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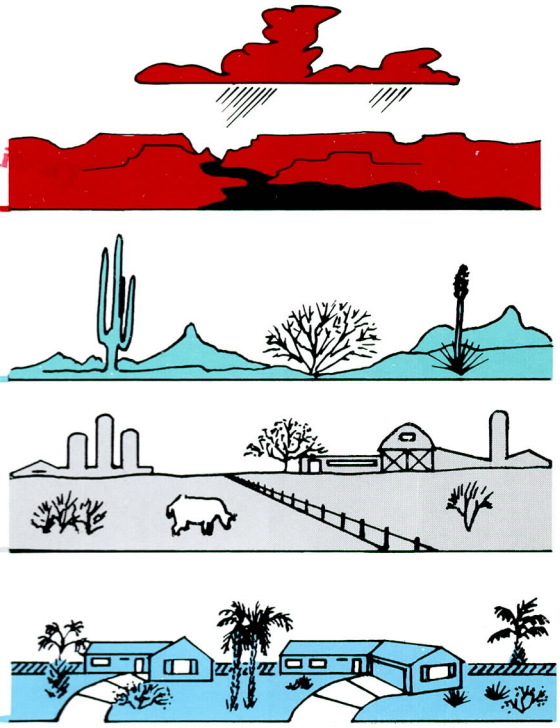

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report
City of Mesa, Arizona

Second Quarter

February 3, 1999

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report

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2801 W. Durango
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Second Quarter, Sampling Year 1999

October 1, 1998 through December 31, 1998

For

City of Mesa, Arizona

February 3, 1999

Stormwater Quality Report
City of Mesa, Arizona

Second Quarter

February 3, 1999

Introduction

The Flood Control District of Maricopa County operates and maintains five land based stormwater monitoring stations for the City of Mesa for compliance with their National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge permit. This report contains data from the fall 1998 seasonal rainfall.

The data is presented as it was in the first quarter report. There are no changes to the format for this report. However, only data required in Mesa's permit is included. The list of pollutants analyzed is reduced and only representative events are included.

A representative event is defined in the following manner.

MESA	RAINFALL	DURATION
SUMMER	0.24 – 0.72 INCH	2.4 – 6.5 HOURS
WINTER	0.22 – 0.66 INCH	5.9 – 17.7 HOURS

In addition, no rainfall greater than 0.10 inches within the past 72 hours. Summer months are July through September and winter months are October through March. Rainfall in April, May, and June is not considered representative.

Data from the two October events shows that samples were analyzed for the entire NPDES schedule. This was an oversight at the laboratory. The lab will no longer analyze this large list. Included for your inspection is a copy of the analytical schedule that the lab is now following. Mesa will be invoiced only for their half of the 26 parameter list. The District will incur the full cost of the extra analyses.

Storm Summaries

This is a summary of sampled storm events in the second quarter of the 1999 sample year, which is October 1 through December 31, 1998. Of the several storm events measured during the fall, only three produced enough rainfall and runoff to be useable, and only one was actually sampled. Any troubleshooting of the equipment is mentioned in the Storm Summaries but is detailed in the Maintenance Summaries. Following are detailed descriptions of the sampled events.

Storm of October 25 – 26, 1998

This storm event produced rainfall over much of the Mesa area. Rainfall totals ranged from 0.09 inches to 0.32 inches, with the larger accumulations in the north. The following table shows rainfall totals for each sampler site.

Storm of October 25 – 26, 1998

SITE	RAINFALL (inches)	SAMPLES COLLECTED
SIXTH AND HORNE	0.23	NO (1)
BROADWAY AND LINDSAY	0.32	YES
FALCON FIELD	0.09	NO
HORNE AND GRANDVIEW	0.23	NO (1)
DOBSON	0.24	YES

(1) Insufficient runoff for sample collection.

All equipment activated during the storm event and seemed to operate properly. Grab samples were not taken during this event because the discharges were significantly diminished when the sites were visited.

The initial part of the storm (i.e. grab samples) was not responded to because of the continuing problem with the autodialers, and the failure of the District's ALERT system. The ALERT system did not notify by pager that the storm was occurring. The ALERT system was providing erroneous data during the storm. The ALERT system was accessed and rainfall totals checked for the entire valley. All of the rainfall totals were low, indicating that the storm was not 'representative'. In the morning, the problem with the system was discovered. The composite samples were collected and submitted for analysis. However, the grab samples were missed.

Other Storm Events Not Sampled

There were a few 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
SIXTH	11/28/98	0.43	Expiration of IGA 92010
LINDSAY	11/28/98	0.39	Expiration of IGA 92010
GRANDVIEW	11/28/98	0.43	Expiration of IGA 92010
DOBSON	11/28/98	0.31	Expiration of IGA 92010
LINDSAY	12/6/98	0.24	Expiration of IGA 92010

No samples were collected at Falcon Field during this quarter. Rainfall at Falcon Field did not exceed the representative threshold.

Maintenance Summary

This section details maintenance activities and problems during the first quarter. In general, no modems or autodialers worked at any of the five sites. Slow 2400-baud modems and the autodialer are no longer available, or are very difficult to obtain. Failure of the ALERT system and the autodialers caused the initial part of the October 25 – 26 storm to be missed.

Sixth and Horne – Mesa 1

Equipment at this site seemed to operate properly during the fall season. The storm of October 25 did not produce enough runoff to be sampled. A larger event occurred on November 28, but was not sampled because of IGA expiration. Equipment will be serviced in January 1999.

Broadway and Lindsay – Mesa 2

The equipment at this site appeared to function properly during the fall 1998. Equipment will be serviced in January 1999.

Falcon Field – Mesa 3

The equipment at this site appeared to function properly during the fall 1998. The equipment was serviced on January 7, 1999.

Horne and Grandview – Mesa 4

The equipment at this site appeared to function properly during the fall 1998. The equipment will be serviced during January 1999.

Dobson Road – Mesa 5

The equipment at this site appeared to function properly during the fall 1998. The equipment will be serviced during January 1999.

Grab Sample Techniques

Grab samples are no longer taken via the automatic sampler. Grab samples are taken using a device that will allow samples to be collected directly into sample bottles. The apparatus is made from PVC piping. Bottles are placed into various sizes of PVC pipe and samples are collected directly into the sample bottles. Once collected, the samples are preserved and placed on ice.

Data from Fall 1998

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 required data for Mesa'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.

MESA NPDES STORMWATER ANALYSIS FORM

SITE _____ DATE _____

GRAB SAMPLE

			Bottle(s) Required
X	BOD5	405.1	1- 1 liter plastic, unpreserved
X	Fecal Coliform	9222C	1- bacterial bottle, tablet preserved
X	Fecal Streptococci	9230C	1- bacterial bottle, tablet preserved
X	Oil and Grease	413.1	1- 1 liter amber glass, unpreserved
X	Methylene Chloride	EPA 624	4- 40 mL glass vials, unpreserved
X	Toluene	EPA 624	from above

COMPOSITE SAMPLE

Inorganic Chemistry - Non Metals

			X	Nitrogen, Organic	351.4
X	COD	410.1	X	Nitrogen, Kjeldahl	351.3
X	Total Dissolved Solids	160.1	X	Phosphorous, Total	365.2
X	Total Suspended Solids	160.1	X	Phosphorous, Dissolved	365.3
X	Nitrogen, Ammonia	350.3	X	Hardness	130.2
X	Nitrogen, Nitrate	353.2			

Inorganic Chemistry - Metals, Total and Dissolved

X	Cadmium, Total	213.2	X	Lead, Total	239.2
X	Cadmium, dissolved	213.2	X	Lead, dissolved	239.2
X	Chromium, Total	218.2	X	Mercury, Total	245.1
X	Chromium, dissolved	218.2	X	Mercury, dissolved	245.1
X	Copper, Total	220.2	X	Zinc, Total	289.2
X	Copper, dissolved	220.2	X	Zinc, dissolved	289.2

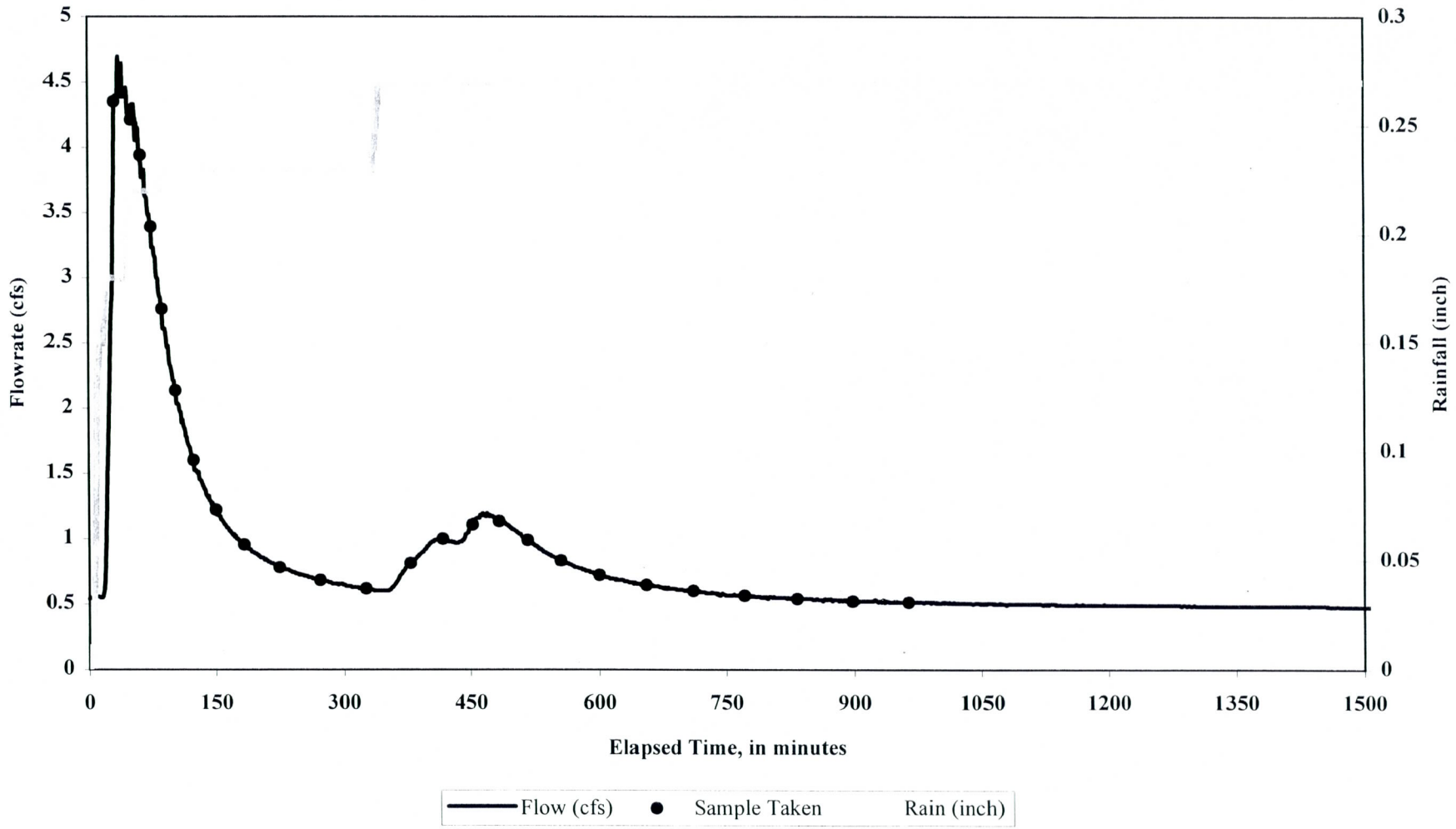
Organic Compounds

X	DDE	608	X	Fluroanthene	625
X	Benzo(a) Anthracene	625	X	Indeno (1,2,3-cd) Pyrene	625
X	Chrysene	625	X	Pyrene	625

Storm Hydrographs

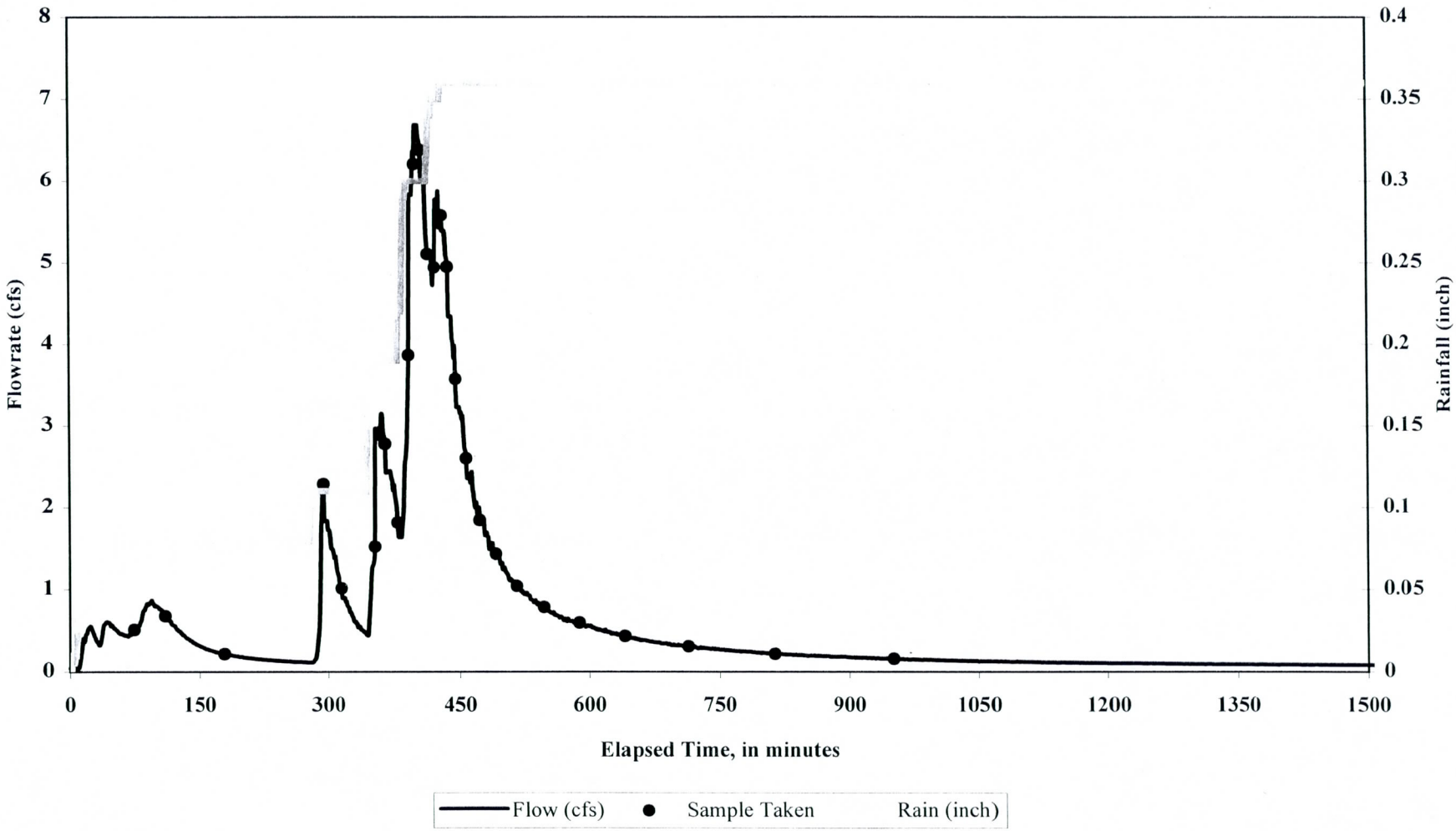
Mesa LINDSAY

25 October 1998



Mesa DOBSON

25 October 1998



Rainfall Data

Gauge Rainfall

Gauge Number	Sixth (Mesa 1) - Data from Mesa 4 ALERT Raingauge
Location	Horne and Sixth Street

	July 1998	August 1998	September 1998	October 1998	November 1998	December 1998	January 1999	February 1999	March 1999	April 1999	May 1999	June 1999
1		0.05	0.01									
2		0.01	0.03			0.07						
3		0.02	0.01									
4	0.04		0.02									
5	0.10		0.01									
6			0.19			0.18						
7												
8			0.03									
9			0.05		0.02							
10		0.01										
11			0.01									
12		0.02										
13												
14												
15		0.28				0.06						
16		0.01										
17	0.13	0.28										
18	0.01	0.01										
19		0.03										
20												
21												
22												
23												
24	0.02		0.24		0.02							
25				0.16								
26	0.02			0.07								
27												
28		0.02			0.42							
29					0.01							
30				0.02								
31	0.64											
Month Total	0.96	0.74	0.60	0.25	0.47	0.31	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall

Gauge Number	Lindsay (Mesa 2)
Location	Broadway and Lindsay

	July 1998	August 1998	September 1998	October 1998	November 1998	December 1998	January 1999	February 1999	March 1999	April 1999	May 1999	June 1999
1	0.01	0.08										
2			0.04			0.04						
3												
4												
5	0.04					0.04						
6			0.04			0.20						
7												
8			0.04									
9												
10												
11			0.12									
12												
13												
14												
15		0.12										
16												
17	0.04	0.43										
18												
19												
20												
21												
22			0.16									
23												
24												
25				0.28								
26				0.04								
27												
28		0.04			0.35							
29					0.04							
30												
31	0.20											
Month Total	0.29	0.67	0.40	0.32	0.39	0.28	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall

Gauge Number	Falcon Field (Mesa 3)
Location	Falcon Field

	July 1998	August 1998	September 1998	October 1998	November 1998	December 1998	January 1999	February 1999	March 1999	April 1999	May 1999	June 1999
1		0.24										
2						0.03						
3												
4												
5	0.04											
6	0.24		0.04			0.06						
7												
8												
9					0.01							
10												
11			0.08									
12												
13												
14												
15		0.47										
16												
17		0.35										
18												
19												
20												
21												
22	0.04											
23												
24	0.04											
25				0.09								
26				0.01								
27												
28					0.11							
29												
30				0.01								
31	0.79											
Month Total	1.15	1.06	0.12	0.11	0.12	0.09	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall

Gauge Number	Grandview (Mesa 4)
Location	Horne and Grandview

	July 1998	August 1998	September 1998	October 1998	November 1998	December 1998	January 1999	February 1999	March 1999	April 1999	May 1999	June 1999
1		0.05	0.01									
2		0.01	0.03			0.07						
3		0.02	0.01									
4	0.04		0.02									
5	0.10		0.01									
6			0.19			0.18						
7												
8			0.03									
9			0.05		0.02							
10		0.01										
11			0.01									
12		0.02										
13												
14												
15		0.28				0.06						
16		0.01										
17	0.13	0.28										
18	0.01	0.01										
19		0.03										
20												
21												
22												
23												
24	0.02		0.24		0.02							
25				0.16								
26	0.02			0.07								
27												
28		0.02			0.42							
29					0.01							
30				0.02								
31	0.64											
Month Total	0.96	0.74	0.60	0.25	0.47	0.31	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall

Gauge Number	Dobson (Mesa 5)
Location	Dobson and Broadway

	July 1998	August 1998	September 1998	October 1998	November 1998	December 1998	January 1999	February 1999	March 1999	April 1999	May 1999	June 1999
1		0.07	0.01									
2						0.13						
3												
4			0.13									
5	0.04	0.01	0.03									
6	0.01		0.24			0.17						
7	0.01											
8					0.02							
9			0.02		0.01							
10												
11			0.09									
12		0.61										
13												
14												
15		0.50				0.07						
16												
17	0.03	0.25										
18												
19												
20												
21												
22			0.11									
23												
24	0.02											
25				0.09								
26				0.26								
27												
28		0.04			0.28							
29					0.03							
30				0.06								
31	0.09											
Month Total	0.20	1.48	0.63	0.41	0.34	0.37	0.00	0.00	0.00	0.00	0.00	0.00

Data Tables

Mesa 1 - Horne and Sixth Street		
Date of Sampling	Method	No Data to Report
Time		No Data to Report
Representative Storm Event		No Data to Report
Agency Collecting Sample		No Data to Report
Agency Analyzing Sample		No Data to Report
Drainage Area (acres) (DA)		No Data to Report
Impervious Area (acres) (IA)		No Data to Report
Land Use - Residential		No Data to Report
Land Use - Commercial		No Data to Report
Land Use - Industrial		No Data to Report
Land Use - Undeveloped		No Data to Report
Sampling Duration (minutes)		No Data to Report
Storm Duration (minutes) (DRN)		No Data to Report
Runoff Sampled (cubic feet) (RUN)		No Data to Report
Total Storm Runoff (cubic feet)		No Data to Report
Instantaneous Discharge (cfs)		No Data to Report
Preceeding Dry Period (days) (ANT)		No Data to Report
Total Storm Rainfall (inch)		No Data to Report
Rainfall Sampled (inch) (TRN)		No Data to Report
Maximum 5-minute rain intensity (MAX5)		No Data to Report
Sample Temperature (deg. C)	Field	No Data to Report
Effluent Temperature (deg. C)	Field	No Data to Report
pH, Effluent (standard units)	Field	No Data to Report
BOD5 (mg/l)	405.1	No Data to Report
COD High Level (mg/l)	410.1	No Data to Report
Fecal Coliform (CFU/100mL)	9222C	No Data to Report
Fecal Streptococci (CFU/100mL)	9230C	No Data to Report
Total Dissolved Solids (mg/l)	160.1	No Data to Report
Total Suspended Solids (mg/l)	160.1	No Data to Report
TKN Nitrogen (mg/l as N)	351.3	No Data to Report
Nitrogen Nitrate Total (mg/l as N)	353.2	No Data to Report
Nitrogen Ammonia Total (mg/l as N)	350.3	No Data to Report
Nitrogen Organic Total (mg/l as N)	351.4	No Data to Report
Phosphorous Total (mg/l as P)	365.2	No Data to Report
Phosphorous Dissolved (mg/l as P)	365.3	No Data to Report
Oil and Grease Total Recoverable (mg/l)	413.1	No Data to Report
Hardness (mg/l)	130.2	No Data to Report
Cadmium Total Recoverable (ug/l as Cd)	213.2	No Data to Report
Cadmium Dissolved (ug/l as Cd)	213.2	No Data to Report
Chromium Total Recoverable (ug/l as Cr)	218.2	No Data to Report
Chromium Dissolved (ug/l as Cr)	218.2	No Data to Report
Copper, Total Recoverable, (ug/l as Cu)	220.2	No Data to Report
Copper, Dissolved, (ug/l as Cu)	220.2	No Data to Report
Lead, Total Recoverable, (ug/l as Pb)	239.2	No Data to Report
Lead, Dissolved, (ug/l as Pb)	239.2	No Data to Report
Mercury, Total Recoverable, (ug/l as Hg)	245.1	No Data to Report
Mercury, Dissolved, (ug/l as Hg)	245.1	No Data to Report
Zinc, Total Recoverable, (ug/l as Zn)	289.2	No Data to Report
Zinc, Dissolved, (ug/l as Zn)	289.2	No Data to Report
P,P' DDE, Total, (ug/l)	608	No Data to Report
Methylene Chloride, Total, (ug/l)	624	No Data to Report
Toluene, Total, (ug/l)	624	No Data to Report
Benzo (a) Anthracene, Total, (ug/l)	625	No Data to Report
Chrysene, Total, (ug/l)	625	No Data to Report
Fluoranthene, Total, (ug/l)	625	No Data to Report
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	No Data to Report
Pyrene, Total, (ug/l)	625	No Data to Report

Mesa 2 - Broadway and Lindsay		
Date of Sampling	Method	10/25/1998
Time		2223
Representative Storm Event		Y
Agency Collecting Sample		FCD
Agency Analyzing Sample		BOLIN
Drainage Area (acres) (DA)		145
Impervious Area (acres) (IA)		37
Land Use - Residential		--
Land Use - Commercial		--
Land Use - Industrial		--
Land Use - Undeveloped		--
Sampling Duration (minutes)		964
Storm Duration (minutes) (DRN)		343
Runoff Sampled (cubic feet) (RUN)		57,900
Total Storm Runoff (cubic feet)		62,000
Instantaneous Discharge (cfs)		4.7
Preceeding Dry Period (days) (ANT)		33
Total Storm Rainfall (inch)		0.27
Rainfall Sampled (inch) (TRN)		0.27
Maximum 5-minute rain intensity (MAX5)		1.44
Sample Temperature (deg. C)	Field	4
Effluent Temperature (deg. C)	Field	22.9
pH, Effluent (standard units)	Field	7.85
BOD5 (mg/l)	405.1	--
COD High Level (mg/l)	410.1	154
Fecal Coliform (CFU/100mL)	9222C	--
Fecal Streptococci (CFU/100mL)	9230C	--
Total Dissolved Solids (mg/l)	160.1	123
Total Suspeded Solids (mg/l)	160.1	102
TKN Nitrogen (mg/l as N)	351.3	<0.5
Nitrogen Nitrate Total (mg/l as N)	353.2	--
Nitrogen Ammonia Total (mg/l as N)	350.3	0.84
Nitrogen Organic Total (mg/l as N)	351.4	<0.5
Phosphorous Total (mg/l as P)	365.2	0.42
Phosphorous Dissolved (mg/l as P)	365.3	0.29
Oil and Grease Total Recoverable (mg/l)	413.1	--
Hardness (mg/l)	130.2	52
Cadmium Total Recoverable (ug/l as Cd)	213.2	0.32
Cadmium Dissolved (ug/l as Cd)	213.2	<0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	4.4
Chromium Dissolved (ug/l as Cr)	218.2	<2
Copper, Total Recoverable, (ug/l as Cu)	220.2	28
Copper, Dissolved, (ug/l as Cu)	220.2	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	7
Lead, Dissolved, (ug/l as Pb)	239.2	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	110
Zinc, Dissolved, (ug/l as Zn)	289.2	90
P,P' DDE, Total, (ug/l)	608	<1.0
Methylene Chloride, Total, (ug/l)	624	--
Toluene, Total, (ug/l)	624	--
Benzo (a) Anthracene, Total, (ug/l)	625	<25
Chrysene, Total, (ug/l)	625	<25
Fluoranthene, Total, (ug/l)	625	<25
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<25
Pyrene, Total, (ug/l)	625	<25

Mesa 3 - Falcon Field		No Data to Report
Date of Sampling	Method	No Data to Report
Time		No Data to Report
Representative Storm Event		No Data to Report
Agency Collecting Sample		No Data to Report
Agency Analyzing Sample		No Data to Report
Drainage Area (acres) (DA)		No Data to Report
Impervious Area (acres) (IA)		No Data to Report
Land Use - Residential		No Data to Report
Land Use - Commercial		No Data to Report
Land Use - Industrial		No Data to Report
Land Use - Undeveloped		No Data to Report
Sampling Duration (minutes)		No Data to Report
Storm Duration (minutes) (DRN)		No Data to Report
Runoff Sampled (cubic feet) (RUN)		No Data to Report
Total Storm Runoff (cubic feet)		No Data to Report
Instantaneous Discharge (cfs)		No Data to Report
Preceeding Dry Period (days) (ANT)		No Data to Report
Total Storm Rainfall (inch)		No Data to Report
Rainfall Sampled (inch) (TRN)		No Data to Report
Maximum 5-minute rain intensity (MAX5)		No Data to Report
Sample Temperature (deg. C)	Field	No Data to Report
Effluent Temperature (deg. C)	Field	No Data to Report
pH, Effluent (standard units)	Field	No Data to Report
BOD5 (mg/l)	405.1	No Data to Report
COD High Level (mg/l)	410.1	No Data to Report
Fecal Coliform (CFU/100mL)	9222C	No Data to Report
Fecal Streptococci (CFU/100mL)	9230C	No Data to Report
Total Dissolved Solids (mg/l)	160.1	No Data to Report
Total Suspended Solids (mg/l)	160.1	No Data to Report
TKN Nitrogen (mg/l as N)	351.3	No Data to Report
Nitrogen Nitrate Total (mg/l as N)	353.2	No Data to Report
Nitrogen Ammonia Total (mg/l as N)	350.3	No Data to Report
Nitrogen Organic Total (mg/l as N)	351.4	No Data to Report
Phosphorous Total (mg/l as P)	365.2	No Data to Report
Phosphorous Dissolved (mg/l as P)	365.3	No Data to Report
Oil and Grease Total Recoverable (mg/l)	413.1	No Data to Report
Hardness (mg/l)	130.2	No Data to Report
Cadmium Total Recoverable (ug/l as Cd)	213.2	No Data to Report
Cadmium Dissolved (ug/l as Cd)	213.2	No Data to Report
Chromium Total Recoverable (ug/l as Cr)	218.2	No Data to Report
Chromium Dissolved (ug/l as Cr)	218.2	No Data to Report
Copper, Total Recoverable, (ug/l as Cu)	220.2	No Data to Report
Copper, Dissolved, (ug/l as Cu)	220.2	No Data to Report
Lead, Total Recoverable, (ug/l as Pb)	239.2	No Data to Report
Lead, Dissolved, (ug/l as Pb)	239.2	No Data to Report
Mercury, Total Recoverable, (ug/l as Hg)	245.1	No Data to Report
Mercury, Dissolved, (ug/l as Hg)	245.1	No Data to Report
Zinc, Total Recoverable, (ug/l as Zn)	289.2	No Data to Report
Zinc, Dissolved, (ug/l as Zn)	289.2	No Data to Report
P,P' DDE, Total, (ug/l)	608	No Data to Report
Methylene Chloride, Total, (ug/l)	624	No Data to Report
Toluene, Total, (ug/l)	624	No Data to Report
Benzo (a) Anthracene, Total, (ug/l)	625	No Data to Report
Chrysene, Total, (ug/l)	625	No Data to Report
Fluoranthene, Total, (ug/l)	625	No Data to Report
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	No Data to Report
Pyrene, Total, (ug/l)	625	No Data to Report

Mesa 4 - Home and Grandview		No Data to Report
Date of Sampling	Method	No Data to Report
Time		No Data to Report
Representative Storm Event		No Data to Report
Agency Collecting Sample		No Data to Report
Agency Analyzing Sample		No Data to Report
Drainage Area (acres) (DA)		No Data to Report
Impervious Area (acres) (IA)		No Data to Report
Land Use - Residential		No Data to Report
Land Use - Commercial		No Data to Report
Land Use - Industrial		No Data to Report
Land Use - Undeveloped		No Data to Report
Sampling Duration (minutes)		No Data to Report
Storm Duration (minutes) (DRN)		No Data to Report
Runoff Sampled (cubic feet) (RUN)		No Data to Report
Total Storm Runoff (cubic feet)		No Data to Report
Instantaneous Discharge (cfs)		No Data to Report
Preceeding Dry Period (days) (ANT)		No Data to Report
Total Storm Rainfall (inch)		No Data to Report
Rainfall Sampled (inch) (TRN)		No Data to Report
Maximum 5-minute rain intensity (MAX5)		No Data to Report
Sample Temperature (deg. C)	Field	No Data to Report
Effluent Temperature (deg. C)	Field	No Data to Report
pH, Effluent (standard units)	Field	No Data to Report
BOD5 (mg/l)	405.1	No Data to Report
COD High Level (mg/l)	410.1	No Data to Report
Fecal Coliform (CFU/100mL)	9222C	No Data to Report
Fecal Streptococci (CFU/100mL)	9230C	No Data to Report
Total Dissolved Solids (mg/l)	160.1	No Data to Report
Total Suspended Solids (mg/l)	160.1	No Data to Report
TKN Nitrogen (mg/l as N)	351.3	No Data to Report
Nitrogen Nitrate Total (mg/l as N)	353.2	No Data to Report
Nitrogen Ammonia Total (mg/l as N)	350.3	No Data to Report
Nitrogen Organic Total (mg/l as N)	351.4	No Data to Report
Phosphorous Total (mg/l as P)	365.2	No Data to Report
Phosphorous Dissolved (mg/l as P)	365.3	No Data to Report
Oil and Grease Total Recoverable (mg/l)	413.1	No Data to Report
Hardness (mg/l)	130.2	No Data to Report
Cadmium Total Recoverable (ug/l as Cd)	213.2	No Data to Report
Cadmium Dissolved (ug/l as Cd)	213.2	No Data to Report
Chromium Total Recoverable (ug/l as Cr)	218.2	No Data to Report
Chromium Dissolved (ug/l as Cr)	218.2	No Data to Report
Copper, Total Recoverable, (ug/l as Cu)	220.2	No Data to Report
Copper, Dissolved, (ug/l as Cu)	220.2	No Data to Report
Lead, Total Recoverable, (ug/l as Pb)	239.2	No Data to Report
Lead, Dissolved, (ug/l as Pb)	239.2	No Data to Report
Mercury, Total Recoverable, (ug/l as Hg)	245.1	No Data to Report
Mercury, Dissolved, (ug/l as Hg)	245.1	No Data to Report
Zinc, Total Recoverable, (ug/l as Zn)	289.2	No Data to Report
Zinc, Dissolved, (ug/l as Zn)	289.2	No Data to Report
P,P' DDE, Total, (ug/l)	608	No Data to Report
Methylene Chloride, Total, (ug/l)	624	No Data to Report
Toluene, Total, (ug/l)	624	No Data to Report
Benzo (a) Anthracene, Total, (ug/l)	625	No Data to Report
Chrysene, Total, (ug/l)	625	No Data to Report
Fluoranthene, Total, (ug/l)	625	No Data to Report
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	No Data to Report
Pyrene, Total, (ug/l)	625	No Data to Report

Mesa 5 - Broadway and Dobson		
Date of Sampling	Method	10/25/1998
Time		2233
Representative Storm Event		Y
Agency Collecting Sample		FCD
Agency Analyzing Sample		BOLIN
Drainage Area (acres) (DA)		63
Impervious Area (acres) (IA)		56
Land Use - Residential		0
Land Use - Commercial		100
Land Use - Industrial		0
Land Use - Undeveloped		0
Sampling Duration (minutes)		952
Storm Duration (minutes) (DRN)		430
Runoff Sampled (cubic feet) (RUN)		50,740
Total Storm Runoff (cubic feet)		53,500
Instantaneous Discharge (cfs)		6.7
Preceeding Dry Period (days) (ANT)		35
Total Storm Rainfall (inch)		0.36
Rainfall Sampled (inch) (TRN)		0.36
Maximum 5-minute rain intensity (MAX5)		0.84
Sample Temperature (deg. C)	Field	4
Effluent Temperature (deg. C)	Field	21.4
pH, Effluent (standard units)	Field	7.62
BOD5 (mg/l)	405.1	--
COD High Level (mg/l)	410.1	151
Fecal Coliform (CFU/100mL)	9222C	--
Fecal Streptococci (CFU/100mL)	9230C	--
Total Dissolved Solids (mg/l)	160.1	111
Total Suspended Solids (mg/l)	160.1	78
TKN Nitrogen (mg/l as N)	351.3	--
Nitrogen Nitrate Total (mg/l as N)	353.2	--
Nitrogen Ammonia Total (mg/l as N)	350.3	1.44
Nitrogen Organic Total (mg/l as N)	351.4	--
Phosphorous Total (mg/l as P)	365.2	0.2
Phosphorous Dissolved (mg/l as P)	365.3	0.11
Oil and Grease Total Recoverable (mg/l)	413.1	--
Hardness (mg/l)	130.2	45
Cadmium Total Recoverable (ug/l as Cd)	213.2	0.52
Cadmium Dissolved (ug/l as Cd)	213.2	<0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	17
Chromium Dissolved (ug/l as Cr)	218.2	<2
Copper, Total Recoverable, (ug/l as Cu)	220.2	30
Copper, Dissolved, (ug/l as Cu)	220.2	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	11
Lead, Dissolved, (ug/l as Pb)	239.2	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	200
Zinc, Dissolved, (ug/l as Zn)	289.2	80
P,P' DDE, Total, (ug/l)	608	<1.0
Methylene Chloride, Total, (ug/l)	624	--
Toluene, Total, (ug/l)	624	--
Benzo (a) Anthracene, Total, (ug/l)	625	<25
Chrysene, Total, (ug/l)	625	<25
Fluoranthene, Total, (ug/l)	625	<25
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<25
Pyrene, Total, (ug/l)	625	<25

Validation Tables

Mesa Lindsay

October 25, 1998

	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)														
Effluent Temperature (deg. C)														
pH, Effluent (standard units)														
BOD5 (mg/l)	405.1	--	mg/l	1		n/a	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	154	mg/l	1		11/09/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	--	CFU/100ml	2		n/a	6 hours			<30	n/a			
Fecal Streptococci (CFU/100mL)	9230B	--	CFU/100ml	2		n/a	6 hours			<30	n/a			
Total Dissolved Solids (mg/l)	2540C	123	mg/l	10		10/30/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	102	mg/l	10		10/30/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	<0.5	mg/l			11/13/1998	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	--	mg/l			n/a	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	0.84	mg/l			10/29/1998	28 days							
Nitrogen Organic Total (mg/l as N)	calc.	<0.5	mg/l											
Phosphorous Total (mg/l as P)	365.3	0.42	mg/l	0.05		11/17/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	0.29	mg/l			11/19/1998	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	--	mg/l	0.2		n/a	28 days	<30	n/a	<50	n/a			
Hardness (mg/l)	2340B	52	mg/l	1		11/04/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	0.32	ug/l	0.2		11/11/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	<0.2	ug/l			11/11/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	4.4	ug/l	1		11/12/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	<2	ug/l			11/12/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	28	ug/l	1		11/04/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	<15	ug/l			11/03/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	7	ug/l	1		11/06/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			11/06/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	ug/l			11/05/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			11/02/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	110	ug/l	1		11/04/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	90	ug/l			11/03/1998	6 months							
EPA Method 608 Extraction	608					10/29/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			11/06/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	--	ug/l			n/a	14 days							
Toluene, Total, (ug/l)	624	--	ug/l			n/a	14 days							
EPA Method 625 Extraction	625					10/28/1998	7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							
Chrysene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							
Fluoranthene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							
Pyrene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							

Mesa Dobson

October 25, 1998

	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)														
Effluent Temperature (deg. C)														
pH, Effluent (standard units)														
BOD5 (mg/l)	405.1	--	mg/l	1		n/a	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	151	mg/l	1		11/09/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	--	CFU/100ml	2		n/a	6 hours			<30	n/a			
Fecal Streptococci (CFU/100mL)	9230B	--	CFU/100ml	2		n/a	6 hours			<30	n/a			
Total Dissolved Solids (mg/l)	2540C	111	mg/l	10		10/30/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	78	mg/l	10		11/02/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	--	mg/l			n/a	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	--	mg/l			n/a	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	1.44	mg/l			10/29/1998	28 days							
Nitrogen Organic Total (mg/l as N)	calc.	--	mg/l											
Phosphorous Total (mg/l as P)	365.3	0.2	mg/l	0.05		11/17/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	0.11	mg/l			11/19/1998	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	--	mg/l	0.2		n/a	28 days	<30	n/a	<50	n/a			
Hardness (mg/l)	2340B	45	mg/l	1		11/04/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	0.52	ug/l	0.2		11/11/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	<0.2	ug/l			11/11/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	17	ug/l	1		11/12/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	<2	ug/l			11/12/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	30	ug/l	1		11/04/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	<15	ug/l			11/03/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	11	ug/l	1		11/06/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			11/06/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	ug/l			11/05/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			11/02/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	200	ug/l	1		11/04/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	80	ug/l			11/03/1998	6 months							
EPA Method 608 Extraction	608					10/29/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			11/05/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	--	ug/l			n/a	14 days							
Toluene, Total, (ug/l)	624	--	ug/l			n/a	14 days							
EPA Method 625 Extraction	625					10/28/1998	7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							
Chrysene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							
Fluoranthene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							
Pyrene, Total, (ug/l)	625	<25	ug/l			11/19/1998	40 days							

R - Rejected Data

Hard Copies of Data

Data Checksheet

Site	MESA LINDSAY
Municipality	MESA
Sample Date	10-26-98

Date Received	1-26-99

Laboratory Used	BOLIN
Laboratory Contact	STEPHANIE
FCD Sample ID Number	MESA 2
Lab Sample ID Number	9810-07628-004
Laboratory Invoice Number	48042

Initial Review Complete	✓	Date	2-1-99
Lab Contacted	—	Date	
Lab Review Complete		Date	
Second Review Complete		Date	
Additional Review Necessary			

Comments

Data Validation Table Complete	✓	Date	2-1-99

Data Entered Into Database	✓	Date	2-1-99

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: 10/26/98
Reported: 12/08/98
Invoice No: 048042

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9810-07628-004
Sample ID: Mesa 2 (Lindsay)

Time Sampled: 22:30
Date Sampled: 10/25/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
pH	EPA 150.1	6.3	Std Unit		10/27/98
Chemical Oxygen Demand	EPA 410.4	154.	mg/L	20	11/09/98
Chloride	EPA 300.0	11.	mg/L	5.0	11/11/98
Cyanide, Total	SM 4500 CN E	<0.01	mg/L	0.01	11/06/98
Total Dissolved Solids	SM 2540C	123.	mg/L	1.	10/30/98
Solids, Total Suspended	EPA 160.2	102.	mg/L	1.	10/30/98
Nitrogen as Ammonia	EPA 350.2	0.84	mg/L	0.03	10/29/98
Nitrogen as Nitrite	SM 4500 NO2 B	<0.1	mg/L	0.1	10/26/98
Organic Nitrogen	CALCULATION	<0.5	mg/L		12/04/98
Total Kjeldahl Nitrogen	EPA 351.3	<0.5	mg/L	0.5	11/13/98
P as Total Phosphate	EPA 365.3	0.42	mg/L	0.05	11/17/98
Phosphorus, Dissolved	EPA 365.3	0.29	mg/L	0.05	11/19/98
P as Orthophosphate	SM 4500 PE	0.31	mg/L	0.05	10/27/98
Total Organic Carbon	SM 5310C	21.2	mg/L	0.2	11/19/98
Total Alkalinity (as CaCO3)	SM 2320B	28.	mg/L	2.	10/29/98
Sulfate, Dissolved	SM 4500 SO4	<5.0	mg/L	5.0	11/13/98
Chromium, hexavalent	SM 3500-CR D	<0.010	mg/L	0.010	10/27/98
Metals Digestion for ICP	EPA 200.7				11/02/98
Metals Digestion for GFAA	SM 3030E				11/02/98
Antimony	SM 3113B	<0.005	mg/L	0.005	11/08/98
Arsenic	SM 3113B	<0.005	mg/L	0.005	11/11/98
Beryllium	EPA 200.7	<0.002	mg/L	0.002	11/04/98
Calcium	EPA 200.7	16.	mg/L	1.	11/04/98
Copper	EPA 200.7	0.028	mg/L	0.015	11/04/98
Lead	SM 3113B	0.007	mg/L	0.005	11/06/98
Magnesium	EPA 200.7	3.	mg/L	1.	11/04/98
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	11/05/98
Selenium	SM 3113B	<0.005	mg/L	0.005	11/03/98
Silver	EPA 200.7	<0.04	mg/L	0.04	11/04/98
Hardness, Total (Ca & Mg)	SM 2340B	52	mg/L	7.	11/04/98
Zinc	EPA 200.7	0.11	mg/L	0.04	11/04/98
Thallium	EPA 200.9	<0.001	mg/L	0.001	11/04/98

Bolin Laboratories Inc.

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

Matrix: Storm Water
Sample No: 9810-07628-004

Time Sampled: 22:30
Date Sampled: 10/25/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Cadmium	EPA 213.2	0.00032	mg/L	0.0002	11/11/98
Chromium	EPA 218.2	0.0044	mg/L	0.002	11/12/98
Nickel	EPA 249.2	0.0092	mg/L	0.002	11/11/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	11/25/98
Arsenic, Dissolved	EPA 200.9	0.005	mg/L	0.005	11/11/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	11/03/98
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	11/03/98
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	11/06/98
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	11/02/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	11/10/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	11/03/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	11/04/98
Zinc, Dissolved	EPA 200.7	0.09	mg/L	0.02	11/03/98
Cadmium, Dissolved	EPA 213.2	<0.0002	mg/L	0.0002	11/11/98
Chromium, Dissolved	EPA 218.2	<0.002	mg/L	0.002	11/12/98
Nickel, Dissolved	EPA 249.2	0.0041	mg/L	0.002	11/11/98
N-Nitrosodimethylamine	EPA 625	ND	ug/L	25	11/19/98
Phenol	EPA 625	ND	ug/L	25	11/19/98
Aniline	EPA 625	ND	ug/L	25	11/19/98
Bis(2-chloroethyl)ether	EPA 625	ND	ug/L	50	11/19/98
2-Chlorophenol	EPA 625	ND	ug/L	50	11/19/98
1,3-Dichlorobenzene	EPA 625	ND	ug/L	25	11/19/98
1,4-Dichlorobenzene	EPA 625	ND	ug/L	25	11/19/98
Benzyl alcohol	EPA 625	ND	ug/L	50	11/19/98
1,2-Dichlorobenzene	EPA 625	ND	ug/L	25	11/19/98
2-Methylphenol	EPA 625	ND	ug/L	25	11/19/98
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	50	11/19/98
4-Methylphenol (p-Cresol)	EPA 625	ND	ug/L	25	11/19/98
N-Nitrosodi-n-propylamine	EPA 625	ND	ug/L	25	11/19/98
Hexachloroethane	EPA 625	ND	ug/L	50	11/19/98
Nitrobenzene	EPA 625	ND	ug/L	50	11/19/98
Isophorone	EPA 625	ND	ug/L	50	11/19/98
2,4-Dimethylphenol	EPA 625	ND	ug/L	50	11/19/98
Benzoic acid	EPA 625	ND	ug/L	250	11/19/98
2-Nitrophenol	EPA 625	ND	ug/L	50	11/19/98
Bis(2-chloroethoxy)methane	EPA 625	ND	ug/L	50	11/19/98
2,4-Dichlorophenol	EPA 625	ND	ug/L	50	11/19/98
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	25	11/19/98
Naphthalene	EPA 625	ND	ug/L	25	11/19/98
Hexachlorobutadiene	EPA 625	ND	ug/L	25	11/19/98
4-Chloroaniline	EPA 625	ND	ug/L	25	11/19/98
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	25	11/19/98

Bolin Laboratories Inc.

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

Matrix: Storm Water
Sample No: 9810-07628-004

Time Sampled: 22:30
Date Sampled: 10/25/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
2-Methylnaphthalene	EPA 625	ND	ug/L	25	11/19/98
Hexachlorocyclopentadiene	EPA 625	ND	ug/L	25	11/19/98
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	25	11/19/98
2,4,5-Trichlorophenol	EPA 625	ND	ug/L	25	11/19/98
2-Chloronaphthalene	EPA 625	ND	ug/L	25	11/19/98
2-Nitroaniline	EPA 625	ND	ug/L	25	11/19/98
Dimethyl Phthalate	EPA 625	ND	ug/L	25	11/19/98
2,6-Dinitrotoluene	EPA 625	ND	ug/L	25	11/19/98
Acenaphthylene	EPA 625	ND	ug/L	50	11/19/98
3-Nitroaniline	EPA 625	ND	ug/L	25	11/19/98
Acenaphthene	EPA 625	ND	ug/L	25	11/19/98
2,4-Dinitrophenol	EPA 625	ND	ug/L	100	11/19/98
4-Nitrophenol	EPA 625	ND	ug/L	25	11/19/98
Dibenzofuran	EPA 625	ND	ug/L	25	11/19/98
2,4-Dinitrotoluene	EPA 625	ND	ug/L	25	11/19/98
Diethyl Phthalate	EPA 625	ND	ug/L	25	11/19/98
4-Chlorophenylphenylether	EPA 625	ND	ug/L	50	11/19/98
Fluorene	EPA 625	ND	ug/L	25	11/19/98
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	50	11/19/98
4-Nitroaniline	EPA 625	ND	ug/L	25	11/19/98
N-Nitrosodiphenylamine	EPA 625	ND	ug/L	25	11/19/98
1,2-Diphenylhydrazine	EPA 625	ND *	ug/L	25	11/19/98
4-Bromophenylphenylether	EPA 625	ND	ug/L	25	11/19/98
Hexachlorobenzene	EPA 625	ND	ug/L	50	11/19/98
Pentachlorophenol	EPA 625	ND	ug/L	50	11/19/98
Phenanthrene	EPA 625	ND	ug/L	25	11/19/98
Anthracene	EPA 625	ND	ug/L	25	11/19/98
Di-n-butylphthalate	EPA 625	ND	ug/L	25	11/19/98
Fluoranthene	EPA 625	ND	ug/L	25	11/19/98
Benzidine	EPA 625	ND	ug/L	100	11/19/98
Pyrene	EPA 625	ND	ug/L	25	11/19/98
Butylbenzyl Phthalate	EPA 625	ND	ug/L	25	11/19/98
Bis(2-ethylhexyl)phthalate	EPA 625	113	ug/L	50	11/19/98
Benzo (a) anthracene	EPA 625	ND	ug/L	25	11/19/98
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	25	11/19/98
Chrysene	EPA 625	ND	ug/L	25	11/19/98
Di-n-octylphthalate	EPA 625	ND	ug/L	25	11/19/98
Benzo (b) fluoranthene	EPA 625	ND	ug/L	25	11/19/98
Benzo (k) fluoranthene	EPA 625	ND	ug/L	25	11/19/98
Benzo (a) pyrene	EPA 625	ND	ug/L	25	11/19/98
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	25	11/19/98
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	25	11/19/98

Bolin Laboratories Inc.

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

Matrix: Storm Water
Sample No: 9810-07628-004

Time Sampled: 22:30
Date Sampled: 10/25/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	25	11/19/98
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	50	11/19/98
Extraction	EPA 625				10/28/98
Surrogate:	EPA 625				11/19/98
***d5-Phenol	EPA 625	26	% Recovery		11/19/98
***2-Fluorophenol	EPA 625	31	% Recovery		11/19/98
***d5-Nitrobenzene	EPA 625	60	% Recovery		11/19/98
***2-Fluorobiphenyl	EPA 625	78	% Recovery		11/19/98
***2,4,6-Tribromophenol	EPA 625	84	% Recovery		11/19/98
***d14-Terphenyl	EPA 625	79	% Recovery		11/19/98
4,4'-DDD	EPA 608	ND C	ug/L	1.0	11/06/98
4,4'-DDE	EPA 608	ND C	ug/L	1.0	11/06/98
4,4'-DDT	EPA 608	ND	ug/L	2.0	11/06/98
Aldrin	EPA 608	ND C	ug/L	1.0	11/06/98
alpha-BHC	EPA 608	ND C	ug/L	1.0	11/06/98
Chlordane	EPA 608	ND	ug/L	1.0	11/06/98
delta-BHC	EPA 608	ND C	ug/L	1.0	11/06/98
Dieldrin	EPA 608	ND C	ug/L	1.0	11/06/98
Endosulfan I	EPA 608	ND C	ug/L	1.0	11/06/98
Endosulfan II	EPA 608	ND C	ug/L	1.0	11/06/98
Endosulfan Sulfate	EPA 608	ND C	ug/L	1.0	11/06/98
Endrin	EPA 608	ND C	ug/L	1.0	11/06/98
Endrin Aldehyde	EPA 608	ND C	ug/L	1.0	11/06/98
Heptachlor	EPA 608	ND	ug/L	1.0	11/06/98
Heptachlor Epoxide	EPA 608	ND C	ug/L	1.0	11/06/98
Lindane (gamma BHC)	EPA 608	ND C	ug/L	1.0	11/06/98
PCB 1016	EPA 608	ND	ug/L	1.0	11/06/98
PCB 1221	EPA 608	ND	ug/L	10	11/06/98
PCB 1232	EPA 608	ND	ug/L	1.0	11/06/98
PCB 1242	EPA 608	ND	ug/L	1.0	11/06/98
PCB 1248	EPA 608	ND	ug/L	1.0	11/06/98
PCB 1254	EPA 608	ND	ug/L	1.0	11/06/98
PCB 1260	EPA 608	ND	ug/L	1.0	11/06/98
Toxaphene	EPA 608	ND	ug/L	1.0	11/06/98
beta-BHC	EPA 608	ND C	ug/L	1.0	11/06/98
Extraction	EPA 608				10/29/98
Surrogate:	EPA 608				11/06/98
***Dibutylchlorendate	EPA 608	146 S1	% Recovery		11/06/98

For EPA 625 analysis sample was diluted x5 because of matrix.
C = Continuing Calibration was above method control limits. Data was not impacted.
S1 = Surrogate recovery was above laboratory acceptance limits. Data was not impacted.

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* = 1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.
T = Result based on a Tentatively Identified Compound search.

Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.
Total & Dissolved Cadmium, Chromium & Nickel analyzed by BC Labs, Bakersfield CA, #AZ0345.

Authorized Signatory
ADHS License No.: AZ0004

Data Checksheet

Site	DOBSON
Municipality	MESA
Sample Date	10-26-98

Date Received	1-26-99

Laboratory Used	BOZIN
Laboratory Contact	STEPHANIE
FCD Sample ID Number	MESA 5
Lab Sample ID Number	9810-07628-003
Laboratory Invoice Number	48042

Initial Review Complete	✓	Date	2-1-99
Lab Contacted	—	Date	
Lab Review Complete	—	Date	
Second Review Complete		Date	
Additional Review Necessary	—		

Comments

Data Validation Table Complete	✓	Date	2-1-99

Data Entered Into Database	✓	Date	2-1-99

Bolin Laboratories Inc.

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

Received: 10/26/98
Reported: 12/08/98
Invoice No: 048042

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9810-07628-003
Sample ID: Mesa 5 (Dobson)

Time Sampled: 22:33
Date Sampled: 10/25/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
pH	EPA 150.1	5.8	Std Unit		10/27/98
Chemical Oxygen Demand	EPA 410.4	151.	mg/L	20	11/09/98
Chloride	EPA 300.0	12.	mg/L	5.0	11/11/98
Cyanide, Total	SM 4500 CN E	<0.01	mg/L	0.01	11/06/98
Total Dissolved Solids	SM 2540C	111.	mg/L	1.	10/30/98
Solids, Total Suspended	EPA 160.2	78.	mg/L	1.	11/02/98
Nitrogen as Ammonia	EPA 350.2	1.44	mg/L	0.03	10/29/98
Nitrogen as Nitrite	SM 4500 NO2 B	<0.1	mg/L	0.1	10/26/98
P as Total Phosphate	EPA 365.3	0.20	mg/L	0.05	11/17/98
Phosphorus, Dissolved	EPA 365.3	0.11	mg/L	0.05	11/19/98
P as Orthophosphate	SM 4500 PE	0.07	mg/L	0.05	10/27/98
Total Organic Carbon	SM 5310C	19.6	mg/L	0.2	11/16/98
Total Alkalinity (as CaCO3)	SM 2320B	22.	mg/L	2.	10/29/98
Sulfate, Dissolved	SM 4500 SO4	13. D1, M2	mg/L	30	11/13/98
Phenolics, Total	EPA 420.1	<0.0050	mg/L	0.0050	11/16/98
Chromium, hexavalent	SM 3500-CR D	<0.010	mg/L	0.010	10/27/98
Metals Digestion for ICP	EPA 200.7				11/02/98
Metals Digestion for GFAA	SM 3030E				11/02/98
Antimony	SM 3113B	<0.005	mg/L	0.005	11/08/98
Arsenic	SM 3113B	<0.005	mg/L	0.005	11/11/98
Beryllium	EPA 200.7	<0.002	mg/L	0.002	11/04/98
Calcium	EPA 200.7	15.	mg/L	1.	11/04/98
Copper	EPA 200.7	0.030	mg/L	0.015	11/04/98
Lead	SM 3113B	0.011	mg/L	0.005	11/06/98
Magnesium	EPA 200.7	2.	mg/L	1.	11/04/98
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	11/05/98
Selenium	SM 3113B	<0.005	mg/L	0.005	11/03/98
Silver	EPA 200.7	<0.04	mg/L	0.04	11/04/98
Hardness, Total (Ca & Mg)	SM 2340B	45	mg/L	7.	11/04/98
Zinc	EPA 200.7	0.20	mg/L	0.04	11/04/98
Thallium	EPA 200.9	<0.001	mg/L	0.001	11/04/98
Cadmium	EPA 213.2	0.00052	mg/L	0.0002	11/11/98

Bolin Laboratories Inc.

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9810-07628-003

Time Sampled: 22:33
Date Sampled: 10/25/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Chromium	EPA 218.2	0.017	mg/L	0.002	11/12/98
Nickel	EPA 249.2	0.012	mg/L	0.002	11/11/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	11/25/98
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	11/11/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	11/03/98
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	11/03/98
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	11/06/98
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	11/02/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	11/10/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	11/03/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	11/04/98
Zinc, Dissolved	EPA 200.7	0.08	mg/L	0.02	11/03/98
Cadmium, Dissolved	EPA 213.2	<0.0002	mg/L	0.0002	11/11/98
Chromium, Dissolved	EPA 218.2	<0.002	mg/L	0.002	11/12/98
Nickel, Dissolved	EPA 249.2	0.0031	mg/L	0.002	11/11/98
N-Nitrosodimethylamine	EPA 625	ND	ug/L	25	11/19/98
Phenol	EPA 625	ND	ug/L	25	11/19/98
Aniline	EPA 625	ND	ug/L	25	11/19/98
Bis(2-chloroethyl)ether	EPA 625	ND	ug/L	50	11/19/98
2-Chlorophenol	EPA 625	ND	ug/L	50	11/19/98
1,3-Dichlorobenzene	EPA 625	ND	ug/L	25	11/19/98
1,4-Dichlorobenzene	EPA 625	ND	ug/L	25	11/19/98
Benzyl alcohol	EPA 625	ND	ug/L	50	11/19/98
1,2-Dichlorobenzene	EPA 625	ND	ug/L	25	11/19/98
2-Methylphenol	EPA 625	ND	ug/L	25	11/19/98
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	50	11/19/98
4-Methylphenol (p-Cresol)	EPA 625	ND	ug/L	25	11/19/98
N-Nitrosodi-n-propylamine	EPA 625	ND	ug/L	25	11/19/98
Hexachloroethane	EPA 625	ND	ug/L	50	11/19/98
Nitrobenzene	EPA 625	ND	ug/L	50	11/19/98
Isophorone	EPA 625	ND	ug/L	50	11/19/98
2,4-Dimethylphenol	EPA 625	ND	ug/L	50	11/19/98
Benzoic acid	EPA 625	ND	ug/L	250	11/19/98
2-Nitrophenol	EPA 625	ND	ug/L	50	11/19/98
Bis(2-chloroethoxy)methane	EPA 625	ND	ug/L	50	11/19/98
2,4-Dichlorophenol	EPA 625	ND	ug/L	50	11/19/98
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	25	11/19/98
Naphthalene	EPA 625	ND	ug/L	25	11/19/98
Hexachlorobutadiene	EPA 625	ND	ug/L	25	11/19/98
4-Chloroaniline	EPA 625	ND	ug/L	25	11/19/98
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	25	11/19/98
2-Methylnaphthalene	EPA 625	ND	ug/L	25	11/19/98

Bolin Laboratories Inc.

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9810-07628-003

Time Sampled: 22:33
Date Sampled: 10/25/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Hexachlorocyclopentadiene	EPA 625	ND	ug/L	25	11/19/98
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	25	11/19/98
2,4,5-Trichlorophenol	EPA 625	ND	ug/L	25	11/19/98
2-Chloronaphthalene	EPA 625	ND	ug/L	25	11/19/98
2-Nitroaniline	EPA 625	ND	ug/L	25	11/19/98
Dimethyl Phthalate	EPA 625	ND	ug/L	25	11/19/98
2,6-Dinitrotoluene	EPA 625	ND	ug/L	25	11/19/98
Acenaphthylene	EPA 625	ND	ug/L	50	11/19/98
3-Nitroaniline	EPA 625	ND	ug/L	25	11/19/98
Acenaphthene	EPA 625	ND	ug/L	25	11/19/98
2,4-Dinitrophenol	EPA 625	ND	ug/L	100	11/19/98
4-Nitrophenol	EPA 625	ND	ug/L	25	11/19/98
Dibenzofuran	EPA 625	ND	ug/L	25	11/19/98
2,4-Dinitrotoluene	EPA 625	ND	ug/L	25	11/19/98
Diethyl Phthalate	EPA 625	ND	ug/L	25	11/19/98
4-Chlorophenylphenylether	EPA 625	ND	ug/L	50	11/19/98
Fluorene	EPA 625	ND	ug/L	25	11/19/98
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	50	11/19/98
4-Nitroaniline	EPA 625	ND	ug/L	25	11/19/98
N-Nitrosodiphenylamine	EPA 625	ND	ug/L	25	11/19/98
1,2-Diphenylhydrazine	EPA 625	ND *	ug/L	25	11/19/98
4-Bromophenylphenylether	EPA 625	ND	ug/L	25	11/19/98
Hexachlorobenzene	EPA 625	ND	ug/L	50	11/19/98
Pentachlorophenol	EPA 625	ND	ug/L	50	11/19/98
Phenanthrene	EPA 625	ND	ug/L	25	11/19/98
Anthracene	EPA 625	ND	ug/L	25	11/19/98
Di-n-butylphthalate	EPA 625	ND	ug/L	25	11/19/98
Fluoranthene	EPA 625	ND	ug/L	25	11/19/98
Benzidine	EPA 625	ND	ug/L	100	11/19/98
Pyrene	EPA 625	ND	ug/L	25	11/19/98
Butylbenzyl Phthalate	EPA 625	ND	ug/L	25	11/19/98
Bis(2-ethylhexyl)phthalate	EPA 625	173	ug/L	50	11/19/98
Benzo (a) anthracene	EPA 625	ND	ug/L	25	11/19/98
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	25	11/19/98
Chrysene	EPA 625	ND	ug/L	25	11/19/98
Di-n-octylphthalate	EPA 625	ND	ug/L	25	11/19/98
Benzo (b) fluoranthene	EPA 625	ND	ug/L	25	11/19/98
Benzo (k) fluoranthene	EPA 625	ND	ug/L	25	11/19/98
Benzo (a) pyrene	EPA 625	ND	ug/L	25	11/19/98
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	25	11/19/98
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	25	11/19/98
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	25	11/19/98

Bolin Laboratories Inc.

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9810-07628-003

Time Sampled: 22:33
Date Sampled: 10/25/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	50	11/19/98
Extraction	EPA 625				10/28/98
Surrogate:	EPA 625				11/19/98
***d5-Phenol	EPA 625	28	% Recovery		11/19/98
***2-Fluorophenol	EPA 625	34	% Recovery		11/19/98
***d5-Nitrobenzene	EPA 625	63	% Recovery		11/19/98
***2-Fluorobiphenyl	EPA 625	79	% Recovery		11/19/98
***2,4,6-Tribromophenol	EPA 625	83	% Recovery		11/19/98
***d14-Terphenyl	EPA 625	93	% Recovery		11/19/98
4,4'-DDD	EPA 608	ND C	ug/L	1.0	11/05/98
4,4'-DDE	EPA 608	ND C	ug/L	1.0	11/05/98
4,4'-DDT	EPA 608	ND	ug/L	2.0	11/05/98
Aldrin	EPA 608	ND C	ug/L	1.0	11/05/98
alpha-BHC	EPA 608	ND C	ug/L	1.0	11/05/98
Chlordane	EPA 608	ND	ug/L	1.0	11/05/98
delta-BHC	EPA 608	ND C	ug/L	1.0	11/05/98
Dieldrin	EPA 608	ND C	ug/L	1.0	11/05/98
Endosulfan I	EPA 608	ND C	ug/L	1.0	11/05/98
Endosulfan II	EPA 608	ND C	ug/L	1.0	11/05/98
Endosulfan Sulfate	EPA 608	ND C	ug/L	1.0	11/05/98
Endrin	EPA 608	ND C	ug/L	1.0	11/05/98
Endrin Aldehyde	EPA 608	ND C	ug/L	1.0	11/05/98
Heptachlor	EPA 608	ND	ug/L	1.0	11/05/98
Heptachlor Epoxide	EPA 608	ND C	ug/L	1.0	11/05/98
Lindane (gamma BHC)	EPA 608	ND C	ug/L	1.0	11/05/98
PCB 1016	EPA 608	ND	ug/L	1.0	11/05/98
PCB 1221	EPA 608	ND	ug/L	10	11/05/98
PCB 1232	EPA 608	ND	ug/L	1.0	11/05/98
PCB 1242	EPA 608	ND	ug/L	1.0	11/05/98
PCB 1248	EPA 608	ND	ug/L	1.0	11/05/98
PCB 1254	EPA 608	ND	ug/L	1.0	11/05/98
PCB 1260	EPA 608	ND	ug/L	1.0	11/05/98
Toxaphene	EPA 608	ND	ug/L	1.0	11/05/98
beta-BHC	EPA 608	ND C	ug/L	1.0	11/05/98
Extraction	EPA 608				10/29/98
Surrogate:	EPA 608				11/05/98
***Dibutylchlorendate	EPA 608	155 S1	% Recovery		11/05/98

For EPA 625 analysis sample was diluted x5 because of matrix.
C = Continuing Calibration was above method control limits. Data was not impacted.
D1 = Sample was diluted due to limited sample.
S1 = Surrogate recovery was above laboratory acceptance limits. Data was not impacted.

Bolin Laboratories Inc.

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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.
* = 1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.
T = Result based on a Tentatively Identified Compound search.
Unable to provide Total Nitrogen data due to laboratory error.

Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.
Phenol analyzed by McKenzie Labs, Phoenix AZ, #AZ0034.
Total & Dissolved Cadmium, Chromium & Nickel analyzed by BC Labs, Bakersfield CA, #AZ0345.

S Kaufman

Authorized Signatory
ADHS License No.: AZ0004

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.:	350.2	ANALYST:	SLM
ANALYSIS DATE:	10/29/98	PREPARED BY:	BS

INTERNAL QUALITY CONTROL SAMPLE

Theoretical Value	Analytical Value	% Recovery
1.00	0.96	96

DUPLICATE SAMPLE DATA

Lab I.D.	Result 1	Result 2	RPD
BD-10470	0.10	0.08	22.2
BD-10678	0.26	0.24	8.0
BD-10687	< 0.03	< 0.03	0.0

SPIKED SAMPLE DATA

Lab I.D.	Sample Result	Spike Result	Amount Spiked	% Recovery
BD-10470	0.09	1.08	1.00	99
BD-10678	0.25	1.20	1.00	95
BD-10687	<0.03	1.01	1.00	101

Reagent Blank = <0.03

File No. QC-NH3-10470

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.:	350.2	ANALYST:	SLM
ANALYSIS DATE:	10/29/98	PREPARED BY:	BS

INTERNAL QUALITY CONTROL SAMPLE

Theoretical Value	Analytical Value	% Recovery
1.00	0.96	96

DUPLICATE SAMPLE DATA

Lab I.D.	Result 1	Result 2	RPD
BD-10470	0.10	0.08	22.2
BD-10678	0.26	0.24	8.0
BD-10687	< 0.03	< 0.03	0.0

SPIKED SAMPLE DATA

Lab I.D.	Sample Result	Spike Result	Amount Spiked	% Recovery
BD-10470	0.09	1.08	1.00	99
BD-10678	0.25	1.20	1.00	95
BD-10687	<0.03	1.01	1.00	101

Reagent Blank = <0.03

File No. QC-NH3-10470

QUALITY CONTROL REPORT

PARAMETER:	NH_3	**UNITS:**	mg/L
METHOD NO.:	350.2	**ANALYST:**	SLM
ANALYSIS DATE:	10/29/98	**PREPARED BY:**	BS

INTERNAL QUALITY CONTROL SAMPLE

Theoretical Value	Analytical Value	% Recovery
1.00	0.96	96

DUPLICATE SAMPLE DATA

Lab I.D.	Result 1	Result 2	RPD
BD-10470	0.10	0.08	22.2
BD-10678	0.26	0.24	8.0
BD-10687	< 0.03	< 0.03	0.0

SPIKED SAMPLE DATA

Lab I.D.	Sample Result	Spike Result	Amount Spiked	% Recovery
BD-10470	0.09	1.08	1.00	99
BD-10678	0.25	1.20	1.00	95
BD-10687	<0.03	1.01	1.00	101

Reagent Blank = <0.03

File No. QC-NH3-10470

Bolin Laboratories Inc.

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Quality Control Data Report

Client: Maricopa County Flood Control District
Bolin Sample ID: 9810-7628

Analyte	Method	Date Analyzed	Spk Conc	MS %Rec	MSD %Rec	RPD	Blk	ICV %Rec	CCV %Rec
Solids, Total Suspended	160.2	10/29/98	N/A	N/A	N/A	######	<1.0	97	-
Oil and Grease	413.1	11/12/98	N/A	N/A	N/A	######	<5.0	97	-
Chemical Oxygen Demand	410.4	11/9/98	30	94	100	6.1856	<20	104	93
Total Dissolved Solids	SM 2540C	10/30/98	N/A	N/A	N/A	######	<1.0	98	-
Total Phosphorous	365.3	11/17/98	0.1	86	89	3.4286	<0.05	95	103
Dissolved Phosphorous	365.2	11/19/98	0.1	93	98	5.2356	<0.01	100	100
Nitrite	SM 4500 NO2 B	10/26/98	0.1	98	100	2.0202	<0.01	109	109
Hexavalent Chromium	SM 3500	10/27/98	0.2	93	90	3.2787	<0.01	99	101
Total Cyanide	335.2	111/6/98	0.05	92	89	3.3149	<0.01	104	94
Alkalinity	SM 2320B	10/29/98	100	98	98	0	<2.0	97	-
Sulfate	SM 4500 SO4	11/13/99	20	107	103	3.8095	<5.0	92	109
Chloride	SM 4500 CL-B	11/11/98	20	102	103	0.9756	<5.0	96	-
Ortho-Phosphate	365.3	10/27/98	0.1	101	97	4.0404	<0.05	96	110
Total Kjeldahl Nitrogen	351.4	11/13/98	2	92	104	12.245	<0.5	103	103
Biological Oxygen Demand	405.1	10/28/98	N/A	N/A	N/A	######	<1.0	80	-
Total Organic Carbons	SM 5310C	11/16/98	5	98	100	2.0202	0.1	95	100

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

Client: Maricopa County Flood Control District
Bolin Sample ID: 9810-7628-2,3

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	Blk (ppb)	Blk-Spk Conc. ppb	Blk-Spk %Rec	Blk Spk Dup Conc. ppb	Blk Spk Dup %Rec	RPD	ICV %Rec	CCV %Rec
Alpha-BHC	EPA 608	11/5/98	5.0	<PQL	3.98	80	4.35	87	9	114	128*
Beta-BHC	EPA 608	11/5/98	5.0	<PQL	4.22	84	4.57	91	8	115	144*
Gamma(Lindane)-BHC	EPA 608	11/5/98	5.0	<PQL	4.40	88	4.73	95	7	120	143*
Delta-BHC	EPA 608	11/5/98	5.0	<PQL	4.21	84	4.59	92	9	115	132*
Heptachlor	EPA 608	11/5/98	5.0	<PQL	3.85	77	4.24	85	10	105	106
Aldrin	EPA 608	11/5/98	5.0	<PQL	4.22	84	4.36	87	3	113	128*
Heptachlor Epoxide	EPA 608	11/5/98	5.0	<PQL	4.32	86	4.61	92	6	114	132*
Endosulfan I	EPA 608	11/5/98	5.0	<PQL	4.34	87	4.44	89	2	115	131*
Dieldrin	EPA 608	11/5/98	5.0	<PQL	4.27	85	4.59	92	7	113	142*
4,4'-DDE	EPA 608	11/5/98	5.0	<PQL	3.91	78	4.24	85	8	102	117*
Endrin	EPA 608	11/5/98	5.0	<PQL	4.65	93	4.93	99	6	115	150*
Endosulfan II	EPA 608	11/5/98	5.0	<PQL	4.60	92	4.81	96	4	117*	154*
4,4'-DDD	EPA 608	11/5/98	5.0	<PQL	4.60	92	4.80	96	4	117*	154*
Endrin Aldehyde	EPA 608	11/5/98	5.0	<PQL	5.66	113	6.87	137	19	97	143*
Endosulfan Sulfate	EPA 608	11/5/98	5.0	<PQL	4.68	94	4.92	98	5	115	140*
4,4'-DDT	EPA 608	11/5/98	5.0	<PQL	4.62	92	4.78	96	3	112	104

*=Continuing Calibration Was Above Method Control Limits. Data Was Not Impacted.
ICV Initial Calibration Verification
CCV Continuing Calibration Verification
Blk is a Blank
Blk Spk is a Blank Spike
Blk Spk Dup is a Blank Spike Duplicate

Bolin Laboratories Inc.

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Quality Control Data Report

Client: Maricopa County Flood Control
Bolin Sample ID: 9810-7628-4

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	Blk (ppb)	Blk-Spk Conc. ppb	Blk-Spk %Rec	Blk MSD Conc. ppb	Blk MSD %Rec	RPD	ICV %Rec	CCV %Rec
Alpha-BHC	EPA 608	11/6/98	5.0	<PQL	3.98	80	4.35	87	9	128*	124*
Beta-BHC	EPA 608	11/6/98	5.0	<PQL	4.22	84	4.57	91	8	144*	143*
Gamma(Lindane)-BHC	EPA 608	11/6/98	5.0	<PQL	4.40	88	4.73	95	7	143*	135*
Delta-BHC	EPA 608	11/6/98	5.0	<PQL	4.21	84	4.59	92	9	132*	127*
Heptachlor	EPA 608	11/6/98	5.0	<PQL	3.85	77	4.24	85	10	106	95
Aldrin	EPA 608	11/6/98	5.0	<PQL	4.22	84	4.36	87	3	128*	125*
Heptachlor Epoxide	EPA 608	11/6/98	5.0	<PQL	4.32	86	4.62	92	7	132*	124*
Endosulfan I	EPA 608	11/6/98	5.0	<PQL	4.34	87	4.44	89	2	131*	127*
Dieldrin	EPA 608	11/6/98	5.0	<PQL	4.27	85	4.59	92	7	142*	136*
4.4.-DDE	EPA 608	11/6/98	5.0	<PQL	3.91	78	4.24	85	8	117*	114
Endrin	EPA 608	11/6/98	5.0	<PQL	4.65	93	4.93	99	6	150*	139*
Endosulfan II	EPA 608	11/6/98	5.0	<PQL	4.60	92	4.81	96	4	154*	148*
4.4-DDD	EPA 608	11/6/98	5.0	<PQL	4.60	92	4.80	96	4	154*	148*
Endrin Aldehyde	EPA 608	11/6/98	5.0	<PQL	5.66	113	6.87	137	19	143*	137*
Endosulfan Sulfate	EPA 608	11/6/98	5.0	<PQL	4.68	94	4.92	98	5	140*	132*
4.4-DDT	EPA 608	11/6/98	5.0	<PQL	4.62	92	4.78	96	3	104	90

ICV Initial Calibration Verification
CCV Continuing Calibration Verification
BLK is a Blank
BLK-SPK is a Blank Spike

Bolin Laboratories Inc.

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Quality Control Data Report

Client: MCFCD
Bolin Sample ID: 9810-7628 Diss

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	11/3/98	0.2	110	107	<PQL	98	106
Copper	EPA 200.7	11/3/98	1	110	111	<PQL	98	102
Silver	EPA 200.7	11/3/98	0.5	79	85	<PQL	102	106
Zinc	EPA 200.7	11/3/98	1	121	118	<PQL	105	106
Antimony	EPA 200.9/SM 3113B	11/25/98	0.020	115	125	<PQL	100	110
Arsenic	EPA 200.9/SM 3113B	11/11/98	0.020	130	120	<PQL	90	90
Lead	EPA 200.9/SM 3113B	11/6/98	0.020	95	105	<PQL	110	105
Selenium	EPA 200.9/SM 3113B	11/10/98	0.020	70	75	<PQL	100	100
Thallium	EPA 200.9/SM 3113B	11/4/98	0.020	114	122	<PQL	104	98
Mercury	EPA 245.1	11/2/98	0.005	72	74	<PQL	104	102

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

Client: MCFCD
Bolin Sample ID: 9810-7628 Total

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	11/4/98	0.2	101	100	<PQL	99	103
Calcium	EPA 200.7	11/4/98	30	103	105	<PQL	98	103
Copper	EPA 200.7	11/4/98	1	98	99	<PQL	103	95
Magnesium	EPA 200.7	11/4/98	30	96	98	<PQL	104	97
Silver	EPA 200.7	11/4/98	0.5	100	100	<PQL	96	100
Zinc	EPA 200.7	11/4/98	1	104	106	<PQL	98	102
Antimony	EPA 200.9/SM 3113B	11/8/98	0.020	100	90	<PQL	100	110
Arsenic	EPA 200.9/SM 3113B	11/11/98	0.020	105	95	<PQL	100	90
Lead	EPA 200.9/SM 3113B	11/6/98	0.020	85	90	<PQL	90	90
Selenium	EPA 200.9/SM 3113B	11/3/98	0.020	70	60	<PQL	100	110
Thallium	EPA 200.9/SM 3113B	11/4/98	0.020	104	103	<PQL	102	98
Mercury	EPA 245.1	11/5/98	0.005	94	90	<PQL	92	94

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

Client: Maricopa County Flood Control
Bolin Sample ID: 9810-7628-1

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	BLK MS Conc. UNITS	BLK MS %Rec	BLK MSD Conc. UNITS	BLK MSD %Rec	RPD	BLK (ppb)	CCV %Rec
1,1-Dichloroethylene	EPA 624	11/5/98	10	10.4	104	10.5	105	1	<PQL	
Benzene	EPA 624	11/5/98	10	10.6	106	10.4	104	2	<PQL	
Trichloroethylene	EPA 624	11/5/98	10	10.3	103	10.4	104	1	<PQL	
Toluene	EPA 624	11/5/98	10	10.6	106	10.5	105	1	<PQL	
Chlorobenzene	EPA 624	11/5/98	10	10.3	103	10.3	103	0	<PQL	
Chloromethane	EPA 624	11/5/98	10						<PQL	97.1
Vinylchloride	EPA 624	11/5/98	10						<PQL	96.7
1,1-Dichloroethylene	EPA 624	11/5/98	10						<PQL	101
1,1-Dichloroethane	EPA 624	11/5/98	10						<PQL	102
Chloroform	EPA 624	11/5/98	10						<PQL	94.7
1,2-Dichloropropane	EPA 624	11/5/98	10						<PQL	101
Toluene	EPA 624	11/5/98	10						<PQL	107
Chlorobenzene	EPA 624	11/5/98	10						<PQL	97.6
Ethylbenzene	EPA 624	11/5/98	10						<PQL	107
Bromoform	EPA 624	11/5/98	10						<PQL	102
1,1,2,2-Tetrachloroethane	EPA 624	11/5/98	10						<PQL	101

CCV = Continuing Calibration Verification.
MS = Matrix Spike.
MSD = Matrix Spike Duplicate.
RPD = Relative Percent Difference.
BLK = Blank.

Bolin Laboratories Inc.

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

Quality Control Data Report

Client: Maricopa County Flood Control
Bolin Sample ID: 9810-7628-2-4

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	BS Conc.	BS %Rec	BSD Conc.	BSD %Rec	RPD	BLK (ppb)
N-nitrosodimethylamine	EPA 625	11/19/98	100	32	32	31	31	3	<PQL
Phenol	EPA 625	11/19/98	200	43	22	38	19	12	<PQL
Aniline	EPA 625	11/19/98	100	32	32	42	42	27 *	<PQL
Bis(2-chloroethyl)ether	EPA 625	11/19/98	100	74	74	80	80	8	<PQL
2-Chlorophenol	EPA 625	11/19/98	200	119	60	120	60	1	<PQL
1,3-Dichlorobenzene	EPA 625	11/19/98	100	41	41	42	42	2	<PQL
1,4-Dichlorobenzene	EPA 625	11/19/98	100	42	42	43	43	2	<PQL
Benzyl Alcohol	EPA 625	11/19/98	100	51	51	53	53	4	<PQL
1,2-Dichlorobenzene	EPA 625	11/19/98	100	44	44	45	45	2	<PQL
Bis(2-chloroisopropyl)ether	EPA 625	11/19/98	100	51	51	56	56	9	<PQL
4-methylphenol	EPA 625	11/19/98	200	84	42	78	39	7	<PQL
N-Nitrosodi-n-propylamine	EPA 625	11/19/98	100	60	60	60	60	0	<PQL
Hexachloroethane	EPA 625	11/19/98	100	40	40	40	40	0	<PQL
Benzoic Acid	EPA 625	11/19/98	100	40	40	38	38	5	<PQL
Nitrobenzene	EPA 625	11/19/98	100	80	80	75	75	6	<PQL
Isophorone	EPA 625	11/19/98	100	64	64	61	61	5	<PQL
2-Nitrophenol	EPA 625	11/19/98	200	68	34	115	58	51 *	<PQL
2,4-Dimethylphenol	EPA 625	11/19/98	200	105	53	107	54	2	<PQL
bis(2-Chloroethoxy)methane	EPA 625	11/19/98	100	60	60	61	61	2	<PQL
2,4-Dichlorophenol	EPA 625	11/19/98	200	123	62	122	61	1	<PQL
1,2,4-Trichlorobenzene	EPA 625	11/19/98	100	50	50	51	51	2	<PQL
Naphthalene	EPA 625	11/19/98	100	53	53	53	53	0	<PQL
4-chloroaniline	EPA 625	11/19/98	100	71	71	79	79	11	<PQL
Hexachlorobutadiene	EPA 625	11/19/98	100	44	44	44	44	0	<PQL
2-methylnaphthalene	EPA 625	11/19/98	100	55	55	53	53	4	<PQL
4-Chloro-3-methylphenol	EPA 625	11/19/98	200	135	68	121	61	11	<PQL
Hexachlorocyclopentadiene	EPA 625	11/19/98	100	43	43	42	42	2	<PQL
2,4,6-Trichlorophenol	EPA 625	11/19/98	200	131	66	122	61	7	<PQL
2,4,5-Trichlorophenol	EPA 625	11/19/98	200	129	65	122	61	6	<PQL
2-Chloronaphthalene	EPA 625	11/19/98	100	59	59	55	55	7	<PQL
2-nitroaniline	EPA 625	11/19/98	100	66	66	61	61	8	<PQL
Acenaphthylene	EPA 625	11/19/98	100	63	63	57	57	10	<PQL
Dimethyl phthalate	EPA 625	11/19/98	100	68	68	65	65	5	<PQL

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2,6-Dinitrotoluene	EPA 625	11/19/98	100	69	69	67	67	3	<PQL
Acenaphthene	EPA 625	11/19/98	100	67	67	66	66	2	<PQL
3-nitroaniline	EPA 625	11/19/98	100	71	71	74	74	4	<PQL
2,4-Dinitrophenol	EPA 625	11/19/98	200	142	71	152	76	7	<PQL
Dibenzofuran	EPA 625	11/19/98	100	71	71	71	71	0	<PQL
2,4-Dinitrotoluene	EPA 625	11/19/98	100	76	76	73	73	4	<PQL
4-Nitrophenol	EPA 625	11/19/98	200	75	38	67	34	11	<PQL
Fluorene	EPA 625	11/19/98	100	73	73	74	74	1	<PQL
Diethylphthalate	EPA 625	11/19/98	100	82	82	79	79	4	<PQL
4-Chlorophenylphenylether	EPA 625	11/19/98	100	74	74	69	69	7	<PQL
4-nitroaniline	EPA 625	11/19/98	100	70	70	74	74	6	<PQL
2-Methyl-4,6-dinitrophenol	EPA 625	11/19/98	200	282	141	280	140	1	<PQL
Diphenylamine	EPA 625	11/19/98	100	70	70	68	68	3	<PQL
Azobenzene	EPA 625	11/19/98	100	78	78	76	76	3	<PQL
4-Bromophenoxybenzene	EPA 625	11/19/98	100	66	66	67	67	2	<PQL
Hexachlorobenzene	EPA 625	11/19/98	100	83	83	81	81	2	<PQL
Pentachlorophenol	EPA 625	11/19/98	200	136	68	141	71	4	<PQL
Phenanthrene	EPA 625	11/19/98	100	81	81	77	77	5	<PQL
Anthracene	EPA 625	11/19/98	100	82	82	79	79	4	<PQL
Di-n-butylphthalate	EPA 625	11/19/98	100	104	104	97	97	7	<PQL
Fluoranthene	EPA 625	11/19/98	100	94	94	91	91	3	<PQL
Pyrene	EPA 625	11/19/98	100	75	75	76	76	1	<PQL
Benzidine	EPA 625	11/19/98	100	27	27	25	25	8	<PQL
Butylbenzylphthalate	EPA 625	11/19/98	100	83	83	81	81	2	<PQL
Benzo(a)anthracene	EPA 625	11/19/98	100	76	76	74	74	3	<PQL
Chrysene	EPA 625	11/19/98	100	83	83	81	81	2	<PQL
3,3'-Dichlorobenzidine	EPA 625	11/19/98	100	113	113	107	107	5	<PQL
bis(2-Ethylhexyl)phthalate	EPA 625	11/19/98	100	82	82	82	82	0	<PQL
Di-n-octylphthalate	EPA 625	11/19/98	100	56	56	54	54	4	<PQL
Benzo(b)fluoranthene	EPA 625	11/19/98	100	54	54	53	53	2	<PQL
Benzo(k)fluoranthene	EPA 625	11/19/98	100	54	54	52	52	4	<PQL
Benzo(a)pyrene	EPA 625	11/19/98	100	57	57	55	55	4	<PQL
Indeno(1,2,3-cd)pyrene	EPA 625	11/19/98	100	50	50	48	48	4	<PQL
Dibenzo(a,h)anthracene	EPA 625	11/19/98	100	55	55	53	53	4	<PQL
Benzo(g,h,I)perylene	EPA 625	11/19/98	100	52	52	51	51	2	<PQL

*=RPD out of criteria probably because of Benzene in the standard which was affecting recoveries of analytes.

CCV = Continuing Calibration Verification.

MS = Matrix Spike.

MSD = Matrix Spike Duplicate.

RPD = Relative Percent Difference.

BLK = Blank.

BC LABORATORIES

B C LABORATORIES
QUALITY CONTROL REPORT
(Instrumental & Blank Parameters)

BOLIN LABORATORIES
17631 N. 25TH AVE.
PHOENIX, AZ 85023
STEPHANIE KAUFMAN

Date of Report: 12/09/98
Sample Matrix: DIGESTATES

Samples Affected: 98-13127-1 - 98-13127-9

Constituents	Method Blank Readings	Units
Dissolved Cadmium	< 0.2	µg/L
Dissolved Chromium	< 1.	µg/L
Dissolved Nickel	< 2.0	µg/L

Quality Control Officer

Anthony Bonanno

4100 Atlas Ct. · Bakersfield, CA 93308 · (805) 327-4911 · FAX (805) 327-1918

BC LABORATORIES

B C LABORATORIES
QUALITY CONTROL REPORT
(Precision & Accuracy)

BOLIN LABORATORIES
17631 N. 25TH AVE.
PHOENIX, AZ 85023
STEPHANIE KAUFMAN

Date of Report: 12/09/98
Sample Matrix: DIGESTATES

Samples Affected: 98-13127-1 - 98-13127-9

Constituents	QC Sample ID	Sample Result	Sample Duplicate	MS Result	MSD Result	MS Spike Level	MSD Spike Level	Units	Sample R.P.D.	Spike R.P.D.	Precision Control Limits	MS % Rec	MSD % Rec	Accuracy Control Limits
Dissolved Cadmium	12866-1	< 0.2	< 0.2	2.518	2.679	2.500	2.500	µg/L	<PQL	6.	20	100.	107.	85 - 115
Dissolved Chromium	13127-1-X4	4.64	4.44	45.52	46.	40.00	40.00	µg/L	<PQL	1.	20	102.	103.	85 - 115
Dissolved Nickel	13127-1	15.39	14.6	37.9	38.48	25.00	25.00	µg/L	5.	2.	20	90.	92.	85 - 115

MS = Matrix Spike; MSD = Matrix Spike Duplicate; RPD = Relative Percent Difference

There are no matrix spikes associated with the total metals. The samples were digested before BCL received the samples.

Quality Control Officer

Anthony Sorrento

4100 Atlas Ct. • Bakersfield, CA 93308 • (805) 327-4911 • FAX (805) 327-1918

BC LABORATORIES

B C LABORATORIES
QUALITY CONTROL REPORT
(Laboratory Control Sample)

BOLIN LABORATORIES
17631 N. 25TH AVE.
PHOENIX, AZ 85023
STEPHANIE KAUFMAN

Date of Report: 12/09/98
Sample Matrix: DIGESTATES

Samples Affected: 98-13127-1 - 98-13127-9

Constituents	QC Sample ID	Sample Result	Spike Level	Units	% Rec	Accuracy Control Limits
Dissolved Cadmium	LCSW	2.689	2.5	µg/L	108.	85 - 115
Dissolved Chromium	LCSW	10.46	10.	µg/L	105.	85 - 115
Dissolved Nickel	LCSW	27.3	25.	µg/L	109.	85 - 115

Quality Control Officer

Anthony Bonanno

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Bolin Laboratories Inc.

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CHAIN OF CUSTODY RECORD

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Laboratory Sample No. 9810-0762

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
FLOOD CONTROL	2801 W DURANGO	PHOENIX	AZ	85009	506-8400	506-4600

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

SAMPLE TYPE CODES

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

TURN AROUND TIME

☐ Standard 10 - 15 Day
☐ Standard UST 3 to 5 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)	MESA NPDES	LAB NO.
* MESA 3G	10/26/98	0845	FALCON		X			8		X	01
MESA 3C	10/25/98	1427	FALCON	X				8		X	02
MESA 2	10/25/98	2230	LINDSAY	X				5		X	03
MESA 5	10/25/98	2233	DOBSON	X				6		X	04

Comments / Special Instructions: * MESA 3G sampled 0845 10/26/98
— No analyses past hold time * Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Tl, Zn

SAMPLE CONDITION UPON RECEIPT

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

WHITE-LAB YELLOW-LAB PINK-CLIENT

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Signature: [signature] / Printed Name: DAVID GAUDNER	Date: 10/26/98 / Time: 1230	Signature / Printed Name	Date / Time
②	Signature / Printed Name	Date / Time	Signature / Printed Name	Date / Time
③	Signature / Printed Name	Date / Time	Signature / Printed Name	Date / Time

Records

STORM EVENT LOG SHEET

SITE:	MESA 1

DATE:	10/25/98	TIME:	920

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

0.20" rain only 2 bottles filled
not enough to sample.

FIELD PARAMETERS:

Sampler Start Time	1836
Effluent pH	
Effluent Temperature	

GRAB SAMPLES: Take grab samples from discharge only!

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

STORM EVENT LOG SHEET

SITE:	MESA 2

DATE:	10/26/98	TIME:	913

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

FIELD PARAMETERS:

Sampler Start Time	1023 P
Effluent pH	7.85
Effluent Temperature	22.9

GRAB SAMPLES:

Take grab samples from discharge only!

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

STORM EVENT LOG SHEET

SITE:	MESA 3

DATE:	10/25/98	TIME:	~~START 1927~~ 0845

DID EQUIPMENT OPERATE PROPERLY DURING EVENT? YES NO

IF NO, WHAT WERE PROBLEM(S):

cabinet has moisture in it
need to check.

FIELD PARAMETERS:

Sampler Start Time	1927	10/25/98
Effluent pH	8.4	
Effluent Temperature	21.2 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:	MESA 4		
DATE:	10/25/98	TIME:	930

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES (NO)

IF NO, WHAT WERE PROBLEM(S):

Small sample vols
0.22" rain only 2 bottles filled

FIELD PARAMETERS:

Sampler Start Time	2343 10/25/98
Effluent pH	
Effluent Temperature	

GRAB SAMPLES: Take grab samples from discharge only!

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

STORM EVENT LOG SHEET

SITE:	MESA 5

DATE:	10/26/98	TIME:	9:50A

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

RAIN = 0.37"

FIELD PARAMETERS:

Sampler Start Time	22:33
Effluent pH	7.62
Effluent Temperature	21.4

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	MESA SIXTH			DATE	12-7-98
ARRIVAL TIME	1010	DEPARTURE TIME		SERVICED BY	DC RWN
SAMPLER MODEL NUMBER	800			SAMPLER SERIAL/ ASSET NUMBER	H01 9511338
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	power failure 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	
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 GFCI plug was tripped - power failed
reset plug - power returned

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Mesa Lindsay	DATE	12-7-98
ARRIVAL TIME 920	DEPARTURE TIME	SERVICED BY	DEO RWJ
SAMPLER MODEL NUMBER	800	SAMPLER SERIAL/ ASSET NUMBER	H0195/1337
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	
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 cleaned intake tubing Liquinox/water

reset sampler.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	MESA FALCON		DATE	12-7-98	
ARRIVAL TIME	940	DEPARTURE TIME		SERVICED BY	RWJ DCC
SAMPLER MODEL NUMBER	800		SAMPLER SERIAL/ ASSET NUMBER	E07925067	
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	
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 Cleaned and reset

cleaned tubing w/ liquinox water

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	MESA Grandview			DATE	12-1-98
ARRIVAL TIME	1000	DEPARTURE TIME		SERVICED BY	
SAMPLER MODEL NUMBER	800			SAMPLER SERIAL/ ASSET NUMBER	H 079 25069
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	
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 *need to replace pump & distributor tubing
cleaned w/ Liquinox and water
reset program

Date: 10/08/1998

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Mesa Dobson	DATE	12-7-98
ARRIVAL TIME	900	DEPARTURE TIME	
SERVICED BY	RWN DEC		
SAMPLER MODEL NUMBER	800	SAMPLER SERIAL/ ASSET NUMBER	H07925066
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	
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 cleaned w/ Liquinox and DI water

Reset program

0.16' rain since 12/4

Date: 10/08/1998

STORM EVENT LOG SHEET

SITE:	MESA SIXTH

DATE:	12-15-98	TIME:	

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

0.13" rain - samples discarded.

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

STORM EVENT LOG SHEET

SITE:	Mesa 2 Lindsay

DATE:	12-15-98	TIME:	

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

0.01" rain

no samples collected

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

STORM EVENT LOG SHEET

SITE:	MESA FALCON

DATE:	12-15-98	TIME:	

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

0.03" rain - no samples taken.

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

STORM EVENT LOG SHEET

SITE:	MESA Grandview

DATE:	12-15-98	TIME:	

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WERE PROBLEM(S):

0.06" rain -no samples taken

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

STORM EVENT LOG SHEET

SITE:	MESA 5 DOBSON

DATE:	12-15-98	TIME:	

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WERE PROBLEM(S):

0.07" rain - samples discarded.

FIELD PARAMETERS:

Sampler Start Time	915A	12/15/98
Effluent pH		
Effluent Temperature		

GRAB SAMPLES: Take grab samples from discharge only!

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