Bromoform	ug/L	1.00	88.5	8.79	<1.00	<1.00	<1.00	<1.00
cis-1,3-dichloroprop	ug/L	1.00	108.	8.23	<1.00	<1.00	<1.00	<1.00

Data Release Authorization

Sample integrity and reliability certified by Lab personnel prior to analysis.
Methods of analysis in accordance with FCL QA and EPA approved methodology.
This Report may not be reproduced in part, results relate only to items tested.

Jefferson S. Flowers, Ph.d.
President/Technical Director

Serving Your Analytical and Environmental Needs Since 1957

Jefferson L. Flowers, Ph.D.
Jefferson S. Flowers, Ph.D.
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FAX: (407) 260-6110

FLOWERS

CHEMICAL LABORATORIES INCORPORATED

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REPORT OF ANALYSIS

Parameter	Unit	Method Detection Limit	%ACC	%PRC	7611 MW3	7612 MW7	7613 MW8	7614 DMW5
Carbon tetrachloride	ug/L	1.00	110.	2.88	<1.00	<1.00	<1.00	<1.00
Chloroform	ug/L	1.00	112.	3.42	<1.00	<1.00	<1.00	<1.00
Dibromochloromethane	ug/L	1.00	82.1	1.29	<1.00	<1.00	<1.00	<1.00
Methylene chloride	ug/L	1.00	116.	3.24	1.41	<1.00	<1.00	<1.00
trans-1,3,-dichlorop	ug/L	1.00	115.	4.72	<1.00	<1.00	<1.00	<1.00
Trichlorofluorometha	ug/L	2.00	92.5	10.3	<2.00	<2.00	<2.00	<2.00
t-1,2-dichloroethene	ug/L	1.00	108.	4.80	<1.00	<1.00	<1.00	<1.00
Trichloroethene	ug/L	1.00	101.	4.47	<1.00	<1.00	<1.00	<1.00
Tetrachloroethene	ug/L	1.00	112.	5.31	<1.00	<1.00	<1.00	<1.00
1,2-dibromo-3-chloro	ug/L	1.00	81.9	2.59	<1.00	<1.00	<1.00	<1.00
Bromomethane	ug/L	5.00			<5.00	<5.00	<5.00	<5.00
Chlorobenzene	ug/L	0.500	93.4	6.54	<0.500	<0.500	<0.500	<0.500
Chloroethane	ug/L	3.00	100.	4.10	<3.00	<3.00	<3.00	<3.00
Chloromethane	ug/L	5.00			<5.00	<5.00	<5.00	<5.00
Dichlorodifluorometh	ug/L	2.00			<2.00	<2.00	<2.00	<2.00
Vinyl chloride	ug/L	0.500			<0.500	<0.500	<0.500	<0.500
o-dichlorobenzene	ug/L	0.500	99.7	4.44	<0.500	<0.500	<0.500	<0.500
m-dichlorobenzene	ug/L	0.500	105.	6.10	<0.500	<0.500	<0.500	<0.500
Para-dichlorobenzene	ug/L	0.500	109.	6.04	<0.500	<0.500	<0.500	<0.500
Hall_Spike	ug/L	0.500	90.3	4.63	84.0	90.2	88.8	85.4
-	-	-	-	-	-	-	-	-
Acenaphthylene	ug/L	1.00	65.6	4.44	<1.00	<1.00	<1.00	<1.00
Acenaphthene	ug/L	1.00	63.4	4.43	<1.00	<1.00	<1.00	<1.00
Anthracene	ug/L	1.00	67.3	3.41	<1.00	<1.00	<1.00	<1.00
Benzo(a)anthracene	ug/L	1.00	73.5	.790	<1.00	<1.00	<1.00	<1.00
Benzo(a)pyrene	ug/L	1.00	76.7	.230	<1.00	<1.00	<1.00	<1.00

Data Release Authorization

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FLOWERS
CHEMICAL LABORATORIES INCORPORATED

Received From:
S&ME-Charlotte
P.O. Box 7668
Charlotte,NC 28241

Date Reported : Aug12 1996
Project Number : UNOCAFE#35927785
PO Number : 9787-214
FDHRSDW Number : 83139
FHRS ENVNumber : E83018
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

For: IPE602 EPA601 PAH
Date Sampled:Aug 5 1996 Date Received:Aug 8 1996 Lab Numbers: 7611-7614

REPORT OF ANALYSIS

Parameter	Unit	Method Detection Limit	%ACC	%PRC	7611 MW3	7612 MW7	7613 MW8	7614 DMW5
Benzo(b)fluoranthene	ug/L	1.00	75.5	4.68	<1.00	<1.00	<1.00	<1.00
Benzo(g,h,i)perylene	ug/L	1.00	75.6	1.64	<1.00	<1.00	<1.00	<1.00
Benzo(k)fluoranthene	ug/L	1.00	78.9	2.78	<1.00	<1.00	<1.00	<1.00
Chrysene	ug/L	1.00	74.0	1.62	<1.00	<1.00	<1.00	<1.00
Dibnz(a,h)anthracene	ug/L	1.00	75.5	.420	<1.00	<1.00	<1.00	<1.00
Fluoranthene	ug/L	1.00	76.0	2.37	<1.00	<1.00	<1.00	<1.00
Fluorene	ug/L	1.00	66.9	4.55	<1.00	<1.00	<1.00	<1.00
Indn(1,2,3-cd)pyrene	ug/L	1.00	89.4	.690	<1.00	<1.00	<1.00	<1.00
Naphthalene	ug/L	1.00	59.8	6.48	12.6	<1.00	<1.00	<1.00
1-methyl-Naphthalene	ug/L	1.00	68.9	5.49	5.86	<1.00	<1.00	<1.00
2-methyl-Naphthalene	ug/L	1.00	67.1	5.45	2.35	<1.00	<1.00	<1.00
Phenanthrene	ug/L	1.00	68.6	5.43	<1.00	<1.00	<1.00	<1.00
Pyrene	ug/L	1.00	72.1	.440	<1.00	<1.00	<1.00	<1.00
Intl_QA_Spike(2FBP)	ug/L	1.00	58.3	1.19	50.9	58.4	58.9	55.1
Surr_Spike(DBBP)	ug/L	1.00	67.2	.020	45.8	58.7	54.6	42.4
PAH_Extraction	ml	-			1000	1000	1000	1000

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FLOWERS

CHEMICAL LABORATORIES INCORPORATED

Received From:
S&ME-Charlotte
P.O. Box 7668
Charlotte,NC 28241

Date Reported : Aug15 1996
Project Number : UNOCAFE#35927785
PO Number : 9787-214
FDHRSDW Number : 83139
FHRS ENVNumber : E83018
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

For: IPE602 EPA601 PAH
Date Sampled:Aug12 1996 Date Received:Aug13 1996 Lab Numbers: 7738-7739

REPORT OF ANALYSIS

Parameter	Unit	Method Detection Limit	%ACC	%PRC	7738 MW4	7739 WILLIAMS
Dilution_Factor		-	-	-	10.0	1.00
o-dichlorobenzene	ug/L	0.500	94.7	.560	<5.00	<0.500
m-dichlorobenzene	ug/L	0.500	95.2	.480	<5.00	<0.500
Para-dichlorobenzene	ug/L	0.500	94.0	.380	<5.00	<0.500
Benzene	ug/L	0.500	99.5	.000	6.10	<0.500
Chlorobenzene	ug/L	0.500	84.2	.070	<5.00	<0.500
Ethylbenzene	ug/L	0.500	92.9	.120	<5.00	<0.500
Toluene	ug/L	0.500	96.4	.090	13.5	<0.500
Xylene	ug/L	0.500	95.1	.070	27.6	<0.500
Methyl-tert-butyleth	ug/L	0.500	95.1	2.00	165.	<0.500
Total_BTEX	ug/L	0.500	95.7	.070	47.2	<0.500
Isopropylether	ug/L	1.00			<10.0	<1.00
PID_Spike	ug/L	0.500	104.	.110	100.	99.5
- -		-	-	-	-	-
Dilution_Factor		-	-	-	10.0	1.00
1,1,1-trichloroethan	ug/L	1.00	90.0	.190	<10.0	<1.00
1,1,2,2-tetrachloroe	ug/L	1.00	102.	.360	<10.0	<1.00
1,1,2-trichloroethan	ug/L	1.00	89.0	.480	<10.0	<1.00
1,1-dichloroethane	ug/L	1.00	85.6	.550	<10.0	<1.00
1,1-dichloroethene	ug/L	1.00	70.8	2.02	<10.0	<1.00
1,2-dichloroethane	ug/L	1.00	95.0	.370	<10.0	<1.00
1,2-dichloropropane	ug/L	1.00	90.0	2.27	<10.0	<1.00
2-chloroethylvinylet	ug/L	1.00			<10.0	<1.00
Bromodichloromethane	ug/L	1.00	94.5	1.05	<10.0	<1.00
Bromoform	ug/L	1.00	94.1	.090	<10.0	<1.00
cis-1,3-dichloroprop	ug/L	1.00	106.	.280	<10.0	<1.00

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Date Reported : Aug15 1996
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PO Number : 9787-214
FDHRSDW Number : 83139
FHRS ENVNumber : E83018
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

For: IPE602 EPA601 PAH
Date Sampled:Aug12 1996 Date Received:Aug13 1996 Lab Numbers: 7738-7739

REPORT OF ANALYSIS

Parameter	Unit	Method Detection Limit	%ACC	%PRC	7738 MW4	7739 WILLIAMS
Carbon tetrachloride	ug/L	1.00	86.9	.400	<10.0	<1.00
Chloroform	ug/L	1.00	82.8	.340	<10.0	<1.00
Dibromochloromethane	ug/L	1.00	94.7	.370	<10.0	<1.00
Methylene chloride	ug/L	1.00	89.1	1.63	<10.0	<1.00
trans-1,3,-dichlorop	ug/L	1.00	115.	.210	<10.0	<1.00
Trichlorofluorometha	ug/L	2.00	113.	2.90	<20.0	<2.00
t-1,2-dichloroethene	ug/L	1.00	85.0	1.13	<10.0	<1.00
Trichloroethene	ug/L	1.00	81.9	2.55	<10.0	<1.00
Tetrachloroethene	ug/L	1.00	85.9	.340	<10.0	<1.00
1,2-dibromo-3-chloro	ug/L	1.00	105.	.800	<10.0	<1.00
Bromomethane	ug/L	5.00			<50.0	<5.00
Chlorobenzene	ug/L	0.500	84.2	.070	<5.00	<0.500
Chloroethane	ug/L	3.00	110.	3.51	<30.0	<3.00
Chloromethane	ug/L	5.00			<50.0	<5.00
Dichlorodifluorometh	ug/L	2.00			<20.0	<2.00
Vinyl chloride	ug/L	0.500			<5.00	<0.500
o-dichlorobenzene	ug/L	0.500	94.7	.560	<5.00	<0.500
m-dichlorobenzene	ug/L	0.500	95.2	.480	<5.00	<0.500
Para-dichlorobenzene	ug/L	0.500	94.0	.380	<5.00	<0.500
Hall_Spike	ug/L	0.500	98.0	.130	93.2	93.7
-	-	-	-	-	-	-
Acenaphthylene	ug/L	1.00	78.7	1.91	<1.00	<1.00
Acenaphthene	ug/L	1.00	69.2	1.30	<1.00	<1.00
Anthracene	ug/L	1.00	72.1	2.43	<1.00	<1.00
Benzo(a)anthracene	ug/L	1.00			<1.00	<1.00
Benzo(a)pyrene	ug/L	1.00			<1.00	<1.00

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P.O. Box 7668
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PO Number : 9787-214
FDHRSDW Number : 83139
FHRS ENVNumber : E83018
FDER COMQAPNum : 86-0008G
LDHH Number : 94-23
NCDEHNR Number : 296
SCDHEC Number : 96019

For: IPE602 EPA601 PAH
Date Sampled:Aug12 1996 Date Received:Aug13 1996 Lab Numbers: 7738-7739

REPORT OF ANALYSIS

Parameter	Unit	Method Detection Limit	%ACC	%PRC	7738 MW4	7739 WILLIA MS
Benzo(b)fluoranthene	ug/L	1.00			<1.00	<1.00
Benzo(g,h,i)perylene	ug/L	1.00			<1.00	<1.00
Benzo(k)fluoranthene	ug/L	1.00			<1.00	<1.00
Chrysene	ug/L	1.00			<1.00	<1.00
Dibnz(a,h)anthracene	ug/L	1.00			<1.00	<1.00
Fluoranthene	ug/L	1.00	70.7	2.98	<1.00	<1.00
Fluorene	ug/L	1.00	75.3	.650	<1.00	<1.00
Indn(1,2,3-cd)pyrene	ug/L	1.00			<1.00	<1.00
Naphthalene	ug/L	1.00	65.3	1.76	<1.00	<1.00
1-methyl-Naphthalene	ug/L	1.00	67.6	.650	<1.00	<1.00
2-methyl-Naphthalene	ug/L	1.00	66.7	2.57	<1.00	<1.00
Phenanthrene	ug/L	1.00	74.4	3.18	<1.00	<1.00
Pyrene	ug/L	1.00	69.3	6.81	<1.00	<1.00
Intl_QA_Spike(2FBP)	ug/L	1.00	71.7	.830	54.2	72.6
Surr_Spike(DBBP)	ug/L	1.00			30.2	72.8
PAH_Extraction	ml	-			800.	1000

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CHAIN OF CUSTODY RECORD FOR UNOCAL 76

Company Name: S & ME, INC.
Address: 9751 S. PINE BLVD.
City: CHARLOTTE State: NC Zip Code: 28273
Telephone: 704-523-4726 FAX #: 704-525-3953
Report To: STEERMET NIVES Sampler: GARY SIMCOX

Project Name: UNOCAL MEBANE
UNOCAL Project Manager: WAYNE HOLT
AFE #:
Site #:
QC Data: ☐ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours
CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure
☐ Drinking Water ☐ Waste Water ☐ Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	NO. OF CONTAINERS	PRESERVATIVES: UNPRESERVED	H_2SO_4	HNO_3	HCl			ANALYSES REQUEST: 610	602 & MTBE / 601, 1,2,6								
MW-4	8/12/96	W	4	GLASS	7738	4	1			3												
WILLIAMS WELL	8/12/96	W	4	GLASS	7739	4	1			3												

Relinquished By: [signature]	Date: 8/12/96 Time: 3:30PM	Received By:	Date: Time:
Relinquished By:	Date: Time:	Received By:	Date: Time:
Relinquished By:	Date: Time:	Received By Lab:	Date: 8/13/96 Time: 1033

Were Samples Received in Good Condition? ☑ Yes ☐ No Samples on Ice? ☑ Yes ☐ No Method of Shipment _____ Page __ of __

To be completed upon receipt of report:
1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____
2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Quality Assurance Report

Prepared for: S&ME-Charlotte
Project Number: UNOCAFE#35927785
Lab Numbers: 7611 - 7614

Report date: 12-Aug-96

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FLOWERS CHEMICAL LABORATORIES, INC.

QA Conformance Summary

Client:	S&ME-Charlotte
Project Number:	UNOCAFE#35927785
P.O. Number:	9787-214
Date Sampled:	5-Aug-96
Lab Numbers:	7611 - 7614

Sample Handling

Sample handling and holding time criteria were met for all samples.
Samples Collected by Submitter

Surrogate Compound Recoveries:

The recovery limits were exceded for 1 samples as shown in section 1. This represents a 93.8% success rate.
Surrogate exceedences are attributed to matrix interferences.

Accuracy / Precision:

The recovery limits were met for all compounds in the matrix spike as shown in section 2.
The recovery limits were met for all compounds in the matrix spike duplicate as shown in section 2.
The RSD was met for all compounds as shown in section 2.

Method Blanks:

No target compounds were found in the method blank in excess of the method limit as shown in section 3.

QCCS Check Sample:

The control limits were met for all compounds as shown in section 4.

Standards Traceability:

The t-test limits were met for all calibration standards as shown in section 5.
The t-test limits were met for all QCCS standards as shown in section 5.
The t-test limits were met for all matrix spike standards as shown in section 5.
There were 4 standard blanks.
The t-test limits were met for all surrogate spike standards as shown in section 5.

FLOWERS CHEMICAL LABORATORIES, INC.

Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

PID_Spike for EPA602
Unit of measure: ug/L

Surrogate Expected: 100
Acceptability Limits: 67.6 - 123

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
7611	MW-3	126	126
7612	MW-7	107	107
7613	MW-8	108	108
7614	DMW-5	110	110

FLOWERS CHEMICAL LABORATORIES, INC.

Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Hall_Spike for EPA601
Unit of measure: ug/L

Surrogate Expected: 100
Acceptability Limits: 69.2 - 133

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
7611	MW-3	84.0	84.0
7612	MW-7	90.2	90.2
7613	MW-8	88.8	88.8
7614	DMW-5	85.4	85.4

FLOWERS CHEMICAL LABORATORIES, INC.

Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Surr_Spike(2FBP) for EPA625
Unit of measure: ug/L

Surrogate Expected: 100
Acceptability Limits: 34.5 - 93.9

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
7611	MW-3	50.9	50.9
7612	MW-7	58.4	58.4
7613	MW-8	58.9	58.9
7614	DMW-5	55.1	55.1

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Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Surr_Spike(DBBP) for EPA625
Unit of measure: ug/L

Surrogate Expected: 100
Acceptability Limits: 38.8 - 91.4

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
7611	MW-3	45.8	45.8
7612	MW-7	58.7	58.7
7613	MW-8	54.6	54.6
7614	DMW-5	42.4	42.4

FLOWERS CHEMICAL LABORATORIES, INC.

Section 2

Matrix Spike Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Analyte	Unit	Analysis Method	Date	Spike Added	Sample Conc.	MS Conc.	MS Rec.	MSD Conc.	MSD Rec.	Acceptable Limits	RSD Rec.	Acceptable Limits
o-dichlorobenzene	ug/L	EPA602	08-08-96	10.0	<0.5	10.3	103%	9.66	96.6%	6.95 - 12.4	0.453	0 - 1.11
m-dichlorobenzene	ug/L	EPA602	08-08-96	10.0	<0.5	10.9	109%	10.0	100%	6.63 - 13.1	0.636	0 - 1.19
Para-dichlorobenzene	ug/L	EPA602	08-08-96	10.0	<0.5	11.3	113%	10.4	104%	6.81 - 12.7	0.636	0 - 1.08
Benzene	ug/L	EPA602	08-08-96	10.0	<0.5	11.8	118%	11.7	117%	7.67 - 12.7	0.071	0 - 0.790
Chlorobenzene	ug/L	EPA602	08-08-96	10.0	<0.5	9.77	97.7%	8.90	89.0%	6.67 - 13.3	0.615	0 - 0.877
Ethylbenzene	ug/L	EPA602	08-08-96	10.0	<0.5	11.8	118%	11.4	114%	6.94 - 12.9	0.283	0 - 1.60
Toluene	ug/L	EPA602	08-08-96	10.0	<0.5	11.8	118%	11.7	117%	8.18 - 12.6	0.071	0 - 0.969
Xylene	ug/L	EPA602	08-08-96	30.0	<0.5	29.6	98.7%	31.7	106%	24.8 - 37.0	1.48	0 - 3.67
Methyl-tert-butylether	ug/L	EPA602	08-08-96	10.0	<0.5	10.2	102%	10.4	104%	7.13 - 12.0	0.141	0 - 1.18
Total_BTEX	ug/L	EPA602	08-08-96	60.0	<0.5	64.9	108%	66.5	111%	48.4 - 74.0	1.13	0 - 5.84
1,1,1-trichloroethane	ug/L	EPA601	08-08-96	10.0	<1	11.4	114%	11.0	110%	7.28 - 12.7	0.283	0 - 1.40
1,1,2,2-tetrachloroethane	ug/L	EPA601	08-08-96	10.0	<1	10.8	108%	11.1	111%	7.09 - 13.5	0.212	0 - 1.42
1,1,2-trichloroethane	ug/L	EPA601	08-08-96	10.0	<1	11.2	112%	10.4	104%	7.20 - 12.3	0.566	0 - 1.36
1,1-dichloroethane	ug/L	EPA601	08-08-96	10.0	<1	11.0	110%	10.5	105%	7.16 - 12.8	0.354	0 - 1.40
1,1-dichloroethene	ug/L	EPA601	08-08-96	10.0	<1	10.8	108%	10.4	104%	6.71 - 13.3	0.283	0 - 1.65
1,2-dichloroethane	ug/L	EPA601	08-08-96	10.0	<1	11.6	116%	10.9	109%	7.19 - 12.8	0.495	0 - 1.61
1,2-dichloropropane	ug/L	EPA601	08-08-96	10.0	<1	11.6	116%	10.9	109%	7.40 - 12.5	0.495	0 - 1.53
Bromodichloromethane	ug/L	EPA601	08-08-96	10.0	<1	11.4	114%	10.2	102%	7.16 - 12.5	0.849	0 - 1.83
Bromoform	ug/L	EPA601	08-08-96	10.0	<1	8.30	83.0%	9.40	94.0%	6.50 - 13.0	0.778	0 - 1.96
cis-1,3-dichloropropene	ug/L	EPA601	08-08-96	10.0	<1	10.2	102%	11.5	115%	7.13 - 12.7	0.919	0 - 1.33
Carbon tetrachloride	ug/L	EPA601	08-08-96	10.0	<1	11.2	112%	10.7	107%	7.03 - 12.9	0.354	0 - 1.29
Chloroform	ug/L	EPA601	08-08-96	10.0	<1	11.5	115%	10.9	109%	7.25 - 12.3	0.424	0 - 1.72
Dibromochloromethane	ug/L	EPA601	08-08-96	10.0	<1	8.28	82.8%	8.13	81.3%	6.81 - 12.5	0.106	0 - 1.27
Methylene chloride	ug/L	EPA601	08-08-96	10.0	<1	11.8	118%	11.3	113%	6.87 - 12.4	0.354	0 - 3.70
trans-1,3,-dichloropropene	ug/L	EPA601	08-08-96	10.0	<1	11.1	111%	11.8	118%	6.93 - 12.7	0.495	0 - 1.44
Trichlorofluoromethane	ug/L	EPA601	08-08-96	10.0	<2	9.93	99.3%	8.58	85.8%	6.47 - 13.4	0.955	0 - 2.05
t-1,2-dichloroethene	ug/L	EPA601	08-08-96	10.0	<1	11.1	111%	10.4	104%	7.10 - 12.7	0.495	0 - 1.46
Trichloroethene	ug/L	EPA601	08-08-96	10.0	<1	10.4	104%	9.80	98.0%	7.14 - 12.3	0.424	0 - 1.22
Tetrachloroethene	ug/L	EPA601	08-08-96	10.0	<1	11.6	116%	10.8	108%	7.17 - 12.8	0.566	0 - 1.20
1,2-dibromo-3-chloropropan	ug/L	EPA601	08-08-96	10.0	<1	8.04	80.4%	8.34	83.4%	6.96 - 12.9	0.212	0 - 2.12

FLOWERS CHEMICAL LABORATORIES, INC.

Section 2

Matrix Spike Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Analyte	Unit	Analysis Method	Date	Spike Added	Sample Conc.	MS Conc.	MS Rec.	MSD Conc.	MSD Rec.	Acceptable Limits	RSD Rec.	Acceptable Limits
Chlorobenzene	ug/L	EPA601	08-08-96	10.0	<0.5	9.77	97.7%	8.90	89.0%	7.51 - 12.7	0.615	0 - 1.35
Chloroethane	ug/L	EPA601	08-08-96	10.0	<3	10.3	103%	9.72	97.2%	7.05 - 12.9	0.410	0 - 1.57
o-dichlorobenzene	ug/L	EPA601	08-08-96	10.0	<0.5	10.3	103%	9.66	96.6%	7.02 - 12.4	0.453	0 - 1.79
m-dichlorobenzene	ug/L	EPA601	08-08-96	10.0	<0.5	10.9	109%	10.0	100%	7.02 - 12.8	0.636	0 - 1.88
Acenaphthylene	ug/L	EPA625	08-09-96	40.0	<1	25.4	63.5%	27.1	67.8%	16.7 - 37.7	1.20	0 - 8.00
Acenaphthene	ug/L	EPA625	08-09-96	40.0	<1	24.6	61.5%	26.2	65.5%	17.5 - 37.1	1.13	0 - 6.99
Anthracene	ug/L	EPA625	08-09-96	40.0	<1	26.3	65.8%	27.6	69.0%	17.4 - 39.3	0.919	0 - 7.66
Benzo(a)anthracene	ug/L	EPA625	08-09-96	40.0	<1	29.2	73.0%	29.6	74.0%	19.2 - 41.2	0.283	0 - 7.35
Benzo(a)pyrene	ug/L	EPA625	08-09-96	40.0	<1	30.7	76.8%	30.6	76.5%	16.4 - 40.6	0.071	0 - 9.03
Benzo(b)fluoranthene	ug/L	EPA625	08-09-96	40.0	<1	31.2	78.0%	29.2	73.0%	17.7 - 40.6	1.41	0 - 9.28
Benzo(g,h,i)perylene	ug/L	EPA625	08-09-96	40.0	<1	29.9	74.8%	30.6	76.5%	16.0 - 44.1	0.495	0 - 9.34
Benzo(k)fluoranthene	ug/L	EPA625	08-09-96	40.0	<1	31.0	77.5%	32.2	80.5%	15.3 - 47.2	0.849	0 - 9.13
Chrysene	ug/L	EPA625	08-09-96	40.0	<1	29.3	73.3%	29.9	74.8%	19.1 - 41.9	0.424	0 - 6.59
Dibnz(a,h)anthracene	ug/L	EPA625	08-09-96	40.0	<1	30.1	75.3%	30.3	75.8%	15.8 - 43.2	0.141	0 - 8.92
Fluoranthene	ug/L	EPA625	08-09-96	40.0	<1	29.9	74.8%	30.9	77.3%	18.8 - 41.8	0.707	0 - 5.74
Fluorene	ug/L	EPA625	08-09-96	40.0	<1	25.9	64.8%	27.6	69.0%	19.4 - 38.2	1.20	0 - 5.78
Indn(1,2,3-cd)pyrene	ug/L	EPA625	08-09-96	40.0	<1	35.6	89.0%	35.9	89.8%	13.2 - 47.1	0.212	0 - 12.1
Naphthalene	ug/L	EPA625	08-09-96	40.0	<1	22.8	57.0%	25.0	62.5%	17.5 - 36.7	1.56	0 - 7.68
1-Methyl-Naphthalene	ug/L	EPA625	08-09-96	40.0	<1	26.5	66.3%	28.6	71.5%	18.4 - 39.2	1.48	0 - 7.81
2-Methyl-Naphthalene	ug/L	EPA625	08-09-96	40.0	<1	25.8	64.5%	27.9	69.8%	16.5 - 41.2	1.48	0 - 7.32
Phenanthrene	ug/L	EPA625	08-09-96	40.0	<1	26.4	66.0%	28.5	71.3%	18.3 - 40.1	1.48	0 - 5.98
Pyrene	ug/L	EPA625	08-09-96	40.0	<1	28.8	72.0%	28.9	72.3%	18.3 - 44.4	0.071	0 - 7.35

FLOWERS CHEMICAL LABORATORIES, INC.

Section 3

Method Blank Report

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Analyte	Unit	Method	Date	Concentration
o-dichlorobenzene	ug/L	EPA602	08-08-96	<0.5
m-dichlorobenzene	ug/L	EPA602	08-08-96	<0.5
Para-dichlorobenzene	ug/L	EPA602	08-08-96	<0.5
Benzene	ug/L	EPA602	08-08-96	<0.5
Chlorobenzene	ug/L	EPA602	08-08-96	<0.5
Ethylbenzene	ug/L	EPA602	08-08-96	<0.5
Toluene	ug/L	EPA602	08-08-96	<0.5
Xylene	ug/L	EPA602	08-08-96	<0.5
Methyl-tert-butylether	ug/L	EPA602	08-08-96	<0.5
Total_BTEX	ug/L	EPA602	08-08-96	<0.5
Isopropylether	ug/L	EPA602	08-08-96	<1
1,1,1-trichloroethane	ug/L	EPA601	08-08-96	<1
1,1,2,2-tetrachloroethane	ug/L	EPA601	08-08-96	<1
1,1,2-trichloroethane	ug/L	EPA601	08-08-96	<1
1,1-dichloroethane	ug/L	EPA601	08-08-96	<1
1,1-dichloroethene	ug/L	EPA601	08-08-96	<1
1,2-dichloroethane	ug/L	EPA601	08-08-96	<1
1,2-dichloropropane	ug/L	EPA601	08-08-96	<1
2-chloroethylvinylether	ug/L	EPA601	08-08-96	<1
Bromodichloromethane	ug/L	EPA601	08-08-96	<1
Bromoform	ug/L	EPA601	08-08-96	<1
cis-1,3-dichloropropene	ug/L	EPA601	08-08-96	<1
Carbon tetrachloride	ug/L	EPA601	08-08-96	<1
Chloroform	ug/L	EPA601	08-08-96	<1
Dibromochloromethane	ug/L	EPA601	08-08-96	<1
Methylene chloride	ug/L	EPA601	08-08-96	<1
trans-1,3,-dichloropropene	ug/L	EPA601	08-08-96	<1
Trichlorofluoromethane	ug/L	EPA601	08-08-96	<2
t-1,2-dichloroethene	ug/L	EPA601	08-08-96	<1
Trichloroethene	ug/L	EPA601	08-08-96	<1
Tetrachloroethene	ug/L	EPA601	08-08-96	<1

FLOWERS CHEMICAL LABORATORIES, INC.

Section 3

Method Blank Report

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Analyte	Unit	Method	Date	Concentration
1,2-dibromo-3-chloropropane	ug/L	EPA601	08-08-96	<1
Bromomethane	ug/L	EPA601	08-08-96	<5
Chlorobenzene	ug/L	EPA601	08-08-96	<0.5
Chloroethane	ug/L	EPA601	08-08-96	<3
Chloromethane	ug/L	EPA601	08-08-96	<5
Dichlorodifluoromethane	ug/L	EPA601	08-08-96	<2
Vinyl chloride	ug/L	EPA601	08-08-96	<0.5
o-dichlorobenzene	ug/L	EPA601	08-08-96	<0.5
m-dichlorobenzene	ug/L	EPA601	08-08-96	<0.5
Para-dichlorobenzene	ug/L	EPA601	08-08-96	<0.5
Acenaphthylene	ug/L	EPA625	08-09-96	<1
Acenaphthene	ug/L	EPA625	08-09-96	<1
Anthracene	ug/L	EPA625	08-09-96	<1
Benzo(a)anthracene	ug/L	EPA625	08-09-96	<1
Benzo(a)pyrene	ug/L	EPA625	08-09-96	<1
Benzo(b)fluoranthene	ug/L	EPA625	08-09-96	<1
Benzo(g,h,i)perylene	ug/L	EPA625	08-09-96	<1
Benzo(k)fluoranthene	ug/L	EPA625	08-09-96	<1
Chrysene	ug/L	EPA625	08-09-96	<1
Dibnz(a,h)anthracene	ug/L	EPA625	08-09-96	<1
Fluoranthene	ug/L	EPA625	08-09-96	<1
Fluorene	ug/L	EPA625	08-09-96	<1
Indn(1,2,3-cd)pyrene	ug/L	EPA625	08-09-96	<1
Naphthalene	ug/L	EPA625	08-09-96	<1
1-Methyl-Naphthalene	ug/L	EPA625	08-09-96	<1
2-Methyl-Naphthalene	ug/L	EPA625	08-09-96	<1
Phenanthrene	ug/L	EPA625	08-09-96	<1
Pyrene	ug/L	EPA625	08-09-96	<1

FLOWERS CHEMICAL LABORATORIES, INC.

Section 4

QCCS Sample Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Analyte	Unit	Method	Date	QCCS Expected	QCCS Measured	Rec. %	Acceptable Limits
o-dichlorobenzene	ug/L	EPA602	08-08-96	10.0	8.61	86.1%	7.41 - 12.5
m-dichlorobenzene	ug/L	EPA602	08-08-96	10.0	9.00	90.0%	7.10 - 13.1
Para-dichlorobenzene	ug/L	EPA602	08-08-96	10.0	9.41	94.1%	7.59 - 12.8
Benzene	ug/L	EPA602	08-08-96	10.0	10.6	106%	8.13 - 12.7
Chlorobenzene	ug/L	EPA602	08-08-96	10.0	8.48	84.8%	7.40 - 12.8
Ethylbenzene	ug/L	EPA602	08-08-96	10.0	12.3	123%	7.69 - 12.5
Toluene	ug/L	EPA602	08-08-96	10.0	11.7	117%	8.54 - 12.7
Xylene	ug/L	EPA602	08-08-96	30.0	36.1	120%	24.7 - 36.5
Methyl-tert-butylether	ug/L	EPA602	08-08-96	10.0	9.14	91.4%	8.40 - 11.6
Total_BTEX	ug/L	EPA602	08-08-96	60.0	70.7	118%	50.7 - 72.9
Isopropylether	ug/L	EPA602	08-08-96	40.0	40.0	100%	35.8 - 45.8
1,1,1-trichloroethane	ug/L	EPA601	08-08-96	10.0	9.14	91.4%	7.76 - 12.1
1,1,2,2-tetrachloroethane	ug/L	EPA601	08-08-96	10.0	10.9	109%	7.78 - 12.8
1,1,2-trichloroethane	ug/L	EPA601	08-08-96	10.0	9.23	92.3%	7.82 - 12.0
1,1-dichloroethane	ug/L	EPA601	08-08-96	10.0	8.72	87.2%	7.46 - 12.1
1,1-dichloroethene	ug/L	EPA601	08-08-96	10.0	8.98	89.8%	7.04 - 12.3
1,2-dichloroethane	ug/L	EPA601	08-08-96	10.0	9.29	92.9%	7.86 - 12.1
1,2-dichloropropane	ug/L	EPA601	08-08-96	10.0	9.54	95.4%	7.93 - 12.5
Bromodichloromethane	ug/L	EPA601	08-08-96	10.0	8.79	87.9%	7.61 - 12.4
Bromoform	ug/L	EPA601	08-08-96	10.0	9.40	94.0%	8.02 - 12.4
cis-1,3-dichloropropene	ug/L	EPA601	08-08-96	10.0	10.2	102%	7.77 - 12.6
Carbon tetrachloride	ug/L	EPA601	08-08-96	10.0	9.16	91.6%	7.68 - 11.9
Chloroform	ug/L	EPA601	08-08-96	10.0	8.89	88.9%	7.99 - 11.8
Dibromochloromethane	ug/L	EPA601	08-08-96	10.0	8.49	84.9%	7.81 - 12.1
Methylene chloride	ug/L	EPA601	08-08-96	10.0	10.8	108%	7.46 - 12.1
trans-1,3,-dichloropropene	ug/L	EPA601	08-08-96	10.0	10.5	105%	7.84 - 12.8
Trichlorofluoromethane	ug/L	EPA601	08-08-96	10.0	8.91	89.1%	6.90 - 13.5
t-1,2-dichloroethene	ug/L	EPA601	08-08-96	10.0	8.87	88.7%	6.88 - 12.3
Trichloroethene	ug/L	EPA601	08-08-96	10.0	8.41	84.1%	7.67 - 11.7
Tetrachloroethene	ug/L	EPA601	08-08-96	10.0	9.32	93.2%	7.86 - 11.9
1,2-dibromo-3-chloropropane	ug/L	EPA601	08-08-96	10.0	8.04	80.4%	7.28 - 12.7

FLOWERS CHEMICAL LABORATORIES, INC.

Section 4

QCCS Sample Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Analyte	Unit	Method	Date	QCCS Expected	QCCS Measured	Rec. %	Acceptable Limits
Chlorobenzene	ug/L	EPA601	08-08-96	10.0	8.48	84.8%	8.05 - 12.1
Chloroethane	ug/L	EPA601	08-08-96	10.0	10.6	106%	7.64 - 12.4
o-dichlorobenzene	ug/L	EPA601	08-08-96	10.0	8.61	86.1%	7.91 - 12.1
m-dichlorobenzene	ug/L	EPA601	08-08-96	10.0	9.00	90.0%	7.81 - 12.2
Acenaphthylene	ug/L	EPA625	08-09-96	40.0	26.2	65.5%	17.4 - 38.0
Acenaphthene	ug/L	EPA625	08-09-96	40.0	25.3	63.3%	17.3 - 38.2
Anthracene	ug/L	EPA625	08-09-96	40.0	27.1	67.8%	16.5 - 40.2
Benzo(a)anthracene	ug/L	EPA625	08-09-96	40.0	29.1	72.8%	19.1 - 42.6
Benzo(a)pyrene	ug/L	EPA625	08-09-96	40.0	31.1	77.8%	15.8 - 43.2
Benzo(b)fluoranthene	ug/L	EPA625	08-09-96	40.0	30.3	75.8%	15.3 - 44.6
Benzo(g,h,i)perylene	ug/L	EPA625	08-09-96	40.0	29.9	74.8%	16.1 - 45.2
Benzo(k)fluoranthene	ug/L	EPA625	08-09-96	40.0	33.3	83.3%	16.0 - 47.4
Chrysene	ug/L	EPA625	08-09-96	40.0	30.1	75.3%	19.0 - 43.2
Dibnz(a,h)anthracene	ug/L	EPA625	08-09-96	40.0	29.2	73.0%	16.1 - 44.0
Fluoranthene	ug/L	EPA625	08-09-96	40.0	29.5	73.8%	18.5 - 43.2
Fluorene	ug/L	EPA625	08-09-96	40.0	26.7	66.8%	20.1 - 37.1
Indn(1,2,3-cd)pyrene	ug/L	EPA625	08-09-96	40.0	35.3	88.3%	12.5 - 47.3
Naphthalene	ug/L	EPA625	08-09-96	40.0	25.4	63.5%	17.7 - 36.1
1-Methyl-Naphthalene	ug/L	EPA625	08-09-96	40.0	27.7	69.3%	18.1 - 40.3
2-Methyl-Naphthalene	ug/L	EPA625	08-09-96	40.0	27.4	68.5%	16.2 - 39.4
Phenanthrene	ug/L	EPA625	08-09-96	40.0	27.0	67.5%	18.5 - 39.4
Pyrene	ug/L	EPA625	08-09-96	40.0	30.1	75.3%	16.7 - 46.2

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std
			Standard				Lot									
o-dichlorobenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.50	>1.76	1.03	0.068	0.974	0.067
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	4.36	>1.75	1.03	0.068	1.08	0.025
m-dichlorobenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.15	>1.76	1.00	0.059	0.988	0.055
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	3.91	>1.75	1.00	0.059	1.09	0.020
Para-dichlorobenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.71	>1.76	1.02	0.092	1.00	0.039
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.88	>1.75	1.02	0.092	1.08	0.045
Benzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	7.64	>1.68	0.976	0.052	0.970	0.055
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	3.65	>1.68	0.976	0.052	1.08	0.074
Chlorobenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.15	>1.76	1.00	0.052	0.952	0.073
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.81	>1.75	1.00	0.052	1.13	0.025
Ethylbenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.42	>1.68	0.975	0.047	1.03	0.104
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	6.26	>1.68	0.975	0.047	1.02	0.078
Toluene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.29	>1.68	0.986	0.067	1.05	0.072
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.78	>1.68	0.986	0.067	1.10	0.034
O-Xylene																
QCCS	Aldrich	07452JZ	116	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	5.03	>1.71	0.965	0.056	1.03	0.037
Matrix Spike	Aldrich	07452JZ	116	DO	01-05-95	01-05-99	545	DO	07-18-96	07-18-97	5.26	>1.71	0.965	0.056	1.03	0.010
M&P-Xylene																
QCCS	Aldrich	05541TF	105	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	6.47	>1.75	1.05	0.037	1.06	0.083
Matrix Spike	Aldrich	05249HG	124	DO	01-05-95	01-05-99	545	DO	07-18-96	07-18-97	6.87	>1.75	1.05	0.037	1.01	0.054
Methyl-tert-butylether																
QCCS	Aldrich	08065KG	115	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	5.14	>1.71	0.951	0.066	0.987	0.043
Matrix Spike	Aldrich	08065KG	115	DO	01-05-95	01-05-99	545	DO	07-18-96	07-18-97	3.10	>1.71	0.951	0.066	1.06	0.019

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std
			Standard				Lot									
1,1,1-trichloroethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.979	0.079	0.998	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.979	0.079	1.12	0.048
1,1,2,2-tetrachloroethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			1.02	0.095	1.08	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			1.02	0.095	1.10	0.069
1,1,2-trichloroethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.992	0.418	0.977	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.992	0.418	1.10	0.015
1,1-dichloroethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.954	0.086	1.12	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.954	0.086	1.08	0.063
1,1-dichloroethene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.942	0.093	1.15	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.942	0.093	1.09	0.055
1,2-dichloroethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.978	0.083	1.13	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.978	0.083	1.13	0.051
1,2-dichloropropane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			1.02	0.096	1.01	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			1.02	0.096	1.15	0.055
Bromodichloromethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.947	0.054	1.03	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	1.83	>1.76	0.947	0.054	1.08	0.072
Bromoform																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			1.02	0.061	1.12	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	3.43	>1.76	1.02	0.061	1.08	0.086
cis-1,3-dichloropropene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.977	0.063	1.08	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.977	0.063	1.19	0.026
Carbon tetrachloride																

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std
			Standard				Lot									
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.995	0.074	1.13	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.995	0.074	1.10	0.074
Chloroform																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.966	0.053	1.05	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	4.25	>1.76	0.966	0.053	0.911	0.072
Dibromochloromethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.973	0.063	1.08	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.93	>1.76	0.973	0.063	1.05	0.087
Methylene chloride																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			1.00	0.061	1.11	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			1.00	0.061	1.07	0.065
trans-1,3,-dichloropropene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.962	0.049	1.05	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.962	0.049	1.16	0.087
Trichlorofluoromethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.931	0.131	1.06	
Matrix Spike	EMS	046-133	537	DO	05-01-96	05-01-97	545	DO	07-18-96	07-18-97			0.931	0.131	1.25	0.230
t-1,2-dichloroethene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			1.01	0.063	1.10	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			1.01	0.063	1.12	0.013
Trichloroethene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.974	0.056	1.10	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.974	0.056	1.02	0.022
Tetrachloroethene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.949	0.045	1.03	
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.949	0.045	1.14	0.015
1,2-dibromo-3-chloropropane																
QCCS	Chem Service	156-43 B	418	DO	02-19-96	02-19-97	563	DO	07-18-96	07-18-97			0.989	0.103	1.04	
Matrix Spike	Chem Service	156-43 B	418	DO	02-19-96	02-19-97	545	DO	07-18-96	07-18-97			0.989	0.103	1.03	0.068
Chlorobenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.15	>1.76	1.00	0.052	0.952	0.073

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std
			Standard				Lot									
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.81	>1.75	1.00	0.052	1.13	0.025
Chloroethane																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97			0.993	0.074	1.14	
Matrix Spike	EMS	046-133	537	DO	05-01-96	05-01-97	545	DO	07-18-96	07-18-97			0.993	0.074	0.918	0.046
o-dichlorobenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.50	>1.76	1.03	0.068	0.974	0.067
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	4.36	>1.75	1.03	0.068	1.08	0.025
m-dichlorobenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.15	>1.76	1.00	0.059	0.988	0.055
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	3.91	>1.75	1.00	0.059	1.09	0.020
Para-dichlorobenzene																
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.71	>1.76	1.02	0.092	1.00	0.039
Matrix Spike	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.88	>1.75	1.02	0.092	1.08	0.045
Acenaphthylene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.90	>1.67	0.705	0.086	0.658	0.031
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.90	>1.67	0.705	0.086	0.658	0.031
Acenaphthene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.05	>1.67	0.710	0.078	0.619	0.031
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.05	>1.67	0.710	0.078	0.619	0.031
Anthracene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.48	>1.67	0.761	0.109	0.694	0.150
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.48	>1.67	0.761	0.109	0.694	0.150
Benzo(a)anthracene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.59	>1.67	0.780	0.106	0.764	0.129
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.59	>1.67	0.780	0.106	0.764	0.129
Benzo(a)pyrene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.04	>1.67	0.767	0.151	0.817	0.189
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.04	>1.67	0.767	0.151	0.817	0.189
Benzo(b)fluoranthene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.02	>1.67	0.781	0.136	0.710	0.117
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.02	>1.67	0.781	0.136	0.710	0.117

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std
			Standard				Lot									
Benzo(g,h,i)perylene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.11	>1.67	0.790	0.144	0.841	0.182
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.11	>1.67	0.790	0.144	0.841	0.182
Benzo(k)fluoranthene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.20	>1.67	0.818	0.142	0.862	0.219
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.20	>1.67	0.818	0.142	0.862	0.219
Chrysene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.08	>1.67	0.798	0.111	0.772	0.179
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.08	>1.67	0.798	0.111	0.772	0.179
Dibnz(a,h)anthracene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.37	>1.67	0.797	0.172	0.803	0.167
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.37	>1.67	0.797	0.172	0.803	0.167
Fluoranthene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.52	>1.67	0.800	0.110	0.805	0.167
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.52	>1.67	0.800	0.110	0.805	0.167
Fluorene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	5.00	>1.67	0.714	0.080	0.709	0.099
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	5.00	>1.67	0.714	0.080	0.709	0.099
Indn(1,2,3-cd)pyrene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.37	>1.67	0.770	0.132	0.796	0.306
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.37	>1.67	0.770	0.132	0.796	0.306
Naphthalene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.39	>1.67	0.681	0.091	0.580	0.124
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.39	>1.67	0.681	0.091	0.580	0.124
1-Methyl-Naphthalene																
QCCS	Chem Service	41-41A	160	CLS	06-06-94	06-06-97	499	CLS	06-10-96	06-06-97	4.18	>1.67	0.712	0.090	0.686	0.058
Matrix Spike	Chem Service	41-41A	160	CLS	06-06-94	06-06-97	499	CLS	06-10-96	06-06-97	4.18	>1.67	0.712	0.090	0.686	0.058
2-Methyl-Naphthalene																
QCCS	Chem Service	62-6A	161	CLS	06-06-94	06-06-97	499	CLS	06-10-96	06-06-97	5.06	>1.67	0.662	0.075	0.643	0.075
Matrix Spike	Chem Service	62-6A	161	CLS	06-06-94	06-06-97	499	CLS	06-10-96	06-06-97	5.06	>1.67	0.662	0.075	0.643	0.075
Phenanthrene																

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 5-Aug-96
Lab Numbers: 7611 - 7614

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std
			Standard				Lot									
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.78	>1.67	0.758	0.093	0.682	0.105
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.78	>1.67	0.758	0.093	0.682	0.105
Pyrene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.08	>1.67	0.809	0.118	0.732	0.180
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.08	>1.67	0.809	0.118	0.732	0.180
EPA601 Blank	Flowers Chemical Laboratories	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97						
EPA602 Blank	Flowers Chemical Laboratories	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97						
EPA625 Blank	Flowers Chemical Laboratories	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97						
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96						
PID_Spike	Aldrich	11231EN	538	DO	01-01-95	01-01-99	549	DO	07-18-96	07-18-97	8.69	>1.69	1.02	0.031	1.01	0.098
Hall_Spike	Aldrich	01920EY	539	DO	01-01-95	01-01-99	549	DO	07-18-96	07-18-97	4.40	>1.75	0.971	0.063	1.02	0.053

FLOWERS CHEMICAL LABORATORIES

Internal Custody Record Lab Numbers: 7611 - 7614

Lab # 7611

Container 82217 Amber 1 L:

Extraction CE Karen Turgeon Thu, 08/08/96 02:23PM

Lab # 7612

Container 82218 Amber 1 L:

Extraction CE Karen Turgeon Thu, 08/08/96 02:23PM

Lab # 7613

Container 82219 Amber 1 L:

Extraction CE Karen Turgeon Thu, 08/08/96 02:23PM

Lab # 7614

Container 82220 Amber 1 L:

Extraction CE Karen Turgeon Thu, 08/08/96 02:23PM

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481 NEWBURYPORT
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CHAIN OF CUSTODY RECORD FOR UNOCAL 76

Company Name: S&ME INC.	Project Name: UNOCAL MEBANE
Address: 9751 S. PINE BLVD.	UNOCAL Project Manager: WAYNE HOLT
City: CHARLOTTE State: NC Zip Code: 28273	AFE #: 35927785
Telephone: 704-523-4726 FAX #: 704-525-3953	Site #: 9787-214
Report To: STEWART HINES Sampler: GARY SIMCOX	QC Data: ☒ Level D (Standard) ☐ Level C ☐ Level B ☐ Level A

Turnaround Time: ☒ 10 Work Days ☐ 5 Work Days ☐ 3 Work Days ☐ 2 Work Days ☐ 1 Work Day ☐ 2-8 Hours

CODE: ☐ Misc. ☐ Detect. ☐ Eval. ☐ Remed. ☐ Demol. ☐ Closure

☐ Drinking Water ☐ Waste Water ☒ Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	NO. OF CONTAINERS	UNPRESERVED	H_2SO_4	HNO_3	HCl			ANALYSES REQUEST	610	602 & MTBE/601 IPE							
MW-3	8/5/96	WATER	4	GLASS	7611	4	1			3				X	X							
MW-7	8/5/96		4		12	4	1			3				X	X							
MW-8	8/6/96		4		13	4	1			3				X	X							
DMW-5	8/6/96		4		7614	4	1			3				X	X							

Relinquished By: [signature]	Date: 8/7/96 Time: 10:00A	Received By: Date: Time:
Relinquished By:	Date: Time:	Received By: Date: Time:
Relinquished By:	Date: Time:	Received By Lab: [signature] Date: 8/8/96 Time: 1116

Were Samples Received in Good Condition? ☒ Yes ☐ No Samples on Ice? ☒ Yes ☐ No Method of Shipment _____ Page ___ of ___

To be completed upon receipt of report:

1) Were the analyses requested on the Chain of Custody reported? ☐ Yes ☐ No If no, what analyses are still needed? _____

2) Was the report issued within the requested turnaround time? ☐ Yes ☐ No If no, what was the turnaround time? _____

Approved by: _____ Signature: _____ Company: _____ Date: _____

Quality Assurance Report

Prepared for: S&ME-Charlotte
Project Number: UNOCAFE#35927785
Lab Numbers: 7738 - 7739

Report date: 15-Aug-96

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FLOWERS CHEMICAL LABORATORIES, INC.

QA Conformance Summary

Client:	S&ME-Charlotte
Project Number:	UNOCAFE#35927785
P.O. Number:	9787-214
Date Sampled:	12-Aug-96
Lab Numbers:	7738 - 7739

Sample Handling

Sample handling and holding time criteria were met for all samples.
Samples Collected by Submitter

Surrogate Compound Recoveries:

The recovery limits were exceeded for 1 samples as shown in section 1. This represents a 87.5% success rate.
Surrogate exceedences are attributed to matrix interferences.

Accuracy / Precision:

The recovery limits were exceeded for 1 compound in the matrix spike as shown in section 2. This represents a 98.1% success rate.
The recovery limits were exceeded for 1 compound in the matrix spike duplicate as shown in section 2. This represents a 98.1% success rate.
The RSD was met for all compounds as shown in section 2.

Method Blanks:

No target compounds were found in the method blank in excess of the method limit as shown in section 3.

QCCS Check Sample:

The control limits were met for all compounds as shown in section 4.

Standards Traceability:

The t-test limits were met for all calibration standards as shown in section 5.
The t-test limits were exceeded for 2 QCCS standards as shown in section 5. This represents a 96.2% success rate.
The t-test limits were exceeded for 2 matrix spike standards as shown in section 5. This represents a 96.2% success rate.
There were 4 standard blanks.
The t-test limits were met for all surrogate spike standards as shown in section 5.

FLOWERS CHEMICAL LABORATORIES, INC.

Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

PID_Spike for EPA602
Unit of measure: ug/L

Surrogate Expected: 100
Acceptability Limits: 67.1 - 121

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
7738	MW-4	100	100
7739	Williams	99.5	99.5

FLOWERS CHEMICAL LABORATORIES, INC.

Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Hall_Spike for EPA601
Unit of measure: ug/L

Surrogate Expected: 100
Acceptability Limits: 69.8 - 132

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
7738	MW-4	93.2	93.2
7739	Williams	93.7	93.7

FLOWERS CHEMICAL LABORATORIES, INC.

Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Surr_Spike(2FBP) for EPA625
Unit of measure: ug/L

Surrogate Expected: 100
Acceptability Limits: 34.5 - 93.5

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
7738	MW-4	54.2	54.2
7739	Williams	72.6	72.6

FLOWERS CHEMICAL LABORATORIES, INC.

Section 1

Surrogate Compound Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Surr_Spike(DBBP) for EPA625
Unit of measure: ug/L

Surrogate Expected: 100
Acceptability Limits: 39.7 - 89.1

Laboratory Number	Site Description	Surrogate Recovered	Percent Recovered
7738	MW-4	30.2	30.2
7739	Williams	72.8	72.8

FLOWERS CHEMICAL LABORATORIES, INC.

Section 2

Matrix Spike Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Analyte	Unit	Analysis Method	Date	Spike Added	Sample Conc.	MS Conc.	MS Rec.	MSD Conc.	MSD Rec.	Acceptable Limits	RSD Rec.	Acceptable Limits
o-dichlorobenzene	ug/L	EPA602	08-13-96	40.0	<0.5	38.0	95.0%	37.7	94.3%	27.9 - 49.6	0.212	0 - 4.40
m-dichlorobenzene	ug/L	EPA602	08-13-96	40.0	<0.5	38.2	95.5%	38.0	95.0%	26.7 - 52.4	0.141	0 - 4.78
Para-dichlorobenzene	ug/L	EPA602	08-13-96	40.0	<0.5	37.7	94.3%	37.5	93.8%	27.2 - 51.0	0.141	0 - 4.32
Benzene	ug/L	EPA602	08-13-96	40.0	<0.5	39.8	99.5%	39.8	99.5%	30.6 - 51.0	0.000	0 - 3.62
Chlorobenzene	ug/L	EPA602	08-13-96	40.0	<0.5	33.7	84.3%	33.7	84.3%	26.7 - 53.3	0.000	0 - 3.56
Ethylbenzene	ug/L	EPA602	08-13-96	40.0	<0.5	37.2	93.0%	37.1	92.8%	27.6 - 51.8	0.071	0 - 6.46
Toluene	ug/L	EPA602	08-13-96	40.0	<0.5	38.6	96.5%	38.5	96.3%	32.6 - 50.6	0.071	0 - 4.00
Xylene	ug/L	EPA602	08-13-96	120	<0.5	114	95.0%	114	95.0%	98.9 - 148	0.000	0 - 14.5
Methyl-tert-butylether	ug/L	EPA602	08-13-96	40.0	<0.5	38.6	96.5%	37.5	93.8%	28.6 - 48.3	0.778	0 - 4.83
Total_BTEX	ug/L	EPA602	08-13-96	240	<0.5	230	95.8%	230	95.8%	193 - 297	0.000	0 - 24.3
1,1,1-trichloroethane	ug/L	EPA601	08-13-96	40.0	<1	36.0	90.0%	35.9	89.8%	29.1 - 50.9	0.071	0 - 5.50
1,1,2,2-tetrachloroethane	ug/L	EPA601	08-13-96	40.0	<1	40.9	102%	40.7	102%	28.4 - 54.0	0.141	0 - 5.66
1,1,2-trichloroethane	ug/L	EPA601	08-13-96	40.0	<1	35.5	88.8%	35.7	89.3%	28.8 - 49.2	0.141	0 - 5.44
1,1-dichloroethane	ug/L	EPA601	08-13-96	40.0	<1	34.4	86.0%	34.1	85.3%	28.5 - 51.3	0.212	0 - 5.57
1,1-dichloroethene	ug/L	EPA601	08-13-96	40.0	<1	28.7	71.8%	27.9	69.8%	26.8 - 53.0	0.566	0 - 6.60
1,2-dichloroethane	ug/L	EPA601	08-13-96	40.0	<1	38.1	95.3%	37.9	94.8%	28.7 - 51.0	0.141	0 - 6.45
1,2-dichloropropane	ug/L	EPA601	08-13-96	40.0	<1	35.4	88.5%	36.6	91.5%	29.6 - 49.9	0.849	0 - 6.12
Bromodichloromethane	ug/L	EPA601	08-13-96	40.0	<1	37.5	93.8%	38.1	95.3%	28.7 - 49.8	0.424	0 - 7.29
Bromoform	ug/L	EPA601	08-13-96	40.0	<1	37.6	94.0%	37.7	94.3%	26.0 - 52.2	0.071	0 - 7.84
cis-1,3-dichloropropene	ug/L	EPA601	08-13-96	40.0	<1	42.6	107%	42.4	106%	28.5 - 50.9	0.141	0 - 5.26
Carbon tetrachloride	ug/L	EPA601	08-13-96	40.0	<1	34.9	87.3%	34.7	86.8%	28.1 - 51.5	0.141	0 - 5.17
Chloroform	ug/L	EPA601	08-13-96	40.0	<1	33.2	83.0%	33.0	82.5%	28.8 - 49.4	0.141	0 - 6.85
Dibromochloromethane	ug/L	EPA601	08-13-96	40.0	<1	37.8	94.5%	38.0	95.0%	27.0 - 50.2	0.141	0 - 5.08
Methylene chloride	ug/L	EPA601	08-13-96	40.0	<1	36.0	90.0%	35.2	88.0%	27.6 - 49.6	0.566	0 - 14.7
trans-1,3,-dichloropropene	ug/L	EPA601	08-13-96	40.0	<1	46.1	115%	46.3	116%	27.7 - 50.9	0.141	0 - 5.73
Trichlorofluoromethane	ug/L	EPA601	08-13-96	40.0	<2	46.3	116%	44.4	111%	25.9 - 53.5	1.34	0 - 8.17
t-1,2-dichloroethene	ug/L	EPA601	08-13-96	40.0	<1	34.3	85.8%	33.7	84.3%	28.3 - 50.6	0.424	0 - 5.83
Trichloroethene	ug/L	EPA601	08-13-96	40.0	<1	32.2	80.5%	33.4	83.5%	28.6 - 49.2	0.849	0 - 4.88
Tetrachloroethene	ug/L	EPA601	08-13-96	40.0	<1	34.3	85.8%	34.5	86.3%	28.6 - 51.4	0.141	0 - 4.78
1,2-dibromo-3-chloropropan	ug/L	EPA601	08-13-96	40.0	<1	42.3	106%	41.9	105%	27.1 - 52.3	0.283	0 - 8.48

FLOWERS CHEMICAL LABORATORIES, INC.

Section 2

Matrix Spike Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Analyte	Unit	Analysis Method	Date	Spike Added	Sample Conc.	MS Conc.	MS Rec.	MSD Conc.	MSD Rec.	Acceptable Limits	RSD Rec.	Acceptable Limits
Chlorobenzene	ug/L	EPA601	08-13-96	40.0	<0.5	33.7	84.3%	33.7	84.3%	30.2 - 50.6	0.000	0 - 5.41
Chloroethane	ug/L	EPA601	08-13-96	40.0	<3	45.0	113%	42.8	107%	27.7 - 51.9	1.56	0 - 6.26
o-dichlorobenzene	ug/L	EPA601	08-13-96	40.0	<0.5	38.0	95.0%	37.7	94.3%	28.1 - 49.5	0.212	0 - 7.14
m-dichlorobenzene	ug/L	EPA601	08-13-96	40.0	<0.5	38.2	95.5%	38.0	95.0%	28.1 - 51.4	0.141	0 - 7.52
Acenaphthylene	ug/L	EPA625	08-14-96	40.0	<1	31.9	79.8%	31.1	77.8%	16.6 - 37.7	0.566	0 - 8.53
Acenaphthene	ug/L	EPA625	08-14-96	40.0	<1	27.9	69.8%	27.4	68.5%	17.6 - 37.2	0.354	0 - 6.29
Anthracene	ug/L	EPA625	08-14-96	40.0	<1	28.4	71.0%	29.4	73.5%	17.4 - 39.3	0.707	0 - 7.95
Benzo(a)anthracene	ug/L	EPA625	08-14-96	40.0	<1	20.3	50.8%	21.3	53.3%	19.2 - 41.2	0.707	0 - 7.67
Benzo(a)pyrene	ug/L	EPA625	08-14-96	40.0	<1	17.4	43.5%	18.0	45.0%	16.4 - 40.6	0.424	0 - 9.10
Benzo(b)fluoranthene	ug/L	EPA625	08-14-96	40.0	<1	14.4	36.0%	15.8	39.5%	17.7 - 40.6	0.990	0 - 9.46
Benzo(g,h,i)perylene	ug/L	EPA625	08-14-96	40.0	<1	18.0	45.0%	17.9	44.8%	16.0 - 44.1	0.071	0 - 9.08
Benzo(k)fluoranthene	ug/L	EPA625	08-14-96	40.0	<1	18.7	46.8%	22.1	55.3%	15.5 - 47.2	2.40	0 - 9.20
Chrysene	ug/L	EPA625	08-14-96	40.0	<1	20.2	50.5%	20.7	51.8%	19.2 - 41.9	0.354	0 - 6.70
Dibnz(a,h)anthracene	ug/L	EPA625	08-14-96	40.0	<1	17.5	43.8%	17.6	44.0%	15.8 - 43.2	0.071	0 - 8.97
Fluoranthene	ug/L	EPA625	08-14-96	40.0	<1	27.7	69.3%	28.9	72.3%	18.6 - 41.9	0.849	0 - 6.78
Fluorene	ug/L	EPA625	08-14-96	40.0	<1	30.0	75.0%	30.3	75.8%	19.3 - 38.3	0.212	0 - 6.54
Indn(1,2,3-cd)pyrene	ug/L	EPA625	08-14-96	40.0	<1	16.7	41.8%	17.8	44.5%	13.5 - 47.1	0.778	0 - 12.0
Naphthalene	ug/L	EPA625	08-14-96	40.0	<1	26.5	66.3%	25.8	64.5%	17.5 - 36.7	0.495	0 - 7.81
1-Methyl-Naphthalene	ug/L	EPA625	08-14-96	40.0	<1	26.9	67.3%	27.2	68.0%	18.7 - 39.1	0.212	0 - 7.90
2-Methyl-Naphthalene	ug/L	EPA625	08-14-96	40.0	<1	26.2	65.5%	27.2	68.0%	16.6 - 41.1	0.707	0 - 7.41
Phenanthrene	ug/L	EPA625	08-14-96	40.0	<1	29.1	72.8%	30.4	76.0%	18.1 - 40.2	0.919	0 - 7.14
Pyrene	ug/L	EPA625	08-14-96	40.0	<1	26.4	66.0%	29.1	72.8%	18.2 - 44.6	1.91	0 - 8.08

FLOWERS CHEMICAL LABORATORIES, INC.

Section 3

Method Blank Report

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Analyte	Unit	Method	Date	Concentration
o-dichlorobenzene	ug/L	EPA602	08-13-96	<0.5
m-dichlorobenzene	ug/L	EPA602	08-13-96	<0.5
Para-dichlorobenzene	ug/L	EPA602	08-13-96	<0.5
Benzene	ug/L	EPA602	08-13-96	<0.5
Chlorobenzene	ug/L	EPA602	08-13-96	<0.5
Ethylbenzene	ug/L	EPA602	08-13-96	<0.5
Toluene	ug/L	EPA602	08-13-96	<0.5
Xylene	ug/L	EPA602	08-13-96	<0.5
Methyl-tert-butylether	ug/L	EPA602	08-13-96	<0.5
Total_BTEX	ug/L	EPA602	08-13-96	<0.5
Isopropylether	ug/L	EPA602	08-13-96	<1
1,1,1-trichloroethane	ug/L	EPA601	08-13-96	<1
1,1,2,2-tetrachloroethane	ug/L	EPA601	08-13-96	<1
1,1,2-trichloroethane	ug/L	EPA601	08-13-96	<1
1,1-dichloroethane	ug/L	EPA601	08-13-96	<1
1,1-dichloroethene	ug/L	EPA601	08-13-96	<1
1,2-dichloroethane	ug/L	EPA601	08-13-96	<1
1,2-dichloropropane	ug/L	EPA601	08-13-96	<1
2-chloroethylvinylether	ug/L	EPA601	08-13-96	<1
Bromodichloromethane	ug/L	EPA601	08-13-96	<1
Bromoform	ug/L	EPA601	08-13-96	<1
cis-1,3-dichloropropene	ug/L	EPA601	08-13-96	<1
Carbon tetrachloride	ug/L	EPA601	08-13-96	<1
Chloroform	ug/L	EPA601	08-13-96	<1
Dibromochloromethane	ug/L	EPA601	08-13-96	<1
Methylene chloride	ug/L	EPA601	08-13-96	<1
trans-1,3,-dichloropropene	ug/L	EPA601	08-13-96	<1
Trichlorofluoromethane	ug/L	EPA601	08-13-96	<2
t-1,2-dichloroethene	ug/L	EPA601	08-13-96	<1
Trichloroethene	ug/L	EPA601	08-13-96	<1
Tetrachloroethene	ug/L	EPA601	08-13-96	<1

FLOWERS CHEMICAL LABORATORIES, INC.

Section 3

Method Blank Report

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Analyte	Unit	Method	Date	Concentration
1,2-dibromo-3-chloropropane	ug/L	EPA601	08-13-96	<1
Bromomethane	ug/L	EPA601	08-13-96	<5
Chlorobenzene	ug/L	EPA601	08-13-96	<0.5
Chloroethane	ug/L	EPA601	08-13-96	<3
Chloromethane	ug/L	EPA601	08-13-96	<5
Dichlorodifluoromethane	ug/L	EPA601	08-13-96	<2
Vinyl chloride	ug/L	EPA601	08-13-96	<0.5
o-dichlorobenzene	ug/L	EPA601	08-13-96	<0.5
m-dichlorobenzene	ug/L	EPA601	08-13-96	<0.5
Para-dichlorobenzene	ug/L	EPA601	08-13-96	<0.5
Acenaphthylene	ug/L	EPA625	08-14-96	<1
Acenaphthene	ug/L	EPA625	08-14-96	<1
Anthracene	ug/L	EPA625	08-14-96	<1
Benzo(a)anthracene	ug/L	EPA625	08-14-96	<1
Benzo(a)pyrene	ug/L	EPA625	08-14-96	<1
Benzo(b)fluoranthene	ug/L	EPA625	08-14-96	<1
Benzo(g,h,i)perylene	ug/L	EPA625	08-14-96	<1
Benzo(k)fluoranthene	ug/L	EPA625	08-14-96	<1
Chrysene	ug/L	EPA625	08-14-96	<1
Dibnz(a,h)anthracene	ug/L	EPA625	08-14-96	<1
Fluoranthene	ug/L	EPA625	08-14-96	<1
Fluorene	ug/L	EPA625	08-14-96	<1
Indn(1,2,3-cd)pyrene	ug/L	EPA625	08-14-96	<1
Naphthalene	ug/L	EPA625	08-14-96	<1
1-Methyl-Naphthalene	ug/L	EPA625	08-14-96	<1
2-Methyl-Naphthalene	ug/L	EPA625	08-14-96	<1
Phenanthrene	ug/L	EPA625	08-14-96	<1
Pyrene	ug/L	EPA625	08-14-96	<1

FLOWERS CHEMICAL LABORATORIES, INC.

Section 4

QCCS Sample Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Analyte	Unit	Method	Date	QCCS Expected	QCCS Measured	Rec. %	Acceptable Limits
o-dichlorobenzene	ug/L	EPA602	08-13-96	40.0	42.3	106%	29.6 - 50.0
m-dichlorobenzene	ug/L	EPA602	08-13-96	40.0	42.3	106%	28.4 - 52.4
Para-dichlorobenzene	ug/L	EPA602	08-13-96	40.0	42.1	105%	30.4 - 51.2
Benzene	ug/L	EPA602	08-13-96	40.0	41.2	103%	32.6 - 50.6
Chlorobenzene	ug/L	EPA602	08-13-96	40.0	36.8	92.0%	29.5 - 51.3
Ethylbenzene	ug/L	EPA602	08-13-96	40.0	40.6	102%	30.8 - 50.0
Toluene	ug/L	EPA602	08-13-96	40.0	41.6	104%	34.0 - 50.8
Xylene	ug/L	EPA602	08-13-96	120	121	101%	98.5 - 146
Methyl-tert-butylether	ug/L	EPA602	08-13-96	40.0	40.4	101%	33.9 - 46.1
Total_BTEX	ug/L	EPA602	08-13-96	240	245	102%	203 - 292
1,1,1-trichloroethane	ug/L	EPA601	08-13-96	40.0	36.5	91.3%	31.0 - 48.2
1,1,2,2-tetrachloroethane	ug/L	EPA601	08-13-96	40.0	45.5	114%	31.1 - 51.3
1,1,2-trichloroethane	ug/L	EPA601	08-13-96	40.0	38.6	96.5%	31.3 - 47.9
1,1-dichloroethane	ug/L	EPA601	08-13-96	40.0	35.0	87.5%	29.7 - 48.7
1,1-dichloroethene	ug/L	EPA601	08-13-96	40.0	32.9	82.3%	28.1 - 49.2
1,2-dichloroethane	ug/L	EPA601	08-13-96	40.0	39.6	99.0%	31.4 - 48.4
1,2-dichloropropane	ug/L	EPA601	08-13-96	40.0	39.1	97.8%	31.8 - 49.8
Bromodichloromethane	ug/L	EPA601	08-13-96	40.0	40.4	101%	30.5 - 49.5
Bromoform	ug/L	EPA601	08-13-96	40.0	41.5	104%	32.0 - 49.6
cis-1,3-dichloropropene	ug/L	EPA601	08-13-96	40.0	45.9	115%	31.1 - 50.5
Carbon tetrachloride	ug/L	EPA601	08-13-96	40.0	35.1	87.8%	30.7 - 47.6
Chloroform	ug/L	EPA601	08-13-96	40.0	32.6	81.5%	31.7 - 47.3
Dibromochloromethane	ug/L	EPA601	08-13-96	40.0	39.8	99.5%	31.3 - 48.1
Methylene chloride	ug/L	EPA601	08-13-96	40.0	39.1	97.8%	29.7 - 48.4
trans-1,3,-dichloropropene	ug/L	EPA601	08-13-96	40.0	47.9	120%	31.3 - 51.1
Trichlorofluoromethane	ug/L	EPA601	08-13-96	40.0	46.4	116%	27.6 - 54.0
t-1,2-dichloroethene	ug/L	EPA601	08-13-96	40.0	35.7	89.3%	27.6 - 49.1
Trichloroethene	ug/L	EPA601	08-13-96	40.0	33.5	83.8%	30.6 - 46.9
Tetrachloroethene	ug/L	EPA601	08-13-96	40.0	35.8	89.5%	31.4 - 47.6
1,2-dibromo-3-chloropropane	ug/L	EPA601	08-13-96	40.0	46.5	116%	29.0 - 50.9
Chlorobenzene	ug/L	EPA601	08-13-96	40.0	36.8	92.0%	32.1 - 48.7

FLOWERS CHEMICAL LABORATORIES, INC.

Section 4

QCCS Sample Recovery

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Analyte	Unit	Method	Date	QCCS Expected	QCCS Measured	Rec. %	Acceptable Limits
Chloroethane	ug/L	EPA601	08-13-96	40.0	37.2	93.0%	30.4 - 49.6
o-dichlorobenzene	ug/L	EPA601	08-13-96	40.0	42.3	106%	31.5 - 48.5
m-dichlorobenzene	ug/L	EPA601	08-13-96	40.0	42.3	106%	31.2 - 48.8
Acenaphthylene	ug/L	EPA625	08-14-96	40.0	31.6	79.0%	17.4 - 38.0
Acenaphthene	ug/L	EPA625	08-14-96	40.0	28.8	72.0%	17.3 - 38.1
Anthracene	ug/L	EPA625	08-14-96	40.0	28.6	71.5%	16.6 - 40.2
Benzo(a)anthracene	ug/L	EPA625	08-14-96	40.0	29.1	72.8%	19.1 - 42.6
Benzo(a)pyrene	ug/L	EPA625	08-14-96	40.0	27.5	68.8%	16.0 - 43.2
Benzo(b)fluoranthene	ug/L	EPA625	08-14-96	40.0	26.8	67.0%	15.4 - 44.5
Benzo(g,h,i)perylene	ug/L	EPA625	08-14-96	40.0	27.8	69.5%	16.2 - 45.2
Benzo(k)fluoranthene	ug/L	EPA625	08-14-96	40.0	29.0	72.5%	16.0 - 47.4
Chrysene	ug/L	EPA625	08-14-96	40.0	27.0	67.5%	19.0 - 43.2
Dibnz(a,h)anthracene	ug/L	EPA625	08-14-96	40.0	26.8	67.0%	16.3 - 43.9
Fluoranthene	ug/L	EPA625	08-14-96	40.0	31.1	77.8%	18.5 - 43.2
Fluorene	ug/L	EPA625	08-14-96	40.0	32.6	81.5%	20.2 - 36.9
Indn(1,2,3-cd)pyrene	ug/L	EPA625	08-14-96	40.0	26.6	66.5%	12.3 - 47.6
Naphthalene	ug/L	EPA625	08-14-96	40.0	27.3	68.3%	17.6 - 36.1
1-Methyl-Naphthalene	ug/L	EPA625	08-14-96	40.0	29.8	74.5%	18.3 - 40.3
2-Methyl-Naphthalene	ug/L	EPA625	08-14-96	40.0	28.5	71.3%	16.3 - 39.4
Phenanthrene	ug/L	EPA625	08-14-96	40.0	29.1	72.8%	18.5 - 39.4
Pyrene	ug/L	EPA625	08-14-96	40.0	29.7	74.3%	16.2 - 47.0

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Contro Mean	Contro Std	Lot Mean	Lot Std
			Standard				Lot									
o-dichlorobenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	4.36	>1.75	1.03	0.068	1.08	0.025
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.50	>1.76	1.03	0.068	0.974	0.067
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.50	>1.76	1.03	0.068	0.974	0.067
m-dichlorobenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	3.91	>1.75	1.00	0.059	1.09	0.020
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.15	>1.76	1.00	0.059	0.988	0.055
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.15	>1.76	1.00	0.059	0.988	0.055
Para-dichlorobenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.88	>1.75	1.02	0.092	1.08	0.045
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.71	>1.76	1.02	0.092	1.00	0.039
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.71	>1.76	1.02	0.092	1.00	0.039
Benzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	3.65	>1.68	0.976	0.052	1.08	0.074
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	7.64	>1.68	0.976	0.052	0.970	0.055
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	7.64	>1.68	0.976	0.052	0.970	0.055
Chlorobenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.81	>1.75	1.00	0.052	1.13	0.025
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.15	>1.76	1.00	0.052	0.952	0.073
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.15	>1.76	1.00	0.052	0.952	0.073
Ethylbenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	6.26	>1.68	0.975	0.047	1.02	0.078
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.42	>1.68	0.975	0.047	1.03	0.104
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.42	>1.68	0.975	0.047	1.03	0.104
Toluene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.78	>1.68	0.986	0.067	1.10	0.034
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.29	>1.68	0.986	0.067	1.05	0.072
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.29	>1.68	0.986	0.067	1.05	0.072
O-Xylene	Aldrich	07452JZ	116	DO	01-05-95	01-05-99	545	DO	07-18-96	07-18-97	5.26	>1.71	0.965	0.056	1.03	0.010
QCCS	Aldrich	07452JZ	116	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	5.03	>1.71	0.965	0.056	1.03	0.037
Matrix Spike	Aldrich	07452JZ	116	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	5.03	>1.71	0.965	0.056	1.03	0.037
M&P-Xylene	Aldrich	05249HG	124	DO	01-05-95	01-05-99	545	DO	07-18-96	07-18-97	6.87	>1.75	1.05	0.037	1.01	0.054
QCCS	Aldrich	05541TF	105	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	6.47	>1.75	1.05	0.037	1.06	0.083
Matrix Spike	Aldrich	05541TF	105	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	6.47	>1.75	1.05	0.037	1.06	0.083
Methyl-tert-butylether	Aldrich	08065KG	115	DO	01-05-95	01-05-99	545	DO	07-18-96	07-18-97	3.10	>1.71	0.951	0.066	1.06	0.019
QCCS	Aldrich	08065KG	115	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	5.14	>1.71	0.951	0.066	0.987	0.043
Matrix Spike	Aldrich	08065KG	115	DO	01-05-95	01-05-99	563	DO	07-18-96	07-18-97	5.14	>1.71	0.951	0.066	0.987	0.043

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Contro Mean	Contro Std	Lot Mean	Lot Std
			Standard				Lot									
1,1,1-trichloroethane	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.979	0.079	1.12	0.048
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.86	>1.65	0.979	0.079	0.951	0.032
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.86	>1.65	0.979	0.079	0.951	0.032
1,1,2,2-tetrachloroethane	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			1.02	0.095	1.10	0.069
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	2.88	>1.65	1.02	0.095	1.10	0.049
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	2.88	>1.65	1.02	0.095	1.10	0.049
1,1,2-trichloroethane	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.992	0.418	1.10	0.015
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	0.092	±1.97	0.992	0.418	1.01	0.091
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	0.092	±1.97	0.992	0.418	1.01	0.091
1,1-dichloroethane	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.954	0.086	1.08	0.063
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.69	>1.65	0.954	0.086	0.970	0.121
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.69	>1.65	0.954	0.086	0.970	0.121
1,1-dichloroethene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.942	0.093	1.09	0.055
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.35	>1.65	0.942	0.093	0.923	0.050
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.35	>1.65	0.942	0.093	0.923	0.050
1,2-dichloroethane	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.978	0.083	1.13	0.051
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.51	>1.65	0.978	0.083	1.01	0.084
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.51	>1.65	0.978	0.083	1.01	0.084
1,2-dichloropropane	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			1.02	0.096	1.15	0.055
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.72	>1.68	1.02	0.096	0.982	0.044
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.72	>1.68	1.02	0.096	0.982	0.044
Bromodichloromethane	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	1.83	>1.76	0.947	0.054	1.08	0.072
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.01	>1.76	0.947	0.054	1.00	0.080
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.01	>1.76	0.947	0.054	1.00	0.080
Bromoform	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	3.43	>1.76	1.02	0.061	1.08	0.086
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.08	>1.76	1.02	0.061	0.957	0.055
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.08	>1.76	1.02	0.061	0.957	0.055
cis-1,3-dichloropropene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.977	0.063	1.19	0.026
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.68	±2.13	0.977	0.063	1.12	0.049
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.68	±2.13	0.977	0.063	1.12	0.049
Carbon tetrachloride	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.995	0.074	1.10	0.074

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Contro Mean	Contro Std	Lot Mean	Lot Std
			Standard				Lot									
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.19	>1.76	0.995	0.074	0.962	0.057
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.19	>1.76	0.995	0.074	0.962	0.057
Chloroform	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	4.25	>1.76	0.966	0.053	0.911	0.072
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.26	>1.76	0.966	0.053	0.922	0.127
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.26	>1.76	0.966	0.053	0.922	0.127
Dibromochloromethane	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.93	>1.76	0.973	0.063	1.05	0.087
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.65	>1.76	0.973	0.063	0.959	0.083
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.65	>1.76	0.973	0.063	0.959	0.083
Methylene chloride	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			1.00	0.061	1.07	0.065
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.32	>1.76	1.00	0.061	1.10	0.034
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.32	>1.76	1.00	0.061	1.10	0.034
trans-1,3,-dichloropropene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.962	0.049	1.16	0.087
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	6.18	±2.13	0.962	0.049	1.14	0.061
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	6.18	±2.13	0.962	0.049	1.14	0.061
Trichlorofluoromethane	EMS	046-133	537	DO	05-01-96	05-01-97	545	DO	07-18-96	07-18-97			0.931	0.131	1.25	0.230
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	1.85	±2.13	0.931	0.131	1.06	0.089
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	1.85	±2.13	0.931	0.131	1.06	0.089
t-1,2-dichloroethene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			1.01	0.063	1.12	0.013
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.06	>1.76	1.01	0.063	0.957	0.069
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.06	>1.76	1.01	0.063	0.957	0.069
Trichloroethene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.974	0.056	1.02	0.022
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.32	>1.76	0.974	0.056	0.899	0.083
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.32	>1.76	0.974	0.056	0.899	0.083
Tetrachloroethene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97			0.949	0.045	1.14	0.015
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	8.09	>1.76	0.949	0.045	0.933	0.021
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	8.09	>1.76	0.949	0.045	0.933	0.021
1,2-dibromo-3-chloropropane	Chem Service	156-43 B	418	DO	02-19-96	02-19-97	545	DO	07-18-96	07-18-97			0.989	0.103	1.03	0.068
QCCS	Chem Service	156-43 B	418	DO	02-19-96	02-19-97	563	DO	07-18-96	07-18-97	3.81	>1.65	0.989	0.103	0.967	0.158
Matrix Spike	Chem Service	156-43 B	418	DO	02-19-96	02-19-97	563	DO	07-18-96	07-18-97	3.81	>1.65	0.989	0.103	0.967	0.158
Chlorobenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.81	>1.75	1.00	0.052	1.13	0.025
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.15	>1.76	1.00	0.052	0.952	0.073

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std
			Standard				Lot									
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	4.15	>1.76	1.00	0.052	0.952	0.073
Chloroethane	EMS	046-133	537	DO	05-01-96	05-01-97	545	DO	07-18-96	07-18-97			0.993	0.074	0.918	0.046
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	2.89	>1.76	0.993	0.074	0.932	0.101
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	2.89	>1.76	0.993	0.074	0.932	0.101
o-dichlorobenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	4.36	>1.75	1.03	0.068	1.08	0.025
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.50	>1.76	1.03	0.068	0.974	0.067
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.50	>1.76	1.03	0.068	0.974	0.067
m-dichlorobenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	3.91	>1.75	1.00	0.059	1.09	0.020
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.15	>1.76	1.00	0.059	0.988	0.055
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	5.15	>1.76	1.00	0.059	0.988	0.055
Para-dichlorobenzene	Accustandard	066-005	536	DO	05-01-96	07-01-97	545	DO	07-18-96	07-18-97	2.88	>1.75	1.02	0.092	1.08	0.045
QCCS	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.71	>1.76	1.02	0.092	1.00	0.039
Matrix Spike	Chem Service	172-124A	542	DO	06-06-96	06-07-97	563	DO	07-18-96	07-18-97	3.71	>1.76	1.02	0.092	1.00	0.039
Acenaphthylene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.90	>1.67	0.705	0.086	0.658	0.031
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.90	>1.67	0.705	0.086	0.658	0.031
Acenaphthene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.05	>1.67	0.710	0.078	0.619	0.031
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.05	>1.67	0.710	0.078	0.619	0.031
Anthracene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.48	>1.67	0.761	0.109	0.694	0.150
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.48	>1.67	0.761	0.109	0.694	0.150
Benzo(a)anthracene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.59	>1.67	0.780	0.106	0.764	0.129
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.59	>1.67	0.780	0.106	0.764	0.129
Benzo(a)pyrene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.04	>1.67	0.767	0.151	0.817	0.189
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.04	>1.67	0.767	0.151	0.817	0.189
Benzo(b)fluoranthene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.02	>1.67	0.781	0.136	0.710	0.117
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.02	>1.67	0.781	0.136	0.710	0.117

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Contro Mean	Contro Std	Lot Mean	Lot Std
			Standard				Lot									
Benzo(g,h,i)perylene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.11	>1.67	0.790	0.144	0.841	0.182
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.11	>1.67	0.790	0.144	0.841	0.182
Benzo(k)fluoranthene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.20	>1.67	0.818	0.142	0.862	0.219
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.20	>1.67	0.818	0.142	0.862	0.219
Chrysene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.08	>1.67	0.798	0.111	0.772	0.179
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.08	>1.67	0.798	0.111	0.772	0.179
Dibnz(a,h)anthracene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.37	>1.67	0.797	0.172	0.803	0.167
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.37	>1.67	0.797	0.172	0.803	0.167
Fluoranthene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.52	>1.67	0.800	0.110	0.805	0.167
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	3.52	>1.67	0.800	0.110	0.805	0.167
Fluorene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	5.00	>1.67	0.714	0.080	0.709	0.099
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	5.00	>1.67	0.714	0.080	0.709	0.099
Indn(1,2,3-cd)pyrene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.37	>1.67	0.770	0.132	0.796	0.306
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.37	>1.67	0.770	0.132	0.796	0.306
Naphthalene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.39	>1.67	0.681	0.091	0.580	0.124
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.39	>1.67	0.681	0.091	0.580	0.124
1-Methyl-Naphthalene																
QCCS	Chem Service	41-41A	160	CLS	06-06-94	06-06-97	499	CLS	06-10-96	06-06-97	4.18	>1.67	0.712	0.090	0.686	0.058
Matrix Spike	Chem Service	41-41A	160	CLS	06-06-94	06-06-97	499	CLS	06-10-96	06-06-97	4.18	>1.67	0.712	0.090	0.686	0.058
2-Methyl-Naphthalene																
QCCS	Chem Service	62-6A	161	CLS	06-06-94	06-06-97	499	CLS	06-10-96	06-06-97	5.06	>1.67	0.662	0.075	0.643	0.075
Matrix Spike	Chem Service	62-6A	161	CLS	06-06-94	06-06-97	499	CLS	06-10-96	06-06-97	5.06	>1.67	0.662	0.075	0.643	0.075
Phenanthrene																

FLOWERS CHEMICAL LABORATORIES, INC.

Section 5

Standards Traceability

Client: S&ME-Charlotte
Project Number: UNOCAFE#35927785
P.O. Number: 9787-214
Date Sampled: 12-Aug-96
Lab Numbers: 7738 - 7739

Compound Name	Manfacturer Name	Manfacturer Lot #	Rec Lot #	Rec By	Date Recieved	Valid Until	Prep Lot #	Prep By	Date Prepared	Valid Until	t-test	t-test range	Control Mean	Control Std	Lot Mean	Lot Std
			Standard				Lot									
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.78	>1.67	0.758	0.093	0.682	0.105
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.78	>1.67	0.758	0.093	0.682	0.105
Pyrene																
QCCS	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.08	>1.67	0.809	0.118	0.732	0.180
Matrix Spike	Chem Service	156-142A	455	CLS	04-01-96	05-01-97	499	CLS	06-10-96	06-06-97	2.08	>1.67	0.809	0.118	0.732	0.180
EPA601 Blank	Flowers Chemical Laboratories	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97						
EPA602 Blank	Flowers Chemical Laboratories	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97						
EPA625 Blank	Flowers Chemical Laboratories	Valid	34	JSF	01-01-95	01-01-97	14	JSF	01-01-95	01-01-97						
EPA625 Blank	EMS	Valid	359	FG	12-08-95	12-08-96	380	FG	12-08-95	12-08-96						
PID Spike	Aldrich	11231EN	538	DO	01-01-95	01-01-99	549	DO	07-18-96	07-18-97	8.69	>1.69	1.02	0.031	1.01	0.098
Hall Spike	Aldrich	01920EY	539	DO	01-01-95	01-01-99	549	DO	07-18-96	07-18-97	4.40	>1.75	0.971	0.063	1.02	0.053

FLOWERS CHEMICAL LABORATORIES

Internal Custody Record Lab Numbers: 7738 - 7739

Lab # 7738

Container 82393 Amber 1 L:

Extraction CE Karen Turgeon Tue, 08/13/96 01:12PM

Lab # 7739

Container 82394 Amber 1 L:

Extraction CE Karen Turgeon Tue, 08/13/96 01:12PM

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