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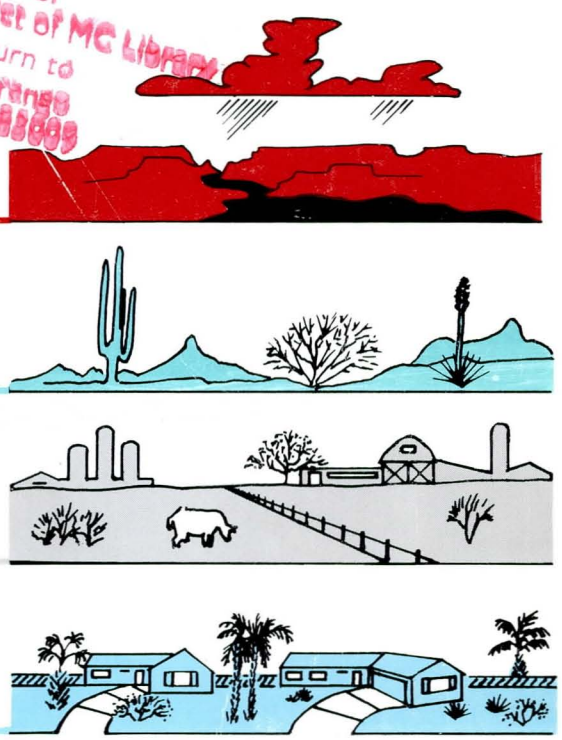

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report
City of Glendale, Arizona

First Quarter

November 1, 1999

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report

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2801 W. Durango
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First Quarter, Sampling Year 2000

July 1, 1999 through September 30, 1999

For
City of Glendale, Arizona

November 1, 1999

Stormwater Quality Report
City of Glendale, Arizona

First Quarter

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Introduction

This report details the NPDES stormwater sampling activities during the summer of 1999, which includes the period from July 1, 1999 through September 30, 1999.

The Flood Control District of Maricopa County operates and maintains four land based stormwater monitoring stations and the United States Geological Survey operates and maintains one land based monitoring station for the City of Glendale for compliance with their National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge permit.

During storm events, only representative storm events are sampled. A representative event is defined in the following manner.

GLENDALE	RAINFALL	DURATION
SUMMER	0.2 – 0.8 INCH	2.2 – 6.5 HOURS
WINTER	0.2 – 0.7 INCH	5.2 – 15.6 HOURS

All storms are to be preceded by 72 hours with rainfall less than 0.10 inches. Summer months are April through September and winter months are October through March.

Storm Summaries

This is a summary of representative storm events in the first quarter of the 2000 sample year, which is July 1 through September 30, 1999. Of the many storm events measured during the summer, two storms produced enough rainfall and runoff to be useable, and both storms were sampled. Any troubleshooting of the equipment is mentioned in the Storm Summaries and is detailed in the Maintenance Summaries. Following is a detailed description of the sampled events.

Storm of July 15, 1999

This storm event produced rainfall over much of the Glendale area. Rainfall totals ranged from 0.12 inches to 0.91 inches, with the highest rainfall totals in southeast Glendale. The following table shows rainfall totals for each sampler site.

Storm of July 15, 1999

SITE	RAINFALL (inches)	SAMPLES COLLECTED
ARROW	0.80	NO
BUTLER	0.54	NO
CITRUS	0.62	NO
INDUSTRIAL PARK	0.48	YES
OLIVE	0.80	NO

Both grab and composite samples from the Industrial Park site were collected and analyzed. All equipment appeared to operate properly during the storm event.

Explanations of why samples from the other four sites were not collected and/or analyzed are included in the table on Page 4.

Storm of September 19, 1999

This storm event produced rainfall over much of the Glendale area. Rainfall totals ranged from 0.08 inches to 1.65 inches, with the highest rainfall totals in north Glendale. The following table shows rainfall totals for each sampler site.

Storm of September 19, 1999

SITE	RAINFALL (inches)	SAMPLES COLLECTED
ARROW	0.67	YES
BUTLER	0.41	NO
CITRUS	0.63	YES
INDUSTRIAL PARK	0.22	NO
OLIVE	0.62	NO

Composite samples were collected from both the Arrow and Citrus sites. All equipment appeared to operate properly during the storm event. Grab samples were not collected because runoff had diminished significantly when staff arrived.

Explanations of why samples from the other three sites were not collected and/or analyzed are included in the table on Page 4.

Storm Events Not Sampled

There were several other rain events that occurred during the summer. The rainfall section provides rainfall totals for each site. Some rainfall totals appear to have been representative, but were not sampled. Below is a table that provides explanation for their not being sampled. All events with rainfall less than 0.20 inches are not included because, by definition, they are not representative.

Events with rainfall > 0.20 inches but not sampled

SITE	DATE	RAIN	REASON
ARROW	07/06/99	0.75	Duration too short.
CITRUS	07/06/99	1.08	Rainfall > 0.8 inches; duration too short.
ARROW	07/15/99	0.80	Duration representative; missed event. When combined with 0.08 in. rainfall of 7/14, total rainfall of 0.88 in. appeared to exceed representative event criteria.
BUTLER	07/15/99	0.54	Duration too short.
CITRUS	07/15/99	0.62	Duration too short.
OLIVE	07/15/99	0.80	Duration too short.
BUTLER	08/10/99	0.48	Duration too short.
OLIVE	08/10/99	0.34	Duration too short.
OLIVE	09/11/99	0.44	Duration too short.
ARROW	09/14/99	0.82	Rainfall > 0.8 inches; duration too short.
CITRUS	09/14/99	0.61	Duration too short.
BUTLER	09/19/99	0.41	Duration too short.
IND PARK	09/19/99	0.22	Duration too short.
OLIVE	09/19/99	0.62	Duration too short.

Maintenance Summary

This section details maintenance activities and problems during the first quarter.

Arrow

A second solar panel was installed on July 1, 1999 to prevent missed storm events due to low or dead batteries.

During the storm event of September 14, 1999 the sampler distributor arm jammed. Corrective action was taken on September 16, 1999 to fix the problem. At this time, the distributor tubing was replaced with a longer section which appeared to correct the problem. The distributor arm was checked and has operated properly during all subsequent storm events.

Ponded water currently prevents servicing of the pressure transducer and intake tubing. The District has initiated action to drain the water into a low flow channel to eliminate the ponded water. This action is scheduled for November 1999.

A representative event was missed at the Arrow site on July 15, 1999. A storm on July 14 generated 0.08 inches of rainfall. The sampler was initiated and collected samples. There was approximately a ten-hour gap, and at approximately 4:00 a.m. on July 15 another storm began. The July 15 storm generated 0.80 inches of rainfall, which was a representative event. The site was not visited between the two storms; thus the samples that were collected and analyzed represent only the non-representative event of July 14. Results are not included in this report. Corrective action was taken to prevent this situation from reoccurring. The samplers were reprogrammed to initiate sampling at 0.10 rather than 0.05 inches of rainfall.

Butler

A second solar panel was installed on August 17, 1999 to prevent missed storm events due to low or dead batteries.

On September 13, 1999 the phone line was dead. The wires were disconnected at the junction box at the connection pole. The wires were reconnected. Confirmation was made that the phone bill had been paid. The individual who disconnected the wires has not been identified.

Citrus

A second solar panel was installed on August 16, 1999 to prevent missed storm events due to low or dead batteries.

Industrial Park

The battery was replaced on August 10, 1999. A second solar panel was installed on August 16, 1999 to prevent missed storm events due to low or dead batteries.

On September 13, 1999 the phone line was dead. The wires were disconnected at the junction box at the connection pole. The wires were reconnected. Confirmation was made that the phone bill had been paid. The individual who disconnected the wires has not been identified.

Olive

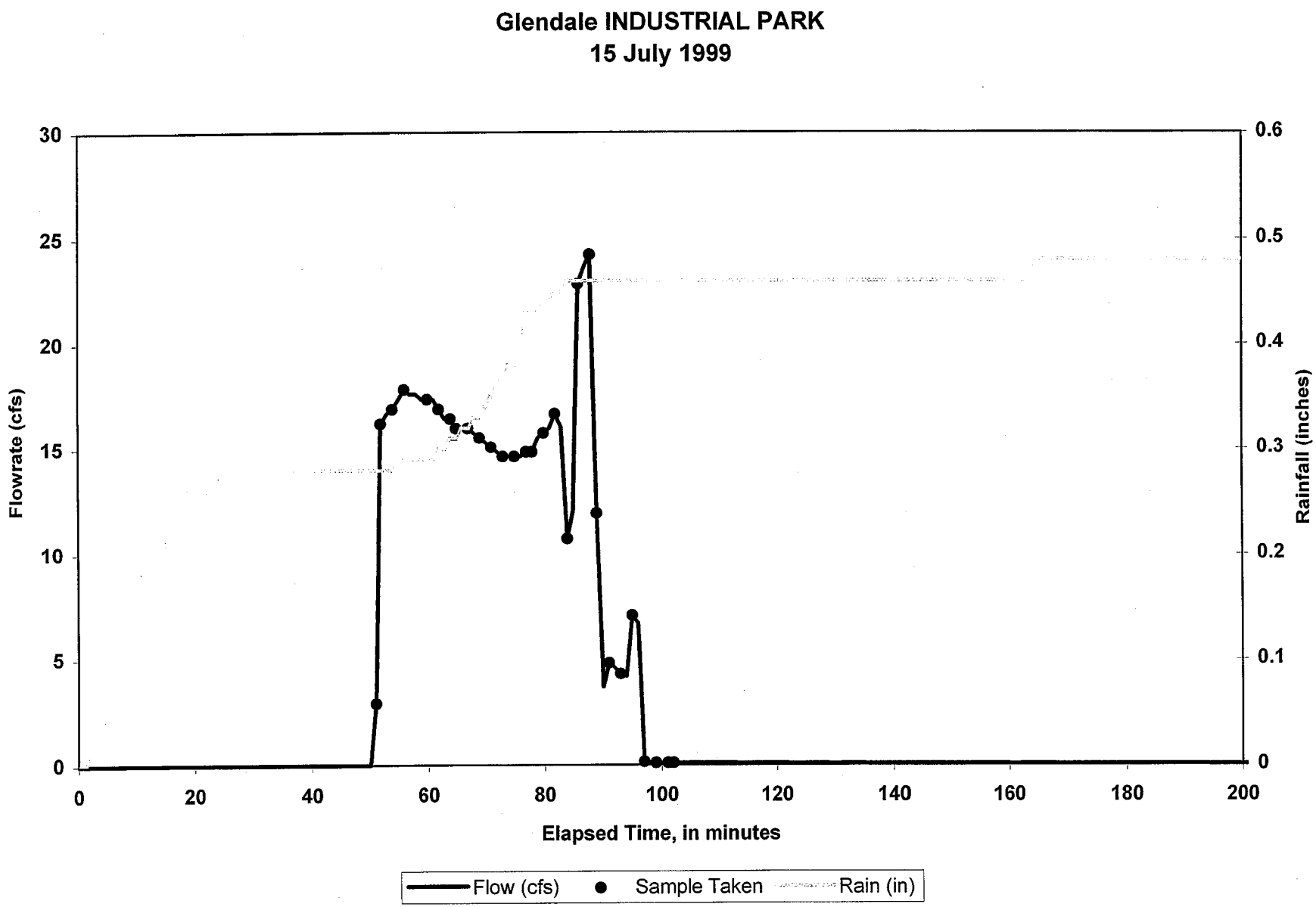
The U.S. Geological Survey reported no problems or activities during the first quarter.

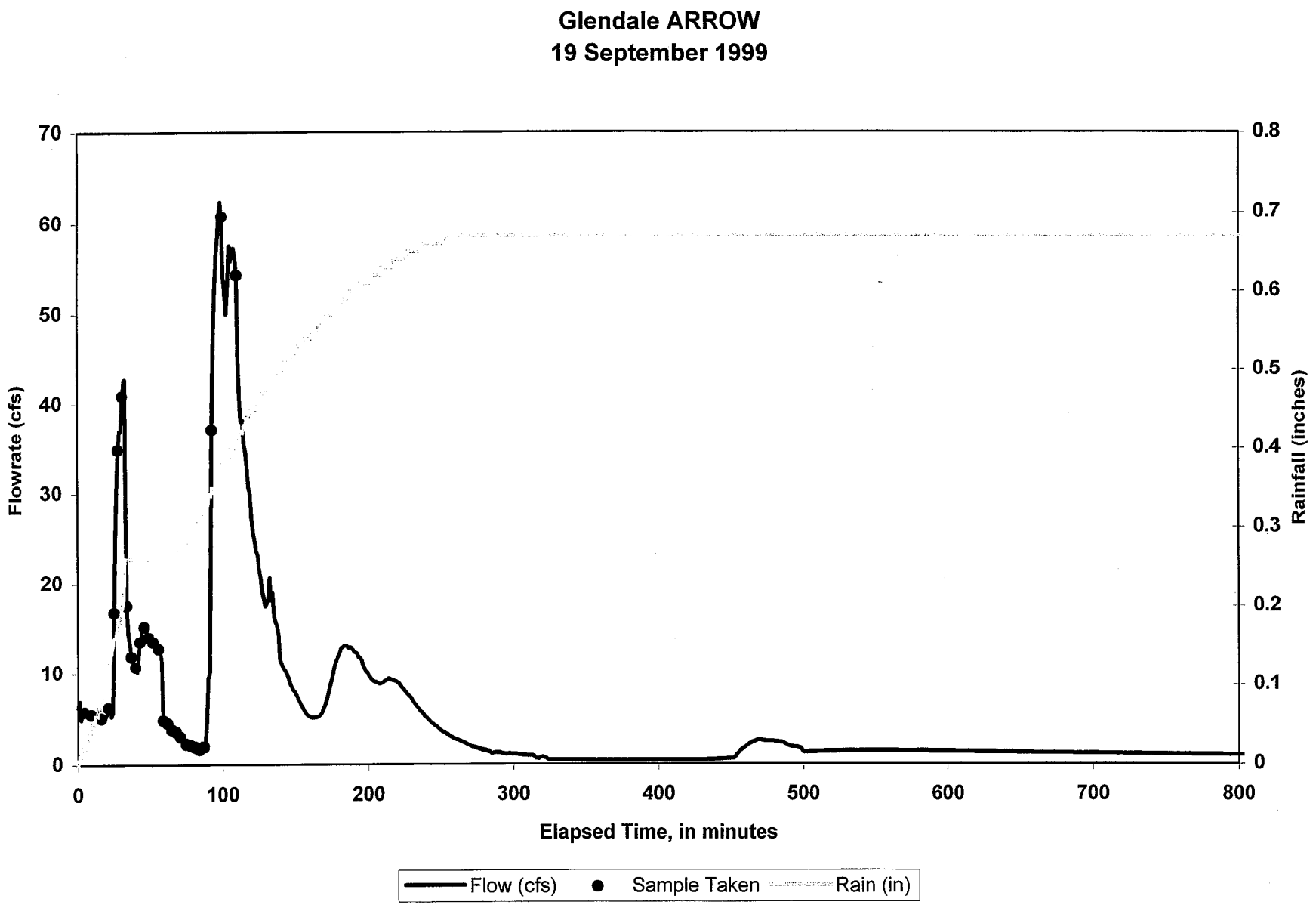
Data from Summer 1999

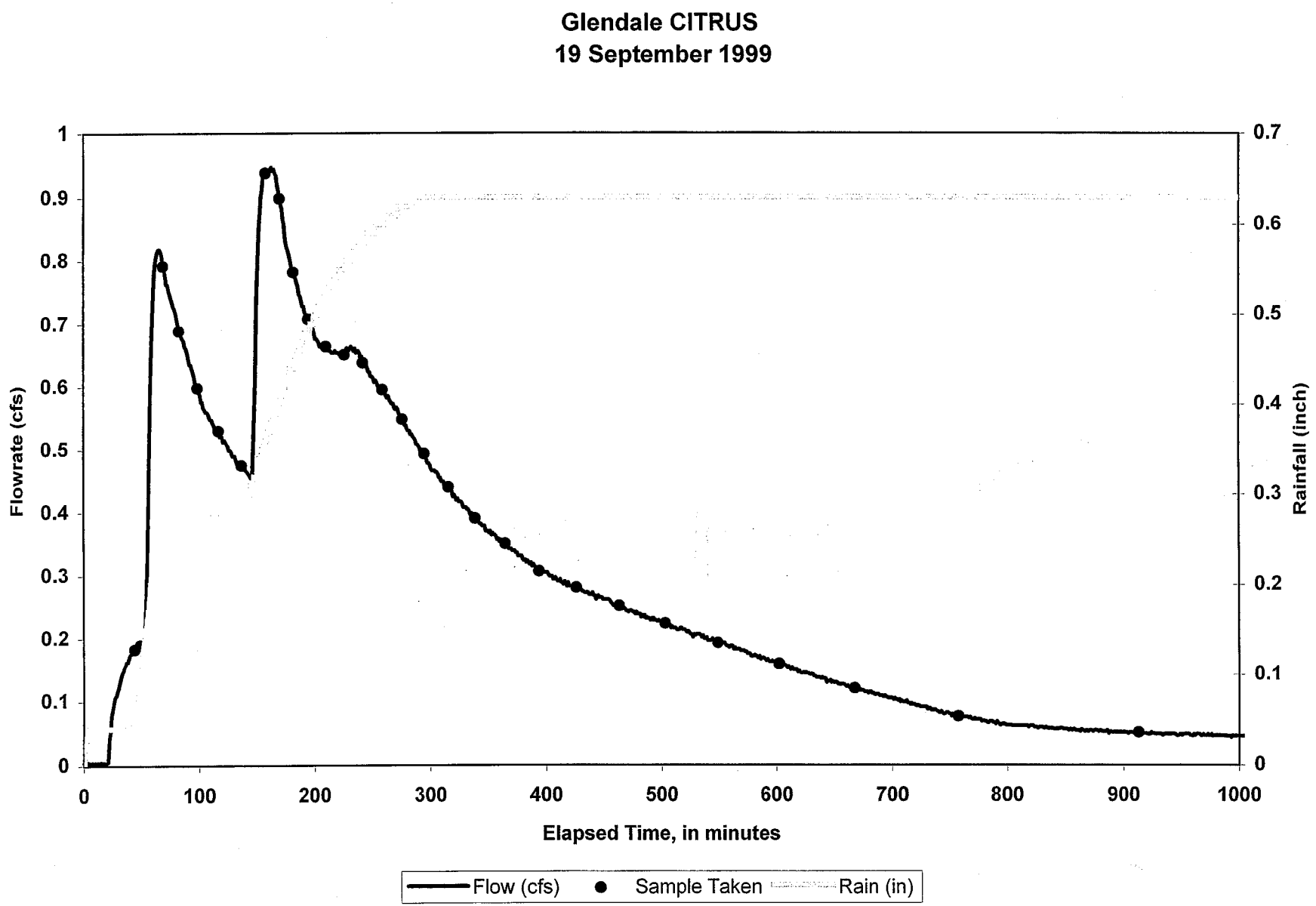
The remainder of this report contains data. The following data are included:

- Storm Hydrographs
- Rainfall Data from each monitoring site
- Printed tables of data from the summer. Included are data required by Glendale's NPDES permit.
- Validation Tables. These data show a validation of the data on an individual basis for each storm event. One table is included for each site for each sampled event.
- Hard copies of data.
- Copies of maintenance and storm sheets.
- Disk of data files.

Storm Hydrographs


Glendale INDUSTRIAL PARK
15 July 1999
Flowrate (cfs)
Rainfall (inches)
Elapsed Time, in minutes
0
5
10
15
20
25
30
0
0.1
0.2
0.3
0.4
0.5
0.6
0
20
40
60
80
100
120
140
160
180
200
Flow (cfs)
Sample Taken
Rain (in)


Glendale ARROW
19 September 1999
Flowrate (cfs)
Rainfall (inches)
Elapsed Time, in minutes
0
10
20
30
40
50
60
70
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0
100
200
300
400
500
600
700
800
Flow (cfs)
Sample Taken
Rain (in)


Glendale CITRUS
19 September 1999
Flowrate (cfs)
Rainfall (inch)
Elapsed Time, in minutes
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0
100
200
300
400
500
600
700
800
900
1000
Flow (cfs)
Sample Taken
Rain (in)

Rainfall Data

Gauge Rainfall

Gage Number	ARROW
Location	Skunk Creek near 79th Avenue

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6	1.11											
7												
8												
9												
10												
11												
12			0.12									
13												
14	0.08		0.82									
15	0.80											
16												
17												
18												
19		0.01	0.71									
20												
21												
22												
23			0.15									
24												
25												
26												
27												
28												
29												
30												
31												
Month Total	1.99	0.01	1.80									

Gauge Rainfall

Gage Number	BUTLER
Location	56th Drive and Orchid Lane

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6	0.04											
7												
8												
9												
10		0.48										
11			0.17									
12			0.01									
13												
14			0.01									
15	0.54											
16												
17												
18												
19			0.41									
20												
21												
22												
23			0.35									
24			0.06									
25												
26												
27												
28												
29												
30												
31												
Month Total	0.58	0.48	1.01									

Gauge Rainfall

Gage Number	CITRUS
Location	Grovers at 71st Avenue

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6	1.09											
7												
8												
9												
10		0.05										
11			0.22									
12												
13												
14	0.09		0.61									
15	0.62											
16												
17												
18												
19		0.03	0.63									
20												
21												
22												
23			0.14									
24												
25												
26												
27												
28												
29												
30												
31												
Month Total	1.80	0.08	1.60									

Gauge Rainfall

Gage Number	INDUSTRIAL PARK
Location	New River north of Glendale Avenue

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6	0.08											
7												
8												
9												
10		0.07										
11			0.04									
12												
13												
14			0.02									
15	0.48											
16												
17												
18												
19		0.07	0.22									
20												
21												
22												
23			0.05									
24												
25		0.07										
26												
27												
28												
29												
30												
31												
Month Total	0.56	0.21	0.33									

Gauge Rainfall

Gage Number	OLIVE
Location	Olive and 67th Avenue

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6	0.12											
7	0.10											
8												
9												
10		0.34										
11			0.44									
12												
13												
14	0.12		0.10									
15	0.80											
16												
17												
18												
19			0.62									
20												
21												
22												
23			0.17									
24												
25												
26												
27	0.03											
28												
29												
30												
31												
Month Total	1.17	0.34	1.33									

Gauge Rainfall

Gage Number	4785
Location	Butler Park

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6	0.04											
7	0.04											
8												
9												
10	0.08	0.43										
11			0.28									
12			0.04									
13												
14	0.04											
15	0.91											
16												
17												
18												
19			0.47									
20												
21												
22												
23			0.35									
24												
25												
26												
27		0.08										
28		0.04										
29												
30												
31												
Month Total	1.11	0.55	1.14									

Gauge Rainfall

Gage Number	5505
Location	New River at Glendale Avenue

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6												
7	0.20											
8												
9												
10	0.08	0.04										
11			0.04									
12												
13												
14												
15	0.31											
16												
17												
18		0.04										
19			0.12									
20												
21												
22												
23			0.04									
24												
25		0.04										
26												
27	0.08											
28												
29												
30												
31		0.04										
Month Total	0.67	0.16	0.20									

Gauge Rainfall

Gage Number	5520
Location	ACDC at 67th Avenue

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6	0.75											
7	0.16											
8												
9												
10												
11			0.04									
12			0.04									
13												
14			0.35									
15	0.43											
16												
17												
18		0.16										
19		0.04	0.43									
20												
21												
22												
23			0.31									
24												
25												
26												
27	0.08											
28												
29												
30												
31												
Month Total	1.42	0.20	1.17									

Gauge Rainfall

Gage Number: 5595

Location: New River at Bell Road

	July 1999	August 1999	September 1999	October 1999	November 1999	December 1999	January 2000	February 2000	March 2000	April 2000	May 2000	June 2000
1												
2												
3												
4												
5												
6	0.71											
7	0.20											
8												
9												
10	0.16											
11	0.04		0.08									
12			0.04									
13												
14	0.12		0.51									
15	0.55											
16												
17												
18												
19			0.63									
20												
21												
22												
23			0.28									
24												
25												
26												
27	0.04											
28												
29												
30												
31												
Month Total	1.82	0.00	1.54									

Data Tables

ARROW (Glendale)

Skunk Creek (north bank) at 79th Avenue alignment

Glendale ARROW

Skunk Creek near 79th Avenue

Date of Sampling	9/19/99
Time	1930
Representative Storm Event	Y
Agency Collecting Sample	FCD
Agency Analyzing Sample	BOLIN
Drainage Area (acres) (DA)	180
Impervious Area (acres) (IA)	0
Land Use - Residential	0
Land Use - Commercial	180
Land Use - Industrial	0
Land Use - Undeveloped	0
Sampling Duration (minutes) (DRN)	110
Storm Duration (minutes)	254
Runoff Sampled (cubic feet) (RUN)	113,400
Total Storm Runoff (cubic feet)	265,700
Instantaneous Discharge (cfs)	62.4
Preceeding Dry Period (days) (ANT)	3
Total Storm Rainfall (inch)	0.67
Rainfall Sampled (inch) (TRN)	0.41
Maximum 5-minute rain intensity (MAX5)	0.96
Sample Temperature (deg. C)	0
Effluent Temperature (deg. C)	NM
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	NM
pH, Effluent (standard units)	NM
pH, Lab (standard units)	NM
Specific Conductance, FIELD (us/cm)	NM
Specific Conductance, LAB (us/cm)	NA
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	NM
Electrical Conductivity (umhos/cm)	NA
BOD5 (mg/l)	NA
COD High Level (mg/l)	98
Chloride (mg/l as Cl)	<5.0
Cyanide Total (mg/l as Cn)	<0.01
Fecal Coliform (MPN/100mL)	NA
Fecal Streptococci (MPN/100mL)	NA
Solids Residue at 180 Deg. C (TDS) (mg/l)	48
Residue, Total at 105 Deg. C (TSS) (mg/l)	106
Nitrogen No2 + No3, Total (mg/l as N)	0.4
TKN Nitrogen (mg/l as N)	3.63
Nitrogen, Ammonia + Organic, Total (mg/l as N)	3.63
Nitrogen Nitrate Total (mg/l as N)	0.4
Nitrogen Nitrite Total (mg/l as N)	<0.1
Nitrogen Ammonia Total (mg/l as N)	2.29
Nitrogen Organic Total (mg/l as N)	1.34
Phosphorous Total (mg/l as P)	0.50
Phosphorous Dissolved (mg/l as P)	0.13
Phosphorous Ortho (mg/l as P)	0.38
Sulfate Dissolved (mg/l)	11.4
Hexavalent Chromium Total (mg/l)	NA
Phenols Total Recoverable (ug/l)	6.2
Oil and Grease Total Recoverable (mg/l)	NA
Organic Carbon, Total (mg/l)	14.2

Glendale ARROW

Skunk Creek near 79th Avenue

Date of Sampling	9/19/99
Bicarbonate Whole Field (mg/l as HCo3)	NA
Bicarbonate Dissolved, Field (mg/l as HCo3)	NA
Carbonate Water Field (mg/l as Co3)	NA
Carbonate Water Dissolved, Field, (mg/l as Co3)	NA
Alkalinity Water Field Total (mg/l as CaCo3)	NA
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)	NA
Alkalinity LAB (mg/l as CaCo3)	22
Silica Dissolved (mg/l as SiO2)	NA
Hardness (mg/l)	35
Antimony (ug/l as Sb)	<4
Antimony Dissolved (ug/l as Sb)	<4
Arsenic Total (ug/l as As)	<5
Arsenic Dissolved (ug/l as As)	<5
Barium Dissolved (ug/l as Ba)	NA
Beryllium Total Recoverable (ug/l as Be)	<2
Beryllium Dissolved (ug/l as Be)	<2
Cadmium Total Recoverable (ug/l as Cd)	0.3
Cadmium Dissolved (ug/l as Cd)	<5
Calcium Dissolved (mg/l as Ca)	11
Chromium Total Recoverable (ug/l as Cr)	1.66
Chromium Dissolved (ug/l as Cr)	9.3
Cobalt Dissolved (ug/l as Co)	NA
Copper, Total Recoverable, (ug/l as Cu)	17
Copper, Dissolved, (ug/l as Cu)	<15
Iron, Dissolved, (ug/l as Fe)	NA
Lead, Total Recoverable, (ug/l as Pb)	10
Lead, Dissolved, (ug/l as Pb)	<5
Lithium, Dissolved, (ug/l as Li)	NA
Magnesium, Dissolved, (mg/l as Mg)	2
Manganese, Dissolved, (ug/l as Mn)	NA
Mercury, Total Recoverable, (ug/l as Hg)	0.7
Mercury, Dissolved, (ug/l as Hg)	<0.2
Molybdenum, Dissolved, (ug/l as Mo)	NA
Nickel, Total Recoverable, (ug/l as Ni)	4
Nickel, Dissolved, (ug/l as Ni)	10
Potassium, Dissolved, (mg/l as K)	NA
Selenium, Total, (ug/l as Se)	<5
Selenium, Dissolved, (ug/l as Se)	<5
Silver, Total Recoverable, (ug/l as Ag)	<40
Silver, Dissolved, (ug/l as Ag)	<50
Sodium, Dissolved, (mg/l as Na)	NA
Strontium, Dissolved, (ug/l as Sr)	NA
Thallium, Total, (ug/l as Tl)	<1
Thallium, Dissolved, (ug/l as Tl)	<1
Vanadium, Dissolved, (ug/l as V)	NA
Zinc, Total Recoverable, (ug/l as Zn)	210
Zinc, Dissolved, (ug/l as Zn)	60
Diazinon, Total, (ug/l)	NA
Ethion, Total, (ug/l)	NA
Malathion, Total, (ug/l)	NA
Methyl Parathion, Total, (ug/l)	NA
Parathion, Total, (ug/l)	NA
Trithion, Total, (ug/l)	NA

method column

Glendale ARROW

Skunk Creek near 79th Avenue

Date of Sampling	9/19/99
Di-syston, Total, (ug/l)	NA
Phorate, Total, (ug/l)	NA
Chlorpyrifos, Total, (ug/l)	NA
DEF, Total, (ug/l)	NA
Fonofos(Dy-fonate), WWT, (ug/l)	NA
Aldrin, Total, (ug/l)	<1.0
BHC - ALPHA, (ug/l)	<1.0
BHC - Gamma (Lindane), (ug/l)	<1.0
BHC - DELTA, (ug/l)	<1.0
Aroclor 1016, PCB, Total, (ug/l)	<1.0
Aroclor 1221, PCB, Total, (ug/l)	<10
Aroclor 1232, PCB, Total, (ug/l)	<1.0
Aroclor 1242, PCB, Total, (ug/l)	<1.0
Aroclor 1248, PCB, Total, (ug/l)	<1.0
Aroclor 1254, PCB, Total, (ug/l)	<1.0
Aroclor 1260, PCB, Total, (ug/L)	<1.0
Chlordane, Total, (ug/l)	<1.0
P,P' DDD, Total, (ug/l)	<1.0
P,P' DDE, Total, (ug/l)	<1.0
P, P' DDT, Total, (ug/l)	<1.0
Dieldrin, Total, (ug/l)	<1.0
Endo-Sulfan Alpha, Total, (ug/l)	<1.0
Endo-Sulfan Beta, Total, (ug/l)	<1.0
Endo-Sulfan Sulfate, Total, (ug/l)	<1.0
Endrin Aldehyde, Total, (ug/l)	<1.0
Endrin, Total, (ug/l)	<1.0
Heptachlor, Total, (ug/l)	<1.0
Heptachlor Epoxide, Total, (ug/l)	<1.0
Toxaphene, Total, (ug/l)	<1.0
Methoxychlor, Total, (ug/l)	NA
Beta Benzene Hexachloride, Total, (ug/l)	<1.0
1,1,2,2-Tetrachloroethane, Total, (ug/l)	NA
1,1,1,2-Tetrachloroethane, Total,(ug/l)	NA
Tetrachloroethene, PCE, Total, (ug/l)	NA
1,1,1- Trichloroethane, Total, (ug/l)	NA
1,1,2- Trichloroethane, Total, (ug/l)	NA
Trichloroethene, Total, (ug/l)	NA
1,1- Dichloroethane, Total, (ug/l)	NA
1,1- Dichloroethene, Total, (ug/l)	NA
1,2- Dichloroethane, Total, (ug/l)	NA
1,2- Dichloropropane, Total, (ug/l)	NA
2- Chloroethylvinyl Ether, Total, (ug/l)	NA
cis-1,3-Dichloropropene, (ug/l)	NA
trans-1,2- Dichloroethene, (ug/l)	NA
trans-1,3- Dichloropropene, (ug/l)	NA
Benzene, Total, (ug/l)	NA
Bromodichloromethane, Total, (ug/l)	NA
Bromoform, Total, (ug/l)	NA
Carbon Tetrachloride, Total, (ug/l)	NA
Chlorobenzene, Total, (ug/l)	NA
Chloroethane, (ug/l)	NA
Chloroform, Total, (ug/l)	NA
Ethylbenzene, Total, (ug/l)	NA

Glendale ARROW Skunk Creek near 79th Avenue	
Date of Sampling	9/19/99
Methylene Chloride, Total, (ug/l)	NA
Toluene, Total, (ug/l)	NA
Trichlorofluoromethane, Total, (ug/l)	NA
Vinyl Chloride, Total, (ug/l)	NA
Chlorodibromomethane, Total, (ug/l)	NA
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L)	NA
Acetone, Total, (ug/l)	NA
2-Butanone, (ug/l)	NA
Carbon Disulfide, Total, (ug/l)	NA
1,2 Dichloroethene, Total, (ug/l)	NA
Xylenes, Total, (ug/l)	NA
m,p-Xylenes (ug/l)	NA
o-Xylene (ug/l)	NA
2-Hexanone, Total, (ug/l)	NA
Styrene, Total, (ug/l)	NA
Acrolein, Total, (ug/l)	NA
Acrylonitrile, Total, (ug/l)	NA
Bromobenzene, Water Whole, Total, (ug/l)	NA
1,3-Dichloropropane, Water Whole, Total, (ug/l)	NA
Methyl Bromide, Total, (ug/l)	NA
Methyl Chloride, Total, (ug/l)	NA
Parachloro Toluene, Total, (ug/l)	NA
Dibromoethane, Total, (ug/l)	NA
Bromomethane (ug/l)	NA
Chloromethane (ug/l)	NA
Dibromochloromethane (ug/l)	NA
Dichlorodifluoromethane, Total, (ug/l)	NA
Dichloromethane (ug/l)	NA
Total Trihalomethanes (ug/l)	NA
Acenaphthene, Total, (ug/l)	<5.0
Acenaphthylene, Total, (ug/l)	<5.0
Anthracene, Total, (ug/l)	<5.0
Benzidine, Total, (ug/l)	<50
Benzoic Acid, Total, (ug/l)	<5.0
Benzo (a) Anthracene, Total, (ug/l)	<5.0
Benzo (b) Fluoranthene, Total, (ug/l)	<5.0
Benzo (k) Fluoranthene, Total, (ug/l)	<5.0
Benzo (ghi) Perylene, Total, (ug/l)	<5.0
Benzo (a) Pyrene, Total, (ug/l)	<5.0
Benzyl Alcohol, Total, (ug/l)	<5.0
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	<5.0
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	<5.0
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	<5.0
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	15
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	<5.0
Butyl Benzyl Phthalate, Total, (ug/l)	<5.0
2-Chloronapthalene, Total, (ug/l)	<5.0
2-Chlorophenol, Total, (ug/l)	<5.0
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	<5.0
Chrysene, Total, (ug/l)	<5.0
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	<5.0
Di-N-Butyl Phthalate, Total, (ug/l)	<5.0
1,3- Dichlorobenzene, Total, (ug/l)	<5.0

Glendale ARROW Skunk Creek near 79th Avenue	
Date of Sampling	9/19/99
1,4- Dichlorobenzene, Total, (ug/l)	<5.0
1,2- Dichlorobenzene, Total, (ug/l)	<5.0
3,3'- Dichlorobenzidine, Total, (ug/l)	<5.0
2,4- Dichlorophenol, Total, (ug/l)	<5.0
Diethyl Phthalate, Total, (ug/l)	<5.0
2,4- Dimethylphenol, Total, (ug/l)	<5.0
Dimethyl Phthalate, Total, (ug/l)	<5.0
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	<5.0
2,4- Dinitrophenol, Total, (ug/l)	<10.0
2,4- Dinitrotoluene, Total, (ug/l)	<5.0
2,6- Dinitrotoluene, Total, (ug/l)	<5.0
Di-N-Octyl-Phthalate, Total, (ug/l)	<5.0
Fluoranthene, Total, (ug/l)	<5.0
Fluorene, Total, (ug/l)	<5.0
Hexachlorobenzene, Total, (ug/l)	<5.0
Hexachlorobutadiene, Total, (ug/l)	<5.0
Hexachlorocyclopentadiene, Total, (ug/l)	<5.0
Hexachloroethane, Total, (ug/l)	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	<5.0
Isophorone, Total, (ug/l)	<5.0
Naphthalene, Total, (ug/l)	<5.0
Nitrobenzene, Total, (ug/l)	<5.0
2-Nitrophenol, Total, (ug/l)	<5.0
4-Nitrophenol, Total, (ug/l)	<5.0
N-Nitrosodiphenylamine, Total, (ug/l)	<5.0
N-Nitrosodi-N-Propylamine, Total, (ug/l)	<5.0
Pentachlorophenol, Total, (ug/l)	<5.0
Phenanthrene, Total, (ug/l)	<5.0
Phenol, Total, (ug/l)	<5.0
Pyrene, Total, (ug/l)	<5.0
1,2,4-Trichlorobenzene, Total, (ug/l)	<5.0
2,4,5- Trichlorophenol, Total, (ug/l)	<5.0
2,4,6- Trichlorophenol, Total, (ug/l)	<5.0
N-Nitrosodimethylamine, Total, (ug/l)	<5.0
1,2- Diphenylhydrazine, Total, (ug/l)	<5.0
Parachloro-Meta-Cresol, Total, (ug/l)	NA
Aniline (ug/l)	<5.0
4-Chloroaniline (ug/l)	<5.0
2-Nitroaniline (ug/l)	<5.0
3-Nitroaniline (ug/l)	<5.0
4-Nitroaniline (ug/l)	<5.0
2-Methylphenol (ug/l)	<5.0
4-Methylphenol (p-Cresol) (ug/l)	<5.0
4-Chloro-3-methylphenol (ug/l)	<5.0
2-Methylnaphthalene (ug/l)	<5.0
2,3,7,8-TCDD (ug/l)	<10
Dibenzofuran (ug/l)	<5.0

BUTLER (Glendale)

near Orchid Drive and 56th Drive

Glendale BUTLER

Orchid Lane and 56th Drive

Date of Sampling	
Time	No Data
Representative Storm Event	No Data
Agency Collecting Sample	No Data
Agency Analyzing Sample	No Data
Drainage Area (acres) (DA)	No Data
Impervious Area (acres) (IA)	No Data
Land Use - Residential	No Data
Land Use - Commercial	No Data
Land Use - Industrial	No Data
Land Use - Undeveloped	No Data
Sampling Duration (minutes) (DRN)	No Data
Storm Duration (minutes)	No Data
Runoff Sampled (cubic feet) (RUN)	No Data
Total Storm Runoff (cubic feet)	No Data
Instantaneous Discharge (cfs)	No Data
Preceeding Dry Period (days) (ANT)	No Data
Total Storm Rainfall (inch)	No Data
Rainfall Sampled (inch) (TRN)	No Data
Maximum 5-minute rain intensity (MAX5)	No Data
Sample Temperature (deg. C)	No Data
Effluent Temperature (deg. C)	No Data
Ambient Temperature (deg. C)	No Data
Barometric Pressure (mm Hg)	No Data
pH, Effluent (standard units)	No Data
pH, Lab (standard units)	No Data
Specific Conductance, FIELD (us/cm)	No Data
Specific Conductance, LAB (us/cm)	No Data
Oxygen Dissolved (% saturation)	No Data
Oxygen Dissolved (mg/l)	No Data
Electrical Conductivity (umhos/cm)	No Data
BOD5 (mg/l)	No Data
COD High Level (mg/l)	No Data
Chloride (mg/l as Cl)	No Data
Cyanide Total (mg/l as Cn)	No Data
Fecal Coliform (MPN/100mL)	No Data
Fecal Streptococci (MPN/100mL)	No Data
Solids Residue at 180 Deg. C (TDS) (mg/l)	No Data
Residue, Total at 105 Deg. C (TSS) (mg/l)	No Data
Nitrogen No2 + No3, Total (mg/l as N)	No Data
TKN Nitrogen (mg/l as N)	No Data
Nitrogen, Ammonia + Organic, Total (mg/l as N)	No Data
Nitrogen Nitrate Total (mg/l as N)	No Data
Nitrogen Nitrite Total (mg/l as N)	No Data
Nitrogen Ammonia Total (mg/l as N)	No Data
Nitrogen Organic Total (mg/l as N)	No Data
Phosphorous Total (mg/l as P)	No Data
Phosphorous Dissolved (mg/l as P)	No Data
Phosphorous Ortho (mg/l as P)	No Data
Sulfate Dissolved (mg/l)	No Data
Hexavalent Chromium Total (mg/l)	No Data

Glendale BUTLER

Orchid Lane and 56th Drive

Date of Sampling	
Phenols Total Recoverable (ug/l)	No Data
Oil and Grease Total Recoverable (mg/l)	No Data
Organic Carbon, Total (mg/l)	No Data
Bicarbonate Whole Field (mg/l as HCo3)	No Data
Bicarbonate Dissolved, Field (mg/l as HCo3)	No Data
Carbonate Water Field (mg/l as Co3)	No Data
Carbonate Water Dissolved, Field, (mg/l as Co3)	No Data
Alkalinity Water Field Total (mg/l as CaCo3)	No Data
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)	No Data
Alkalinity LAB (mg/l as CaCo3)	No Data
Silica Dissolved (mg/l as SiO2)	No Data
Hardness (mg/l)	No Data
Antimony (ug/l as Sb)	No Data
Antimony Dissolved (ug/l as Sb)	No Data
Arsenic Total (ug/l as As)	No Data
Arsenic Dissolved (ug/l as As)	No Data
Barium Dissolved (ug/l as Ba)	No Data
Beryllium Total Recoverable (ug/l as Be)	No Data
Beryllium Dissolved (ug/l as Be)	No Data
Cadmium Total Recoverable (ug/l as Cd)	No Data
Cadmium Dissolved (ug/l as Cd)	No Data
Calcium Dissolved (mg/l as Ca)	No Data
Chromium Total Recoverable (ug/l as Cr)	No Data
Chromium Dissolved (ug/l as Cr)	No Data
Cobalt Dissolved (ug/l as Co)	No Data
Copper, Total Recoverable, (ug/l as Cu)	No Data
Copper, Dissolved, (ug/l as Cu)	No Data
Iron, Dissolved, (ug/l as Fe)	No Data
Lead, Total Recoverable, (ug/l as Pb)	No Data
Lead, Dissolved, (ug/l as Pb)	No Data
Lithium, Dissolved, (ug/l as Li)	No Data
Magnesium, Dissolved, (mg/l as Mg)	No Data
Manganese, Dissolved, (ug/l as Mn)	No Data
Mercury, Total Recoverable, (ug/l as Hg)	No Data
Mercury, Dissolved, (ug/l as Hg)	No Data
Molybdenum, Dissolved, (ug/l as Mo)	No Data
Nickel, Total Recoverable, (ug/l as Ni)	No Data
Nickel, Dissolved, (ug/l as Ni)	No Data
Potassium, Dissolved, (mg/l as K)	No Data
Selenium, Total, (ug/l as Se)	No Data
Selenium, Dissolved, (ug/l as Se)	No Data
Silver, Total Recoverable, (ug/l as Ag)	No Data
Silver, Dissolved, (ug/l as Ag)	No Data
Sodium, Dissolved, (mg/l as Na)	No Data
Strontium, Dissolved, (ug/l as Sr)	No Data
Thallium, Total, (ug/l as Tl)	No Data
Thallium, Dissolved, (ug/l as Tl)	No Data
Vanadium, Dissolved, (ug/l as V)	No Data
Zinc, Total Recoverable, (ug/l as Zn)	No Data
Zinc, Dissolved, (ug/l as Zn)	No Data

Glendale BUTLER

Orchid Lane and 56th Drive

Date of Sampling	
Diazinon, Total, (ug/l)	No Data
Ethion, Total, (ug/l)	No Data
Malathion, Total, (ug/l)	No Data
Methyl Parathion, Total, (ug/l)	No Data
Parathion, Total, (ug/l)	No Data
Trithion, Total, (ug/l)	No Data
Di-syston, Total, (ug/l)	No Data
Phorate, Total, (ug/l)	No Data
Chlorpyrifos, Total, (ug/l)	No Data
DEF, Total, (ug/l)	No Data
Fonofos(Dy-fonate), WWT, (ug/l)	No Data
Aldrin, Total, (ug/l)	No Data
BHC - ALPHA, (ug/l)	No Data
BHC - Gamma (Lindane), (ug/l)	No Data
BHC - DELTA, (ug/l)	No Data
Aroclor 1016, PCB, Total, (ug/l)	No Data
Aroclor 1221, PCB, Total, (ug/l)	No Data
Aroclor 1232, PCB, Total, (ug/l)	No Data
Aroclor 1242, PCB, Total, (ug/l)	No Data
Aroclor 1248, PCB, Total, (ug/l)	No Data
Aroclor 1254, PCB, Total, (ug/l)	No Data
Aroclor 1260, PCB, Total, (ug/L)	No Data
Chlordane, Total, (ug/l)	No Data
P,P' DDD, Total, (ug/l)	No Data
P,P' DDE, Total, (ug/l)	No Data
P, P' DDT, Total, (ug/l)	No Data
Dieldrin, Total, (ug/l)	No Data
Endo-Sulfan Alpha, Total, (ug/l)	No Data
Endo-Sulfan Beta, Total, (ug/l)	No Data
Endo-Sulfan Sulfate, Total, (ug/l)	No Data
Endrin Aldehyde, Total, (ug/l)	No Data
Endrin, Total, (ug/l)	No Data
Heptachlor, Total, (ug/l)	No Data
Heptachlor Epoxide, Total, (ug/l)	No Data
Toxaphene, Total, (ug/l)	No Data
Methoxychlor, Total, (ug/l)	No Data
Beta Benzene Hexachloride, Total, (ug/l)	No Data
1,1,2,2-Tetrachloroethane, Total, (ug/l)	No Data
1,1,1,2-Tetrachloroethane, Total,(ug/l)	No Data
Tetrachloroethene, PCE, Total, (ug/l)	No Data
1,1,1- Trichloroethane, Total, (ug/l)	No Data
1,1,2- Trichloroethane, Total, (ug/l)	No Data
Trichloroethene, Total, (ug/l)	No Data
1,1- Dichloroethane, Total, (ug/l)	No Data
1,1- Dichloroethene, Total, (ug/l)	No Data
1,2- Dichloroethane, Total, (ug/l)	No Data
1,2- Dichloropropane, Total, (ug/l)	No Data
2- Chloroethylvinyl Ether, Total, (ug/l)	No Data
cis-1,3-Dichloropropene, (ug/l)	No Data
trans-1,2- Dichloroethene, (ug/l)	No Data

Glendale BUTLER

Orchid Lane and 56th Drive

Date of Sampling	
trans-1,3- Dichloropropene, (ug/l)	No Data
Benzene, Total, (ug/l)	No Data
Bromodichloromethane, Total, (ug/l)	No Data
Bromoform, Total, (ug/l)	No Data
Carbon Tetrachloride, Total, (ug/l)	No Data
Chlorobenzene, Total, (ug/l)	No Data
Chloroethane, (ug/l)	No Data
Chloroform, Total, (ug/l)	No Data
Ethyl-Benzene, Total, (ug/l)	No Data
Methylene Chloride, Total, (ug/l)	No Data
Toluene, Total, (ug/l)	No Data
Trichlorofluoromethane, Total, (ug/l)	No Data
Vinyl Chloride, Total, (ug/l)	No Data
Chlorodibromomethane, Total, (ug/l)	No Data
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L)	No Data
Acetone, Total, (ug/l)	No Data
2-Butanone, (ug/l)	No Data
Carbon Disulfide, Total, (ug/l)	No Data
1,2 Dichloroethene, Total, (ug/l)	No Data
Xylenes, Total, (ug/l)	No Data
2-Hexanone, Total, (ug/l)	No Data
Styrene, Total, (ug/l)	No Data
Acrolein, Total, (ug/l)	No Data
Acrylonitirile, Total, (ug/l)	No Data
Bromobenzene, Water Whole, Total, (ug/l)	No Data
1,3-Dichloropropane, Water Whole, Total, (ug/l)	No Data
Methyl Bromide, Total, (ug/l)	No Data
Methyl Chloride, Total, (ug/l)	No Data
Parachloro Toluene, Total, (ug/l)	No Data
Dibromoethane, Total, (ug/l)	No Data
Acenaphthene, Total, (ug/l)	No Data
Acenaphthylene, Total, (ug/l)	No Data
Anthracene, Total, (ug/l)	No Data
Benzidine, Total, (ug/l)	No Data
Benzoic Acid, Total, (ug/l)	No Data
Benzo (a) Anthracene, Total, (ug/l)	No Data
Benzo (b) Fluoranthene, Total, (ug/l)	No Data
Benzo (k) Fluoranthene, Total, (ug/l)	No Data
Benzo (ghi) Perylene, Total, (ug/l)	No Data
Benzo (a) Pyrene, Total, (ug/l)	No Data
Benzyl Alcohol, Total, (ug/l)	No Data
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	No Data
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	No Data
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	No Data
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	No Data
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	No Data
Butyl Benzyl Phthalate, Total, (ug/l)	No Data
2-Chloronapthalene, Total, (ug/l)	No Data
2-Chlorophenol, Total, (ug/l)	No Data
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	No Data

Glendale BUTLER

Orchid Lane and 56th Drive

Date of Sampling	
Chrysene, Total, (ug/l)	No Data
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	No Data
Di-N-Butyl Phthalate, Total, (ug/l)	No Data
1,3- Dichlorobenzene, Total, (ug/l)	No Data
1,4- Dichlorobenzene, Total, (ug/l)	No Data
1,2- Dichlorobenzene, Total, (ug/l)	No Data
3,3'- Dichlorobenzidine, Total, (ug/l)	No Data
2,4- Dichlorophenol, Total, (ug/l)	No Data
Diethyl Phthalate, Total, (ug/l)	No Data
2,4- Dimethylphenol, Total, (ug/l)	No Data
Dimethyl Phthalate, Total, (ug/l)	No Data
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	No Data
2,4- Dinitrophenol, Total, (ug/l)	No Data
2,4- Dinitrotoluene, Total, (ug/l)	No Data
2,6- Dinitrotoluene, Total, (ug/l)	No Data
Di-N-Octyl-Phthalate, Total, (ug/l)	No Data
Fluoranthene, Total, (ug/l)	No Data
Fluorene, Total, (ug/l)	No Data
Hexachlorobenzene, Total, (ug/l)	No Data
Hexachlorobutadiene, Total, (ug/l)	No Data
Hexachlorocyclopentadiene, Total, (ug/l)	No Data
Hexachloroethane, Total, (ug/l)	No Data
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	No Data
Isophorone, Total, (ug/l)	No Data
Naphthalene, Total, (ug/l)	No Data
Nitrobenzene, Total, (ug/l)	No Data
2-Nitrophenol, Total, (ug/l)	No Data
4-Nitrophenol, Total, (ug/l)	No Data
N-Nitrosodiphenylamine, Total, (ug/l)	No Data
N-Nitrosodi-N-Propylamine, Total, (ug/l)	No Data
Pentachlorophenol, Total, (ug/l)	No Data
Phenanthrene, Total, (ug/l)	No Data
Phenol, Total, (ug/l)	No Data
Pyrene, Total, (ug/l)	No Data
1,2,4-Trichlorobenzene, Total, (ug/l)	No Data
2,4,5- Trichlorophenol, Total, (ug/l)	No Data
2,4,6- Trichlorophenol, Total, (ug/l)	No Data
N-Nitrosodimethylamine, Total, (ug/l)	No Data
1,2- Diphenylhydrazine, Total, (ug/l)	No Data
Dichlorodifluoromethane, Total, (ug/l)	No Data
Parachloro-Meta-Cresol, Total, (ug/l)	No Data

CITRUS (Glendale)

Grovers and 71st Avenues

Glendale CITRUS
Grovers at 71st Avenue

Date of Sampling	9/19/99
Time	1900
Representative Storm Event	Y
Agency Collecting Sample	FCD
Agency Analyzing Sample	BOLIN
Drainage Area (acres) (DA)	60
Impervious Area (acres) (IA)	UA
Land Use - Residential	UA
Land Use - Commercial	UA
Land Use - Industrial	UA
Land Use - Undeveloped	UA
Sampling Duration (minutes) (DRN)	913
Storm Duration (minutes)	286
Runoff Sampled (cubic feet) (RUN)	16500
Total Storm Runoff (cubic feet)	17000
Instantaneous Discharge (cfs)	0.95
Preceeding Dry Period (days) (ANT)	3
Total Storm Rainfall (inch)	0.63
Rainfall Sampled (inch) (TRN)	0.63
Maximum 5-minute rain intensity (MAX5)	0.72
Sample Temperature (deg. C)	0
Effluent Temperature (deg. C)	NM
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	NM
pH, Effluent (standard units)	NM
pH, Lab (standard units)	NA
Specific Conductance, FIELD (us/cm)	NM
Specific Conductance, LAB (us/cm)	NA
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	NA
Electrical Conductivity (umhos/cm)	NA
BOD5 (mg/l)	NA
COD High Level (mg/l)	65
Chloride (mg/l as Cl)	<5.0
Cyanide Total (mg/l as Cn)	<0.01
Fecal Coliform (MPN/100mL)	NA
Fecal Streptococci (MPN/100mL)	NA
Solids Residue at 180 Deg. C (TDS) (mg/l)	97
Residue, Total at 105 Deg. C (TSS) (mg/l)	83
Nitrogen No2 + No3, Total (mg/l as N)	1.3
TKN Nitrogen (mg/l as N)	2.84
Nitrogen, Ammonia + Organic, Total (mg/l as N)	2.84
Nitrogen Nitrate Total (mg/l as N)	1.2
Nitrogen Nitrite Total (mg/l as N)	0.1
Nitrogen Ammonia Total (mg/l as N)	1.50
Nitrogen Organic Total (mg/l as N)	1.34
Phosphorous Total (mg/l as P)	0.50
Phosphorous Dissolved (mg/l as P)	0.20
Phosphorous Ortho (mg/l as P)	0.45
Sulfate Dissolved (mg/l)	12.4
Hexavalent Chromium Total (mg/l)	NA
Phenols Total Recoverable (ug/l)	8.1
Oil and Grease Total Recoverable (mg/l)	NA
Organic Carbon, Total (mg/l)	7.0

Glendale CITRUS Grovers at 71st Avenue	
Date of Sampling	9/19/99
Bicarbonate Whole Field (mg/l as HCo3)	NA
Bicarbonate Dissolved, Field (mg/l as HCo3)	NA
Carbonate Water Field (mg/l as Co3)	NA
Carbonate Water Dissolved, Field, (mg/l as Co3)	NA
Alkalinity Water Field Total (mg/l as CaCo3)	NA
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)	NA
Alkalinity LAB (mg/l as CaCo3)	52
Silica Dissolved (mg/l as SiO2)	NA
Hardness (mg/l)	63
Antimony (ug/l as Sb)	<4
Antimony Dissolved (ug/l as Sb)	<4
Arsenic Total (ug/l as As)	<5
Arsenic Dissolved (ug/l as As)	<5
Barium Dissolved (ug/l as Ba)	NA
Beryllium Total Recoverable (ug/l as Be)	<2
Beryllium Dissolved (ug/l as Be)	<2
Cadmium Total Recoverable (ug/l as Cd)	<0.2
Cadmium Dissolved (ug/l as Cd)	<5
Calcium Dissolved (mg/l as Ca)	22
Chromium Total Recoverable (ug/l as Cr)	2.8
Chromium Dissolved (ug/l as Cr)	8.4
Cobalt Dissolved (ug/l as Co)	NA
Copper, Total Recoverable, (ug/l as Cu)	<15
Copper, Dissolved, (ug/l as Cu)	<15
Iron, Dissolved, (ug/l as Fe)	NA
Lead, Total Recoverable, (ug/l as Pb)	10
Lead, Dissolved, (ug/l as Pb)	<5
Lithium, Dissolved, (ug/l as Li)	NA
Magnesium, Dissolved, (mg/l as Mg)	2
Manganese, Dissolved, (ug/l as Mn)	NA
Mercury, Total Recoverable, (ug/l as Hg)	<0.2
Mercury, Dissolved, (ug/l as Hg)	<0.2
Molybdenum, Dissolved, (ug/l as Mo)	NA
Nickel, Total Recoverable, (ug/l as Ni)	3
Nickel, Dissolved, (ug/l as Ni)	11
Potassium, Dissolved, (mg/l as K)	NA
Selenium, Total, (ug/l as Se)	<5
Selenium, Dissolved, (ug/l as Se)	<5
Silver, Total Recoverable, (ug/l as Ag)	<40
Silver, Dissolved, (ug/l as Ag)	<50
Sodium, Dissolved, (mg/l as Na)	NA
Strontium, Dissolved, (ug/l as Sr)	NA
Thallium, Total, (ug/l as Tl)	<1
Thallium, Dissolved, (ug/l as Tl)	<1
Vanadium, Dissolved, (ug/l as V)	NA
Zinc, Total Recoverable, (ug/l as Zn)	200
Zinc, Dissolved, (ug/l as Zn)	80
Diazinon, Total, (ug/l)	NA
Ethion, Total, (ug/l)	NA
Malathion, Total, (ug/l)	NA
Methyl Parathion, Total, (ug/l)	NA
Parathion, Total, (ug/l)	NA
Trithion, Total, (ug/l)	NA

Glendale CITRUS
Grovers at 71st Avenue

Date of Sampling	9/19/99
Di-syston, Total, (ug/l)	NA
Phorate, Total, (ug/l)	NA
Chlorpyrifos, Total, (ug/l)	NA
DEF, Total, (ug/l)	NA
Fonofos(Dy-fonate), WWT, (ug/l)	NA
Aldrin, Total, (ug/l)	<1.0
BHC - ALPHA, (ug/l)	<1.0
BHC - Gamma (Lindane), (ug/l)	<1.0
BHC - DELTA, (ug/l)	<1.0
Aroclor 1016, PCB, Total, (ug/l)	<1.0
Aroclor 1221, PCB, Total, (ug/l)	<10
Aroclor 1232, PCB, Total, (ug/l)	<1.0
Aroclor 1242, PCB, Total, (ug/l)	<1.0
Aroclor 1248, PCB, Total, (ug/l)	<1.0
Aroclor 1254, PCB, Total, (ug/l)	<1.0
Aroclor 1260, PCB, Total, (ug/L)	<1.0
Chlordane, Total, (ug/l)	<1.0
P,P' DDD, Total, (ug/l)	<1.0
P,P' DDE, Total, (ug/l)	<1.0
P, P' DDT, Total, (ug/l)	<1.0
Dieldrin, Total, (ug/l)	<1.0
Endo-Sulfan Alpha, Total, (ug/l)	<1.0
Endo-Sulfan Beta, Total, (ug/l)	<1.0
Endo-Sulfan Sulfate, Total, (ug/l)	<1.0
Endrin Aldehyde, Total, (ug/l)	<1.0
Endrin, Total, (ug/l)	<1.0
Heptachlor, Total, (ug/l)	<1.0
Heptachlor Epoxide, Total, (ug/l)	<1.0
Toxaphene, Total, (ug/l)	<1.0
Methoxychlor, Total, (ug/l)	NA
Beta Benzene Hexachloride, Total, (ug/l)	<1.0
1,1,2,2-Tetrachloroethane, Total, (ug/l)	NA
1,1,1,2-Tetrachloroethane, Total,(ug/l)	NA
Tetrachloroethene, PCE, Total, (ug/l)	NA
1,1,1- Trichloroethane, Total, (ug/l)	NA
1,1,2- Trichloroethane, Total, (ug/l)	NA
Trichloroethene, Total, (ug/l)	NA
1,1- Dichloroethane, Total, (ug/l)	NA
1,1- Dichloroethene, Total, (ug/l)	NA
1,2- Dichloroethane, Total, (ug/l)	NA
1,2- Dichloropropane, Total, (ug/l)	NA
2- Chloroethylvinyl Ether, Total, (ug/l)	NA
cis-1,3-Dichloropropene, (ug/l)	NA
trans-1,2- Dichloroethene, (ug/l)	NA
trans-1,3- Dichloropropene, (ug/l)	NA
Benzene, Total, (ug/l)	NA
Bromodichloromethane, Total, (ug/l)	NA
Bromoform, Total, (ug/l)	NA
Carbon Tetrachloride, Total, (ug/l)	NA
Chlorobenzene, Total, (ug/l)	NA
Chloroethane, (ug/l)	NA
Chloroform, Total, (ug/l)	NA
Ethylbenzene, Total, (ug/l)	NA

Glendale CITRUS Grovers at 71st Avenue	
Date of Sampling	9/19/99
Methylene Chloride, Total, (ug/l)	NA
Toluene, Total, (ug/l)	NA
Trichlorofluoromethane, Total, (ug/l)	NA
Vinyl Chloride, Total, (ug/l)	NA
Chlorodibromomethane, Total, (ug/l)	NA
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L)	NA
Acetone, Total, (ug/l)	NA
2-Butanone, (ug/l)	NA
Carbon Disulfide, Total, (ug/l)	NA
1,2 Dichloroethene, Total, (ug/l)	NA
Xylenes, Total, (ug/l)	NA
m,p-Xylenes (ug/l)	NA
o-Xylene (ug/l)	NA
2-Hexanone, Total, (ug/l)	NA
Styrene, Total, (ug/l)	NA
Acrolein, Total, (ug/l)	NA
Acrylonitrile, Total, (ug/l)	NA
Bromobenzene, Water Whole, Total, (ug/l)	NA
1,3-Dichloropropane, Water Whole, Total, (ug/l)	NA
Methyl Bromide, Total, (ug/l)	NA
Methyl Chloride, Total, (ug/l)	NA
Parachloro Toluene, Total, (ug/l)	NA
Dibromoethane, Total, (ug/l)	NA
Bromomethane (ug/l)	NA
Chloromethane (ug/l)	NA
Dibromochloromethane (ug/l)	NA
Dichlorodifluoromethane, Total, (ug/l)	NA
Dichloromethane (ug/l)	NA
Total Trihalomethanes (ug/l)	NA
Acenaphthene, Total, (ug/l)	<5.0
Acenaphthylene, Total, (ug/l)	<5.0
Anthracene, Total, (ug/l)	<5.0
Benzidine, Total, (ug/l)	<50
Benzoic Acid, Total, (ug/l)	<50
Benzo (a) Anthracene, Total, (ug/l)	<5.0
Benzo (b) Fluoranthene, Total, (ug/l)	<5.0
Benzo (k) Fluoranthene, Total, (ug/l)	<5.0
Benzo (ghi) Perylene, Total, (ug/l)	<5.0
Benzo (a) Pyrene, Total, (ug/l)	<5.0
Benzyl Alcohol, Total, (ug/l)	<5.0
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	<5.0
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	<5.0
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	<5.0
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	<5.0
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	<5.0
Butyl Benzyl Phthalate, Total, (ug/l)	<5.0
2-Chloronapthalene, Total, (ug/l)	<5.0
2-Chlorophenol, Total, (ug/l)	<5.0
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	<5.0
Chrysene, Total, (ug/l)	<5.0
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	<5.0
Di-N-Butyl Phthalate, Total, (ug/l)	<5.0
1,3- Dichlorobenzene, Total, (ug/l)	<5.0

Glendale CITRUS

Grovers at 71st Avenue

Date of Sampling	9/19/99
1,4- Dichlorobenzene, Total, (ug/l)	<5.0
1,2- Dichlorobenzene, Total, (ug/l)	<5.0
3,3'- Dichlorobenzidine, Total, (ug/l)	<5.0
2,4- Dichlorophenol, Total, (ug/l)	<5.0
Diethyl Phthalate, Total, (ug/l)	<5.0
2,4- Dimethylphenol, Total, (ug/l)	<5.0
Dimethyl Phthalate, Total, (ug/l)	<5.0
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	<5.0
2,4- Dinitrophenol, Total, (ug/l)	<10.0
2,4- Dinitrotoluene, Total, (ug/l)	<5.0
2,6- Dinitrotoluene, Total, (ug/l)	<5.0
Di-N-Octyl-Phthalate, Total, (ug/l)	<5.0
Fluoranthene, Total, (ug/l)	<5.0
Fluorene, Total, (ug/l)	<5.0
Hexachlorobenzene, Total, (ug/l)	<5.0
Hexachlorobutadiene, Total, (ug/l)	<5.0
Hexachlorocyclopentadiene, Total, (ug/l)	<5.0
Hexachloroethane, Total, (ug/l)	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	<5.0
Isophorone, Total, (ug/l)	<5.0
Naphthalene, Total, (ug/l)	<5.0
Nitrobenzene, Total, (ug/l)	<5.0
2-Nitrophenol, Total, (ug/l)	<5.0
4-Nitrophenol, Total, (ug/l)	<5.0
N-Nitrosodiphenylamine, Total, (ug/l)	<5.0
N-Nitrosodi-N-Propylamine, Total, (ug/l)	<5.0
Pentachlorophenol, Total, (ug/l)	<5.0
Phenanthrene, Total, (ug/l)	<5.0
Phenol, Total, (ug/l)	<5.0
Pyrene, Total, (ug/l)	<5.0
1,2,4-Trichlorobenzene, Total, (ug/l)	<5.0
2,4,5- Trichlorophenol, Total, (ug/l)	<5.0
2,4,6- Trichlorophenol, Total, (ug/l)	<5.0
N-Nitrosodimethylamine, Total, (ug/l)	<5.0
1,2- Diphenylhydrazine, Total, (ug/l)	<5.0
Parachloro-Meta-Cresol, Total, (ug/l)	NA
Aniline (ug/l)	<5.0
4-Chloroaniline (ug/l)	<5.0
2-Nitroaniline (ug/l)	<5.0
3-Nitroaniline (ug/l)	<5.0
4-Nitroaniline (ug/l)	<5.0
2-Methylphenol (ug/l)	<5.0
4-Methylphenol (p-Cresol) (ug/l)	<5.0
4-Chloro-3-methylphenol (ug/l)	<5.0
2-Methylnaphthalene (ug/l)	<5.0
2,3,7,8-TCDD (ug/l)	<10
Dibenzofuran (ug/l)	<5.0

INDPK (Glendale)

New River (west bank) between Glendale and Northern Avenues

Glendale INDPK near Orangewood and 107th Avenue	
Date of Sampling	7/15/99
Time	1215
Representative Storm Event	Y
Agency Collecting Sample	FCD
Agency Analyzing Sample	BOLIN
Drainage Area (acres) (DA)	30
Impervious Area (acres) (IA)	0
Land Use - Residential	0
Land Use - Commercial	0
Land Use - Industrial	30
Land Use - Undeveloped	0
Sampling Duration (minutes) (DRN)	102
Storm Duration (minutes)	165
Runoff Sampled (cubic feet) (RUN)	40,000
Total Storm Runoff (cubic feet)	40,200
Instantaneous Discharge (cfs)	24.3
Preceeding Dry Period (days) (ANT)	4
Total Storm Rainfall (inch)	0.48
Rainfall Sampled (inch) (TRN)	0.46
Maximum 5-minute rain intensity (MAX5)	1.56
Sample Temperature (deg. C)	4
Effluent Temperature (deg. C)	NM
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	NM
pH, Effluent (standard units)	NM
pH, Lab (standard units)	7.2
Specific Conductance, FIELD (us/cm)	NM
Specific Conductance, LAB (us/cm)	NA
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	NM
Electrical Conductivity (umhos/cm)	NA
BOD5 (mg/l)	<44
COD High Level (mg/l)	123
Chloride (mg/l as Cl)	<5.0
Cyanide Total (mg/l as Cn)	NA
Fecal Coliform (MPN/100mL)	>8200
Fecal Streptococci (MPN/100mL)	50000
Total Dissolved Solids (mg/l)	112
Total Suspended Solids (mg/l)	2
Nitrogen No2 + No3, Total (mg/l as N)	2.3
TKN Nitrogen (mg/l as N)	3.62
Nitrogen, Ammonia + Organic, Total (mg/l as N)	3.62
Nitrogen Nitrate Total (mg/l as N)	2.3
Nitrogen Nitrite Total (mg/l as N)	<0.1
Nitrogen Ammonia Total (mg/l as N)	1.08
Nitrogen Organic Total (mg/l as N)	2.54
Phosphorous Total (mg/l as P)	0.35
Phosphorous Dissolved (mg/l as P)	0.14
Phosphorous Ortho (mg/l as P)	0.2
Sulfate Dissolved (mg/l)	7.4
Hexavalent Chromium Total (mg/l)	NA
Phenols Total Recoverable (ug/l)	NA
Oil and Grease Total Recoverable (mg/l)	<40
Organic Carbon, Total (mg/l)	NA
Bicarbonate Whole Field (mg/l as HCo3)	NA
Bicarbonate Dissolved, Field (mg/l as HCo3)	NA
Carbonate Water Field (mg/l as Co3)	NA

Glendale INDPK near Orangewood and 107th Avenue	
Date of Sampling	7/15/99
Carbonate Water Dissolved, Field, (mg/l as Co3)	NA
Alkalinity Water Field Total (mg/l as CaCo3)	NA
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)	NA
Alkalinity LAB (mg/l as CaCo3)	48
Silica Dissolved (mg/l as SiO2)	NA
Hardness (mg/l)	48
Antimony (ug/l as Sb)	<4.0
Antimony Dissolved (ug/l as Sb)	<4.0
Arsenic Total (ug/l as As)	<5.0
Arsenic Dissolved (ug/l as As)	<5.0
Barium Dissolved (ug/l as Ba)	NA
Beryllium Total Recoverable (ug/l as Be)	<2.0
Beryllium Dissolved (ug/l as Be)	<2.0
Cadmium Total Recoverable (ug/l as Cd)	<0.2
Cadmium Dissolved (ug/l as Cd)	<5.0
Calcium Dissolved (mg/l as Ca)	16
Chromium Total Recoverable (ug/l as Cr)	18
Chromium Dissolved (ug/l as Cr)	1.4
Cobalt Dissolved (ug/l as Co)	NA
Copper, Total Recoverable, (ug/l as Cu)	<15
Copper, Dissolved, (ug/l as Cu)	<15
Iron, Dissolved, (ug/l as Fe)	NA
Lead, Total Recoverable, (ug/l as Pb)	<5.0
Lead, Dissolved, (ug/l as Pb)	<5.0
Lithium, Dissolved, (ug/l as Li)	NA
Magnesium, Dissolved, (mg/l as Mg)	2
Manganese, Dissolved, (ug/l as Mn)	NA
Mercury, Total Recoverable, (ug/l as Hg)	<0.2
Mercury, Dissolved, (ug/l as Hg)	<0.2
Molybdenum, Dissolved, (ug/l as Mo)	NA
Nickel, Total Recoverable, (ug/l as Ni)	4
Nickel, Dissolved, (ug/l as Ni)	4.6
Nickel, Dissolved, (ug/l as Ni)	<20
Potassium, Dissolved, (mg/l as K)	NA
Selenium, Total, (ug/l as Se)	<5.0
Selenium, Dissolved, (ug/l as Se)	<5.0
Silver, Total Recoverable, (ug/l as Ag)	<40
Silver, Dissolved, (ug/l as Ag)	<50
Sodium, Dissolved, (mg/l as Na)	NA
Strontium, Dissolved, (ug/l as Sr)	NA
Thallium, Total, (ug/l as Tl)	<1.0
Thallium, Dissolved, (ug/l as Tl)	<1.0
Vanadium, Dissolved, (ug/l as V)	NA
Zinc, Total Recoverable, (ug/l as Zn)	70
Zinc, Dissolved, (ug/l as Zn)	<20
Diazinon, Total, (ug/l)	NA
Ethion, Total, (ug/l)	NA
Malathion, Total, (ug/l)	NA
Methyl Parathion, Total, (ug/l)	NA
Parathion, Total, (ug/l)	NA
Trithion, Total, (ug/l)	NA
Di-syston, Total, (ug/l)	NA
Phorate, Total, (ug/l)	NA
Chlorpyrifos, Total, (ug/l)	NA
DEF, Total, (ug/l)	NA
Fonofos(Dy-fonate), WWT, (ug/l)	NA

Glendale INDPK near Orangewood and 107th Avenue	
Date of Sampling	7/15/99
Aldrin, Total, (ug/l)	<1.0
BHC - ALPHA, (ug/l)	<1.0
BHC - Gamma (Lindane), (ug/l)	<1.0
BHC - DELTA, (ug/l)	<1.0
Aroclor 1016, PCB, Total, (ug/l)	<1.0
Aroclor 1221, PCB, Total, (ug/l)	<1.0
Aroclor 1232, PCB, Total, (ug/l)	<1.0
Aroclor 1242, PCB, Total, (ug/l)	<1.0
Aroclor 1248, PCB, Total, (ug/l)	<1.0
Aroclor 1254, PCB, Total, (ug/l)	<1.0
Aroclor 1260, PCB, Total, (ug/L)	<1.0
Chlordane, Total, (ug/l)	<1.0
P,P' DDD, Total, (ug/l)	<1.0
P,P' DDE, Total, (ug/l)	<1.0
P, P' DDT, Total, (ug/l)	<1.0
Dieldrin, Total, (ug/l)	<1.0
Endo-Sulfan Alpha, Total, (ug/l)	<1.0
Endo-Sulfan Beta, Total, (ug/l)	<1.0
Endo-Sulfan Sulfate, Total, (ug/l)	<1.0
Endrin Aldehyde, Total, (ug/l)	<1.0
Endrin, Total, (ug/l)	<1.0
Heptachlor, Total, (ug/l)	<1.0
Heptachlor Epoxide, Total, (ug/l)	<1.0
Toxaphene, Total, (ug/l)	<5.0
Methoxychlor, Total, (ug/l)	NA
Beta Benzene Hexachloride, Total, (ug/l)	<1.0
1,1,2,2-Tetrachloroethane, Total, (ug/l)	<20
1,1,1,2-Tetrachloroethane, Total,(ug/l)	NA
Tetrachloroethene, PCE, Total, (ug/l)	<20
1,1,1- Trichloroethane, Total, (ug/l)	<20
1,1,2- Trichloroethane, Total, (ug/l)	<20
Trichloroethene, Total, (ug/l)	<20
1,1- Dichloroethane, Total, (ug/l)	<20
1,1- Dichloroethene, Total, (ug/l)	<20
1,2- Dichloroethane, Total, (ug/l)	<20
1,2- Dichloropropane, Total, (ug/l)	<20
2- Chloroethylvinyl Ether, Total, (ug/l)	<20
cis-1,3-Dichloropropene, (ug/l)	<20
trans-1,2- Dichloroethene, (ug/l)	<20
trans-1,3- Dichloropropene, (ug/l)	<20
Benzene, Total, (ug/l)	<20
Bromodichloromethane, Total, (ug/l)	<20
Bromoform, Total, (ug/l)	<20
Carbon Tetrachloride, Total, (ug/l)	<20
Chlorobenzene, Total, (ug/l)	<20
Chloroethane, (ug/l)	<50
Chloroform, Total, (ug/l)	<20
Ethylbenzene, Total, (ug/l)	<20
Methylene Chloride, Total, (ug/l)	<50
Toluene, Total, (ug/l)	<20
Trichlorofluoromethane, Total, (ug/l)	<50
Vinyl Chloride, Total, (ug/l)	<50
Chlorodibromomethane, Total, (ug/l)	NA
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L)	NA
Acetone, Total, (ug/l)	NA
2-Butanone, (ug/l)	NA

Glendale INDPK near Orangewood and 107th Avenue	
Date of Sampling	7/15/99
Carbon Disulfide, Total, (ug/l)	NA
1,2 Dichloroethene, Total, (ug/l)	NA
Xylenes, Total, (ug/l)	NA
m,p-xylenes (ug/l)	<40
o-xylene (ug/l)	<20
2-Hexanone, Total, (ug/l)	NA
Styrene, Total, (ug/l)	NA
Acrolein, Total, (ug/l)	<500
Acrylonitrile, Total, (ug/l)	<100
Bromobenzene, Water Whole, Total, (ug/l)	NA
1,3-Dichloropropane, Water Whole, Total, (ug/l)	NA
Methyl Bromide, Total, (ug/l)	NA
Methyl Chloride, Total, (ug/l)	NA
Parachloro Toluene, Total, (ug/l)	NA
Dibromoethane, Total, (ug/l)	NA
Bromomethane (ug/l)	<50
Chloromethane (ug/l)	<50
Dibromochloromethane (ug/l)	<20
Dichloromethane (ug/l)	<50
Total Trihalomethanes	<20
Acenaphthene, Total, (ug/l)	<5.0
Acenaphthylene, Total, (ug/l)	<5.0
Anthracene, Total, (ug/l)	<5.0
Benzidine, Total, (ug/l)	<50
Benzoic Acid, Total, (ug/l)	<5.0
Benzo (a) Anthracene, Total, (ug/l)	<5.0
Benzo (b) Fluoranthene, Total, (ug/l)	<5.0
Benzo (k) Fluoranthene, Total, (ug/l)	<5.0
Benzo (ghi) Perylene, Total, (ug/l)	<5.0
Benzo (a) Pyrene, Total, (ug/l)	<5.0
Benzyl Alcohol, Total, (ug/l)	<5.0
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	<5.0
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	<5.0
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	<5.0
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	<5.0
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	<5.0
Butyl Benzyl Phthalate, Total, (ug/l)	<5.0
2-Chloronapthalene, Total, (ug/l)	<5.0
2-Chlorophenol, Total, (ug/l)	<5.0
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	<5.0
Chrysene, Total, (ug/l)	<5.0
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	<5.0
Di-N-Butyl Phthalate, Total, (ug/l)	<5.0
1,2-Dichlorobenzene, Total, (ug/l)	<5.0
1,3-Dichlorobenzene, Total, (ug/l)	<5.0
1,4-Dichlorobenzene, Total, (ug/l)	<5.0
1,2-Dichlorobenzene, Total, (ug/l)	<20
1,3-Dichlorobenzene, Total, (ug/l)	<20
1,4-Dichlorobenzene, Total, (ug/l)	<20
3,3'- Dichlorobenzidine, Total, (ug/l)	<5.0
2,4- Dichlorophenol, Total, (ug/l)	<5.0
Diethyl Phthalate, Total, (ug/l)	<5.0
2,4- Dimethylphenol, Total, (ug/l)	<5.0
Dimethyl Phthalate, Total, (ug/l)	<5.0
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	<20
2,4- Dinitrophenol, Total, (ug/l)	<20

Glendale INDPK near Orangewood and 107th Avenue	
Date of Sampling	7/15/99
2,4- Dinitrotoluene, Total, (ug/l)	<5.0
2,6- Dinitrotoluene, Total, (ug/l)	<5.0
Di-N-Octyl-Phthalate, Total, (ug/l)	<5.0
Fluoranthene, Total, (ug/l)	<5.0
Fluorene, Total, (ug/l)	<5.0
Hexachlorobenzene, Total, (ug/l)	<5.0
Hexachlorobutadiene, Total, (ug/l)	<5.0
Hexachlorocyclopentadiene, Total, (ug/l)	<5.0
Hexachloroethane, Total, (ug/l)	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	<5.0
Isophorone, Total, (ug/l)	<5.0
Naphthalene, Total, (ug/l)	<5.0
Nitrobenzene, Total, (ug/l)	<5.0
2-Nitrophenol, Total, (ug/l)	<5.0
4-Nitrophenol, Total, (ug/l)	<5.0
N-Nitrosodiphenylamine, Total, (ug/l)	<5.0
N-Nitrosodi-N-Propylamine, Total, (ug/l)	<5.0
Pentachlorophenol, Total, (ug/l)	<5.0
Phenanthrene, Total, (ug/l)	<5.0
Phenol, Total, (ug/l)	<5.0
Pyrene, Total, (ug/l)	<5.0
1,2,4-Trichlorobenzene, Total, (ug/l)	<5.0
2,4,5- Trichlorophenol, Total, (ug/l)	<5.0
2,4,6- Trichlorophenol, Total, (ug/l)	<5.0
N-Nitrosodimethylamine, Total, (ug/l)	<5.0
1,2- Diphenylhydrazine, Total, (ug/l)	<5.0
Dichlorodifluoromethane, Total, (ug/l)	<50
Parachloro-Meta-Cresol, Total, (ug/l)	NA
Aniline (ug/l)	<5.0
4-Chloroaniline (ug/l)	<5.0
2-Nitroaniline (ug/l)	<5.0
3-Nitroaniline (ug/l)	<5.0
4-Nitroaniline (ug/l)	<5.0
2-Methylphenol (ug/l)	<5.0
4-Methylphenol (p-Cresol) (ug/l)	<5.0
4-Chloro-3-methylphenol (ug/l)	<5.0
2-Methylnaphthalene (ug/l)	<5.0
2,3,7,8-TCDD (ug/l)	<10
Dibenzofuran (ug/l)	<5.0

OLIVE (Glendale)

67th Avenue north of Olive Avenue

Glendale OLIVE

Olive and 67th Avenues

Date of Sampling	
Time	No Data
Representative Storm Event	No Data
Agency Collecting Sample	No Data
Agency Analyzing Sample	No Data
Drainage Area (acres) (DA)	No Data
Impervious Area (acres) (IA)	No Data
Land Use - Residential	No Data
Land Use - Commercial	No Data
Land Use - Industrial	No Data
Land Use - Undeveloped	No Data
Sampling Duration (minutes)	No Data
Storm Duration (minutes) (DRN)	No Data
Runoff Sampled (cubic feet) (RUN)	No Data
Total Storm Runoff (cubic feet)	No Data
Instantaneous Discharge (cfs)	No Data
Preceeding Dry Period (days) (ANT)	No Data
Total Storm Rainfall (inch)	No Data
Rainfall Sampled (inch) (TRN)	No Data
Maximum 5-minute rain intensity (MAX5)	No Data
Sample Temperature (deg. C)	No Data
Effluent Temperature (deg. C)	No Data
Ambient Temperature (deg. C)	No Data
Barometric Pressure (mm Hg)	No Data
pH, Effluent (standard units)	No Data
pH, Lab (standard units)	No Data
Specific Conductance, FIELD (us/cm)	No Data
Specific Conductance, LAB (us/cm)	No Data
Oxygen Dissolved (% saturation)	No Data
Oxygen Dissolved (mg/l)	No Data
Electrical Conductivity (umhos/cm)	No Data
BOD5 (mg/l)	No Data
COD High Level (mg/l)	No Data
Chloride (mg/l as Cl)	No Data
Cyanide Total (mg/l as Cn)	No Data
Fecal Coliform (CFU/100mL)	No Data
Fecal Streptococci (CFU/100mL)	No Data
Solids Residue at 180 Deg. C (TDS) (mg/l)	No Data
Residue, Total at 105 Deg. C (TSS) (mg/l)	No Data
Nitrogen No2 + No3, Total (mg/l as N)	No Data
TKN Nitrogen (mg/l as N)	No Data
Nitrogen, Ammonia + Organic, Total (mg/l as N)	No Data
Nitrogen Nitrate Total (mg/l as N)	No Data
Nitrogen Nitrite Total (mg/l as N)	No Data
Nitrogen Ammonia Total (mg/l as N)	No Data
Nitrogen Organic Total (mg/l as N)	No Data
Phosphorous Total (mg/l as P)	No Data
Phosphorous Dissolved (mg/l as P)	No Data
Phosphorous Ortho (mg/l as P)	No Data
Sulfate Dissolved (mg/l)	No Data
Hexavalent Chromium Total (mg/l)	No Data

Glendale OLIVE

Olive and 67th Avenues

Date of Sampling	
Phenols Total Recoverable (ug/l)	No Data
Oil and Grease Total Recoverable (mg/l)	No Data
Organic Carbon, Total (mg/l)	No Data
Bicarbonate Whole Field (mg/l as HCo3)	No Data
Bicarbonate Dissolved, Field (mg/l as HCo3)	No Data
Carbonate Water Field (mg/l as Co3)	No Data
Carbonate Water Dissolved, Field, (mg/l as Co3)	No Data
Alkalinity Water Field Total (mg/l as CaCo3)	No Data
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)	No Data
Alkalinity LAB (mg/l as CaCo3)	No Data
Silica Dissolved (mg/l as SiO2)	No Data
Hardness (mg/l)	No Data
Antimony (ug/l as Sb)	No Data
Antimony Dissolved (ug/l as Sb)	No Data
Arsenic Total (ug/l as As)	No Data
Arsenic Dissolved (ug/l as As)	No Data
Barium Dissolved (ug/l as Ba)	No Data
Beryllium Total Recoverable (ug/l as Be)	No Data
Beryllium Dissolved (ug/l as Be)	No Data
Cadmium Total Recoverable (ug/l as Cd)	No Data
Cadmium Dissolved (ug/l as Cd)	No Data
Calcium Dissolved (mg/l as Ca)	No Data
Chromium Total Recoverable (ug/l as Cr)	No Data
Chromium Dissolved (ug/l as Cr)	No Data
Cobalt Dissolved (ug/l as Co)	No Data
Copper, Total Recoverable, (ug/l as Cu)	No Data
Copper, Dissolved, (ug/l as Cu)	No Data
Iron, Dissolved, (ug/l as Fe)	No Data
Lead, Total Recoverable, (ug/l as Pb)	No Data
Lead, Dissolved, (ug/l as Pb)	No Data
Lithium, Dissolved, (ug/l as Li)	No Data
Magnesium, Dissolved, (mg/l as Mg)	No Data
Manganese, Dissolved, (ug/l as Mn)	No Data
Mercury, Total Recoverable, (ug/l as Hg)	No Data
Mercury, Dissolved, (ug/l as Hg)	No Data
Molybdenum, Dissolved, (ug/l as Mo)	No Data
Nickel, Total Recoverable, (ug/l as Ni)	No Data
Nickel, Dissolved, (ug/l as Ni)	No Data
Potassium, Dissolved, (mg/l as K)	No Data
Selenium, Total, (ug/l as Se)	No Data
Selenium, Dissolved, (ug/l as Se)	No Data
Silver, Total Recoverable, (ug/l as Ag)	No Data
Silver, Dissolved, (ug/l as Ag)	No Data
Sodium, Dissolved, (mg/l as Na)	No Data
Strontium, Dissolved, (ug/l as Sr)	No Data
Thallium, Total, (ug/l as Tl)	No Data
Thallium, Dissolved, (ug/l as Tl)	No Data
Vanadium, Dissolved, (ug/l as V)	No Data
Zinc, Total Recoverable, (ug/l as Zn)	No Data
Zinc, Dissolved, (ug/l as Zn)	No Data

Glendale OLIVE

Olive and 67th Avenues

Date of Sampling	
Diazinon, Total, (ug/l)	No Data
Ethion, Total, (ug/l)	No Data
Malathion, Total, (ug/l)	No Data
Methyl Parathion, Total, (ug/l)	No Data
Parathion, Total, (ug/l)	No Data
Trithion, Total, (ug/l)	No Data
Di-syston, Total, (ug/l)	No Data
Phorate, Total, (ug/l)	No Data
Chlorpyrifos, Total, (ug/l)	No Data
DEF, Total, (ug/l)	No Data
Fonofos(Dy-fonate), WWT, (ug/l)	No Data
Aldrin, Total, (ug/l)	No Data
BHC - ALPHA, (ug/l)	No Data
BHC - Gamma (Lindane), (ug/l)	No Data
BHC - DELTA, (ug/l)	No Data
Aroclor 1016, PCB, Total, (ug/l)	No Data
Aroclor 1221, PCB, Total, (ug/l)	No Data
Aroclor 1232, PCB, Total, (ug/l)	No Data
Aroclor 1242, PCB, Total, (ug/l)	No Data
Aroclor 1248, PCB, Total, (ug/l)	No Data
Aroclor 1254, PCB, Total, (ug/l)	No Data
Aroclor 1260, PCB, Total, (ug/L)	No Data
Chlordane, Total, (ug/l)	No Data
P,P' DDD, Total, (ug/l)	No Data
P,P' DDE, Total, (ug/l)	No Data
P, P' DDT, Total, (ug/l)	No Data
Dieldrin, Total, (ug/l)	No Data
Endo-Sulfan Alpha, Total, (ug/l)	No Data
Endo-Sulfan Beta, Total, (ug/l)	No Data
Endo-Sulfan Sulfate, Total, (ug/l)	No Data
Endrin Aldehyde, Total, (ug/l)	No Data
Endrin, Total, (ug/l)	No Data
Heptachlor, Total, (ug/l)	No Data
Heptachlor Epoxide, Total, (ug/l)	No Data
Toxaphene, Total, (ug/l)	No Data
Methoxychlor, Total, (ug/l)	No Data
Beta Benzene Hexachloride, Total, (ug/l)	No Data
1,1,2,2-Tetrachloroethane, Total, (ug/l)	No Data
1,1,1,2-Tetrachloroethane, Total,(ug/l)	No Data
Tetrachloroethene, PCE, Total, (ug/l)	No Data
1,1,1- Trichloroethane, Total, (ug/l)	No Data
1,1,2- Trichloroethane, Total, (ug/l)	No Data
Trichloroethene, Total, (ug/l)	No Data
1,1- Dichloroethane, Total, (ug/l)	No Data
1,1- Dichloroethene, Total, (ug/l)	No Data
1,2- Dichloroethane, Total, (ug/l)	No Data
1,2- Dichloropropane, Total, (ug/l)	No Data
2- Chloroethylvinyl Ether, Total, (ug/l)	No Data
cis-1,3-Dichloropropene, (ug/l)	No Data
trans-1,2- Dichloroethene, (ug/l)	No Data

Glendale OLIVE

Olive and 67th Avenues

Date of Sampling	
trans-1,3- Dichloropropene, (ug/l)	No Data
Benzene, Total, (ug/l)	No Data
Bromodichloromethane, Total, (ug/l)	No Data
Bromoform, Total, (ug/l)	No Data
Carbon Tetrachloride, Total, (ug/l)	No Data
Chlorobenzene, Total, (ug/l)	No Data
Chloroethane, (ug/l)	No Data
Chloroform, Total, (ug/l)	No Data
Ethyl-Benzene, Total, (ug/l)	No Data
Methylene Chloride, Total, (ug/l)	No Data
Toluene, Total, (ug/l)	No Data
Trichlorofluoromethane, Total, (ug/l)	No Data
Vinyl Chloride, Total, (ug/l)	No Data
Chlorodibromomethane, Total, (ug/l)	No Data
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L)	No Data
Acetone, Total, (ug/l)	No Data
2-Butanone, (ug/l)	No Data
Carbon Disulfide, Total, (ug/l)	No Data
1,2 Dichloroethene, Total, (ug/l)	No Data
Xylenes, Total, (ug/l)	No Data
2-Hexanone, Total, (ug/l)	No Data
Styrene, Total, (ug/l)	No Data
Acrolein, Total, (ug/l)	No Data
Acrylonitirile, Total, (ug/l)	No Data
Bromobenzene, Water Whole, Total, (ug/l)	No Data
1,3-Dichloropropane, Water Whole, Total, (ug/l)	No Data
Methyl Bromide, Total, (ug/l)	No Data
Methyl Chloride, Total, (ug/l)	No Data
Parachloro Toluene, Total, (ug/l)	No Data
Dibromoethane, Total, (ug/l)	No Data
Acenaphthene, Total, (ug/l)	No Data
Acenaphthylene, Total, (ug/l)	No Data
Anthracene, Total, (ug/l)	No Data
Benzidine, Total, (ug/l)	No Data
Benzoic Acid, Total, (ug/l)	No Data
Benzo (a) Anthracene, Total, (ug/l)	No Data
Benzo (b) Fluoranthene, Total, (ug/l)	No Data
Benzo (k) Fluoranthene, Total, (ug/l)	No Data
Benzo (ghi) Perylene, Total, (ug/l)	No Data
Benzo (a) Pyrene, Total, (ug/l)	No Data
Benzyl Alcohol, Total, (ug/l)	No Data
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	No Data
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	No Data
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	No Data
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	No Data
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	No Data
Butyl Benzyl Phthalate, Total, (ug/l)	No Data
2-Chloronapthalene, Total, (ug/l)	No Data
2-Chlorophenol, Total, (ug/l)	No Data
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	No Data

Glendale OLIVE Olive and 67th Avenues	
Date of Sampling	
Chrysene, Total, (ug/l)	No Data
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	No Data
Di-N-Butyl Phthalate, Total, (ug/l)	No Data
1,3- Dichlorobenzene, Total, (ug/l)	No Data
1,4- Dichlorobenzene, Total, (ug/l)	No Data
1,2- Dichlorobenzene, Total, (ug/l)	No Data
3,3'- Dichlorobenzidine, Total, (ug/l)	No Data
2,4- Dichlorophenol, Total, (ug/l)	No Data
Diethyl Phthalate, Total, (ug/l)	No Data
2,4- Dimethylphenol, Total, (ug/l)	No Data
Dimethyl Phthalate, Total, (ug/l)	No Data
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	No Data
2,4- Dinitrophenol, Total, (ug/l)	No Data
2,4- Dinitrotoluene, Total, (ug/l)	No Data
2,6- Dinitrotoluene, Total, (ug/l)	No Data
Di-N-Octyl-Phthalate, Total, (ug/l)	No Data
Fluoranthene, Total, (ug/l)	No Data
Fluorene, Total, (ug/l)	No Data
Hexachlorobenzene, Total, (ug/l)	No Data
Hexachlorobutadiene, Total, (ug/l)	No Data
Hexachlorocyclopentadiene, Total, (ug/l)	No Data
Hexachloroethane, Total, (ug/l)	No Data
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	No Data
Isophorone, Total, (ug/l)	No Data
Naphthalene, Total, (ug/l)	No Data
Nitrobenzene, Total, (ug/l)	No Data
2-Nitrophenol, Total, (ug/l)	No Data
4-Nitrophenol, Total, (ug/l)	No Data
N-Nitrosodiphenylamine, Total, (ug/l)	No Data
N-Nitrosodi-N-Propylamine, Total, (ug/l)	No Data
Pentachlorophenol, Total, (ug/l)	No Data
Phenanthrene, Total, (ug/l)	No Data
Phenol, Total, (ug/l)	No Data
Pyrene, Total, (ug/l)	No Data
1,2,4-Trichlorobenzene, Total, (ug/l)	No Data
2,4,5- Trichlorophenol, Total, (ug/l)	No Data
2,4,6- Trichlorophenol, Total, (ug/l)	No Data
N-Nitrosodimethylamine, Total, (ug/l)	No Data
1,2- Diphenylhydrazine, Total, (ug/l)	No Data
Dichlorodifluoromethane, Total, (ug/l)	No Data
Parachloro-Meta-Cresol, Total, (ug/l)	No Data

Validation Tables

INDPK (Glendale)

New River (west bank) between Glendale and Northern Avenues

Glendale IND PARK

New River Channel near Orangewood

15 July 1999

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		4	deg. C			7/15/99	Immediate							
Effluent Temperature (deg. C)		NM	deg. C				Immediate							
Ambient Temperature (deg. C)		NM	deg. C				Immediate							
Barometric Pressure (mm Hg)		NM	mm Hg				Immediate							
pH, Effluent, Field (standard units)		NM	std units				Immediate							
pH, Lab (standard units)	150.1	7.2	std units			7/15/99	Immediate			<15	n/a			
Specific Conductance, FIELD (us/cm)		NM	us/cm				Immediate							
Specific Conductance, LAB (us/cm)		NA	us/cm				Immediate							
Oxygen Dissolved (% saturation)		NM	percent				Immediate							
Oxygen Dissolved (mg/l)	360.1	NA	mg/l				Immediate							
Electrical Conductivity (umhos/cm)	2510B	NA	umhos/cm				20 days							
BOD5 (mg/l)	405.1	<44	mg/l	1		7/15/99	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	123	mg/l	1		7/30/99	28 days			<30	n/a			
Chloride (mg/l as Cl)	4500	<5.0	mg/l			8/3/99	28 days							
Cyanide Total (mg/l as Cn)	4500	NA	mg/l				14 days							
Fecal Coliform (MPN/100mL)	9221D	>8200	CFU/100ml	2		7/15/99	6 hours			<30	n/a			
Fecal Streptococci (MPN/100mL)	9230B	50000	CFU/100ml	2		7/15/99	6 hours			<30	n/a			
Total Dissolved Solids (mg/l)	2540C	112	mg/l	10		7/20/99	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	2	mg/l	10		7/20/99	7 days			<15	n/a			
Nitrogen No2 + No3, Total (mg/l as N)	4500	2.3	mg/l	0.05		7/19/99	28 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	3.62	mg/l			7/26/99	28 days				1.8			
Nitrogen, Ammonia + Organic, Total (mg/l as N)	calc.	3.62	mg/l			7/26/99	28 days							
Nitrogen Nitrate Total (mg/l as N)	calc.	2.3	mg/l			7/16/99	48 hours							Filter w/in 48hrs, analyze w/in 28 days
Nitrogen Nitrite Total (mg/l as N)	4500	<0.1	mg/l			7/16/99	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	1.08	mg/l			7/26/99	28 days				7.6			
Nitrogen Organic Total (mg/l as N)	calc.	2.54	mg/l			7/26/99	28 days							
Phosphorous Total (mg/l as P)	365.3	0.35	mg/l	0.05		8/2/99	28 days			<15				
Phosphorous Dissolved (mg/l as P)	365.3	0.14	mg/l			7/29/99	28 days							
Phosphorous Ortho (mg/l as P)	4500PE	0.2	mg/l	0.05		7/16/99	48 hours			<15				
Sulfate Dissolved (mg/l)	300.0	7.4	mg/l			7/28/99	28 days							
Hexavalent Chromium Total (mg/l)	3500	NA	mg/l				24 hours							
Phenols Total Recoverable (ug/l)	420.1	NA	ug/l				28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	<40	mg/l	0.2		8/12/99	28 days	<30	n/a	<50	n/a			
Organic Carbon, Total (mg/l)	5310C	NA	mg/l				28 days							
Bicarbonate Whole Field (mg/l as HCo3)		NA	mg/l											
Bicarbonate Dissolved, Field (mg/l as HCo3)		NA	mg/l											
Carbonate Water Field (mg/l as Co3)		NA	mg/l											
Carbonate Water Dissolved, Field, (mg/l as Co3)		NA	mg/l											
Alkalinity Water Field Total (mg/l as CaCo3)		NA	mg/l											
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)		NA	mg/l											
Alkalinity LAB (mg/l as CaCo3)	2320B	48	mg/l			7/27/99	14 days*							
Silica Dissolved (mg/l as SiO2)		NA	mg/l											
Hardness (mg/l)	2340B	48	mg/l	1		8/4/99	6 months			<15	n/a			
Antimony (ug/l as Sb)	3113B	<4	ug/l			8/2/99	6 months							
Antimony Dissolved (ug/l as Sb)	200.9	<4	ug/l			8/2/99	6 months							
Arsenic Total (ug/l as As)	3113B	<5	ug/l			8/6/99	6 months							
Arsenic Dissolved (ug/l as As)	200.9	<5	ug/l			8/6/99	6 months							
Barium Dissolved (ug/l as Ba)		NA	ug/l											

Glendale IND PARK

New River Channel near Orangewood

15 July 1999

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Beryllium Total Recoverable (ug/l as Be)	200.7	<2	ug/l			8/4/99	6 months							
Beryllium Dissolved (ug/l as Be)	200.7	<2	ug/l			8/4/99	6 months							
Cadmium Total Recoverable (ug/l as Cd)	3113B	<0.2	ug/l	0.2		8/6/99	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	200.7	<5	ug/l			8/4/99	6 months							
Calcium Dissolved (mg/l as Ca)	200.7	16	mg/l			8/4/99	6 months							
Chromium Total Recoverable (ug/l as Cr)	218.2	18	ug/l	1		9/16/99	6 months	<25		<35	0			
Chromium Dissolved (ug/l as Cr)	218.2	1.4	ug/l			9/11/99	6 months							
Cobalt Dissolved (ug/l as Co)		NA	ug/l											
Copper, Total Recoverable, (ug/l as Cu)	200.7	<15	ug/l	1		8/4/99	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.7	<15	ug/l			8/4/99	6 months							
Iron, Dissolved, (ug/l as Fe)		NA	ug/l											
Lead, Total Recoverable, (ug/l as Pb)	3113B	<5	ug/l	1		8/6/99	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			8/6/99	6 months							
Lithium, Dissolved, (ug/l as Li)		NA	ug/l											
Magnesium, Dissolved, (mg/l as Mg)	200.7	2	mg/l	1		8/4/99	6 months							
Manganese, Dissolved, (ug/l as Mn)		NA	ug/l											
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	ug/l			7/26/99	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			7/28/99	6 months							
Molybdenum, Dissolved, (ug/l as Mo)		NA	ug/l											
Nickel, Total Recoverable, (ug/l as Ni)	249.2	4	ug/l	2	B	9/16/99	6 months	<25		<35	0			Conc. detected between MDL and PQL
Nickel, Dissolved, (ug/l as Ni)	249.2	4.6	ug/l			9/11/99	6 months							
Nickel, Dissolved, (ug/l as Ni)	200.7	<20	ug/l			8/4/99	6 months							
Potassium, Dissolved, (mg/l as K)		NA	mg/l											
Selenium, Total, (ug/l as Se)	3113B	<5	ug/l			8/6/99	6 months							
Selenium, Dissolved, (ug/l as Se)	200.9	<5	ug/l			8/6/99	6 months							
Silver, Total Recoverable, (ug/l as Ag)	200.7	<40	ug/l			8/4/99	6 months							
Silver, Dissolved, (ug/l as Ag)	200.7	<50	ug/l			8/4/99	6 months							
Sodium, Dissolved, (mg/l as Na)		NA	mg/l											
Strontium, Dissolved, (ug/l as Sr)		NA	ug/l											
Thallium, Total, (ug/l as Tl)	279.2	<1	ug/l			8/3/99	6 months							
Thallium, Dissolved, (ug/l as Tl)	200.9	<1	ug/l			8/2/99	6 months							
Vanadium, Dissolved, (ug/l as V)		NA	ug/l											
Zinc, Total Recoverable, (ug/l as Zn)	200.7	70	ug/l	1		8/4/99	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	<20	ug/l			8/8/99	6 months							
Diazinon, Total, (ug/l)		NA	ug/l											
Ethion, Total, (ug/l)		NA	ug/l											
Malathion, Total, (ug/l)		NA	ug/l											
Methyl Parathion, Total, (ug/l)		NA	ug/l											
Parathion, Total, (ug/l)		NA	ug/l											
Trithion, Total, (ug/l)		NA	ug/l											
Di-syston, Total, (ug/l)		NA	ug/l											
Phorate, Total, (ug/l)		NA	ug/l											
Chlorpyrifos, Total, (ug/l)		NA	ug/l											
DEF, Total, (ug/l)		NA	ug/l											
Fonofos(Dy-fonate), WWT, (ug/l)		NA	ug/l											
EPA Method 608 Extraction						7/16/99	7 days							
Aldrin, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
BHC - ALPHA, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							

R - Rejected Data

Glendale IND PARK

New River Channel near Orangewood

15 July 1999

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
BHC - Gamma (Lindane), (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
BHC - DELTA, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Aroclor 1016, PCB, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Aroclor 1221, PCB, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Aroclor 1232, PCB, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Aroclor 1242, PCB, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Aroclor 1248, PCB, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Aroclor 1254, PCB, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Aroclor 1260, PCB, Total, (ug/L)	608	<1.0	ug/l			8/7/99	40 days							
Chlordane, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
P,P' DDD, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
P, P' DDT, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Dieldrin, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Endo-Sulfan Alpha, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Endo-Sulfan Beta, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Endo-Sulfan Sulfate, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Endrin Aldehyde, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Endrin, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Heptachlor, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Heptachlor Epoxide, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
Toxaphene, Total, (ug/l)	608	<5.0	ug/l			8/7/99	40 days							
Methoxychlor, Total, (ug/l)		NA	ug/l											
Beta Benzene Hexachloride, Total, (ug/l)	608	<1.0	ug/l			8/7/99	40 days							
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
1,1,1,2-Tetrachloroethane, Total,(ug/l)	624	NA	ug/l											
Tetrachloroethene, PCE, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
1,1,1- Trichloroethane, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
1,1,2- Trichloroethane, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Trichloroethene, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
1,1- Dichloroethane, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
1,1- Dichloroethene, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
1,2- Dichloroethane, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
1,2- Dichloropropane, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
2- Chloroethylvinyl Ether, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
cis-1,3-Dichloropropene, (ug/l)	624	<20	ug/l			7/23/99	14 days							
trans-1,2- Dichloroethene, (ug/l)	624	<20	ug/l			7/23/99	14 days							
trans-1,3- Dichloropropene, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Benzene, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Bromodichloromethane, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Bromoform, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Carbon Tetrachloride, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Chlorobenzene, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Chloroethane, (ug/l)	624	<50	ug/l			7/23/99	14 days							
Chloroform, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Ethylbenzene, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Methylene Chloride, Total, (ug/l)	624	<50	ug/l			7/23/99	14 days							
Toluene, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							

Glendale IND PARK New River Channel near Orangewood 15 July 1999	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Trichlorofluoromethane, Total, (ug/l)	624	<50	ug/l			7/23/99	14 days							
Vinyl Chloride, Total, (ug/l)	624	<50	ug/l			7/23/99	14 days							
Chlorodibromomethane, Total, (ug/l)	624	NA	ug/l				14 days							
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L)		NA	ug/l											
Acetone, Total, (ug/l)	624	NA	ug/l				14 days							
2-Butanone, (ug/l)	624	NA	ug/l				14 days							
Carbon Disulfide, Total, (ug/l)	624	NA	ug/l				14 days							
1,2 Dichloroethene, Total, (ug/l)	624	<20	ug/l			7/23/99	14 days							
Xylenes, Total, (ug/l)	624	NA	ug/l				14 days							
m,p-Xylenes (ug/l)	624	<40	ug/l			7/23/99	14 days							
o-Xylene (ug/l)	624	<20	ug/l			7/23/99	14 days							
2-Hexanone, Total, (ug/l)	624	NA	ug/l				14 days							
Styrene, Total, (ug/l)	624	NA	ug/l				14 days							
Acrolein, Total, (ug/l)	624	<500	ug/l			7/23/99	14 days							
Acrylonitrile, Total, (ug/l)	624	<100	ug/l			7/23/99	14 days							
Bromobenzene, Water Whole, Total, (ug/l)		NA	ug/l											
1,3-Dichloropropane, Water Whole, Total, (ug/l)	624	NA	ug/l			7/23/99	14 days							
Methyl Bromide, Total, (ug/l)	624	NA	ug/l			7/23/99	14 days							
Methyl Chloride, Total, (ug/l)	624	NA	ug/l			7/23/99	14 days							
Parachloro Toluene, Total, (ug/l)		NA	ug/l											
Dibromoethane, Total, (ug/l)		NA	ug/l											
Bromomethane (ug/l)	624	<50	ug/l			7/23/99	14 days							
Chloromethane (ug/l)	624	<50	ug/l			7/23/99	14 days							
Dibromochloromethane (ug/l)	624	<20	ug/l			7/23/99	14 days							
Dichlorodifluoromethane, Total, (ug/l)	624	<50	ug/l			7/23/99	14 days							
Dichloromethane (ug/l)	624	<50	ug/l			7/23/99	14 days							
Total Trihalomethanes	624	<20	ug/l			7/23/99	14 days							
1,2-Dichlorobenzene (ug/l)	624	<20	ug/l			7/23/99								
1,3-Dichlorobenzene (ug/l)	624	<20	ug/l			7/23/99								
1,4-Dichlorobenzene (ug/l)	624	<20	ug/l			7/23/99								
EPA Method 625 Extraction						7/19/99	7 days							
Acenaphthene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Acenaphthylene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Anthracene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Benzidine, Total, (ug/l)	625	<50	ug/l			7/28/99	40 days							
Benzoic Acid, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Benzo (b) Fluoranthene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Benzo (k) Fluoranthene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Benzo (ghi) Perylene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Benzo (a) Pyrene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Benzyl Alcohol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Butyl Benzyl Phthalate, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							

Glendale IND PARK

New River Channel near Orangewood

15 July 1999

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
2-Chloronapthalene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
2-Chlorophenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Chrysene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Di-N-Butyl Phthalate, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
1,3- Dichlorobenzene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
1,4- Dichlorobenzene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
1,2- Dichlorobenzene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
3,3'- Dichlorobenzidine, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
2,4- Dichlorophenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Diethyl Phthalate, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
2,4- Dimethylphenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Dimethyl Phthalate, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	625	<20	ug/l			7/28/99	40 days							
2,4- Dinitrophenol, Total, (ug/l)	625	<20	ug/l			7/28/99	40 days							
2,4- Dinitrotoluene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
2,6- Dinitrotoluene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Di-N-Octyl-Phthalate, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Fluoranthene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Fluorene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Hexachlorobenzene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Hexachlorobutadiene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Hexachlorocyclopentadiene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Hexachloroethane, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Isophorone, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Naphthalene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Nitrobenzene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
2-Nitrophenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
4-Nitrophenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
N-Nitrosodiphenylamine, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
N-Nitrosodi-N-Propylamine, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Pentachlorophenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Phenanthrene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Phenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
Pyrene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
1,2,4-Trichlorobenzene, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
2,4,5- Trichlorophenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							
2,4,6- Trichlorophenol, Total, (ug/l)	625	<5	ug/l			7/28/99	40 days							

ARROW (Glendale)

Skunk Creek (north bank) at 79th Avenue alignment

Glendale ARROW
Skunk Creek near 79th Avenue

19 Sept 1999

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		0	deg. C			9/20/99	Immediate							
Effluent Temperature (deg. C)		NM	deg. C				Immediate							
Ambient Temperature (deg. C)		NM	deg. C				Immediate							
Barometric Pressure (mm Hg)		NM	mm Hg				Immediate							
pH, Effluent, Field (standard units)		NM	std units				Immediate							
pH, Lab (standard units)	150.1	NA	std units				Immediate			<15	n/a			
Specific Conductance, FIELD (us/cm)		NM	us/cm				Immediate							
Specific Conductance, LAB (us/cm)		NA	us/cm				Immediate							
Oxygen Dissolved (% saturation)		NM	percent				Immediate							
Oxygen Dissolved (mg/l)	360.1	NA	mg/l				Immediate							
Electrical Conductivity (umhos/cm)	2510B	NA	umhos/cm				20 days							
BOD5 (mg/l)	405.1	NA	mg/l	1			48 hours			<30	n/a			
COD High Level (mg/l)	410.4	98	mg/l	1		9/23/99	28 days			<30	n/a			
Chloride (mg/l as Cl)	4500-CLB	<5.0	mg/l			9/22/99	28 days							
Cyanide Total (mg/l as Cn)	4500 CNE	<0.01	mg/l			9/30/99	14 days							
Fecal Coliform (MPN/100mL)	9221D	NA	CFU/100m	2			6 hours			<30	n/a			
Fecal Streptococci (MPN/100mL)	9230B	NA	CFU/100m	2			6 hours			<30	n/a			
Total Dissolved Solids (mg/l)	2540C	48	mg/l	10		9/24/99	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	106	mg/l	10		9/24/99	7 days			<15	n/a			
Nitrogen No2 + No3, Total (mg/l as N)	4500NO3F	0.4	mg/l	0.05		9/20/99	28 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	3.63	mg/l			9/20/99	28 days				6.45			
Nitrogen, Ammonia + Organic, Total (mg/l as N)	calc.	3.63	mg/l				28 days							
Nitrogen Nitrate Total (mg/l as N)	calc.	0.4	mg/l			9/20/99	48 hours							Filter w/in 48hrs, analyze w/in 28 days
Nitrogen Nitrite Total (mg/l as N)	4500NO2B	<0.1	mg/l			9/20/99	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	2.29	mg/l			9/24/99	28 days				10			
Nitrogen Organic Total (mg/l as N)	calc.	1.34	mg/l			9/27/99	28 days							
Phosphorous Total (mg/l as P)	365.3	0.50	mg/l	0.05		9/23/99	28 days			<15				
Phosphorous Dissolved (mg/l as P)	365.3	0.13	mg/l			9/21/99	28 days							
Phosphorous Ortho (mg/l as P)	4500PE	0.38	mg/l	0.05		9/20/99	48 hours			<15				
Sulfate Dissolved (mg/l)	300.0	11.4	mg/l			9/30/99	28 days							
Hexavalent Chromium Total (mg/l)	3500	NA	mg/l				24 hours							
Phenols Total Recoverable (ug/l)	420.1	6.2	ug/l			9/24/99	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	NA	mg/l	0.2			28 days	<30	n/a	<5.00	n/a			
Organic Carbon, Total (mg/l)	5310C	14.2	mg/l			10/1/99	28 days							
Bicarbonate Whole Field (mg/l as HCo3)		NA	mg/l											
Bicarbonate Dissolved, Field (mg/l as HCo3)		NA	mg/l											
Carbonate Water Field (mg/l as Co3)		NA	mg/l											
Carbonate Water Dissolved, Field, (mg/l as Co3)		NA	mg/l											
Alkalinity Water Field Total (mg/l as CaCo3)		NA	mg/l											
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)		NA	mg/l											
Alkalinity LAB (mg/l as CaCo3)	2320B	22	mg/l			9/24/99	14 days							
Silica Dissolved (mg/l as SiO2)		NA	mg/l											
Hardness (mg/l)	2340B	35	mg/l	1		10/28/99	6 months			<15	n/a			
Antimony (ug/l as Sb)	3113B	<4	ug/l			9/28/99	6 months							
Antimony Dissolved (ug/l as Sb)	200.9	<4	ug/l			9/28/99	6 months							
Arsenic Total (ug/l as As)	3113B	<5	ug/l			10/1/99	6 months							
Arsenic Dissolved (ug/l as As)	200.9	<5	ug/l			10/4/99	6 months							
Barium Dissolved (ug/l as Ba)		NA	ug/l											

Glendale ARROW
Skunk Creek near 79th Avenue

19 Sept 1999

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Beryllium Total Recoverable (ug/l as Be)	200.7	<2	ug/l			11/8/99	6 months							
Beryllium Dissolved (ug/l as Be)	200.7	<2	ug/l			10/11/99	6 months							
Cadmium Total Recoverable (ug/l as Cd)	3113B	0.3	ug/l	0.2		10/1/99	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	200.7	<5	ug/l			10/7/99	6 months							
Calcium Dissolved (mg/l as Ca)	200.7	11	mg/l			10/28/99	6 months							
Chromium Total Recoverable (ug/l as Cr)	200.8	1.66	ug/l	1		10/18/99	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	200.8	9.3	ug/l			10/2/99	6 months				0.9			
Cobalt Dissolved (ug/l as Co)		NA	ug/l											
Copper, Total Recoverable, (ug/l as Cu)	200.7	17	ug/l	1		11/4/99	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.7	<15	ug/l			10/7/99	6 months							
Iron, Dissolved, (ug/l as Fe)		NA	ug/l											
Lead, Total Recoverable, (ug/l as Pb)	3113B	10	ug/l	1		10/1/99	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			9/21/99	6 months							
Lithium, Dissolved, (ug/l as Li)		NA	ug/l											
Magnesium, Dissolved, (mg/l as Mg)	200.7	2	mg/l	1		10/28/99	6 months							
Manganese, Dissolved, (ug/l as Mn)		NA	ug/l											
Mercury, Total Recoverable, (ug/l as Hg)	245.1	0.7	ug/l			9/30/99	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			10/5/99	6 months							
Molybdenum, Dissolved, (ug/l as Mo)		NA	ug/l											
Nickel, Total Recoverable, (ug/l as Ni)	200.8	4	ug/l	2	B	10/19/99	6 months	<25		<35				Conc. detected between MDL and PQL
Nickel, Dissolved, (ug/l as Ni)	200.8	10	ug/l			10/2/99	6 months				0.5			
Potassium, Dissolved, (mg/l as K)		NA	mg/l											
Selenium, Total, (ug/l as Se)	3113B	<5	ug/l			10/1/99	6 months							
Selenium, Dissolved, (ug/l as Se)	200.9	<5	ug/l			9/30/99	6 months							
Silver, Total Recoverable, (ug/l as Ag)	200.7	<40	ug/l			10/28/99	6 months							
Silver, Dissolved, (ug/l as Ag)	200.7	<50	ug/l			10/7/99	6 months							
Sodium, Dissolved, (mg/l as Na)		NA	mg/l											
Strontium, Dissolved, (ug/l as Sr)		NA	ug/l											
Thallium, Total, (ug/l as Tl)	279.2	<1	ug/l			9/27/99	6 months							
Thallium, Dissolved, (ug/l as Tl)	200.9	<1	ug/l			9/28/99	6 months							
Vanadium, Dissolved, (ug/l as V)		NA	ug/l											
Zinc, Total Recoverable, (ug/l as Zn)	200.7	210	ug/l	1		11/4/99	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	60	ug/l			10/7/99	6 months							
Diazinon, Total, (ug/l)		NA	ug/l											
Ethion, Total, (ug/l)		NA	ug/l											
Malathion, Total, (ug/l)		NA	ug/l											
Methyl Parathion, Total, (ug/l)		NA	ug/l											
Parathion, Total, (ug/l)		NA	ug/l											
Trithion, Total, (ug/l)		NA	ug/l											
Di-syston, Total, (ug/l)		NA	ug/l											
Phorate, Total, (ug/l)		NA	ug/l											
Chlorpyrifos, Total, (ug/l)		NA	ug/l											
DEF, Total, (ug/l)		NA	ug/l											
Fonofos(Dy-fonate), WWT, (ug/l)		NA	ug/l											
EPA Method 608 Extraction						9/21/99	7 days							
Aldrin, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
BHC - ALPHA, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
BHC - Gamma (Lindane), (ug/l)	608	<1.0	ug/l			9/23/99	40 days							

R - Rejected Data

Glendale ARROW Skunk Creek near 79th Avenue 19 Sept 1999	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
BHC - DELTA, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1016, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1221, PCB, Total, (ug/l)	608	<10	ug/l			9/23/99	40 days							
Aroclor 1232, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1242, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1248, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1254, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1260, PCB, Total, (ug/L)	608	<1.0	ug/l			9/23/99	40 days							
Chlordane, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
P,P' DDD, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
P, P' DDT, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Dieldrin, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endo-Sulfan Alpha, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endo-Sulfan Beta, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endo-Sulfan Sulfate, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endrin Aldehyde, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endrin, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Heptachlor, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Heptachlor Epoxide, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Toxaphene, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Methoxychlor, Total, (ug/l)		NA	ug/l											
Beta Benzene Hexachloride, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
1,1,1,2-Tetrachloroethane, Total,(ug/l)	624	NA	ug/l				14 days							
Tetrachloroethene, PCE, Total, (ug/l)	624	NA	ug/l				14 days							
1,1,1- Trichloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
1,1,2- Trichloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
Trichloroethene, Total, (ug/l)	624	NA	ug/l				14 days							
1,1- Dichloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
1,1- Dichloroethene, Total, (ug/l)	624	NA	ug/l				14 days							
1,2- Dichloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
1,2- Dichloropropane, Total, (ug/l)	624	NA	ug/l				14 days							
2- Chloroethylvinyl Ether, Total, (ug/l)	624	NA	ug/l				14 days							
cis-1,3-Dichloropropene, (ug/l)	624	NA	ug/l				14 days							
trans-1,2- Dichloroethene, (ug/l)	624	NA	ug/l				14 days							
trans-1,3- Dichloropropene, (ug/l)	624	NA	ug/l				14 days							
Benzene, Total, (ug/l)	624	NA	ug/l				14 days							
Bromodichloromethane, Total, (ug/l)	624	NA	ug/l				14 days							
Bromoform, Total, (ug/l)	624	NA	ug/l				14 days							
Carbon Tetrachloride, Total, (ug/l)	624	NA	ug/l				14 days							
Chlorobenzene, Total, (ug/l)	624	NA	ug/l				14 days							
Chloroethane, (ug/l)	624	NA	ug/l				14 days							
Chloroform, Total, (ug/l)	624	NA	ug/l				14 days							
Ethylbenzene, Total, (ug/l)	624	NA	ug/l				14 days							
Methylene Chloride, Total, (ug/l)	624	NA	ug/l				14 days							
Toluene, Total, (ug/l)	624	NA	ug/l				14 days							
Trichlorofluoromethane, Total, (ug/l)	624	NA	ug/l				14 days							

Glendale ARROW
Skunk Creek near 79th Avenue

19 Sept 1999

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Vinyl Chloride, Total, (ug/l)	624	NA	ug/l				14 days							
Chlorodibromomethane, Total, (ug/l)	624	NA	ug/l				14 days							
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/l)		NA	ug/l											
Acetone, Total, (ug/l)	624	NA	ug/l				14 days							
2-Butanone, (ug/l)	624	NA	ug/l				14 days							
Carbon Disulfide, Total, (ug/l)	624	NA	ug/l				14 days							
1,2 Dichloroethene, Total, (ug/l)	624	NA	ug/l				14 days							
Xylenes, Total, (ug/l)	624	NA	ug/l				14 days							
m,p-Xylenes (ug/l)	624	NA	ug/l				14 days							
o-Xylene (ug/l)	624	NA	ug/l				14 days							
2-Hexanone, Total, (ug/l)	624	NA	ug/l				14 days							
Styrene, Total, (ug/l)	624	NA	ug/l				14 days							
Acrolein, Total, (ug/l)	624	NA	ug/l				14 days							
Acrylonitrile, Total, (ug/l)	624	NA	ug/l				14 days							
Bromobenzene, Water Whole, Total, (ug/l)		NA	ug/l											
1,3-Dichloropropane, Water Whole, Total, (ug/l)	624	NA	ug/l				14 days							
Methyl Bromide, Total, (ug/l)	624	NA	ug/l				14 days							
Methyl Chloride, Total, (ug/l)	624	NA	ug/l				14 days							
Parachloro Toluene, Total, (ug/l)		NA	ug/l											
Dibromoethane, Total, (ug/l)		NA	ug/l											
Bromomethane (ug/l)	624	NA	ug/l				14 days							
Chloromethane (ug/l)	624	NA	ug/l				14 days							
Dibromochloromethane (ug/l)	624	NA	ug/l				14 days							
Dichlorodifluoromethane, Total, (ug/l)	624	NA	ug/l				14 days							
Dichloromethane (ug/l)	624	NA	ug/l				14 days							
Total Trihalomethanes (ug/l)	624	NA	ug/l				14 days							
1,2-Dichlorobenzene (ug/l)	624	NA	ug/l				14 days							
1,3-Dichlorobenzene (ug/l)	624	NA	ug/l				14 days							
1,4-Dichlorobenzene (ug/l)	624	NA	ug/l				14 days							
EPA Method 625 Extraction						9/23/99	7 days							
Acenaphthene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Acenaphthylene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Anthracene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzidine, Total, (ug/l)	625	<50	ug/l			10/1/99	40 days							
Benzoic Acid, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (b) Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (k) Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (ghi) Perylene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (a) Pyrene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzyl Alcohol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Butyl Benzyl Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2-Chloronapthalene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							

Glendale ARROW
Skunk Creek near 79th Avenue

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	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
2-Chlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Chrysene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Di-N-Butyl Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
1,3-Dichlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
1,4-Dichlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
1,2-Dichlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
3,3'-Dichlorobenzidine, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4-Dichlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Diethyl Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4- Dimethylphenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Dimethyl Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4- Dinitrophenol, Total, (ug/l)	625	<10	ug/l			10/1/99	40 days							
2,4- Dinitrotoluene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,6- Dinitrotoluene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Di-N-Octyl-Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Fluorene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Hexachlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Hexachlorobutadiene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Hexachlorocyclopentadiene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Hexachloroethane, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Isophorone, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Naphthalene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Nitrobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2-Nitrophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
4-Nitrophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
N-Nitrosodiphenylamine, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
N-Nitrosodi-N-Propylamine, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Pentachlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Phenanthrene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Phenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Pyrene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
1,2,4-Trichlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4,5- Trichlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4,6- Trichlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							

CITRUS (Glendale)

Grovers and 71st Avenues

Glendale CITRUS
Grovers and 71st Avenues

19 Sept 1999

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		0	deg. C			9/20/99	Immediate							
Effluent Temperature (deg. C)		NM	deg. C				Immediate							
Ambient Temperature (deg. C)		NM	deg. C				Immediate							
Barometric Pressure (mm Hg)		NM	mm Hg				Immediate							
pH, Effluent, Field (standard units)		NM	std units				Immediate							
pH, Lab (standard units)	150.1	NA	std units				Immediate			<15	n/a			
Specific Conductance, FIELD (us/cm)		NM	us/cm				Immediate							
Specific Conductance, LAB (us/cm)		NA	us/cm				Immediate							
Oxygen Dissolved (% saturation)		NM	percent				Immediate							
Oxygen Dissolved (mg/l)	360.1	NA	mg/l				Immediate							
Electrical Conductivity (umhos/cm)	2510B	NA	umhos/cm				20 days							
BOD5 (mg/l)	405.1	NA	mg/l	1			48 hours			<30	n/a			
COD High Level (mg/l)	410.4	65	mg/l	1		9/23/99	28 days			<30	n/a			
Chloride (mg/l as Cl)	4500-CLB	<5.0	mg/l			9/22/99	28 days							
Cyanide Total (mg/l as Cn)	4500 CNE	<0.01	mg/l			9/30/99	14 days							
Fecal Coliform (MPN/100mL)	9221D	NA	CFU/100ml	2			6 hours			<30	n/a			
Fecal Streptococci (MPN/100mL)	9230B	NA	CFU/100ml	2			6 hours			<30	n/a			
Total Dissolved Solids (mg/l)	2540C	97	mg/l	10		9/24/99	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	83	mg/l	10		9/24/99	7 days			<15	n/a			
Nitrogen No2 + No3, Total (mg/l as N)	4500NO3F	1.3	mg/l	0.05		9/20/99	28 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	2.84	mg/l			9/27/99	28 days				6.45			
Nitrogen, Ammonia + Organic, Total (mg/l as N)	calc.	2.84	mg/l				28 days							
Nitrogen Nitrate Total (mg/l as N)	calc.	1.2	mg/l			9/20/99	48 hours							Filter w/in 48hrs, analyze w/in 28 days
Nitrogen Nitrite Total (mg/l as N)	4500NO2B	0.1	mg/l			9/20/99	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	1.5	mg/l			9/24/99	28 days				10			
Nitrogen Organic Total (mg/l as N)	calc.	1.34	mg/l			9/27/99	28 days							
Phosphorous Total (mg/l as P)	365.3	0.50	mg/l	0.05		9/23/99	28 days			<15				
Phosphorous Dissolved (mg/l as P)	365.3	0.20	mg/l			9/21/99	28 days							
Phosphorous Ortho (mg/l as P)	4500PE	0.45	mg/l	0.05		9/20/99	48 hours			<15				
Sulfate Dissolved (mg/l)	300.0	12.4	mg/l			9/30/99	28 days							
Hexavalent Chromium Total (mg/l)	3500	NA	mg/l				24 hours							
Phenols Total Recoverable (ug/l)	420.1	8.1	ug/l			9/24/99	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	NA	mg/l	0.2			28 days	<30	n/a	<5.00	n/a			
Organic Carbon, Total (mg/l)	5310C	7.0	mg/l			10/1/99	28 days							
Bicarbonate Whole Field (mg/l as HCo3)		NA	mg/l											
Bicarbonate Dissolved, Field (mg/l as HCo3)		NA	mg/l											
Carbonate Water Field (mg/l as Co3)		NA	mg/l											
Carbonate Water Dissolved, Field, (mg/l as Co3)		NA	mg/l											
Alkalinity Water Field Total (mg/l as CaCo3)		NA	mg/l											
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)		NA	mg/l											
Alkalinity LAB (mg/l as CaCo3)	2320B	52	mg/l			9/24/99	14 days							
Silica Dissolved (mg/l as SiO2)		NA	mg/l											
Hardness (mg/l)	2340B	63	mg/l	1		10/28/99	6 months			<15	n/a			
Antimony (ug/l as Sb)	3113B	<4	ug/l		M2	9/28/99	6 months							Matrix spike recovery outside lab limits
Antimony Dissolved (ug/l as Sb)	200.9	<4	ug/l			9/28/99	6 months							
Arsenic Total (ug/l as As)	3113B	<5	ug/l			10/1/99	6 months							
Arsenic Dissolved (ug/l as As)	200.9	<5	ug/l			10/4/99	6 months							
Barium Dissolved (ug/l as Ba)		NA	ug/l											

Glendale CITRUS Grovers and 71st Avenues 19 Sept 1999	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Beryllium Total Recoverable (ug/l as Be)	200.7	<2	ug/l			11/8/99	6 months							
Beryllium Dissolved (ug/l as Be)	200.7	<2	ug/l			10/11/99	6 months							
Cadmium Total Recoverable (ug/l as Cd)	3113B	<0.2	ug/l	0.2		10/1/99	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	200.7	<5	ug/l			10/7/99	6 months							
Calcium Dissolved (mg/l as Ca)	200.7	22	mg/l			10/28/99	6 months							
Chromium Total Recoverable (ug/l as Cr)	200.8	2.8	ug/l	1	B	11/1/99	6 months	<25		<35				Conc. detected between MDL and PQL
Chromium Dissolved (ug/l as Cr)	200.8	8.4	ug/l			10/2/99	6 months				0.9			
Cobalt Dissolved (ug/l as Co)		NA	ug/l											
Copper, Total Recoverable, (ug/l as Cu)	200.7	<15	ug/l	1		10/21/99	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.7	<15	ug/l			10/7/99	6 months							
Iron, Dissolved, (ug/l as Fe)		NA	ug/l											
Lead, Total Recoverable, (ug/l as Pb)	3113B	10	ug/l	1		10/1/99	6 months	<25		<35				Matrix spike recovery outside lab limits
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			9/21/99	6 months							
Lithium, Dissolved, (ug/l as Li)		NA	ug/l											
Magnesium, Dissolved, (mg/l as Mg)	200.7	2	mg/l	1		10/21/99	6 months							
Manganese, Dissolved, (ug/l as Mn)		NA	ug/l											
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	ug/l			9/30/99	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			10/5/99	6 months							
Molybdenum, Dissolved, (ug/l as Mo)		NA	ug/l											
Nickel, Total Recoverable, (ug/l as Ni)	200.8	3	ug/l	2	B	11/1/99	6 months	<25		<35				Conc. detected between MDL and PQL
Nickel, Dissolved, (ug/l as Ni)	249.2	11	ug/l			10/2/99	6 months				0.5			
Potassium, Dissolved, (mg/l as K)		NA	mg/l											
Selenium, Total, (ug/l as Se)	3113B	<5	ug/l			10/1/99	6 months							
Selenium, Dissolved, (ug/l as Se)	200.9	<5	ug/l			9/30/99	6 months							
Silver, Total Recoverable, (ug/l as Ag)	200.7	<40	ug/l			10/21/99	6 months							
Silver, Dissolved, (ug/l as Ag)	200.7	<50	ug/l			10/7/99	6 months							
Sodium, Dissolved, (mg/l as Na)		NA	mg/l											
Strontium, Dissolved, (ug/l as Sr)		NA	ug/l											
Thallium, Total, (ug/l as Tl)	279.2	<1	ug/l			9/27/99	6 months							
Thallium, Dissolved, (ug/l as Tl)	200.9	<1	ug/l			9/28/99	6 months							
Vanadium, Dissolved, (ug/l as V)		NA	ug/l											
Zinc, Total Recoverable, (ug/l as Zn)	200.7	210	ug/l	1		11/4/99	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	60	ug/l			10/7/99	6 months							
Diazinon, Total, (ug/l)		NA	ug/l											
Ethion, Total, (ug/l)		NA	ug/l											
Malathion, Total, (ug/l)		NA	ug/l											
Methyl Parathion, Total, (ug/l)		NA	ug/l											
Parathion, Total, (ug/l)		NA	ug/l											
Trithion, Total, (ug/l)		NA	ug/l											
Di-syston, Total, (ug/l)		NA	ug/l											
Phorate, Total, (ug/l)		NA	ug/l											
Chlorpyrifos, Total, (ug/l)		NA	ug/l											
DEF, Total, (ug/l)		NA	ug/l											
Fonofos(Dy-fonate), WWT, (ug/l)		NA	ug/l											
EPA Method 608 Extraction						9/21/99	7 days							
Aldrin, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
BHC - ALPHA, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
BHC - Gamma (Lindane), (ug/l)	608	<1.0	ug/l			9/23/99	40 days							

R - Rejected Data

Glendale CITRUS Grovers and 71st Avenues 19 Sept 1999	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
BHC - DELTA, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1016, PCB, Total, (ug/l)	608	<1.0	ug/l		L	9/23/99	40 days							Lab fortified blank outside lab limits
Aroclor 1221, PCB, Total, (ug/l)	608	<10	ug/l			9/23/99	40 days							
Aroclor 1232, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1242, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1248, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1254, PCB, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Aroclor 1260, PCB, Total, (ug/L)	608	<1.0	ug/l			9/23/99	40 days							
Chlordane, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
P,P' DDD, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
P, P' DDT, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Dieldrin, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endo-Sulfan Alpha, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endo-Sulfan Beta, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endo-Sulfan Sulfate, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endrin Aldehyde, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Endrin, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Heptachlor, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Heptachlor Epoxide, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Toxaphene, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
Methoxychlor, Total, (ug/l)		NA	ug/l											
Beta Benzene Hexachloride, Total, (ug/l)	608	<1.0	ug/l			9/23/99	40 days							
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
1,1,1,2-Tetrachloroethane, Total,(ug/l)	624	NA	ug/l				14 days							
Tetrachloroethene, PCE, Total, (ug/l)	624	NA	ug/l				14 days							
1,1,1- Trichloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
1,1,2- Trichloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
Trichloroethene, Total, (ug/l)	624	NA	ug/l				14 days							
1,1- Dichloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
1,1- Dichloroethene, Total, (ug/l)	624	NA	ug/l				14 days							
1,2- Dichloroethane, Total, (ug/l)	624	NA	ug/l				14 days							
1,2- Dichloropropane, Total, (ug/l)	624	NA	ug/l				14 days							
2- Chloroethylvinyl Ether, Total, (ug/l)	624	NA	ug/l				14 days							
cis-1,3-Dichloropropene, (ug/l)	624	NA	ug/l				14 days							
trans-1,2- Dichloroethene, (ug/l)	624	NA	ug/l				14 days							
trans-1,3- Dichloropropene, (ug/l)	624	NA	ug/l				14 days							
Benzene, Total, (ug/l)	624	NA	ug/l				14 days							
Bromodichloromethane, Total, (ug/l)	624	NA	ug/l				14 days							
Bromoform, Total, (ug/l)	624	NA	ug/l				14 days							
Carbon Tetrachloride, Total, (ug/l)	624	NA	ug/l				14 days							
Chlorobenzene, Total, (ug/l)	624	NA	ug/l				14 days							
Chloroethane, (ug/l)	624	NA	ug/l				14 days							
Chloroform, Total, (ug/l)	624	NA	ug/l				14 days							
Ethylbenzene, Total, (ug/l)	624	NA	ug/l				14 days							
Methylene Chloride, Total, (ug/l)	624	NA	ug/l				14 days							
Toluene, Total, (ug/l)	624	NA	ug/l				14 days							
Trichlorofluoromethane, Total, (ug/l)	624	NA	ug/l				14 days							

Glendale CITRUS Grovers and 71st Avenues 19 Sept 1999	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Vinyl Chloride, Total, (ug/l)	624	NA	ug/l				14 days							
Chlorodibromomethane, Total, (ug/l)	624	NA	ug/l				14 days							
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/l)		NA	ug/l											
Acetone, Total, (ug/l)	624	NA	ug/l				14 days							
2-Butanone, (ug/l)	624	NA	ug/l				14 days							
Carbon Disulfide, Total, (ug/l)	624	NA	ug/l				14 days							
1,2 Dichloroethene, Total, (ug/l)	624	NA	ug/l				14 days							
Xylenes, Total, (ug/l)	624	NA	ug/l				14 days							
m,p-Xylenes (ug/l)	624	NA	ug/l				14 days							
o-Xylene (ug/l)	624	NA	ug/l				14 days							
2-Hexanone, Total, (ug/l)	624	NA	ug/l				14 days							
Styrene, Total, (ug/l)	624	NA	ug/l				14 days							
Acrolein, Total, (ug/l)	624	NA	ug/l				14 days							
Acrylonitrile, Total, (ug/l)	624	NA	ug/l				14 days							
Bromobenzene, Water Whole, Total, (ug/l)		NA	ug/l											
1,3-Dichloropropane, Water Whole, Total, (ug/l)	624	NA	ug/l				14 days							
Methyl Bromide, Total, (ug/l)	624	NA	ug/l				14 days							
Methyl Chloride, Total, (ug/l)	624	NA	ug/l				14 days							
Parachloro Toluene, Total, (ug/l)		NA	ug/l											
Dibromoethane, Total, (ug/l)		NA	ug/l											
Bromomethane (ug/l)	624	NA	ug/l				14 days							
Chloromethane (ug/l)	624	NA	ug/l				14 days							
Dibromochloromethane (ug/l)	624	NA	ug/l				14 days							
Dichlorodifluoromethane, Total, (ug/l)	624	NA	ug/l				14 days							
Dichloromethane (ug/l)	624	NA	ug/l				14 days							
Total Trihalomethanes (ug/l)	624	NA	ug/l				14 days							
1,2-Dichlorobenzene (ug/l)	624	NA	ug/l				14 days							
1,3-Dichlorobenzene (ug/l)	624	NA	ug/l				14 days							
1,4-Dichlorobenzene (ug/l)	624	NA	ug/l				14 days							
EPA Method 625 Extraction						9/23/99	7 days							
Acenaphthene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Acenaphthylene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Anthracene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzidine, Total, (ug/l)	625	<50	ug/l			10/1/99	40 days							
Benzoic Acid, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (b) Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (k) Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (ghi) Perylene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzo (a) Pyrene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Benzyl Alcohol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Butyl Benzyl Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2-Chloronapthalene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							

Glendale CITRUS Grovers and 71st Avenues 19 Sept 1999	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
2-Chlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Chrysene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Di-N-Butyl Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
1,3- Dichlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
1,4- Dichlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
1,2- Dichlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
3,3'- Dichlorobenzidine, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4- Dichlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Diethyl Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4- Dimethylphenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Dimethyl Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4- Dinitrophenol, Total, (ug/l)	625	<10	ug/l			10/1/99	40 days							
2,4- Dinitrotoluene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,6- Dinitrotoluene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Di-N-Octyl-Phthalate, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Fluorene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Hexachlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Hexachlorobutadiene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Hexachlorocyclopentadiene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Hexachloroethane, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Isophorone, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Naphthalene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Nitrobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2-Nitrophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
4-Nitrophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
N-Nitrosodiphenylamine, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
N-Nitrosodi-N-Propylamine, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Pentachlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Phenanthrene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Phenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
Pyrene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
1,2,4-Trichlorobenzene, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4,5- Trichlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							
2,4,6- Trichlorophenol, Total, (ug/l)	625	<5.0	ug/l			10/1/99	40 days							

Hard Copies of Data

Data Checksheet

Site	INDUSTRIAL PARK
Municipality	GLENDALE
Sample Date	JULY 15, 1999

Date Received	SEPTEMBER 30, 1999

Laboratory Used	BOLIN
Laboratory Contact	STEPHANIE ARMAO
FCD Sample ID Number	INDUSTRIAL PARK
Lab Sample ID Number	9907-06337-002, 06322-001
Laboratory Invoice Number	055898, 056354

Initial Review Complete	✓	Date	10-04-99
Lab Contacted		Date	
Lab Review Complete		Date	
Second Review Complete		Date	
Additional Review Necessary			

Comments

Data Validation Table Complete	✓	Date	10-29-99

Data Entered Into Database	✓	Date	10-29-99

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Maricopa County Flood Control
Environmental Branch
2801 West Durango
Phoenix, AZ 85009
Attn: Dave Gardner

Received: 7/15/99
Reported: 8/13/99
Invoice No: 055898

Project Name: Glendale

Matrix: Storm Water
Sample No: 9907-06322-001
Sample ID: Ind Park (West of New River)

Time Sampled: 8:40
Date Sampled: 7/15/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Biochemical Oxygen Demand	EPA 405.1	<44. F	mg/L		7/15/99
Oil & Grease	EPA 413.1	ND	mg/L	40	8/12/99
Coliform, Fecal (MPN)	SM 9221D	>8200	MPN/100ml	2.	7/15/99
Fecal Streptococcus	SM 9230B	50000	MPN/100ml	200	7/15/99
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	50	7/23/99
Chloromethane	EPA 624	ND	ug/L	50	7/23/99
Vinyl Chloride	EPA 624	ND	ug/L	50	7/23/99
Bromomethane	EPA 624	ND	ug/L	50	7/23/99
Chloroethane	EPA 624	ND	ug/L	50	7/23/99
Trichlorofluoromethane	EPA 624	ND	ug/L	50	7/23/99
1,1-Dichloroethylene	EPA 624	ND	ug/L	20	7/23/99
Dichloromethane	EPA 624	ND	ug/L	50	7/23/99
Acrylonitrile	EPA 624	ND Y	ug/L	100	7/23/99
trans 1,2-Dichloroethylene	EPA 624	ND	ug/L	20	7/23/99
1,1-Dichloroethane	EPA 624	ND	ug/L	20	7/23/99
Chloroform	EPA 624	ND	ug/L	20	7/23/99
1,1,1-Trichloroethane	EPA 624	ND	ug/L	20	7/23/99
Carbon tetrachloride	EPA 624	ND	ug/L	20	7/23/99
Benzene	EPA 624	ND	ug/L	20	7/23/99
1,2-Dichloroethane	EPA 624	ND	ug/L	20	7/23/99
Trichloroethylene (TCE)	EPA 624	ND	ug/L	20	7/23/99
1,2-Dichloropropane	EPA 624	ND	ug/L	20	7/23/99
Bromodichloromethane	EPA 624	ND	ug/L	20	7/23/99
2-Chloroethylvinyl ether	EPA 624	ND	ug/L	20	7/23/99
cis 1,3-Dichloropropene	EPA 624	ND	ug/L	20	7/23/99
Toluene	EPA 624	ND	ug/L	20	7/23/99
trans-1,3-Dichloropropene	EPA 624	ND	ug/L	20	7/23/99
1,1,2-Trichloroethane	EPA 624	ND	ug/L	20	7/23/99
Tetrachloroethylene (PCE)	EPA 624	ND	ug/L	20	7/23/99
Dibromochloromethane	EPA 624	ND	ug/L	20	7/23/99
Chlorobenzene	EPA 624	ND	ug/L	20	7/23/99
Ethylbenzene	EPA 624	ND	ug/L	20	7/23/99

Bolin Laboratories Inc.

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9907-06322-001

Time Sampled: 8:40
Date Sampled: 7/15/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
m,p-Xylenes	EPA 624	ND Y	ug/L	40	7/23/99
o-Xylene	EPA 624	ND Y	ug/L	20	7/23/99
1,3-Dichlorobenzene	EPA 624	ND	ug/L	20	7/23/99
1,4-Dichlorobenzene	EPA 624	ND	ug/L	20	7/23/99
Bromoform	EPA 624	ND	ug/L	20	7/23/99
1,1,2,2-Tetrachloroethane	EPA 624	ND	ug/L	20	7/23/99
1,2-Dichlorobenzene	EPA 624	ND	ug/L	20	7/23/99
Total Trihalomethanes	EPA 624	ND	ug/L	20	7/23/99
Acrolein	EPA 624	ND T,Y	ug/L	500	7/23/99
Surrogates:	EPA 624				7/23/99
***Pentafluorobenzene	EPA 624	81	% Recovery		7/23/99
***1,2-dichloroethane-d4	EPA 624	100	% Recovery		7/23/99
***4-bromofluorobenzene	EPA 624	72	% Recovery		7/23/99
***1,2-dichlorobenzene-d4	EPA 624	92	% Recovery		7/23/99

F = The oxygen depletion for the BOD seed was outside laboratory acceptance criteria. The associated GGA check standard was acceptable. Data is considered valid.
For EPA 624, the sample was diluted by a factor of 10 due to sample matrix.
T = Result based on a Tentatively Identified Compound search.
Y = Compound not listed in cited method.

Stephanie Armao

Authorized Signatory
ADHS License No.: AZ0004

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Maricopa County Flood Control
Environmental Branch
2801 West Durango
Phoenix, AZ 85009
Attn: Dave Gardner

Received: 7/15/99
Reported: 8/26/99
Invoice No: 056354

Project Name: Glendale

Matrix: Storm Water
Sample No: 9907-06337-002
Sample ID: Industrial Park

Time Sampled: 12:15
Date Sampled: 7/15/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	8/02/99
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/06/99
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	8/04/99
Cadmium, Dissolved	EPA 200.7	<0.005	mg/L	0.005	8/04/99
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	8/04/99
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/06/99
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	7/28/99
Nickel, Dissolved	EPA 200.7	<0.02	mg/L	0.02	8/04/99
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/06/99
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	8/04/99
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	8/02/99
Zinc, Dissolved	EPA 200.7	<0.02	mg/L	0.02	8/08/99
Chromium	EPA 218.2	0.018 ***	mg/L	0.005	9/16/99
Chromium, Dissolved	EPA 218.2	0.0014 ***	mg/L	0.0005	9/11/99
Nickel	EPA 249.2	0.004 *** B	mg/L	0.02	9/16/99
Nickel, Dissolved	EPA 249.2	0.0046 ***	mg/L	0.002	9/11/99
Chemical Oxygen Demand	EPA 410.4	123.	mg/L	20.	7/30/99
Chloride	SM 4500-CL B	<5.0	mg/L	5.0	8/03/99
Total Dissolved Solids	SM 2540C	112.	mg/L		7/20/99
Solids, Total Suspended	EPA 160.2	2.	mg/L		7/20/99
Nitrogen as Ammonia	EPA 350.2	1.08	mg/L	0.03	7/26/99
Nitrogen as Nitrite	SM 4500-NO2 B	<0.1	mg/L	0.1	7/16/99
Organic Nitrogen	CALCULATION	2.54	mg/L		7/26/99
Total Kjeldahl Nitrogen	EPA 351.3	3.62	mg/L	0.03	7/26/99
Total Phosphorous as P	EPA 365.3	0.35	mg/L	0.05	8/02/99
Phosphorus, Dissolved	EPA 365.3	0.14	mg/L	0.05	7/29/99
Orthophosphate as P	SM 4500 PE	0.20	mg/L	0.05	7/16/99
Total Alkalinity (as CaCO3)	SM 2320B	48.	mg/L	2.	7/27/99
Sulfate, Dissolved	EPA 300.0	7.4	mg/L	5.0	7/28/99
Metals Digestion for ICP	EPA 200.7				7/21/99
Metals Digestion for GFAA	SM 3030E				7/28/99
Antimony	SM 3113B	<0.004	mg/L	0.004	8/02/99

Bolin Laboratories Inc.

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9907-06337-002

Time Sampled: 12:15
Date Sampled: 7/15/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Arsenic	SM 3113B	<0.005	mg/L	0.005	8/06/99
Beryllium	EPA 200.7	<0.002	mg/L	0.002	8/04/99
Copper	EPA 200.7	<0.015	mg/L	0.015	8/04/99
Lead	SM 3113B	<0.005	mg/L	0.005	8/06/99
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	7/26/99
Selenium	SM 3113B	<0.005	mg/L	0.005	8/06/99
Silver	EPA 200.7	<0.04	mg/L	0.04	8/04/99
Zinc	EPA 200.7	0.07	mg/L	0.02	8/04/99
4,4'-DDD	EPA 608	ND	ug/L	1.0	8/07/99
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/07/99
4,4'-DDT	EPA 608	ND	ug/L	1.0	8/07/99
Aldrin	EPA 608	ND	ug/L	1.0	8/07/99
alpha-BHC	EPA 608	ND	ug/L	1.0	8/07/99
Chlordane	EPA 608	ND	ug/L	1.0	8/07/99
delta-BHC	EPA 608	ND	ug/L	1.0	8/07/99
Dieldrin	EPA 608	ND	ug/L	1.0	8/07/99
Endosulfan I	EPA 608	ND	ug/L	1.0	8/07/99
Endosulfan II	EPA 608	ND	ug/L	1.0	8/07/99
Endosulfan Sulfate	EPA 608	ND	ug/L	1.0	8/07/99
Endrin	EPA 608	ND	ug/L	1.0	8/07/99
Endrin Aldehyde	EPA 608	ND	ug/L	1.0	8/07/99
Heptachlor	EPA 608	ND	ug/L	1.0	8/07/99
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	8/07/99
Lindane (gamma BHC)	EPA 608	ND	ug/L	1.0	8/07/99
PCB 1016	EPA 608	ND	ug/L	1.0	8/07/99
PCB 1221	EPA 608	ND	ug/L	1.0	8/07/99
PCB 1232	EPA 608	ND	ug/L	1.0	8/07/99
PCB 1242	EPA 608	ND	ug/L	1.0	8/07/99
PCB 1248	EPA 608	ND	ug/L	1.0	8/07/99
PCB 1254	EPA 608	ND	ug/L	1.0	8/07/99
PCB 1260	EPA 608	ND	ug/L	1.0	8/07/99
Toxaphene	EPA 608	ND	ug/L	5.0	8/07/99
beta-BHC	EPA 608	ND	ug/L	1.0	8/07/99
Extraction	EPA 608				7/16/99
Surrogate:	EPA 608				8/07/99
***Dibutylchlorendate	EPA 608	50	% Recovery		8/07/99
pH	EPA 150.1	7.2	Std Unit		7/15/99
Nitrogen as Nitrate	CALCULATION	2.3	mg/L		7/16/99
Nitrate plus Nitrite	SM 4500-NO3 F	2.3	mg/L	0.1	7/19/99
Thallium	EPA 279.2	<0.001	mg/L	0.001	8/03/99
Cadmium	SM 3113B	<0.0002	mg/L	0.0002	8/06/99
Acenaphthene	EPA 625	ND	ug/L	5.0	7/28/99

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9907-06337-002

Time Sampled: 12:15
Date Sampled: 7/15/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Acenaphthylene	EPA 625	ND	ug/L	5.0	7/28/99
Aniline	EPA 625	ND Y	ug/L	5.0	7/28/99
Anthracene	EPA 625	ND	ug/L	5.0	7/28/99
Benzidine	EPA 625	ND Y	ug/L	50.	7/28/99
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	7/28/99
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	7/28/99
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	7/28/99
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	7/28/99
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	7/28/99
Benzoic acid	EPA 625	ND Y	ug/L	5.0	7/28/99
Benzyl alcohol	EPA 625	ND Y	ug/L	5.0	7/28/99
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	7/28/99
Bis(2-chloroethyl)ether	EPA 625	ND	ug/L	5.0	7/28/99
Bis(2-chloroethoxy)methane	EPA 625	ND	ug/L	5.0	7/28/99
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	5.0	7/28/99
Bis(2-ethylhexyl)phthalate	EPA 625	ND	ug/L	5.0	7/28/99
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	7/28/99
4-Chloroaniline	EPA 625	ND Y	ug/L	5.0	7/28/99
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	7/28/99
4-Chlorophenylphenylether	EPA 625	ND	ug/L	5.0	7/28/99
Chrysene	EPA 625	ND	ug/L	5.0	7/28/99
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	7/28/99
Dibenzofuran	EPA 625	ND Y	ug/L	5.0	7/28/99
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	7/28/99
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	7/28/99
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	7/28/99
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	7/28/99
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	7/28/99
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	7/28/99
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	7/28/99
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	7/28/99
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	7/28/99
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	7/28/99
1,2-Diphenylhydrazine	EPA 625	ND *, Y	ug/L	5.0	7/28/99
Fluoranthene	EPA 625	ND	ug/L	5.0	7/28/99
Fluorene	EPA 625	ND	ug/L	5.0	7/28/99
Hexachlorobenzene	EPA 625	ND	ug/L	5.0	7/28/99
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	7/28/99
Hexachlorocyclopentadiene	EPA 625	ND Y	ug/L	5.0	7/28/99
Hexachloroethane	EPA 625	ND	ug/L	5.0	7/28/99
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	7/28/99
Isophorone	EPA 625	ND	ug/L	5.0	7/28/99

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9907-06337-002

Time Sampled: 12:15
Date Sampled: 7/15/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
2-Methylnaphthalene	EPA 625	ND Y	ug/L	5.0	7/28/99
Naphthalene	EPA 625	ND	ug/L	5.0	7/28/99
2-Nitroaniline	EPA 625	ND Y	ug/L	5.0	7/28/99
3-Nitroaniline	EPA 625	ND Y	ug/L	5.0	7/28/99
4-Nitroaniline	EPA 625	ND Y	ug/L	5.0	7/28/99
Nitrobenzene	EPA 625	ND	ug/L	5.0	7/28/99
N-Nitrosodimethylamine	EPA 625	ND Y	ug/L	5.0	7/28/99
N-Nitrosodiphenylamine	EPA 625	ND Y	ug/L	5.0	7/28/99
N-Nitrosodi-n-propylamine	EPA 625	ND	ug/L	5.0	7/28/99
Phenanthrene	EPA 625	ND	ug/L	5.0	7/28/99
Pyrene	EPA 625	ND	ug/L	5.0	7/28/99
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	7/28/99
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	7/28/99
2-Chlorophenol	EPA 625	ND	ug/L	5.0	7/28/99
2,4-Dichlorophenol	EPA 625	ND	ug/L	5.0	7/28/99
2,4-Dimethylphenol	EPA 625	ND	ug/L	5.0	7/28/99
2,4-Dinitrophenol	EPA 625	ND	ug/L	20.0	7/28/99
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	20.0	7/28/99
2-Methylphenol	EPA 625	ND Y	ug/L	5.0	7/28/99
4-Methylphenol (p-Cresol)	EPA 625	ND Y	ug/L	5.0	7/28/99
2-Nitrophenol	EPA 625	ND	ug/L	5.0	7/28/99
4-Nitrophenol	EPA 625	ND	ug/L	5.0	7/28/99
Pentachlorophenol	EPA 625	ND	ug/L	5.0	7/28/99
Phenol	EPA 625	ND	ug/L	5.0	7/28/99
2,4,5-Trichlorophenol	EPA 625	ND Y	ug/L	5.0	7/28/99
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	7/28/99
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.0	7/28/99
Extraction	EPA 625				7/19/99
Surrogate:	EPA 625				7/28/99
***2-Fluorophenol	EPA 625	20.5	% Recovery		7/28/99
***d6-Phenol	EPA 625	18.0	% Recovery		7/28/99
***d5-Nitrobenzene	EPA 625	29.1	% Recovery		7/28/99
***2-Fluorobiphenyl	EPA 625	29.8	% Recovery		7/28/99
***2,4,6-Tribromophenol	EPA 625	51.0	% Recovery		7/28/99
***d14-Terphenyl	EPA 625	48.0	% Recovery		7/28/99
Calcium	EPA 200.7	16.	mg/L	1.	8/04/99
Magnesium	EPA 200.7	2.	mg/L	1.	8/04/99
Hardness, Total (Ca & Mg)	SM 2340B	48	mg/L	7.	8/04/99

* = 1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.
B = Analyte concentration detected at a value between MDL and PQL.

Bolin Laboratories Inc.

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(602) 942 8220 • FAX (602) 942 1050

T = Result based on a Tentatively Identified Compound search.
Y = Compound not listed in cited method.

EPA Method 625 performed by Legend Technical Services, St.Paul MN, #AZ0557.
EPA Method 608 analyzed by Alpha Analytical. Sparks, NV. #AZ0467.
TKN & Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.
***Metals analyzed by ACZ Laboratories, Steamboat Springs CO. #AZ0102.

Insufficient sample volume for Total Organic Carbon analysis.

Stephanie Armao

Authorized Signatory
ADHS License No.: AZ0004

QC Report

QC Parameter	Sample Result	ICP Sample Result	QCS % Rec	Duplicate Result	Duplicate RPD	Spike Result	Spike % Rec
Batch ID: CR-D-628 QC ID: BE08510		Samples: BE08505 BE08506 BE08507 BE08508 BE08509 BE08510					
Chromium, Dissolved	<0.01						
Batch ID: CR-T-629 QC ID: BE08510		Samples: BE08505 BE08506 BE08507 BE08508 BE08509 BE08510					
Chromium, Total	0.02		106.	0.02	0.00	5.26	105
Batch ID: NI-D-630 QC ID: BE08510		Samples: BE08505 BE08506 BE08507 BE08508 BE08509 BE08510					
Nickel, Dissolved	0.02						
Batch ID: NI-T-631 QC ID: BE08510		Samples: BE08505 BE08506 BE08507 BE08508 BE08509 BE08510					
Nickel, Total	0.03		114.	0.03	0.00	5.61	112

AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (602) 921-8044 • FAX: (602) 921-0049

Lic. No. AZ0003

QUALITY CONTROL REPORT

PARAMETER:	NH_3	**UNITS:**	mg/L
METHOD NO.:	EPA 350.2	**ANALYST:**	SLM
ANALYSIS DATE:	07/26/99	**PREPARED BY:**	CJC

QUALITY CONTROL SAMPLE

Theoretical Value	Analytical Value	% Recovery
1.00	0.95	95

DUPLICATE SAMPLE

Lab I.D.	Result 1	Result 2	% RPD
BE-07692	1.36	1.26	7.6
BE-07701	0.17	0.17	0.0

SPIKED SAMPLE

Lab I.D.	Sample Result	Spike Result	Amount Spiked	% Recovery
BE-07692	1.31	6.06	5.00	95
BE-07701	0.17	1.24	1.00	107

Reagent Blank = < 0.03

File No. NH3-7-26.xls

AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (602) 921-8044 • FAX: (602) 921-0049

Lic. No. AZ0003

QUALITY CONTROL REPORT

PARAMETER:	TKN	**UNITS:**	mg/L
METHOD NO.:	EPA 351.3	**ANALYST:**	SLM
ANALYSIS DATE:	07/26/99	**PREPARED BY:**	CJC

QUALITY CONTROL SAMPLE

Theoretical Value	Analytical Value	% Recovery
1.00	1.03	103

DUPLICATE SAMPLE

Lab I.D.	Result 1	Result 2	% RPD
BE-07683	4.40	4.32	1.8
BE-07703	3.55	3.68	3.6

SPIKED SAMPLE

Lab I.D.	Sample Result	Spike Result	Amount Spiked	% Recovery
BE-07683	4.36	8.91	5.00	91
BE-07703	3.61	8.43	5.00	96

Reagent Blank = < 0.03

File No. TKN-7-26.xls

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL Bolin Labs ;17753550406 # 7/ 30

EPA Method 608/8081A
QC Summary

Batch: 990805
Date: 8/8/99

Initials: US
Instrument ID: GC/ECD#2D

Analyte	LRB		LCS BLL99080542-26A PEST			LCSD BLL99080542-27A PEST			Precision	MS BLL99080542-29A (6482-1)			Accuracy	Comments
	Conc. µg/L	R.L. µg/L	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	RPD %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Range of Acceptability*	
gamma-BHC	ND	0.05	5.0	3.928	79	5.0	4.037	81	2.7	5.0	3.541	71	32-127	
Aldrin	ND	0.05	5.0	3.949	79	5.0	4.007	80	1.4	5.0	3.414	68	42-122	
Heptachlor epoxide	ND	0.05	5.0	4.182	84	5.0	4.316	86	3.1	5.0	3.514	70	37-142	
Dieldrin	ND	0.10	5.0	4.026	81	5.0	4.139	83	2.7	5.0	3.332	67	36-146	
Endrin	ND	0.10	5.0	4.099	82	5.0	4.240	85	3.4	5.0	3.652	73	30-147	
4,4'-DDT	ND	0.10	5.0	3.753	75	5.0	3.848	77	2.5	5.0	3.516	70	25-160	

* DQOS are derived from EPA Methods 608

Endrin Breakdown: 10%
DDT Breakdown: 13%

Surrogate Recovery
DBC Limits: 35-135%

AAI ID	DBC % Rec.		AAI ID	DBC % Rec.		AAI ID	DBC % Rec.	
MBLK BLL99080542-25A	112							
LCS BLL99080542-26A PEST	134							
MS BLL99080542-29A (6482-1)	111							
LCSD BLL99080542-27A PEST	136							
SAMP BLL99080542-30A (6482-1)	77							
SAMP BLL99080542-31A (6496-2)	71							
SAMP BLL99080542-32A (6547-1)	56							

DO: Diluted out

Received Time Aug.13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-0089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL Bolin Labs ;17753550406 # 8/ 30

EPA Method 608/8081A
Calibration Factor / Continuing Calibration

Batch: 990805
Date: 8/8/99

Initials: _____
Instrument ID: GC/ECD#2D

Analyte	Initial Calibration: Calibration Factors (Conc./Area) 0.0025 d53820	0.005 d53830	0.01 d53830	0.02 d53850	0.05 d53860	0.1 d53870	0.2 d53880	Mean	RSD* %	Coefficient of Determination	Continuing Calibration Verification: 8081 CCV 0.1NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	8081 CCV 0.02NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	Accuracy Range of Acceptability
Hexachlorobenzene	3.62E-08	3.84E-08	4.22E-08	4.69E-08	5.60E-08	6.78E-08	8.30E-08	5.34E-08	32.1		0.1	0.101	101	0.02	0.020	100	85-115%
alpha-BHC	4.24E-08	4.18E-08	4.08E-08	4.04E-08	4.65E-08	5.21E-08	6.22E-08	4.66E-08	17.2		0.1	0.100	100	0.02	0.019	97	85-115%
gamma-BHC	4.10E-08	4.09E-08	4.12E-08	4.36E-08	5.10E-08	5.75E-08	6.82E-08	4.91E-08	21.4		0.1	0.091	91	0.02	0.019	93	85-115%
Heptachlor	3.81E-08	3.70E-08	3.84E-08	4.26E-08	5.12E-08	5.82E-08	7.03E-08	4.77E-08	27.0		0.1	0.100	100	0.02	0.019	95	85-115%
Aldrin	4.37E-08	4.46E-08	4.46E-08	4.71E-08	5.48E-08	6.24E-08	7.45E-08	5.31E-08	22.0		0.1	0.099	99	0.02	0.019	93	85-115%
beta-BHC	6.63E-08	7.07E-08	7.48E-08	8.20E-08	9.80E-08	1.12E-07	1.34E-07	9.12E-08	27.4		0.1	0.095	95	0.02	0.018	91	85-115%
delta-BHC	6.56E-08	6.39E-08	6.22E-08	6.54E-08	7.28E-08	7.98E-08	9.37E-08	7.19E-08	15.8		0.1	0.098	98	0.02	0.018	92	85-115%
Heptachlor epoxide	4.80E-08	4.59E-08	4.69E-08	5.19E-08	6.06E-08	6.84E-08	8.23E-08	5.79E-08	23.3		0.1	0.097	97	0.02	0.018	92	85-115%
Endosulfan I	5.01E-08	5.12E-08	5.16E-08	5.62E-08	6.52E-08	7.39E-08	8.81E-08	6.23E-08	23.0		0.1	0.096	96	0.02	0.017	87	85-115%
gamma-Chlordane	4.69E-08	4.72E-08	4.86E-08	5.22E-08	6.08E-08	6.87E-08	8.16E-08	5.80E-08	22.7		0.1	0.095	95	0.02	0.017	87	85-115%
alpha-Chlordane	4.57E-08	4.68E-08	4.84E-08	5.31E-08	6.25E-08	7.12E-08	8.51E-08	5.90E-08	25.1		0.1	0.095	95	0.02	0.017	85	85-115%
4,4'-DDE	5.62E-08	5.48E-08	5.39E-08	5.67E-08	6.47E-08	7.29E-08	8.66E-08	6.37E-08	19.1		0.1	0.095	95	0.02	0.017	84	85-115%
Dieldrin	5.41E-08	5.46E-08	5.43E-08	5.88E-08	6.43E-08	7.13E-08	8.34E-08	6.27E-08	17.8		0.1	0.095	95	0.02	0.017	84	85-115%
Endrin	6.46E-08	6.67E-08	6.57E-08	7.09E-08	7.90E-08	9.00E-08	1.06E-07	7.76E-08	20.1		0.1	0.101	101	0.02	0.017	84	85-115%
4,4'-DDD	7.01E-08	7.10E-08	6.98E-08	7.04E-08	8.00E-08	8.91E-08	1.04E-07	7.93E-08	16.6		0.1	0.096	96	0.02	0.017	85	85-115%
Endosulfan II	5.89E-08	6.29E-08	6.39E-08	6.91E-08	7.88E-08	8.76E-08	1.02E-07	7.47E-08	20.8		0.1	0.092	92	0.02	0.017	85	85-115%
4,4'-DDT	9.02E-08	9.02E-08	9.00E-08	9.81E-08	1.07E-07	1.15E-07	1.30E-07	1.03E-07	14.9		0.1	0.085	85	0.02	0.016	79	85-115%
Endrin Aldehyde	9.18E-08	7.96E-08	8.06E-08	8.04E-08	8.87E-08	9.46E-08	1.07E-07	8.90E-08	11.3		0.1	0.087	87	0.02	0.017	83	85-115%
Methoxychlor	1.26E-07	1.28E-07	1.34E-07	1.50E-07	1.67E-07	1.81E-07	2.24E-07	1.59E-07	22.2		0.1	0.094	94	0.02	0.017	85	85-115%
Endosulfan Sulfate	1.02E-07	1.09E-07	1.12E-07	1.18E-07	1.32E-07	1.47E-07	1.61E-07	1.26E-07	17.3		0.1	0.086	86	0.02	0.018	88	85-115%
Endrin Ketone	8.70E-08	8.55E-08	8.43E-08	8.69E-08	9.67E-08	1.03E-07	1.17E-07	9.44E-08	13.0		0.1	0.087	87	0.02	0.016	81	85-115%
Permethion I	9.09E-08	9.43E-08	9.89E-08	1.09E-07	1.31E-07	1.51E-07	1.61E-07	1.22E-07	27.6		0.1	0.855	86	0.02	0.181	90	85-115%
Permethion II	2.01E-07	2.09E-07	2.18E-07	2.29E-07	2.63E-07	2.94E-07	3.44E-07	2.51E-07	21.1		0.1	0.827	83	0.02	0.176	88	85-115%
							Average %RSD		20.8		Average Recovery %		94	Average Recovery %		88	85-115%

OK

Method 608
Initial Calibration Criteria
Prepare a calibration curve using a minimum of three calibration points. Alternatively, if the RSD <10%, linearity through the origin and quantitation using the Average Response Factor may be used.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed daily. The CVS is acceptable if the response of each analyte is within 15% of its true value.

Method 8081
Initial Calibration Criteria
*If the RSD of an analyte is <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may be used.
If the RSD for one or more analytes exceeds 20%, but the average RSD of all analytes is still <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may still be used
If the average RSD of all analytes exceeds 20%, linearity through the origin may not be used. The use of a linear regression not forced through zero may be used if the coefficient of determination >= 0.99.
Alternatively, a calibration curve may be prepared. A second order (quadratic) calibration curve must have a minimum of six calibration points. The curve cannot be forced through the origin or used as a calibration point.
The coefficient of determination of an acceptable calibration curve must be >= 0.99.
Calibration Verification Criteria
The CVS is acceptable if the response of each analyte is within 15% of its true value.
If this criteria is exceeded for one or more analytes, but the average response of all analytes is within 15% of their true values, the CVS is acceptable.

Calibration Type: 7 point Quadratic

Received Time Aug.13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

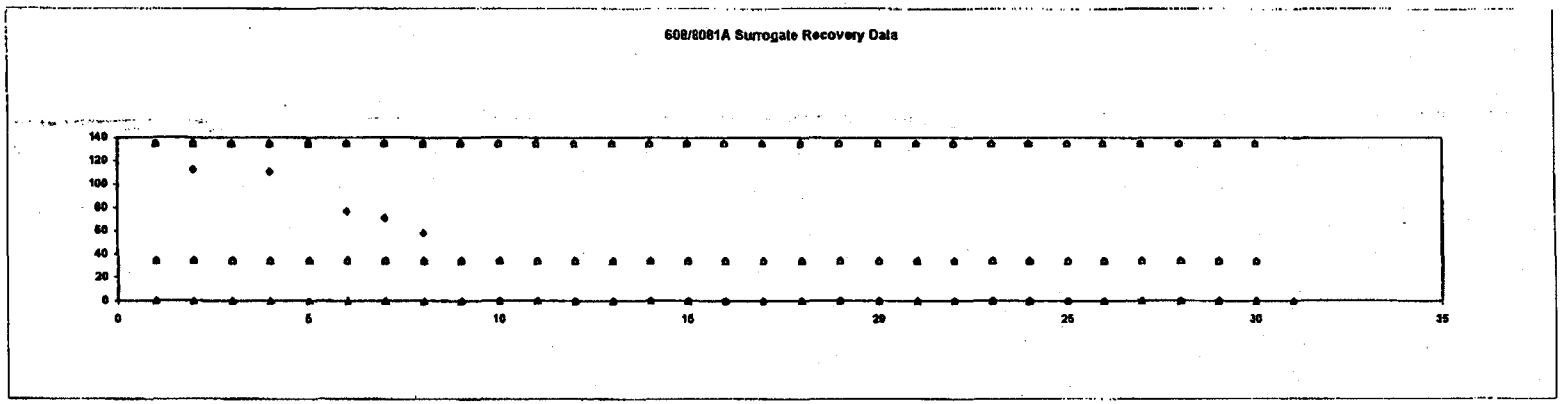
Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-6890
info@alpha-analytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL Bolin Labs ;1775355040 6 # 9/ 30

EPA Method 608/8081A
Surrogate Recovery Chart / Retention Time Windows

Batch: 990805
Date: 8/8/99

Initials:
Instrument ID: GC/ECD#2D



Analyte	0.0025 d53820	0.005 d53830	0.01 d53830	0.02 d53850	0.05 d53860	0.1 d53870	0.2 d53880	LCS d54130	MS d54340	CCV d54220	CCV d54210	Mean RT	Standard Deviation*	Retention Time Window (Mean RT +/- (3 x Std. Dev.)) From	To
	Retention Time Window Data														
Hexachlorobenzene	6.71	6.71	6.70	6.71	6.70	6.70	6.70			6.71	6.71	6.706	0.005	6.69	6.72
alpha-BHC	7.73	7.73	7.73	7.73	7.72	7.72	7.73	7.71	7.70	7.73	7.72	7.723	0.010	7.69	7.76
gamma-BHC	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.59	8.59	8.61	8.61	8.606	0.008	8.58	8.63
Heptachlor	9.01	9.01	9.01	9.01	9.01	9.01	9.01	8.99	8.99	9.01	9.01	9.006	0.008	8.98	9.03
Aldrin	9.55	9.55	9.55	9.55	9.55	9.55	9.55	9.53	9.53	9.55	9.55	9.546	0.008	9.52	9.57
beta-BHC	10.24	10.24	10.24	10.24	10.23	10.23	10.23	10.22	10.21	10.23	10.23	10.231	0.009	10.20	10.26
delta-BHC	10.69	10.68	10.69	10.68	10.68	10.68	10.68	10.67	10.66	10.68	10.68	10.679	0.008	10.65	10.70
Heptachlor epoxide	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.01	11.00	11.03	11.02	11.025	0.010	10.99	11.06
Endosulfan I	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.52	11.52	11.54	11.54	11.536	0.008	11.51	11.56
gamma-Chlordane	11.66	11.66	11.66	11.66	11.66	11.66	11.66			11.66	11.65	11.659	0.003	11.65	11.67
alpha-Chlordane	11.81	11.81	11.81	11.81	11.81	11.81	11.81			11.81	11.81	11.810	0.000	11.81	11.81
4,4'-DDE	11.96	11.96	11.96	11.96	11.95	11.95	11.96			11.95	11.96	11.956	0.005	11.94	11.97
Dieldrin	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.25	12.25	12.27	12.27	12.266	0.008	12.24	12.29
Endrin	12.68	12.67	12.68	12.67	12.67	12.67	12.67	12.65	12.65	12.67	12.67	12.668	0.010	12.64	12.70
4,4'-DDD	13.49	13.49	13.49	13.48	13.49	13.49	13.49	13.47	13.46	13.49	13.49	13.485	0.010	13.45	13.52
Endosulfan II	13.63	13.62	13.62	13.62	13.62	13.62	13.62	13.60	13.60	13.62	13.62	13.617	0.009	13.59	13.64
4,4'-DDT	13.80	13.80	13.80	13.80	13.79	13.79	13.79	13.77	13.77	13.79	13.79	13.790	0.011	13.76	13.82
Endrin Aldehyde	14.43	14.43	14.43	14.43	14.42	14.42	14.42	14.40	14.40	14.42	14.42	14.420	0.011	14.39	14.45
Methoxychlor	15.01	15.01	15.01	15.01	15.01	15.01	15.01	14.98	14.97	15.01	15.01	15.004	0.014	14.96	15.05
Endosulfan Sulfate	15.02	15.03	15.03	15.03	15.03	15.03	15.02	15.00	14.99	15.02	15.02	15.020	0.013	14.98	15.06
Endrin Ketone	15.75	15.75	15.75	15.75	15.75	15.75	15.75	15.73	15.73	15.75	15.75	15.746	0.008	15.72	15.77
Permethion I	16.43	16.43	16.43	16.43	16.43	16.43	16.43			16.43	16.43	16.430	0.000	16.43	16.43
Permethion I	16.67	16.67	16.67	16.67	16.67	16.67	16.67			16.67	16.67	16.670	0.000	16.67	16.67

Received Time Aug. 13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 1983312 Sacramento, CA • (916) 36659089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

Batch: 980805
Date: 8/8/98

Initials: d
Instrument ID: GC/ECD#2D

Analyte	Initial Calibration: Calibration Factors (Conc./Area) 0.025 d53930	0.05 d53940	0.1 d53940	0.25 d53960	0.5 d53970	1.0 d53980	1.5 d53990	2.5 d54000	Mean	RSD* %	Coefficient of Determination	Continuing Calibration Verification: 16/60 CCV 0.1NG/UL Conc µg/L	Rec. Amt. µg/L	Rec. %	16/60 CCV 1.0NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	
1016-1	1.31E-06	1.73E-06	1.93E-06	2.13E-06	2.49E-06	3.07E-06	3.43E-06	4.00E-06	2.30E-06	32.6		0.1	0.097	97	1.0	1.021	102	
1016-2	5.31E-07	7.18E-07	9.57E-07	1.14E-06	1.37E-06	1.73E-06	1.98E-06	2.35E-06	1.20E-06	43.7		0.1	0.093	93	1.0	1.022	102	Accuracy
1016-3	2.11E-06	2.78E-06	3.31E-06	3.59E-06	4.02E-06	4.69E-06	5.14E-06	5.82E-06	3.88E-06	28.9		0.1	0.095	95	1.0	1.011	101	Range of
1016-4	1.35E-06	1.82E-06	2.27E-06	2.52E-06	2.99E-06	3.59E-06	4.03E-06	5.02E-06	2.85E-06	35.9		0.1	0.093	93	1.0	1.011	101	Acceptability
1016-5	1.72E-06	2.41E-06	3.30E-06	3.42E-06	4.20E-06	4.90E-06	5.55E-06	6.12E-06	3.84E-06	37.0		0.1	0.088	88	1.0	1.024	102	85-115%
1016-6	3.16E-07	4.24E-07	5.18E-07	6.14E-07	7.49E-07	9.73E-07	1.08E-06	1.20E-06	6.69E-07	42.0		0.1	0.097	97	1.0	0.999	100	85-115%
1016-7	5.90E-07	8.32E-07	1.03E-06	1.20E-06	1.45E-06	1.78E-06	2.02E-06	2.36E-06	1.27E-06	40.5		0.1	0.095	95	1.0	1.005	100	85-115%
1016-8	8.55E-07	1.18E-06	1.39E-06	1.63E-06	1.81E-06	2.16E-06	2.40E-06	2.75E-06	1.62E-06	33.6		0.1	0.093	93	1.0	0.998	100	85-115%
1016-9	6.83E-07	9.19E-07	1.09E-06	1.22E-06	1.49E-06	1.81E-06	2.04E-06	2.35E-06	1.32E-06	36.7		0.1	0.090	90	1.0	1.000	100	85-115%
1016-10	7.21E-07	1.01E-06	1.14E-06	1.28E-06	1.64E-06	1.82E-06	2.04E-06	2.32E-06	1.38E-06	34.1		0.1	0.092	92	1.0	0.985	99	85-115%
1260-1	5.95E-07	9.13E-07	9.09E-07	1.05E-06	1.26E-06	1.58E-06	1.75E-06	2.01E-06	1.13E-06	36.5		0.1	0.090	90	1.0	0.950	95	85-115%
1260-2	1.09E-06	1.65E-06	1.70E-06	1.90E-06	2.28E-06	2.77E-06	1.55E-06	1.77E-06	1.85E-06	29.3		0.1	0.088	88	1.0	0.951	95	85-115%
1260-3	1.07E-06	1.44E-06	1.65E-06	1.78E-06	2.14E-06	2.61E-06	2.90E-06	3.24E-06	1.84E-06	33.5		0.1	0.095	95	1.0	0.947	95	85-115%
1260-4	3.56E-07	5.05E-07	5.79E-07	6.82E-07	7.85E-07	9.61E-07	1.06E-06	1.20E-06	7.04E-07	36.6		0.1	0.096	96	1.0	0.933	93	85-115%
1260-5	9.97E-07	1.31E-06	1.48E-06	1.65E-06	1.99E-06	2.41E-06	2.65E-06	3.00E-06	1.76E-06	33.5		0.1	0.083	83	1.0	0.911	91	85-115%
1260-6	1.03E-06	1.59E-06	1.97E-06	2.59E-06	2.76E-06	3.33E-06	3.61E-06	4.05E-06	2.41E-06	36.9		0.1	0.083	83	1.0	0.898	90	85-115%
1260-7	8.41E-07	1.11E-06	1.25E-06	1.38E-06	1.56E-06	1.89E-06	2.04E-06	2.28E-06	1.44E-06	28.4		0.1	0.085	85	1.0	0.890	89	85-115%
1260-8	1.15E-06	1.54E-06	2.86E-06	1.92E-06	3.59E-06	4.28E-06	4.84E-06	5.14E-06	2.86E-06	47.8		0.1	0.117	117	1.0	0.877	88	85-115%
1260-9	4.83E-07	6.15E-07	7.29E-07	8.03E-07	8.20E-07	1.10E-06	1.19E-06	1.30E-06	8.34E-07	30.5		0.1	0.095	95	1.0	0.951	95	85-115%
1260-10	6.74E-07	6.88E-07	9.42E-07	1.09E-06	1.18E-06	1.41E-06	1.52E-06	1.63E-06	1.07E-06	30.6		0.1	0.075	75	1.0	1.161	116	85-115%
							Average %RSD			35.5		Average Recovery %		91	Average Recovery %		99	85-115%

Method 608
Initial Calibration Criteria
Prepare a calibration curve using a minimum of three calibration points. Alternatively, if the RSD <10%, linearity through the origin and quantitation using the Average Response Factor may be used.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed daily. The CVS is acceptable if the response of each analyte is within 15% of its true value.

Method 8082
If the RSD of an analyte is <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may be used.
If the RSD for one or more analytes exceeds 20%, but the average RSD of all analytes is still <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may still be used
If the average RSD of all analytes exceeds 20%, linearity through the origin may not be used. The use of a linear regression not forced through zero may be used if the coefficient of determination >= 0.99.
Alternatively, a calibration curve may be prepared. A second order (quadratic) calibration curve must have a minimum of six calibration points. The curve cannot be forced through the origin or used as a calibration point.
The coefficient of determination of an acceptable calibration curve must be >= 0.99.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed at the beginning of each 12 hour shift. The CVS is acceptable if the recovery is within 15% of the theoretical value.
If this criteria is exceeded for one or more analytes, but the average response of all analytes is within 15% of their true values, the CVS is acceptable.

Calibration Type:
8 point Quadratic

EPA Method 8082

8-13-99; 2:33PM;ALPHA ANALYTICAL Bolin Labs ;17753550406 # 11/ 30
Received Time Aug.13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-0089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL Bolin Labs #13/30 17753550406

85

EPA Method 608/8081A
QC Summary

Batch: 990805
Date: 8/6/99

Initials: _____
Instrument ID: GC/ECD#2D

Analyte	LRB		LCS BLL99080542-21A PEST			LCSD BLL99080542-22A PEST			Precision	0			Accuracy	Comments
	Conc. µg/L	R.L. µg/L	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	RPD %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Range of Acceptability*	
gamma-BHC	ND	0.05	5.0	3.552	71	5.0	3.764	75	5.8	1.0	0.000	0	32-127	
Aldrin	ND	0.05	5.0	3.540	71	5.0	3.638	73	2.7	1.0	0.000	0	42-122	
Heptachlor epoxide	ND	0.05	5.0	3.702	74	5.0	3.959	79	6.7	1.0	0.000	0	37-142	
Dieldrin	ND	0.10	5.0	3.591	72	5.0	3.741	75	4.1	1.0	0.000	0	36-146	
Endrin	ND	0.10	5.0	3.639	73	5.0	3.856	77	5.8	1.0	0.000	0	30-147	
4,4'-DDT	ND	0.10	5.0	3.147	63	5.0	3.428	69	8.8	1.0	0.000	0	25-160	

* DQOS are derived from EPA Methods 608

Endrin Breakdown: 10%
DDT Breakdown: 13%

Surrogate Recovery
DBC Limits: 35-135%

AAI ID	DBC % Rec.		AAI ID	DBC % Rec.		AAI ID	DBC % Rec.	
MBLK BLL99080542-20A	103							
LCS BLL99080542-21A PEST	117							
LCSD BLL99080542-22A PEST	117							
SAMP BLL99080542-24A (6379-1)	106							

DO: Diluted out

Received Time Aug.13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-0089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL Bolin Labs ;17753550406 # 14/ 30

EPA Method 608/8081A
Calibration Factor / Continuing Calibration

Batch: 990805
Date: 8/8/99

Initials: _____
Instrument ID: GC/ECD#2D

Analyte	Initial Calibration: Calibration Factors (Conc./Area) 0.0025 d53820	0.005 d53830	0.01 d53830	0.02 d53850	0.05 d53860	0.1 d53870	0.2 d53880	Mean	RSD* %	Coefficient of Determination	Continuing Calibration Verification: 8081 CCV 0.1NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	8081 CCV 0.02NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	Accuracy Range of Acceptability
Hexachlorobenzene	3.62E-08	3.94E-08	4.22E-08	4.69E-08	5.80E-08	6.78E-08	8.30E-08	5.34E-08	32.1		0.1	0.101	101	0.02	0.020	100	85-115%
alpha-BHC	4.24E-08	4.18E-08	4.08E-08	4.04E-08	4.85E-08	5.21E-08	6.22E-08	4.66E-08	17.2		0.1	0.100	100	0.02	0.019	97	85-115%
gamma-BHC	4.10E-08	4.09E-08	4.12E-08	4.36E-08	5.10E-08	5.75E-08	6.82E-08	4.91E-08	21.4		0.1	0.091	91	0.02	0.019	93	85-115%
Heptachlor	3.61E-08	3.70E-08	3.84E-08	4.26E-08	5.12E-08	5.82E-08	7.03E-08	4.77E-08	27.0		0.1	0.100	100	0.02	0.019	95	85-115%
Aldrin	4.37E-08	4.46E-08	4.46E-08	4.71E-08	5.48E-08	6.24E-08	7.45E-08	5.31E-08	22.0		0.1	0.099	99	0.02	0.019	93	85-115%
beta-BHC	6.63E-08	7.07E-08	7.48E-08	8.20E-08	9.80E-08	1.12E-07	1.34E-07	9.12E-08	27.4		0.1	0.095	95	0.02	0.018	91	85-115%
delta-BHC	6.56E-08	6.39E-08	6.22E-08	6.54E-08	7.29E-08	7.98E-08	9.37E-08	7.19E-08	15.8		0.1	0.098	98	0.02	0.018	92	85-115%
Heptachlor epoxide	4.80E-08	4.69E-08	4.69E-08	5.19E-08	6.06E-08	6.84E-08	8.23E-08	5.79E-08	23.3		0.1	0.097	97	0.02	0.018	92	85-115%
Endosulfan I	5.01E-08	5.12E-08	5.16E-08	5.62E-08	6.52E-08	7.39E-08	8.81E-08	6.23E-08	23.0		0.1	0.096	96	0.02	0.017	87	85-115%
gamma-Chlordane	4.69E-08	4.72E-08	4.86E-08	5.22E-08	6.08E-08	6.87E-08	8.16E-08	5.80E-08	22.7		0.1	0.095	95	0.02	0.017	87	85-115%
alpha-Chlordane	4.57E-08	4.68E-08	4.84E-08	5.31E-08	6.25E-08	7.12E-08	8.51E-08	5.90E-08	25.1		0.1	0.095	95	0.02	0.017	85	85-115%
4,4'-DDE	5.62E-08	5.48E-08	5.39E-08	5.67E-08	6.47E-08	7.29E-08	8.66E-08	6.37E-08	19.1		0.1	0.095	95	0.02	0.017	84	85-115%
Dieldrin	5.41E-08	5.46E-08	5.43E-08	5.68E-08	6.43E-08	7.13E-08	8.34E-08	6.27E-08	17.8		0.1	0.095	95	0.02	0.017	84	85-115%
Endrin	6.48E-08	6.67E-08	6.57E-08	7.09E-08	7.90E-08	9.00E-08	1.06E-07	7.76E-08	20.1		0.1	0.101	101	0.02	0.017	84	85-115%
4,4'-DDD	7.01E-08	7.10E-08	6.98E-08	7.04E-08	8.00E-08	8.91E-08	1.04E-07	7.93E-08	16.6		0.1	0.096	96	0.02	0.017	85	85-115%
Endosulfan II	5.89E-08	6.29E-08	6.39E-08	6.91E-08	7.88E-08	8.76E-08	1.02E-07	7.47E-08	20.8		0.1	0.092	92	0.02	0.017	85	85-115%
4,4'-DDT	9.02E-08	9.02E-08	9.00E-08	9.81E-08	1.07E-07	1.15E-07	1.30E-07	1.03E-07	14.9		0.1	0.085	85	0.02	0.016	79	85-115%
Endrin Aldehyde	9.18E-08	7.96E-08	8.06E-08	8.04E-08	8.87E-08	9.48E-08	1.07E-07	8.90E-08	11.3		0.1	0.087	87	0.02	0.017	83	85-115%
Methoxychlor	1.26E-07	1.28E-07	1.34E-07	1.50E-07	1.67E-07	1.81E-07	2.24E-07	1.59E-07	22.2		0.1	0.094	94	0.02	0.017	85	85-115%
Endosulfan Sulfate	1.02E-07	1.09E-07	1.12E-07	1.18E-07	1.32E-07	1.47E-07	1.61E-07	1.26E-07	17.3		0.1	0.086	86	0.02	0.018	88	85-115%
Endrin Ketone	8.70E-08	8.55E-08	8.43E-08	8.69E-08	9.67E-08	1.03E-07	1.17E-07	9.44E-08	13.0		0.1	0.087	87	0.02	0.016	81	85-115%
Permethion I	9.09E-08	9.43E-08	9.89E-08	1.09E-07	1.31E-07	1.51E-07	1.81E-07	1.22E-07	27.6		0.1	0.855	86	0.02	0.181	90	85-115%
Permethion II	2.01E-07	2.09E-07	2.16E-07	2.29E-07	2.63E-07	2.94E-07	3.44E-07	2.51E-07	21.1		0.1	0.827	83	0.02	0.176	88	85-115%
							Average %RSD		20.8		Average Recovery %		94	Average Recovery %		88	85-115%

Method 608
Initial Calibration Criteria
Prepare a calibration curve using a minimum of three calibration points. Alternatively, if the RSD <10%, linearity through the origin and quantitation using the Average Response Factor may be used.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed daily. The CVS is acceptable if the response of each analyte is within 15% of its true value.

Method 8081
Initial Calibration Criteria
*If the RSD of an analyte is <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may be used.
If the RSD for one or more analytes exceeds 20%, but the average RSD of all analytes is still <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may still be used
If the average RSD of all analytes exceeds 20%, linearity through the origin may not be used. The use of a linear regression not forced through zero may be used if the coefficient of determination >= 0.99.
Alternatively, a calibration curve may be prepared. A second order (quadratic) calibration curve must have a minimum of six calibration points. The curve cannot be forced through the origin or used as a calibration point.
The coefficient of determination of an acceptable calibration curve must be >= 0.99.
Calibration Verification Criteria
The CVS is acceptable if the response of each analyte is within 15% of its true value.
If this criteria is exceeded for one or more analytes, but the average response of all analytes is within 15% of their true values, the CVS is acceptable.

Calibration Type: 7 point Quadratic

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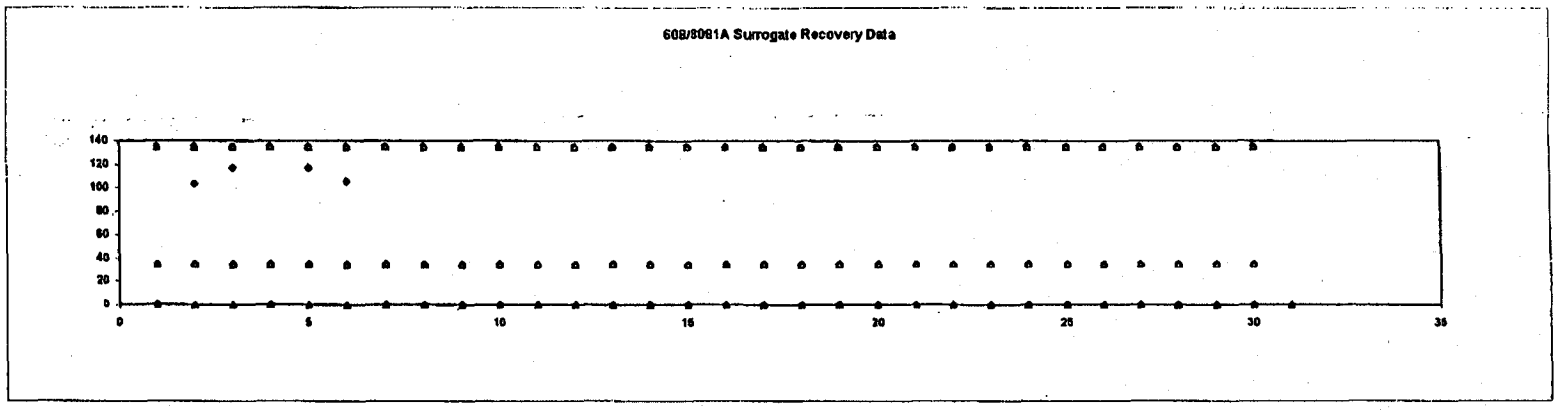
Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-0089 Wichita, KS • (316) 722-5890
info@alphaanalytical.com

EPA Method 608/8081A
Surrogate Recovery Chart / Retention Time Windows

Batch: 990805
Date: 8/8/99

Initials: _____
Instrument ID: GC/ECD#2D



Analyte	Retention Time Window Data													Retention Time Window (Mean RT +/- (3 x Std. Dev.))	
	0.0025 d53820	0.005 d53830	0.01 d53830	0.02 d53850	0.05 d53860	0.1 d53870	0.2 d53880	LCS d54080	MS d54320	CCV d54220	CCV d54210	Mean RT	Standard Deviation*	From	To
Hexachlorobenzene	6.71	6.71	6.70	6.71	6.70	6.70	6.70			6.71	6.71	6.706	0.005	6.69	6.72
alpha-BHC	7.73	7.73	7.73	7.73	7.72	7.72	7.73	7.71		7.73	7.72	7.725	0.007	7.70	7.75
gamma-BHC	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.60		8.61	8.61	8.609	0.003	8.60	8.62
Heptachlor	9.01	9.01	9.01	9.01	9.01	9.01	9.01	8.99		9.01	9.01	9.008	0.006	8.99	9.03
Aldrin	9.55	9.55	9.55	9.55	9.56	9.55	9.55	9.54		9.55	9.55	9.549	0.003	9.54	9.56
beta-BHC	10.24	10.24	10.24	10.24	10.23	10.23	10.23	10.22		10.23	10.23	10.233	0.007	10.21	10.25
delta-BHC	10.69	10.68	10.69	10.68	10.68	10.68	10.68	10.67		10.68	10.68	10.681	0.006	10.68	10.70
Heptachlor epoxide	11.03	11.03	11.03	11.03	11.03	11.03	11.03	11.01		11.03	11.02	11.027	0.007	11.01	11.05
Endosulfan I	11.54	11.54	11.54	11.54	11.54	11.54	11.54	11.53		11.54	11.54	11.539	0.003	11.53	11.55
gamma-Chlordane	11.66	11.66	11.66	11.66	11.66	11.66	11.66			11.66	11.65	11.659	0.003	11.65	11.67
alpha-Chlordane	11.81	11.81	11.81	11.81	11.81	11.81	11.81			11.81	11.81	11.810	0.000	11.81	11.81
4,4'-DDE	11.96	11.96	11.96	11.96	11.95	11.95	11.96			11.95	11.95	11.956	0.005	11.94	11.97
Dieldrin	12.27	12.27	12.27	12.27	12.27	12.27	12.27	12.26		12.27	12.27	12.269	0.003	12.26	12.28
Endrin	12.68	12.67	12.68	12.67	12.67	12.67	12.67	12.66		12.67	12.67	12.671	0.006	12.65	12.69
4,4'-DDD	13.49	13.49	13.49	13.49	13.49	13.49	13.49	13.47		13.49	13.49	13.488	0.006	13.47	13.51
Endosulfan II	13.63	13.62	13.62	13.62	13.62	13.62	13.62	13.61		13.62	13.62	13.620	0.005	13.61	13.63
4,4'-DDT	13.80	13.80	13.80	13.80	13.79	13.79	13.79	13.78		13.79	13.79	13.793	0.007	13.77	13.81
Endrin Aldehyde	14.43	14.43	14.43	14.43	14.42	14.42	14.42	14.41		14.42	14.42	14.423	0.007	14.40	14.44
Methoxychlor	15.01	15.01	15.01	15.01	15.01	15.01	15.01	14.98		15.01	15.01	15.007	0.009	14.98	15.04
Endosulfan Sulfate	15.02	15.03	15.03	15.03	15.03	15.03	15.02	15.01		15.02	15.02	15.024	0.007	15.00	15.04
Endrin Ketone	15.75	15.75	15.75	15.75	15.75	15.75	15.75	15.74		15.75	15.75	15.749	0.003	15.74	15.76
Permethion I	16.43	16.43	16.43	16.43	16.43	16.43	16.43			16.43	16.43	16.430	0.000	16.43	16.43
Permethion I	16.67	16.67	16.67	16.67	16.67	16.67	16.67			16.67	16.67	16.670	0.000	16.67	16.67

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Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 198-3312 Sacramento, CA • (916) 366-0889 Wichita, KS • (316) 729-3890
info@alphaanalytical.com

EPA Method 8082
QC Summary

Batch: 990805
Date: 8/8/99

Initials: SP
Instrument ID: GC/ECD#2D

Analyte	LRB Conc. µg/L	LRB R.L. µg/L	LCS BLL99080542-23A PCB Spike Amt. µg/L	LCS Rec. Amt. µg/L	LCS Rec. %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Precision RPD %	Q Spike Amt. µg/L	Q Rec. Amt. µg/L	Q Rec. %	Accuracy Range of Acceptability*	Comments
1016-1	ND	1.00	10.0	8.268	83	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-2	ND	1.00	10.0	9.126	91	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-3	ND	1.00	10.0	9.161	92	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-4	ND	1.00	10.0	8.851	89	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-5	ND	1.00	10.0	11.431	114	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-6	ND	1.00	10.0	9.388	94	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-7	ND	1.00	10.0	10.005	100	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-8	ND	1.00	10.0	9.501	95	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-9	ND	1.00	10.0	9.630	96	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-10	ND	1.00	10.0	8.215	82	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-1	ND	1.00	10.0	10.291	103	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-2	ND	1.00	10.0	10.164	102	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-3	ND	1.00	10.0	13.258	133	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-4	ND	1.00	10.0	9.449	94	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-5	ND	1.00	10.0	11.327	113	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-6	ND	1.00	10.0	11.380	114	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-7	ND	1.00	10.0	9.292	93	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-8	ND	1.00	10.0	8.628	86	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-9	ND	1.00	10.0	10.145	101	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-10	ND	1.00	10.0	11.688	117	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	

* DQO'S are derived from EPA Methods 8082 (QA Acceptance Criteria)
** DQO'S are derived from laboratory data.

Surrogate Recovery
DBC Limits: 35-135%

AAI ID	DBC % Rec.		AAI ID	DBC % Rec.		AAI ID	DBC % Rec.	
MBLK BLL99080542-20A	102							
LCS BLL99080542-23A PCB	99							
SAMP BLL99080542-24A (8379-1)	107							

DO: Diluted out

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255 Glendale Avenue, Suite 21
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LAB: 1-800-283-1183

Las Vegas, NV • (702) 198-3312 Sacramento, CA • (916) 366-0889 Wichita, KS • (316) 729-5890
info@alphaanalytical.com

Batch: 990805
Date: 8/8/99

Initials: d
Instrument ID: GC/ECD#2D

Analyte	Initial Calibration: Calibration Factors (Conc./Area) 0.025 d53930	0.05 d53940	0.1 d53940	0.25 d53960	0.5 d53970	1.0 d53980	1.5 d53990	2.5 d54000	Mean	RSD[1] %	Coefficient of Determination	Continuing Calibration Verification: 16/60 CCV 0.1NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	16/60 CCV 1.0NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	
1016-1	1.31E-06	1.73E-06	1.83E-06	2.13E-06	2.49E-06	3.07E-06	3.43E-06	4.00E-06	2.30E-06	32.9		0.1	0.097	97	1.0	1.021	102	
1016-2	5.31E-07	7.18E-07	9.57E-07	1.14E-06	1.37E-06	1.73E-06	1.96E-06	2.36E-06	1.20E-06	43.7		0.1	0.093	93	1.0	1.022	102	Accuracy
1016-3	2.11E-06	2.76E-06	3.31E-06	3.59E-06	4.02E-06	4.69E-06	5.14E-06	6.02E-06	3.88E-06	26.9		0.1	0.095	95	1.0	1.011	101	Range of
1016-4	1.35E-06	1.82E-06	2.27E-06	2.52E-06	2.89E-06	3.58E-06	4.03E-06	6.82E-06	2.85E-06	36.9		0.1	0.093	93	1.0	1.011	101	Acceptability
1016-5	1.72E-06	2.41E-06	3.30E-06	3.42E-06	4.20E-06	4.90E-06	5.55E-06	6.12E-06	3.84E-06	37.0		0.1	0.088	88	1.0	1.024	102	85-115%
1016-6	3.16E-07	4.34E-07	6.18E-07	8.14E-07	7.48E-07	9.73E-07	1.06E-06	1.26E-06	6.69E-07	42.0		0.1	0.097	97	1.0	0.999	100	85-115%
1016-7	5.90E-07	8.32E-07	1.03E-06	1.20E-06	1.45E-06	1.79E-06	2.02E-06	2.38E-06	1.27E-06	40.5		0.1	0.095	95	1.0	1.005	100	85-115%
1016-8	8.55E-07	1.19E-06	1.38E-06	1.63E-06	1.81E-06	2.16E-06	2.40E-06	2.75E-06	1.62E-06	33.8		0.1	0.093	93	1.0	0.996	100	85-115%
1016-9	6.83E-07	9.19E-07	1.09E-06	1.22E-06	1.49E-06	1.81E-06	2.04E-06	2.35E-06	1.32E-06	36.7		0.1	0.090	90	1.0	1.000	100	85-115%
1016-10	7.21E-07	1.01E-06	1.14E-06	1.26E-06	1.54E-06	1.82E-06	2.04E-06	2.32E-06	1.36E-06	34.1		0.1	0.092	92	1.0	0.985	99	85-115%
1260-1	5.95E-07	8.13E-07	9.09E-07	1.06E-06	1.28E-06	1.56E-06	1.75E-06	2.01E-06	1.13E-06	38.5		0.1	0.090	90	1.0	0.950	95	85-115%
1260-2	1.09E-06	1.65E-06	1.70E-06	1.80E-06	2.28E-06	2.77E-06	1.56E-06	1.77E-06	1.85E-06	28.3		0.1	0.088	88	1.0	0.951	95	85-115%
1260-3	1.07E-06	1.44E-06	1.65E-06	1.78E-06	2.14E-06	2.81E-06	2.90E-06	3.24E-06	1.94E-06	33.5		0.1	0.095	95	1.0	0.847	95	85-115%
1260-4	3.56E-07	6.05E-07	5.78E-07	6.92E-07	7.85E-07	9.81E-07	1.06E-06	1.20E-06	7.04E-07	35.8		0.1	0.086	86	1.0	0.833	83	85-115%
1260-5	9.97E-07	1.31E-06	1.49E-06	1.85E-06	1.99E-06	2.41E-06	2.65E-06	3.00E-06	1.78E-06	33.5		0.1	0.083	83	1.0	0.911	91	85-115%
1260-6	1.03E-06	1.58E-06	1.87E-06	2.59E-06	2.78E-06	3.33E-06	3.61E-06	4.05E-06	2.41E-06	38.8		0.1	0.083	83	1.0	0.898	90	85-115%
1260-7	9.41E-07	1.11E-06	1.25E-06	1.38E-06	1.56E-06	1.88E-06	2.04E-06	2.26E-06	1.44E-06	29.4		0.1	0.085	85	1.0	0.890	89	85-115%
1260-8	1.15E-06	1.50E-06	2.88E-06	1.92E-06	3.59E-06	4.20E-06	4.64E-06	5.14E-06	2.86E-06	47.8		0.1	0.117	117	1.0	0.877	88	85-115%
1260-9	4.83E-07	6.15E-07	7.29E-07	8.03E-07	9.20E-07	1.10E-06	1.19E-06	1.30E-06	8.34E-07	30.5		0.1	0.095	95	1.0	0.851	85	85-115%
1260-10	6.74E-07	8.88E-07	9.42E-07	1.09E-06	1.18E-06	1.41E-06	1.52E-06	1.63E-06	1.07E-06	30.6		0.1	0.075	75	1.0	1.181	118	85-115%
							Average %RSD			35.5		Average Recovery %		91	Average Recovery %		98	85-115%

Method 608
Initial Calibration Criteria
Prepare a calibration curve using a minimum of three calibration points. Alternatively, if the RSD <10%, linearity through the origin and quantitation using the Average Response Factor may be used.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed daily. The CVS is acceptable if the response of each analyte is within 15% of its true value.

Method 8082
If the RSD of an analyte is <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may be used.
If the RSD for one or more analytes exceeds 20%, but the average RSD of all analytes is still <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may still be used
If the average RSD of all analytes exceeds 20%, linearity through the origin may not be used. The use of a linear regression not forced through zero may be used if the coefficient of determination >= 0.99.
Alternatively, a calibration curve may be prepared. A second order (quadratic) calibration curve must have a minimum of six calibration points. The curve cannot be forced through the origin or used as a calibration point.
The coefficient of determination of an acceptable calibration curve must be >= 0.99.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed at the beginning of each 12 hour shift. The CVS is acceptable if the recovery is within 15% of the theoretical value.
If this criteria is exceeded for one or more analytes, but the average response of all analytes is within 15% of their true values, the CVS is acceptable.

Calibration Type:
8 point Quadratic

EPA Method 8082

8-13-99; 2:33PM;ALPHA ANALYTICAL Bolin Labs ;17755550406 # 17/ 30
Received Time Aug. 13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

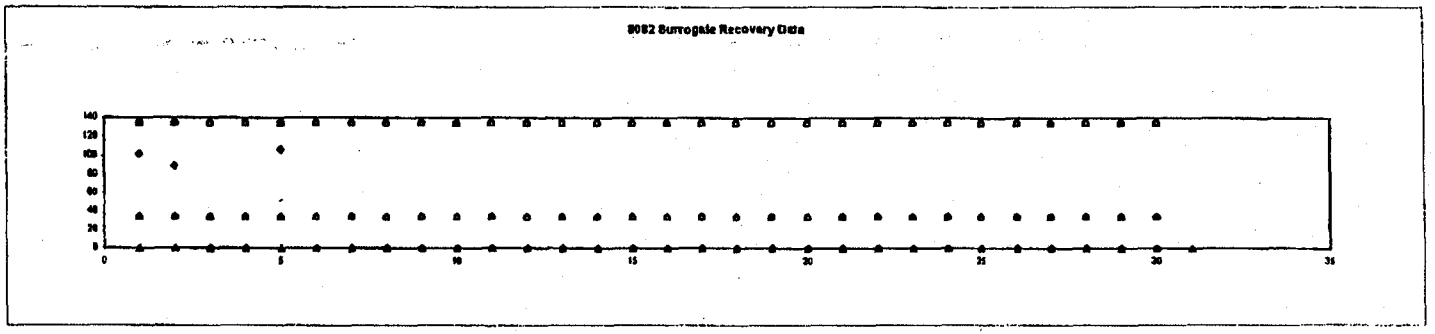
Las Vegas, NV • (702) 198-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

EPA Method 8082

Surrogate Recovery Chart / Retention Time Windows

Batch: 990805
Date: 8/8/99

Initials: sf
Instrument ID: GC/ECD#2D



Analyte	Retention Time Window Data														Retention Time Window (Mean RT +/- 3 x Std. Dev.)	
	0.025 d53930	0.05 d53940	0.1 d53940	0.25 d53960	0.5 d53970	1.0 d53980	1.5 d53990	2.5 d54000	LCS d54110	MS	CCV d54240	CCV d54250	Mean RT	Standard Deviation*	From	To
1016-1	6.93	6.93	6.93	6.93	6.92	6.92	6.92	6.92	6.92		6.93	6.93	6.925	0.005	6.91	6.94
1016-2	7.83	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82		7.83	7.83	7.823	0.006	7.81	7.84
1016-3	8.25	8.25	8.26	8.25	8.24	8.24	8.24	8.24	8.24		8.26	8.26	8.246	0.007	8.23	8.27
1016-4	8.36	8.36	8.35	8.36	8.35	8.35	8.35	8.35	8.35		8.36	8.36	8.355	0.005	8.34	8.37
1016-5	8.62	8.62	8.62	8.62	8.61	8.61	8.62	8.61	8.61		8.63	8.63	8.618	0.008	8.60	8.64
1016-6	8.79	8.79	8.79	8.79	8.78	8.78	8.79	8.79	8.78		8.79	8.79	8.785	0.005	8.77	8.80
1016-7	9.09	9.08	9.08	9.08	9.08	9.08	9.08	9.08	9.08		9.09	9.09	9.083	0.005	9.07	9.10
1016-8	9.30	9.30	9.29	9.30	9.29	9.29	9.29	9.29	9.29		9.30	9.30	9.295	0.005	9.28	9.31
1016-9	10.06	10.06	10.05	10.06	10.05	10.05	10.05	10.05	10.05		10.08	10.06	10.055	0.005	10.04	10.07
1016-10	10.28	10.26	10.26	10.26	10.25	10.25	10.25	10.25	10.25		10.27	10.26	10.256	0.007	10.24	10.28
1260-1	12.46	12.46	12.46	12.46	12.45	12.45	12.46	12.45	12.45		12.47	12.46	12.456	0.007	12.44	12.48
1260-2	12.89	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88		12.89	12.89	12.883	0.005	12.87	12.90
1260-3	13.12	13.12	13.12	13.12	13.12	13.12	13.11	13.11	13.11		13.13	13.12	13.118	0.006	13.10	13.14
1260-4	13.55	13.54	13.54	13.54	13.54	13.54	13.54	13.54	13.54		13.55	13.55	13.543	0.005	13.53	13.56
1260-5	13.69	13.69	13.68	13.68	13.68	13.68	13.68	13.68	13.68		13.69	13.69	13.684	0.005	13.67	13.70
1260-6	13.76	13.76	13.76	13.77	13.76	13.76	13.76	13.76	13.76		13.77	13.77	13.763	0.005	13.75	13.78
1260-7	14.26	14.26	14.25	14.25	14.25	14.26	14.25	14.25	14.26		14.26	14.26	14.254	0.005	14.24	14.27
1260-8	14.35	14.35	14.35	14.35	14.35	14.35	14.35	14.35	14.35		14.36	14.36	14.352	0.004	14.34	14.36
1260-9	14.77	14.77	14.77	14.77	14.77	14.78	14.77	14.77	14.77		14.78	14.78	14.772	0.004	14.76	14.78
1260-10	15.44	15.44	15.43	15.44	15.43	15.43	15.43	15.43	15.43		15.44	15.44	15.435	0.005	15.42	15.45

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alphaanalytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL ;1775355040 6 # 19/ 30
Bollin Labs

EPA Method 608/8081A
QC Summary

Batch: 990805
Date: 8/7/99

Initials:
Instrument ID: GC/ECD#2D

Analyte	LRB		LCS BLL99080542-09A PEST			LCSD BLL99080542-10A PEST			Precision	MS BLL99080542-12MS (6358-1)			Accuracy	Comments
	Conc. µg/L	R.L. µg/L	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	RPD %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Range of Acceptability*	
gamma-BHC	ND	0.05	5.0	4.183	84	5.0	4.275	85	2.2	5.0	3.106	62	32-127	
Aldrin	ND	0.05	5.0	4.266	85	5.0	4.398	88	3.0	5.0	3.303	66	42-122	
Heptachlor epoxide	ND	0.05	5.0	4.410	88	5.0	4.653	93	5.4	5.0	3.375	68	37-142	
Dieldrin	ND	0.10	5.0	4.393	88	5.0	4.601	92	4.8	5.0	3.621	72	36-146	
Endrin	ND	0.10	5.0	5.133	103	5.0	5.522	110	7.3	5.0	4.676	94	30-147	
4,4'-DDT	ND	0.10	5.0	3.182	64	5.0	3.410	68	6.9	5.0	2.744	55	25-160	

* DQOS are derived from EPA Methods 608

Endrin Breakdown: 6%
DDT Breakdown: 10%

Surrogate Recovery
DBC Limits: 35-135%

AAI ID	DBC % Rec.		AAI ID	DBC % Rec.		AAI ID	DBC % Rec.	
			SAMP BLL99080542-18A (6337-6)	73				
MBLK BLL99080542-01A	103		SAMP BLL99080542-19A (6358-1)	87				
LCS BLL99080542-08A PEST	124							
MS BLL99080542-12MS (6358-1)	10							
LCSD BLL99080542-10A PEST	129							
SAMP BLL99080542-13A (6312-2)	86							
SAMP BLL99080542-14A (6312-5)	40							
SAMP BLL99080542-15A (6312-8)	67							
SAMP BLL99080542-16A (6337-2)	50							
SAMP BLL99080542-17A (6337-4)	78							

DO: Diluted out

Received Time Aug. 13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

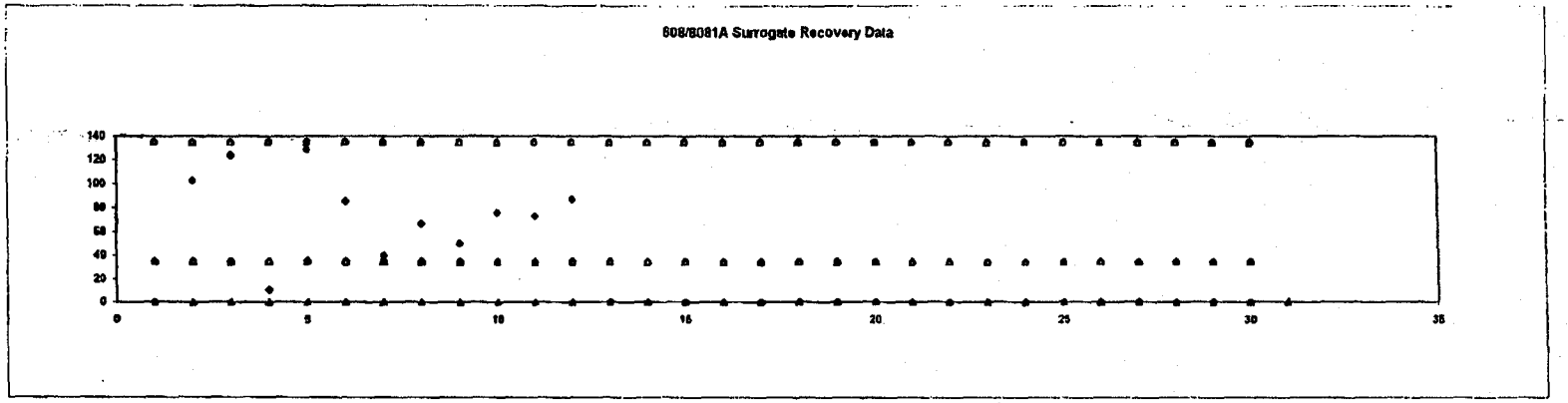
Las Vegas, NV • (702) 498-5312 Sacramento, CA • (916) 366-0089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL ;17753550406 Bolin Labs # 20/ 30

EPA Method 608/8081A
Surrogate Recovery Chart / Retention Time Windows

Batch: 990805
Date: 8/7/99

Initials: BJ
Instrument ID: GC/ECD#2D



Analyte	Retention Time Window Data													Retention Time Window (Mean RT +/- (3 x Std. Dev.))	
	0.0025 d53270	0.005 d53280	0.01 d53280	0.02 d53300	0.05 d53310	0.1 d53320	0.2 d53330	LCS d53530	MS d54290	CCV d53780	CCV d53770	Mean RT	Standard Deviation*	From	To
Hexachlorobenzene	6.72	6.72	6.72	6.71	6.72	6.72	6.72			6.71	6.71	6.717	0.005	6.70	6.73
alpha-BHC	7.75	7.74	7.75	7.74	7.74	7.74	7.74	7.72	7.71	7.73	7.73	7.735	0.012	7.70	7.77
gamma-BHC	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.61	8.61	8.61	8.62	8.624	0.009	8.60	8.65
Heptachlor	9.03	9.03	9.03	9.03	9.03	9.03	9.03	9.00	9.00	9.01	9.01	9.021	0.013	8.98	9.06
Aldrin	9.57	9.57	9.58	9.57	9.57	9.57	9.57	9.55	9.56	9.56	9.56	9.565	0.009	9.54	9.59
beta-BHC	10.26	10.26	10.26	10.25	10.25	10.25	10.25	10.23	10.23	10.24	10.24	10.247	0.011	10.21	10.28
delta-BHC	10.71	10.70	10.71	10.70	10.70	10.70	10.70	10.67	10.67	10.69	10.69	10.695	0.014	10.65	10.74
Heptachlor epoxide	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.02	11.01	11.03	11.03	11.040	0.015	11.00	11.08
Endosulfan I	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.53	11.53	11.55	11.55	11.559	0.016	11.51	11.61
gamma-Chlordane	11.68	11.68	11.69	11.68	11.68	11.68	11.68			11.66	11.66	11.677	0.010	11.65	11.71
alpha-Chlordane	11.83	11.83	11.83	11.83	11.83	11.83	11.83			11.81	11.81	11.826	0.009	11.80	11.85
4,4'-DDE	11.98	11.98	11.99	11.98	11.98	11.98	11.98			11.96	11.96	11.977	0.010	11.95	12.01
Dieldrin	12.30	12.30	12.30	12.30	12.30	12.29	12.29	12.27	12.26	12.28	12.28	12.288	0.014	12.25	12.33
Endrin	12.70	12.70	12.70	12.70	12.70	12.70	12.70	12.67	12.67	12.68	12.68	12.691	0.013	12.65	12.73
4,4'-DDD	13.51	13.51	13.51	13.51	13.51	13.51	13.51	13.48	13.47	13.49	13.49	13.500	0.015	13.46	13.54
Endosulfan II	13.65	13.65	13.65	13.65	13.65	13.65	13.65	13.61	13.81	13.63	13.63	13.639	0.016	13.59	13.69
4,4'-DDT	13.83	13.83	13.83	13.82	13.82	13.82	13.82	13.79	13.78	13.80	13.80	13.813	0.017	13.76	13.86
Endrin Aldehyde	14.45	14.45	14.45	14.45	14.45	14.45	14.45	14.41	14.41	14.43	14.43	14.439	0.016	14.39	14.49
Methoxychlor	15.04	15.04	15.04	15.04	15.04	15.03	15.03	14.99	14.99	15.01	15.01	15.024	0.020	14.98	15.08
Endosulfan Sulfate	15.05	15.05	15.05	15.05	15.05	15.05	15.05	15.01	15.01	15.03	15.03	15.039	0.016	14.99	15.09
Endrin Ketone	15.78	15.78	15.78	15.78	15.77	15.77	15.77	15.74	15.74	15.75	15.75	15.765	0.018	15.72	15.81
Permethion I	16.47	16.47	16.47	16.47	16.47	16.47	16.47			16.43	16.44	16.462	0.016	16.42	16.51
Permethion I	16.71	16.71	16.71	16.71	16.71	16.71	16.71			16.67	16.68	16.702	0.016	16.66	16.75

Received Time Aug.13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL ;1775550406 # 21/ 30
Bolin Labs

EPA Method 608/8081A
Calibration Factor / Continuing Calibration

Batch: 990805
Date: 8/7/99

Initials: ST
Instrument ID: GC/ECD#2D

Analyte	Initial Calibration: Calibration Factors (Conc./Area) 0.0025 d53270	0.005 d53280	0.01 d53290	0.02 d53300	0.05 d53310	0.1 d53320	0.2 d53330	Mean	RSD* %	Coefficient of Determination	Continuing Calibration Verification: 8081 CCV 0.1NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	8081 CCV 0.02NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	Accuracy Range of Acceptability
Hexachlorobenzene	3.65E-08	4.01E-08	4.40E-08	4.85E-08	6.03E-08	7.04E-08	8.41E-08	5.50E-08	31.8		0.1	0.101	101	0.02	0.022	109	85-115%
alpha-BHC	4.34E-08	4.44E-08	4.42E-08	4.38E-08	4.93E-08	5.46E-08	6.35E-08	4.90E-08	15.5		0.1	0.104	104	0.02	0.022	110	85-115%
gamma-BHC	4.40E-08	4.34E-08	4.50E-08	4.70E-08	5.40E-08	6.03E-08	6.98E-08	5.19E-08	19.3		0.1	0.104	104	0.02	0.022	111	85-115%
Heptachlor	3.93E-08	4.00E-08	4.23E-08	4.55E-08	5.31E-08	6.01E-08	7.08E-08	5.02E-08	23.6		0.1	0.102	102	0.02	0.022	109	85-115%
Aldrin	4.81E-08	4.82E-08	4.95E-08	5.16E-08	5.88E-08	6.57E-08	7.65E-08	5.69E-08	19.0		0.1	0.104	104	0.02	0.022	111	85-115%
beta-BHC	7.21E-08	7.67E-08	8.27E-08	9.01E-08	1.06E-07	1.20E-07	1.41E-07	9.84E-08	25.6		0.1	0.105	105	0.02	0.022	111	85-115%
delta-BHC	6.48E-08	6.55E-08	6.58E-08	6.36E-08	7.14E-08	7.96E-08	8.91E-08	7.14E-08	13.4		0.1	0.099	99	0.02	0.021	107	85-115%
Heptachlor epoxide	5.05E-08	5.11E-08	5.28E-08	5.57E-08	6.48E-08	7.33E-08	8.55E-08	6.20E-08	21.5		0.1	0.105	105	0.02	0.023	113	85-115%
Endosulfan I	5.59E-08	5.69E-08	5.93E-08	6.33E-08	7.15E-08	7.95E-08	9.15E-08	6.83E-08	19.5		0.1	0.106	106	0.02	0.023	113	85-115%
gamma-Chlordane	5.18E-08	5.27E-08	5.51E-08	5.92E-08	6.73E-08	7.47E-08	8.59E-08	6.38E-08	20.0		0.1	0.107	107	0.02	0.023	113	85-115%
alpha-Chlordane	5.15E-08	5.26E-08	5.54E-08	6.00E-08	6.91E-08	7.72E-08	8.92E-08	6.50E-08	21.8		0.1	0.107	107	0.02	0.023	114	85-115%
4,4'-DDE	6.38E-08	6.16E-08	6.22E-08	6.42E-08	7.10E-08	7.82E-08	8.86E-08	7.01E-08	14.9		0.1	0.106	106	0.02	0.022	112	85-115%
Dieldrin	6.18E-08	6.13E-08	6.24E-08	6.45E-08	7.12E-08	7.74E-08	8.69E-08	6.93E-08	14.0		0.1	0.108	108	0.02	0.023	113	85-115%
Endrin	6.46E-08	6.71E-08	8.53E-08	8.98E-08	1.01E-07	1.13E-07	1.26E-07	9.81E-08	16.2		0.1	0.145	145	0.02	0.030	148	85-115%
4,4'-DDD	8.69E-08	8.70E-08	8.77E-08	8.89E-08	9.68E-08	1.04E-07	1.17E-07	9.54E-08	11.9		0.1	0.116	116	0.02	0.025	123	85-115%
Endosulfan II	8.50E-08	6.94E-08	7.21E-08	7.75E-08	8.70E-08	9.52E-08	1.07E-07	8.19E-08	18.6		0.1	0.106	106	0.02	0.022	112	85-115%
4,4'-DDT	8.49E-08	8.54E-08	8.71E-08	8.87E-08	9.83E-08	1.06E-07	1.17E-07	9.53E-08	12.8		0.1	0.089	89	0.02	0.019	94	85-115%
Endrin Aldehyde	7.48E-08	7.73E-08	7.94E-08	8.22E-08	8.99E-08	9.58E-08	1.06E-07	8.65E-08	13.1		0.1	0.090	90	0.02	0.018	92	85-115%
Methoxychlor	1.12E-07	1.23E-07	1.23E-07	1.40E-07	1.58E-07	1.76E-07	2.10E-07	1.49E-07	23.6		0.1	0.090	90	0.02	0.017	87	85-115%
Endosulfan Sulfate	1.07E-07	1.05E-07	1.19E-07	1.21E-07	1.38E-07	1.46E-07	1.55E-07	1.27E-07	15.2		0.1	0.097	97	0.02	0.022	109	85-115%
Endrin Ketone	8.78E-08	8.64E-08	8.76E-08	9.13E-08	1.00E-07	1.07E-07	1.19E-07	9.71E-08	12.7		0.1	0.095	95	0.02	0.020	98	85-115%
Permethion I	8.60E-08	8.88E-08	9.82E-08	1.10E-07	1.29E-07	1.45E-07	1.69E-07	1.18E-07	26.2		0.1	0.087	99	0.02	0.194	97	85-115%
Permethion II	1.92E-07	1.99E-07	2.12E-07	2.30E-07	2.64E-07	2.90E-07	3.31E-07	2.46E-07	21.1		0.1	0.814	81	0.02	0.198	99	85-115%
							Average %RSD		18.7		Average Recovery %		103	Average Recovery %		109	85-115%

Method 608
Initial Calibration Criteria
Prepare a calibration curve using a minimum of three calibration points. Alternatively, if the RSD <10%, linearity through the origin and quantitation using the Average Response Factor may be used.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed daily. The CVS is acceptable if the response of each analyte is within 15% of its true value.

Method 8081
Initial Calibration Criteria
*If the RSD of an analyte is <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may be used.
If the RSD for one or more analytes exceeds 20%, but the average RSD of all analytes is still <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may still be used
If the average RSD of all analytes exceeds 20%, linearity through the origin may not be used. The use of a linear regression not forced through zero may be used if the coefficient of determination >= 0.99.
Alternatively, a calibration curve may be prepared. A second order (quadratic) calibration curve must have a minimum of six calibration points. The curve cannot be forced through the origin or used as a calibration point.
The coefficient of determination of an acceptable calibration curve must be >= 0.99.
Calibration Verification Criteria
The CVS is acceptable if the response of each analyte is within 15% of its true value.
If this criteria is exceeded for one or more analytes, but the average response of all analytes is within 15% of their true values, the CVS is acceptable.

Calibration Type: 7 point Quadratic

Received Time Aug.13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

EPA Method 8082
QC Summary

Batch: 990805
Date: 8/7/99

Initials: GC cd
Instrument ID: GC/ECD#2D

Analyte	LRB Conc. µg/L	LRB R.L. µg/L	LCS BLL99080542-11A PCB Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Precision RPD %	0 Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Accuracy Range of Acceptability*	Comments
1016-1	ND	1.00	10.0	9.609	96	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-2	ND	1.00	10.0	9.627	96	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-3	ND	1.00	10.0	9.620	96	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-4	ND	1.00	10.0	9.837	98	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-5	ND	1.00	10.0	12.233	122	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-6	ND	1.00	10.0	10.454	105	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-7	ND	1.00	10.0	10.476	105	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-8	ND	1.00	10.0	11.583	116	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-9	ND	1.00	10.0	9.356	94	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-10	ND	1.00	10.0	9.796	98	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-1	ND	1.00	10.0	11.113	111	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-2	ND	1.00	10.0	10.393	104	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-3	ND	1.00	10.0	13.296	133	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-4	ND	1.00	10.0	10.131	101	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-5	ND	1.00	10.0	11.887	119	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-6	ND	1.00	10.0	10.326	103	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-7	ND	1.00	10.0	10.844	108	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-8	ND	1.00	10.0	11.401	114	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-9	ND	1.00	10.0	10.432	104	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-10	ND	1.00	10.0	10.094	101	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	

* DQO'S are derived from EPA Methods 8082 (QA Acceptance Criteria)
*** DQO'S are derived from laboratory data.

Surrogate Recovery
DBC Limits: 35-135%

AAI ID	DBC % Rec.		AAI ID	DBC % Rec.		AAI ID	DBC % Rec.	
MBLK BLL99080542-08A	97		SAMP BLL99080542-19A (6358-1)	69				
LCS BLL99080542-11A PCB	96							
SAMP BLL99080542-13A (6312-2)	68							
SAMP BLL99080542-14A (6312-5)	41							
SAMP BLL99080542-15A (6312-8)	71							
SAMP BLL99080542-16A (6337-2)	50							
SAMP BLL99080542-17A (6337-4)	69							
SAMP BLL99080542-18A (6337-5)	73							

DO: Diluted out

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Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 198-3312 Sacramento, CA • (916) 366-0889 Wichita, KS • (316) 722-5800
info@alpha-analytical.com

Batch: 990806
Date: 8/7/99

Initials: [illegible]
Instrument ID: GC/ECD#2D

Analyte	Initial Calibration: Calibration Factors (Conc./Area) 0.025 d53380	0.05 d53390	0.1 d53390	0.25 d53410	0.5 d53420	1.0 d53430	1.6 d53440	2.5 d53450	Mean	RSD[1] %	Coefficient of Determination	Continuing Calibration Verification: 16/80 CCV 0.1NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	16/80 CCV 1.0NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	
1016-1	1.38E-06	1.76E-06	1.97E-06	2.20E-06	2.59E-06	3.16E-06	3.49E-06	4.05E-06	2.38E-06	32.1		0.1	0.097	97	1.0	1.031	103	
1016-2	5.58E-07	8.67E-07	1.01E-06	1.19E-06	1.40E-06	1.80E-06	2.00E-06	2.39E-06	1.26E-06	40.7		0.1	0.099	99	1.0	1.029	102	Accuracy
1016-3	2.21E-06	3.22E-06	3.54E-06	3.74E-06	4.13E-06	4.92E-06	5.34E-06	5.96E-06	3.88E-06	26.7		0.1	0.097	97	1.0	1.034	103	Range of
1016-4	1.43E-06	2.14E-06	2.43E-06	2.68E-06	3.00E-06	3.75E-06	4.11E-06	5.98E-06	2.79E-06	33.2		0.1	0.097	97	1.0	1.038	104	Acceptability
1016-5	1.83E-06	2.85E-06	3.51E-06	3.80E-06	4.13E-06	5.17E-06	5.61E-06	6.24E-06	3.82E-06	34.1		0.1	0.098	98	1.0	1.040	104	85-115%
1016-6	3.42E-07	4.69E-07	5.49E-07	6.44E-07	7.72E-07	1.00E-06	1.08E-06	1.28E-06	8.96E-07	39.7		0.1	0.103	103	1.0	1.008	101	85-115%
1016-7	6.33E-07	9.22E-07	1.10E-06	1.27E-06	1.48E-06	1.87E-06	2.08E-06	2.41E-06	1.33E-06	38.1		0.1	0.100	100	1.0	1.045	105	85-115%
1016-8	9.34E-07	1.31E-06	1.49E-06	1.63E-06	1.84E-06	2.28E-06	2.48E-06	2.93E-06	1.71E-06	31.4		0.1	0.099	99	1.0	1.049	105	85-115%
1016-9	7.38E-07	8.86E-07	1.17E-06	1.32E-06	1.62E-06	1.91E-06	2.09E-06	2.43E-06	1.39E-06	34.8		0.1	0.102	102	1.0	1.059	106	85-115%
1016-10	8.48E-07	1.12E-06	1.26E-06	1.38E-06	1.68E-06	1.95E-06	2.11E-06	2.42E-06	1.46E-06	30.7		0.1	0.103	103	1.0	1.073	107	85-115%
1260-1	6.36E-07	8.54E-07	9.90E-07	1.14E-06	1.34E-06	1.66E-06	1.81E-06	2.09E-06	1.20E-06	35.4		0.1	0.103	103	1.0	1.067	107	85-115%
1260-2	1.25E-06	1.59E-06	1.92E-06	2.07E-06	2.45E-06	2.92E-06	1.60E-06	1.91E-06	1.98E-06	28.3		0.1	0.097	97	1.0	1.054	105	85-115%
1260-3	1.18E-06	1.52E-06	1.74E-06	1.91E-06	2.22E-06	2.71E-06	2.99E-06	3.38E-06	2.04E-06	31.7		0.1	0.095	95	1.0	1.041	104	85-115%
1260-4	4.17E-07	5.81E-07	6.41E-07	7.43E-07	8.56E-07	1.03E-06	1.11E-06	1.25E-06	7.65E-07	32.6		0.1	0.108	108	1.0	1.064	106	85-115%
1260-5	1.16E-06	1.43E-06	1.62E-06	1.79E-06	2.04E-06	2.50E-06	2.83E-06	3.20E-06	1.91E-06	31.2		0.1	0.097	97	1.0	1.032	103	85-115%
1260-6	1.14E-06	1.84E-06	2.28E-06	2.69E-06	3.16E-06	3.76E-06	3.63E-06	4.05E-06	2.84E-06	36.4		0.1	0.120	120	1.0	1.074	107	85-115%
1260-7	8.66E-07	1.21E-06	1.39E-06	1.51E-06	1.70E-06	1.99E-06	2.12E-06	2.35E-06	1.56E-06	26.5		0.1	0.101	101	1.0	1.055	105	85-115%
1260-8	2.09E-06	2.82E-06	2.86E-06	3.20E-06	3.67E-06	4.30E-06	4.62E-06	5.33E-06	3.41E-06	27.3		0.1	0.092	92	1.0	0.992	99	85-115%
1260-9	6.47E-07	7.09E-07	7.93E-07	8.65E-07	9.71E-07	1.13E-06	1.20E-06	1.28E-06	8.87E-07	26.0		0.1	0.101	101	1.0	1.044	104	85-115%
1260-10	7.31E-07	9.44E-07	1.03E-06	1.16E-06	1.22E-06	1.39E-06	1.52E-06	1.72E-06	1.14E-06	23.4		0.1	0.093	93	1.0	0.942	94	85-115%
							Average %RSD			32.1		Average Recovery %		100	Average Recovery %		104	85-115%

Method 608
Initial Calibration Criteria
Prepare a calibration curve using a minimum of three calibration points. Alternatively, if the RSD <10%, linearity through the origin and quantitation using the Average Response Factor may be used.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed daily. The CVS is acceptable if the response of each analyte is within 15% of its true value.

Method 8082
If the RSD of an analyte is <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may be used.
If the RSD for one or more analytes exceeds 20%, but the average RSD of all analytes is still <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may still be used
If the average RSD of all analytes exceeds 20%, linearity through the origin may not be used. The use of a linear regression not forced through zero may be used if the coefficient of determination >= 0.99.
Alternatively, a calibration curve may be prepared. A second order (quadratic) calibration curve must have a minimum of six calibration points. The curve cannot be forced through the origin or used as a calibration point.
The coefficient of determination of an acceptable calibration curve must be >= 0.99.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed at the beginning of each 12 hour shift. The CVS is acceptable if the recovery is within 15% of the theoretical value.
If this criteria is exceeded for one or more analytes, but the average response of all analytes is within 15% of their true values, the CVS is acceptable.

Calibration Type:
9 point Quadratic

EPA Method 8082

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

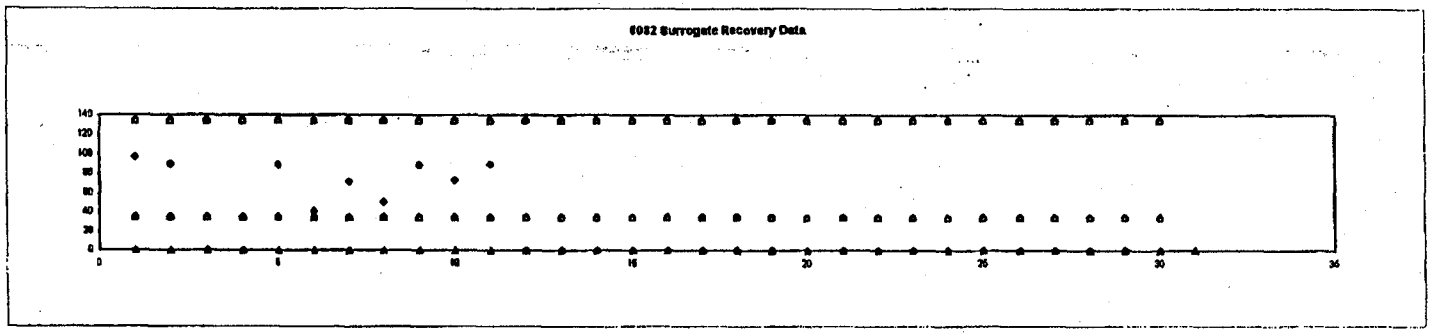
Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

EPA Method 8082

Surrogate Recovery Chart / Retention Time Windows

Batch: 980805
Date: 8/7/99

Initials:
Instrument ID: GC/ECD#2D



Analyte	0.025 d53380	0.05 d53390	0.1 d53390	0.25 d53410	0.5 d53420	1.0 d53430	1.5 d53440	2.5 d53450	LCS d53660	MS	CCV d53800	CCV d53810	Mean RT	Standard Deviation*	Retention Time Window (Mean RT +/- (3 x Std. Dev.)) From	To
	Retention Time Window Data															
1016-1	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.94		6.93	6.93	6.945	0.008	6.92	6.97
1016-2	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.83		7.83	7.83	7.845	0.008	7.82	7.87
1016-3	8.28	8.28	8.28	8.28	8.28	8.28	8.27	8.27	8.26		8.26	8.25	8.272	0.011	8.24	8.30
1016-4	8.38	8.38	8.38	8.38	8.38	8.38	8.38	8.38	8.36		8.36	8.36	8.375	0.009	8.35	8.40
1016-5	8.64	8.65	8.65	8.64	8.64	8.64	8.64	8.64	8.63		8.63	8.63	8.639	0.007	8.62	8.66
1016-6	8.81	8.81	8.81	8.81	8.81	8.81	8.81	8.81	8.80		8.79	8.79	8.805	0.009	8.78	8.83
1016-7	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.09		9.09	9.09	9.106	0.009	9.08	9.13
1016-8	9.32	9.33	9.32	9.32	9.32	9.32	9.32	9.32	9.30		9.30	9.30	9.315	0.010	9.28	9.35
1016-9	10.09	10.09	10.09	10.08	10.08	10.08	10.08	10.08	10.07		10.07	10.06	10.079	0.009	10.05	10.11
1016-10	10.29	10.29	10.29	10.29	10.29	10.28	10.28	10.28	10.27		10.27	10.26	10.281	0.010	10.25	10.31
1260-1	12.49	12.49	12.49	12.49	12.49	12.49	12.49	12.49	12.47		12.47	12.47	12.485	0.009	12.46	12.51
1260-2	12.92	12.92	12.92	12.91	12.91	12.91	12.91	12.91	12.90		12.89	12.89	12.908	0.011	12.88	12.94
1260-3	13.16	13.16	13.15	13.15	13.15	13.15	13.15	13.15	13.13		13.13	13.13	13.146	0.011	13.11	13.18
1260-4	13.58	13.58	13.58	13.58	13.58	13.57	13.57	13.57	13.56		13.55	13.55	13.570	0.012	13.53	13.61
1260-5	13.72	13.72	13.72	13.72	13.72	13.72	13.71	13.71	13.70		13.70	13.69	13.712	0.011	13.68	13.74
1260-6	13.79	13.80	13.80	13.80	13.80	13.80	13.79	13.79	13.78		13.77	13.77	13.790	0.012	13.75	13.83
1260-7	14.29	14.29	14.29	14.29	14.28	14.29	14.28	14.28	14.27		14.26	14.26	14.281	0.012	14.24	14.32
1260-8	14.39	14.39	14.39	14.39	14.38	14.38	14.38	14.38	14.37		14.36	14.36	14.379	0.011	14.35	14.41
1260-9	14.81	14.81	14.81	14.81	14.81	14.80	14.80	14.80	14.79		14.78	14.78	14.800	0.012	14.76	14.84
1260-10	15.47	15.47	15.47	15.47	15.47	15.47	15.47	15.47	15.46		15.46	15.44	15.464	0.011	15.43	15.50

Received Time Aug.13. 2:30PM

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255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
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LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

8-13-99; 2:33PM;ALPHA ANALYTICAL Bolin Labs ;17753550406 # 25/ 30

Received Time Aug.13. 2:30PM

EPA Method 608/8081A
QC Summary

Batch: 99080
Date: 8/7/99

Initials: BP
Instrument ID: GC/ECD#2D

Analyte	LRB		LCS BLL99080542-02A PEST			LCSD BLL99080542-03A PEST			Precision	0			Accuracy	Comments
	Conc. µg/L	R.L. µg/L	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	RPD %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Range of Acceptability*	
gamma-BHC	ND	0.05	5.0	4.465	89	5.0	4.285	86	4.1	1.0	0.000	0	32-127	
Aldrin	ND	0.05	5.0	4.499	90	5.0	4.356	87	3.2	1.0	0.000	0	42-122	
Heptachlor epoxide	ND	0.05	5.0	4.647	93	5.0	4.572	91	1.6	1.0	0.000	0	37-142	
Dieldrin	ND	0.10	5.0	4.456	89	5.0	4.502	90	1.0	1.0	0.000	0	36-146	
Endrin	ND	0.10	5.0	5.244	105	5.0	5.217	104	0.5	1.0	0.000	0	30-147	
4,4'-DDT	ND	0.10	5.0	3.320	66	5.0	3.275	66	1.3	1.0	0.000	0	25-160	

* DQOS are derived from EPA Methods 608

Endrin Breakdown: 18%
DDT Breakdown: 5%

Surrogate Recovery
DBC Limits: 35-135%

AAI ID	DBC % Rec.		AAI ID	DBC % Rec.		AAI ID	DBC % Rec.	
MBLK BLL99080542-01A	103							
LCS BLL99080542-02A PEST	120							
LCSD BLL99080542-03A PEST	123							
SAMP BLL99080542-05A (6244-1)	151 *							
SAMP BLL99080542-06A (6248-1)	66							
SAMP BLL99080542-07A (6307-1)	98							

DO: Diluted out

* DBC surrogate recovery was 93% on the "C" detector.

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
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Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

EPA Method 608/8081A
Calibration Factor / Continuing Calibration

Batch: 99080 5
Date: 8/7/99

Initials: 8
Instrument ID: GC/ECD#2D

Analyte	Initial Calibration: Calibration Factors (Conc./Area) 0.0025 d53270	0.005 d53280	0.01 d53280	0.02 d53300	0.05 d53310	0.1 d53320	0.2 d53330	Mean	RSD* %	Coefficient of Determination	Continuing Calibration Verification: 8081 CCV 0.1NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	8081 CCV 0.02NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	Accuracy Range of Acceptability
Hexachlorobenzene	3.65E-08	4.01E-08	4.40E-08	4.95E-08	6.03E-08	7.04E-08	8.41E-08	5.90E-08	31.8		0.1	0.100	100	0.02	0.021	105	85-115%
alpha-BHC	4.34E-08	4.44E-08	4.42E-08	4.38E-08	4.63E-08	5.46E-08	6.35E-08	4.90E-08	15.5		0.1	0.101	101	0.02	0.021	104	85-115%
gamma-BHC	4.40E-08	4.34E-08	4.50E-08	4.70E-08	5.40E-08	6.03E-08	6.98E-08	5.19E-08	19.3		0.1	0.102	102	0.02	0.021	105	85-115%
Heptachlor	3.93E-08	4.00E-08	4.23E-08	4.55E-08	5.31E-08	6.01E-08	7.08E-08	5.02E-08	23.6		0.1	0.102	102	0.02	0.021	105	85-115%
Aldrin	4.81E-08	4.82E-08	4.95E-08	5.16E-08	5.88E-08	6.57E-08	7.65E-08	5.69E-08	19.0		0.1	0.103	103	0.02	0.021	105	85-115%
beta-BHC	7.21E-08	7.67E-08	8.27E-08	9.01E-08	1.06E-07	1.20E-07	1.41E-07	9.84E-08	25.6		0.1	0.102	102	0.02	0.021	105	85-115%
delta-BHC	6.48E-08	6.55E-08	6.58E-08	6.36E-08	7.14E-08	7.96E-08	8.91E-08	7.14E-08	13.4		0.1	0.093	93	0.02	0.019	94	85-115%
Heptachlor epoxide	5.05E-08	5.11E-08	5.28E-08	5.57E-08	6.48E-08	7.33E-08	8.55E-08	6.20E-08	21.5		0.1	0.103	103	0.02	0.021	106	85-115%
Endosulfan I	5.59E-08	5.89E-08	5.93E-08	6.33E-08	7.15E-08	7.95E-08	9.15E-08	6.83E-08	19.5		0.1	0.104	104	0.02	0.021	106	85-115%
gamma-Chlordane	5.18E-08	5.27E-08	5.51E-08	5.92E-08	6.73E-08	7.47E-08	8.59E-08	6.38E-08	20.0		0.1	0.104	104	0.02	0.021	107	85-115%
alpha-Chlordane	5.15E-08	5.26E-08	5.54E-08	6.00E-08	6.91E-08	7.72E-08	8.92E-08	6.50E-08	21.8		0.1	0.103	103	0.02	0.021	107	85-115%
4,4'-DDE	6.36E-08	6.16E-08	6.22E-08	6.42E-08	7.10E-08	7.82E-08	8.96E-08	7.01E-08	14.9		0.1	0.104	104	0.02	0.021	107	85-115%
Dieldrin	6.18E-08	6.13E-08	6.24E-08	6.45E-08	7.12E-08	7.74E-08	8.69E-08	6.93E-08	14.0		0.1	0.105	105	0.02	0.021	107	85-115%
Endrin	8.46E-08	8.71E-08	8.53E-08	8.98E-08	1.01E-07	1.13E-07	1.26E-07	9.81E-08	16.2		0.1	0.145	145	0.02	0.029	145	85-115%
4,4'-DDD	8.69E-08	8.70E-08	8.77E-08	8.69E-08	9.68E-08	1.04E-07	1.17E-07	9.54E-08	11.9		0.1	0.108	108	0.02	0.022	111	85-115%
Endosulfan II	6.50E-08	6.94E-08	7.21E-08	7.75E-08	8.70E-08	9.52E-08	1.07E-07	8.19E-08	18.6		0.1	0.103	103	0.02	0.021	106	85-115%
4,4'-DDT	8.49E-08	8.54E-08	8.71E-08	8.87E-08	9.83E-08	1.06E-07	1.17E-07	9.53E-08	12.8		0.1	0.095	95	0.02	0.019	97	85-115%
Endrin Aldehyde	7.48E-08	7.73E-08	7.84E-08	8.22E-08	8.99E-08	9.58E-08	1.06E-07	8.65E-08	13.1		0.1	0.091	91	0.02	0.018	92	85-115%
Methoxychlor	1.12E-07	1.23E-07	1.23E-07	1.40E-07	1.58E-07	1.76E-07	2.10E-07	1.49E-07	23.6		0.1	0.100	100	0.02	0.018	90	85-115%
Endosulfan Sulfate	1.07E-07	1.05E-07	1.19E-07	1.21E-07	1.38E-07	1.46E-07	1.55E-07	1.27E-07	15.2		0.1	0.102	102	0.02	0.023	114	85-115%
Endrin Ketone	8.78E-08	8.64E-08	8.76E-08	9.13E-08	1.00E-07	1.07E-07	1.19E-07	9.71E-08	12.7		0.1	0.093	93	0.02	0.019	93	85-115%
Permethion I	8.50E-08	8.98E-08	9.82E-08	1.10E-07	1.29E-07	1.45E-07	1.69E-07	1.16E-07	26.2		0.1	1.100	110	0.02	0.203	101	85-115%
Permethion II	1.92E-07	1.99E-07	2.12E-07	2.30E-07	2.64E-07	2.90E-07	3.31E-07	2.46E-07	21.1		0.1	0.830	83	0.02	0.202	101	85-115%
							Average %RSD		16.7		Average Recovery %		102	Average Recovery %		105	85-115%

Method 608
Initial Calibration Criteria
Prepare a calibration curve using a minimum of three calibration points. Alternatively, if the RSD <10%, linearity through the origin and quantitation using the Average Response Factor may be used.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed daily. The CVS is acceptable if the response of each analyte is within 15% of its true value.

Method 8081
Initial Calibration Criteria
*If the RSD of an analyte is <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may be used.
If the RSD for one or more analytes exceeds 20%, but the average RSD of all analytes is still <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may still be used
If the average RSD of all analytes exceeds 20%, linearity through the origin may not be used. The use of a linear regression not forced through zero may be used if the coefficient of determination >= 0.99.
Alternatively, a calibration curve may be prepared. A second order (quadratic) calibration curve must have a minimum of six calibration points. The curve cannot be forced through the origin or used as a calibration point.
The coefficient of determination of an acceptable calibration curve must be >= 0.99.
Calibration Verification Criteria
The CVS is acceptable if the response of each analyte is within 15% of its true value.
If this criteria is exceeded for one or more analytes, but the average response of all analytes is within 15% of their true values, the CVS is acceptable.

Calibration Type: 7 point Quadratic

Received Time Aug. 13. 2:30PM

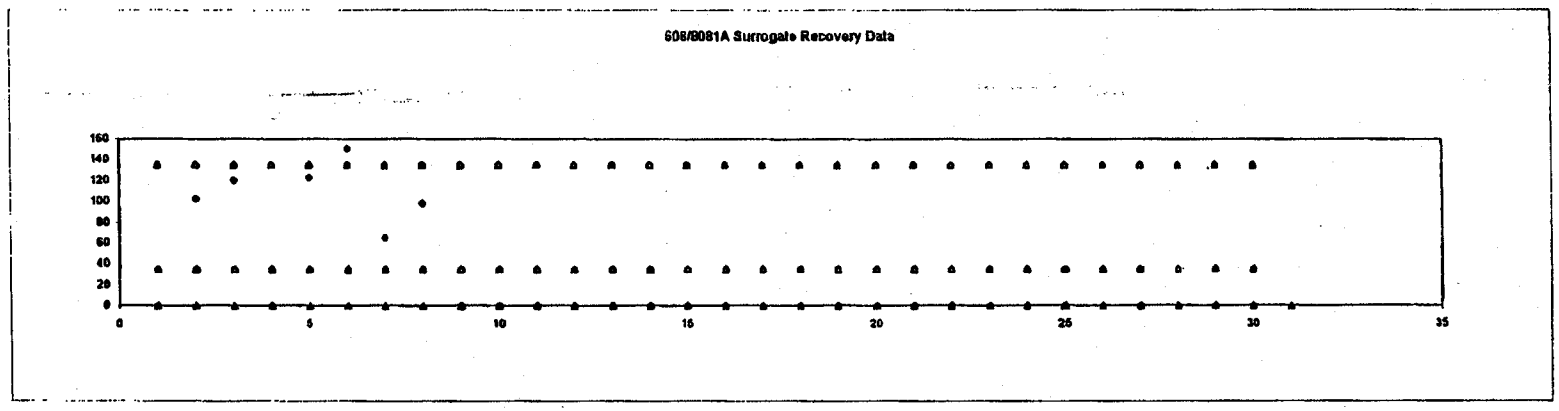
Alpha Analytical, Inc.
2765 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 198-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

EPA Method 608/8081A
Surrogate Recovery Chart / Retention Time Windows

Batch: 990805
Date: 8/7/99

Initials: XO
Instrument ID: GC/ECD#2D



Analyte	Retention Time Window Data													Retention Time Window (Mean RT +/- (3 x Std. Dev.))	
	0.0025 d53270	0.005 d53280	0.01 d53280	0.02 d53300	0.05 d53310	0.1 d53320	0.2 d53330	LCS d53530	MS d54270	CCV d53610	CCV d53800	Mean RT	Standard Deviation*	From	To
Hexachlorobenzene	6.72	6.72	6.72	6.71	6.72	6.72	6.72			6.71	6.71	6.717	0.005	6.70	6.73
alpha-BHC	7.75	7.74	7.75	7.74	7.74	7.74	7.74	7.73		7.73	7.73	7.739	0.007	7.72	7.76
gamma-BHC	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.61		8.62	8.62	8.626	0.007	8.61	8.65
Heptachlor	9.03	9.03	9.03	9.03	9.03	9.03	9.03	9.01		9.01	9.02	9.025	0.008	9.00	9.05
Aldrin	9.57	9.57	9.58	9.57	9.57	9.57	9.57	9.55		9.56	9.57	9.568	0.008	9.54	9.59
beta-BHC	10.26	10.26	10.26	10.25	10.25	10.25	10.25	10.24		10.25	10.25	10.252	0.006	10.23	10.27
delta-BHC	10.71	10.70	10.71	10.70	10.70	10.70	10.70	10.68		10.69	10.69	10.699	0.007	10.68	10.72
Heptachlor epoxide	11.05	11.05	11.05	11.05	11.05	11.05	11.05	11.03		11.03	11.03	11.044	0.010	11.02	11.07
Endosulfan I	11.57	11.57	11.57	11.57	11.57	11.57	11.57	11.54		11.55	11.55	11.563	0.012	11.53	11.60
gamma-Chlordane	11.68	11.68	11.69	11.68	11.68	11.68	11.68			11.67	11.67	11.679	0.008	11.66	11.70
alpha-Chlordane	11.83	11.83	11.83	11.83	11.83	11.83	11.83			11.82	11.82	11.828	0.004	11.81	11.84
4,4'-DDE	11.98	11.98	11.99	11.98	11.98	11.98	11.98			11.97	11.97	11.978	0.006	11.96	12.00
Dieldrin	12.30	12.30	12.30	12.30	12.30	12.29	12.29	12.27		12.28	12.29	12.292	0.010	12.26	12.32
Endrin	12.70	12.70	12.70	12.70	12.70	12.70	12.70	12.67		12.69	12.69	12.695	0.010	12.67	12.72
4,4'-DDD	13.51	13.51	13.51	13.51	13.51	13.51	13.51	13.49		13.49	13.50	13.505	0.008	13.48	13.53
Endosulfan II	13.65	13.65	13.65	13.65	13.65	13.65	13.65	13.62		13.63	13.63	13.643	0.012	13.61	13.68
4,4'-DDT	13.83	13.83	13.83	13.82	13.82	13.82	13.82	13.79		13.81	13.81	13.818	0.012	13.78	13.85
Endrin Aldehyde	14.45	14.45	14.45	14.45	14.45	14.45	14.45	14.43		14.43	14.44	14.445	0.008	14.42	14.47
Methoxychlor	15.04	15.04	15.04	15.04	15.04	15.03	15.03	15.00		15.01	15.02	15.029	0.014	14.99	15.07
Endosulfan Sulfate	15.06	15.05	15.05	15.05	15.05	15.05	15.05	15.03		15.03	15.03	15.044	0.010	15.02	15.07
Endrin Ketone	15.78	15.78	15.78	15.78	15.77	15.77	15.77	15.76		15.76	15.77	15.771	0.010	15.74	15.80
Permethion I	16.47	16.47	16.47	16.47	16.47	16.47	16.47			16.46	16.45	16.466	0.009	16.44	16.49
Permethion I	16.71	16.71	16.71	16.71	16.71	16.71	16.71			16.69	16.69	16.706	0.009	16.68	16.73

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Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

EPA Method 8082
QC Summary

Batch: 990805
Date: 8/7/99

Initials: A
Instrument ID: GC/ECD#2D

Analyte	LRB Conc. µg/L	LRB R.L. µg/L	LCS BLL99080542-04A PCB Spike Amt. µg/L	LCS Rec. Amt. µg/L	LCS Rec. %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Precision RPD %	0 Spike Amt. µg/L	0 Rec. Amt. µg/L	0 Rec. %	Accuracy Range of Acceptability*	Comments
1016-1	ND	1.00	10.0	9.593	96	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-2	ND	1.00	10.0	9.891	99	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-3	ND	1.00	10.0	9.417	94	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-4	ND	1.00	10.0	9.813	98	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-5	ND	1.00	10.0	11.470	115	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-6	ND	1.00	10.0	10.374	104	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-7	ND	1.00	10.0	10.163	102	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-8	ND	1.00	10.0	11.243	112	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-9	ND	1.00	10.0	10.387	104	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-10	ND	1.00	10.0	9.261	93	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-1	ND	1.00	10.0	10.741	107	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-2	ND	1.00	10.0	10.437	104	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-3	ND	1.00	10.0	13.020	130	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-4	ND	1.00	10.0	10.103	101	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-5	ND	1.00	10.0	11.847	118	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-6	ND	1.00	10.0	9.753	98	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-7	ND	1.00	10.0	10.749	107	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-8	ND	1.00	10.0	11.419	114	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-9	ND	1.00	10.0	10.538	105	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-10	ND	1.00	10.0	10.810	108	10.0	0.000	0	200.0	10.0	0.000	0	60-140%	

* DQO'S are derived from EPA Methods 8082 (QA Acceptance Criteria)
** DQO'S are derived from laboratory data.

Surrogate Recovery
DBC Limits: 35-135%

AAI ID	DBC % Rec.		AAI ID	DBC % Rec.		AAI ID	DBC % Rec.	
MBLK BLL99080542-01A	102							
LCS BLL99080542-04A PCB	90							
SAMP BLL99080542-05A (6244-1)	177 *							
SAMP BLL99080542-06A (6248-1)	65							
SAMP BLL99080542-07A (6307-1)	102							

DO: Diluted out

* DBC SURROGATE RECOVERY WAS 93% ON THE "C" DETECTOR.

Received Time Aug.13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-9312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

Batch: 990805
Date: 8/7/99

Initials:
Instrument ID: GC/ECD#2D

Analyte	Initial Calibration: Calibration Factors (Conc./Area) 0.025 d53380	0.05 d53390	0.1 d53390	0.25 d53410	0.5 d53420	1.0 d53430	1.5 d53440	2.5 d53450	Mean	RSD* %	Coefficient of Determination	Continuing Calibration Verification: 18/60 CCV 0.1NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	18/60 CCV 1.0NG/UL Conc. µg/L	Rec. Amt. µg/L	Rec. %	
1016-1	1.38E-06	1.76E-06	1.97E-06	2.20E-06	2.59E-06	3.16E-06	3.46E-06	4.05E-06	2.36E-06	32.1		0.1	0.096	96	1.0	1.007	101	
1016-2	5.58E-07	8.67E-07	1.01E-06	1.18E-06	1.40E-06	1.80E-06	2.00E-06	2.39E-06	1.26E-06	40.7		0.1	0.093	93	1.0	1.017	102	Accuracy
1016-3	2.21E-06	3.22E-06	3.54E-06	3.74E-06	4.13E-06	4.92E-06	5.24E-06	5.96E-06	3.85E-06	26.7		0.1	0.092	92	1.0	1.007	101	Range of
1016-4	1.43E-06	2.14E-06	2.43E-06	2.68E-06	3.00E-06	3.75E-06	4.11E-06	5.96E-06	2.79E-06	33.2		0.1	0.094	94	1.0	1.034	103	Acceptability
1016-5	1.83E-06	2.85E-06	3.51E-06	3.60E-06	4.13E-06	5.17E-06	5.81E-06	6.24E-06	3.82E-06	34.1		0.1	0.085	85	1.0	1.027	103	85-115%
1016-6	3.42E-07	4.69E-07	5.49E-07	6.44E-07	7.72E-07	1.00E-06	1.09E-06	1.28E-06	6.98E-07	39.7		0.1	0.099	99	1.0	0.991	99	85-115%
1016-7	6.33E-07	8.22E-07	1.10E-06	1.27E-06	1.48E-06	1.87E-06	2.06E-06	2.41E-06	1.33E-06	38.1		0.1	0.097	97	1.0	1.027	103	85-115%
1016-8	9.34E-07	1.31E-06	1.49E-06	1.83E-06	1.84E-06	2.29E-06	2.46E-06	2.93E-06	1.71E-06	31.4		0.1	0.098	98	1.0	1.027	103	85-115%
1016-9	7.39E-07	9.86E-07	1.17E-06	1.32E-06	1.52E-06	1.91E-06	2.09E-06	2.43E-06	1.39E-06	34.9		0.1	0.094	94	1.0	1.024	102	85-115%
1016-10	8.48E-07	1.12E-06	1.26E-06	1.36E-06	1.58E-06	1.95E-06	2.11E-06	2.42E-06	1.40E-06	30.7		0.1	0.099	99	1.0	1.040	104	85-115%
1260-1	6.36E-07	8.54E-07	9.90E-07	1.14E-06	1.34E-06	1.66E-06	1.81E-06	2.09E-06	1.20E-06	36.4		0.1	0.099	99	1.0	1.023	102	85-115%
1260-2	1.35E-06	1.59E-06	1.92E-06	2.07E-06	2.45E-06	2.82E-06	1.60E-06	1.81E-06	1.98E-06	29.3		0.1	0.097	97	1.0	1.018	102	85-115%
1260-3	1.19E-06	1.52E-06	1.74E-06	1.81E-06	2.22E-06	2.71E-06	2.88E-06	3.38E-06	2.04E-06	31.7		0.1	0.095	95	1.0	1.011	101	85-115%
1260-4	4.17E-07	5.81E-07	6.41E-07	7.43E-07	8.58E-07	1.09E-06	1.11E-06	1.25E-06	7.85E-07	32.6		0.1	0.104	104	1.0	1.021	102	85-115%
1260-5	1.15E-06	1.43E-06	1.82E-06	1.79E-06	2.04E-06	2.60E-06	2.83E-06	3.20E-06	1.91E-06	31.2		0.1	0.097	97	1.0	1.044	104	85-115%
1260-6	1.14E-06	1.84E-06	2.28E-06	2.69E-06	3.15E-06	3.76E-06	3.83E-06	4.05E-06	2.64E-06	36.4		0.1	0.102	102	1.0	0.953	95	85-115%
1260-7	9.66E-07	1.21E-06	1.39E-06	1.51E-06	1.70E-06	1.99E-06	2.12E-06	2.35E-06	1.58E-06	26.5		0.1	0.102	102	1.0	0.998	100	85-115%
1260-8	2.09E-06	2.82E-06	2.95E-06	3.20E-06	3.87E-06	4.36E-06	4.92E-06	5.33E-06	3.41E-06	27.3		0.1	0.089	89	1.0	1.029	103	85-115%
1260-9	5.47E-07	7.09E-07	7.93E-07	8.85E-07	9.71E-07	1.13E-06	1.20E-06	1.28E-06	8.97E-07	28.0		0.1	0.099	99	1.0	1.001	100	85-115%
1260-10	7.31E-07	8.44E-07	1.03E-06	1.16E-06	1.22E-06	1.39E-06	1.52E-06	1.72E-06	1.14E-06	23.4		0.1	0.093	93	1.0	0.948	95	85-115%
							Average %RSD			32.1		Average Recovery %		98	Average Recovery %		101	85-115%

Method 608
Initial Calibration Criteria
Prepare a calibration curve using a minimum of three calibration points. Alternatively, if the RSD <10%, linearily through the origin and quantitation using the Average Response Factor may be used.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed daily. The CVS is acceptable if the response of each analyte is within 15% of its true value.

Method 8082
If the RSD of an analyte is <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may be used.
If the RSD for one or more analytes exceeds 20%, but the average RSD of all analytes is still <=20%, a linear calibration forced through zero and quantitation using the Average Response Factor may still be used
If the average RSD of all analytes exceeds 20%, linearily through the origin may not be used. The use of a linear regression not forced through zero may be used if the coefficient of determination >= 0.99.
Alternatively, a calibration curve may be prepared. A second order (quadratic) calibration curve must have a minimum of six calibration points. The curve cannot be forced through the origin or used as a calibration point.
The coefficient of determination of an acceptable calibration curve must be >= 0.99.
Calibration Verification Criteria
A Calibration Verification Standard must be analyzed at the beginning of each 12 hour shift. The CVS is acceptable if the recovery is within 15% of the theoretical value.
If this criteria is exceeded for one or more analytes, but the average response of all analytes is within 15% of their true values, the CVS is acceptable.

Calibration Type:
8 point Quadratic

EPA Method 8082

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

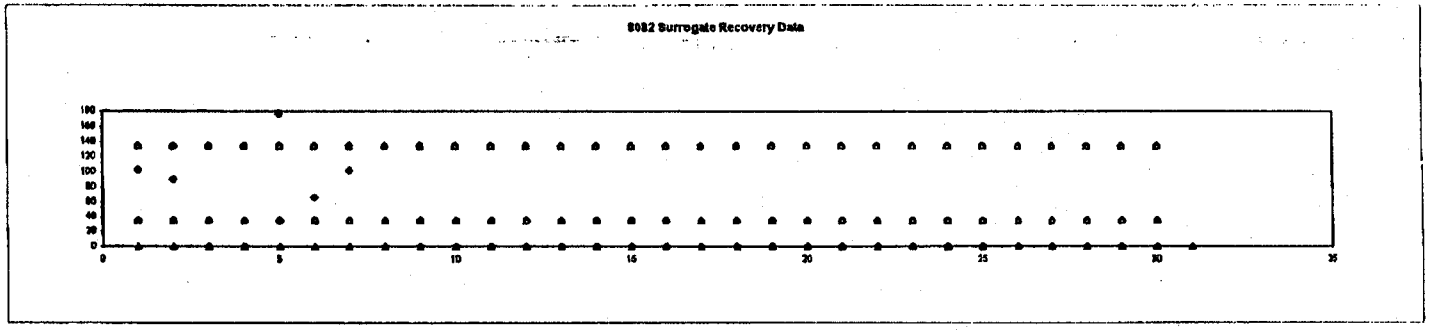
Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5890
info@alpha-analytical.com

EPA Method 8082

Surrogate Recovery Chart / Retention Time Windows

Batch: 990805
Date: 8/7/99

Initials: KB
Instrument ID: GC/ECD#2D



Retention Time Window Data															Retention Time Window (Mean RT +/- (3 x Std. Dev.))	
Analyte	0.025 d53380	0.05 d53390	0.1 d53390	0.25 d53410	0.5 d53420	1.0 d53430	1.5 d53440	2.5 d53450	LCS d53560	MS	CCV d53630	CCV d53640	Mean RT	Standard Deviation*	From	To
1016-1	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.95	6.94		6.94	6.93	6.946	0.007	6.93	6.97
1016-2	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.85	7.84		7.84	7.83	7.846	0.007	7.83	7.87
1016-3	8.28	8.28	8.28	8.28	8.28	8.28	8.27	8.27	8.27		8.26	8.26	8.274	0.008	8.25	8.30
1016-4	8.38	8.38	8.38	8.38	8.38	8.38	8.38	8.38	8.37		8.37	8.36	8.376	0.007	8.36	8.40
1016-5	8.64	8.65	8.65	8.64	8.64	8.64	8.64	8.64	8.64		8.63	8.63	8.640	0.006	8.62	8.66
1016-6	8.81	8.81	8.81	8.81	8.81	8.81	8.81	8.81	8.80		8.80	8.80	8.807	0.005	8.79	8.82
1016-7	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.10		9.10	9.09	9.108	0.007	9.09	9.13
1016-8	9.32	9.33	9.32	9.32	9.32	9.32	9.32	9.32	9.31		9.31	9.30	9.317	0.008	9.29	9.34
1016-9	10.09	10.09	10.09	10.08	10.08	10.08	10.08	10.08	10.07		10.07	10.07	10.080	0.008	10.06	10.10
1016-10	10.29	10.29	10.29	10.29	10.29	10.28	10.28	10.28	10.28		10.27	10.27	10.283	0.008	10.26	10.31
1260-1	12.49	12.49	12.49	12.49	12.49	12.49	12.49	12.49	12.48		12.47	12.47	12.485	0.008	12.46	12.51
1260-2	12.92	12.92	12.92	12.91	12.91	12.91	12.91	12.91	12.90		12.90	12.89	12.909	0.009	12.88	12.94
1260-3	13.16	13.16	13.16	13.15	13.15	13.15	13.15	13.15	13.14		13.14	13.13	13.148	0.009	13.12	13.17
1260-4	13.58	13.58	13.58	13.58	13.58	13.57	13.57	13.57	13.56		13.56	13.56	13.572	0.009	13.55	13.60
1260-5	13.72	13.72	13.72	13.72	13.72	13.72	13.71	13.71	13.71		13.70	13.70	13.714	0.008	13.69	13.74
1260-6	13.79	13.80	13.80	13.80	13.80	13.80	13.79	13.79	13.79		13.78	13.78	13.793	0.008	13.77	13.82
1260-7	14.29	14.29	14.29	14.29	14.29	14.29	14.28	14.28	14.28		14.27	14.27	14.284	0.008	14.26	14.31
1260-8	14.39	14.39	14.39	14.39	14.38	14.38	14.38	14.38	14.37		14.37	14.37	14.381	0.009	14.36	14.41
1260-9	14.81	14.81	14.81	14.81	14.81	14.80	14.80	14.80	14.79		14.79	14.79	14.802	0.009	14.78	14.83
1260-10	15.47	15.47	15.47	15.47	15.47	15.47	15.47	15.47	15.46		15.46	15.46	15.465	0.008	15.44	15.49

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255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
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Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-9089 Wichita, KS • (316) 722-5899
info@alpha-analytical.com

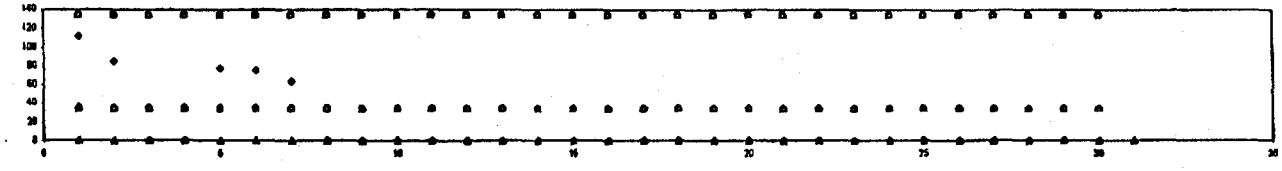
EPA Method 8082

Surrogate Recovery Chart / Retention Time Windows

Batch: 990805
Date: 8/8/99

Initials: dl
Instrument ID: GC/ECD#2D

8082 Surrogate Recovery Data



Analyte	0.025 d53930	0.05 d53940	0.1 d53940	0.25 d53960	0.5 d53970	1.0 d53980	1.5 d53990	2.5 d54000	LCS d54160	MS	CCV d54240	CCV d54260	Mean RT	Standard Deviation*	Retention Time Window (Mean RT +/- (3 x Std. Dev.)) From	To
	Retention Time Window Data															
1016-1	6.93	6.93	6.93	6.93	6.92	6.92	6.92	6.92	6.92		6.93	6.93	6.925	0.005	6.91	6.94
1016-2	7.83	7.82	7.82	7.82	7.82	7.82	7.82	7.82	7.82		7.83	7.83	7.823	0.005	7.81	7.84
1016-3	8.25	8.25	8.25	8.25	8.24	8.24	8.24	8.24	8.25		8.26	8.25	8.247	0.006	8.23	8.27
1016-4	8.36	8.36	8.36	8.36	8.35	8.35	8.35	8.35	8.35		8.36	8.36	8.355	0.005	8.34	8.37
1016-5	8.62	8.62	8.62	8.62	8.61	8.61	8.62	8.61	8.62		8.63	8.63	8.619	0.007	8.60	8.64
1016-6	8.79	8.79	8.79	8.79	8.78	8.78	8.78	8.78	8.78		8.79	8.79	8.785	0.005	8.77	8.80
1016-7	9.09	9.08	9.08	9.08	9.08	9.08	9.08	9.08	9.08		9.09	9.09	9.083	0.005	9.07	9.10
1016-8	9.30	9.30	9.29	9.30	9.29	9.29	9.29	9.29	9.29		9.30	9.30	9.295	0.005	9.28	9.31
1016-9	10.06	10.05	10.05	10.06	10.05	10.05	10.05	10.05	10.05		10.06	10.06	10.055	0.005	10.04	10.07
1016-10	10.26	10.26	10.26	10.26	10.25	10.25	10.25	10.25	10.25		10.27	10.26	10.258	0.007	10.24	10.28
1260-1	12.46	12.46	12.46	12.46	12.45	12.45	12.45	12.45	12.46		12.47	12.46	12.457	0.006	12.44	12.48
1260-2	12.89	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88		12.89	12.89	12.883	0.005	12.87	12.90
1260-3	13.12	13.12	13.12	13.12	13.12	13.12	13.11	13.11	13.12		13.13	13.12	13.118	0.005	13.10	13.14
1260-4	13.55	13.54	13.54	13.54	13.54	13.54	13.54	13.54	13.54		13.55	13.55	13.543	0.005	13.53	13.56
1260-5	13.69	13.69	13.68	13.68	13.68	13.68	13.68	13.68	13.68		13.69	13.69	13.684	0.005	13.67	13.70
1260-6	13.78	13.76	13.76	13.77	13.76	13.76	13.76	13.76	13.76		13.77	13.77	13.763	0.005	13.75	13.78
1260-7	14.26	14.26	14.25	14.25	14.25	14.25	14.25	14.25	14.25		14.26	14.26	14.254	0.005	14.24	14.27
1260-8	14.36	14.36	14.35	14.35	14.36	14.36	14.36	14.35	14.36		14.36	14.36	14.352	0.004	14.34	14.36
1260-9	14.77	14.77	14.77	14.77	14.77	14.77	14.77	14.77	14.77		14.78	14.78	14.772	0.004	14.76	14.78
1260-10	15.44	15.44	15.43	15.44	15.43	15.43	15.43	15.43	15.43		15.44	15.44	15.435	0.005	15.42	15.45

Received Time Aug.13. 2:30PM

Alpha Analytical, Inc.
255 Glendale Avenue, Suite 21
Sparks, Nevada 89431-5778
(775) 355-1044
FAX: 775-355-0406
LAB: 1-800-283-1183

Las Vegas, NV • (702) 498-3312 Sacramento, CA • (916) 366-0889 Wichita, KS • (316) 722-7890
info@alphaanalytical.com

Bolin Labs

EPA Method 8082
QC Summary

Batch: 990805
Date: 8/8/99

Initials:
Instrument ID: GC/ECD#2D

Analyte	LRB Conc. µg/L	LRB R.L. µg/L	LCS BLL99080542-28A PCB Spike Amt. µg/L	LCS Rec. Amt. µg/L	LCS Rec. %		Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Precision RPD %	Spike Amt. µg/L	Rec. Amt. µg/L	Rec. %	Accuracy Range of Acceptability*	Comments
1016-1	ND	1.00	10.0	8.585	86		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-2	ND	1.00	10.0	8.753	88		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-3	ND	1.00	10.0	7.000	70		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-4	ND	1.00	10.0	8.609	86		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-5	ND	1.00	10.0	9.973	100		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-6	ND	1.00	10.0	9.134	91		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-7	ND	1.00	10.0	9.040	90		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-8	ND	1.00	10.0	8.924	89		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-9	ND	1.00	10.0	9.730	97		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1016-10	ND	1.00	10.0	8.265	83		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-1	ND	1.00	10.0	10.422	104		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-2	ND	1.00	10.0	8.884	89		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-3	ND	1.00	10.0	12.858	129		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-4	ND	1.00	10.0	9.285	93		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-5	ND	1.00	10.0	10.267	103		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-6	ND	1.00	10.0	10.928	109		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-7	ND	1.00	10.0	11.458	115		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-8	ND	1.00	10.0	8.587	86		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-9	ND	1.00	10.0	9.723	97		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	
1260-10	ND	1.00	10.0	10.121	101		10.0	0.000	0	200.0	10.0	0.000	0	60-140%	

* DQO'S are derived from EPA Methods 8082 (QA Acceptance Criteria)
** DQO'S are derived from laboratory data.

Surrogate Recovery
DBC Limits: 35-135%

AAI ID	DBC % Rec.		AAI ID	DBC % Rec.		AAI ID	DBC % Rec.	
MBLK BLL99080542-25A	111							
LCS BLL99080542-28A PCB	86							
SAMP BLL99080542-30A (6482-1)	77							
SAMP BLL99080542-31A (6496-2)	75							
SAMP BLL99080542-32A (6547-1)	64							

DO: Diluted out

Received Time Aug.13. 2:30PM

Data File: /var/chem/GCMS_3.i/99207a.b/010a.d
Report Date: 27-Jul-1999 15:55

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 8270/625 lcs 7/19
Level: LOW
Data Type: MS DATA
SpikeList File: water.spk
Sublist File: all.sub
Method File: /var/chem/GCMS_3.i/99207a.b/8270w207.m
Misc Info: 8270/625 lcs 7/19

Client SDG: 99207a
Fraction: SV
Operator: SAM
SampleType: MS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 Phenol C	200	60.2	30.10	12-110
9 2-Chlorophenol	200	121	60.50	27-123
11 1,4-Dichlorobenzen	100	58.9	58.90	36-97
17 N-Nitroso-di-n-pro	100	73.6	73.60	41-116
27 1,2,4-Trichloroben	100	67.5	67.50	39-98
33 4-Chloro-3-methylp	200	130	65.00	23-97
45 Acenaphthene C	100	79.6	79.60	46-118
49 2,4-Dinitrotoluene	100	89.0	89.00	24-96
50 4-Nitrophenol P	200	76.3	38.15	10-80
63 Pentachlorophenol	200	167	83.50	9-103
71 Pyrene	100	91.4	91.40	26-127

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	75.8	37.90	21-100
$ 7 Phenol-d5	200	59.6	29.80	10-94
$ 20 Nitrobenzene-d5	100	70.1	70.10	35-114
$ 39 2-Fluorobiphenyl	100	71.9	71.90	43-116
$ 60 2,4,6-Tribromophen	200	184	92.00	10-123
$ 72 Terphenyl-d14	100	80.3	80.30	33-141

Data File: /var/chem/GCMS_3.i/99207a.b/011a.d
Report Date: 27-Jul-1999 15:56

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 8270/625 lcsd 7/19
Level: LOW
Data Type: MS DATA
SpikeList File: water.spk
Sublist File: all.sub
Method File: /var/chem/GCMS_3.i/99207a.b/8270w207.m
Misc Info: 8270/625 lcsd 7/19

Client SDG: 99207a
Fraction: SV

Operator: SAM
SampleType: MSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 Phenol C	200	62.4	31.20	12-110
9 2-Chlorophenol	200	134	67.00	27-123
11 1,4-Dichlorobenzen	100	68.4	68.40	36-97
17 N-Nitroso-di-n-pro	100	71.1	71.10	41-116
27 1,2,4-Trichloroben	100	77.6	77.60	39-98
33 4-Chloro-3-methylp	200	135	67.50	23-97
45 Acenaphthene C	100	83.5	83.50	46-118
49 2,4-Dinitrotoluene	100	87.2	87.20	24-96
50 4-Nitrophenol P	200	80.9	40.45	10-80
63 Pentachlorophenol	200	172	86.00	9-103
71 Pyrene	100	86.4	86.40	26-127

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	83.5	41.75	21-100
$ 7 Phenol-d5	200	64.5	32.25	10-94
$ 20 Nitrobenzene-d5	100	74.2	74.20	35-114
$ 39 2-Fluorobiphenyl	100	74.6	74.60	43-116
$ 60 2,4,6-Tribromophen	200	186	93.00	10-123
$ 72 Terphenyl-d14	100	75.8	75.80	33-141

Data File: /var/chem/GCMS_3.i/99207a.b/010.d
Report Date: 27-Jul-1999 15:32

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 8270/625 lcs 7/19
Level: LOW
Data Type: MS DATA
SpikeList File: 625.spk
Sublist File: all.sub
Method File: /var/chem/GCMS_3.i/99207a.b/62599207.m
Misc Info: 8270/625 lcs 7/19

Client SDG: 99207a
Fraction: SV
Operator: SAM
SampleType: MS
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6	bis(2-Chloroethyl)	100	54.2	54.20	12-158
8	Phenol C	200	58.1	29.05	5-112
9	2-Chlorophenol	200	102	51.00	12-134
10	1,3-Dichlorobenzen	100	53.4	53.40	0-172
11	1,4-Dichlorobenzen	100	52.3	52.30	20-124
12	1,2-Dichlorobenzen	100	54.3	54.30	32-129
14	bis(2-chloroisopro	100	60.0	60.00	36-166
16	Hexachloroethane	100	52.5	52.50	40-113
17	N-Nitroso-di-n-pro	100	73.6	73.60	0-230
21	Nitrobenzene	100	68.4	68.40	35-180
22	Isophorone	100	69.3	69.30	21-196
23	2-Nitrophenol C	200	139	69.50	29-182
24	2,4-Dimethylphenol	200	125	62.50	32-119
25	bis(2-Chloroethoxy	100	70.2	70.20	33-184
26	2,4-Dichlorophenol	200	131	65.50	39-135
27	1,2,4-Trichloroben	100	60.8	60.80	44-142
28	Naphthalene	100	61.9	61.90	21-133
32	Hexachlorobutadien	100	60.7	60.70	24-116
33	4-Chloro-3-methylp	200	130	65.00	22-147
37	2,4,6-Trichlorophe	200	141	70.50	37-144
42	Acenaphthylene	100	61.2	61.20	33-145
43	Dimethylphthalate	100	70.7	70.70	0-112
44	2,6-Dinitrotoluene	100	86.0	86.00	39-139
45	Acenaphthene C	100	63.9	63.90	47-145
47	2,4-Dinitrophenol	200	187	93.50	0-191
49	2,4-Dinitrotoluene	100	96.8	96.80	39-139
50	4-Nitrophenol P	200	86.2	43.10	0-132
52	Fluorene	100	71.1	71.10	59-121
53	4-Chlorophenyl-phe	100	74.2	74.20	25-158
54	Diethylphthalate	100	71.9	71.90	0-114
62	Hexachlorobenzene	100	75.3	75.30	0-152
63	Pentachlorophenol	200	167	83.50	14-176
64	Phenanthrene	100	71.1	71.10	54-120

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
65 Anthracene	100	68.2	68.20	27-133
67 Di-n-butylphthalat	100	73.6	73.60	1-118
68 Fluoranthene C	100	76.4	76.40	26-137
71 Pyrene	100	80.1	80.10	52-115
73 Butylbenzylphthala	100	83.1	83.10	0-152
74 3,3'-Dichlorobenzi	100	79.8	79.80	0-262
75 Benzo[a]anthracene	100	84.6	84.60	33-143
76 Chrysene	100	91.8	91.80	17-168
77 bis(2-Ethylhexyl)p	100	81.4	81.40	8-158
79 Di-n-octylphthalat	100	71.8	71.80	4-146
80 Benzo[b]fluoranthe	100	52.4	52.40	24-159
81 Benzo[k]fluoranthe	100	52.4	52.40	11-162
82 Benzo[a]pyrene C	100	75.9	75.90	17-163
83 Indeno[1,2,3-cd]py	100	89.4	89.40	0-171
84 Dibenz[a,h]anthrac	100	90.9	90.90	0-227
61 4-Bromophenyl-phen	100	79.9	79.90	53-127
40 2-Chloronaphthalen	100	63.0	63.00	60-118
57 4,6-Dinitro-2-meth	200	178	89.00	0-181

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	75.8	37.90	21-100
$ 7 Phenol-d5	200	56.7	28.35	10-94
$ 20 Nitrobenzene-d5	100	70.1	70.10	35-114
$ 39 2-Fluorobiphenyl	100	61.2	61.20	43-116
$ 60 2,4,6-Tribromophen	200	184	92.00	10-123
$ 72 Terphenyl-d14	100	80.3	80.30	33-141

Data File: /var/chem/GCMS_3.i/99207a.b/011.d
Report Date: 27-Jul-1999 15:33

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 8270/625 lcsd 7/19
Level: LOW
Data Type: MS DATA
SpikeList File: 625.spk
Sublist File: all.sub
Method File: /var/chem/GCMS_3.i/99207a.b/62599207.m
Misc Info: 8270/625 lcsd 7/19

Client SDG: 99207a
Fraction: SV

Operator: SAM
SampleType: MSD
Quant Type: ISTD

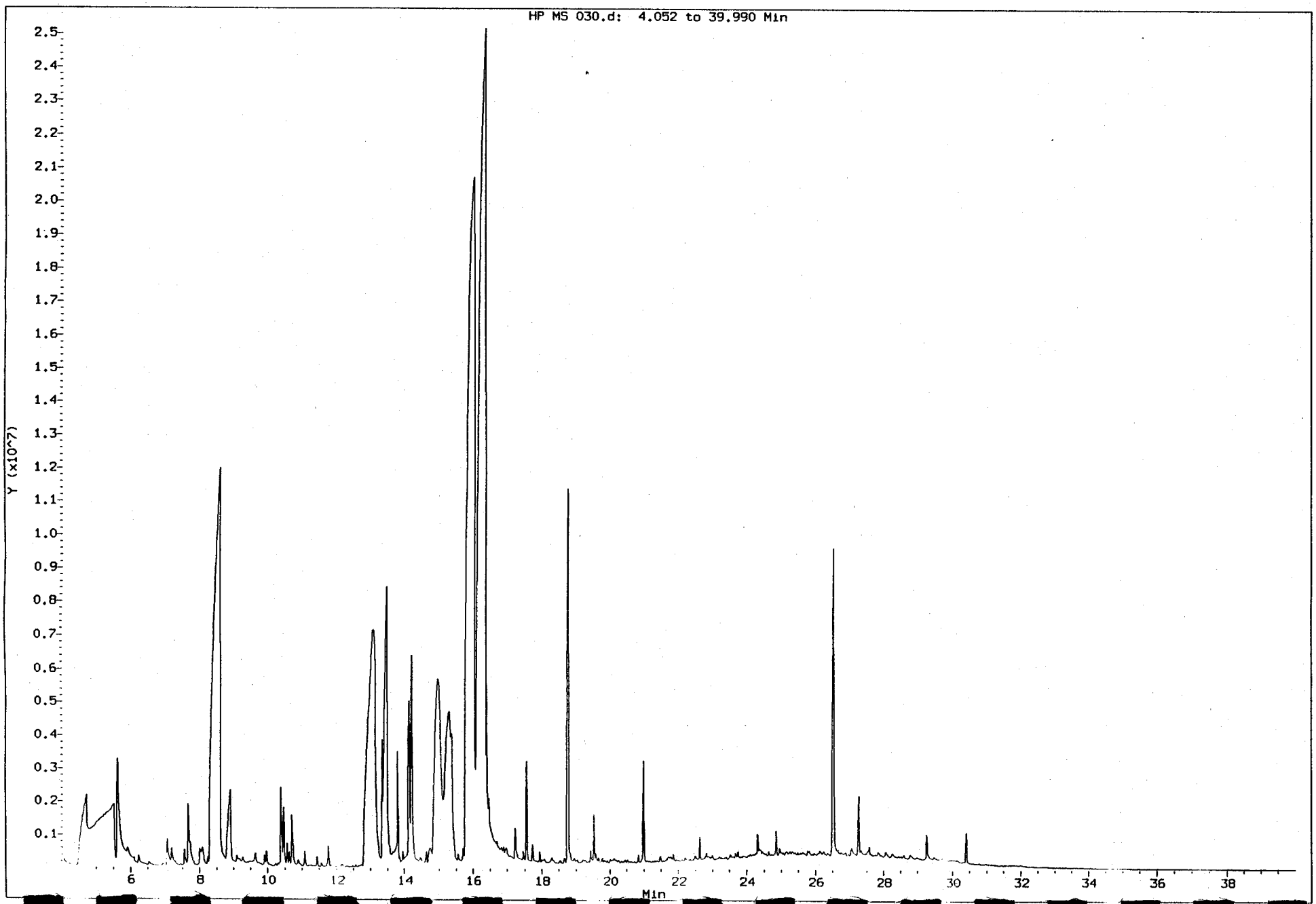
SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6	bis(2-Chloroethyl)	100	59.0	59.00	12-158
8	Phenol C	200	59.7	29.85	5-112
9	2-Chlorophenol	200	111	55.50	12-134
10	1,3-Dichlorobenzen	100	62.2	62.20	0-172
11	1,4-Dichlorobenzen	100	59.9	59.90	20-124
12	1,2-Dichlorobenzen	100	63.0	63.00	32-129
14	bis(2-chloroisopro	100	59.3	59.30	36-166
16	Hexachloroethane	100	65.8	65.80	40-113
17	N-Nitroso-di-n-pro	100	71.1	71.10	0-230
21	Nitrobenzene	100	72.0	72.00	35-180
22	Isophorone	100	56.7	56.70	21-196
23	2-Nitrophenol C	200	153	76.50	29-182
24	2,4-Dimethylphenol	200	129	64.50	32-119
25	bis(2-Chloroethoxy	100	68.1	68.10	33-184
26	2,4-Dichlorophenol	200	134	67.00	39-135
27	1,2,4-Trichloroben	100	69.2	69.20	44-142
28	Naphthalene	100	62.7	62.70	21-133
32	Hexachlorobutadien	100	72.7	72.70	24-116
33	4-Chloro-3-methylp	200	135	67.50	22-147
37	2,4,6-Trichlorophe	200	145	72.50	37-144
42	Acenaphthylene	100	63.4	63.40	33-145
43	Dimethylphthalate	100	67.7	67.70	0-112
44	2,6-Dinitrotoluene	100	88.1	88.10	39-139
45	Acenaphthene C	100	66.6	66.60	47-145
47	2,4-Dinitrophenol	200	205	102.50	0-191
49	2,4-Dinitrotoluene	100	95.0	95.00	39-139
50	4-Nitrophenol P	200	91.5	45.75	0-132
52	Fluorene	100	73.1	73.10	59-121
53	4-Chlorophenyl-phe	100	73.2	73.20	25-158
54	Diethylphthalate	100	66.0	66.00	0-114
62	Hexachlorobenzene	100	77.2	77.20	0-152
63	Pentachlorophenol	200	172	86.00	14-176
64	Phenanthrene	100	70.2	70.20	54-120

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
65 Anthracene	100	67.3	67.30	27-133
67 Di-n-butylphthalat	100	68.2	68.20	1-118
68 Fluoranthene C	100	74.9	74.90	26-137
71 Pyrene	100	76.1	76.10	52-115
73 Butylbenzylphthala	100	76.3	76.30	0-152
74 3,3'-Dichlorobenzi	100	77.9	77.90	0-262
75 Benzo[a]anthracene	100	81.4	81.40	33-143
76 Chrysene	100	88.3	88.30	17-168
77 bis(2-Ethylhexyl)p	100	72.5	72.50	8-158
79 Di-n-octylphthalat	100	66.1	66.10	4-146
80 Benzo[b]fluoranthe	100	49.0	49.00	24-159
81 Benzo[k]fluoranthe	100	49.0	49.00	11-162
82 Benzo[a]pyrene C	100	73.2	73.20	17-163
83 Indeno[1,2,3-cd]py	100	84.9	84.90	0-171
84 Dibenz[a,h]anthrac	100	86.7	86.70	0-227
61 4-Bromophenyl-phen	100	78.4	78.40	53-127
40 2-Chloronaphthalen	100	66.1	66.10	60-118
57 4,6-Dinitro-2-meth	200	187	93.50	0-181

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	83.5	41.75	21-100
$ 7 Phenol-d5	200	60.6	30.30	10-94
$ 20 Nitrobenzene-d5	100	74.2	74.20	35-114
$ 39 2-Fluorobiphenyl	100	63.1	63.10	43-116
$ 60 2,4,6-Tribromophen	200	186	93.00	10-123
$ 72 Terphenyl-d14	100	75.8	75.80	33-141

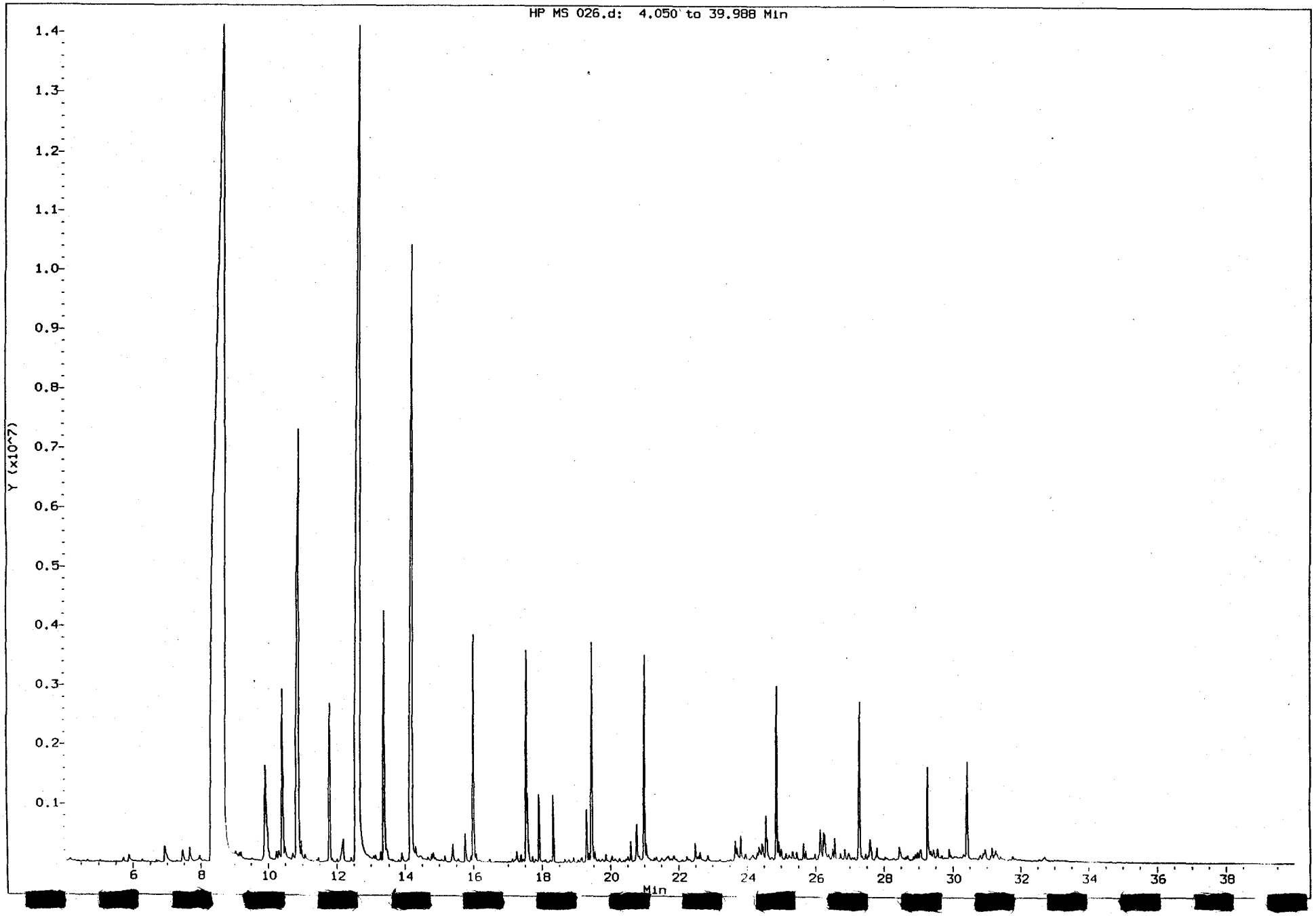
6244-1

Data File: /var/chem/GCMS_3.1/99207a.b/030.d
Injection Date: 27-JUL-1999 13:06



Data File: /var/chem/GCMS_3.1/99207a.b/026.d
Injection Date: 27-JUL-1999 09:52

6307-1



Bolin Laboratories Inc.

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Quality Control Data Report

Bolin Sample ID's: 9907-06324-002; **9907-06337-002**; 9907-06337-004; 9907-06337-005; 9907-06188-001; 9907-6310-0
9907-06352-001

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Antimony	EPA 200.9/SM 3113B	8/2/99	0.020	112	111	<PQL	99	92
Thalluim	EPA 200.9/SM 3113B	8/2/99	0.020	98	98	<PQL	99	97

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification

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Quality Control Data Report

Analysis Date: 8/6/99
Bolin Sample ID's: (Dissolved) 9907-6165-002; 9907-6337-002,004; 9907-6431-002; 9907-6753-002
9907-6107-001; 9907-6111-001,002,003

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Cadmium	EPA 200.9/SM 3113B	0.002	110	110	<PQL	110	100
Arsenic	EPA 200.9/SM 3113B	0.020	110	105	<PQL	105	110
Lead	EPA 200.9/SM 3113B	0.020	105	105	<PQL	110	100
Selenium	EPA 200.9/SM 3113B	0.020	95	100	<PQL	95	95

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Analysis Date: 8/6/99

Bolin Sample ID's: 9907-6312-002,005,008; 9907-6337-002,004,005; 9907-6366-001; **9907-6107-001**

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Cadmium	EPA 200.9/SM 3113B	0.002	110	110	<PQL	105	110
Arsenic	EPA 200.9/SM 3113B	0.020	110	105	<PQL	100	105
Lead	EPA 200.9/SM 3113B	0.020	105	105	<PQL	100	110
Selenium	EPA 200.9/SM 3113B	0.020	95	100	<PQL	100	95

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Bolin Sample ID's: 9907-06337-005; 9907-06312-002,005,008 (Dissolved) 9907-06337-002, 004, 005 (Dissolved)

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Barium	EPA 200.7	8/4/99	1	100	102	<PQL	104	98
Beryllium	EPA 200.7	8/4/99	0.5	102	104	<PQL	107	98
Boron	EPA 200.7	8/4/99	1	103	107	<PQL	99	96
Cadmium	EPA 200.7	8/4/99	0.4	108	110	<PQL	101	102
Calcium	EPA 200.7	8/4/99	30	108	112	<PQL	107	103
Chromium	EPA 200.7	8/4/99	0.5	104	108	<PQL	107	103
Copper	EPA 200.7	8/4/99	1	99	102	<PQL	105	97
Magnesium	EPA 200.7	8/4/99	30	109	112	<PQL	103	104
Manganese	EPA 200.7	8/4/99	1	106	109	<PQL	106*	104
Molybdenum	EPA 200.7	8/4/99	0.5	113	114	<PQL	104	103
Nickel	EPA 200.7	8/4/99	1	108	112	<PQL	100	102
Silver	EPA 200.7	8/4/99	0.5	96	98	<PQL	98	98
Zinc	EPA 200.7	8/4/99	1	110	111	<PQL	101	97

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Bolin Sample ID's: **9907-06337-005** (Dissolved) 9907-06337-002, 004, 006; 9907-06238-001; 9907-06239-001; 9907-06240-001; 9907-06253-001; 9907-06254-001

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Barium	EPA 200.7	8/4/99	1	100	102	<PQL	104	98
Beryllium	EPA 200.7	8/4/99	0.5	102	104	<PQL	101	98
Boron	EPA 200.7	8/4/99	1	103	107	<PQL	98	96
Cadmium	EPA 200.7	8/4/99	0.4	108	110	<PQL	99	102
Calcium	EPA 200.7	8/4/99	30	108	112	<PQL	101	103
Chromium	EPA 200.7	8/4/99	0.5	104	108	<PQL	104	103
Copper	EPA 200.7	8/4/99	1	99	102	<PQL	102	97
Magnesium	EPA 200.7	8/4/99	30	109	112	<PQL	102	104
Manganese	EPA 200.7	8/4/99	1	106	109	<PQL	105	104
Molybdenum	EPA 200.7	8/4/99	0.5	113	114	<PQL	99	103
Nickel	EPA 200.7	8/4/99	1	108	112	<PQL	98	102
Silver	EPA 200.7	8/4/99	0.5	96	98	<PQL	101	98
Zinc	EPA 200.7	8/4/99	1	110	111	<PQL	105	97

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Bolin Sample ID's: 9907-06392-01; 9907-6312-002, 005(Dissolved), 9907-06337-005 (Dissolved)

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Lead	EPA 200.9/SM 3113B	7/20/99	0.020	100	100	<PQL	105	100
Selenium	EPA 200.9/SM 3113B	7/20/99	0.020	MI	MI	<PQL	90	100

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.

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Quality Control Data Report

Date Analyzed: 8/6/99
Bolin Sample ID's: **9907-06337-004, 005**

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Cadmium	EPA 200.7	0.4	110	110	<PQL	105	110

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Date Analyzed: 8/8/99
Bolin Sample ID's: **9907-06337-004, 005**

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Zinc	EPA 200.7	1	99	97	<PQL	101	101

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Client: MCFC
Bolin Sample ID: 9907-6337 - 04

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	RPD	Blk (ppb)	ICV %Rec	CCV %Rec
COD	EPA 410.4	7/30/99	74	99	88	12	<PQL	103	92
Total Suspended Solids	EPA 160.1	7/20/99	N/A	N/A	N/A	N/A	<PQL	96	102
Chloride	SM 4500 Cl B	8/3/99	20	115	110	4	<PQL	100	98
Dissolved Sulfate	EPA 375.4	7/28/99	30	88	92	4	<PQL	100	96
Nitrate + Nitrite	SM 4500 NO3 F	7/19/99	9.52	102	102	0	<PQL	105	105
Nitrite	SM 4500 NO2B	7/16/99	9.52	103	103	0	<PQL	103	101
Total Dissolved Solids	SM 2540C	7/20/99	N/A	N/A	N/A	N/A	<PQL	99	101
Orthophosphate	SM 4500 P E	7/16/99	0.1	80	80	0	<PQL	90	93
Total Phosphorous	EPA 365.3	8/2/99	0.13	MI	MI	N/A	<PQL	110	110
Alkalinity	SM 2320 B	7/27/99	200	94	94	0	<PQL	101	103
Dissolved Phosporous	EPA 365.3	7/29/99	0.26	96	96	0	<PQL	110	107

MS/MSD are Matrix Spikes
ICV is Initial Calibration Verification
CCV is Continuing Calibration Verification
RPD is Relative Percent Difference
BLK is a Blank
LFB is a Laboratory Fortified Blank

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Quality Control Data Report

Client: MCFC
Bolin Sample ID: 9907-6337 - 05

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	RPD	Blk (ppb)	ICV %Rec	CCV %Rec
COD	EPA 410.4	7/29/99	74	109	112	3	<PQL	93	97
Total Suspended Solids	EPA 160.1	7/20/99	N/A	N/A	N/A	N/A	<PQL	96	102
Chloride	SM 4500 Cl B	8/3/99	20	115	110	5? 4	<PQL	100	98
Dissolved Sulfate	EPA 375.4	7/28/99	30	88	92	4	<PQL	100	96
Nitrate + Nitrite	SM 4500 NO3 F	7/19/99	9.52	100	99	1	<PQL	105	107
Nitrite	SM 4500 NO2B	7/16/99	9.52	103	103	0	<PQL	103	101
Total Dissolved Solids	SM 2540C	7/20/99	N/A	N/A	N/A	N/A	<PQL	99	101
Orthophosphate	SM 4500 P E	7/16/99	0.1	80	80	0	<PQL	90	93
Total Phosphorous	EPA 365.3	8/2/99	0.13	MI	MI	N/A	<PQL	110	110
Alkalinity	SM 2320 B	7/27/99	200	94	94	0	<PQL	101	103
Dissolved Phosporous	EPA 365.3	7/29/99	0.26	96	96	0	<PQL	110	107

MS/MSD are Matrix Spikes
ICV is Initial Calibration Verification
CCV is Continuing Calibration Verification
RPD is Relative Percent Difference
BLK is a Blank
LFB is a Laboratory Fortified Blank

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Quality Control Data Report

Client: MCFC
Bolin Sample ID: 9907-6337 - 02

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	RPD	Blk (ppb)	ICV %Rec	CCV %Rec
COD	EPA 410.4	7/30/99	74	99	88	12	<PQL	103	92
Total Suspended Solids	EPA 160.1	7/20/99	N/A	N/A	N/A	N/A	<PQL	96	102
Chloride	SM 4500 Cl B	8/3/99	20	115	110	4	<PQL	100	100
Dissolved Sulfate	EPA 375.4	7/28/99	30	88	92	4	<PQL	100	96
Nitrate + Nitrite	SM 4500 NO3 F	7/19/99	9.52	102	102	0	<PQL	105	105
Nitrite	SM 4500 NO2B	7/16/99	9.52	103	103	0	<PQL	103	101
Total Dissolved Solids	SM 2540C	7/20/99	N/A	N/A	N/A	N/A	<PQL	99	101
Orthophosphate	SM 4500 P E	7/16/99	0.1	80	80	0	<PQL	90	93
Total Phosphorous	EPA 365.3	8/2/99	0.13	MI	MI	N/A	<PQL	110	110
Alkalinity	SM 2320 B	7/27/99	200	94	94	0	<PQL	101	103
Dissolved Phosporous	EPA 365.3	7/29/99	0.26	96	96	0	<PQL	110	107

MS/MSD are Matrix Spikes
ICV is Initial Calibration Verification
CCV is Continuing Calibration Verification
RPD is Relative Percent Difference
BLK is a Blank
LFB is a Laboratory Fortified Blank

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Quality Control Data Report

Analyzed Date: 7/26/99
olin Sample ID's: **9907-06132-001***;9907-06337-002,004,005;9907-06352-001;9907-06354-1,2,3;9907-0635

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Mercury	EPA 245.1	0.005	62*	66*	<PQL	98	110

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank
* Spike failure sample must be reran

Bolin Laboratories Inc.

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Quality Control Data Report

Analysis Date: 7/28/99

Bolin Sample ID's: **9907-06209-002;** 9907-06165-002; 9907-6312-001,007; (Diss) 9907-06337-002,004,005 9907-06431-002; 9907-06209-001,002

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Mercury	EPA 245.1/EPA 7470A	0.005	116	116	<PQL	98	98

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
RPD = Relative Percent Difference
BLK = Blank

Bolin Laboratories Inc.

☐ 17631 N. 25th Ave. Phoenix AZ 85023
(602) 942-8220 • Fax(602) 942-1050

☐ 440 N. Alvernon, Suite 103, Tucson AZ 85711
(520) 327-1234 • Fax(520) 327-0518

CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory Sample No.: [illegible]

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
Flood Control	2801 W Durango	Phx	AZ	[illegible]	[illegible]	

Project Name	Project Number	Contact	P.O. No.	Fax Results ☐	QC Report ☐	Special Detection Limits ☐
NPDES		Dave Graham				

SAMPLE TYPE CODES

DW=Drinking Water, S=Soil/Solid
WW=Wastewater, T=Travel Blank
SW=Surface Water, F=Food
GW=Groundwater, G=Sludge
O=Other

TURN AROUND TIME

☐ Standard 10 - 15 Day
☐ Other

★ Laboratory Authorization Required for Rush ★

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Bolin Use Only)	See Attached														LAB NO.
Industrial Park	7/15/99	1215	Composite	X				7		X	✓	[illegible]												02
Butler Park	7/15/99	1245	↓	X				5		X	✓													01
Arrowhead	7/15/99	1356	↓	X				7		X														05

Comments / Special Instructions: Submit Grab [illegible] separately
Composite Analysis: pH, COD, Cl, TDS, TSS, NH_3, NO_3, NO_2, ON, TKN [illegible]
Metals: total and dissolved Cd, As, Pb, Cr, Cu, Fe, Ni, Zn [illegible]

SAMPLE CONDITION UPON RECEIPT

No. of Containers		
Temperature		
Custody Seals	Y	N
Seals Intact	Y	N
Preserved	Y	N

RELINQUISHED BY

	Signature	Printed Name	Date	Time
①	Charles S. Kenner	Charles S. Kenner	1425	7/16/99
②				
③				

SAMPLES RECEIVED BY

Signature	Printed Name	Date	Time
[illegible]	[illegible]	[illegible]	[illegible]

WHITE-LAB YELLOW-LAB PINK-CLIENT

Bolin Laboratories Inc.

17631 N. 25th Ave. Phoenix AZ 85023
(602) 942-8220 • Fax(602) 942-1050

440 N. Alvernon, Suite 103, Tucson AZ 85711
(520) 327-1234 • Fax(502) 327-0518

CHAIN OF CUSTODY RECORD

Page_____of_____

Laboratory Sample No. 9901-0[illegible]

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
Flood Control	2801 W Durango	Phx	AZ	85041	[illegible]	

Project Name	Project Number	Contact	P.O. No.	Fax Results ☐ QC Report ☐ Special Detection Limits ☐
		Dan Garnaker		

SAMPLE TYPE CODES

DW=Drinking Water S=Soil/Solid
WW=Wastewater T=Travel Blank
SW=Surface Water F=Food
GW=Groundwater G=Sludge
O=Other_____

TURN AROUND TIME

☐ Standard 10 - 15 Day
☐ Other_____

Laboratory Authorization Required for Rush ★ ★

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Bolin Use Only)	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	LAB NO
Ind Park G.16	7/15	8:40	West of New River		9				✓	X	X	X	X	X	01
Arrow G.A6	7/15	9:25	Skunk Creek / 79th		9				X	X	X	X	X	X	02
Travel Blank															-03

Comments / Special Instructions:_____

SAMPLE CONDITION UPON RECEIPT

No. of Containers	20
Temperature	ON ICE
Custody Seals	Y N
Seals Intact	Y N
Preserved	Y N

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Signature [illegible]	Date 7/15/99	Signature [illegible]	Date 7/15/99
	Printed Name Alberto Barrantes	Time 10:[illegible]	Printed Name [illegible]	Time 10:[illegible]
②	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time
③	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time

WHITE-LAB YELLOW-LAB PINK-CLIENT

Data Checksheet

Site	ARROW
Municipality	GLENDALE
Sample Date	9/19/99

Date Received	11/22/99

Laboratory Used	BOLIN
Laboratory Contact	STEPHANIE ARMAO
FCD Sample ID Number	A 091999
Lab Sample ID Number	9909-08528-002
Laboratory Invoice Number	059014

Initial Review Complete	✓	Date	11/23/99
Lab Contacted		Date	
Lab Review Complete		Date	
Second Review Complete		Date	
Additional Review Necessary			

Comments

Data Validation Table Complete	✓	Date	11/23/99

Data Entered Into Database	✓	Date	11/23/99

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Maricopa County Flood Control
Environmental Branch
2801 West Durango
Phoenix, AZ 85009
Attn: Dave Gardner

Received: 9/20/99
Reported: 11/11/99
Invoice No: 059014

Project Name: Glendale NPDES

Matrix: Storm Water
Sample No: 9909-08528-002
Sample ID: A 091999 (Skunk Crk & 79th)Comp.
Arrow

Time Sampled: 19:30
Date Sampled: 9/19/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Filtration for Diss Metals					9/20/99
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	9/28/99
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	10/04/99
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	10/11/99
Cadmium, Dissolved	EPA 200.7	<0.005	mg/L	0.005	10/07/99
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	10/07/99
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	9/21/99
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	10/05/99
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	9/30/99
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	10/07/99
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	9/28/99
Zinc, Dissolved	EPA 200.7	0.06	mg/L	0.02	10/07/99
Chromium	EPA 200.8	0.00166	mg/L	0.0013	10/18/99
Chromium, Dissolved	EPA 200.8	0.0093	mg/L	0.0025	10/02/99
Nickel	EPA 200.8	0.004 B	mg/L	0.01	10/19/99
Nickel, Dissolved	EPA 200.8	0.010	mg/L	0.010	10/02/99
Cyanide, Total	SM 4500 CNE	<0.01	mg/L	0.01	9/30/99
Chemical Oxygen Demand	EPA 410.4	98.	mg/L	20.	9/23/99
Total Dissolved Solids	SM 2540C	48.	mg/L		9/24/99
Solids, Total Suspended	EPA 160.2	106.	mg/L		9/24/99
Nitrogen as Ammonia	EPA 350.2	2.29	mg/L	0.03	9/24/99
Nitrate plus Nitrite	SM 4500-NO3 F	0.4	mg/L	0.1	9/20/99
Nitrogen as Nitrate	CALC.	0.4	mg/L		9/20/99
Nitrogen as Nitrite	SM 4500-NO2 B	<0.1	mg/L	0.1	9/20/99
Organic Nitrogen	CALCULATION	1.34	mg/L		9/27/99
Total Kjeldahl Nitrogen	EPA 351.3	3.63	mg/L	0.03	9/27/99
Total Phosphorous as P	EPA 365.3	0.50	mg/L	0.05	9/23/99
Phosphorus, Dissolved	EPA 365.3	0.13	mg/L	0.05	9/21/99
Orthophosphate as P	SM 4500 PE	0.38	mg/L	0.05	9/20/99
Phenolics, Total	EPA 420.1	0.0062	mg/L	0.0050	9/24/99
Total Organic Carbon	SM 5310C	14.2	mg/L	1.0	10/01/99
Total Alkalinity (as CaCO3)	SM 2320B	22.	mg/L	2.	9/24/99

Bolin Laboratories Inc.

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Matrix: Storm Water
Sample No: 9909-08528-002

Time Sampled: 19:30
Date Sampled: 9/19/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Sulfate, Dissolved	EPA 300.0	11.4	mg/L	5.0	9/30/99
4,4'-DDD	EPA 608	ND	ug/L	1.0	9/23/99
4,4'-DDE	EPA 608	ND	ug/L	1.0	9/23/99
4,4'-DDT	EPA 608	ND	ug/L	1.0	9/23/99
Aldrin	EPA 608	ND	ug/L	1.0	9/23/99
alpha-BHC	EPA 608	ND	ug/L	1.0	9/23/99
Chlordane	EPA 608	ND	ug/L	1.0	9/23/99
delta-BHC	EPA 608	ND	ug/L	1.0	9/23/99
Dieldrin	EPA 608	ND	ug/L	1.0	9/23/99
Endosulfan I	EPA 608	ND	ug/L	1.0	9/23/99
Endosulfan II	EPA 608	ND	ug/L	1.0	9/23/99
Endosulfan Sulfate	EPA 608	ND	ug/L	1.0	9/23/99
Endrin	EPA 608	ND	ug/L	1.0	9/23/99
Endrin Aldehyde	EPA 608	ND	ug/L	1.0	9/23/99
Heptachlor	EPA 608	ND	ug/L	1.0	9/23/99
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	9/23/99
Lindane (gamma BHC)	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1016	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1221	EPA 608	ND	ug/L	10	9/23/99
PCB 1232	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1242	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1248	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1254	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1260	EPA 608	ND	ug/L	1.0	9/23/99
Toxaphene	EPA 608	ND	ug/L	1.0	9/23/99
beta-BHC	EPA 608	ND	ug/L	1.0	9/23/99
Extraction	EPA 608				9/21/99
Surrogate:	EPA 608				9/23/99
***Dibutylchlorendate	EPA 608	50 S	% Recovery		9/23/99
Metals Digestion for ICP	EPA 200.7				9/22/99
Metals Digestion for GFAA	SM 3030E				9/22/99
Antimony	SM 3113B	<0.004	mg/L	0.004	9/28/99
Beryllium	EPA 200.7	<0.002	mg/L	0.002	11/08/99
Cadmium	SM 3113B	0.0003	mg/L	0.0002	10/01/99
Calcium	EPA 200.7	11.	mg/L	1.	10/28/99
Copper	EPA 200.7	0.017	mg/L	0.015	11/04/99
Lead	SM 3113B	0.010	mg/L	0.005	10/01/99
Magnesium	EPA 200.7	2.	mg/L	1.	10/28/99
Mercury	EPA 245.1	0.0007	mg/L	0.0002	9/30/99
Selenium	SM 3113B	<0.005	mg/L	0.005	10/01/99
Silver	EPA 200.7	<0.04	mg/L	0.04	10/28/99
Hardness, Total (Ca & Mg)	SM 2340B	35	mg/L	7.	10/28/99

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Matrix: Storm Water
Sample No: 9909-08528-002

Time Sampled: 19:30
Date Sampled: 9/19/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Thallium	EPA 279.2	<0.001	mg/L	0.001	9/27/99
Zinc	EPA 200.7	0.21	mg/L	0.02	11/04/99
Arsenic	SM 3113B	<0.005	mg/L	0.005	10/01/99
Acenaphthene	EPA 625	ND	ug/L	5.0	10/01/99
Acenaphthylene	EPA 625	ND	ug/L	5.0	10/01/99
Aniline	EPA 625	ND Y	ug/L	5.0	10/01/99
Anthracene	EPA 625	ND	ug/L	5.0	10/01/99
Benzidine	EPA 625	ND Y	ug/L	50.	10/01/99
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	10/01/99
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	10/01/99
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	10/01/99
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	10/01/99
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	10/01/99
Benzoic acid	EPA 625	ND Y	ug/L	5.0	10/01/99
Benzyl alcohol	EPA 625	ND Y	ug/L	5.0	10/01/99
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	10/01/99
Bis(2-chloroethyl)ether	EPA 625	ND	ug/L	5.0	10/01/99
Bis(2-chloroethoxy)methane	EPA 625	ND	ug/L	5.0	10/01/99
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	5.0	10/01/99
Bis(2-ethylhexyl)phthalate	EPA 625	15.	ug/L	5.0	10/01/99
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	10/01/99
4-Chloroaniline	EPA 625	ND Y	ug/L	5.0	10/01/99
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	10/01/99
4-Chlorophenylphenylether	EPA 625	ND	ug/L	5.0	10/01/99
Chrysene	EPA 625	ND	ug/L	5.0	10/01/99
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	10/01/99
Dibenzofuran	EPA 625	ND Y	ug/L	5.0	10/01/99
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	10/01/99
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	10/01/99
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	10/01/99
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	10/01/99
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	10/01/99
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	10/01/99
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	10/01/99
1,2-Diphenylhydrazine	EPA 625	ND *, Y	ug/L	5.0	10/01/99
Fluoranthene	EPA 625	ND	ug/L	5.0	10/01/99
Fluorene	EPA 625	ND	ug/L	5.0	10/01/99
Hexachlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	10/01/99

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9909-08528-002

Time Sampled: 19:30
Date Sampled: 9/19/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Hexachlorocyclopentadiene	EPA 625	ND Y	ug/L	5.0	10/01/99
Hexachloroethane	EPA 625	ND	ug/L	5.0	10/01/99
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	10/01/99
Isophorone	EPA 625	ND	ug/L	5.0	10/01/99
2-Methylnaphthalene	EPA 625	ND Y	ug/L	5.0	10/01/99
Naphthalene	EPA 625	ND	ug/L	5.0	10/01/99
2-Nitroaniline	EPA 625	ND Y	ug/L	5.0	10/01/99
3-Nitroaniline	EPA 625	ND Y	ug/L	5.0	10/01/99
4-Nitroaniline	EPA 625	ND Y	ug/L	5.0	10/01/99
Nitrobenzene	EPA 625	ND	ug/L	5.0	10/01/99
N-Nitrosodimethylamine	EPA 625	ND Y	ug/L	5.0	10/01/99
N-Nitrosodiphenylamine	EPA 625	ND Y	ug/L	5.0	10/01/99
N-Nitrosodi-n-propylamine	EPA 625	ND	ug/L	5.0	10/01/99
Phenanthrene	EPA 625	ND	ug/L	5.0	10/01/99
Pyrene	EPA 625	ND	ug/L	5.0	10/01/99
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	10/01/99
2-Chlorophenol	EPA 625	ND	ug/L	5.0	10/01/99
2,4-Dichlorophenol	EPA 625	ND	ug/L	5.0	10/01/99
2,4-Dimethylphenol	EPA 625	ND	ug/L	5.0	10/01/99
2,4-Dinitrophenol	EPA 625	ND	ug/L	10.0	10/01/99
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	5.0	10/01/99
2-Methylphenol	EPA 625	ND Y	ug/L	5.0	10/01/99
4-Methylphenol (p-Cresol)	EPA 625	ND Y	ug/L	5.0	10/01/99
2-Nitrophenol	EPA 625	ND	ug/L	5.0	10/01/99
4-Nitrophenol	EPA 625	ND	ug/L	5.0	10/01/99
Pentachlorophenol	EPA 625	ND	ug/L	5.0	10/01/99
Phenol	EPA 625	ND	ug/L	5.0	10/01/99
2,4,5-Trichlorophenol	EPA 625	ND Y	ug/L	5.0	10/01/99
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	10/01/99
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.0	10/01/99
Extraction	EPA 625				9/23/99
Surrogate:	EPA 625				10/01/99
***2-Fluorophenol	EPA 625	50.5	% Recovery		10/01/99
***d6-Phenol	EPA 625	37.3	% Recovery		10/01/99
***d5-Nitrobenzene	EPA 625	80.4	% Recovery		10/01/99
***2-Fluorobiphenyl	EPA 625	74.1	% Recovery		10/01/99
***2,4,6-Tribromophenol	EPA 625	98.5	% Recovery		10/01/99
***d14-Terphenyl	EPA 625	163	% Recovery		10/01/99
Chloride	SM 4500-CL B	<5.0	mg/L	5.0	9/22/99

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* = 1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.
B = Analyte concentration detected at a value between MDL & PQL.
T = Result based on a Tentatively Identified Compound search.
Y = Compound not listed in cited method.
S = EPA 608 surrogate recovery was below the laboratory acceptance limits due to lab error. Data may be biased low.

EPA Method 625 performed by Legend Technical Services, St.Paul MN, #AZ0557.
Phenol analyzed by McKenzie Labs, Phoenix AZ, #AZ0034.
TKN & Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.
Total & Dissloved Chromium & Nickel analyzed by ACZ Laboratories, Steamboat Springs CO, #AZ0102.

Stephanie Armao

Authorized Signatory
ADHS License No.: AZ0004

Data Checksheet

Site	CITRUS
Municipality	GLENDALE
Sample Date	9/19/99

Date Received	11/22/99

Laboratory Used	BOLIN
Laboratory Contact	STEPHANIE ARMAO
FCD Sample ID Number	C091999
Lab Sample ID Number	9909-08528-004
Laboratory Invoice Number	059014

Initial Review Complete	✓	Date	11/23/99
Lab Contacted		Date	
Lab Review Complete		Date	
Second Review Complete		Date	
Additional Review Necessary			

Comments

Data Validation Table Complete	✓	Date	11/24/99

Data Entered Into Database	✓	Date	11/23/99

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Maricopa County Flood Control
Environmental Branch
2801 West Durango
Phoenix, AZ 85009
Attn: Dave Gardner

Received: 9/20/99
Reported: 11/11/99
Invoice No: 059014

Project Name: Glendale NPDES

Matrix: Storm Water
Sample No: 9909-08528-004
Sample ID: C 091999 (Grovers & 71st)Comp.
CITRUS

Time Sampled: 19:00
Date Sampled: 9/19/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Filtration for Diss Metals					9/20/99
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	9/28/99
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	10/04/99
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	10/11/99
Cadmium, Dissolved	EPA 200.7	<0.005	mg/L	0.005	10/07/99
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	10/07/99
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	9/21/99
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	10/05/99
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	9/30/99
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	10/07/99
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	9/28/99
Zinc, Dissolved	EPA 200.7	0.08	mg/L	0.02	10/07/99
Chromium	EPA 200.8	0.0028 B	mg/L	0.003	11/01/99
Chromium, Dissolved	EPA 200.8	0.0084	mg/L	0.0025	10/02/99
Nickel	EPA 200.8	0.003 B	mg/L	0.01	11/01/99
Nickel, Dissolved	EPA 200.8	0.011	mg/L	0.01	10/02/99
Cyanide, Total	SM 4500 CNE	<0.01	mg/L	0.01	9/30/99
Chemical Oxygen Demand	EPA 410.4	65.	mg/L	20.	9/23/99
Total Dissolved Solids	SM 2540C	97.	mg/L		9/24/99
Solids, Total Suspended	EPA 160.2	83.	mg/L		9/24/99
Nitrogen as Ammonia	EPA 350.2	1.50	mg/L	0.03	9/24/99
Nitrate plus Nitrite	SM 4500-NO3 F	1.3	mg/L	0.1	9/20/99
Nitrogen as Nitrate	CALC.	1.2	mg/L		9/20/99
Nitrogen as Nitrite	SM 4500-NO2 B	0.1	mg/L	0.1	9/20/99
Organic Nitrogen	CALCULATION	1.34	mg/L		9/27/99
Total Kjeldahl Nitrogen	EPA 351.3	2.84	mg/L	0.03	9/27/99
Total Phosphorous as P	EPA 365.3	0.50	mg/L	0.05	9/23/99
Phosphorus, Dissolved	EPA 365.3	0.20	mg/L	0.05	9/21/99
Orthophosphate as P	SM 4500 PE	0.45	mg/L	0.05	9/20/99
Phenolics, Total	EPA 420.1	0.0081	mg/L	0.0050	9/24/99
Total Organic Carbon	SM 5310C	7.0	mg/L	1.0	10/01/99
Total Alkalinity (as CaCO3)	SM 2320B	52.	mg/L	2.	9/24/99

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9909-08528-004

Time Sampled: 19:00
Date Sampled: 9/19/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Sulfate, Dissolved	EPA 300.0	12.4	mg/L	5.0	9/30/99
4,4'-DDD	EPA 608	ND	ug/L	1.0	9/23/99
4,4'-DDE	EPA 608	ND	ug/L	1.0	9/23/99
4,4'-DDT	EPA 608	ND	ug/L	1.0	9/23/99
Aldrin	EPA 608	ND	ug/L	1.0	9/23/99
alpha-BHC	EPA 608	ND	ug/L	1.0	9/23/99
Chlordane	EPA 608	ND	ug/L	1.0	9/23/99
delta-BHC	EPA 608	ND	ug/L	1.0	9/23/99
Dieldrin	EPA 608	ND	ug/L	1.0	9/23/99
Endosulfan I	EPA 608	ND	ug/L	1.0	9/23/99
Endosulfan II	EPA 608	ND	ug/L	1.0	9/23/99
Endosulfan Sulfate	EPA 608	ND	ug/L	1.0	9/23/99
Endrin	EPA 608	ND	ug/L	1.0	9/23/99
Endrin Aldehyde	EPA 608	ND	ug/L	1.0	9/23/99
Heptachlor	EPA 608	ND	ug/L	1.0	9/23/99
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	9/23/99
Lindane (gamma BHC)	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1016	EPA 608	ND L	ug/L	1.0	9/23/99
PCB 1221	EPA 608	ND	ug/L	10	9/23/99
PCB 1232	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1242	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1248	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1254	EPA 608	ND	ug/L	1.0	9/23/99
PCB 1260	EPA 608	ND	ug/L	1.0	9/23/99
Toxaphene	EPA 608	ND	ug/L	1.0	9/23/99
beta-BHC	EPA 608	ND	ug/L	1.0	9/23/99
Extraction	EPA 608				9/21/99
Surrogate:	EPA 608				9/23/99
***Dibutylchlorendate	EPA 608	72	% Recovery		9/23/99
Metals Digestion for ICP	EPA 200.7				9/22/99
Metals Digestion for GFAA	SM 3030E				9/22/99
Antimony	SM 3113B	<0.004 M2	mg/L	0.004	9/28/99
Beryllium	EPA 200.7	<0.002	mg/L	0.002	11/08/99
Cadmium	SM 3113B	<0.0002	mg/L	0.0002	10/01/99
Calcium	EPA 200.7	22.	mg/L	1.	10/28/99
Copper	EPA 200.7	<0.015	mg/L	0.015	10/21/99
Lead	SM 3113B	0.010 M2	mg/L	0.005	10/01/99
Magnesium	EPA 200.7	2.	mg/L	1.	10/21/99
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	9/30/99
Selenium	SM 3113B	<0.005	mg/L	0.005	10/01/99
Silver	EPA 200.7	<0.04	mg/L	0.04	10/21/99
Hardness, Total (Ca & Mg)	SM 2340B	63	mg/L	7.	10/28/99

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9909-08528-004

Time Sampled: 19:00
Date Sampled: 9/19/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Thallium	EPA 279.2	<0.001	mg/L	0.001	9/27/99
Zinc	EPA 200.7	0.20	mg/L	0.02	10/21/99
Arsenic	SM 3113B	<0.005	mg/L	0.005	10/01/99
Chloride	SM 4500-CL B	<5.0	mg/L	5.0	9/22/99
Acenaphthene	EPA 625	ND	ug/L	5.0	10/01/99
Acenaphthylene	EPA 625	ND	ug/L	5.0	10/01/99
Aniline	EPA 625	ND Y	ug/L	5.0	10/01/99
Anthracene	EPA 625	ND	ug/L	5.0	10/01/99
Benzidine	EPA 625	ND Y	ug/L	50.	10/01/99
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	10/01/99
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	10/01/99
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	10/01/99
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	10/01/99
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	10/01/99
Benzoic acid	EPA 625	ND Y	ug/L	5.0	10/01/99
Benzyl alcohol	EPA 625	ND Y	ug/L	5.0	10/01/99
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	10/01/99
Bis(2-chloroethyl)ether	EPA 625	ND	ug/L	5.0	10/01/99
Bis(2-chloroethoxy)methane	EPA 625	ND	ug/L	5.0	10/01/99
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	5.0	10/01/99
Bis(2-ethylhexyl)phthalate	EPA 625	ND	ug/L	5.0	10/01/99
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	10/01/99
4-Chloroaniline	EPA 625	ND Y	ug/L	5.0	10/01/99
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	10/01/99
4-Chlorophenylphenylether	EPA 625	ND	ug/L	5.0	10/01/99
Chrysene	EPA 625	ND	ug/L	5.0	10/01/99
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	10/01/99
Dibenzofuran	EPA 625	ND Y	ug/L	5.0	10/01/99
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	10/01/99
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	10/01/99
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	10/01/99
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	10/01/99
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	10/01/99
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	10/01/99
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	10/01/99
1,2-Diphenylhydrazine	EPA 625	ND *, Y	ug/L	5.0	10/01/99
Fluoranthene	EPA 625	ND	ug/L	5.0	10/01/99
Fluorene	EPA 625	ND	ug/L	5.0	10/01/99
Hexachlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9909-08528-004

Time Sampled: 19:00
Date Sampled: 9/19/1999

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	10/01/99
Hexachlorocyclopentadiene	EPA 625	ND Y	ug/L	5.0	10/01/99
Hexachloroethane	EPA 625	ND	ug/L	5.0	10/01/99
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	10/01/99
Isophorone	EPA 625	ND	ug/L	5.0	10/01/99
2-Methylnaphthalene	EPA 625	ND Y	ug/L	5.0	10/01/99
Naphthalene	EPA 625	ND	ug/L	5.0	10/01/99
2-Nitroaniline	EPA 625	ND Y	ug/L	5.0	10/01/99
3-Nitroaniline	EPA 625	ND Y	ug/L	5.0	10/01/99
4-Nitroaniline	EPA 625	ND Y	ug/L	5.0	10/01/99
Nitrobenzene	EPA 625	ND	ug/L	5.0	10/01/99
N-Nitrosodimethylamine	EPA 625	ND Y	ug/L	5.0	10/01/99
N-Nitrosodiphenylamine	EPA 625	ND Y	ug/L	5.0	10/01/99
N-Nitrosodi-n-propylamine	EPA 625	ND	ug/L	5.0	10/01/99
Phenanthrene	EPA 625	ND	ug/L	5.0	10/01/99
Pyrene	EPA 625	ND	ug/L	5.0	10/01/99
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	10/01/99
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	10/01/99
2-Chlorophenol	EPA 625	ND	ug/L	5.0	10/01/99
2,4-Dichlorophenol	EPA 625	ND	ug/L	5.0	10/01/99
2,4-Dimethylphenol	EPA 625	ND	ug/L	5.0	10/01/99
2,4-Dinitrophenol	EPA 625	ND	ug/L	10.0	10/01/99
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	5.0	10/01/99
2-Methylphenol	EPA 625	ND Y	ug/L	5.0	10/01/99
4-Methylphenol (p-Cresol)	EPA 625	ND Y	ug/L	5.0	10/01/99
2-Nitrophenol	EPA 625	ND	ug/L	5.0	10/01/99
4-Nitrophenol	EPA 625	ND	ug/L	5.0	10/01/99
Pentachlorophenol	EPA 625	ND	ug/L	5.0	10/01/99
Phenol	EPA 625	ND	ug/L	5.0	10/01/99
2,4,5-Trichlorophenol	EPA 625	ND Y	ug/L	5.0	10/01/99
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	10/01/99
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.0	10/01/99
Extraction	EPA 625				9/23/99
Surrogate:	EPA 625				10/01/99
***2-Fluorophenol	EPA 625	41.4	% Recovery		10/01/99
***d6-Phenol	EPA 625	32.0	% Recovery		10/01/99
***d5-Nitrobenzene	EPA 625	61.8	% Recovery		10/01/99
***2-Fluorobiphenyl	EPA 625	59.3	% Recovery		10/01/99
***2,4,6-Tribromophenol	EPA 625	82.5	% Recovery		10/01/99
***d14-Terphenyl	EPA 625	95.6	% Recovery		10/01/99

B = Analyte concentration detected at a value between MDL & PQL.

Bolin Laboratories Inc.

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L = The Laboratory Fortified Blank was outside the laboratory acceptance limits. It was biased low with a possibility of false negative result in the sample for PCB 1016.
M2 = Matrix spike recovery was outside the laboratory acceptance limits. The Laboratory Fortified Blank recovery was acceptable. The data may have been impacted, but is considered valid.
T = Result based on a Tentatively Identified Compound search.
Y = Compound not listed in cited method.
* = 1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.

EPA Method 625 performed by Legend Technical Services, St.Paul MN, #AZ0557.
Phenol analyzed by McKenzie Labs, Phoenix AZ, #AZ0034.
TKN & Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.
Total & Dissolved Chromium & Nickel analyzed by ACZ Laboratories, Steamboat Springs CO, #AZ0102.

Report revised to correct method reference for Dissolved Chromium and Nickel.

Stephanie Armao

Authorized Signatory
ADHS License No.: AZ0004

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

ACZ Project #	L24868
QC Report ID	QC2969-B
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

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ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Sample Identification

ACZ Project #	L24868
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

ACZ Lab ID	Client Sample ID	Sample Matrix	Date Sampled	Date Received
L24868-01	9909-08528-02	Waste Water	09/19/1999 7:30:00 PM	09/24/1999
L24868-02	9909-08528-04	Waste Water	09/19/1999 7:00:00 PM	09/24/1999

Comments:

REPQC001.07.97.03

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Project Summary

ACZ Project #	L24868
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

ACZ Lab ID: L24868-

Product Description	Method	01	02
Chromium, dissolved	M200.8 ICP-MS	X	X
Chromium, total	M200.8 ICP-MS	X	X
Nickel, dissolved	M200.8 ICP-MS	X	X
Nickel, total	M200.8 ICP-MS	X	X

ACZ

Inorganic QC Summary

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Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Calibration Verification - Control Samples

Cover Page

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

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Metal Analysis

Metals - ICPMS

Dissolved Metals

Total Metals

Additional analytical runs may have been required as a result of matrix effects and/or instrumental problems.
Re-analysis data immediately follows initial QC data as outlined in above sequence.

REPQC001.07.97.03

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix Aqueous
Analysis Group Metals - ICPMS
QC Report ***Calibration Verification-Control Samples***

ACZ Project #	L24868
QC Report ID	QC2969-B
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

Dissolved Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	PCN / SCN#	Analysis Date	Concentration (mg/L) True	Found	Q	Rec (%)	Control Limits,% Lower	Upper	Q
Chromium	WG89141ICS1	ICS	MS990920-1	10/02/1999 2:39:00 AM	0.1	0.0987		98.7	90	110	
Chromium	WG89141QCS	QCS	MS990920-9	10/02/1999 2:54:00 AM	0.05	0.0501		100.2	90	110	
Chromium	WG89141ICS2	ICS	MS990920-1	10/02/1999 4:11:00 AM	0.1	0.102		101.9	90	110	
Nickel	WG89141ICS1	ICS	MS990920-1	10/02/1999 2:39:00 AM	0.1	0.0996		99.6	90	110	
Nickel	WG89141QCS	QCS	MS990920-9	10/02/1999 2:54:00 AM	0.05	0.0514		102.9	90	110	
Nickel	WG89141ICS2	ICS	MS990920-1	10/02/1999 4:11:00 AM	0.1	0.103		102.7	90	110	

ACZ	Client
✓	

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix *Aqueous*
Analysis Group *Metals - ICPMS*
QC Report ***Calibration Verification-Control Samples***

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Total Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	PCN / SCN#	Analysis Date	Concentration (mg/L) True	Found	Q	Rec (%)	Control Limits,% Lower	Upper	Q
Chromium	WG90057QCS	QCS	MS990920-9	10/18/1999 1:47:00 PM	0.05	0.0519		103.8	90	110	
Chromium	WG90057ICS2	ICS	MS990920-1	10/18/1999 2:55:00 PM	0.1	0.0996		99.6	90	110	
Chromium	WG90057ICS3	ICS	MS990920-1	10/18/1999 4:25:00 PM	0.1	0.0947		94.7	90	110	
Nickel	WG90154ICS1	ICS	MS990920-1	10/19/1999 8:52:00 PM	0.1	0.102		102.5	90	110	
Nickel	WG90154QCS	QCS	MS990920-9	10/19/1999 9:07:00 PM	0.05	0.0522		104.3	90	110	
Nickel	WG90154ICS2	ICS	MS990920-1	10/19/1999 10:00:00 PM	0.1	0.0957		95.7	90	110	

ACZ	Client
✓	

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Calibration Verification - Blanks

Cover Page

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

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Metals - ICPMS	
Dissolved Metals	
Total Metals	

Additional analytical runs may have been required as a result of matrix effects and/or instrumental problems.
Re-analysis data immediately follows initial QC data as outlined in above sequence.

REPQC001.07.97.03

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix | *Aqueous*
Analysis Group | *Metals - ICPMS*
QC Report | ***Calibration Verification-Blanks***

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Dissolved Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	Analysis Date	Concentration			Control Limits		Units	Q
				MDL	Found	Q	Lower	Upper		
Chromium	WG89141ICB1	ICB	10/02/1999 2:47:00 A	0.00005		U	-0.00011	0.00011	mg/L	
Chromium	WG89141ICB2	ICB	10/02/1999 4:19:00 A	0.00005		U	-0.00011	0.00011	mg/L	
Chromium	WG89141ICB3	ICB	10/02/1999 5:53:00 A	0.00005		U	-0.00011	0.00011	mg/L	
Chromium	WG89141ICB4	ICB	10/02/1999 6:38:00 A	0.00005		U	-0.00011	0.00011	mg/L	
Nickel	WG89141ICB1	ICB	10/02/1999 2:47:00 A	0.0002		U	-0.00044	0.00044	mg/L	
Nickel	WG89141ICB2	ICB	10/02/1999 4:19:00 A	0.0002		U	-0.00044	0.00044	mg/L	
Nickel	WG89141ICB3	ICB	10/02/1999 5:53:00 A	0.0002		U	-0.00044	0.00044	mg/L	
Nickel	WG89141ICB4	ICB	10/02/1999 6:38:00 A	0.0002		U	-0.00044	0.00044	mg/L	

ACZ	Client
✓	

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix *Aqueous*
Analysis Group *Metals - ICPMS*
QC Report ***Calibration Verification-Blanks***

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Total Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	Analysis Date	Concentration MDL	Found	Q	Control Limits Lower	Upper	Units	Q
Chromium	WG90057ICB1	ICB	10/18/1999 1:40:00 P	0.00005		U	-0.00011	0.00011	mg/L	
Chromium	WG90057ICB2	ICB	10/18/1999 3:02:00 P	0.00005		U	-0.00011	0.00011	mg/L	
Chromium	WG90057ICB3	ICB	10/18/1999 4:32:00 P	0.00005		U	-0.00011	0.00011	mg/L	
Chromium	WG90057ICB4	ICB	10/18/1999 4:55:00 P	0.00005		U	-0.00011	0.00011	mg/L	
Nickel	WG90154ICB1	ICB	10/19/1999 9:00:00 P	0.0002		U	-0.00044	0.00044	mg/L	
Nickel	WG90154ICB2	ICB	10/19/1999 10:08:00 P	0.0002		U	-0.00044	0.00044	mg/L	

ACZ	Client
✓	

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Spike Verification

Cover Page

ACZ Project #	L24868
QC Report ID	QC2969-B
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

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Metal Analysis

Metals - ICPMS

Dissolved Metals

Total Metals

Additional analytical runs may have been required as a result of matrix effects and/or instrumental problems.
Re-analysis data immediately follows initial QC data as outlined in above sequence.

REPQC001.07.97.03

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix | *Aqueous*
Analysis Group | *Metals - ICPMS*
QC Report | ***Spike Verification***

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Dissolved Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	PCN / SCN#	Analysis Date	Concentration Added	Sample	Q	Spike	Q	Units	Rec (%)	Control Limits,% Lower	Upper	Q
Chromium	L24868-01LFM	LFM	MS990920-5	10/02/1999 3:40:00	0.1	0.0093		0.106		mg/L	105.5	70	130	
Chromium	L24868-01LFMD	LFMD	MS990920-5	10/02/1999 3:48:00	0.1	0.0093		0.106		mg/L	104.6	70	130	
Nickel	L24868-01LFM	LFM	MS990920-5	10/02/1999 3:40:00	0.1	0.01		0.105		mg/L	103.6	70	130	
Nickel	L24868-01LFMD	LFMD	MS990920-5	10/02/1999 3:48:00	0.1	0.01		0.104		mg/L	103.2	70	130	

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix Aqueous
Analysis Group Metals - ICPMS
QC Report ***Spike Verification***

ACZ Project #	L24868
QC Report ID	QC2969-B
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

Total Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	PCN / SCN#	Analysis Date	Concentration Added	Sample	Q	Spike	Q	Units	Rec (%)	Control Limits,% Lower	Upper	Q
Chromium	L24785-06AS	AS	MS990920-5	10/18/1999 3:39:00	0.1		U	0.104		mg/L	104	85	115	
Nickel	L24868-01AS	AS	MS990920-5	10/19/1999 9:45:00	0.1	0.0004	B	0.0900		mg/L	89.6	85	115	

ACZ	Client
✓	

REPQC001.07.97.03

ACZ FORM IV - IN

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Duplicate Verification

Cover Page

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

	Page
Metal Analysis	15
Metals - ICPMS	
Dissolved Metals	

Additional analytical runs may have been required as a result of matrix effects and/or instrumental problems.
Re-analysis data immediately follows initial QC data as outlined in above sequence.

REPQC001.07.97.03

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix Aqueous
Analysis Group Metals - ICPMS
QC Report ***Duplicate Verification***

ACZ Project #	L24868
QC Report ID	QC2969-B
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

Dissolved Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	Concentration (mg/L) Sample	Q	Duplicate	Q	RPD (%)	Control Limits, % Lower	Upper	Q
Chromium	L24868-01LFMD	LFMD	0.106		0.106		0.9	0	20	
Nickel	L24868-01LFMD	LFMD	0.105		0.104		0.5	0	20	

ACZ / Client ✓

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Method Verification - Control Samples

Cover Page

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

	Page
Metal Analysis	17
Metals - ICPMS	
Dissolved Metals	
Total Metals	

Additional analytical runs may have been required as a result of matrix effects and/or instrumental problems.
Re-analysis data immediately follows initial QC data as outlined in above sequence.

REPQC001.07.97.03

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
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Matrix *Aqueous*
Analysis Group *Metals - ICPMS*
QC Report ***Method Verification-Control Samples***

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Dissolved Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	PCN / SCN#	Analysis Date	Concentration (mg/L) True	Found	Q	Rec (%)	Control Limits,% Lower	Upper	Q
Chromium	WG89141LFB	LFB	MS990920-5	10/02/1999 3:09:00 A	0.1	0.102		102	85	115	
Nickel	WG89141LFB	LFB	MS990920-5	10/02/1999 3:09:00 A	0.1	0.102		102	85	115	

ACZ	Client
✓	

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix *Aqueous*
Analysis Group *Metals - ICPMS*
QC Report ***Method Verification-Control Samples***

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Total Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	PCN / SCN#	Analysis Date	Concentration (mg/L) True	Found	Q	Rec (%)	Control Limits,% Lower	Upper	Q
Chromium	WG90057LFB	LFB	MS990920-5	10/18/1999 2:02:00 P	0.1	0.104		104	85	115	
Nickel	WG90154LFB	LFB	MS990920-5	10/19/1999 9:22:00 P	0.1	0.0990		99	85	115	

ACZ	Client
✓	

ACZ

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Method Verification - Blanks

Cover Page

ACZ Project #	L24868
QC Report ID	QC2969-B
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

	Page
Metal Analysis	20
Metals - ICPMS	
Dissolved Metals	
Total Metals	

Additional analytical runs may have been required as a result of matrix effects and/or instrumental problems.
Re-analysis data immediately follows initial QC data as outlined in above sequence.

ACZ

Inorganic QC Summary

2773 Downhill Drive
Steamboat Springs, CO 80487
(800) 334-5493
Fax: (970) 879-2216

Matrix *Aqueous*
Analysis Group *Metals - ICPMS*
QC Report ***Method Verification-Blank***

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Dissolved Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	Analysis Date	Concentration (mg/L)			Control Limits		Q
				MDL	Found	Q	Lower	Upper	
Chromium	WG89141LRB	LRB	10/02/1999 3:02:00 AM	0.00005		U	-0.00011	0.00011	
Chromium	WG89141PBW	PBW	10/02/1999 3:17:00 AM	0.00005		U	-0.00011	0.00011	
Nickel	WG89141LRB	LRB	10/02/1999 3:02:00 AM	0.0002		U	-0.00044	0.00044	
Nickel	WG89141PBW	PBW	10/02/1999 3:17:00 AM	0.0002		U	-0.00044	0.00044	

ACZ

Inorganic QC Summary

2773 Downhill Drive
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Fax: (970) 879-2216

Matrix *Aqueous*
Analysis Group *Metals - ICPMS*
QC Report ***Method Verification-Blank***

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Total Metals

Method M200.8 ICP-MS

Element	ACZ ID	QC Type	Analysis Date	Concentration (mg/L) MDL	Found	Q	Control Limits Lower	Upper	Q
Chromium	WG90057LRB	LRB	10/18/1999 1:55:00 PM	0.00005		U	-0.00011	0.00011	
Nickel	WG90154LRB	LRB	10/19/1999 9:15:00 PM	0.0002		U	-0.00044	0.00044	

ACZ	Client
✓	

ACZ

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Fax: (970) 879-2216

Analysis Run Log

Cover Page

ACZ Project #	*L24868*
QC Report ID	*QC2969-B*
Client	*Bolin Laboratories*
Client Project ID	*99-2230*
Date Received	*09/24/1999*
Date Reported	*10/25/1999*

Page

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Metal Analysis

Metals (Dissolved) by ICP-MS	WG89141
Metals (Total) by ICP-MS	WG90057 WG90154

ACZ

Inorganic QC Summary

2773 Downhill Drive
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(800) 334-5493
Fax: (970) 879-2216

QC Report | *Analysis Run Log*

Analysis | *Metals (Dissolved) by ICP-MS*

ACZ Project #	L24868
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

Workgroup: WG89141

ACZ ID	Measure Date	Dilution	Cr	Ni
WG89141ICS1	10/02/1999	1	X	X
WG89141ICB1	10/02/1999	1	X	X
WG89141QCS	10/02/1999	1	X	X
WG89141LRB	10/02/1999	1	X	X
WG89141LFB	10/02/1999	1	X	X
WG89141PBW	10/02/1999	1	X	X
L24868-01	10/02/1999	10	X	X
L24868-01LFM	10/02/1999	1	X	X
L24868-01LFMD	10/02/1999	1	X	X
L24868-02	10/02/1999	10	X	X
ZZZ	10/02/1999	50	X	X
WG89141ICS2	10/02/1999	1	X	X
WG89141ICB2	10/02/1999	1	X	X
ZZZ	10/02/1999	50	X	X
ZZZ	10/02/1999	2	X	X
ZZZ	10/02/1999	50	X	X
ZZZ	10/02/1999	2	X	X
ZZZ	10/02/1999	5	X	X
L24887-06LFM	10/02/1999	1	X	X
L24887-06LFMD	10/02/1999	1	X	X
ZZZ	10/02/1999	2	X	X
ZZZ	10/02/1999	5	X	X
ZZZ	10/02/1999	5	X	X
WG89141ICS3	10/02/1999	1	X	X
WG89141ICB3	10/02/1999	1	X	X
ZZZ	10/02/1999	20	X	X
ZZZ	10/02/1999	20	X	X
ZZZ	10/02/1999	50	X	X
ZZZ	10/02/1999	50	X	X
WG89141ICS4	10/02/1999	1	X	X
WG89141ICB4	10/02/1999	1	X	X

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Inorganic QC Summary

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QC Report | *Analysis Run Log*

Analysis | *Metals (Total) by ICP-MS*

ACZ Project #	L24868
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

Workgroup: WG90057

ACZ ID	Measure Date	Dilution	Cr
WG90057ICS1	10/18/1999	1	X
WG90057ICB1	10/18/1999	1	X
WG90057QCS	10/18/1999	1	X
WG90057LRB	10/18/1999	1	X
WG90057LFB	10/18/1999	1	X
L24775-13AS	10/18/1999	1	X
WG90057ICS2	10/18/1999	1	X
WG90057ICB2	10/18/1999	1	X
L24785-06AS	10/18/1999	1	X
ZZZ	10/18/1999	50	X
L24868-01	10/18/1999	5	X
WG90057ICS3	10/18/1999	1	X
WG90057ICB3	10/18/1999	1	X
WG90057ICS4	10/18/1999	1	X
WG90057ICB4	10/18/1999	1	X

ACZ	Client
✓	

ACZ

Inorganic QC Summary

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QC Report | *Analysis Run Log*

Analysis | *Metals (Total) by ICP-MS*

ACZ Project #	L24868
Client	Bolin Laboratories
Client Project ID	99-2230
Date Received	09/24/1999
Date Reported	10/25/1999

Workgroup: WG90154

ACZ ID	Measure Date	Dilution	Ni
WG90154ICS1	10/19/1999	1	X
WG90154ICB1	10/19/1999	1	X
WG90154QCS	10/19/1999	1	X
WG90154LRB	10/19/1999	1	X
WG90154LFB	10/19/1999	1	X
ZZZ	10/19/1999	100	X
L24868-01	10/19/1999	10	X
L24868-01AS	10/19/1999	1	X
WG90154ICS2	10/19/1999	1	X
WG90154ICB2	10/19/1999	1	X

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(800) 334-5493
Fax: (970) 879-2216

QC SUMMARY

QC REFERENCE

QC Report Types

(1)	Calibration Verification - Blanks	Verifies that there is no or minimal contamination in the instrument calibration.
(2)	Calibration Verification - Control Samples	Verifies the accuracy of the instrument calibration.
(3)	Method Verification - Blanks	Verifies that there is no or minimal contamination in the prep method procedure.
(4)	Method Verification - Control Samples	Verifies the accuracy of the method, including the prep procedure.
(5)	Spike Verification	Determines sample matrix interferences, if any.
(6)	Duplicate Verification	Verifies the precision of the instrument and/or method.

QC Sample Types

ICV	Initial Calibration Verification	QCS	Quality Control Sample
CCV	Continuing Calibration Verification	ICS	Instrument Check Sample
LCSW	Laboratory Control Sample - Water	LFB	Laboratory Fortified Blank
LCSS	Laboratory Control Sample - Soil	LFM	Laboratory Fortified Matrix
ICB	Initial Calibration Blank	AS	Analytical (Post Digestion) Spike
CCB	Continuing Calibration Blank	MS	Matrix Spike
LRB	Laboratory Reagent Blank	LFMD	Laboratory Fortified Matrix Duplicate
PBW	Prep Blank - Water	ASD	Analytical Spike (Post Digestion) Duplicate
PBS	Prep Blank - Soil	MSD	Matrix Spike Duplicate
		DUP	Sample Duplicate

Unique ACZ QC Summary Qualifiers (Q)

Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.
Y	This sample, instead of one of yours, was used as the quality control sample for the workgroup batch.
X	QC is out of control. See Case Narrative.
W	Poor recovery for Silver quality control is accepted because Silver often precipitates with Chloride.
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
U	Analyte was analyzed for but not detected at the indicated MDL
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
S	ICV/QCS sample not part of workgroup; analyzed immediately following instrument calibration as part of a prevous workgroup.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
J	Oraganic: Analyte concentration detected at a value between the MDL & PQL.
B	Inorganic: Analyte concentration detected at a value between the MDL & PQL. Organic: Analyte found in daily blank.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4) EPA 600/4-80-032. Prescribed Procedures for Measurement of Radioactivity in Drinking Water, August 1980.
(5) EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update II, September 1994.
(6) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the reported (rounded) values are used in the calculations.
(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4) All matrices for Organic analyses are reported on an "as received" basis, except for TPH-IR analyses on soils which are reported on a dry weight basis.
(5) The PCN/SCN header on the QC reports stands for Primary Control Number/Secondary Control Number. All stock chemicals are given a PCN and any reagent made at the bench level is assigned a SCN. These numbers track our standards and chemicals so that any reagent is traceable to a manufacturer's certificate of analysis.

This report is subject to the "Terms & Conditions" section in ACZ Laboratories, Inc. 1999 Analytical Services Fee Schedule.

Data File: /chem/GCMS_1.i/99273.b/012.d
Report Date: 05-Oct-1999 13:32

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: blms-w 9/23
Level: LOW
Data Type: MS DATA
SpikeList File: water.spk
Sublist File: all.sub
Method File: /chem/GCMS_1.i/99273.b/8270w99273.m
Misc Info:

Client SDG: 99082
Fraction: SV

Operator: sbd
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 Phenol C	200	60.0	30.00	12-110
9 2-Chlorophenol	200	137	68.50	27-123
11 1,4-Dichlorobenzen	100	62.3	62.30	36-97
17 N-Nitroso-di-n-pro	100	85.5	85.50	41-116
27 1,2,4-Trichloroben	100	72.5	72.50	39-98
33 4-Chloro-3-methylp	200	184	92.00	23-97
45 Acenaphthene C	100	89.3	89.30	46-118
49 2,4-Dinitrotoluene	100	88.8	88.80	24-96
50 4-Nitrophenol P	200	74.2	37.10	10-80
63 Pentachlorophenol	200	179	89.50	9-103
71 Pyrene	100	91.0	91.00	26-127

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	83.5	41.75	21-100
$ 7 Phenol-d5	200	61.3	30.65	10-94
$ 20 Nitrobenzene-d5	100	74.4	74.40	35-114
$ 39 2-Fluorobiphenyl	100	82.5	82.50	43-116
$ 60 2,4,6-Tribromophen	200	185	92.50	10-123
$ 72 Terphenyl-d14	100	90.7	90.70	33-141

Data File: /chem/GCMS_1.i/99273.b/012a.d
Report Date: 05-Oct-1999 13:33

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: blms-w 9/23
Level: LOW
Data Type: MS DATA
SpikeList File: 625.spk
Sublist File: all.sub
Method File: /chem/GCMS_1.i/99273.b/625w99273.m
Misc Info:

Client SDG: 99082
Fraction: SV

Operator: sbd
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6 bis(2-Chloroethyl)	100	66.7	66.70	12-158
8 Phenol C	200	60.0	30.00	5-112
9 2-Chlorophenol	200	137	68.50	12-134
10 1,3-Dichlorobenzen	100	61.4	61.40	0-172
11 1,4-Dichlorobenzen	100	62.3	62.30	20-124
12 1,2-Dichlorobenzen	100	63.1	63.10	32-129
14 bis(2-chloroisopro	100	105	105.00	36-166
16 Hexachloroethane	100	68.2	68.20	40-113
17 N-Nitroso-di-n-pro	100	85.5	85.50	0-230
21 Nitrobenzene	100	77.8	77.80	35-180
22 Isophorone	100	81.3	81.30	21-196
23 2-Nitrophenol C	200	180	90.00	29-182
24 2,4-Dimethylphenol	200	164	82.00	32-119
25 bis(2-Chloroethoxy	100	73.6	73.60	33-184
26 2,4-Dichlorophenol	200	178	89.00	39-135
27 1,2,4-Trichloroben	100	72.5	72.50	44-142
28 Naphthalene	100	71.1	71.10	21-133
32 Hexachlorobutadien	100	76.7	76.70	24-116
33 4-Chloro-3-methylp	200	184	92.00	22-147
37 2,4,6-Trichlorophe	200	202	101.00	37-144
42 Acenaphthylene	100	88.2	88.20	33-145
43 Dimethylphthalate	100	90.5	90.50	0-112
44 2,6-Dinitrotoluene	100	103	103.00	39-139
45 Acenaphthene C	100	89.3	89.30	47-145
47 2,4-Dinitrophenol	200	232	116.00	0-191
49 2,4-Dinitrotoluene	100	101	101.00	39-139
50 4-Nitrophenol P	200	89.8	44.90	0-132
52 Fluorene	100	100	100.00	59-121
53 4-Chlorophenyl-phe	100	99.4	99.40	25-158
54 Diethylphthalate	100	85.5	85.50	0-114
62 Hexachlorobenzene	100	99.8	99.80	0-152
63 Pentachlorophenol	200	180	90.00	14-176
64 Phenanthrene	100	97.4	97.40	54-120

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
65 Anthracene	100	95.7	95.70	27-133
67 Di-n-butylphthalat	100	94.1	94.10	1-118
68 Fluoranthene C	100	101	101.00	26-137
71 Pyrene	100	91.0	91.00	52-115
73 Butylbenzylphthala	100	89.1	89.10	0-152
74 3,3'-Dichlorobenzi	100	98.2	98.20	0-262
75 Benzo[a]anthracene	100	96.3	96.30	33-143
76 Chrysene	100	99.2	99.20	17-168
77 bis(2-Ethylhexyl)p	100	95.9	95.90	8-158
79 Di-n-octylphthalat	100	97.7	97.70	4-146
80 Benzo[b]fluoranthe	100	101	101.00	24-159
81 Benzo[k]fluoranthe	100	111	111.00	11-162
82 Benzo[a]pyrene C	100	106	106.00	17-163
83 Indeno[1,2,3-cd]py	100	112	112.00	0-171
84 Dibenz[a,h]anthrac	100	110	110.00	0-227
61 4-Bromophenyl-phen	100	99.9	99.90	53-127
40 2-Chloronaphthalen	100	85.3	85.30	60-118
57 4,6-Dinitro-2-meth	200	178	89.00	0-181

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	83.5	41.75	21-100
$ 7 Phenol-d5	200	61.3	30.65	10-94
$ 20 Nitrobenzene-d5	100	74.4	74.40	35-114
$ 39 2-Fluorobiphenyl	100	82.5	82.50	43-116
$ 60 2,4,6-Tribromophen	200	185	92.50	10-123
$ 72 Terphenyl-d14	100	90.7	90.70	33-141

Data File: /chem/GCMS_1.i/99273.b/013.d
Report Date: 05-Oct-1999 13:33

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: blmsd-w 9/23
Level: LOW
Data Type: MS DATA
SpikeList File: water.spk
Sublist File: all.sub
Method File: /chem/GCMS_1.i/99273.b/8270w99273.m
Misc Info:

Client SDG: 99082
Fraction: SV

Operator: sbd
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 Phenol C	200	56.3	28.15	12-110
9 2-Chlorophenol	200	130	65.00	27-123
11 1,4-Dichlorobenzen	100	59.4	59.40	36-97
17 N-Nitroso-di-n-pro	100	82.3	82.30	41-116
27 1,2,4-Trichloroben	100	73.4	73.40	39-98
33 4-Chloro-3-methylp	200	176	88.00	23-97
45 Acenaphthene C	100	85.2	85.20	46-118
49 2,4-Dinitrotoluene	100	86.8	86.80	24-96
50 4-Nitrophenol P	200	72.9	36.45	10-80
63 Pentachlorophenol	200	177	88.50	9-103
71 Pyrene	100	88.4	88.40	26-127

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	78.2	39.10	21-100
$ 7 Phenol-d5	200	56.7	28.35	10-94
$ 20 Nitrobenzene-d5	100	74.0	74.00	35-114
$ 39 2-Fluorobiphenyl	100	79.6	79.60	43-116
$ 60 2,4,6-Tribromophen	200	182	91.00	10-123
$ 72 Terphenyl-d14	100	86.8	86.80	33-141

Data File: /chem/GCMS_1.i/99273.b/013a.d
Report Date: 05-Oct-1999 13:34

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: blmsd-w 9/23
Level: LOW
Data Type: MS DATA
SpikeList File: 625.spk
Sublist File: all.sub
Method File: /chem/GCMS_1.i/99273.b/625w99273.m
Misc Info:

Client SDG: 99082
Fraction: SV

Operator: sbd
SampleType: LCSD
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6	bis(2-Chloroethyl)	100	64.1	64.10	12-158
8	Phenol C	200	56.3	28.15	5-112
9	2-Chlorophenol	200	130	65.00	12-134
10	1,3-Dichlorobenzen	100	59.1	59.10	0-172
11	1,4-Dichlorobenzen	100	59.4	59.40	20-124
12	1,2-Dichlorobenzen	100	61.6	61.60	32-129
14	bis(2-chloroisopro	100	100	100.00	36-166
16	Hexachloroethane	100	65.8	65.80	40-113
17	N-Nitroso-di-n-pro	100	82.3	82.30	0-230
21	Nitrobenzene	100	78.1	78.10	35-180
22	Isophorone	100	79.7	79.70	21-196
23	2-Nitrophenol C	200	179	89.50	29-182
24	2,4-Dimethylphenol	200	163	81.50	32-119
25	bis(2-Chloroethoxy	100	73.0	73.00	33-184
26	2,4-Dichlorophenol	200	178	89.00	39-135
27	1,2,4-Trichloroben	100	73.4	73.40	44-142
28	Naphthalene	100	71.0	71.00	21-133
32	Hexachlorobutadien	100	75.9	75.90	24-116
33	4-Chloro-3-methylp	200	176	88.00	22-147
37	2,4,6-Trichlorophe	200	198	99.00	37-144
42	Acenaphthylene	100	85.0	85.00	33-145
43	Dimethylphthalate	100	88.1	88.10	0-112
44	2,6-Dinitrotoluene	100	100	100.00	39-139
45	Acenaphthene C	100	85.2	85.20	47-145
47	2,4-Dinitrophenol	200	227	113.50	0-191
49	2,4-Dinitrotoluene	100	98.5	98.50	39-139
50	4-Nitrophenol P	200	88.2	44.10	0-132
52	Fluorene	100	96.2	96.20	59-121
53	4-Chlorophenyl-phe	100	97.1	97.10	25-158
54	Diethylphthalate	100	84.1	84.10	0-114
62	Hexachlorobenzene	100	97.9	97.90	0-152
63	Pentachlorophenol	200	178	89.00	14-176
64	Phenanthrene	100	94.6	94.60	54-120

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
65 Anthracene	100	93.7	93.70	27-133
67 Di-n-butylphthalat	100	91.7	91.70	1-118
68 Fluoranthene C	100	98.7	98.70	26-137
71 Pyrene	100	88.4	88.40	52-115
73 Butylbenzylphthala	100	85.9	85.90	0-152
74 3,3'-Dichlorobenzi	100	93.6	93.60	0-262
75 Benzo[a]anthracene	100	95.5	95.50	33-143
76 Chrysene	100	96.8	96.80	17-168
77 bis(2-Ethylhexyl)p	100	93.4	93.40	8-158
79 Di-n-octylphthalat	100	96.9	96.90	4-146
80 Benzo[b]fluoranthe	100	100	100.00	24-159
81 Benzo[k]fluoranthe	100	110	110.00	11-162
82 Benzo[a]pyrene C	100	104	104.00	17-163
83 Indeno[1,2,3-cd]py	100	111	111.00	0-171
84 Dibenz[a,h]anthrac	100	109	109.00	0-227
61 4-Bromophenyl-phen	100	96.9	96.90	53-127
40 2-Chloronaphthalen	100	80.7	80.70	60-118
57 4,6-Dinitro-2-meth	200	175	87.50	0-181

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	78.2	39.10	21-100
$ 7 Phenol-d5	200	56.7	28.35	10-94
$ 20 Nitrobenzene-d5	100	74.0	74.00	35-114
$ 39 2-Fluorobiphenyl	100	79.6	79.60	43-116
$ 60 2,4,6-Tribromophen	200	182	91.00	10-123
$ 72 Terphenyl-d14	100	86.8	86.80	33-141

Data File: /chem/GCMS_1.i/99273.b/016.d
Report Date: 05-Oct-1999 15:33

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 8528-2 MS
Level: LOW
Data Type: MS DATA
SpikeList File: water.spk
Sublist File: all.sub
Method File: /chem/GCMS_1.i/99273.b/8270w99273.m
Misc Info:

Client SDG: 99082
Fraction: SV

Operator: sbd
SampleType: MS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
8 Phenol C	200	68.0	34.00	12-110
9 2-Chlorophenol	200	126	63.00	27-123
11 1,4-Dichlorobenzen	100	56.4	56.40	36-97
17 N-Nitroso-di-n-pro	100	80.4	80.40	41-116
27 1,2,4-Trichloroben	100	63.6	63.60	39-98
33 4-Chloro-3-methylp	200	158	79.00	23-97
45 Acenaphthene C	100	72.2	72.20	46-118
49 2,4-Dinitrotoluene	100	81.4	81.40	24-96
50 4-Nitrophenol P	200	82.8	41.40	10-80
63 Pentachlorophenol	200	175	87.50	9-103
71 Pyrene	100	79.9	79.90	26-127

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	86.5	43.25	21-100
$ 7 Phenol-d5	200	66.3	33.15	10-94
$ 20 Nitrobenzene-d5	100	69.2	69.20	35-114
$ 39 2-Fluorobiphenyl	100	67.4	67.40	43-116
$ 60 2,4,6-Tribromophen	200	167	83.50	10-123
$ 72 Terphenyl-d14	100	81.0	81.00	33-141

Data File: /chem/GCMS_1.i/99273.b/016a.d
Report Date: 05-Oct-1999 15:34

Legend Technical Services, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 8528-2 MS
Level: LOW
Data Type: MS DATA
SpikeList File: 625.spk
Sublist File: all.sub
Method File: /chem/GCMS_1.i/99273.b/625w99273.m
Misc Info:

Client SDG: 99082
Fraction: SV

Operator: sbd
SampleType: MS
Quant Type: ISTD

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6	bis(2-Chloroethyl)	100	68.4	68.40	12-158
8	Phenol C	200	68.0	34.00	5-112
9	2-Chlorophenol	200	126	63.00	12-134
10	1,3-Dichlorobenzen	100	53.6	53.60	0-172
11	1,4-Dichlorobenzen	100	56.4	56.40	20-124
12	1,2-Dichlorobenzen	100	56.7	56.70	32-129
14	bis(2-chloroisopro	100	71.7	71.70	36-166
16	Hexachloroethane	100	62.6	62.60	40-113
17	N-Nitroso-di-n-pro	100	80.4	80.40	0-230
21	Nitrobenzene	100	74.9	74.90	35-180
22	Isophorone	100	72.9	72.90	21-196
23	2-Nitrophenol C	200	157	78.50	29-182
24	2,4-Dimethylphenol	200	148	74.00	32-119
25	bis(2-Chloroethoxy	100	73.8	73.80	33-184
26	2,4-Dichlorophenol	200	147	73.50	39-135
27	1,2,4-Trichloroben	100	63.6	63.60	44-142
28	Naphthalene	100	63.8	63.80	21-133
32	Hexachlorobutadien	100	65.4	65.40	24-116
33	4-Chloro-3-methylp	200	158	79.00	22-147
37	2,4,6-Trichlorophe	200	171	85.50	37-144
42	Acenaphthylene	100	72.0	72.00	33-145
43	Dimethylphthalate	100	82.1	82.10	0-112
44	2,6-Dinitrotoluene	100	86.3	86.30	39-139
45	Acenaphthene C	100	72.2	72.20	47-145
47	2,4-Dinitrophenol	200	176	88.00	0-191
49	2,4-Dinitrotoluene	100	88.0	88.00	39-139
50	4-Nitrophenol P	200	96.7	48.35	0-132
52	Fluorene	100	78.3	78.30	59-121
53	4-Chlorophenyl-phe	100	89.1	89.10	25-158
54	Diethylphthalate	100	79.8	79.80	0-114
62	Hexachlorobenzene	100	80.2	80.20	0-152
63	Pentachlorophenol	200	176	88.00	14-176
64	Phenanthrene	100	77.6	77.60	54-120

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
65 Anthracene	100	76.8	76.80	27-133
67 Di-n-butylphthalat	100	88.8	88.80	1-118
68 Fluoranthene C	100	85.7	85.70	26-137
71 Pyrene	100	79.9	79.90	52-115
73 Butylbenzylphthala	100	86.7	86.70	0-152
74 3,3'-Dichlorobenz	100	0.00	*	0-262
75 Benzo[a]anthracene	100	87.3	87.30	33-143
76 Chrysene	100	85.4	85.40	17-168
77 bis(2-Ethylhexyl)p	100	107	107.00	8-158
79 Di-n-octylphthalat	100	106	106.00	4-146
80 Benzo[b]fluoranthe	100	87.8	87.80	24-159
81 Benzo[k]fluoranthe	100	101	101.00	11-162
82 Benzo[a]pyrene C	100	88.7	88.70	17-163
83 Indeno[1,2,3-cd]py	100	79.1	79.10	0-171
84 Dibenz[a,h]anthrac	100	75.2	75.20	0-227
61 4-Bromophenyl-phen	100	80.9	80.90	53-127
40 2-Chloronaphthalen	100	70.0	70.00	60-118
57 4,6-Dinitro-2-meth	200	149	74.50	0-181

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 4 2-Fluorophenol	200	86.5	43.25	21-100
$ 7 Phenol-d5	200	66.3	33.15	10-94
$ 20 Nitrobenzene-d5	100	69.2	69.20	35-114
$ 39 2-Fluorobiphenyl	100	67.4	67.40	43-116
$ 60 2,4,6-Tribromophen	200	167	83.50	10-123
$ 72 Terphenyl-d14	100	81.0	81.00	33-141

QC Report

QC Parameter	Sample Result	Method Blank Result	QCS % Rec	Duplicate Result	Duplicate RPD	Spike Result	Spike % Rec
Batch ID: NH3-1069 QC ID: BE09946 Samples: BE09953 BE09954							
Ammonia - N	0.20		95.0	0.18	10.0	1.15	95.0
Batch ID: TKN-1089 QC ID: BE09946 Samples: BE09953 BE09954							
Total Kjeldahl Nitrogen	0.60		100.	0.64	6.45	2.90	92.0

McKENZIE LABORATORIES

Date: 29-Sep-99

CLIENT: Bolin Laboratories Inc
Work Order: 9909110
Project:

QC SUMMARY REPORT

Sample Duplicate

Analyte	Result	PQL	Units	RPD Ref Val	% RPD	RPD Limit	Test Code	Date Prepared	Date Analyzed	Analyst	Qual
Sample ID: **9909117-01AD** Batch ID: 420.1-9/24/99											
Client ID:											
Phenolics, Total Recoverable	<0.0050	0.0050	mg/L	<0.0050	0%	20	EPA420.1	9/23/99	9/24/99	MCC	
Sample ID: **9909105-01AD** Batch ID: 420.1-9/24/99											
Client ID:											
Phenolics, Total Recoverable	<0.0050	0.0050	mg/L	<0.0050	0%	20	EPA420.1	9/23/99	9/24/99	MCC	

McKENZIE LABORATORIES

Date: 29-Sep-99

CLIENT: Bolin Laboratories Inc
Work Order: 9909110
Project:

QC SUMMARY REPORT

Sample Matrix Spike

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: **9909117-01AS**	Batch ID: 420.1-9/24/99			Test Code: EPA420.1				Date Analyzed: 9/24/99			
Client ID:				Units: mg/L				Date Prepared: 9/23/99			
Phenolics, Total Recoverable	0.1413	0.0050	0.1000	<0.0050	141%	80	120				S
Sample ID: **9909105-01AS**	Batch ID: 420.1-9/24/99			Test Code: EPA420.1				Date Analyzed: 9/24/99			
Client ID:				Units: mg/L				Date Prepared: 9/23/99			
Phenolics, Total Recoverable	0.09800	0.0050	0.1000	<0.0050	98%	80	120				

McKENZIE LABORATORIES

Date: 29-Sep-99

CLIENT: Bolin Laboratories Inc
Work Order: 9909110
Project:

QC SUMMARY REPORT

Blank Spike (primary source)

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: LCS	Batch ID: 420.1-9/24/99			Test Code: EPA420.1				Date Analyzed: 9/24/99			
				Units: mg/L				Date Prepared: 9/23/99			
Phenolics, Total Recoverable	0.1003	0.0050	0.1000	<0.0050	100%	85	115				

McKENZIE LABORATORIES

Date: 29-Sep-99

CLIENT: Bolin Laboratories Inc
Work Order: 9909110
Project:

QC SUMMARY REPORT

Secondary Source QC Sample

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: LCSV	Batch ID: 420.1-9/24/99			Test Code: EPA420.1				Date Analyzed: 9/24/99			
				Units: mg/L				Date Prepared: 9/23/99			
Phenolics, Total Recoverable	0.09480	0.0050	0.1000	<0.0050	95%	85	115				

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Quality Control Data Report

Client: MCFC
Bolin Sample ID: 9909-08528

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	RPD	Blk (ppb)	ICV %Rec	CCV %Rec
COD	EPA 410.4	9/23/99	200	88	86	2	<PQL	94	92
Total Suspended Solids	EPA 160.1	9/24/99	N/A	N/A	N/A	N/A	<PQL	95	97
Chloride	SM 4500 Cl B	9/22/99	20	105	105	0	<PQL	98	98
Dissolved Sulfate	EPA 375.4	9/30/99	30	MI	MI	N/A	<PQL	98	99
Nitrate + Nitrite	SM 4500 NO3 F	9/20/99	9.52	92	91	1	<PQL	102	97
Nitrite	SM 4500 NO2B	9/20/99	9.52	102	103	1	<PQL	97	97
Total Dissolved Solids	SM 2540C	9/24/99	N/A	N/A	N/A	N/A	<PQL	102	92
Orthophosphate	SM 4500 P E	9/20/99	0.1	120	100	18	<PQL	98	102
Total Phosphorous	EPA 365.3	9/23/99	0.13	100	100	0	<PQL	106	107
Total Cyanide	SM 4500 CN E	9/30/99	0.05	84	88	5	<PQL	84	93
Alkalinity	SM 2320 B	9/24/99	200	92	93	1	<PQL	92	90
TOC	SM 5310 C	10/1/99	10	107	108	1	<PQL	102	106

MI is Matrix Interference
MS/MSD are Matrix Spikes
ICV is Initial Calibration Verification
CCV is Continuing Calibration Verification
RPD is Relative Percent Difference
BLK is a Blank
LFB is a Laboratory Fortified Blank

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Quality Control Data Report

Analysis Date: 10/5/99
Bolin Sample ID's: 9909-08456-001; (9909-08528-002,004; 9909-08696-001 Diss); 9909-08674-001,002; 9909-08675-001; 9909-08679-001; 9909-08683-001,**002**

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Mercury	EPA 245.1/EPA 7470A	0.005	120	116	<PQL	98	108

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
RPD = Relative Percent Difference
BLK = Blank

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Quality Control Data Report

Analysis Date: 9/28/99

Bolin Sample ID's: 9909-08528-002,004 (Diss); **9909-08570-001**

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Antimony	EPA 200.9/SM 3113B	0.020	77	88	<PQL	102	96
Thallium	EPA 200.9/EPA 279.2	0.020	97	95	<PQL	104	99

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Date Analyzed: 10/7/99
Bolin Sample ID's: 9910-08528-002,**004** (Dissolved)

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Zinc	EPA 200.7	1	104	105	<PQL	105	107

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Analysis Date: 9/21/99
Bolin Sample ID's: 9909-8528-002, 004

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Cadmium	EPA 200.9/SM 3113B	0.002	100	100	<PQL	105	110
Arsenic	EPA 200.9/SM 3113B	0.020	110	110	<PQL	110	115
Lead	EPA 200.9/SM 3113B	0.020	100	100	<PQL	105	110
Selenium	EPA 200.9/SM 3113B	0.020	80	80	<PQL	100	105

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

Bolin Laboratories Inc.

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Quality Control Data Report

Analysis Date: 9/30/99

Bolin Sample ID's: **9909-08615-001**; 9909-08528-002 diss; 9909-08528-004 diss; 9909-08696 001 diss; 9909-07992-001; 9909-08296-001; 9909-08415-001

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Cadmium	EPA 200.9/SM 3113B	0.002	100	95	<PQL	95	95
Lead	EPA 200.9/SM 3113B	0.020	110	110	<PQL	95	100
Selenium	EPA 200.9/SM 3113B	0.020	105	100	<PQL	95	100

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Analysis Date: 9/28/99

Bolin Sample ID's: 9909-08528-002,004 (Diss); **9909-08570-001**

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Antimony	EPA 200.9/SM 3113B	0.020	77	88	<PQL	102	96
Thallium	EPA 200.9/EPA 279.2	0.020	97	95	<PQL	104	99

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Analysis Date: 9/30/99

Bolin Sample ID's: **9909-08615-001**; 9909-08528-002,004; 9909-08545-001; 9909-08570-001 9909-08603-003; 9909-08614-002; 9909-08616-001; 9909-08667-001,002; 9909-08474-001

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Mercury	EPA 245.1/EPA 7470A	0.005	86	92	<PQL	92	92

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
RPD = Relative Percent Difference
BLK = Blank

Bolin Laboratories Inc.

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Quality Control Data Report

Analysis Date: 9/28/99
Bolin Sample ID's: 9909-08507-001; 9909-08508-001; 9909-08528-002;**004**; 9909-08614-002

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Cadmium	EPA 200.9/SM 3113B	0.002			<PQL		
Antimony	EPA 200.9/SM 3113B	0.020	MI (141)	MI (114)	<PQL	90	100
Arsenic	EPA 200.9/SM 3113B	0.020			<PQL		
Lead	EPA 200.9/SM 3113B	0.020			<PQL		
Selenium	EPA 200.9/SM 3113B	0.020			<PQL		
Thallium	EPA 200.9/EPA 279.2	0.020			<PQL		

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Analysis Date: 10/1/99

Bolin Sample ID's: **9908-08528-004**; 9908-08474-001; 9908-08475-001; 9908-08476-001; 9908-08477-001; 9908-08478-001; 9908-08479-001; 9908-08507-001; 9908-08508-001; 9908-08528-002

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Cadmium	EPA 200.9/SM 3113B	0.002	95	95	<PQL	105	95
Arsenic	EPA 200.9/SM 3113B	0.020	95	95	<PQL	95	90
Lead	EPA 200.9/SM 3113B	0.020	MI (84)	MI (84)	<PQL	100	95
Selenium	EPA 200.9/SM 3113B	0.020	88	90	<PQL	90	90

NOTES:

Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

Bolin Laboratories Inc.

17631 N. 25th Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Quality Control Data Report

Analysis Date: 10/21/99
Bolin Sample ID: **9909-8223-001**;9909-8528-002,004;9909-8696-001;9909-8151-001,002;9909-8231-001

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Cadmium	EPA 200.7	0.4	101	102	<PQL	102	100
Chromium	EPA 200.7	0.5	100	101	<PQL	100	100
Copper	EPA 200.7	1	102	103	<PQL	102	99
Magnesium	EPA 200.7	30	100	99	<PQL	99	97
Nickel	EPA 200.7	1	100	1000	<PQL	100	98
Silver	EPA 200.7	0.5	105	105	<PQL	99	96
Zinc	EPA 200.7	1	100	100	<PQL	103	97

MI Matrix Interference
ICV Initial Calibration Verification
CCV Continuing Calibration Verification
MS is Matrix Spike
MSD is a Matrix Spike Duplicate.
RPD is Relative Percent Difference
BLK is a Blank

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Quality Control Data Report

Analysis Date: 9/27/99
Bolin Sample ID's: 9909-08474-001; 9909-08475-001; 9909-08476-001; 9909-08477-001
9909-08478-001; 9909-08479-001; 9909-08480-001; 9909-08507-001
9909-08508-001; 9909-08528-002;**004**

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Thallium	EPA 200.9/EPA 279.2	0.020	110	108	<PQL	103	93

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Analysis Date: 11/4/99

Bolin Sample ID: **9909-08759-001**; 9909-08480-001; 9909-08502-005; 9909-08507-001; 9909-08508-001; 9909-08528-002, 004; 9909-08667-001, 002; 9909-08759-001

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Barium	EPA 200.7	1	96	100	<PQL	101	102
Chromium	EPA 200.7	0.5	95	100	<PQL	101	102
Copper	EPA 200.7	1	97	100	<PQL	100	101
Iron	EPA 200.7	1	96	100	<PQL	98	99
Magnesium	EPA 200.7	30	92	96	<PQL	95	96
Manganese	EPA 200.7	1	98	102	<PQL	102	103
Nickel	EPA 200.7	1	92	96	<PQL	98	99
Strontium	EPA 200.7	0.4	99	104	<PQL	96	98
Vanadium	EPA 200.7	0.7	95	100	<PQL	100	101
Zinc	EPA 200.7	1	92	96	<PQL	97	98

MI Matrix Interference
ICV Initial Calibration Verification
CCV Continuing Calibration Verification
MS is Matrix Spike
MSD is a Matrix Spike Duplicate.
RPD is Relative Percent Difference
BLK is a Blank

Bolin Laboratories Inc.

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Quality Control Data Report

Analysis Date: 10/4/99
Bolin Sample ID's: **9908-07552-010**; 9909-08528-002, 004 dissolved

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec
Cadmium	EPA 200.9/SM 3113B	0.002	100	100	<PQL	105
Arsenic	EPA 200.9/SM 3113B	0.020	84	97	<PQL	100
Lead	EPA 200.9/SM 3113B	0.020	90	95	<PQL	100
Selenium	EPA 200.9/SM 3113B	0.020	80	85	<PQL	90

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

Bolin Laboratories Inc.

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Quality Control Data Report

Date Analyzed: 10/11/99
Bolin Sample ID's: 9909-08528-002, 004 dissolved

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	0.5	97	95	<PQL	106	108

NOTES:
Sample in bold listed above has been spiked for quality control purposes.
MI = Matrix Interference
ICV = Initial Calibration Verification
CCV = Continuing Calibration Verification
MS = Matrix Spike
MSD = Matrix Spike Duplicate.
BLK = Blank

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Quality Control Data Report

Analysis Date: 10/28/99

Bolin Sample ID: **9909-8502-005**;9909-8478-001;9909-8479-001;9909-8480-001;9909-8507-001;9909-8508-001;9909-8528-002,004

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Calcium	EPA 200.7	30	MI 88	MI 90	<PQL	105	102
Magnesium	EPA 200.7	30	105	98	<PQL	102	102
Silver	EPA 200.7	0.5	MI 113	MI 108	<PQL	103	102
Sodium	EPA 200.7	30	MI 113	MI 101	<PQL	99	97

MI Matrix Interference
ICV Initial Calibration Verification
CCV Continuing Calibration Verification
MS is Matrix Spike
MSD is a Matrix Spike Duplicate.
RPD is Relative Percent Difference
BLK is a Blank

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Quality Control Data Report

Analysis Date: 11/8/99

Bolin Sample ID: **9909-08528-004**, 002; 9909-08667-001; 9910-09443-001; 9910-09514-001; 9910-09515-001; 9910-09628-001; 9910-09676-001; 9910-09726-001; 9910-09764-001; 9910-09787-003; 9910-09801-001

Analyte	Method	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Aluminum	EPA 200.7	2	95	96	<PQL	99	96
Beryllium	EPA 200.7	0.5	103	104	<PQL	101	105
Potassium	EPA 200.7	30	101	101	<PQL	98	99

MI Matrix Interference
ICV Initial Calibration Verification
CCV Continuing Calibration Verification
MS is Matrix Spike
MSD is a Matrix Spike Duplicate.
RPD is Relative Percent Difference
BLK is a Blank

Bolin Laboratories Inc.

☒ 17631 N. 25th Ave. Phoenix AZ 85023
(602) 942-8220 • Fax(602) 942-1050

☐ 4837 East Fifth Street, Suite 103, Tucson AZ 85711
(520) 327-1234 • Fax(520) 327-0518

CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory Sample No. 99109-08528 WDS

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
FLOOD CONTROL DIST	2801 W DURANGO	PHX	AZ	85009	506 8401	

Project Name	Project Number	Contact	P.O. No.	Fax Results ☐	QC Report ☒	Special Detection Limits ☐
GLENDALE NPDES		JULIE COX				

SAMPLE TYPE CODES

DW=Drinking Water, S=Soil/Solid, WW=Wastewater, T=Travel Blank, SW=Surface Water, F=Food, GW=Groundwater, G=Sludge, O=Other

TURN AROUND TIME

☒ Standard 10 - 15 Day
☐ Other

★ Laboratory Authorization Required for Rush ★

REQUESTED ANALYSES

Client's Sample Identification	Date	Time	Sample Location	Composite	Grab	Sample Type	Compliance	No. of Containers	pH ✓ (Bolin Use Only)	See attached Glendale list	Cn, COD, Cl	TDS, TSS, NH3	NO3NO2, NO2	NO3 DN TKN	TP DP OP	Phenol	TOC, DOC	AIK	Metals *	608	625			LAB NO.
A 091999	9/19	1930	SKUNK CRK + 79TH	X		SW		8		X														~~01~~ 02
C 091999	9/19	1900	GROVERS + 71ST	X		SW		8		X													9/20/99 WDS	~~03~~ 04

Comments / Special Instructions: * Total + Dissolved → Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn Hardness

SAMPLE RECEPTION UPON RECEIPT

No. of Containers	36	
Temperature 0°C	~~4°C~~ 9/20/99	①
Custody Seals	Y N	
Seals Intact	Y N	②
Preserved	Y N	

WHITE-LAB YELLOW-LAB PINK-CLIENT

RELINQUISHED BY		SAMPLES RECEIVED BY	
Signature: Julie Cox	Date: 9/20/99	Signature: J Sutherland	Date: 9/20/99
Printed Name: JULIE COX	Time: 1215	Printed Name: R. Sutherland	Time: 1215
Signature	Date	Signature	Date
Printed Name	Time	Printed Name	Time
Signature	Date	Signature	Date
Printed Name	Time	Printed Name	Time

Records

ARROW (Glendale)

Skunk Creek (north bank) at 79th Avenue alignment

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Arrowhead	DATE	9/30/99
ARRIVAL TIME		DEPARTURE TIME	
SAMPLER MODEL NUMBER		SAMPLER SERIAL ASSET NUMBER	
PT SERIAL NUMBER ASSET NUMBER		RAINGAGE SERIAL ASSET NUMBER	

BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check site, need to consider way to drain water into Low Flow channel so sensors can be serviced

EQUIPMENT CLEANING CHECKLIST

Site	Arrowhead		
Date	9/28/99	Time	
Serviced By:	Jim		

Clean Solar Panels, 15.4 Good

N/A	Data Downloaded to DTU?

Check Battery on Cell phone 14.7 Good

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

EQUIPMENT CLEANING CHECKLIST

Site	ARROW		
Date	9-24-99	Time	1620
Serviced By:	JRC		

YES	Data Downloaded to DTU?

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

1) 13.5 V battery
2) 0.15" rainfall
3) Copied data
4) restarted program
5) cleaned tubing
6) replaced clean glass bottles

JRC

SITE:	Arrow 3002		
DATE:	9-24-99	TIME:	1620

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

FIELD PARAMETERS:

Discharge at time of Grabs		cfs
Effluent pH		s.u.
Effluent Temperature		°C

GRAB SAMPLES: Take grab samples from discharge only!

Grab Samples Taken?	YES	(NO)
Preservatives added to bottles?	YES	(NO)

STORM EVENT LOG SHEET

SITE:	Arrow 3002

DATE:	09-30-99	TIME:	1145

0.71" rainfall
composite samples collected
data copied #12

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

FIELD PARAMETERS:

Discharge at time of Grabs		cfs
Effluent pH		s.u.
Effluent Temperature		°C

GRAB SAMPLES:

Take grab samples from discharge only!

Grab Samples Taken?	YES	(NO)
Preservatives added to bottles?	YES	(NO)

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Arrowhead	DATE	9/16/99
ARRIVAL TIME		DEPARTURE TIME	
			(Rm)

BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	done
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Replace tube with longer one. The one in place now can spray sample over jar as well as in.

(Rm)

EQUIPMENT CLEANING CHECKLIST

Site	Arrowhead
Date	9/15/99
Time	
Serviced By:	Rew

Copy data to Cell #10

Yes	Data Downloaded to DTU?

Remove bottles for cleaning, will trouble shoot sampler on return. Believe DiST Hose pulled back and out. Will replace hose on Return Visit.

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Rew

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

SITE	Arrowhead

DATE	9/14/99	TIME	2100

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES (NO)

IF NO, WHAT WERE PROBLEM(S):

Dist Arm jammed Rain 0.82

Left running for date. 0.91 CFS

Battery 13.1

FIELD PARAMETERS:

Dissolved Oxygen		mg/l
pH		
Temperature		C

GRAB SAMPLES: Take grab samples from discharge only!

Were Grab Samples Taken	YES	(NO)
Preservation Was Appropriate and Verified	YES	(NO)

EQUIPMENT CLEANING CHECKLIST

Site	Alloa head Data on Cell #5		
Date	9/13/99	Time	
Serviced By:	RW		

Yes	Data Downloaded to DTU?

No sampler tube. Reset program -

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

Site	Attached

Date	9/12/99	Time	

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

Rain 0.12 at this time

No samples taken at this time

FIELD PARAMETERS:

[redacted]		[redacted]
[redacted]		[redacted]
[redacted]		[redacted]

GRAB SAMPLES: Take grab samples from discharge only!

[redacted]	YES	NO
[redacted]	YES	NO

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

[redacted]	City of Glendale	[redacted]	8/17/99
[redacted]	[redacted]	[redacted]	RLW
[redacted]		[redacted]	
[redacted]		[redacted]	

	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Citrus Park check program restart program 13.8 Volts

Arrow head " " 13.7 Volts

Industrial Park " " 13.3 Volts

Butler Park " " 12.6

Butler Park is in Shade in the P.M

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Arrowhead			DATE	8/26/99
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	RW
SAMPLER MODEL NUMBER				SAMPLER SERIAL/ ASSET NUMBER	
PT SERIAL NUMBER/ ASSET NUMBER				RAINGAGE SERIAL/ ASSET NUMBER	

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
Sampler 14.2 BATTERY VOLTAGE Cellphone 10.9	YES NO	GOOD FAIR POOR	YES NO	YES NO	14.2 12.9 volts cellphone
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Continue to monitor cell phone battery. May remove regulator, or put in larger panel.

RW

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

[redacted]	City of Glendale	[redacted]	8/19/99
[redacted]		[redacted]	(RW)
[redacted]		[redacted]	
[redacted]		[redacted]	

	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Butler Park, No rain, clean Solar Panels

Citrus Park 0.03 rain No Samples clean solar panels

~~Allen Road~~ 0.01 rain " "

Industrial Park 0.07 " " "

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	Arrow Head
Date	8/11/99
Time	0920
Serviced By:	RW

Yes	Data Downloaded to DTU?

Cell #2 Copy data, restart program

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Avra Head	DATE	8/10/99
ARRIVAL TIME		DEPARTURE TIME	
		SERVICEMEN	RCM
SAMPLER MODEL NUMBER		SAMPLE SERVICE ASSET NUMBER	
SAMPLER SERIAL NUMBER ASSET NUMBER		SAMPLE SERVICE ASSET NUMBER	

	SERVICE REQUIRED	CONDITION	CALIBRATED	NEEDS REPAIR	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	11.2 new 13.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	19-5-20.3 13.15
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Change battery, cell phone power at 12.8
Will look into possible second large solar for site.

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	ARROW

Date	7-19-99	Time	1015

Serviced By:	DEC

No done previously	Data Downloaded to DTU?

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Arrowhead	DATE	7/8/99
ARRIVAL TIME		DEPARTURE TIME		SIGNATURE	Ron
SAMPLER PORT NUMBER		SAMPLER PORT NUMBER	
PRESSURE TRANSDUCER ASSET NUMBER		PRESSURE TRANSDUCER ASSET NUMBER	

	PRESSURE TRANSDUCER			NEEDS REPLACING	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Sampler sampled, 7 jars, clean jars and flush lines. Copy data #2

Precip 1.11

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	Arrow head

Date	7/7/99	Time	

Serviced By:	[illegible]

Unable to get to station per peoria police Dept.

[ ]	Data Downloaded to DTU?

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

[ ]	Pump approximately 1/2 gallon of Liquinox through tubing.
[ ]	Pump approximately 1/2 gallon tap water through tubing.
[ ]	Pump approximately 1/2 liter Nitric Acid (pH 3 - 4) through tubing.
[ ]	Pump approximately 1 - 2 gallons deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	ARRowhead			DATE	7/1/99
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	Rem
SAMPLER MODEL NUMBER				SAMPLER SERIAL/ ASSET NUMBER	
PT SERIAL NUMBER/ ASSET NUMBER				RAINGAGE SERIAL/ ASSET NUMBER	

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	✓
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Install second Solar panel to maintain second battery for cell phone: To prevent storm Qout sampling due to low or dead battery.

Sample 13.2 phone 13.0

Check next week, has voltage Regulator installed

BUTLER (Glendale)

near Orchid Drive and 56th Drive

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Butler Park	DATE	9/30/99
ARRIVAL TIME		DEPARTURE TIME	
		SERVICED BY	RW
SAMPLER MODEL NUMBER		SAMPLER SERIAL/ ASSET NUMBER	
PT SERIAL NUMBER/ ASSET NUMBER		RAINGAGE SERIAL/ ASSET NUMBER	

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES ~~NO~~	YES ~~NO~~	volts
SOLAR PANEL	~~YES~~ NO N/A	GOOD FAIR POOR	YES ~~NO~~	YES ~~NO~~	-
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE (Compare Alert to Sampler Raingauge, Sampler worked well)	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING (Did tip count and check, Cleaned, accurate)	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS clean drain, check phone lines. Did tipping bucket check, gauge accurate, no problems found. Restart gauge after tip check.

RW

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Butler Park		DATE	9/28/99	
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	Rem
SAMPLER MODEL NUMBER			SAMPLER SERIAL/ ASSET NUMBER		
PT SERIAL NUMBER/ ASSET NUMBER			RAINGAGE SERIAL/ ASSET NUMBER		

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.4 volts
SOLAR PANEL Clean Solar Panels	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Sampler unit did not respond to button request for information. Shut unit off and then on. Station came up and is now running.

Rem

STORM EVENT LOG SHEET

SITE:	BUTLER 3004

DATE:	09-24-99	TIME:	1215

0 bottles fill.
0.06" rainfall.
Data copied.
Sampler restarted.

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

FIELD PARAMETERS:

Discharge at time of Grabs		cfs
Effluent pH		s.u.
Effluent Temperature		°C

GRAB SAMPLES:

Take grab samples from discharge only!

Grab Samples Taken?	YES	(NO)
Preservatives added to bottles?	YES	(NO)

EQUIPMENT CLEANING CHECKLIST

Site	Butler Park 3004		
Date	9/23/99	Time	0745
Serviced By:	(Rw)		

Data cell #1

yes	Data Downloaded to DTU?

no samples taken, 0.35 Rain recorded

1. Halt program — Sampler did not sample. check PT and Intake Line clear.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

SITE:	BUTLER 3004

DATE:	09-20-09	TIME:	0915

0.41" rainfall
12.4 v battery
Copy data cell #14

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES ~~NO~~ OK

IF NO, WHAT WERE PROBLEM(S):

Adequate rainfall amount to initiate sampler, but sampler never initiated sampling program. Rainfall duration was 10 min.

FIELD PARAMETERS:

Discharge at time of Grabs		cfs
Effluent pH		s.u.
Effluent Temperature		°C

GRAB SAMPLES:

Take grab samples from discharge only!

Grab Samples Taken?	YES	NO
Preservatives added to bottles?	YES	NO

EQUIPMENT CLEANING CHECKLIST

Site	Butler Park
Date	9/15/99
Time	
Serviced By:	(Rem)

no	Data Downloaded to DTU?

0.01 Rain, no flow, no samples taken

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

EQUIPMENT CLEANING CHECKLIST

Site	Butler Park
Date	9/13/99
Time	
Serviced By:	RW

Cell #7

yes	Data Downloaded to DTU?

Check Station, Reset program. Repair O.I.S
Check phone lines No problem found in station house.

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Wires disconnected at junction box at connection pole.

	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

SITE	Butler Park

DATE	9/12/99	TIME	2400

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

0.17 at 2400hrs, no samples taken by sampler
Flow in channel very low and slow. No grab
samples take at this time

RW

FIELD PARAMETERS:

[redacted]		[redacted]
[redacted]		[redacted]
[redacted]		[redacted]

GRAB SAMPLES: **Take grab samples from discharge only!**

[redacted]	YES	NO
[redacted]	YES	NO

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

	City of Glendale		8/17/99
			Rev

BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Citrus Park check program restart program 13.8 Volt

Arrow head " " 13.7 Volt

Industrial Park " " 13.3 Volt

Butler Park " " 12.6

Butler Park is in Shade in the P.M

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

[redacted]	City of Olandale	[redacted]	8/19/99
[redacted]		[redacted]	RW
[redacted]		[redacted]	
[redacted]		[redacted]	

	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Butler Park No rain, clean Solar Panels

Citrus Park 0.03 rain No Samples clean Solar panels

Allen Road 0.01 rain " "

Industrial Park 0.07 " " "

Date: 01/27/1999

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Butler Park	DATE	8/17/99
ARRIVAL TIME		DEPARTURE TIME	
SERVICE BY	Ray		
SAMPLER MODEL NUMBER		SAMPLER SERIAL ASSET NUMBER	
PUMPER SERIAL ASSET NUMBER		RAINGAGE SERIAL ASSET NUMBER	

	CHECKED SERVICED CALIBRATED	CONDITION	REPLACED	NEEDS REPAIR/ADJUST	NOTES
BATTERY VOLTAGE	~~YES~~ NO	~~GOOD~~ FAIR POOR	YES ~~NO~~	YES ~~NO~~	12.5 volts
SOLAR PANEL	~~YES~~ NO N/A	~~GOOD~~ FAIR POOR	YES ~~NO~~	YES ~~NO~~	18.5
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS add second solar Panel. Voltage up.

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	Butler Park
Date	8/11/99
Time	08/15
Serviced By:	(Rw)

Yes	Data Downloaded to DTU?

cell #1 Reset program;

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

clean and install 4 bottles.

EQUIPMENT CLEANING CHECKLIST

Site	BUTLER		
Date	7-19-99	Time	1130
Serviced By:	DEC		

yes	Data Downloaded to DTU?

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Butler Park	DATE	7/8/99
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	RW
SAMPLER MODEL NUMBER		SAMPLER SERIAL NUMBER	
RAINGAGE MODEL NUMBER		RAINGAGE SERIAL NUMBER	

	CHECKED / REPAIRED / SERVICED	CONDITION	CALIBRATED	NEEDS SERVICING	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Copy data #4 / Clean 6 jars, flush line and Restart program

RW

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	Butler Park
Date	7/7/99
Time	
Serviced By:	[illegible]

NO	Data Downloaded to DTU?

precip 0.04 no flow - no samples
restart program

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 liter Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1 - 2 gallons deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

CITRUS (Glendale)

Grovers and 71st Avenues

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Citrus Park	DATE	9/30/99
ARRIVAL TIME		[illegible]	[illegible]
[illegible]		[illegible]	
[illegible]		[illegible]	

	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Clean drain pipe and outlet. check sampler and battery, 13.4 volts good. Clean around sensors.

EQUIPMENT CLEANING CHECKLIST

Site	Citrus Park
Date	9/28/99
Time	
Serviced By:	Ran

N/A	Data Downloaded to DTU?

Clean Solar Panels, check voltage 13.5 good

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Schedule Drain for cleaning.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

EQUIPMENT CLEANING CHECKLIST

Site	CITRUS		
Date	9-24-99	Time	1645
Serviced By:	JRC		

YES	Data Downloaded to DTU?

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

1) 13.3 v battery
2) 0.14" rainfall
3) copied data
4) restarted program
5) cleaned tubing
6) replaced clean glass bottle.

SITE:	CITRUS 3001		
DATE:	09-24-99	TIME:	1645

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

FIELD PARAMETERS:

Discharge at time of Grabs		cfs
Effluent pH		s.u.
Effluent Temperature		°C

GRAB SAMPLES:

Take grab samples from discharge only!

Grab Samples Taken?	YES	NO
Preservatives added to bottles?	YES	NO

STORM EVENT LOG SHEET

SITE:	CITRUS 3001

DATE:	9-20-99	TIME:	1105

0.63" rainfall
Copied data to cell #11
picked up bottles for delivery to lab (composite.

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

FIELD PARAMETERS:

Discharge at time of Grabs		cfs
Effluent pH		s.u.
Effluent Temperature		°C

GRAB SAMPLES:

Take grab samples from discharge only!

Grab Samples Taken?	YES	(NO)
Preservatives added to bottles?	YES	(NO)

EQUIPMENT CLEANING CHECKLIST

Site	Citrus Park		
Date	9/15/99	Time	
Serviced By:	Rem		

Cell tel 8 tried 8, did not work

Yes	Data Downloaded to DTU?

Remove bottles for cleaning, Replace Crab Sample bottles.

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

SITE:	Citrus Park

DATE:	9/14/99	TIME:	2000 hrs

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

~~IF NO, WHAT WERE PROBLEM(S);~~

Sampler recorded 0.61" inches of rain
checked sampler, 3 bottles had full bottles
and 1st flush.
Battery 13.1 V

FIELD PARAMETERS:

[illegible]	0.31	[illegible]
[illegible]	8.4	[illegible]
[illegible]	25	C

GRAB SAMPLES: Take grab samples from discharge only!

[illegible] Grab Samples taken	(YES)	NO
[illegible]	(YES)	NO

EQUIPMENT CLEANING CHECKLIST

Site	Citrus Park Data Cell #4 DTU #1
Date	9/13/99
Time	
Serviced By:	Mw

Precip read .22

Yes	Data Downloaded to DTU?

Clean 3 sample bottles and flush system.
2 bottles full, 1 - #00 Next program

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

SITE	Citrus Park

DATE	9/12/09	TIME	0040

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

1 sample bottle filled, no flow at this time, no grabs taken

RW

Rain 0.22"

FIELD PARAMETERS:

[redacted]		[redacted]
[redacted]		[redacted]
[redacted]		[redacted]

GRAB SAMPLES: Take grab samples from discharge only!

[redacted]	YES	NO
[redacted]	YES	NO

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	City of Glendale	DATE	8/17/99
ARRIVAL TIME		DEPARTURE TIME	
		SERVICED BY	RWD
SAMPLER MODEL NUMBER		SAMPLER SERIAL NUMBER / ASSET NUMBER	
PT SERIAL NUMBER / ASSET NUMBER		RAINGAGE SERIAL NUMBER / ASSET NUMBER	

	CHECKED / SERVICED / CALIBRATED	CONDITION	[illegible]	[illegible]	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Citrus Park check program restart program 13.8 volts

ARROYO head " " 13.7 volts

Industrial Park " " 13.3 volts

Butler Park " " 12.6

Butler Park is in Shade in the P.M

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

[redacted]	City of Olandale	[redacted]	8/19/99
[redacted]		[redacted]	(RW)
[redacted]		[redacted]	
[redacted]		[redacted]	

	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Butler Park, No rain, clean Solar panels

Citrus Park 0.03 rain No Samples clean Solar panels

Allen Road 0.01 rain " "

Industrial Park 0.07 " " "

Date: 01/27/1999

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Citrus Park	DATE	8/16/99
ARRIVAL TIME		DEPARTURE TIME	
		SERVICED BY	Pau
SAMPLER MODEL NUMBER		SOLAR PANEL MODEL NUMBER	
DATALOGGER SERIAL NUMBER / ASSET NUMBER		SOLAR PANEL SERIAL NUMBER / ASSET NUMBER	

	NEEDS REPAIR?	GOOD?		NEEDS REPAIR?	NOTES
BATTERY VOLTAGE 10.5	YES ~~NO~~	GOOD FAIR ~~POOR~~	YES NO	YES NO	10.5 volts
SOLAR PANEL	~~YES~~ NO N/A	~~GOOD~~ FAIR POOR	YES ~~NO~~	YES ~~NO~~	19.4
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Will add 2nd Solar Panel or replace with large one.

Return and install 2nd Panel.

EQUIPMENT CLEANING CHECKLIST

Site	Citrus Park
Date	8/11/99
Time	1000
Serviced By:	[illegible]

NO	Data Downloaded to DTU?

0.05 rain Left program running.

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

SITE:	CITRUS

DATE:	7-19	TIME:	

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

0.71" rain

33000 cf runoff

FIELD PARAMETERS:

Sampler Start Time	
Effluent pH	
Effluent Temperature	

GRAB SAMPLES: Take grab samples from discharge only!

Grab Samples Taken?	YES	NO
Preservatives added to bottles?	YES	NO

EQUIPMENT CLEANING CHECKLIST

Site	CITRUS		
Date	7-19-99	Time	0940
Serviced By:	DEC		

No	Data Downloaded to DTU?

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Citrus Park	DATE	7/8/99
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	RW
SAMPLER MODEL NUMBER		SAMPLER SERIAL ASSET NUMBER	
TRIGGER MODEL NUMBER ASSET NUMBER		RAINGAGE SERIAL ASSET NUMBER	

	CHECKED SERVICED (CIRCLE ONE)	CONDITION	TESTED	NEEDS REPLACING	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Copy Data #3 clean 4 jars and in-take line

Restart program

RW

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	citrus
Date	7/7/99
Time	
Serviced By:	RW

✓ #1	Data Downloaded to DTU?

clean 4 bottles, precip 1.0a

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 liter Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1 - 2 gallons deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

INDPK (Glendale)

New River (west bank) between Glendale and Northern Avenues

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Industrial Park	DATE	9/30/99
ARRIVAL TIME		DEPARTURE TIME	
		SERVICE BY	Rlm
SAMPLER MODEL NUMBER		CONTROL STATION ASSET NUMBER	
PT SERIAL NUMBER ASSET NUMBER		RAINGAGE SERIAL ASSET NUMBER	

	CHECKED SERVICE MATERIALS	CONDITION	REPLACED	CHECKED OPERATION	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES ~~NO~~	YES ~~NO~~	volts
SOLAR PANEL	~~YES~~ NO N/A	~~GOOD~~ FAIR POOR	YES ~~NO~~	YES ~~NO~~	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Clean drain and opening. Remove Sediment and garbage. Clear and clean Sensors. check Station & program

Rlm

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Industrial Park		DATE	9/28/99	
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	Rw
SAMPLER MODEL NUMBER			SAMPLER SERIAL/ ASSET NUMBER		
PT SERIAL NUMBER/ ASSET NUMBER			RAINGAGE SERIAL/ ASSET NUMBER		

	CHECKED/ SERVICED/ CALIBRATED	CONDITION	[redacted]	[redacted]	[redacted]
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Schedule Dra'n cleaning clean Solar Panels.

STORM EVEN.' LOG SHEET

SITE:	IMDPK 3003		
DATE:	9-24-99	TIME:	1245

0 bottles full.
0.05" rainfall.
Data copied.
Sampler restarted.

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

FIELD PARAMETERS:

Discharge at time of Grabs		cfs
Effluent pH		s.u.
Effluent Temperature		°C

GRAB SAMPLES:

Take grab samples from discharge only!

Grab Samples Taken?	YES	(NO)
Preservatives added to bottles?	YES	(NO)

STORM EVENT LOG SHEET

SITE:	INDPK 3003		
DATE:	9-20-99	TIME:	1010

0.22" rainfall
12.8 V battery
data copied cell #13

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

FIELD PARAMETERS:

Discharge at time of Grabs		cfs
Effluent pH		s.u.
Effluent Temperature		°C

GRAB SAMPLES:

Take grab samples from discharge only!

Grab Samples Taken?	YES	NO
Preservatives added to bottles?	YES	NO

EQUIPMENT CLEANING CHECKLIST

Site	Industrial Park		
Date	9/15/99	Time	
Serviced By:	RLM		

No	Data Downloaded to DTU?

0.02 Rain No samples, no flow

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

EQUIPMENT CLEANING CHECKLIST

Site	Industrial Park
Date	9/13/99
Time	
Serviced By:	[illegible]

Copy data to cell #6

yes	Data Downloaded to DTU?

Re-samples taken

1. Halt program

check phone line saw nothing wrong, wires connected clean.

2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Wires disconnected at junctionbox at telephone pole.

	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

STORM EVENT LOG SHEET

SITE	Industrial Park

DATE	9/12/99	TIME	

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

Rain 0.04 area looked dry.
No flow as of this time.

FIELD PARAMETERS:

[redacted]		[redacted]
[redacted]		[redacted]
[redacted]		[redacted]

GRAB SAMPLES: **Take grab samples from discharge only!**

[redacted]	**YES**	**NO**
[redacted]	**YES**	**NO**

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

City of Glendale	8/17/99
	Rev

BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS

Citrus Park	check program	restart program	13.8 Volts
Arrowhead	"	"	13.7 Volts
Industrial Park	"	"	13.3 Volts
Butler Park	"	"	12.6

Butler Park is in Shade in the P.M

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Industrial Park			DATE	8/26/99
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	RW
SAMPLER MODEL NUMBER				SAMPLER SERIAL/ ASSET NUMBER	
PT SERIAL NUMBER/ ASSET NUMBER				RAINGAGE SERIAL/ ASSET NUMBER	

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station on precipitation of 0.07
There were Signs of light rain and high winds.
no Flows or samples. Self running
RW

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	City of Glendale	DATE	8/19/99
ARRIVAL TIME		[illegible]	
		ATTENDED BY	RLW
SAMPLER MAKE/MODEL NUMBER		SAMPLER SERIAL/ASSET NUMBER	
PRS SERIAL NUMBER/ASSET NUMBER		RAINGAGE SERIAL/ASSET NUMBER	

	[illegible]	[illegible]	[illegible]	[illegible] NEEDS REPAIR/ADJ	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Butler Park, No rain, clean Solar panels

Citrus Park 0.03 rain No Samples clean Solar panels

Aldine Road 0.01 rain " "

Industrial Park 0.07 " " "

Date: 01/27/1999

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Industrial Park	DATE	8/16/99
ARRIVAL TIME		DEPARTURE TIME	
		SERVICED BY	RLW
SAMPLER MODEL NUMBER		SAMPLER SERIAL/ ASSET NUMBER	
PTBERA NUMBER ASSET NUMBER		RAINGAGE SERIAL/ ASSET NUMBER	

	CHECKED & PROVED OPERATIVE	CONDITION	REPLACED	CHECKED REMARKED	NOTES
BATTERY VOLTAGE 11.4	YES NO	GOOD FAIR POOR	~~YES~~ NO	~~YES~~ NO	11.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	20.2
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS add second solar panel and change out battery. Replace connector bolts

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	Industrial Park		
Date	8/11/99	Time	0855
Serviced By:	(Rew)		

NO	Data Downloaded to DTU?

1. Halt program .07 precip, no flow, Left running
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Industrial Park	DATE	8/10/99
ARRIVAL TIME		DEPARTURE TIME	
		SERVICE BY	RW
SAMPLER MODEL NUMBER		SAMPLER SERIAL ASSET NUMBER	
RAINGAGE SERIAL NUMBER ASSET NUMBER		RAINGAGE SERIAL ASSET NUMBER	

	SERVICE PERFORMED	CONDITION	FUNCTIONAL	NEEDS REPAIRING	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	20 volts +
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Changed Battery.

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	TND PK		
Date	7-19-99	Time	1040
Serviced By:	DEG		

✓	Data Downloaded to DTU?

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓	Pump approximately 1/2 gallon tap water through tubing.
✓	Pump approximately 1/2 gallon of Liquinox through tubing.
✓	Pump a large quantity of tap water through tubing.
✓	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
✓	Pump approximately 1/2 - 1 gallon deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Industrial Park	DATE	7/8/99
ARRIVAL TIME		DEPARTURE TIME	
		SERVICED BY	[illegible]
SAMPLER MODEL NUMBER		SAMPLER SERIAL NUMBER	
PRESSURE SENSOR SERIAL NUMBER		RAINGAGE SERIAL NUMBER	

	CHECKED SERVICED (CIRCLE ONE)	CONDITION	FUNCTIONS	NEEDS REPLACING	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Copy data #1. Empty Jars and clean intake line and jars Restart program

[illegible]

Date: 01/27/1999

EQUIPMENT CLEANING CHECKLIST

Site	Industrial Park
Date	7/7/99
Time	
Serviced By:	RW

Precip 0.08 no flow No samples.

No	Data Downloaded to DTU?

1. Halt program
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 liter Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1 - 2 gallons deionized water through tubing.

6. Disconnect the extension tubing and make sure the distributor tubing is seated properly.
7. Replace the base and clean bottles.
8. If the data has been downloaded to the DTU, START the program from the beginning.
9. If the data has not been downloaded, RESUME the program.