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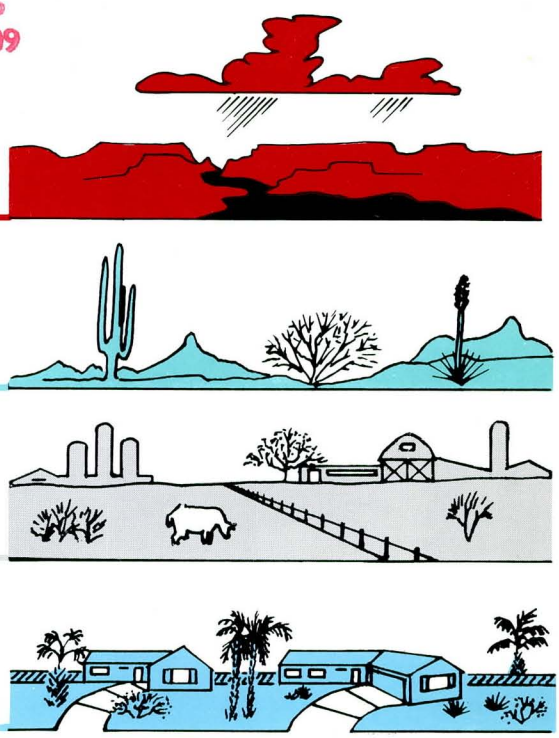

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report
City of Mesa, Arizona

First Quarter

November 24, 1998

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report

First Quarter, Sampling Year 1999

July 1, 1998 through September 30, 1998

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For

City of Mesa, Arizona

November 24, 1998

Stormwater Quality Report
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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 summer 1998 seasonal rainfall.

The data is presented differently than in past reports. First, only data from the summer of 1998 is included. Second, only data required in the City of Mesa's permit is reported here. Finally, in addition to the tabular data, each event for each site is presented in validation form. Validation form lists the analyte and result, plus the analysis date, data flags, any relevant quality control data, and comments about data.

Storm Summaries

This is a summary of sampled storm events in the first quarter of the 1999 sample year, which is July 1 through September 30. Of the several storm events measured during the summer, only three produced enough rainfall and runoff to be useable. Overall, the summer of 1998 would be considered relatively dry. 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 July 31 – August 1, 1998

This storm event produced rainfall over much of the Mesa area. Rainfall totals ranged from 0.16 inches to 0.76 inches, with the larger accumulations in the north. The following table shows rainfall totals for each sampler site.

Storm of July 31 – August 1, 1998

SITE	RAINFALL (inches)	SAMPLES COLLECTED
SIXTH AND HORNE	0.69	NO (2)
BROADWAY AND LINDSAY	0.28	YES
FALCON FIELD	0.76 (1)	YES
HORNE AND GRANDVIEW	0.69	YES
DOBSON	0.16	NO (3)

(1) ALERT Raingauge had a storm total of 1.03 inches.
(2) Equipment failure.
(3) Not enough rainfall and runoff.

The equipment at Sixth and Horne failed to sample properly because it did not pump enough sample into the containers. The equipment at Dobson operated properly, but insufficient rainfall and runoff occurred to complete the sample collection. The sampler raingauge at Falcon Field had 0.76 inches and the ALERT raingauge had 1.03 inches. High winds accompanied this storm and probably affected the ALERT gauge more than the sampler gauge.

Grab samples were not taken at this site other than by using the automatic sampler. This is noted in the Data Validation sheets in this report.

Storm of August 12, 1998

The storm of August 12, 1998 mainly effected west Mesa. Dobson Road received 0.61 inches of rainfall. Only 0.02 inches of rainfall was recorded at any other sampler gauge east of Dobson. Below is a table of rainfall data.

Storm of August 12, 1998

SITE	RAINFALL (inches)	SAMPLES COLLECTED
SIXTH AND HORNE	0.02	NO (1)
BROADWAY AND LINDSAY	0.02	NO (1)
FALCON FIELD	0.00	NO (1)
HORNE AND GRANDVIEW	0.00	NO (1)
DOBSON	0.61	YES

(1) Insufficient rainfall and runoff to sample.

Only Dobson sampled during this event. The equipment seemed to operate properly. Grab samples were not taken at this site other than by using the automatic sampler.

Storm of August 15 – 16, 1998

The storm of August 15 – 16, 1998 was widespread over the city north of US 60. Rainfall totals were less than one-half inch. The following table indicates rainfall totals for this storm.

Storm of August 15 – 16, 1998

SITE	RAINFALL (inches)	SAMPLES COLLECTED
SIXTH AND HORNE	0.28	NO (1)
BROADWAY AND LINDSAY	0.12	YES
FALCON FIELD	0.25	YES
HORNE AND GRANDVIEW	0.28	YES
DOBSON	0.50	NO (2)

(1) Equipment failure.
(2) Samples collected three days earlier and this storm was near the 72-hour storm criteria.

Equipment at Sixth and Horne again did not operate properly. Pumped sample volume again was insufficient. Equipment at all other sites seemed to operate adequately. Grab samples were not taken during this event with the exception of those taken by the automatic equipment.

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
FALCON	7/6/98	0.24	Equipment not ready for summer season
DOBSON	8/15/98	0.50	Rainfall > 0.10 inches / < 72 hours prior to this storm
DOBSON	8/17/98	0.25	Rainfall > 0.10 inches / < 72 hours prior to this storm
FALCON	8/17/98	0.35	Rainfall > 0.10 inches / < 72 hours prior to this storm
GRANDVIEW	8/17/98	0.28	Rainfall > 0.10 inches / < 72 hours prior to this storm
LINDSAY	8/17/98	0.43	Rainfall > 0.10 inches / < 72 hours prior to this storm
GRANDVIEW	9/24/98	0.24	Insufficient runoff
SIXTH	9/24/98	0.24	Equipment Failure

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.

Sixth and Horne – Mesa 1

Equipment at this site failed to operate during all storm events, and no samples were collected this summer. The equipment was serviced on July 8, 1998 in preparation for the summer monsoons. During the winter months, the equipment had worked generally well. Because equipment at this site has been problematic in the past, it was decided not to calibrate the depth sensor or the sample volume. Experience has shown that calibrating depth sensors may adversely affect its operation. Other equipment was checked and found to be working adequately.

The storm of July 31 – August 1 produced enough rain to initiate the sampling program. The sampler, however, did not pump an adequate sample volume so there was no sample to analyze. This problem has occurred before at this site, and has resolved on its own, so no immediate action was taken. Volume was checked by manually pumping samples and measuring the volume. This action indicated the sample volume was fine. Another storm occurred on August 15 – 16. Again, the sample volume was not adequate for analysis.

Because the pump tubing sometimes collapses, this would prevent sufficient sample from being drawn by the pump. The pump and distributor tubing was replaced on August 20, 1998.

Another small storm event occurred on September 22, 1998. However, no sampling occurred because the level sensor showed zero flow throughout the event.
On September 23, 1998, the pressure transducer and the sample volume were calibrated. The level sensor was covered by debris that may have caused the zero readings. Both sensors calibrated well. A subsequent event on October 25, 1998 indicated that the equipment functioned properly because sample volume was good, and flow was recorded. (However, this storm did not produce enough rainfall and runoff to be analyzed.)

Broadway and Lindsay – Mesa 2

The equipment at this site appeared to function properly during the summer 1998. On July 8, 1998, all equipment was checked and the sample volume and pressure transducer were calibrated.

Falcon Field – Mesa 3

The equipment at this site appeared to function properly during the summer 1998. On July 8, 1998, all equipment was checked and the sample volume was calibrated. The pressure transducer was not calibrated because of a large amount of standing water in the pipe from a small event two days earlier.

One persistent problem at this site seems to be standing water. This has become a problem recently. A review of data since this station was established indicated that in the past the discharge quickly moved beyond the monitoring point. However, this is no longer the case. There may have been settling of the pipe or blockage downstream. This could be a problem in that stagnant water is being sampled. The pressure transducer measures only level. Thus when water is present the level sensor converts that water level into a discharge. This could be solved first by checking for downstream blockage. If no blockage is found, the station could be moved downstream. A final solution may be to use a velocity meter that would indicate zero velocity and thus zero flow.

Horne and Grandview – Mesa 4

The equipment at this site appeared to function properly during the summer 1998. On July 8, 1998, all equipment was checked and the sample volume and pressure transducer were both calibrated. The calibrations appeared to be good.

Dobson Road – Mesa 5

The equipment at this site appeared to function properly during the summer 1998. On July 8, 1998, all equipment was checked with the exception of the intake tubing and pressure transducer. Both the sample volume and the pressure transducer have worked well since being calibrated in late March. Furthermore, because the equipment, especially the pressure transducer, has been problematic, it was decided not to calibrate at this time for the same reason above that calibrating equipment sometimes adversely affects that equipment.

Grab Sample Techniques

As mentioned above in the storm summaries, grab samples have been taken using the automatic sampler. This technique is not valid for volatile organics, bacterial samples, and oil and grease. The District has developed an apparatus that will allow collection of grab samples from very near the intake tubing.

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.

Access to the intake tubing is gained from the manhole access point. Some sites in Mesa will be easier to access than others. Traffic and rainfall will have the most influence over sample collection. For instance, access at Falcon Field is relatively easy because the manhole is not in a street or driveway. However, access at Dobson Road will always be very difficult because of the volume and speed of traffic.

Grab samples are no longer being collected with the automatic sampler. If grab samples cannot be obtained directly, no samples will be taken.

Data from Summer 1998

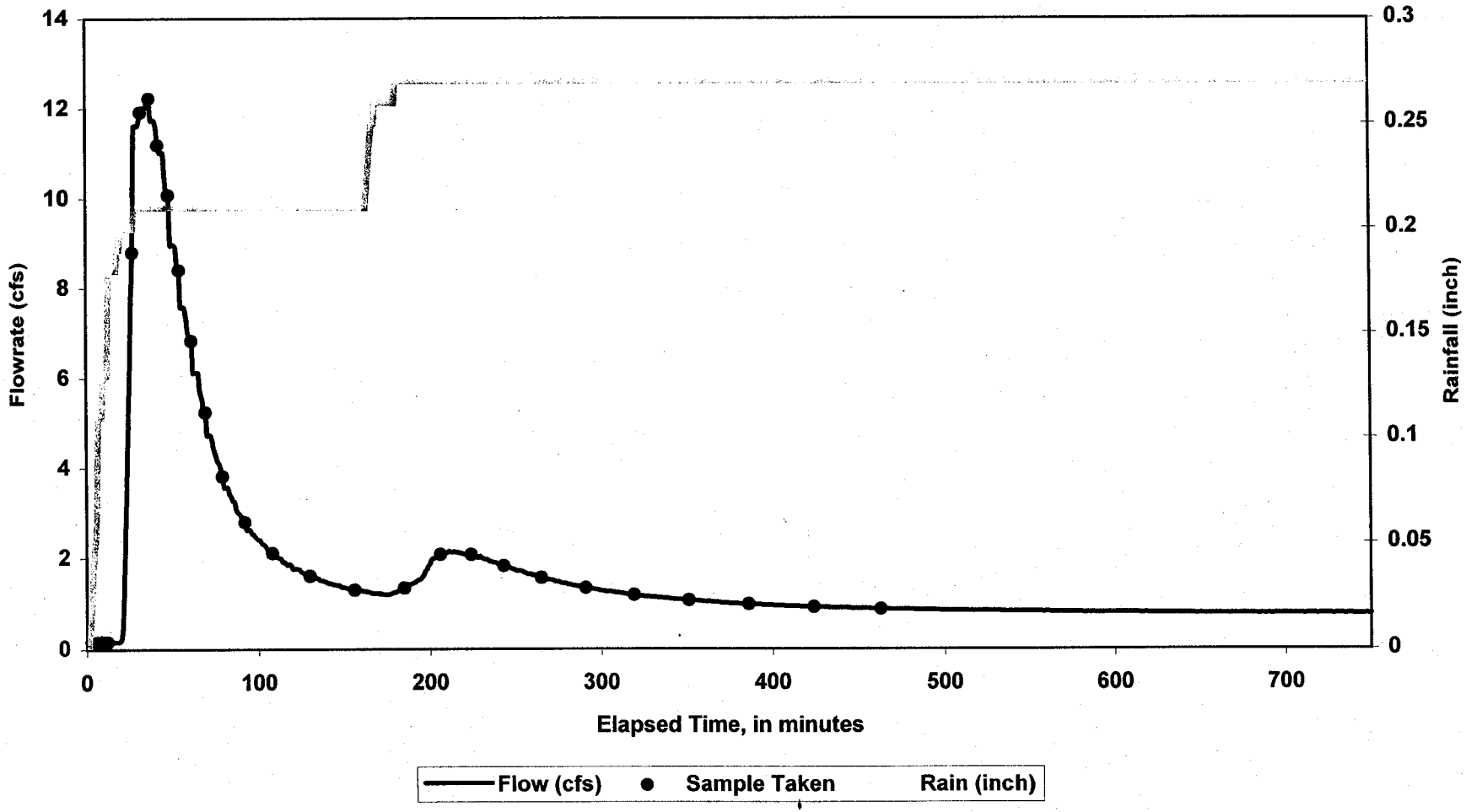
The remainder of this report contains data. The following data are included:

- 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.

Storm Hydrographs

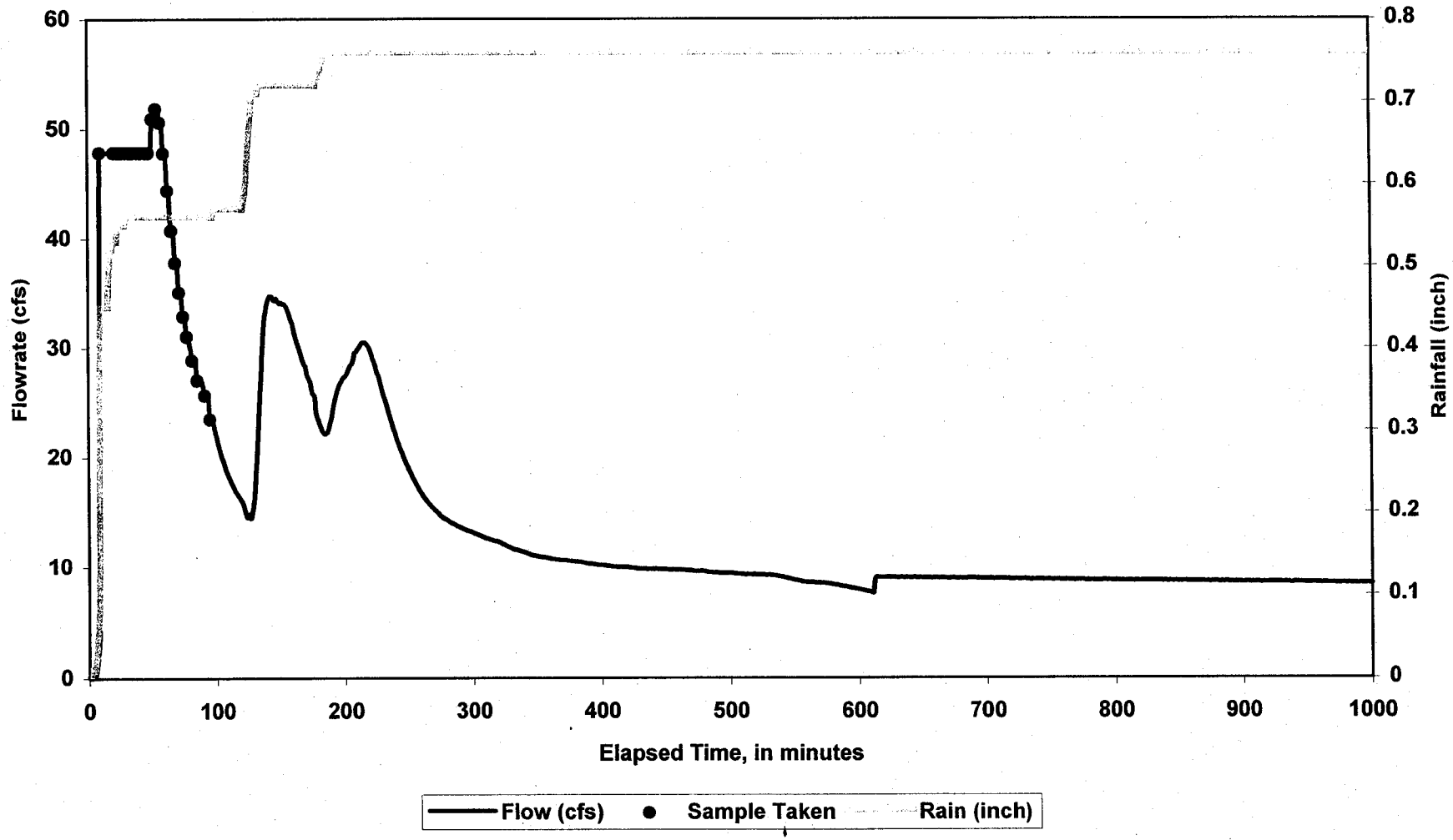
Mesa 2: Broadway and Lindsay

31 July 1998



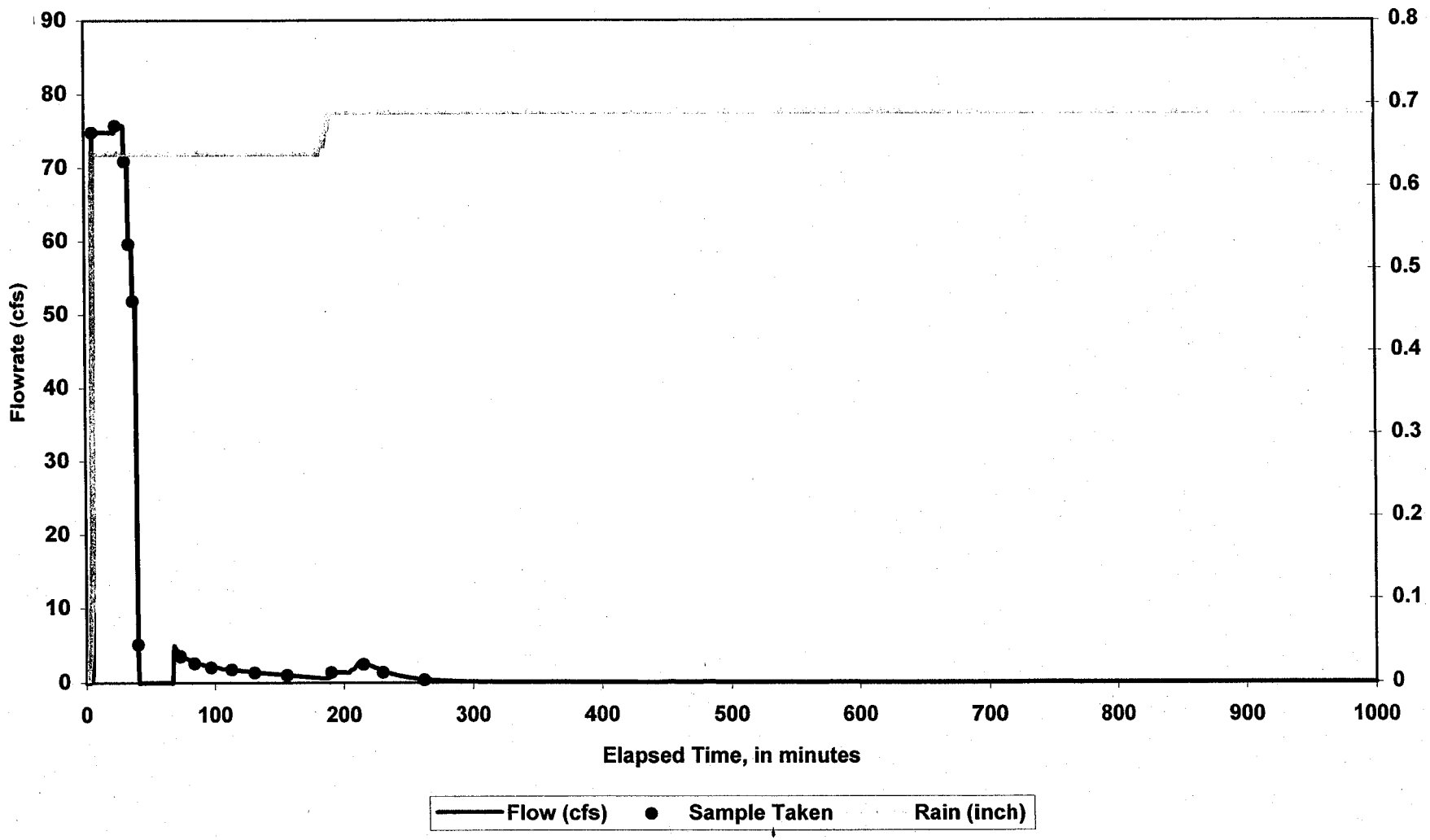
Mesa 3: Falcon Field

31 July 1998



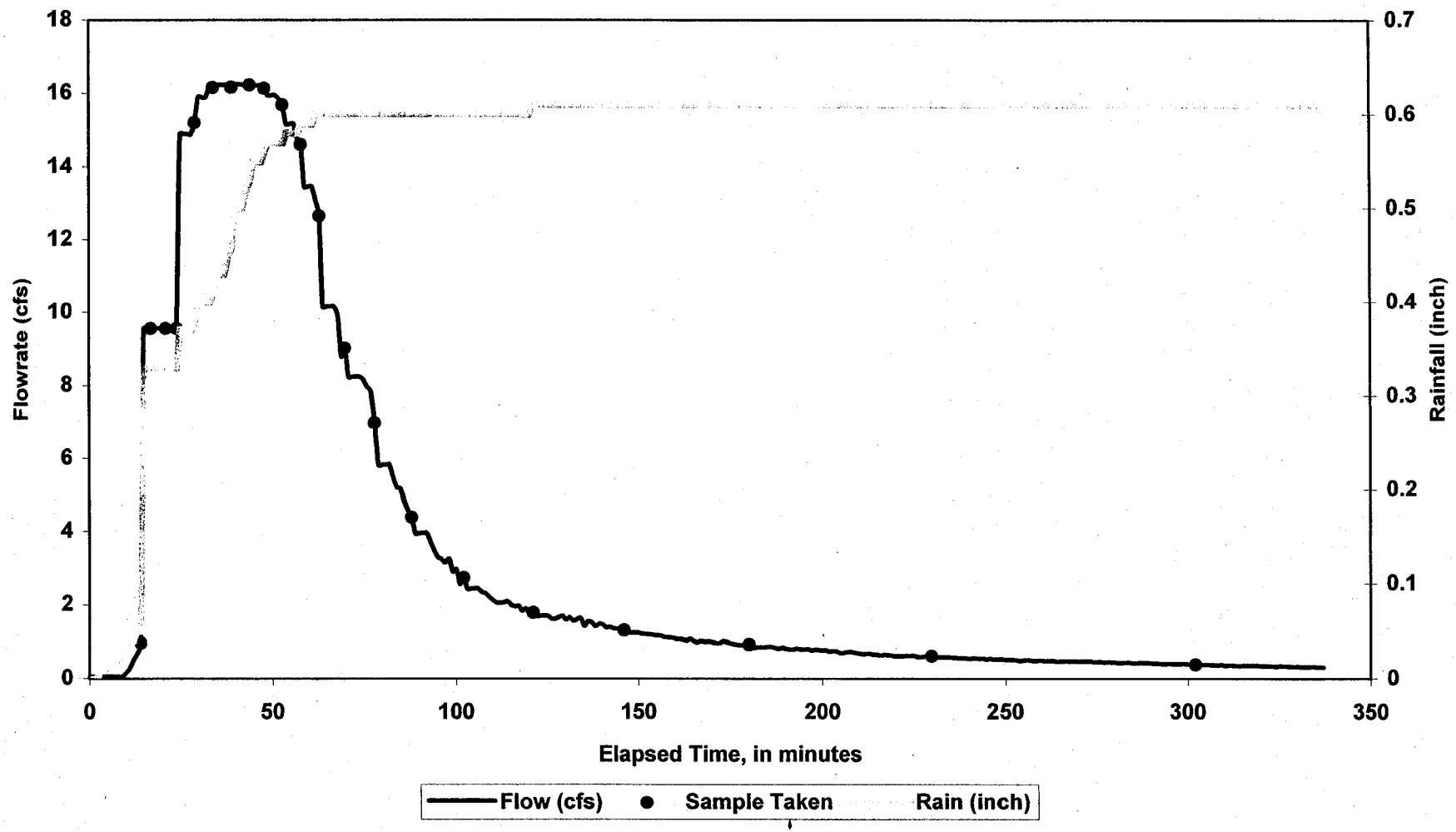
Mesa 4: Horne and Grandview

31 July 1998



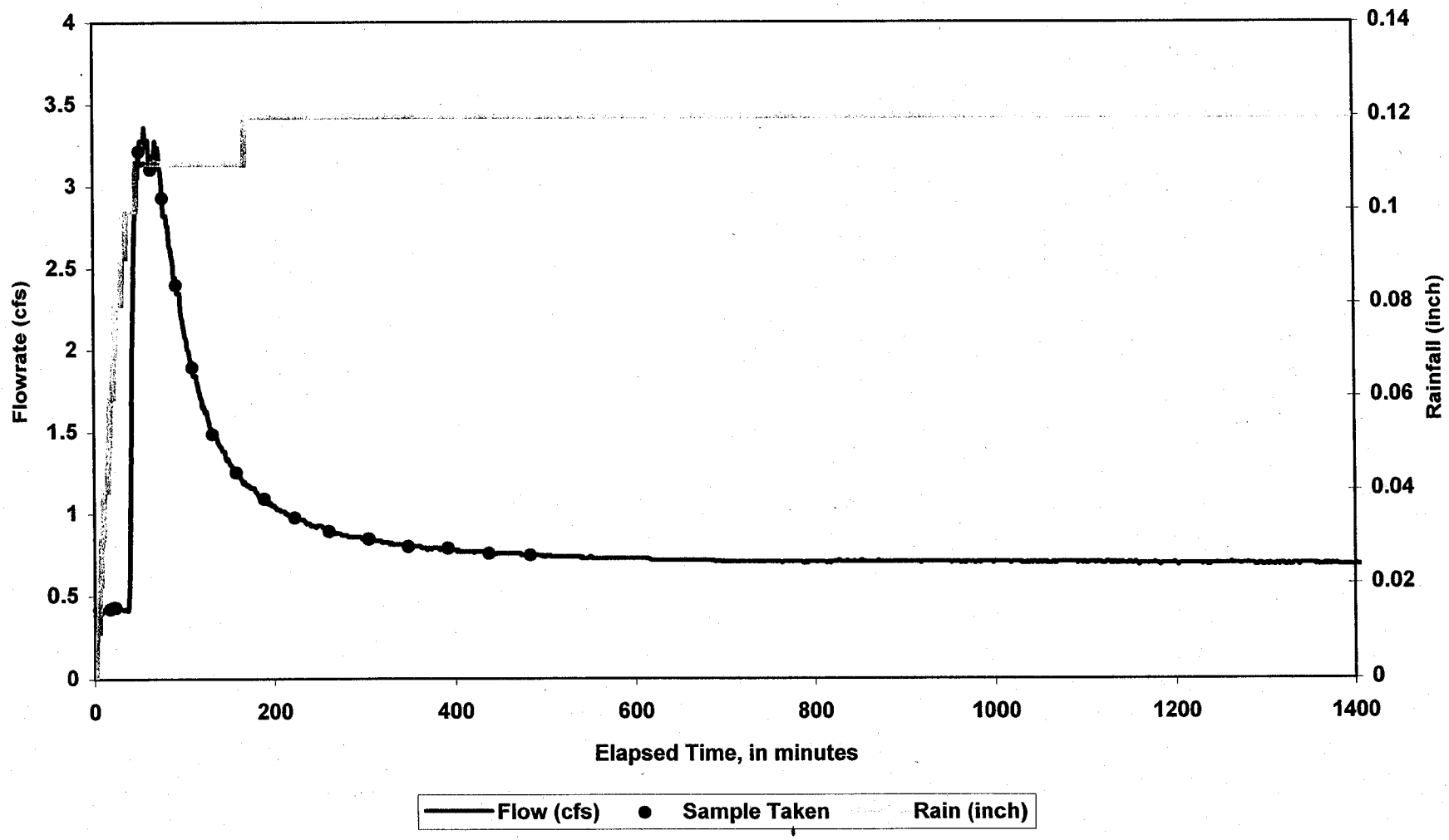
Mesa 5: Dobson Road

12 August 1998



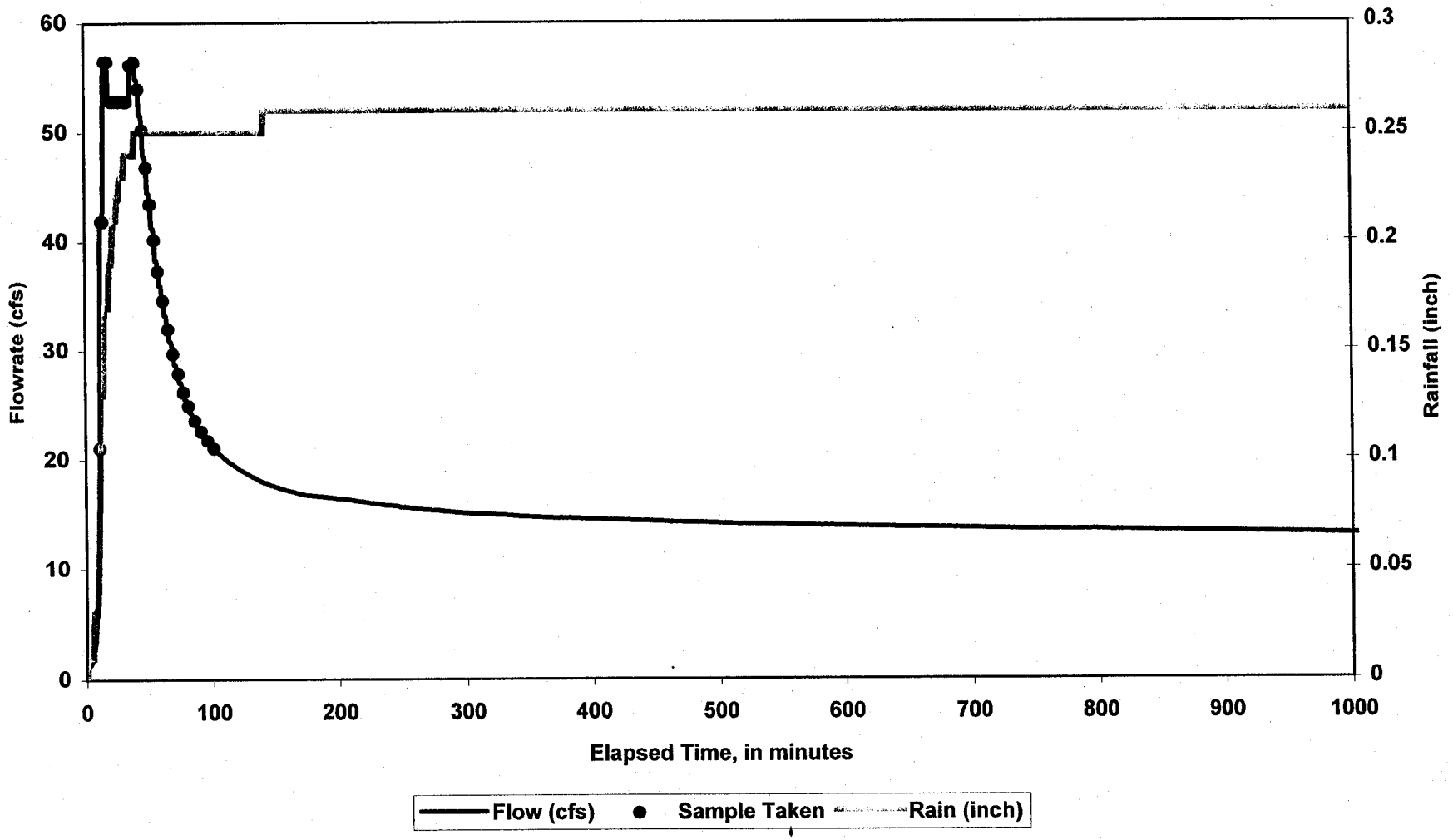
Mesa 2: Broadway and Lindsay

15 August 1998



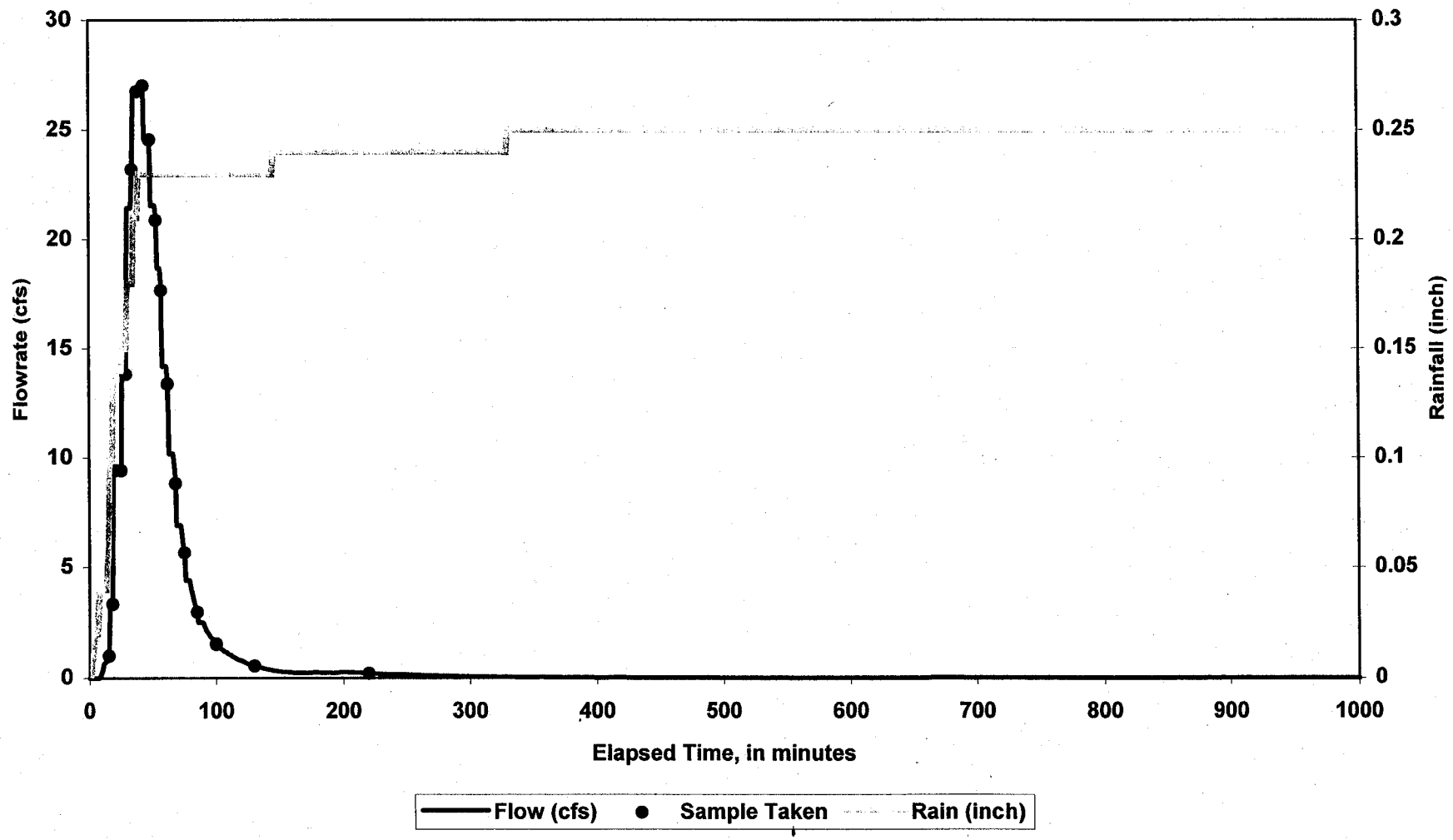
Mesa 3: Falcon Field

15 August 1998



Mesa 4: Horne and Grandview

15 August 1998



Rainfall Data

Gauge Rainfall

Gage 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									
3		0.02	0.01									
4	0.04		0.02									
5	0.10		0.01									
6			0.19									
7												
8			0.03									
9			0.05									
10		0.01										
11			0.01									
12		0.02										
13												
14												
15		0.28										
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									
25												
26	0.02											
27												
28		0.02										
29												
30												
31	0.64											
Month Total	0.96	0.74	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall

Gage 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									
3												
4												
5	0.04											
6			0.04									
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												
26												
27												
28		0.04										
29												
30												
31	0.20											
Month Total	0.29	0.67	0.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall

Gage Number		Falcon Field (Mesa 3)										
Location		Falcon Field										
		July	August	September	October	November	December	January	February	March	April	May	June
		1998	1998	1998	1998	1998	1998	1999	1999	1999	1999	1999	1999
	1		0.24										
	2												
	3												
	4												
	5	0.04											
	6	0.24		0.04									
	7												
	8												
	9												
	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												
	26												
	27												
	28												
	29												
	30												
	31	0.79											
	Month Total	1.15	1.06	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall

Gage 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									
3		0.02	0.01									
4	0.04		0.02									
5	0.10		0.01									
6			0.19									
7												
8			0.03									
9			0.05									
10		0.01										
11			0.01									
12		0.02										
13												
14												
15		0.28										
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									
25												
26	0.02											
27												
28		0.02										
29												
30												
31	0.64											
Month Total	0.96	0.74	0.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall

Gage 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												
3												
4			0.13									
5	0.04	0.01	0.03									
6	0.01		0.24									
7	0.01											
8												
9			0.02									
10												
11			0.09									
12		0.61										
13												
14												
15		0.50										
16												
17	0.03	0.25										
18												
19												
20												
21												
22			0.11									
23												
24	0.02											
25												
26												
27												
28		0.04										
29												
30												
31	0.09											
Month Total	0.20	1.48	0.63	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Data Tables

Mesa 1 - Home 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	07/31/1998	08/15/1998
Time		2212	1100
Representative Storm Event		Y	N
Agency Collecting Sample		FCD	FCD
Agency Analyzing Sample		BOLIN	BOLIN
Drainage Area (acres) (DA)		145	145
Impervious Area (acres) (IA)		37	37
Land Use - Residential		--	--
Land Use - Commercial		--	--
Land Use - Industrial		--	--
Land Use - Undeveloped		--	--
Sampling Duration (minutes)		463	480
Storm Duration (minutes) (DRN)		181	169
Runoff Sampled (cubic feet) (RUN)		61,500	33,800
Total Storm Runoff (cubic feet)		75,000	50,000
Instantaneous Discharge (cfs)		12.2	3.4
Preceeding Dry Period (days) (ANT)		14	14
Total Storm Rainfall (inch)		0.27	0.12
Rainfall Sampled (inch) (TRN)		0.27	0.12
Maximum 5-minute rain intensity (MAX5)		1.2	0.24
Sample Temperature (deg. C)	Field	4	4
Effluent Temperature (deg. C)	Field	26	NM
pH, Effluent (standard units)	Field	NM	7
BOD5 (mg/l)	405.1	23	25
COD High Level (mg/l)	410.1	212	183
Fecal Coliform (CFU/100mL)	9222C	>1600	>160,000
Fecal Streptococci (CFU/100mL)	9230C	240	90,000
Total Dissolved Solids (mg/l)	160.1	172	425
Total Suspeded Solids (mg/l)	160.1	150	26
TKN Nitrogen (mg/l as N)	351.3	1.8	1.5
Nitrogen Nitrate Total (mg/l as N)	353.2	<0.1	2
Nitrogen Ammonia Total (mg/l as N)	350.3	2.94	1.44
Nitrogen Organic Total (mg/l as N)	351.4	<0.5	0.06
Phosphorous Total (mg/l as P)	365.2	1.5	1.7
Phosphorous Dissolved (mg/l as P)	365.3	0.8	1.5
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	<5.0
Hardness (mg/l)	130.2	64	142
Cadmium Total Recoverable (ug/l as Cd)	213.2	<0.2	<0.2
Cadmium Dissolved (ug/l as Cd)	213.2	<0.2	0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	2.2	<1
Chromium Dissolved (ug/l as Cr)	218.2	1.3	3.3
Copper, Total Recoverable, (ug/l as Cu)	220.2	24	14
Copper, Dissolved, (ug/l as Cu)	220.2	<15	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	12	<5
Lead, Dissolved, (ug/l as Pb)	239.2	6	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	0.3
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	0.5
Zinc, Total Recoverable, (ug/l as Zn)	289.2	180	110
Zinc, Dissolved, (ug/l as Zn)	289.2	50	80
P,P' DDE, Total, (ug/l)	608	<1.0	<1.0
Methylene Chloride, Total, (ug/l)	624	--	--
Toluene, Total, (ug/l)	624	--	<40
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	<5.0
Chrysene, Total, (ug/l)	625	<5.0	<5.0
Fluoranthene, Total, (ug/l)	625	<5.0	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	<5.0
Pyrene, Total, (ug/l)	625	<5.0	<5.0

Mesa 3 - Falcon Field			
Date of Sampling	Method	07/31/1998	08/15/1998
Time		2225	1951
Representative Storm Event		Y	Y
Agency Collecting Sample		FCD	FCD
Agency Analyzing Sample		BOLIN	BOLIN
Drainage Area (acres) (DA)		171	171
Impervious Area (acres) (IA)		111	111
Land Use - Residential		--	--
Land Use - Commercial		--	--
Land Use - Industrial		--	--
Land Use - Undeveloped		--	--
Sampling Duration (minutes)		95	101
Storm Duration (minutes) (DRN)		185	142
Runoff Sampled (cubic feet) (RUN)		220,000	212,500
Total Storm Runoff (cubic feet)		>500,000	>500,000
Instantaneous Discharge (cfs)		56.9	56.9
Preceeding Dry Period (days) (ANT)		7	14
Total Storm Rainfall (inch)		0.76	0.26
Rainfall Sampled (inch) (TRN)		0.56	0.25
Maximum 5-minute rain intensity (MAX5)		5.28	1.32
Sample Temperature (deg. C)	Field	4	4
Effluent Temperature (deg. C)	Field	NM	NM
pH, Effluent (standard units)	Field	NM	7
BOD5 (mg/l)	405.1	24	31
COD High Level (mg/l)	410.1	155	121
Fecal Coliform (CFU/100mL)	9222C	>16,000	14,000
Fecal Streptococci (CFU/100mL)	9230C	9,000	2,400
Total Dissolved Solids (mg/l)	160.1	116	91
Total Suspended Solids (mg/l)	160.1	196	68
TKN Nitrogen (mg/l as N)	351.3	1.1	1
Nitrogen Nitrate Total (mg/l as N)	353.2	0.8	0.9
Nitrogen Ammonia Total (mg/l as N)	350.3	30.8	1.63
Nitrogen Organic Total (mg/l as N)	351.4	<0.5	<0.5
Phosphorous Total (mg/l as P)	365.2	0.8	0.4
Phosphorous Dissolved (mg/l as P)	365.3	0.3	0.4
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	<5.0
Hardness (mg/l)	130.2	58	40
Cadmium Total Recoverable (ug/l as Cd)	213.2	0.7	0.26
Cadmium Dissolved (ug/l as Cd)	213.2	0.58	0.83
Chromium Total Recoverable (ug/l as Cr)	218.2	4.8	1.4
Chromium Dissolved (ug/l as Cr)	218.2	4.6	4.5
Copper, Total Recoverable, (ug/l as Cu)	220.2	<15	14
Copper, Dissolved, (ug/l as Cu)	220.2	<15	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	16	10
Lead, Dissolved, (ug/l as Pb)	239.2	8	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	0.3
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	120	160
Zinc, Dissolved, (ug/l as Zn)	289.2	80	100
P,P' DDE, Total, (ug/l)	608	<1.0	<1.0
Methylene Chloride, Total, (ug/l)	624	--	--
Toluene, Total, (ug/l)	624	--	<40
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	<5.0
Chrysene, Total, (ug/l)	625	<5.0	<5.0
Fluoranthene, Total, (ug/l)	625	<5.0	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	<5.0
Pyrene, Total, (ug/l)	625	<5.0	<5.0

Mesa 4 - Horne and Grandview			
Date of Sampling	Method	07/31/1998	08/15/1998
Time		2219	2002
Representative Storm Event		Y	Y
Agency Collecting Sample		FCD	FCD
Agency Analyzing Sample		BOLIN	BOLIN
Drainage Area (acres) (DA)		113.1	113.1
Impervious Area (acres) (IA)		58	58
Land Use - Residential		100	100
Land Use - Commercial		0	0
Land Use - Industrial		0	0
Land Use - Undeveloped		0	0
Sampling Duration (minutes)		262	480
Storm Duration (minutes) (DRN)		190	146
Runoff Sampled (cubic feet) (RUN)		165,000	65,400
Total Storm Runoff (cubic feet)		166,400	66,400
Instantaneous Discharge (cfs)		75.7	27
Preceeding Dry Period (days) (ANT)		7	15
Total Storm Rainfall (inch)		0.69	0.24
Rainfall Sampled (inch) (TRN)		0.69	0.24
Maximum 5-minute rain intensity (MAX5)		7.68	1.08
Sample Temperature (deg. C)	Field	NM	4
Effluent Temperature (deg. C)	Field	NM	NM
pH, Effluent (standard units)	Field	NM	NM
BOD5 (mg/l)	405.1	19	85
COD High Level (mg/l)	410.1	101	180
Fecal Coliform (CFU/100mL)	9222C	2,400	>160,000
Fecal Streptococci (CFU/100mL)	9230C	14,000	17,000
Total Dissolved Solids (mg/l)	160.1	111	153
Total Suspended Solids (mg/l)	160.1	40	59
TKN Nitrogen (mg/l as N)	351.3	1.1	1.7
Nitrogen Nitrate Total (mg/l as N)	353.2	--	1.5
Nitrogen Ammonia Total (mg/l as N)	350.3	--	1.65
Nitrogen Organic Total (mg/l as N)	351.4	--	0.05
Phosphorous Total (mg/l as P)	365.2	<0.05	0.6
Phosphorous Dissolved (mg/l as P)	365.3	<0.05	0.5
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	<5.0
Hardness (mg/l)	130.2	43	52
Cadmium Total Recoverable (ug/l as Cd)	213.2	<0.2	0.51
Cadmium Dissolved (ug/l as Cd)	213.2	<0.2	<0.2
Chromium Total Recoverable (ug/l as Cr)	218.2	1.6	1.5
Chromium Dissolved (ug/l as Cr)	218.2	<1	2.6
Copper, Total Recoverable, (ug/l as Cu)	220.2	<15	18
Copper, Dissolved, (ug/l as Cu)	220.2	<15	<15
Lead, Total Recoverable, (ug/l as Pb)	239.2	5	9
Lead, Dissolved, (ug/l as Pb)	239.2	<5	<5
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	<0.2
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	0.7
Zinc, Total Recoverable, (ug/l as Zn)	289.2	90	120
Zinc, Dissolved, (ug/l as Zn)	289.2	40	80
P,P' DDE, Total, (ug/l)	608	<1.0	<1.0
Methylene Chloride, Total, (ug/l)	624	--	--
Toluene, Total, (ug/l)	624	--	<40
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	--
Chrysene, Total, (ug/l)	625	<5.0	--
Fluoranthene, Total, (ug/l)	625	<5.0	--
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	--
Pyrene, Total, (ug/l)	625	<5.0	--

Mesa 5 - Broadway and Dobson		
Date of Sampling	Method	08/12/1998
Time		1805
Representative Storm Event		N
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)		480
Storm Duration (minutes) (DRN)		121
Runoff Sampled (cubic feet) (RUN)		67,200
Total Storm Runoff (cubic feet)		68,000
Instantaneous Discharge (cfs)		16.2
Preceeding Dry Period (days) (ANT)		7
Total Storm Rainfall (inch)		0.61
Rainfall Sampled (inch) (TRN)		0.61
Maximum 5-minute rain intensity (MAX5)		3.72
Sample Temperature (deg. C)	Field	4
Effluent Temperature (deg. C)	Field	27.8
pH, Effluent (standard units)	Field	7.8
BOD5 (mg/l)	405.1	68
COD High Level (mg/l)	410.1	191
Fecal Coliform (CFU/100mL)	9222C	160,000
Fecal Streptococci (CFU/100mL)	9230C	24,000
Total Dissolved Solids (mg/l)	160.1	85
Total Suspended Solids (mg/l)	160.1	116
TKN Nitrogen (mg/l as N)	351.3	2.4
Nitrogen Nitrate Total (mg/l as N)	353.2	1.5
Nitrogen Ammonia Total (mg/l as N)	350.3	1.48
Nitrogen Organic Total (mg/l as N)	351.4	0.92
Phosphorous Total (mg/l as P)	365.2	0.9
Phosphorous Dissolved (mg/l as P)	365.3	0.5
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0
Hardness (mg/l)	130.2	54
Cadmium Total Recoverable (ug/l as Cd)	213.2	1.1
Cadmium Dissolved (ug/l as Cd)	213.2	0.57
Chromium Total Recoverable (ug/l as Cr)	218.2	8.6
Chromium Dissolved (ug/l as Cr)	218.2	3.9
Copper, Total Recoverable, (ug/l as Cu)	220.2	42
Copper, Dissolved, (ug/l as Cu)	220.2	18
Lead, Total Recoverable, (ug/l as Pb)	239.2	24
Lead, Dissolved, (ug/l as Pb)	239.2	12
Mercury, Total Recoverable, (ug/l as Hg)	245.1	0.3
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2
Zinc, Total Recoverable, (ug/l as Zn)	289.2	320
Zinc, Dissolved, (ug/l as Zn)	289.2	200
P,P' DDE, Total, (ug/l)	608	<1.0
Methylene Chloride, Total, (ug/l)	624	<100
Toluene, Total, (ug/l)	624	<40
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0
Chrysene, Total, (ug/l)	625	<5.0
Fluoranthene, Total, (ug/l)	625	<5.0
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0
Pyrene, Total, (ug/l)	625	<5.0

Validation Tables

Mesa Lindsay August 1, 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)		4												
Effluent Temperature (deg. C)		NM												
pH, Effluent (standard units)		NM	std. Units											
BOD5 (mg/l)	405.1	23	mg/l	1		08/01/1998	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	212	mg/l	1		08/09/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	>1600	CFU/100ml	2	R	08/01/1998	6 hours			<30	n/a			Incorrect sample technique
Fecal Streptococci (CFU/100mL)	9230B	240	CFU/100ml	2	R	08/01/1998	6 hours			<30	n/a			Incorrect sample technique
Total Dissolved Solids (mg/l)	2540C	172	mg/l	10		08/05/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	150	mg/l	10		08/05/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	1.8	mg/l			08/10/1998	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	<0.1	mg/l			08/04/1998	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	2.94	mg/l			08/10/1998	28 days							
Nitrogen Organic Total (mg/l as N)	calc.	<0.5	mg/l											
Phosphorous Total (mg/l as P)	365.3	1.5	mg/l	0.05		08/04/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	0.8	mg/l			08/04/1998	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	mg/l	0.2	R	08/11/1998	28 days	<30	n/a	<50	n/a			Incorrect sample technique
Hardness (mg/l)	2340B	64	mg/l	1		08/18/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	<0.2	ug/l	0.2		08/10/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	<0.2	ug/l			08/10/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	2.2	ug/l	1		08/10/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	1.3	ug/l			08/10/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	24	ug/l	1		08/18/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	<15	ug/l			08/11/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	12	ug/l	1		08/12/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	6	ug/l			08/11/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	ug/l			08/08/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			08/08/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	180	ug/l	1		08/18/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	50	ug/l			08/17/1998	6 months							
EPA Method 608 Extraction	608					08/07/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			08/12/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	--	ug/l				14 days							
Toluene, Total, (ug/l)	624	--	ug/l				14 days							
EPA Method 625 Extraction	625					08/06/1998	7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Chrysene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							

R - Rejected Data

Mesa Falcon August 1, 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)		4												
Effluent Temperature (deg. C)		NM												
pH, Effluent (standard units)		NM	std. Units											
BOD5 (mg/l)	405.1	24	mg/l	1		08/01/1998	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	155	mg/l	1		08/09/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	>16,000	CFU/100ml	2	R	08/01/1998	6 hours			<30	n/a			Incorrect sample technique
Fecal Streptococci (CFU/100mL)	9230B	9000	CFU/100ml	2	R	08/01/1998	6 hours			<30	n/a			Incorrect sample technique
Total Dissolved Solids (mg/l)	2540C	116	mg/l	10		08/03/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	196	mg/l	10		08/05/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	1.1	mg/l			08/10/1998	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	0.8	mg/l			08/01/1998	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	30.8	mg/l			08/05/1998	28 days							
Nitrogen Organic Total (mg/l as N)	calc.	<0.5	mg/l											
Phosphorous Total (mg/l as P)	365.3	0.8	mg/l	0.05		08/04/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	0.3	mg/l			08/04/1998	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	mg/l	0.2	R	08/11/1998	28 days	<30	n/a	<50	n/a			Incorrect sample technique
Hardness (mg/l)	2340B	58	mg/l	1		08/18/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	0.7	ug/l	0.2		08/10/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	0.58	ug/l			08/10/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	4.8	ug/l	1		08/10/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	4.6	ug/l			08/10/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	<15	ug/l	1		08/18/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	<15	ug/l			08/11/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	16	ug/l	1		08/12/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	8	ug/l			08/11/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	ug/l			08/08/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			08/08/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	120	ug/l	1		08/18/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	80	ug/l			08/17/1998	6 months							
EPA Method 608 Extraction	608					08/04/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			08/09/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	--	ug/l				14 days							
Toluene, Total, (ug/l)	624	--	ug/l				14 days							
EPA Method 625 Extraction	625					08/06/1998	7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Chrysene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							

R - Rejected Data

Mesa Grandview

August 1, 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)		4												
Effluent Temperature (deg. C)		NM												
pH, Effluent (standard units)		NM	std. Units											
BOD5 (mg/l)	405.1	19	mg/l	1		08/01/1998	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	101	mg/l	1		08/09/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	2400	CFU/100ml	2	R	08/01/1998	6 hours			<30	n/a			Incorrect sample technique
Fecal Streptococci (CFU/100mL)	9230B	14000	CFU/100ml	2	R	08/01/1998	6 hours			<30	n/a			Incorrect sample technique
Total Dissolved Solids (mg/l)	2540C	111	mg/l	10		08/05/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	40	mg/l	10		08/05/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	1.1	mg/l			08/10/1998	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	--	mg/l				48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	--	mg/l				28 days							
Nitrogen Organic Total (mg/l as N)	calc.	--	mg/l											
Phosphorous Total (mg/l as P)	365.3	<0.05	mg/l	0.05		08/04/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	--	mg/l				28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	mg/l	0.2	R	08/11/1998	28 days	<30	n/a	<50	n/a			Incorrect sample technique
Hardness (mg/l)	2340B	43	mg/l	1		08/21/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	<0.2	ug/l	0.2		08/10/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	<0.2	ug/l			08/10/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	1.6	ug/l	1		08/10/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	<1	ug/l			08/10/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	<15	ug/l	1		08/18/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	<15	ug/l			08/11/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	5	ug/l	1		08/12/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			08/11/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	ug/l			08/08/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			08/08/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	90	ug/l	1		08/18/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	40	ug/l			08/17/1998	6 months							
EPA Method 608 Extraction	608					08/07/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			08/12/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	--	ug/l				14 days							
Toluene, Total, (ug/l)	624	--	ug/l				14 days							
EPA Method 625 Extraction	625					08/06/1998	7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Chrysene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							
Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/10/1998	40 days							

R - Rejected Data

Mesa Dobson

August 12, 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)	Field	6.4	std. Units		R	08/13/1998	Immediate							Invalid Measurement - Not taken in field
BOD5 (mg/l)	405.1	68	mg/l	1		08/13/1998	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	191	mg/l	1		08/25/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	160,000	CFU/100m	2	R	08/13/1998	6 hours			<30	n/a			Incorrect collection procedure
Fecal Streptococci (CFU/100mL)	9230B	24,000	CFU/100m	2	R	08/13/1998	6 hours			<30	n/a			Incorrect collection procedure
Total Dissolved Solids (mg/l)	2540C	85	mg/l	10		08/19/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	116	mg/l	10		08/13/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	2.4	mg/l			08/14/1998	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	1.5	mg/l			08/13/1998	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	1.48	mg/l			08/14/1998	28 days							
Nitrogen Organic Total (mg/l as N)	calc.	0.92	mg/l											
Phosphorous Total (mg/l as P)	365.3	0.9	mg/l	0.05		08/28/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	0.5	mg/l			08/28/1998	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	mg/l	0.2	R	08/24/1998	28 days	<30	n/a	<50	n/a			Incorrect collection procedure
Hardness (mg/l)	2340B	54	mg/l	1		08/31/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	1.1	ug/l	0.2		08/20/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	0.57	ug/l			08/20/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	8.6	ug/l	1		08/21/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	3.9	ug/l			08/21/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	42	ug/l	1		09/08/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	18	ug/l			08/31/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	24	ug/l	1		08/20/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	12	ug/l			09/02/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	0.3	ug/l			08/19/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			08/19/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	320	ug/l	1		08/31/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	200	ug/l			09/01/1998	6 months							
EPA Method 608 Extraction	608					08/19/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			08/19/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	<100	ug/l		R	08/14/1998	14 days							Incorrect collection procedure
Toluene, Total, (ug/l)	624	<40	ug/l		R	08/14/1998	14 days							Incorrect collection procedure
EPA Method 625 Extraction	625					08/17/1998	7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	ug/l			08/25/1998	40 days							
Chrysene, Total, (ug/l)	625	<5.0	ug/l			08/25/1998	40 days							
Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			08/25/1998	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/25/1998	40 days							
Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/25/1998	40 days							

R - Rejected Data

Mesa Lindsay August 16, 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)		4												
Effluent Temperature (deg. C)		NM												
pH, Effluent (standard units)		7.0	std. Units			08/16/1998								
BOD5 (mg/l)	405.1	25	mg/l	1		08/17/1998	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	183	mg/l	1		08/25/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	>160,000	CFU/100ml	2	R	08/16/1998	6 hours			<30	n/a			Incorrect sample technique
Fecal Streptococci (CFU/100mL)	9230B	90000	CFU/100ml	2	R	08/16/1998	6 hours			<30	n/a			Incorrect sample technique
Total Dissolved Solids (mg/l)	2540C	425	mg/l	10		08/19/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	26	mg/l	10		08/17/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	1.5	mg/l			08/19/1998	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	2	mg/l			08/17/1998	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	1.44	mg/l			08/21/1998	28 days							
Nitrogen Organic Total (mg/l as N)	calc.	0.06	mg/l											
Phosphorous Total (mg/l as P)	365.3	1.7	mg/l	0.05		08/28/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	1.5	mg/l			08/28/1998	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	mg/l	0.2	R	08/24/1998	28 days	<30	n/a	<50	n/a			Incorrect sample technique
Hardness (mg/l)	2340B	142	mg/l	1		08/31/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	<0.2	ug/l	0.2		08/26/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	0.2	ug/l			08/26/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	<1	ug/l	1		08/27/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	3.3	ug/l			08/27/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	14	ug/l	1		09/08/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	<15	ug/l			08/31/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	<5	ug/l	1		08/20/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			09/02/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	0.3	ug/l			08/19/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	0.5	ug/l			08/19/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	110	ug/l	1		08/31/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	80	ug/l			09/01/1998	6 months							
EPA Method 608 Extraction	608					08/21/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			08/25/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	<100	ug/l		R	08/20/1998	14 days							Incorrect sample technique
Toluene, Total, (ug/l)	624	<40	ug/l		R	08/20/1998	14 days							Incorrect sample technique
EPA Method 625 Extraction	625					08/20/1998	7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							
Chrysene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							
Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							
Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							

R - Rejected Data

Mesa Falcon

August 16, 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)		4												
Effluent Temperature (deg. C)		NM												
pH, Effluent (standard units)		NM	std. Units											
BOD5 (mg/l)	405.1	31	mg/l	1		08/17/1998	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	121	mg/l	1		08/25/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	14000	CFU/100ml	2	R	08/16/1998	6 hours			<30	n/a			Incorrect sample technique
Fecal Streptococci (CFU/100mL)	9230B	2400	CFU/100ml	2	R	08/16/1998	6 hours			<30	n/a			Incorrect sample technique
Total Dissolved Solids (mg/l)	2540C	91	mg/l	10		08/19/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	68	mg/l	10		08/17/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	1	mg/l			08/19/1998	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	0.9	mg/l			08/17/1998	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	1.63	mg/l			08/21/1998	28 days							
Nitrogen Organic Total (mg/l as N)	calc.	<0.5	mg/l											
Phosphorous Total (mg/l as P)	365.3	0.4	mg/l	0.05		08/28/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	0.4	mg/l			08/28/1998	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	mg/l	0.2	R	08/24/1998	28 days	<30	n/a	<50	n/a			Incorrect sample technique
Hardness (mg/l)	2340B	40	mg/l	1		08/31/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	0.26	ug/l	0.2		08/26/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	0.83	ug/l			08/26/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	1.4	ug/l	1		08/27/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	4.5	ug/l			08/27/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	14	ug/l	1		09/08/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	<15	ug/l			08/31/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	10	ug/l	1		08/20/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			09/02/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	0.3	ug/l			08/19/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	<0.2	ug/l			08/26/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	160	ug/l	1		08/31/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	100	ug/l			09/01/1998	6 months							
EPA Method 608 Extraction	608					08/21/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			08/25/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	<100	ug/l		R	08/20/1998	14 days							Incorrect sample technique
Toluene, Total, (ug/l)	624	<40	ug/l		R	08/20/1998	14 days							Incorrect sample technique
EPA Method 625 Extraction	625					08/20/1998	7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							
Chrysene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							
Fluoranthene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							
Pyrene, Total, (ug/l)	625	<5.0	ug/l			08/26/1998	40 days							

R - Rejected Data

Mesa Grandview August 16, 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)		4												
Effluent Temperature (deg. C)		NM												
pH, Effluent (standard units)		NM	std. Units											
BOD5 (mg/l)	405.1	85	mg/l	1		08/17/1998	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	180	mg/l	1		08/25/1998	28 days			<30	n/a			
Fecal Coliform (CFU/100mL)	9221D	>160,000	CFU/100ml	2	R	08/16/1998	6 hours			<30	n/a			Incorrect sample technique
Fecal Streptococci (CFU/100mL)	9230B	17000	CFU/100ml	2	R	08/16/1998	6 hours			<30	n/a			Incorrect sample technique
Total Dissolved Solids (mg/l)	2540C	153	mg/l	10		08/19/1998	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	59	mg/l	10		08/17/1998	7 days			<15	n/a			
TKN Nitrogen (mg/l as N)	351.3	1.7	mg/l			08/19/1998	28 days							
Nitrogen Nitrate Total (mg/l as N)	300.0	1.5	mg/l			08/17/1998	48 hours							
Nitrogen Ammonia Total (mg/l as N)	350.2	1.65	mg/l			08/21/1998	28 days							
Nitrogen Organic Total (mg/l as N)	calc.	0.05	mg/l											
Phosphorous Total (mg/l as P)	365.3	0.6	mg/l	0.05		08/28/1998	28 days			<15	3.5			
Phosphorous Dissolved (mg/l as P)	365.3	0.5	mg/l			08/28/1998	28 days							
Oil and Grease Total Recoverable (mg/l)	413.1	<5.0	mg/l	0.2	R	08/24/1998	28 days	<30	n/a	<50	n/a			Incorrect sample technique
Hardness (mg/l)	2340B	52	mg/l	1		08/31/1998	6 months			<15	n/a			
Cadmium Total Recoverable (ug/l as Cd)	7131	0.51	ug/l	0.2		08/26/1998	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	7131	<0.2	ug/l			08/26/1998	6 months							
Chromium Total Recoverable (ug/l as Cr)	7191	1.5	ug/l	1		08/27/1998	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	7191	2.6	ug/l			08/27/1998	6 months							
Copper, Total Recoverable, (ug/l as Cu)	3113B	18	ug/l	1		09/08/1998	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	<15	ug/l			08/31/1998	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	9	ug/l	1		08/20/1998	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<5	ug/l			09/02/1998	6 months							
Mercury, Total Recoverable, (ug/l as Hg)	245.1	<0.2	ug/l			08/19/1998	6 months							
Mercury, Dissolved, (ug/l as Hg)	245.1	0.7	ug/l			08/26/1998	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	120	ug/l	1		08/31/1998	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	80	ug/l			09/01/1998	6 months							
EPA Method 608 Extraction	608					08/21/1998	7 days							
P,P' DDE, Total, (ug/l)	608	<1.0	ug/l			08/25/1998	40 days							
Methylene Chloride, Total, (ug/l)	624	<100	ug/l		R	08/20/1998	14 days							Incorrect sample technique
Toluene, Total, (ug/l)	624	<40	ug/l		R	08/20/1998	14 days							Incorrect sample technique
EPA Method 625 Extraction	625	--					7 days							
Benzo (a) Anthracene, Total, (ug/l)	625	--	ug/l				40 days							
Chrysene, Total, (ug/l)	625	--	ug/l				40 days							
Fluoranthene, Total, (ug/l)	625	--	ug/l				40 days							
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	625	--	ug/l				40 days							
Pyrene, Total, (ug/l)	625	--	ug/l				40 days							

R - Rejected Data

Hard Copies of Data

Data Checksheet

Site	LINDSAY (M2)
Municipality	MESA
Sample Date	Jul 31, 1998 →

Date Received	Sept 8, 1998

Laboratory Used	Bolin
Laboratory Contact	Stephanie
FCD Sample ID Number	Mesa 2-Grab / Mesa 2
Lab Sample ID Number	9808-05289-001 / 9808-05315-001
Laboratory Invoice Number	45278 / 45348

Initial Review Complete	yes	Date	10-5-98
Lab Contacted	yes	Date	10-22-98
Lab Review Complete	yes	Date	11-9-98
Second Review Complete	yes	Date	11-9-98
Additional Review Necessary	No		

Comments	
	anaysis dates were set at 7/31/98
	rather than 8/1/98.

Data Validation Table Complete	yes	Date	11-12-98

Data Entered Into Database	yes	Date	11-10-98

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: 8/01/98
Reported: 8/31/98
Invoice No: 045278

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05289-001
Sample ID: Mesa 2-Grab (Lindsay)

Time Sampled: 23:30
Date Sampled: 7/31/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Biochemical Oxygen Demand	EPA 405.1	23.	mg/L	1.0	8/01/98
Dissolved Oxygen	EPA 360.1	7.34	mg/L	0.01	8/01/98
Fecal Coliform	SM 9221D	>1,600.	MPN/100ml		8/01/98
Fecal Streptococcus	SM 9230B	240.	MPN/100ml		8/01/98
Oil & Grease	EPA 413.1	<5.0	mg/L	5.0	8/11/98

Report revised on 11/3/98 to correct BOD analyzed date.

J. Kaufman

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: 8/03/98
Reported: 8/31/98
Invoice No: 045348

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05315-001
Sample ID: Mesa 2 (Lindsay)

Time Sampled: 3:20
Date Sampled: 8/01/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Chemical Oxygen Demand	EPA 410.4	212.	mg/L	20.	8/09/98
P as Total Phosphate	EPA 365.3	1.5 D1	mg/L	0.5	8/04/98
Total Phosphate	CALCULATION	4.6	mg/L	0.15	8/04/98
Total Kjeldahl Nitrogen	EPA 351.3	1.8	mg/L	0.5	8/10/98
Solids, Total Suspended	EPA 160.2	150.	mg/L	1.	8/05/98
Total Dissolved Solids	SM 2540C	172.	mg/L	1.	8/05/98
pH	EPA 150.1	6.6	Std Unit		8/04/98
Total Alkalinity (as CaCO3)	SM 2320B	50.	mg/L	2.	8/06/98
Sulfate, Dissolved	EPA 300.0	11.	mg/L	5.0	8/04/98
Chloride	EPA 300.0	14.	mg/L	5.0	8/04/98
Chromium, hexavalent	SM 3500-CR D	<0.010	mg/L	0.010	8/04/98
Nitrogen as Nitrate	EPA 300.0	<0.1	mg/L	0.1	8/04/98
Nitrogen as Nitrite	EPA 300.0	<0.1	mg/L	0.1	8/04/98
Nitrogen, Total	CALCULATION	1.8	mg/L		8/10/98
Nitrate plus Nitrite	CALCULATION	<0.1	mg/L		8/06/98
P as Orthophosphate	SM 4500 PE	0.36	mg/L	0.05	8/04/98
Phosphorus, Dissolved	EPA 365.3	0.8 D1	mg/L	0.05	8/04/98
Nitrogen as Ammonia	EPA 350.2	2.94	mg/L	0.03	8/10/98
Organic Nitrogen	CALCULATION	<0.5	mg/L		8/25/98
Cyanide, Total	SM 4500 CN E	<0.01	mg/L	0.01	8/05/98
Phenolics, Total	EPA 420.1	0.012	mg/L	0.0050	8/12/98
N-Nitrosodimethylamine	EPA 625	ND	ug/L	5.0	8/10/98
Phenol	EPA 625	ND	ug/L	5.0	8/10/98
Aniline	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-chloroethyl)ether	EPA 625	ND C	ug/L	10.	8/10/98
2-Chlorophenol	EPA 625	ND	ug/L	10.	8/10/98
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
Benzyl alcohol	EPA 625	ND C	ug/L	10.	8/10/98
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
2-Methylphenol	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	10.	8/10/98

Bolin Laboratories Inc.

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Matrix: Storm Water
Sample No: 9808-05315-001

Time Sampled: 3:20
Date Sampled: 8/01/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
4-Methylphenol (p-Cresol)	EPA 625	ND	ug/L	5.0	8/10/98
N-Nitrosodi-n-propylamine	EPA 625	ND C	ug/L	5.0	8/10/98
Hexachloroethane	EPA 625	ND C	ug/L	10.	8/10/98
Nitrobenzene	EPA 625	ND	ug/L	10.	8/10/98
Isophorone	EPA 625	ND	ug/L	10.	8/10/98
2,4-Dimethylphenol	EPA 625	ND	ug/L	10.	8/10/98
Benzoic acid	EPA 625	ND C	ug/L	50.	8/10/98
2-Nitrophenol	EPA 625	ND	ug/L	10.	8/10/98
Bis(2-chloroethoxy)methane	EPA 625	ND C	ug/L	10.	8/10/98
2,4-Dichlorophenol	EPA 625	ND	ug/L	10.	8/10/98
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
Naphthalene	EPA 625	ND	ug/L	5.0	8/10/98
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	8/10/98
4-Chloroaniline	EPA 625	ND	ug/L	5.0	8/10/98
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	8/10/98
2-Methylnaphthalene	EPA 625	ND	ug/L	5.0	8/10/98
Hexachlorocyclopentadiene	EPA 625	ND C	ug/L	5.0	8/10/98
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
2,4,5-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	8/10/98
2-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/10/98
Acenaphthylene	EPA 625	ND	ug/L	10.	8/10/98
3-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
Acenaphthene	EPA 625	ND	ug/L	5.0	8/10/98
2,4-Dinitrophenol	EPA 625	ND	ug/L	10.	8/10/98
4-Nitrophenol	EPA 625	ND C	ug/L	5.0	8/10/98
Dibenzofuran	EPA 625	ND	ug/L	5.0	8/10/98
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/10/98
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
4-Chlorophenylphenylether	EPA 625	ND	ug/L	10.	8/10/98
Fluorene	EPA 625	ND	ug/L	5.0	8/10/98
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	10.	8/10/98
4-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
N-Nitrosodiphenylamine	EPA 625	ND	ug/L	5.0	8/10/98
1,2-Diphenylhydrazine	EPA 625	ND **	ug/L	5.0	8/10/98
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	8/10/98
Hexachlorobenzene	EPA 625	ND	ug/L	10.	8/10/98
Pentachlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
Phenanthrene	EPA 625	ND	ug/L	5.0	8/10/98
Anthracene	EPA 625	ND	ug/L	5.0	8/10/98

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Matrix: Storm Water
Sample No: 9808-05315-001

Time Sampled: 3:20
Date Sampled: 8/01/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	8/10/98
Fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98
Benzidine	EPA 625	ND	ug/L	20.	8/10/98
Pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-ethylhexyl)phthalate	EPA 625	53.3	ug/L	10.	8/10/98
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	8/10/98
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	8/10/98
Chrysene	EPA 625	ND	ug/L	5.0	8/10/98
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	8/10/98
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.	8/10/98
Extraction	EPA 625				8/06/98
Surrogate:	EPA 625				8/10/98
***d5-Phenol	EPA 625	29.1	% Recovery		8/10/98
***2-Fluorophenol	EPA 625	21.6	% Recovery		8/10/98
***d5-Nitrobenzene	EPA 625	55.4	% Recovery		8/10/98
***2-Fluorobiphenyl	EPA 625	51.7	% Recovery		8/10/98
***2,4,6-Tribromophenol	EPA 625	70.5	% Recovery		8/10/98
***d14-Terphenyl	EPA 625	58.6	% Recovery		8/10/98
4,4'-DDD	EPA 608	ND C	ug/L	1.0	8/12/98
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/12/98
4,4'-DDT	EPA 608	ND	ug/L	2.0	8/12/98
Aldrin	EPA 608	ND	ug/L	1.0	8/12/98
alpha-BHC	EPA 608	ND	ug/L	1.0	8/12/98
Chlordane	EPA 608	ND	ug/L	1.0	8/12/98
delta-BHC	EPA 608	ND	ug/L	1.0	8/12/98
Dieldrin	EPA 608	ND	ug/L	1.0	8/12/98
Endosulfan I	EPA 608	ND	ug/L	1.0	8/12/98
Endosulfan II	EPA 608	ND C	ug/L	1.0	8/12/98
Endosulfan Sulfate	EPA 608	ND	ug/L	1.0	8/12/98
Endrin	EPA 608	ND C	ug/L	1.0	8/12/98
Endrin Aldehyde	EPA 608	ND C	ug/L	1.0	8/12/98
Heptachlor	EPA 608	ND	ug/L	1.0	8/12/98
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	8/12/98
Lindane (gamma BHC)	EPA 608	ND C	ug/L	1.0	8/12/98
PCB 1016	EPA 608	ND	ug/L	1.0	8/12/98

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Matrix: Storm Water
Sample No: 9808-05315-001

Time Sampled: 3:20
Date Sampled: 8/01/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
PCB 1221	EPA 608	ND	ug/L	10	8/12/98
PCB 1232	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1242	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1248	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1254	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1260	EPA 608	ND	ug/L	1.0	8/12/98
Toxaphene	EPA 608	ND	ug/L	1.0	8/12/98
beta-BHC	EPA 608	ND C	ug/L	1.0	8/12/98
Extraction	EPA 608				8/07/98
Surrogate:	EPA 608				8/12/98
***Dibutylchlorendate	EPA 608	150 S1	% Recovery		8/12/98
WW Metals Digestion for ICP	EPA 200.7				8/04/98
DW/WW metals digestion-AA	SM 3030E				8/04/98
Antimony	SM 3113B	<0.005	mg/L	0.005	8/19/98
Arsenic	SM 3113B	0.006	mg/L	0.005	8/06/98
Beryllium	EPA 200.7	<0.002	mg/L	0.002	8/18/98
Calcium	EPA 200.7	21.	mg/L	1.	8/18/98
Copper	EPA 200.7	0.024	mg/L	0.015	8/18/98
Lead	SM 3113B	0.012	mg/L	0.005	8/12/98
Magnesium	EPA 200.7	3.	mg/L	1.	8/18/98
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	8/08/98
Selenium	SM 3113B	<0.005	mg/L	0.005	8/17/98
Silver	EPA 200.7	<0.04	mg/L	0.04	8/21/98
Hardness, Total (Ca & Mg)	SM 2340B	64	mg/L	7.	8/18/98
Zinc	EPA 200.7	0.18	mg/L	0.02	8/18/98
Thallium	EPA 200.9	<0.001	mg/L	0.001	8/05/98
Chromium	EPA 218.2	0.0022	mg/L	0.001	8/10/98
Cadmium	EPA 213.2	<0.0002	mg/L	0.0002	8/10/98
Nickel	EPA 249.2	0.026	mg/L	0.001	8/11/98
Cadmium, Dissolved	EPA 213.2	<0.0002	mg/L	0.0002	8/10/98
Chromium, Dissolved	EPA 218.2	0.0013	mg/L	0.001	8/10/98
Nickel, Dissolved	EPA 249.2	0.0057	mg/L	0.001	8/11/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	8/14/98
Arsenic, Dissolved	EPA 200.9	0.005	mg/L	0.005	8/18/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	8/11/98
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	8/11/98
Lead, Dissolved	EPA 200.9	0.006	mg/L	0.005	8/11/98
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	8/08/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/17/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	8/17/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	8/05/98
Zinc, Dissolved	EPA 200.7	0.05	mg/L	0.02	8/17/98

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C = Continuing Calibration was above method control limits. Data was not impacted.
D1 = Sample was diluted due to high concentration of target analyte.
S1 = Surrogate recovery was above laboratory acceptance limits. Data was not impacted.
T = Result based on a Tentatively Identified Compound search.
**1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.

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

Nitrate, Nitrite, Ortho & Dissolved Phosphorous, Hexavalent Chromium & pH analyzed past the recommended hold time at the client's request.

S. Kaufman

Project Manager
ADHS License No.: AZ0004

Data Checksheet

Site	FALCON (M3)
Municipality	MESA
Sample Date	7/31/98 —

Date Received	Sept 8, 1998

Laboratory Used	Bolin
Laboratory Contact	Stephanie
FCD Sample ID Number	MESA 3-Grab / Mesa 3-Comp
Lab Sample ID Number	9808-05289-004, -002
Laboratory Invoice Number	45278

Initial Review Complete	yes	Date	10-5-98
Lab Contacted	yes	Date	10-22-98
Lab Review Complete	yes	Date	11-9-98
Second Review Complete	yes	Date	11-9-98
Additional Review Necessary	yes		

Comments
Analysis dates for some short hold time stuff was on 7/31/98 - samples turned in on 8/1/98.
Asked lab to review Nitg value of 30.3 - seems very high.

Data Validation Table Complete	yes	Date	11-12-98

Data Entered Into Database	yes	Date	11-9-98

Bolin Laboratories Inc.

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

Received: 8/01/98
Reported: 8/31/98
Invoice No: 045278

Project Name: NPDES Stormwater Analysis

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Matrix:	Storm Water				
Sample No:	9808-05289-004		Time Sampled:	23:00	
Sample ID:	Mesa 3-Grab (Falcon Field)		Date Sampled:	7/31/1998	
Biochemical Oxygen Demand	EPA 405.1	24.	mg/L	1.0	8/01/98
Dissolved Oxygen	EPA 360.1	7.98	mg/L	0.01	8/01/98
Fecal Coliform	SM 9221D	>16,000.	MPN/100ml		8/01/98
Fecal Streptococcus	SM 9230B	9,000.	MPN/100ml		8/01/98
Oil & Grease	EPA 413.1	<5.0	mg/L	5.0	8/11/98

Report revised on 11/3/98 to correct BOD analyze date.

S. Kaufman

Authorized Signatory
ADHS License No.: AZ0004

Bolin Laboratories Inc.

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

Received: 8/01/98
Reported: 8/31/98
Invoice No: 045278

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05289-002
Sample ID: Mesa 3-Comp (Falcon Field)

Time Sampled: 22:48
Date Sampled: 7/31/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
pH	EPA 150.1	7.4	Std Unit		8/01/98
Chemical Oxygen Demand	EPA 410.4	155.	mg/L	20.	8/09/98
Chloride	EPA 300.0	<5.0	mg/L	5.0	8/01/98
Cyanide, Total	SM 4500 CN E	<0.01	mg/L	0.01	8/06/98
Total Dissolved Solids	SM 2540C	116.	mg/L	1.	8/03/98
Solids, Total Suspended	EPA 160.2	196.	mg/L	1.	8/05/98
Nitrogen as Ammonia	EPA 350.2	30.8	mg/L	0.03	8/05/98
Nitrogen as Nitrate	EPA 300.0	0.8	mg/L	0.1	8/01/98
Nitrogen as Nitrite	EPA 300.0	<0.1	mg/L	0.1	8/01/98
Nitrate plus Nitrite	CALCULATION	0.8	mg/L		8/03/98
Organic Nitrogen	CALCULATION	<0.5	mg/L		8/25/98
Total Kjeldahl Nitrogen	EPA 351.3	1.1	mg/L	0.5	8/07/98
P as Total Phosphate	EPA 365.3	0.8 D1	mg/L	0.1	8/04/98
Phosphorus, Dissolved	EPA 365.3	0.3	mg/L	0.05	8/04/98
P as Orthophosphate	SM 4500 PE	0.18	mg/L	0.05	8/01/98
Total Organic Carbon	SM 5310C	32.4	mg/L	0.2	8/05/98
Sulfate, Dissolved	EPA 300.0	5.	mg/L	5.	8/01/98
Phenolics, Total	EPA 420.1	0.018	mg/L	0.010	8/12/98
Chromium, hexavalent	SM 3500-CR D	<0.010	mg/L	0.010	8/01/98
Nitrogen, Total	CALCULATION	1.9	mg/L		8/25/98
WW Metals Digestion for ICP	EPA 200.7				8/04/98
DW/WW metals digestion-AA	SM 3030E				8/04/98
Antimony	SM 3113B	<0.005	mg/L	0.005	8/20/98
Arsenic	SM 3113B	<0.005	mg/L	0.005	8/06/98
Beryllium	EPA 200.7	<0.002	mg/L	0.002	8/18/98
Calcium	EPA 200.7	20.	mg/L	1.	8/18/98
Copper	EPA 200.7	<0.015	mg/L	0.015	8/18/98
Lead	SM 3113B	0.016	mg/L	0.005	8/12/98
Magnesium	EPA 200.7	2.	mg/L	1.	8/18/98
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	8/08/98
Selenium	SM 3113B	<0.005	mg/L	0.005	8/17/98
Silver	EPA 200.7	<0.04	mg/L	0.04	8/21/98

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Matrix: Storm Water
Sample No: 9808-05289-002

Time Sampled: 22:48
Date Sampled: 7/31/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Hardness, Total (Ca & Mg)	SM 2340B	58	mg/L	7.	8/18/98
Zinc	EPA 200.7	0.12	mg/L	0.02	8/18/98
Thallium	EPA 200.9	<0.001	mg/L	0.001	8/05/98
Cadmium	EPA 213.2	0.0007	mg/L	0.0002	8/10/98
Chromium	EPA 218.2	0.0048	mg/L	0.001	8/10/98
Nickel	EPA 249.2	0.0036	mg/L	0.001	8/11/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	8/14/98
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/18/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	8/11/98
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	8/11/98
Lead, Dissolved	EPA 200.9	0.008	mg/L	0.005	8/11/98
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	8/08/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/17/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	8/17/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	8/05/98
Zinc, Dissolved	EPA 200.7	0.08	mg/L	0.02	8/17/98
Cadmium, Dissolved	EPA 213.2	0.00058	mg/L	0.0002	8/10/98
Chromium, Dissolved	EPA 218.2	0.0046	mg/L	0.001	8/10/98
Nickel, Dissolved	EPA 249.2	0.0048	mg/L	0.001	8/11/98
N-Nitrosodimethylamine	EPA 625	ND	ug/L	5.0	8/10/98
Phenol	EPA 625	ND	ug/L	5.0	8/10/98
Aniline	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-chloroethyl)ether	EPA 625	ND C	ug/L	10.	8/10/98
2-Chlorophenol	EPA 625	ND	ug/L	10.	8/10/98
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
Benzyl alcohol	EPA 625	ND C	ug/L	10.	8/10/98
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
2-Methylphenol	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	10.	8/10/98
4-Methylphenol (p-Cresol)	EPA 625	ND	ug/L	5.0	8/10/98
N-Nitrosodi-n-propylamine	EPA 625	ND C	ug/L	5.0	8/10/98
Hexachloroethane	EPA 625	ND C	ug/L	10.	8/10/98
Nitrobenzene	EPA 625	ND	ug/L	10.	8/10/98
Isophorone	EPA 625	ND	ug/L	10.	8/10/98
2,4-Dimethylphenol	EPA 625	ND	ug/L	10.	8/10/98
Benzoic acid	EPA 625	ND C	ug/L	50.	8/10/98
2-Nitrophenol	EPA 625	ND	ug/L	10.	8/10/98
Bis(2-chloroethoxy)methane	EPA 625	ND C	ug/L	10.	8/10/98
2,4-Dichlorophenol	EPA 625	ND	ug/L	10.	8/10/98
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
Naphthalene	EPA 625	ND	ug/L	5.0	8/10/98

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Matrix: Storm Water
Sample No: 9808-05289-002

Time Sampled: 22:48
Date Sampled: 7/31/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	8/10/98
4-Chloroaniline	EPA 625	ND	ug/L	5.0	8/10/98
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	8/10/98
2-Methylnaphthalene	EPA 625	ND	ug/L	5.0	8/10/98
Hexachlorocyclopentadiene	EPA 625	ND C	ug/L	5.0	8/10/98
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
2,4,5-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	8/10/98
2-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/10/98
Acenaphthylene	EPA 625	ND	ug/L	10.	8/10/98
3-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
Acenaphthene	EPA 625	ND	ug/L	5.0	8/10/98
2,4-Dinitrophenol	EPA 625	ND	ug/L	10.	8/10/98
4-Nitrophenol	EPA 625	ND C	ug/L	5.0	8/10/98
Dibenzofuran	EPA 625	ND	ug/L	5.0	8/10/98
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/10/98
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
4-Chlorophenylphenylether	EPA 625	ND	ug/L	10.	8/10/98
Fluorene	EPA 625	ND	ug/L	5.0	8/10/98
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	10.	8/10/98
4-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
N-Nitrosodiphenylamine	EPA 625	ND	ug/L	5.0	8/10/98
1,2-Diphenylhydrazine	EPA 625	ND **	ug/L	5.0	8/10/98
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	8/10/98
Hexachlorobenzene	EPA 625	ND	ug/L	10.	8/10/98
Pentachlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
Phenanthrene	EPA 625	ND	ug/L	5.0	8/10/98
Anthracene	EPA 625	ND	ug/L	5.0	8/10/98
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	8/10/98
Fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98
Benzidine	EPA 625	ND	ug/L	20.	8/10/98
Pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-ethylhexyl)phthalate	EPA 625	23.7	ug/L	10.	8/10/98
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	8/10/98
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	8/10/98
Chrysene	EPA 625	ND	ug/L	5.0	8/10/98
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98

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Matrix: Storm Water
Sample No: 9808-05289-002

Time Sampled: 22:48
Date Sampled: 7/31/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	8/10/98
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.	8/10/98
Extraction	EPA 625				8/06/98
Surrogate:	EPA 625				8/10/98
***d5-Phenol	EPA 625	31.8	% Recovery		8/10/98
***2-Fluorophenol	EPA 625	24.8	% Recovery		8/10/98
***d5-Nitrobenzene	EPA 625	55.5	% Recovery		8/10/98
***2-Fluorobiphenyl	EPA 625	55.4	% Recovery		8/10/98
***2,4,6-Tribromophenol	EPA 625	64.9	% Recovery		8/10/98
***d14-Terphenyl	EPA 625	58.0	% Recovery		8/10/98
4,4'-DDD	EPA 608	ND C	ug/L	1.0	8/09/98
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/09/98
4,4'-DDT	EPA 608	ND C	ug/L	2.0	8/09/98
Aldrin	EPA 608	ND	ug/L	1.0	8/09/98
alpha-BHC	EPA 608	ND	ug/L	1.0	8/09/98
Chlordane	EPA 608	ND	ug/L	1.0	8/09/98
delta-BHC	EPA 608	ND	ug/L	1.0	8/09/98
Dieldrin	EPA 608	ND	ug/L	1.0	8/09/98
Endosulfan I	EPA 608	ND	ug/L	1.0	8/09/98
Endosulfan II	EPA 608	ND C	ug/L	1.0	8/09/98
Endosulfan Sulfate	EPA 608	ND C	ug/L	1.0	8/09/98
Endrin	EPA 608	ND C	ug/L	1.0	8/09/98
Endrin Aldehyde	EPA 608	ND	ug/L	1.0	8/09/98
Heptachlor	EPA 608	ND	ug/L	1.0	8/09/98
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	8/09/98
Lindane (gamma BHC)	EPA 608	ND	ug/L	1.0	8/09/98
PCB 1016	EPA 608	ND	ug/L	1.0	8/09/98
PCB 1221	EPA 608	ND	ug/L	10	8/09/98
PCB 1232	EPA 608	ND	ug/L	1.0	8/09/98
PCB 1242	EPA 608	ND	ug/L	1.0	8/09/98
PCB 1248	EPA 608	ND	ug/L	1.0	8/09/98
PCB 1254	EPA 608	ND	ug/L	1.0	8/09/98
PCB 1260	EPA 608	ND	ug/L	1.0	8/09/98
Toxaphene	EPA 608	ND	ug/L	1.0	8/09/98
beta-BHC	EPA 608	ND	ug/L	1.0	8/09/98
Extraction	EPA 608				8/04/98
Surrogate:	EPA 608				8/09/98
***Dibutylchlorendate	EPA 608	112	% Recovery		8/09/98

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C = Continuing Calibration was above method control limits. Data was not impacted.
D1 = Sample was diluted due to high concentration of target analyte.
T = Result based on a Tentatively Identified Compound search.
**1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.

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

Report revised on 11/3/98 to correct analyzed dates for Nitrate & Nitrite.

S. Kaufman

Authorized Signatory
ADHS License No.: AZ0004

Data Checksheet

Site	GRANDVIEW (M4)
Municipality	MESA
Sample Date	July 31, 1998 —

Date Received	Sept 8, 1998

Laboratory Used	Bolin
Laboratory Contact	Stephanie
FCD Sample ID Number	Mesa 4-Grab / Mesa 4
Lab Sample ID Number	9808-05289-005 / 9808-05315-002
Laboratory Invoice Number	45278 / 45348

Initial Review Complete	yes	Date	10-5-98
Lab Contacted	yes	Date	10-22-98
Lab Review Complete	yes	Date	11-9-98
Second Review Complete	yes	Date	11-9-98
Additional Review Necessary	No		

Comments
Analyses for short hold time items was reported to have been done on 7/31/98; samples not delivered to lab until 8/1/98.

Data Validation Table Complete	yes	Date	11-12-98

Data Entered Into Database	yes	Date	11-10-98

Bolin Laboratories Inc.

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

Received: 8/01/98
Reported: 8/31/98
Invoice No: 045278

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05289-005
Sample ID: Mesa 4-Grab (Grandview)

Time Sampled: 23:10
Date Sampled: 7/31/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Biochemical Oxygen Demand	EPA 405.1	19.	mg/L	1.0	8/01/98
Dissolved Oxygen	EPA 360.1	7.62	mg/L	0.01	8/01/98
Fecal Coliform	SM 9221D	2,400.	MPN/100ml		8/01/98
Fecal Streptococcus	SM 9230B	14,000.	MPN/100ml		8/01/98
Oil & Grease	EPA 413.1	<5.0	mg/L	5.0	8/11/98

Report revised on 11/3/98 to correct BOD analyze date.

S. Kaufman

Authorized Signatory
ADHS License No.: AZ0004

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

Received: 8/03/98
Reported: 8/31/98
Invoice No: 045348

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05315-002
Sample ID: Mesa 4 (Grandview)

Time Sampled: 3:07
Date Sampled: 8/01/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Chemical Oxygen Demand	EPA 410.4	101.	mg/L	20.	8/09/98
P as Total Phosphate	EPA 365.3	<0.05	mg/L	0.05	8/04/98
Total Phosphate	CALCULATION	<0.05	mg/L	0.15	8/04/98
Total Kjeldahl Nitrogen	EPA 351.3	1.1	mg/L	0.5	8/10/98
Solids, Total Suspended	EPA 160.2	40.	mg/L	1.	8/05/98
Total Dissolved Solids	SM 2540C	111.	mg/L	1.	8/05/98
pH	EPA 150.1	6.5	Std Unit		8/04/98
Total Alkalinity (as CaCO3)	SM 2320B	32.	mg/L	2.	8/06/98
Sulfate, Dissolved	EPA 300.0	7.	mg/L	5.0	8/04/98
Chloride	EPA 300.0	10.	mg/L	5.0	8/04/98
Nitrogen as Ammonia	EPA 350.2	1.27	mg/L	0.03	8/10/98
Organic Nitrogen	CALCULATION	<0.5	mg/L		8/25/98
Cyanide, Total	SM 4500 CN E	<0.01	mg/L	0.01	8/05/98
N-Nitrosodimethylamine	EPA 625	ND	ug/L	5.0	8/10/98
Phenol	EPA 625	ND	ug/L	5.0	8/10/98
Aniline	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-chloroethyl)ether	EPA 625	ND C	ug/L	10.	8/10/98
2-Chlorophenol	EPA 625	ND	ug/L	10.	8/10/98
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
Benzyl alcohol	EPA 625	ND C	ug/L	10.	8/10/98
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
2-Methylphenol	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	10.	8/10/98
4-Methylphenol (p-Cresol)	EPA 625	ND	ug/L	5.0	8/10/98
N-Nitrosodi-n-propylamine	EPA 625	ND C	ug/L	5.0	8/10/98
Hexachloroethane	EPA 625	ND C	ug/L	10.	8/10/98
Nitrobenzene	EPA 625	ND	ug/L	10.	8/10/98
Isophorone	EPA 625	ND	ug/L	10.	8/10/98
2,4-Dimethylphenol	EPA 625	ND	ug/L	10.	8/10/98
Benzoic acid	EPA 625	ND C	ug/L	50.	8/10/98
2-Nitrophenol	EPA 625	ND	ug/L	10.	8/10/98

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Matrix: Storm Water
Sample No: 9808-05315-002

Time Sampled: 3:07
Date Sampled: 8/01/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Bis(2-chloroethoxy)methane	EPA 625	ND C	ug/L	10.	8/10/98
2,4-Dichlorophenol	EPA 625	ND	ug/L	10.	8/10/98
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	8/10/98
Naphthalene	EPA 625	ND	ug/L	5.0	8/10/98
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	8/10/98
4-Chloroaniline	EPA 625	ND	ug/L	5.0	8/10/98
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	8/10/98
2-Methylnaphthalene	EPA 625	ND	ug/L	5.0	8/10/98
Hexachlorocyclopentadiene	EPA 625	ND C	ug/L	5.0	8/10/98
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
2,4,5-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	8/10/98
2-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/10/98
Acenaphthylene	EPA 625	ND	ug/L	10.	8/10/98
3-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
Acenaphthene	EPA 625	ND	ug/L	5.0	8/10/98
2,4-Dinitrophenol	EPA 625	ND	ug/L	10.	8/10/98
4-Nitrophenol	EPA 625	ND C	ug/L	5.0	8/10/98
Dibenzofuran	EPA 625	ND	ug/L	5.0	8/10/98
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/10/98
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
4-Chlorophenylphenylether	EPA 625	ND	ug/L	10.	8/10/98
Fluorene	EPA 625	ND	ug/L	5.0	8/10/98
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	10.	8/10/98
4-Nitroaniline	EPA 625	ND	ug/L	5.0	8/10/98
N-Nitrosodiphenylamine	EPA 625	ND	ug/L	5.0	8/10/98
1,2-Diphenylhydrazine	EPA 625	ND **	ug/L	5.0	8/10/98
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	8/10/98
Hexachlorobenzene	EPA 625	ND	ug/L	10.	8/10/98
Pentachlorophenol	EPA 625	ND	ug/L	5.0	8/10/98
Phenanthrene	EPA 625	ND	ug/L	5.0	8/10/98
Anthracene	EPA 625	ND	ug/L	5.0	8/10/98
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	8/10/98
Fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98
Benzidine	EPA 625	ND	ug/L	20.	8/10/98
Pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	8/10/98
Bis(2-ethylhexyl)phthalate	EPA 625	142	ug/L	10.	8/10/98
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	8/10/98
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	8/10/98

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9808-05315-002

Time Sampled: 3:07
Date Sampled: 8/01/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Chrysene	EPA 625	ND	ug/L	5.0	8/10/98
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	8/10/98
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	8/10/98
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	8/10/98
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.	8/10/98
Extraction	EPA 625				8/06/98
Surrogate:	EPA 625				8/10/98
***d5-Phenol	EPA 625	31.5	% Recovery		8/10/98
***2-Fluorophenol	EPA 625	21.5	% Recovery		8/10/98
***d5-Nitrobenzene	EPA 625	54.2	% Recovery		8/10/98
***2-Fluorobiphenyl	EPA 625	53.2	% Recovery		8/10/98
***2,4,6-Tribromophenol	EPA 625	74.0	% Recovery		8/10/98
***d14-Terphenyl	EPA 625	60.3	% Recovery		8/10/98
4,4'-DDD	EPA 608	ND C	ug/L	1.0	8/12/98
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/12/98
4,4'-DDT	EPA 608	ND	ug/L	2.0	8/12/98
Aldrin	EPA 608	ND	ug/L	1.0	8/12/98
alpha-BHC	EPA 608	ND	ug/L	1.0	8/12/98
Chlordane	EPA 608	ND	ug/L	1.0	8/12/98
delta-BHC	EPA 608	ND	ug/L	1.0	8/12/98
Dieldrin	EPA 608	ND	ug/L	1.0	8/12/98
Endosulfan I	EPA 608	ND	ug/L	1.0	8/12/98
Endosulfan II	EPA 608	ND C	ug/L	1.0	8/12/98
Endosulfan Sulfate	EPA 608	ND	ug/L	1.0	8/12/98
Endrin	EPA 608	ND C	ug/L	1.0	8/12/98
Endrin Aldehyde	EPA 608	ND C	ug/L	1.0	8/12/98
Heptachlor	EPA 608	ND	ug/L	1.0	8/12/98
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	8/12/98
Lindane (gamma BHC)	EPA 608	ND C	ug/L	1.0	8/12/98
PCB 1016	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1221	EPA 608	ND	ug/L	10	8/12/98
PCB 1232	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1242	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1248	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1254	EPA 608	ND	ug/L	1.0	8/12/98
PCB 1260	EPA 608	ND	ug/L	1.0	8/12/98
Toxaphene	EPA 608	ND	ug/L	1.0	8/12/98
beta-BHC	EPA 608	ND C	ug/L	1.0	8/12/98

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9808-05315-002

Time Sampled: 3:07
Date Sampled: 8/01/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Extraction	EPA 608				8/07/98
Surrogate:	EPA 608				8/12/98
***Dibutylchlorendate	EPA 608	192 S1	% Recovery		8/12/98
WW Metals Digestion for ICP	EPA 200.7				8/04/98
DW/WW metals digestion-AA	SM 3030E				8/04/98
Antimony	SM 3113B	<0.005	mg/L	0.005	8/19/98
Arsenic	SM 3113B	<0.005	mg/L	0.005	8/06/98
Beryllium	EPA 200.7	<0.002 M1	mg/L	0.002	8/21/98
Calcium	EPA 200.7	14.	mg/L	1.	8/18/98
Copper	EPA 200.7	<0.015	mg/L	0.015	8/18/98
Lead	SM 3113B	0.005	mg/L	0.005	8/12/98
Magnesium	EPA 200.7	2.	mg/L	1.	8/21/98
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	8/08/98
Selenium	SM 3113B	<0.005	mg/L	0.005	8/17/98
Silver	EPA 200.7	<0.04	mg/L	0.04	8/21/98
Hardness, Total (Ca & Mg)	SM 2340B	43	mg/L	7.	8/21/98
Zinc	EPA 200.7	0.09	mg/L	0.02	8/18/98
Thallium	EPA 200.9	<0.001	mg/L	0.001	8/05/98
Chromium	EPA 218.2	0.0016	mg/L	0.001	8/10/98
Cadmium	EPA 213.2	<0.0002	mg/L	0.0002	8/10/98
Nickel	EPA 249.2	0.007	mg/L	0.001	8/11/98
Cadmium, Dissolved	EPA 213.2	<0.0002	mg/L	0.0002	8/10/98
Chromium, Dissolved	EPA 218.2	<0.001	mg/L	0.001	8/10/98
Nickel, Dissolved	EPA 249.2	0.0048	mg/L	0.001	8/11/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	8/14/98
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/18/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	8/11/98
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	8/11/98
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/11/98
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	8/08/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/17/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	8/17/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	8/05/98
Zinc, Dissolved	EPA 200.7	0.04	mg/L	0.02	8/17/98

C = Continuing Calibration was above method control limits. Data was not impacted.
S1 = Surrogate recovery was above laboratory acceptance limits. Data was not impacted.
M1 = Matrix spike recovery was above laboratory acceptance limits. Data was not impacted.
T = Result based on a Tentatively Identified Compound search.
**1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.

Bolin Laboratories Inc.

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

J. Kaufman

Project Manager
ADHS License No.: AZ0004

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 District
Bolin Sample ID: 9808-5289

Analyte	Method	Date Analyzed	Spk Conc.	MS %Rec	MSD %Rec	RPD	Blk	ICV %Rec	CCV %Rec
Biological Oxygen Demand	405.1	7/31/98	N/A	N/A	N/A	#####	<1.0	82	-
Oil and Grease	413.1	8/11/98	N/A	N/A	N/A	#####	<5.0		-
Chemical Oxygen Demand	410.4	8/9/98	30	100	98	2.02	<20	111	107
Chloride	300	7/31/98	20	103	102	0.976	<5.0	102	103
Conductivity	SM 2510B	8/3/98	N/A	N/A	N/A	#####	<2.0	106	-
Total Dissolved Solids	SM 2540C	8/3/98	N/A	N/A	N/A	#####	<1.0	100	-
Total Suspended Solids	160.2	8/5/98	N/A	N/A	N/A	#####	<1.0	93	92
Nitrite	300	7/31/98	2.03	98	100	2.02	<0.1	99	101
Nitrate	300	7/31/98	4.54	105	106	0.948	<0.1	102	103
Total Phosphorous	365.3	8/4/98	0.1	92	95	3.209	<0.05	96	110
Disolved Phosphorous	365.2	8/4/98	0.1	105	99	5.882	<0.05	94	99
Ortho-Phosphorous	365.2	7/31/98	0.1	99	100	1.005	<0.05	91	92
Total Organic Carbons	SM 5310C	8/5/98	5	86	80	7.229	0.17	108	104
Hexavalent Chromium	SM 3500	7/31/98	0.2	109	104	4.695	<0.01	106	103
Dissolved Sulfate	300	7/31/98	20	103	104	0.966	<5.0	104	103

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: 9808-5289-2

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	8/9/98	5.0	<PQL	3.84	77	3.17	63	19	104	106
Beta-BHC	EPA 608	8/9/98	5.0	<PQL	4.16	83	3.75	75	10	105	114
Gamma(Lindane)-BHC	EPA 608	8/9/98	5.0	<PQL	3.70	74	3.16	63	16	103	114
Delta-BHC	EPA 608	8/9/98	5.0	<PQL	4.21	84	3.88	78	8	103	109
Heptachlor	EPA 608	8/9/98	5.0	<PQL	3.44	69	2.95	59	15	96	110
Aldrin	EPA 608	8/9/98	5.0	<PQL	3.88	78	3.44	69	12	104	107
Heptachlor Epoxide	EPA 608	8/9/98	5.0	<PQL	4.16	83	3.77	75	10	102	108
Endosulfan I	EPA 608	8/9/98	5.0	<PQL	4.15	83	3.67	73	12	104	108
Dieldrin	EPA 608	8/9/98	5.0	<PQL	3.97	79	3.86	77	3	105	113
4,4,-DDE	EPA 608	8/9/98	5.0	<PQL	4.34	87	4.05	81	7	101	103
Endrin	EPA 608	8/9/98	5.0	<PQL	4.28	86	4.03	81	6	103	117 *
Endosulfan II	EPA 608	8/9/98	5.0	<PQL	4.16	83	3.67	73	13	103	119 *
4,4-DDD	EPA 608	8/9/98	5.0	<PQL	6.20	124	6.18	124	0	103	119 *
Endrin Aldehyde	EPA 608	8/9/98	5.0	<PQL	4.26	85	3.97	79	7	95	110
Endosulfan Sulfate	EPA 608	8/9/98	5.0	<PQL	4.11	82	3.93	79	4	102	115 *
4,4-DDT	EPA 608	8/9/98	5.0	<PQL	3.62	72	3.86	77	6	95	117 *

*=Continuing Calibration Was Above Method Control Limits. Data Was Not Impacted.
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
BLK-SPK is a Blank Spike

Bolin Laboratories Inc.

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Quality Control Data Report

Client: Maricopa County Flood Control
Bolin Sample ID: 5315 & 5289

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	BS Conc.	BS %Rec	BSD Conc.	BSD %Rec	RPD	BLK (ppb)	CCV %Rec
Acenaphthene	EPA 625	8/10/98	100	73	73	72	72	1	<PQL	108
Acenaphthylene	EPA 625	8/10/98	100	60	60	57	57	5	<PQL	103
Anthracene	EPA 625	8/10/98	100	76	76	77	77	1	<PQL	107
Benzo(a)anthracene	EPA 625	8/10/98	100	87	87	84	84	4	<PQL	113
Benzo(b)fluoranthene	EPA 625	8/10/98	100	82	82	82	82	0	<PQL	110
Benzo(k)fluoranthene	EPA 625	8/10/98	100	78	78	81	81	4	<PQL	102
Benzo(a)pyrene	EPA 625	8/10/98	100	77	77	79	79	3	<PQL	107
Benzo(ghi)perylene	EPA 625	8/10/98	100	79	79	79	79	0	<PQL	108
Benzyl butyl phthalate	EPA 625	8/10/98	100	76	76	77	77	1	<PQL	103
Bis(2-chloroethyl)ether	EPA 625	8/10/98	100	66	66	58	58	13	<PQL	127
Bis(2-chloroethoxy)methane	EPA 625	8/10/98	100	67	67	62	62	8	<PQL	122
Bis(2-chloroisopropyl)ether	EPA 625	8/10/98	100	26	26	24	24	8	<PQL	106
Bis(2-ethylhexyl) phthalate	EPA 625	8/10/98	100	78	78	75	75	4	<PQL	105
4-Bromophenyl phenyl ether	EPA 625	8/10/98	100	76	76	79	79	4	<PQL	88
2-Chloronaphthalene	EPA 625	8/10/98	100	58	58	56	56	4	<PQL	109
4-Chlorophenyl phenyl ether	EPA 625	8/10/98	100	68	68	71	71	4	<PQL	102
Chrysene	EPA 625	8/10/98	100	86	86	83	83	4	<PQL	114
Dibenzo(a,h)anthracene	EPA 625	8/10/98	100	86	86	87	87	1	<PQL	117
Di-n-butyl phthalate	EPA 625	8/10/98	100	75	75	76	76	1	<PQL	105
1,2-Dichlorobenzene	EPA 625	8/10/98	100	46	46	45	45	2	<PQL	114
1,3-Dichlorobenzene	EPA 625	8/10/98	100	44	44	45	45	2	<PQL	116
1,4-Dichlorobenzene	EPA 625	8/10/98	100	45	45	45	45	0	<PQL	113
3,3'-Dichlorobenzidine	EPA 625	8/10/98	100	70	70	72	72	3	<PQL	106
Diethyl phthalate	EPA 625	8/10/98	100	70	70	71	71	1	<PQL	95
Dimethyl phthalate	EPA 625	8/10/98	100	66	66	59	59	11	<PQL	104
2,4-Dinitrotoluene	EPA 625	8/10/98	100	76	76	79	79	4	<PQL	113
2,6-Dinitrotoluene	EPA 625	8/10/98	100	65	65	63	63	3	<PQL	108
Di-n-octyl phthalate	EPA 625	8/10/98	100	76	76	76	76	0	<PQL	103
Fluoranthene	EPA 625	8/10/98	100	82	82	82	82	0	<PQL	114
Fluorene	EPA 625	8/10/98	100	73	73	75	75	3	<PQL	104
Hexachlorobenzene	EPA 625	8/10/98	100	77	77	81	81	5	<PQL	116

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Hexachlorobutadiene	EPA 625	8/10/98	100	47	47	51	51	8	<PQL	108
Hexachloroethane	EPA 625	8/10/98	100	52	52	55	55	6	<PQL	144
Indeno(1,2,3-cd)pyrene	EPA 625	8/10/98	100	89	89	90	90	1	<PQL	118
Isophorone	EPA 625	8/10/98	100	64	64	61	61	5	<PQL	114
Naphthalene	EPA 625	8/10/98	100	58	58	56	56	4	<PQL	111
Nitrobenzene	EPA 625	8/10/98	100	63	63	60	60	5	<PQL	119
N-Nitrosodi-n-propylamine	EPA 625	8/10/98	100	64	64	62	62	3	<PQL	125
Phenanthrene	EPA 625	8/10/98	100	77	77	80	80	4	<PQL	107
Pyrene	EPA 625	8/10/98	100	87	87	85	85	2	<PQL	115
1,2,4-Trichlorobenzene	EPA 625	8/10/98	100	50	50	50	50	0	<PQL	111
4-Chloro-3-methylphenol	EPA 625	8/10/98	200	136	68	130	65	5	<PQL	118
2-Chlorophenol	EPA 625	8/10/98	200	101	51	97	49	4	<PQL	112
2,4-Dichlorophenol	EPA 625	8/10/98	200	124	62	112	56	10	<PQL	103
2,4-Dimethylphenol	EPA 625	8/10/98	200	123	62	118	59	4	<PQL	112
2,4-Dinitrophenol	EPA 625	8/10/98	200	150	75	154	77	3	<PQL	119
2-Methyl-4,6-dinitrophenol	EPA 625	8/10/98	200	155	78	159	80	3	<PQL	110
2-Nitrophenol	EPA 625	8/10/98	200	120	60	115	58	4	<PQL-	104
4-Nitrophenol	EPA 625	8/10/98	200	0	0	76	38	200	<PQL	127
Pentachlorophenol	EPA 625	8/10/98	200	141	71	153	77	8	<PQL	105
Phenol	EPA 625	8/10/98	200	7	4	6	3	15	<PQL	112
2,4,6-Trichlorophenol	EPA 625	8/10/98	200	139	70	128	64	8	<PQL	116

CCV = Continuing Calibration Verification.
BS = Blank Spike.
BSD = Blank Spike Duplicate.
RPD = Relative Percent Difference.
BLK = Blank.

McKENZIE LABORATORIES

Date: 14-Aug-98

CLIENT: Bolin Laboratories Inc
Work Order: 9808004
Project:

QC SUMMARY REPORT

Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	<0.0050	0.0050		mg/L	1	EPA420.1	8/12/98	8/12/98	HO	420.1-8/13/98

Qualifiers:

S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
H - Analyzed past EPA recommended Holding Time
R - RPD outside accepted recovery limits
E - Value above quantitation range
D - Surrogate diluted out

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McKENZIE LABORATORIES

Date: 14-Aug-98

CLIENT: Bolin Laboratories Inc
Work Order: 9808004
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: **9808018-04AD**		Batch ID:	420.1-8/13/98								
Client ID:											
Phenolics, Total Recoverable	<0.0050	0.0050	mg/L	<0.0050	0%	20	EPA420.1	8/12/98	8/12/98	HO	

Qualifiers:

S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
H - Analyzed past EPA recommended Holding Time
R - RPD outside accepted recovery limits
E - Value above quantitation range
D - Surrogate diluted out

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McKENZIE LABORATORIES

Date: 14-Aug-98

CLIENT: Bolin Laboratories Inc
Work Order: 9808004
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: **9808018-04AS**	Batch ID: 420.1-8/13/98			Test Code: EPA420.1				Date Analyzed: 8/12/98			
Client ID:				Units: mg/L				Date Prepared: 8/12/98			
Phenolics, Total Recoverable	0.09730	0.0050	0.1	<0.0050	97%	80	120				

Qualifiers:

S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
H - Analyzed past EPA recommended Holding Time
R - RPD outside accepted recovery limits
E - Value above quantitation range
D - Surrogate diluted out

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McKENZIE LABORATORIES

Date: 14-Aug-98

CLIENT: Bolin Laboratories Inc
Work Order: 9808004
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: 420.1-8/13/98			Test Code: EPA420.1				Date Analyzed: 8/12/98			
				Units: mg/L				Date Prepared: 8/12/98			
Phenolics, Total Recoverable	0.08780	0.0050	0.1	<0.0050	88%	85	115				

Qualifiers:

S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
H - Analyzed past EPA recommended Holding Time
R - RPD outside accepted recovery limits
E - Value above quantitation range
D - Surrogate diluted out

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McKENZIE LABORATORIES

Date: 14-Aug-98

CLIENT: Bolin Laboratories Inc
Work Order: 9808004
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: 420.1-8/13/98			Test Code: EPA420.1				Date Analyzed: 8/12/98			
				Units: mg/L				Date Prepared: 8/12/98			
Phenolics, Total Recoverable	0.09010	0.0050	0.1	<0.0050	90%	85	115				

Qualifiers:

S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
H - Analyzed past EPA recommended Holding Time
R - RPD outside accepted recovery limits
E - Value above quantitation range
D - Surrogate diluted out

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Quality Control Data Report

Client: MCFC
Bolin Sample ID: 9807-5289 diss

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	8/11/98	0.2	114	117	<PQL	96	96
Copper	EPA 200.7	8/11/98	1	107	109	<PQL	92	90
Silver	EPA 200.7	8/17/98	0.5	86	87	<PQL	96	97
Zinc	EPA 200.7	8/17/98	1	115	114	<PQL	98	107
Antimony	EPA 200.9/SM 3113B	8/14/98	0.020	60	75	<PQL	90	90
Arsenic	EPA 200.9/SM 3113B	8/18/98	0.020	105	115	<PQL	100	100
Lead	EPA 200.9/SM 3113B	8/11/98	0.020	100	100	<PQL	95	95
Selenium	EPA 200.9/SM 3113B	8/17/98	0.020	70	70	<PQL	100	100
Thallium	EPA 200.9/SM 3113B	8/5/98	0.020	110	110	<PQL	110	110
Mercury	EPA 245.1	7/29/98	0.005	66	100	<PQL	100	100

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: MCFC
Bolin Sample ID: 9807-5289 total

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Calcium	EPA 200.7	8/18/98	30	109	101	<PQL	102	103
Copper	EPA 200.7	8/18/98	1	98	104	<PQL	102	104
Magnesium	EPA 200.7	8/18/98	30	85	85	<PQL	100	98
Silver	EPA 200.7	8/21/98	0.5	102	91	<PQL	102	101
Zinc	EPA 200.7	8/18/98	1	94	94	<PQL	98	101
Antimony	EPA 200.9/SM 3113B	8/20/98	0.020	70	90	<PQL	95	110
Arsenic	EPA 200.9/SM 3113B	8/6/98	0.020	80	70	<PQL	105	105
Lead	EPA 200.9/SM 3113B	8/12/98	0.020	90	90	<PQL	95	100
Selenium	EPA 200.9/SM 3113B	8/17/98	0.020	85	100	<PQL	95	100
Thallium	EPA 200.9/SM 3113B	8/5/98	0.020	100	95	<PQL	90	90
Mercury	EPA 245.1	8/8/98	0.005	102	106	<PQL	100	100

MI Matrix Interference
ICV Initial Calibration Verification
CCV Continuing Calibration Verification
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RPD is Relative Percent Difference
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Bolin Laboratories Inc.

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Quality Control Data Report

Client: MCFC
Bolin Sample ID: 9807-5315 diss

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	8/11/98	0.2	114	117	<PQL	96	96
Copper	EPA 200.7	8/11/98	1	107	109	<PQL	92	90
Silver	EPA 200.7	8/17/98	0.5	80	79	<PQL	97	95
Zinc	EPA 200.7	8/17/98	1	123	122	<PQL	107	97
Antimony	EPA 200.9/SM 3113B	8/14/98	0.020	60	75	<PQL	90	90
Arsenic	EPA 200.9/SM 3113B	8/18/98	0.020	105	115	<PQL	100	100
Lead	EPA 200.9/SM 3113B	8/11/98	0.020	100	100	<PQL	95	95
Selenium	EPA 200.9/SM 3113B	8/17/98	0.020	70	70	<PQL	100	100
Thallium	EPA 200.9/SM 3113B	8/5/98	0.020	110	110	<PQL	110	110
Mercury	EPA 245.1	8/8/98	0.005	102	106	<PQL	100	100

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: MCFC
Bolin Sample ID: 9807-5315 total

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	8/18/98	1	105	103	<PQL	96	104
Calcium	EPA 200.7	8/18/98	30	109	101	<PQL	102	103
Copper	EPA 200.7	8/18/98	1	98	104	<PQL	102	104
Magnesium	EPA 200.7	8/18/98	30	85	85	<PQL	100	98
Silver	EPA 200.7	8/21/98	0.5	102	91	<PQL	102	101
Zinc	EPA 200.7	8/18/98	1	94	94	<PQL	98	101
Antimony	EPA 200.9/SM 3113B	8/20/98	0.020	70	90	<PQL	95	110
Arsenic	EPA 200.9/SM 3113B	8/6/98	0.020	80	70	<PQL	105	105
Lead	EPA 200.9/SM 3113B	8/12/98	0.020	90	90	<PQL	95	100
Selenium	EPA 200.9/SM 3113B	8/17/98	0.020	85	100	<PQL	95	100
Thallium	EPA 200.9/SM 3113B	8/5/98	0.020	100	95	<PQL	90	90
Mercury	EPA 245.1	8/8/98	0.005	100	100	<PQL	100	100

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

McKENZIE LABORATORIES

Date: 14-Aug-98

CLIENT: Bolin Laboratories Inc
Work Order: 9808018
Project:

QC SUMMARY REPORT

Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	<0.0050	0.0050		mg/L	1	EPA420.1	8/12/98	8/12/98	HO	420.1-8/13/98

Qualifiers:

S - Spike Recovery outside accepted recovery limits
B - Analyte detected in the associated Method Blank
H - Analyzed past EPA recommended Holding Time
R - RPD outside accepted recovery limits
E - Value above quantitation range
D - Surrogate diluted out

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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: NH3 **UNITS:** mg/L
METHOD NO.: 350.2 **PREPARED BY:** SM
ANALYSIS DATE: 08/10/98

INTERNAL QUALITY CONTROL SAMPLE

Theoretical Value	Analytical Value	% Recovery
1.00	1.00	100

DUPLICATE SAMPLE DATA

Lab I.D.	Result 1	Result 2	RPD
BD-07425	3.75	3.68	1.9
BD-07492	0.10	0.11	9.5

SPIKED SAMPLE DATA

Lab I.D.	Sample Result	Spike Result	Amount Spiked	% Recovery
BD-07425	3.72	5.50	2.00	89
BD-07492	0.11	1.04	1.00	94

Reagent Blank <0.03

File No. QC-NH3-7425.xls

Bolin Laboratories Inc.

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Quality Control Data Report

Client: Maricopa County Flood Control District
Bolin Sample ID: 9808-5315

Analyte	Method	Date Analyzed	Spk Conc.	MS %Rec	MSD %Rec	RPD	Blk	ICV %Rec	CCV %Rec
Chemical Oxygen Demand	410.4	8/9/98	30	100	98	2.02	<20	111	107
Chloride	300	8/4/98	20	97	97	0	<5.0	100	102
Total Dissolved Solids	SM 2540C	8/5/98	N/A	N/A	N/A	#####	<1.0	102	-
Total Suspended Solids	160.2	8/5/98	N/A	N/A	N/A	#####	<1.0	93	92
Nitrite	300	8/4/98	2.03	101	103	1.961	<0.1	103	104
Nitrate	300	8/4/98	4.54	107	100	6.763	<0.1	104	106
Total Phosphorous	365.3	8/4/98	0.1	92	95	3.209	<0.05	96	110
Disolved Phosphorous	365.2	8/4/98	0.1	105	99	5.882	<0.05	94	99
Ortho-Phosphorous	365.2	8/4/98	0.1	118	118	0	<0.05	90	93
Total Organic Carbons	SM 5310C	8/5/98	5	86	80	7.229	0.17	108	104
Alkalinity	SM 2320B	8/6/98	20	91	92	1.093	<2.0	98	96
Hexavalent Chromium	SM 3500	8/4/98	0.2	94	95	1.058	<0.01	99	96
Dissolved Sulfate	300	8/4/98	20	99	99	0	<5.0	99	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

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Quality Control Data Report

Client: Maricopa County Flood Control
Bolin Sample ID: 9808-5315-1,2,3

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	Blk (ppb)	Blk-Spk Conc. ppb	Blk-Spk %Rec	Blk Spk Dup ppb	Blk Spk Dup %Rec	ICV %Rec	CCV %Rec
Alpha-BHC	EPA 608	8/12/98	5.0	<PQL	4.29	86	4.93	99	106	109
Beta-BHC	EPA 608	8/12/98	5.0	<PQL	5.21	104	5.75	115	108	116 *
Gamma(Lindane)-BHC	EPA 608	8/12/98	5.0	<PQL	5.12	102	5.87	117	108	121 *
Delta-BHC	EPA 608	8/12/98	5.0	<PQL	4.87	97	5.39	108	105	112
Heptachlor	EPA 608	8/12/98	5.0	<PQL	4.79	96	5.50	110	103	108
Aldrin	EPA 608	8/12/98	5.0	<PQL	4.48	90	5.08	102	104	106
Heptachlor Epoxide	EPA 608	8/12/98	5.0	<PQL	5.03	101	5.54	111	106	109
Endosulfan I	EPA 608	8/12/98	5.0	<PQL	4.73	95	5.22	104	105	108
Dieldrin	EPA 608	8/12/98	5.0	<PQL	5.09	102	5.58	112	107	115
4,4,-DDE	EPA 608	8/12/98	5.0	<PQL	4.28	86	4.79	96	101	100
Endrin	EPA 608	8/12/98	5.0	<PQL	5.39	108	5.92	118	106	116 *
Endosulfan II	EPA 608	8/12/98	5.0	<PQL	5.07	101	5.68	114	105	121 *
4,4-DDD	EPA 608	8/12/98	5.0	<PQL	5.08	102	5.68	114	105	121 *
Endrin Aldehyde	EPA 608	8/12/98	5.0	<PQL	7.17	143	4.67	93	110	119 *
Endosulfan Sulfate	EPA 608	8/12/98	5.0	<PQL	5.24	105	5.76	115	104	114
4,4-DDT	EPA 608	8/12/98	5.0	<PQL	5.68	114	6.40	128	104	108

*=Continuing Calibration was above the method control limits. Data was not impacted.
ICV Initial Calibration Verification
CCV Continuing Calibration Verification
RPD is Relative Percent Difference
BLK is a Blank
BLK-SPK is a Blank Spike

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Quality Control Data Report

Client: Maricopa County Flood Control
Bolin Sample ID: 5315 & 5289

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	BS Conc.	BS %Rec	BSD Conc.	BSD %Rec	RPD	BLK (ppb)	CCV %Rec
Acenaphthene	EPA 625	8/10/98	100	73	73	72	72	1	<PQL	108
Acenaphthylene	EPA 625	8/10/98	100	60	60	57	57	5	<PQL	103
Anthracene	EPA 625	8/10/98	100	76	76	77	77	1	<PQL	107
Benzo(a)anthracene	EPA 625	8/10/98	100	87	87	84	84	4	<PQL	113
Benzo(b)fluoranthene	EPA 625	8/10/98	100	82	82	82	82	0	<PQL	110
Benzo(k)fluoranthene	EPA 625	8/10/98	100	78	78	81	81	4	<PQL	102
Benzo(a)pyrene	EPA 625	8/10/98	100	77	77	79	79	3	<PQL	107
Benzo(ghi)perylene	EPA 625	8/10/98	100	79	79	79	79	0	<PQL	108
Benzyl butyl phthalate	EPA 625	8/10/98	100	76	76	77	77	1	<PQL	103
Bis(2-chloroethyl)ether	EPA 625	8/10/98	100	66	66	58	58	13	<PQL	127
Bis(2-chloroethoxy)methane	EPA 625	8/10/98	100	67	67	62	62	8	<PQL	122
Bis(2-chloroisopropyl)ether	EPA 625	8/10/98	100	26	26	24	24	8	<PQL	106
Bis(2-ethylhexyl) phthalate	EPA 625	8/10/98	100	78	78	75	75	4	<PQL	105
4-Bromophenyl phenyl ether	EPA 625	8/10/98	100	76	76	79	79	4	<PQL	88
2-Chloronaphthalene	EPA 625	8/10/98	100	58	58	56	56	4	<PQL	109
4-Chlorophenyl phenyl ether	EPA 625	8/10/98	100	68	68	71	71	4	<PQL	102
Chrysene	EPA 625	8/10/98	100	86	86	83	83	4	<PQL	114
Dibenzo(a,h)anthracene	EPA 625	8/10/98	100	86	86	87	87	1	<PQL	117
Di-n-butyl phthalate	EPA 625	8/10/98	100	75	75	76	76	1	<PQL	105
1,2-Dichlorobenzene	EPA 625	8/10/98	100	46	46	45	45	2	<PQL	114
1,3-Dichlorobenzene	EPA 625	8/10/98	100	44	44	45	45	2	<PQL	116
1,4-Dichlorobenzene	EPA 625	8/10/98	100	45	45	45	45	0	<PQL	113
3,3'-Dichlorobenzidine	EPA 625	8/10/98	100	70	70	72	72	3	<PQL	106
Diethyl phthalate	EPA 625	8/10/98	100	70	70	71	71	1	<PQL	95
Dimethyl phthalate	EPA 625	8/10/98	100	66	66	59	59	11	<PQL	104
2,4-Dinitrotoluene	EPA 625	8/10/98	100	76	76	79	79	4	<PQL	113
2,6-Dinitrotoluene	EPA 625	8/10/98	100	65	65	63	63	3	<PQL	108
Di-n-octyl phthalate	EPA 625	8/10/98	100	76	76	76	76	0	<PQL	103
Fluoranthene	EPA 625	8/10/98	100	82	82	82	82	0	<PQL	114
Fluorene	EPA 625	8/10/98	100	73	73	75	75	3	<PQL	104
Hexachlorobenzene	EPA 625	8/10/98	100	77	77	81	81	5	<PQL	116

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Hexachlorobutadiene	EPA 625	8/10/98	100	47	47	51	51	8	<PQL	108
Hexachloroethane	EPA 625	8/10/98	100	52	52	55	55	6	<PQL	144
Indeno(1,2,3-cd)pyrene	EPA 625	8/10/98	100	89	89	90	90	1	<PQL	118
Isophorone	EPA 625	8/10/98	100	64	64	61	61	5	<PQL	114
Naphthalene	EPA 625	8/10/98	100	58	58	56	56	4	<PQL	111
Nitrobenzene	EPA 625	8/10/98	100	63	63	60	60	5	<PQL	119
N-Nitrosodi-n-propylamine	EPA 625	8/10/98	100	64	64	62	62	3	<PQL	125
Phenanthrene	EPA 625	8/10/98	100	77	77	80	80	4	<PQL	107
Pyrene	EPA 625	8/10/98	100	87	87	85	85	2	<PQL	115
1,2,4-Trichlorobenzene	EPA 625	8/10/98	100	50	50	50	50	0	<PQL	111
4-Chloro-3-methylphenol	EPA 625	8/10/98	200	136	68	130	65	5	<PQL	118
2-Chlorophenol	EPA 625	8/10/98	200	101	51	97	49	4	<PQL	112
2,4-Dichlorophenol	EPA 625	8/10/98	200	124	62	112	56	10	<PQL	103
2,4-Dimethylphenol	EPA 625	8/10/98	200	123	62	118	59	4	<PQL	112
2,4-Dinitrophenol	EPA 625	8/10/98	200	150	75	154	77	3	<PQL	119
2-Methyl-4,6-dinitrophenol	EPA 625	8/10/98	200	155	78	159	80	3	<PQL	110
2-Nitrophenol	EPA 625	8/10/98	200	120	60	115	58	4	<PQL	104
4-Nitrophenol	EPA 625	8/10/98	200	0	0	76	38	200	<PQL	127
Pentachlorophenol	EPA 625	8/10/98	200	141	71	153	77	8	<PQL	105
Phenol	EPA 625	8/10/98	200	7	4	6	3	15	<PQL	112
2,4,6-Trichlorophenol	EPA 625	8/10/98	200	139	70	128	64	8	<PQL	116

CCV = Continuing Calibration Verification.
BS = Blank Spike.
BSD = Blank Spike Duplicate.
RPD = Relative Percent Difference.
BLK = Blank.

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8/17

CHAIN OF CUSTODY RECORD

Page_____of_____

Laboratory Sample No. 9808-5289

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
FLOOD CONTROL	2801 W DURANGO	PHOENIX	AZ	85009	506 5401	506-4601

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

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	BOD, DO	TC, FS, O&G	Diss. Total Hg	Cu, Pb, Zn	TSS, TDS, pH	*Alk, SO4, Cl, Cr	NO2, NO3, OP	DP	NH3	COD	BOD	Turbidity	FDC	Diurnal Cu	LAB NO.
MESA 2	7/31/98	2330	LINDSAY		X	SW		4		X	X	X													-01
MESA 3	7/31/98	2248	FALCON FIELD		X	SW		4		X	X	X													-04
MESA 3	7/31/98	2300	FALCON FIELD	X		SW		13		X			X	X	X	X	X	X	X	X	X	X	X	X	-02
MESA 4	7/31/98	2310	GRANDVIEW		X	SW		4		X	X	X													-05
MESA 5	7/31/98	2315	DOBSON		X	SW		4		X	X	X													-06

Comments / Special Instructions: Metals → Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn
*Not enough sample to run

SAMPLE CONDITION UPON RECEIPT

No. of Containers	25
Temperature	Ice Cold
Custody Seals	Y (N)
Seals Intact	Y N
Preserved	(Y) N

WHITE-LAB YELLOW-LAB PINK-CLIENT

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Signature: David Gardner	Date: 8/1/98	Signature: Laura A Closson	Date: 8/1/98
	Printed Name:	Time: 0319	Printed Name: L Closson	Time: 0319
②	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time
③	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory Sample No. 9708-3315

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
FLOOD CONTROL DIST.	2801 W DURANGO	PHOENIX	AZ	85009	506-8401	506-4601

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

SAMPLE TYPE CODES

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

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)	NPDES	Diss + Total Metals	TOD, PHOS, TKN	TSS, TDS, pH	DHS, Cr, Cl, CN	NO2, NO3, OP	DP	NH3	COD	CBOD	Cyanide	TOC	Phenol				LAB NO
MESA 2	8/1/98	0330	LINDSAY	X		SW		6		X	X	X	X	X	X	X	X	X	X	X		X				-01
MESA 4	8/1/98	0307	GRANDVIEW	X		SW		4		X	X	X					X	X	X	X						-02
SPI-0803	8/3/98	0200	PL		X	SW		13		X	X	X	X	X	X	X	X	X	X	X	X	X				-03

L composite bottles Rcvd.

Per Dave → run short hold times - past hold time
future samples must be limited.
03 - no sample for pH, NO2, NO3, Cr6, TOC Phenol, DP, DP
*Metals: Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn

Comments / Special Instructions: please replace grab/composite sets, clean bottles by Thu 8/6
QC report from sub-contract labs too. Thx
* Do lab prep holding time or sample volume will suffer - per D. Gardner.

SAMPLE CONDITION UPON RECEIPT

No. of Containers	33
Temperature	On Ice
Custody Seals	Y (N)
Seals Intact	Y N
Preserved	(Y) N

RELINQUISHED BY

	Signature	Date	Printed Name	Time
①	David Gardner	8/3/98	DAVID GARDNER	14:22
②				
③				

SAMPLES RECEIVED BY

Signature	Date	Printed Name	Time
Jorge	8/3/98	Jorge	19:22

WHITE-LAB YELLOW-LAB PINK-CLIENT

Data Checksheet

Site	DOBSON
Municipality	MESA
Sample Date	AUG 12, 1998

Date Received	SEPT 15, 1998

Laboratory Used	Bolin
Laboratory Contact	Stephanie 942-8220
FCD Sample ID Number	MESA 5-Grab / Mesa 5-Comp
Lab Sample ID Number	9808-05633-001, -002
Laboratory Invoice Number	45624

Initial Review Complete	yes	Date	10/5/98
Lab Contacted	No	Date	—
Lab Review Complete	—	Date	—
Second Review Complete	—	Date	—
Additional Review Necessary	—		

Comments
samples collected @ 2300 hrs 8/12/98, taken to lab
@ 0045 hrs on 8/13/98 (w/in 6 hrs)

Data Validation Table Complete	yes	Date	11-10-98

Data Entered Into Database	yes	Date	11/9/98

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

Received: 8/13/98
Reported: 9/10/98
Invoice No: 045624

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05633-001
Sample ID: Mesa 5-Grab (Broadway/Dobson)

Time Sampled: 23:00
Date Sampled: 8/12/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Biochemical Oxygen Demand	EPA 405.1	68.	mg/L	1.0	8/13/98
Dissolved Oxygen	EPA 360.1	5.9	mg/L	0.01	8/14/98
Fecal Coliform	SM 9221D	160,000	MPN/100ml		8/13/98
Fecal Streptococcus	SM 9230B	24,000	MPN/100ml		8/13/98
Oil & Grease	EPA 413.1	<5.0	mg/L	5.0	8/24/98
Carbon tetrachloride	EPA 624	ND	ug/L	40	8/14/98
Bromomethane	EPA 624	ND	ug/L	100	8/14/98
Benzene	EPA 624	ND	ug/L	40	8/14/98
trans-1,3-Dichloropropene	EPA 624	ND	ug/L	40	8/14/98
trans 1,2-Dichloroethylene	EPA 624	ND	ug/L	40	8/14/98
cis 1,3-Dichloropropene	EPA 624	ND	ug/L	40	8/14/98
2-Chloroethylvinyl ether	EPA 624	ND	ug/L	40	8/14/98
1,4-Dichlorobenzene	EPA 624	ND	ug/L	40	8/14/98
1,3-Dichlorobenzene	EPA 624	ND	ug/L	40	8/14/98
1,2-Dichloropropane	EPA 624	ND	ug/L	40	8/14/98
1,2-Dichloroethane	EPA 624	ND	ug/L	40	8/14/98
1,2-Dichlorobenzene	EPA 624	ND	ug/L	40	8/14/98
1,1-Dichloroethylene	EPA 624	ND	ug/L	40	8/14/98
1,1-Dichloroethane	EPA 624	ND	ug/L	40	8/14/98
Trichloroethylene (TCE)	EPA 624	ND	ug/L	40	8/14/98
1,1,2-Trichloroethane	EPA 624	ND	ug/L	40	8/14/98
1,1,1-Trichloroethane	EPA 624	ND	ug/L	40	8/14/98
Toluene	EPA 624	ND	ug/L	40	8/14/98
Ethylbenzene	EPA 624	ND	ug/L	40	8/14/98
m,p-Xylenes	EPA 624	ND Y	ug/L	40	8/14/98
o-Xylene	EPA 624	ND Y	ug/L	40	8/14/98
Tetrachloroethylene (PCE)	EPA 624	ND	ug/L	40	8/14/98
1,1,2,2-Tetrachloroethane	EPA 624	ND	ug/L	40	8/14/98
Chloromethane	EPA 624	ND	ug/L	100	8/14/98
Chloroform	EPA 624	ND	ug/L	40	8/14/98
Bromodichloromethane	EPA 624	ND	ug/L	40	8/14/98
Bromoform	EPA 624	ND	ug/L	40	8/14/98

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Matrix: Storm Water
Sample No: 9808-05633-001

Time Sampled: 23:00
Date Sampled: 8/12/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Chlorobenzene	EPA 624	ND	ug/L	40	8/14/98
Chloroethane	EPA 624	ND	ug/L	100	8/14/98
Dichloromethane	EPA 624	ND	ug/L	100	8/14/98
Trichlorofluoromethane	EPA 624	ND	ug/L	100	8/14/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	100	8/14/98
Vinyl Chloride	EPA 624	ND	ug/L	100	8/14/98
Dibromochloromethane	EPA 624	ND	ug/L	40	8/14/98
Total Trihalomethanes	EPA 624	ND	ug/L	40	8/14/98
Acrolein	EPA 624	ND T,Y	ug/L	1000	8/14/98
Acrylonitrile	EPA 624	ND Y	ug/L	200	8/14/98
Surrogates:	EPA 624				8/14/98
***Pentafluorobenzene	EPA 624	86.	% Recovery		8/14/98
***1,2-dichloroethane-d4	EPA 624	76.	% Recovery		8/14/98
***4-bromofluorobenzene	EPA 624	78.	% Recovery		8/14/98
***1,2-dichlorobenzene-d4	EPA 624	88.	% Recovery		8/14/98
Acetone	EPA 624	ND Y	ug/L	500	8/14/98
2-Butanone (MEK)	EPA 624	ND Y	ug/L	200	8/14/98
Carbon disulfide	EPA 624	ND Y	ug/L	200	8/14/98
2-Hexanone (MBK)	EPA 624	ND Y	ug/L	200	8/14/98
Styrene	EPA 624	ND Y	ug/L	40	8/14/98
Total Xylenes	EPA 624	ND Y	ug/L	40	8/14/98
Trichlorotrifluoroethane	EPA 624	ND Y	ug/L	40	8/14/98
cis 1,2-Dichloroethylene	EPA 624	ND Y	ug/L	40	8/14/98
m,p-Xylenes	EPA 624	ND Y	ug/L	40	8/14/98
o-Xylene	EPA 624	ND Y	ug/L	40	8/14/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	100	8/14/98

Sample was diluted due to matrix interferences.(Method 624)
T = Result based on a Tentatively Identified Compound search.
Y = Compound not listed in cited method.

S. Kaufman

Project Manager
ADHS License No.: AZ0004

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

Received: 8/13/98
Reported: 9/10/98
Invoice No: 045624

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05633-002
Sample ID: Mesa 5-Comp (Broadway/Dobson)

Time Sampled: 23:00
Date Sampled: 8/12/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
pH	EPA 150.1	6.4	Std Unit		8/13/98
Chemical Oxygen Demand	EPA 410.4	191.	mg/L	20.	8/25/98
Chloride	EPA 300.0	17.	mg/L	5.0	8/13/98
Cyanide, Total	SM 4500 CN E	<0.01	mg/L	0.01	8/17/98
Total Dissolved Solids	SM 2540C	85.	mg/L	1.	8/19/98
Solids, Total Suspended	EPA 160.2	116.	mg/L	1.	8/13/98
Nitrogen as Ammonia	EPA 350.2	1.48	mg/L	0.03	8/14/98
Nitrogen as Nitrate	EPA 300.0	1.5	mg/L	0.1	8/13/98
Nitrogen as Nitrite	EPA 300.0	<0.1	mg/L	0.1	8/13/98
Nitrate plus Nitrite	CALCULATION	1.5	mg/L		8/25/98
Organic Nitrogen	CALCULATION	0.92	mg/L		9/02/98
Total Kjeldahl Nitrogen	EPA 351.3	2.4	mg/L	0.5	8/14/98
P as Total Phosphate	EPA 365.3	0.9 D1	mg/L	0.3	8/28/98
Phosphorus, Dissolved	EPA 365.3	0.5 D1	mg/L	0.3	8/28/98
P as Orthophosphate	SM 4500 PE	0.31	mg/L	0.05	8/14/98
Total Organic Carbon	SM 5310C	146.1	mg/L	0.2	8/20/98
Total Alkalinity (as CaCO3)	SM 2320B	22.	mg/L	2.	8/14/98
Sulfate, Dissolved	EPA 300.0	9.	mg/L	5.0	8/13/98
Chromium, hexavalent	SM 3500-CR D	<0.010	mg/L	0.010	8/13/98
Nitrogen, Total	CALCULATION	3.9	mg/L		8/25/98
WW Metals Digestion for ICP	EPA 200.7				8/13/98
DW/WW metals digestion-AA	SM 3030E				8/13/98
Antimony	SM 3113B	<0.005	mg/L	0.005	8/19/98
Arsenic	SM 3113B	<0.005	mg/L	0.005	8/18/98
Beryllium	EPA 200.7	<0.002	mg/L	0.002	8/31/98
Calcium	EPA 200.7	17.	mg/L	1.	8/31/98
Copper	SM 3113B	0.042	mg/L	0.005	9/08/98
Lead	SM 3113B	0.024	mg/L	0.005	8/20/98
Magnesium	EPA 200.7	3.	mg/L	1.	8/31/98
Mercury	EPA 245.1	0.0003 M2	mg/L	0.0002	8/19/98
Selenium	SM 3113B	<0.005	mg/L	0.005	8/28/98
Silver	EPA 200.7	<0.04	mg/L	0.04	8/31/98

Bolin Laboratories Inc.

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Matrix: Storm Water
Sample No: 9808-05633-002

Time Sampled: 23:00
Date Sampled: 8/12/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Hardness, Total (Ca & Mg)	SM 2340B	54	mg/L	7.	8/31/98
Zinc	EPA 200.7	0.32	mg/L	0.04	8/31/98
Thallium	EPA 200.9	<0.001	mg/L	0.001	8/26/98
Cadmium	EPA 213.2	0.0011	mg/L	0.0002	8/20/98
Chromium	EPA 218.2	0.0086	mg/L	0.001	8/21/98
Nickel	EPA 249.2	0.011	mg/L	0.001	8/24/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	8/20/98
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/18/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	8/31/98
Copper, Dissolved	EPA 200.7	0.018	mg/L	0.015	8/31/98
Lead, Dissolved	EPA 200.9	0.012	mg/L	0.005	9/02/98
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	8/19/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/17/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	8/31/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	8/26/98
Zinc, Dissolved	EPA 200.7	0.20	mg/L	0.02	9/01/98
Cadmium, Dissolved	EPA 213.2	0.00057	mg/L	0.0002	8/20/98
Chromium, Dissolved	EPA 218.2	0.0039	mg/L	0.001	8/21/98
Nickel, Dissolved	EPA 249.2	0.007	mg/L	0.001	8/24/98
N-Nitrosodimethylamine	EPA 625	ND	ug/L	5.0	8/25/98
Phenol	EPA 625	ND	ug/L	5.0	8/25/98
Aniline	EPA 625	ND	ug/L	5.0	8/25/98
Bis(2-chloroethyl)ether	EPA 625	ND	ug/L	10.	8/25/98
2-Chlorophenol	EPA 625	ND	ug/L	10.	8/25/98
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/25/98
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/25/98
Benzyl alcohol	EPA 625	ND	ug/L	10.	8/25/98
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/25/98
2-Methylphenol	EPA 625	ND	ug/L	5.0	8/25/98
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	10.	8/25/98
4-Methylphenol (p-Cresol)	EPA 625	ND	ug/L	5.0	8/25/98
N-Nitrosodi-n-propylamine	EPA 625	ND	ug/L	5.0	8/25/98
Hexachloroethane	EPA 625	ND	ug/L	10.	8/25/98
Nitrobenzene	EPA 625	ND	ug/L	10.	8/25/98
Isophorone	EPA 625	ND	ug/L	10.	8/25/98
2,4-Dimethylphenol	EPA 625	ND	ug/L	10.	8/25/98
Benzoic acid	EPA 625	ND	ug/L	50.	8/25/98
2-Nitrophenol	EPA 625	ND	ug/L	10.	8/25/98
Bis(2-chloroethoxy)methane	EPA 625	ND	ug/L	10.	8/25/98
2,4-Dichlorophenol	EPA 625	ND	ug/L	10.	8/25/98
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	8/25/98
Naphthalene	EPA 625	ND	ug/L	5.0	8/25/98

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Matrix: Storm Water
Sample No: 9808-05633-002

Time Sampled: 23:00
Date Sampled: 8/12/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	8/25/98
4-Chloroaniline	EPA 625	ND	ug/L	5.0	8/25/98
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	8/25/98
2-Methylnaphthalene	EPA 625	ND	ug/L	5.0	8/25/98
Hexachlorocyclopentadiene	EPA 625	ND	ug/L	5.0	8/25/98
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/25/98
2,4,5-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/25/98
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	8/25/98
2-Nitroaniline	EPA 625	ND	ug/L	5.0	8/25/98
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	8/25/98
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/25/98
Acenaphthylene	EPA 625	ND	ug/L	10.	8/25/98
3-Nitroaniline	EPA 625	ND	ug/L	5.0	8/25/98
Acenaphthene	EPA 625	ND	ug/L	5.0	8/25/98
2,4-Dinitrophenol	EPA 625	ND	ug/L	20.	8/25/98
4-Nitrophenol	EPA 625	ND	ug/L	5.0	8/25/98
Dibenzofuran	EPA 625	ND	ug/L	5.0	8/25/98
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/25/98
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	8/25/98
4-Chlorophenylphenylether	EPA 625	ND	ug/L	10.	8/25/98
Fluorene	EPA 625	ND	ug/L	5.0	8/25/98
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	10.	8/25/98
4-Nitroaniline	EPA 625	ND	ug/L	5.0	8/25/98
N-Nitrosodiphenylamine	EPA 625	ND	ug/L	5.0	8/25/98
1,2-Diphenylhydrazine	EPA 625	ND *	ug/L	5.0	8/25/98
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	8/25/98
Hexachlorobenzene	EPA 625	ND	ug/L	10.	8/25/98
Pentachlorophenol	EPA 625	ND	ug/L	10.	8/25/98
Phenanthrene	EPA 625	ND	ug/L	5.0	8/25/98
Anthracene	EPA 625	ND	ug/L	5.0	8/25/98
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	8/25/98
Fluoranthene	EPA 625	ND	ug/L	5.0	8/25/98
Benzidine	EPA 625	ND	ug/L	20.	8/25/98
Pyrene	EPA 625	ND L	ug/L	5.0	8/25/98
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	8/25/98
Bis(2-ethylhexyl)phthalate	EPA 625	185	ug/L	10.	8/25/98
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	8/25/98
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	8/25/98
Chrysene	EPA 625	ND	ug/L	5.0	8/25/98
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	8/25/98
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	8/25/98
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	8/25/98

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Matrix: Storm Water
Sample No: 9808-05633-002

Time Sampled: 23:00
Date Sampled: 8/12/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	8/25/98
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	8/25/98
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	8/25/98
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	8/25/98
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.	8/25/98
Extraction	EPA 625				8/17/98
Surrogate:	EPA 625				8/25/98
***d5-Phenol	EPA 625	52	% Recovery		8/25/98
***2-Fluorophenol	EPA 625	38	% Recovery		8/25/98
***d5-Nitrobenzene	EPA 625	62	% Recovery		8/25/98
***2-Fluorobiphenyl	EPA 625	76	% Recovery		8/25/98
***2,4,6-Tribromophenol	EPA 625	82	% Recovery		8/25/98
***d14-Terphenyl	EPA 625	72	% Recovery		8/25/98
4,4'-DDD	EPA 608	ND C	ug/L	1.0	8/19/98
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/19/98
4,4'-DDT	EPA 608	ND C	ug/L	2.0	8/19/98
Aldrin	EPA 608	ND	ug/L	1.0	8/19/98
alpha-BHC	EPA 608	ND	ug/L	1.0	8/19/98
Chlordane	EPA 608	ND	ug/L	1.0	8/19/98
delta-BHC	EPA 608	ND C	ug/L	1.0	8/19/98
Dieldrin	EPA 608	ND C	ug/L	1.0	8/19/98
Endosulfan I	EPA 608	ND	ug/L	1.0	8/19/98
Endosulfan II	EPA 608	ND C	ug/L	1.0	8/19/98
Endosulfan Sulfate	EPA 608	ND C	ug/L	1.0	8/19/98
Endrin	EPA 608	ND C	ug/L	1.0	8/19/98
Endrin Aldehyde	EPA 608	ND C	ug/L	1.0	8/19/98
Heptachlor	EPA 608	ND	ug/L	1.0	8/19/98
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	8/19/98
Lindane (gamma BHC)	EPA 608	ND C	ug/L	1.0	8/19/98
PCB 1016	EPA 608	ND	ug/L	1.0	8/19/98
PCB 1221	EPA 608	ND	ug/L	10	8/19/98
PCB 1232	EPA 608	ND	ug/L	1.0	8/19/98
PCB 1242	EPA 608	ND	ug/L	1.0	8/19/98
PCB 1248	EPA 608	ND	ug/L	1.0	8/19/98
PCB 1254	EPA 608	ND	ug/L	1.0	8/19/98
PCB 1260	EPA 608	ND	ug/L	1.0	8/19/98
Toxaphene	EPA 608	ND	ug/L	1.0	8/19/98
beta-BHC	EPA 608	ND C	ug/L	1.0	8/19/98
Extraction	EPA 608				8/14/98
Surrogate:	EPA 608				8/19/98
***Dibutylchlorendate	EPA 608	170 S1	% Recovery		8/19/98

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C = Continuing Calibration was above method control limits. Data was not impacted.
D1 = Sample was diluted due to high concentration of target analyte.
L = The Laboratory Fortified Blank Spike was outside the laboratory acceptance limits. The Laboratory Fortified Blank Spike duplicate was acceptable. The data may have been impacted but is considered valid.
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.
S1 = Surrogate recovery was above laboratory acceptance limits. Data was not impacted.
* = 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.
Dissolved and Total Cadmium, Chromium & Nickel analyzed by BC Labs, Bakersfield CA, #AZ0345.

S. Kaufman

Project Manager
ADHS License No.: AZ0004

Bolin Laboratories Inc.

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

Received: 8/13/98
Reported: 9/10/98
Invoice No: 045624

Project Name: NPDES Stormwater Analysis

Matrix: DI Water
Sample No: 9808-05633-003
Sample ID: Travel Blank

Time Sampled: 23:00
Date Sampled: 8/13/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Carbon tetrachloride	EPA 624	ND	ug/L	2	8/14/98
Bromomethane	EPA 624	ND	ug/L	5	8/14/98
Benzene	EPA 624	ND	ug/L	2	8/14/98
trans-1,3-Dichloropropene	EPA 624	ND	ug/L	2	8/14/98
trans 1,2-Dichloroethylene	EPA 624	ND	ug/L	2	8/14/98
cis 1,3-Dichloropropene	EPA 624	ND	ug/L	2	8/14/98
2-Chloroethylvinyl ether	EPA 624	ND	ug/L	2	8/14/98
1,4-Dichlorobenzene	EPA 624	ND	ug/L	2	8/14/98
1,3-Dichlorobenzene	EPA 624	ND	ug/L	2	8/14/98
1,2-Dichloropropane	EPA 624	ND	ug/L	2	8/14/98
1,2-Dichloroethane	EPA 624	ND	ug/L	2	8/14/98
1,2-Dichlorobenzene	EPA 624	ND	ug/L	2	8/14/98
1,1-Dichloroethylene	EPA 624	ND	ug/L	2	8/14/98
1,1-Dichloroethane	EPA 624	ND	ug/L	2	8/14/98
Trichloroethylene (TCE)	EPA 624	ND	ug/L	2	8/14/98
1,1,2-Trichloroethane	EPA 624	ND	ug/L	2	8/14/98
1,1,1-Trichloroethane	EPA 624	ND	ug/L	2	8/14/98
Toluene	EPA 624	ND	ug/L	2	8/14/98
Ethylbenzene	EPA 624	ND	ug/L	2	8/14/98
m,p-Xylenes	EPA 624	ND Y	ug/L	2	8/14/98
o-Xylene	EPA 624	ND Y	ug/L	2	8/14/98
Tetrachloroethylene (PCE)	EPA 624	ND	ug/L	2	8/14/98
1,1,2,2-Tetrachloroethane	EPA 624	ND	ug/L	2	8/14/98
Chloromethane	EPA 624	ND	ug/L	5	8/14/98
Chloroform	EPA 624	ND	ug/L	2	8/14/98
Bromodichloromethane	EPA 624	ND	ug/L	2	8/14/98
Bromoform	EPA 624	ND	ug/L	2	8/14/98
Chlorobenzene	EPA 624	ND	ug/L	2	8/14/98
Chloroethane	EPA 624	ND	ug/L	5	8/14/98
Dichloromethane	EPA 624	ND	ug/L	5	8/14/98
Trichlorofluoromethane	EPA 624	ND	ug/L	5	8/14/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	5.	8/14/98

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Matrix: DI Water
Sample No: 9808-05633-003

Time Sampled: 23:00
Date Sampled: 8/13/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Vinyl Chloride	EPA 624	ND	ug/L	5	8/14/98
Dibromochloromethane	EPA 624	ND	ug/L	2	8/14/98
Total Trihalomethanes	EPA 624	ND	ug/L	2	8/14/98
Acrolein	EPA 624	ND T,Y	ug/L	50	8/14/98
Acrylonitrile	EPA 624	ND Y	ug/L	10	8/14/98
Surrogates:	EPA 624				8/14/98
***Pentafluorobenzene	EPA 624	84.	% Recovery		8/14/98
***1,2-dichloroethane-d4	EPA 624	76.	% Recovery		8/14/98
***4-bromofluorobenzene	EPA 624	80.	% Recovery		8/14/98
***1,2-dichlorobenzene-d4	EPA 624	88.	% Recovery		8/14/98
Acetone	EPA 624	ND Y	ug/L	25	8/14/98
1,2,3-Trichlorobenzene	EPA 624	ND Y	ug/L	2.	8/14/98
2-Butanone (MEK)	EPA 624	ND Y	ug/L	10	8/14/98
Carbon disulfide	EPA 624	ND Y	ug/L	10	8/14/98
2-Hexanone (MBK)	EPA 624	ND Y	ug/L	10	8/14/98
Styrene	EPA 624	ND Y	ug/L	2	8/14/98
Total Xylenes	EPA 624	ND Y	ug/L	2	8/14/98
Trichlorotrifluoroethane	EPA 624	ND Y	ug/L	2	8/14/98
cis 1,2-Dichloroethylene	EPA 624	ND Y	ug/L	2	8/14/98
m,p-Xylenes	EPA 624	ND Y	ug/L	2	8/14/98
o-Xylene	EPA 624	ND Y	ug/L	2	8/14/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	5.	8/14/98

Y = Compound not listed in cited method.

S. Kaufman

Project Manager
ADHS License No.: AZ0004

Bolin Laboratories Inc.

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Quality Control Data Report

Client: MCFC
Bolin Sample ID: 9807-5633 total

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	8/31/98	1	104	107	<PQL	97	98
Calcium	EPA 200.7	8/31/98	30	102	102	<PQL	100	101
Copper	EPA 200.9/SM 3113B	9/8/98	1	105	115	<PQL	100	105
Magnesium	EPA 200.7	8/31/98	30	99	100	<PQL	99	101
Silver	EPA 200.7	8/31/98	0.5	106	106	<PQL	95	95
Zinc	EPA 200.7	8/31/98	1	105	106	<PQL	102	102
Antimony	EPA 200.9/SM 3113B	8/19/98	0.020	80	107	<PQL	100	102
Arsenic	EPA 200.9/SM 3113B	8/31/98	0.020	105	95	<PQL	100	100
Lead	EPA 200.9/SM 3113B	8/20/98	0.020	95	115	<PQL	90	90
Selenium	EPA 200.9/SM 3113B	8/28/98	0.020	80	100	<PQL	95	110
Thallium	EPA 200.9/SM 3113B	8/26/98	0.020	105	135	<PQL	100	100
Mercury	EPA 245.1	8/19/98	0.005	68	78	<PQL	96	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: MCFC
Bolin Sample ID: 9807-5633 diss

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	8/31/98	0.2	108	108	<PQL	100	97
Copper	EPA 200.7	8/31/98	1	111	108	<PQL	99	100
Silver	EPA 200.7	8/31/98	0.5	85	86	<PQL	96	95
Zinc	EPA 200.7	9/1/98	1	118	110	<PQL	102	98
Antimony	EPA 200.9/SM 3113B	8/20/98	0.020	105	100	<PQL	110	110
Arsenic	EPA 200.9/SM 3113B	8/18/98	0.020	100	90	<PQL	100	110
Lead	EPA 200.9/SM 3113B	8/20/98	0.020	100	100	<PQL	100	100
Selenium	EPA 200.9/SM 3113B	8/28/98	0.020	80	80	<PQL	100	95
Thallium	EPA 200.9/SM 3113B	8/26/98	0.020	100	90	<PQL	90	90
Mercury	EPA 245.1	8/19/98	0.005	90	92	<PQL	102	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 District
Bolin Sample ID: 9808-5633

Analyte	Method	Date Analyzed	Spk Conc.	MS %Rec	MSD %Rec	RPD	Blk	ICV %Rec	CCV %Rec
Biological Oxygen Demand	405.1	8/13/98	N/A	N/A	N/A	#####	<1.0	107	-
Oil and Grease	413.1	8/24/98	N/A	N/A	N/A	#####	<5.0	97	-
Chemical Oxygen Demand	410.4	8/25/98	30	101	100	0.995	<20	92	101
Chloride	300	8/13/98	20	102	102	0	<5.0	98	106
Total Dissolved Solids	SM 2540C	8/18/98	N/A	N/A	N/A	#####	<1.0	104	-
Total Suspended Solids	160.2	8/13/98	N/A	N/A	N/A	#####	<1.0	104	-
Nitrite	300	8/13/98	2.03	100	101	0.995	<0.1	104	104
Nitrate	300	8/13/98	4.54	100	107	6.763	<0.1	109	110
Total Phosphorous	365.3	8/28/98	0.1	107	97	9.804	<0.05	100	108
Disolved Phosphorous	365.2	8/28/98	0.1	108	103	4.739	<0.05	102	99
Ortho-Phosphorous	365.2	8/14/98	0.1	104	102	1.942	<0.05	109	103
Total Organic Carbons	SM 5310C	8/20/98	5	92	93	1.081	0.04	108	108
Alkalinity	SM 2320B	8/14/98	100	98	96	2.062	<2.0	99	94
Hexavalent Chromium	SM 3500	8/13/98	0.2	96	95	1.047	<0.01	106	104
Total Kjeldahl Nitrogen	351.4	8/14/98	2	98	107	8.78	<0.5	108	95
Dissolved Sulfate	300	8/13/98	20	101	104	2.927	<5.0	108	107

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 Avenue • Phoenix, Arizona 85023
(602) 942 8220 • FAX (602) 942 1050

Quality Control Data Report

Client: Maricopa County Flood Control
Bolin Sample ID: 9808-5633-2

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	ICV %Rec	CCV %Rec
Alpha-BHC	EPA 608	8/19/98	5.0	<PQL	4.48	90	4.43	89	104	108
Beta-BHC	EPA 608	8/19/98	5.0	<PQL	5.33	107	5.47	109	110	122 *
Gamma(Lindane)-BHC	EPA 608	8/19/98	5.0	<PQL	5.23	105	5.40	108	110	127 *
Delta-BHC	EPA 608	8/19/98	5.0	<PQL	4.90	98	5.08	102	108	117 *
Heptachlor	EPA 608	8/19/98	5.0	<PQL	4.74	95	4.89	98	106	110
Aldrin	EPA 608	8/19/98	5.0	<PQL	4.53	91	4.63	93	105	106
Heptachlor Epoxide	EPA 608	8/19/98	5.0	<PQL	5.03	101	5.22	104	106	112
Endosulfan I	EPA 608	8/19/98	5.0	<PQL	4.82	96	4.82	96	106	110
Dieldrin	EPA 608	8/19/98	5.0	<PQL	5.08	102	5.31	106	107	117 *
4,4,-DDE	EPA 608	8/19/98	5.0	<PQL	4.51	90	4.69	94	104	106
Endrin	EPA 608	8/19/98	5.0	<PQL	5.39	108	5.65	113	107	119 *
Endosulfan II	EPA 608	8/19/98	5.0	<PQL	5.26	105	5.42	108	106	122 *
4,4-DDD	EPA 608	8/19/98	5.0	<PQL	5.27	105	5.42	108	106	122 *
Endrin Aldehyde	EPA 608	8/19/98	5.0	<PQL	4.53	91	4.50	90	101	123 *
Endosulfan Sulfate	EPA 608	8/19/98	5.0	<PQL	5.29	106	5.61	112	106	115
4,4-DDT	EPA 608	8/19/98	5.0	<PQL	5.77	115	6.27	125	107	126 *

*=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

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Quality Control Data Report

Client: Maricopa County Flood Control
Bolin Sample ID: 9808-5633-1,3

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	8/14/98	10	10.3	103	8.84	88	15	<PQL	
Benzene	EPA 624	8/14/98	10	10.4	104	9.78	98	6	<PQL	
Trichloroethylene	EPA 624	8/14/98	10	10.0	100	9.56	96	4	<PQL	
Toluene	EPA 624	8/14/98	10	10.2	102	9.70	97	5	<PQL	
Chlorobenzene	EPA 624	8/14/98	10	10.3	103	9.84	98	5	<PQL	
Chloromethane	EPA 624	8/14/98	10						<PQL	113
Vinylchloride	EPA 624	8/14/98	10						<PQL	102
1,1-Dichloroethylene	EPA 624	8/14/98	10						<PQL	91.8
1,1-Dichloroethane	EPA 624	8/14/98	10						<PQL	99.7
Chloroform	EPA 624	8/14/98	10						<PQL	103
1,2-Dichloropropane	EPA 624	8/14/98	10						<PQL	98.9
Toluene	EPA 624	8/14/98	10						<PQL	102
Chlorobenzene	EPA 624	8/14/98	10						<PQL	102
Ethylbenzene	EPA 624	8/14/98	10						<PQL	106
Bromoform	EPA 624	8/14/98	10						<PQL	104
1,1,2,2-Tetrachloroethane	EPA 624	8/14/98	10						<PQL	118

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

Client: MCFCD
Bolin Sample ID: 5633

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	BS Conc.	BS %Rec	BSD Conc.	BSD %Rec	RPD	BLK (ppb)	CCV %Rec
Phenol	EPA 625	8/26/98	200	58	29	49	25	17	<PQL	100
Bis(2-chloroethyl)ether	EPA 625	8/26/98	100	80	80	68	68	16	<PQL	111
2-Chlorophenol	EPA 625	8/26/98	200	131	66	112	56	16	<PQL	100
1,3-Dichlorobenzene	EPA 625	8/26/98	100	67	67	60	60	11	<PQL	103
1,4-Dichlorobenzene	EPA 625	8/26/98	100	67	67	61	61	9	<PQL	102
1,2-Dichlorobenzene	EPA 625	8/26/98	100	71	71	60	60	17	<PQL	97
Bis(2-chloroisopropyl)ether	EPA 625	8/26/98	100	69	69	61	61	12	<PQL	99
N-Nitrosodi-n-propylamine	EPA 625	8/26/98	100	80	80	68	68	16	<PQL	90
Hexachloroethane	EPA 625	8/26/98	100	79	79	65	65	19	<PQL	116
Nitrobenzene	EPA 625	8/26/98	100	78	78	69	69	12	<PQL	96
Isophorone	EPA 625	8/26/98	100	92	92	79	79	15	<PQL	94
2-Nitrophenol	EPA 625	8/26/98	200	160	80	131	66	20	<PQL	99
2,4-Dimethylphenol	EPA 625	8/26/98	200	148	74	131	66	12	<PQL	99
bis(2-Chloroethoxy)methane	EPA 625	8/26/98	100	83	83	68	68	20	<PQL	97
2,4-Dichlorophenol	EPA 625	8/26/98	200	139	70	126	63	10	<PQL	91
1,2,4-Trichlorobenzene	EPA 625	8/26/98	100	73	73	63	63	15	<PQL	94
Naphthalene	EPA 625	8/26/98	100	74	74	63	63	16	<PQL	96
Hexachlorobutadiene	EPA 625	8/26/98	100	71	71	60	60	17	<PQL	96
4-Chloro-3-methylphenol	EPA 625	8/26/98	200	169	85	153	77	10	<PQL	99
2,4,6-Trichlorophenol	EPA 625	8/26/98	200	170	85	154	77	10	<PQL	95
2-Chloronaphthalene	EPA 625	8/26/98	100	87	87	77	77	12	<PQL	92
Acenaphthylene	EPA 625	8/26/98	100	88	88	77	77	13	<PQL	94
Dimethyl phthalate	EPA 625	8/26/98	100	94	94	82	82	14	<PQL	94
2,6-Dinitrotoluene	EPA 625	8/26/98	100	100	100	86	86	15	<PQL	99
Acenaphthene	EPA 625	8/26/98	100	82	82	76	76	8	<PQL	99
2,4-Dinitrophenol	EPA 625	8/26/98	200	164	82	149	75	10	<PQL	103
2,4-Dinitrotoluene	EPA 625	8/26/98	100	94	94	91	91	3	<PQL	103
4-Nitrophenol	EPA 625	8/26/98	200	68	34	66	33	3	<PQL	106
Fluorene	EPA 625	8/26/98	100	83	83	80	80	4	<PQL	105
Diethylphthalate	EPA 625	8/26/98	100	83	83	81	81	2	<PQL	99
4-Chlorophenylphenylether	EPA 625	8/26/98	100	79	79	74	74	7	<PQL	97

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2-Methyl-4,6-dinitrophenol	EPA 625	8/26/98	200	169	85	163	82	4	<PQL	99
4-Bromophenoxybenzene	EPA 625	8/26/98	100	85	85	78	78	9	<PQL	100
Hexachlorobenzene	EPA 625	8/26/98	100	83	83	84	84	1	<PQL	101
Pentachlorophenol	EPA 625	8/26/98	200	175	88	165	83	6	<PQL	106
Phenanthrene	EPA 625	8/26/98	100	88	88	80	80	10	<PQL	99
Anthracene	EPA 625	8/26/98	100	87	87	80	80	8	<PQL	99
Di-n-butylphthalate	EPA 625	8/26/98	100	95	95	90	90	5	<PQL	107
Fluoranthene	EPA 625	8/26/98	100	90	90	87	87	3	<PQL	103
Pyrene	EPA 625	8/26/98	100	102	102	97	97	5	<PQL	106
Butylbenzylphthalate	EPA 625	8/26/98	100	93	93	89	89	4	<PQL	98
Benzo(a)anthracene	EPA 625	8/26/98	100	90	90	90	90	0	<PQL	102
Chrysene	EPA 625	8/26/98	100	97	97	95	95	2	<PQL	103
3,3'-Dichlorobenzidine	EPA 625	8/26/98	100	70	70	68	68	3	<PQL	93
bis(2-Ethylhexyl)phthalate	EPA 625	8/26/98	100	88	88	88	88	0	<PQL	104
Di-n-octylphthalate	EPA 625	8/26/98	100	85	85	80	80	6	<PQL	97
Benzo(b)fluoranthene	EPA 625	8/26/98	100	93	93	87	87	7	<PQL	102
Benzo(k)fluoranthene	EPA 625	8/26/98	100	95	95	88	88	8	<PQL	103
Benzo(a)pyrene	EPA 625	8/26/98	100	94	94	87	87	8	<PQL	103
Indeno(1,2,3-cd)pyrene	EPA 625	8/26/98	100	94	94	88	88	7	<PQL	104
Dibenzo(a,h)anthracene	EPA 625	8/26/98	100	92	92	86	86	7	<PQL	100
Benzo(g,h,I)perylene	EPA 625	8/26/98	100	93	93	86	86.	8	<PQL	105

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

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

CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory Sample No. 9808-05633

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
Flood Control	2801 W Durango	Phx	AZ	85009	506-[illegible]	5[illegible]

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

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)	BOD, 5D, FC-TKN	FC-MFN 624	*Oil & Grease	Diss. Metals *	Total Metals **	COD, Phos, TKN	TS, TDS, pH, Alk	Cl, Cu, Cr, NO3	NO2, OP	NH3	608	624	Cyanide	TSS	LAB NO.
Mesa 5	8/12/98	2300	Broadway Dobson		X	SW		9		X	X	X												-01
Mesa 5	8/12/98	2300	Broadway Dobson	X		SW		5					X	X	X	X	X	X	X	X	X	X	X	-02
Travel Blank								2			X													-03
Travel Blank			TB			T		2																

Comments / Special Instructions: 11, 12, 13 did not get filled due to not enough sample. 2m
10 is half full. Could not analyze Phenol due to insuff. sample
* Sb, As, Be, Hg, Se, Ag, Tl, Cr, Ni ** Sb, As, Be, Cd, Cu, Pb, Hg, Mo, Se, Ag, Zn, Tl, Cr, Ni

SAMPLE CONDITION UPON RECEIPT

No. of Containers	21
Temperature	On Ice
Custody Seals	Y (N)
Seals Intact	Y N
Preserved	(Y) N

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Signature: Charles F. Klenner	Date: 8/13/98	Signature: Zeeba K. Mirza	Date: 8/13/98
	Printed Name: Charles F. Klenner	Time: 00:45	Printed Name: ZEEBA MIRZA	Time: 00:45
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	LINDSAY (2)
Municipality	MESA
Sample Date	8-16-98

Date Received	Sept 16, 1998

Laboratory Used	BOLIN
Laboratory Contact	Stephanie
FCD Sample ID Number	MESA 2-Grab / Mesa 2-Comp
Lab Sample ID Number	9808-05689-001, -002
Laboratory Invoice Number	45627

Initial Review Complete	yes	Date	10-5-98
Lab Contacted	no	Date	—
Lab Review Complete	—	Date	—
Second Review Complete	—	Date	—
Additional Review Necessary	—		

Comments

Data Validation Table Complete	yes	Date	11-12-98

Data Entered Into Database	yes	Date	11-10-98

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

Received: 8/16/98
Reported: 9/10/98
Invoice No: 045627

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05689-001
Sample ID: Mesa 2-Grab (Broadway/Lindsay)

Time Sampled: 0:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Biochemical Oxygen Demand	EPA 405.1	25.	mg/L	1.0	8/17/98
Dissolved Oxygen	EPA 360.1	8.24	mg/L	0.01	8/16/98
Fecal Coliform	SM 9221D	>160,000.	MPN/100ml		8/16/98
Fecal Streptococcus	SM 9230B	90,000.	MPN/100ml		8/16/98
Oil & Grease	EPA 413.1	<5.0	mg/L	5.0	8/24/98
Carbon tetrachloride	EPA 624	ND	ug/L	40	8/20/98
Bromomethane	EPA 624	ND	ug/L	100	8/20/98
Benzene	EPA 624	ND	ug/L	40	8/20/98
trans-1,3-Dichloropropene	EPA 624	ND	ug/L	40	8/20/98
trans 1,2-Dichloroethylene	EPA 624	ND	ug/L	40	8/20/98
cis 1,3-Dichloropropene	EPA 624	ND	ug/L	40	8/20/98
2-Chloroethylvinyl ether	EPA 624	ND	ug/L	40	8/20/98
1,4-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,3-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichloropropane	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichloroethane	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,1-Dichloroethylene	EPA 624	ND	ug/L	40	8/20/98
1,1-Dichloroethane	EPA 624	ND	ug/L	40	8/20/98
Trichloroethylene (TCE)	EPA 624	ND	ug/L	40	8/20/98
1,1,2-Trichloroethane	EPA 624	ND	ug/L	40	8/20/98
1,1,1-Trichloroethane	EPA 624	ND	ug/L	40	8/20/98
Toluene	EPA 624	ND	ug/L	40	8/20/98
Ethylbenzene	EPA 624	ND	ug/L	40	8/20/98
m,p-Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
o-Xylene	EPA 624	ND Y	ug/L	40	8/20/98
Tetrachloroethylene (PCE)	EPA 624	ND	ug/L	40	8/20/98
1,1,2,2-Tetrachloroethane	EPA 624	ND	ug/L	40	8/20/98
Chloromethane	EPA 624	ND	ug/L	100	8/20/98
Chloroform	EPA 624	ND	ug/L	40	8/20/98
Bromodichloromethane	EPA 624	ND	ug/L	40	8/20/98
Bromoform	EPA 624	ND	ug/L	40	8/20/98

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Matrix: Storm Water
Sample No: 9808-05689-001

Time Sampled: 0:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Chlorobenzene	EPA 624	ND	ug/L	40	8/20/98
Chloroethane	EPA 624	ND	ug/L	100	8/20/98
Dichloromethane	EPA 624	ND	ug/L	100	8/20/98
Trichlorofluoromethane	EPA 624	ND	ug/L	100	8/20/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	100	8/20/98
Vinyl Chloride	EPA 624	ND	ug/L	100	8/20/98
Dibromochloromethane	EPA 624	ND	ug/L	40	8/20/98
Total Trihalomethanes	EPA 624	ND	ug/L	40	8/20/98
Acrolein	EPA 624	ND T,Y	ug/L	1000	8/20/98
Acrylonitrile	EPA 624	ND Y	ug/L	200	8/20/98
Surrogates:	EPA 624				8/20/98
***Pentafluorobenzene	EPA 624	86.	% Recovery		8/20/98
***1,2-dichloroethane-d4	EPA 624	88.	% Recovery		8/20/98
***4-bromofluorobenzene	EPA 624	78.	% Recovery		8/20/98
***1,2-dichlorobenzene-d4	EPA 624	90.	% Recovery		8/20/98
Acetone	EPA 624	ND Y	ug/L	500	8/20/98
2-Butanone (MEK)	EPA 624	ND Y	ug/L	200	8/20/98
Carbon disulfide	EPA 624	ND Y	ug/L	200	8/20/98
2-Hexanone (MBK)	EPA 624	ND Y	ug/L	200	8/20/98
Styrene	EPA 624	ND Y	ug/L	40	8/20/98
Total Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
Trichlorotrifluoroethane	EPA 624	ND Y	ug/L	40	8/20/98
cis 1,2-Dichloroethylene	EPA 624	ND Y	ug/L	40	8/20/98
m,p-Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
o-Xylene	EPA 624	ND Y	ug/L	40	8/20/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	100	8/20/98

For EPA 624, Sample was diluted due to matrix interferences.
T = Result based on a Tentatively Identified Compound search.
Y = Compound not listed in cited method.

S. Kaufman

Project Manager
ADHS License No.: AZ0004

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

Received: 8/16/98
Reported: 9/10/98
Invoice No: 045627

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05689-002
Sample ID: Mesa 2-Comp (Broadway/Lindsay)

Time Sampled: 0:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
pH	EPA 150.1	7.2	Std Unit		8/16/98
Chemical Oxygen Demand	EPA 410.4	183.	mg/L	20.	8/25/98
Chloride	EPA 300.0	119.	mg/L	5.0	8/17/98
Total Dissolved Solids	SM 2540C	425.	mg/L	1.	8/19/98
Solids, Total Suspended	EPA 160.2	26.	mg/L	1.	8/17/98
Nitrogen as Ammonia	EPA 350.2	1.44	mg/L	0.03	8/21/98
Nitrogen as Nitrate	EPA 300.0	2.0	mg/L	0.1	8/17/98
Nitrogen as Nitrite	EPA 300.0	0.1	mg/L	0.1	8/17/98
Nitrate plus Nitrite	CALCULATION	2.1	mg/L		8/25/98
Organic Nitrogen	CALCULATION	0.06	mg/L		9/03/98
Total Kjeldahl Nitrogen	EPA 351.3	1.5	mg/L	0.5	8/19/98
P as Total Phosphate	EPA 365.3	1.7 D1	mg/L	0.5	8/28/98
Phosphorus, Dissolved	EPA 365.3	1.5 D1	mg/L	0.3	8/28/98
P as Orthophosphate	SM 4500 PE	0.1	mg/L	0.05	8/17/98
Total Alkalinity (as CaCO3)	SM 2320B	106.	mg/L	2.	8/20/98
Sulfate, Dissolved	EPA 300.0	48.	mg/L	5.0	8/17/98
Chromium, hexavalent	SM 3500-CR D	<0.010	mg/L	0.010	8/17/98
Nitrogen, Total	CALCULATION	3.6	mg/L		8/25/98
WW Metals Digestion for ICP	EPA 200.7				8/19/98
DW/WW metals digestion-AA	SM 3030E				8/19/98
Antimony	SM 3113B	<0.005	mg/L	0.005	8/20/98
Arsenic	SM 3113B	0.008	mg/L	0.005	8/31/98
Beryllium	EPA 200.7	<0.002	mg/L	0.002	8/31/98
Calcium	EPA 200.7	47.	mg/L	1.	8/31/98
Copper	SM 3113B	0.014	mg/L	0.005	9/08/98
Lead	SM 3113B	<0.005	mg/L	0.005	8/20/98
Magnesium	EPA 200.7	6.	mg/L	1.	8/31/98
Mercury	EPA 245.1	0.0003	mg/L	0.0002	8/19/98
Selenium	SM 3113B	<0.005	mg/L	0.005	8/28/98
Silver	EPA 200.7	<0.04	mg/L	0.04	9/01/98
Hardness, Total (Ca & Mg)	SM 2340B	142	mg/L	7.	8/31/98
Zinc	EPA 200.7	0.11	mg/L	0.03	8/31/98

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Matrix: Storm Water
Sample No: 9808-05689-002

Time Sampled: 0:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Thallium	EPA 200.9	<0.001	mg/L	0.001	8/26/98
Cadmium	EPA 213.2	<0.0002	mg/L	0.0002	8/26/98
Chromium	EPA 218.2	<0.001	mg/L	0.001	8/27/98
Nickel	EPA 249.2	0.0038	mg/L	0.001	8/26/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	8/19/98
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/18/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	8/31/98
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	8/31/98
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	9/02/98
Mercury, Dissolved	EPA 245.1	0.0005	mg/L	0.0002	8/19/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/28/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	8/31/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	8/26/98
Zinc, Dissolved	EPA 200.7	0.08	mg/L	0.02	9/01/98
Cadmium, Dissolved	EPA 213.2	0.0002	mg/L	0.0002	8/26/98
Chromium, Dissolved	EPA 218.2	0.0033	mg/L	0.001	8/27/98
Nickel, Dissolved	EPA 249.2	0.0093	mg/L	0.001	8/26/98
N-Nitrosodimethylamine	EPA 625	ND	ug/L	5.0	8/26/98
Phenol	EPA 625	ND	ug/L	5.0	8/26/98
Aniline	EPA 625	ND	ug/L	5.0	8/26/98
Bis(2-chloroethyl)ether	EPA 625	ND	ug/L	10.	8/26/98
2-Chlorophenol	EPA 625	ND	ug/L	10.	8/26/98
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/26/98
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/26/98
Benzyl alcohol	EPA 625	ND	ug/L	10.	8/26/98
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/26/98
2-Methylphenol	EPA 625	ND	ug/L	5.0	8/26/98
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	10.	8/26/98
4-Methylphenol (p-Cresol)	EPA 625	ND	ug/L	5.0	8/26/98
N-Nitrosodi-n-propylamine	EPA 625	ND	ug/L	5.0	8/26/98
Hexachloroethane	EPA 625	ND	ug/L	10.	8/26/98
Nitrobenzene	EPA 625	ND	ug/L	10.	8/26/98
Isophorone	EPA 625	ND	ug/L	10.	8/26/98
2,4-Dimethylphenol	EPA 625	ND	ug/L	10.	8/26/98
Benzoic acid	EPA 625	ND	ug/L	50.	8/26/98
2-Nitrophenol	EPA 625	ND	ug/L	10.	8/26/98
Bis(2-chloroethoxy)methane	EPA 625	ND	ug/L	10.	8/26/98
2,4-Dichlorophenol	EPA 625	ND	ug/L	10.	8/26/98
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	8/26/98
Naphthalene	EPA 625	ND	ug/L	5.0	8/26/98
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	8/26/98
4-Chloroaniline	EPA 625	ND	ug/L	5.0	8/26/98

Bolin Laboratories Inc.

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Matrix: Storm Water
Sample No: 9808-05689-002

Time Sampled: 0:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	8/26/98
2-Methylnaphthalene	EPA 625	ND	ug/L	5.0	8/26/98
Hexachlorocyclopentadiene	EPA 625	ND	ug/L	5.0	8/26/98
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/26/98
2,4,5-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/26/98
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	8/26/98
2-Nitroaniline	EPA 625	ND	ug/L	5.0	8/26/98
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	8/26/98
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/26/98
Acenaphthylene	EPA 625	ND	ug/L	10.	8/26/98
3-Nitroaniline	EPA 625	ND	ug/L	5.0	8/26/98
Acenaphthene	EPA 625	ND	ug/L	5.0	8/26/98
2,4-Dinitrophenol	EPA 625	ND	ug/L	20.	8/26/98
4-Nitrophenol	EPA 625	ND	ug/L	5.0	8/26/98
Dibenzofuran	EPA 625	ND	ug/L	5.0	8/26/98
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/26/98
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	8/26/98
4-Chlorophenylphenylether	EPA 625	ND	ug/L	10.	8/26/98
Fluorene	EPA 625	ND	ug/L	5.0	8/26/98
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	10.	8/26/98
4-Nitroaniline	EPA 625	ND	ug/L	5.0	8/26/98
N-Nitrosodiphenylamine	EPA 625	ND	ug/L	5.0	8/26/98
1,2-Diphenylhydrazine	EPA 625	ND *	ug/L	5.0	8/26/98
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	8/26/98
Hexachlorobenzene	EPA 625	ND	ug/L	10.	8/26/98
Pentachlorophenol	EPA 625	ND	ug/L	10.	8/26/98
Phenanthrene	EPA 625	ND	ug/L	5.0	8/26/98
Anthracene	EPA 625	ND	ug/L	5.0	8/26/98
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	8/26/98
Fluoranthene	EPA 625	ND	ug/L	5.0	8/26/98
Benzidine	EPA 625	ND	ug/L	20.	8/26/98
Pyrene	EPA 625	ND	ug/L	5.0	8/26/98
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	8/26/98
Bis(2-ethylhexyl)phthalate	EPA 625	82.6	ug/L	10.	8/26/98
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	8/26/98
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	8/26/98
Chrysene	EPA 625	ND	ug/L	5.0	8/26/98
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	8/26/98
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	8/26/98
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	8/26/98
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	8/26/98
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	8/26/98

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Matrix: Storm Water
Sample No: 9808-05689-002

Time Sampled: 0:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	8/26/98
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	8/26/98
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.	8/26/98
Extraction	EPA 625				8/20/98
Surrogate:	EPA 625				8/26/98
***d5-Phenol	EPA 625	35	% Recovery		8/26/98
***2-Fluorophenol	EPA 625	25	% Recovery		8/26/98
***d5-Nitrobenzene	EPA 625	47	% Recovery		8/26/98
***2-Fluorobiphenyl	EPA 625	52	% Recovery		8/26/98
***2,4,6-Tribromophenol	EPA 625	66	% Recovery		8/26/98
***d14-Terphenyl	EPA 625	58	% Recovery		8/26/98
4,4'-DDD	EPA 608	ND	ug/L	1.0	8/25/98
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/25/98
4,4'-DDT	EPA 608	ND	ug/L	2.0	8/25/98
Aldrin	EPA 608	ND	ug/L	1.0	8/25/98
alpha-BHC	EPA 608	ND	ug/L	1.0	8/25/98
Chlordane	EPA 608	ND	ug/L	1.0	8/25/98
delta-BHC	EPA 608	ND	ug/L	1.0	8/25/98
Dieldrin	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan I	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan II	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan Sulfate	EPA 608	ND	ug/L	1.0	8/25/98
Endrin	EPA 608	ND	ug/L	1.0	8/25/98
Endrin Aldehyde	EPA 608	ND	ug/L	1.0	8/25/98
Heptachlor	EPA 608	ND	ug/L	1.0	8/25/98
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	8/25/98
Lindane (gamma BHC)	EPA 608	ND C	ug/L	1.0	8/25/98
PCB 1016	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1221	EPA 608	ND	ug/L	10	8/25/98
PCB 1232	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1242	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1248	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1254	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1260	EPA 608	ND	ug/L	1.0	8/25/98
Toxaphene	EPA 608	ND	ug/L	1.0	8/25/98
beta-BHC	EPA 608	ND	ug/L	1.0	8/25/98
Extraction	EPA 608				8/21/98
Surrogate:	EPA 608	131 S1			8/25/98
***Dibutylchlorendate	EPA 608	131 S1	% Recovery		8/25/98

C = Continuing Calibration was above method control limits. Data was not impacted.
D1 = Sample was diluted due to high concentration of target analyte.

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S1 = Surrogate recovery was above laboratory acceptance limits. Data was not impacted.
T = Result based on a Tentatively Identified Compound search.
* = 1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.

Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.
Dissolved and Total Cd, Cr & Ni analyzed by BC Labs, Bakersfield CA, #AZ0345.

S. Kaufman

Project Manager
ADHS License No.: AZ0004

Data Checksheet

Site	FALCON (M3)
Municipality	MESA
Sample Date	Aug 16, 1998

Date Received	Sept 16, 1998

Laboratory Used	BOLIN
Laboratory Contact	Stephanie 942-8220
FCD Sample ID Number	Mesa 3 Grab / Mesa 3 Comp.
Lab Sample ID Number	9808-05689-004, -005
Laboratory Invoice Number	45627

Initial Review Complete	yes	Date	10-5-98
Lab Contacted	N/A	Date	—
Lab Review Complete	—	Date	—
Second Review Complete	—	Date	—
Additional Review Necessary	—		

Comments

Data Validation Table Complete	yes	Date	11-12-98

Data Entered Into Database	yes	Date	11-10-98

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

Received: 8/16/98
Reported: 9/10/98
Invoice No: 045627

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05689-004
Sample ID: Mesa 3-Grab (Falcon Field)

Time Sampled: 0:45
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Biochemical Oxygen Demand	EPA 405.1	31.	mg/L	1.0	8/17/98
Dissolved Oxygen	EPA 360.1	9.31	mg/L	0.01	8/16/98
Fecal Coliform	SM 9221D	14,000.	MPN/100ml		8/16/98
Fecal Streptococcus	SM 9230B	2,400.	MPN/100ml		8/16/98
Oil & Grease	EPA 413.1	<5.0	mg/L	5.0	8/24/98
Carbon tetrachloride	EPA 624	ND	ug/L	40	8/20/98
Bromomethane	EPA 624	ND	ug/L	100	8/20/98
Benzene	EPA 624	ND	ug/L	40	8/20/98
trans-1,3-Dichloropropene	EPA 624	ND	ug/L	40	8/20/98
trans 1,2-Dichloroethylene	EPA 624	ND	ug/L	40	8/20/98
cis 1,3-Dichloropropene	EPA 624	ND	ug/L	40	8/20/98
2-Chloroethylvinyl ether	EPA 624	ND	ug/L	40	8/20/98
1,4-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,3-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichloropropane	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichloroethane	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,1-Dichloroethylene	EPA 624	ND	ug/L	40	8/20/98
1,1-Dichloroethane	EPA 624	ND	ug/L	40	8/20/98
Trichloroethylene (TCE)	EPA 624	ND	ug/L	40	8/20/98
1,1,2-Trichloroethane	EPA 624	ND	ug/L	40	8/20/98
1,1,1-Trichloroethane	EPA 624	ND	ug/L	40	8/20/98
Toluene	EPA 624	ND	ug/L	40	8/20/98
Ethylbenzene	EPA 624	ND	ug/L	40	8/20/98
m,p-Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
o-Xylene	EPA 624	ND Y	ug/L	40	8/20/98
Tetrachloroethylene (PCE)	EPA 624	ND	ug/L	40	8/20/98
1,1,2,2-Tetrachloroethane	EPA 624	ND	ug/L	40	8/20/98
Chloromethane	EPA 624	ND	ug/L	100	8/20/98
Chloroform	EPA 624	ND	ug/L	40	8/20/98
Bromodichloromethane	EPA 624	ND	ug/L	40	8/20/98
Bromoform	EPA 624	ND	ug/L	40	8/20/98

Bolin Laboratories Inc.

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9808-05689-004

Time Sampled: 0:45
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Chlorobenzene	EPA 624	ND	ug/L	40	8/20/98
Chloroethane	EPA 624	ND	ug/L	100	8/20/98
Dichloromethane	EPA 624	ND	ug/L	100	8/20/98
Trichlorofluoromethane	EPA 624	ND	ug/L	100	8/20/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	100	8/20/98
Vinyl Chloride	EPA 624	ND	ug/L	100	8/20/98
Dibromochloromethane	EPA 624	ND	ug/L	40	8/20/98
Total Trihalomethanes	EPA 624	ND	ug/L	40	8/20/98
Acrolein	EPA 624	ND T,Y	ug/L	1000	8/20/98
Acrylonitrile	EPA 624	ND Y	ug/L	200	8/20/98
Surrogates:	EPA 624				8/20/98
***Pentafluorobenzene	EPA 624	88.	% Recovery		8/20/98
***1,2-dichloroethane-d4	EPA 624	89.	% Recovery		8/20/98
***4-bromofluorobenzene	EPA 624	76.	% Recovery		8/20/98
***1,2-dichlorobenzene-d4	EPA 624	91.	% Recovery		8/20/98
Acetone	EPA 624	ND Y	ug/L	500	8/20/98
2-Butanone (MEK)	EPA 624	ND Y	ug/L	200	8/20/98
Carbon disulfide	EPA 624	ND Y	ug/L	200	8/20/98
2-Hexanone (MBK)	EPA 624	ND Y	ug/L	200	8/20/98
Styrene	EPA 624	ND Y	ug/L	40	8/20/98
Total Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
Trichlorotrifluoroethane	EPA 624	ND Y	ug/L	40	8/20/98
cis 1,2-Dichloroethylene	EPA 624	ND Y	ug/L	40	8/20/98
m,p-Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
o-Xylene	EPA 624	ND Y	ug/L	40	8/20/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	100	8/20/98

For EPA 624, Sample was diluted due to matrix interferences.
T = Result based on a Tentatively Identified Compound search.
Y = Compound not listed in cited method.

S. Kaufman

Project Manager
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: 8/16/98
Reported: 9/10/98
Invoice No: 045627

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05689-005
Sample ID: Mesa 3-Comp (Falcon Field)

Time Sampled: 0:45
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
pH	EPA 150.1	6.8	Std Unit		8/16/98
Chemical Oxygen Demand	EPA 410.4	121.	mg/L	20.	8/25/98
Chloride	EPA 300.0	<5.0	mg/L	5.0	8/17/98
Cyanide, Total	SM 4500 CN E	<0.01	mg/L	0.01	8/24/98
Total Dissolved Solids	SM 2540C	91.	mg/L	1.	8/19/98
Solids, Total Suspended	EPA 160.2	68.	mg/L	1.	8/17/98
Nitrogen as Ammonia	EPA 350.2	1.63	mg/L	0.03	8/21/98
Nitrogen as Nitrate	EPA 300.0	0.9	mg/L	0.1	8/17/98
Nitrogen as Nitrite	EPA 300.0	<0.1	mg/L	0.1	8/17/98
Nitrate plus Nitrite	CALCULATION	0.9	mg/L		8/25/98
Organic Nitrogen	CALCULATION	<0.5	mg/L		9/03/98
Total Kjeldahl Nitrogen	EPA 351.3	1.0	mg/L	0.5	8/19/98
P as Total Phosphate	EPA 365.3	0.4	mg/L	0.05	8/28/98
Phosphorus, Dissolved	EPA 365.3	0.4	mg/L	0.05	8/28/98
P as Orthophosphate	SM 4500 PE	0.1	mg/L	0.05	8/17/98
Total Organic Carbon	SM 5310C	28.3	mg/L	0.2	8/20/98
Total Alkalinity (as CaCO3)	SM 2320B	22.	mg/L	2.	8/20/98
Sulfate, Dissolved	EPA 300.0	6.	mg/L	5.0	8/17/98
Phenolics, Total	EPA 420.1	0.0068	mg/L	0.0050	8/19/98
Chromium, hexavalent	SM 3500-CR D	<0.010	mg/L	0.010	8/17/98
Nitrogen, Total	CALCULATION	1.9	mg/L		8/25/98
WW Metals Digestion for ICP	EPA 200.7				8/19/98
DW/WW metals digestion-AA	SM 3030E				8/19/98
Antimony	SM 3113B	<0.005	mg/L	0.005	8/20/98
Arsenic	SM 3113B	<0.005	mg/L	0.005	8/31/98
Beryllium	EPA 200.7	<0.002	mg/L	0.002	8/31/98
Calcium	EPA 200.7	13.	mg/L	1.	8/31/98
Copper	SM 3113B	0.014	mg/L	0.005	9/08/98
Lead	SM 3113B	0.010	mg/L	0.005	8/20/98
Magnesium	EPA 200.7	2.	mg/L	1.	8/31/98
Mercury	EPA 245.1	0.0003	mg/L	0.0002	8/19/98
Selenium	SM 3113B	<0.005	mg/L	0.005	8/28/98

Bolin Laboratories Inc.

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9808-05689-005

Time Sampled: 0:45
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Silver	EPA 200.7	<0.04	mg/L	0.04	9/01/98
Hardness, Total (Ca & Mg)	SM 2340B	40	mg/L	7.	8/31/98
Zinc	EPA 200.7	0.16	mg/L	0.03	8/31/98
Thallium	EPA 200.9	<0.001	mg/L	0.001	8/26/98
Cadmium	EPA 213.2	0.00026	mg/L	0.0002	8/26/98
Chromium	EPA 218.2	0.0014	mg/L	0.001	8/27/98
Nickel	EPA 249.2	0.0014	mg/L	0.001	8/26/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	8/19/98
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/18/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	8/31/98
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	8/31/98
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	9/02/98
Mercury, Dissolved	EPA 245.1	<0.0002	mg/L	0.0002	8/26/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/28/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	8/31/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	8/26/98
Zinc, Dissolved	EPA 200.7	0.10	mg/L	0.02	9/01/98
Cadmium, Dissolved	EPA 213.2	0.00083	mg/L	0.0002	8/26/98
Chromium, Dissolved	EPA 218.2	0.0045	mg/L	0.001	8/27/98
Nickel, Dissolved	EPA 249.2	0.0062	mg/L	0.001	8/26/98
N-Nitrosodimethylamine	EPA 625	ND	ug/L	5.0	8/26/98
Phenol	EPA 625	ND	ug/L	5.0	8/26/98
Aniline	EPA 625	ND	ug/L	5.0	8/26/98
Bis(2-chloroethyl)ether	EPA 625	ND	ug/L	10.	8/26/98
2-Chlorophenol	EPA 625	ND	ug/L	10.	8/26/98
1,3-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/26/98
1,4-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/26/98
Benzyl alcohol	EPA 625	ND	ug/L	10.	8/26/98
1,2-Dichlorobenzene	EPA 625	ND	ug/L	5.0	8/26/98
2-Methylphenol	EPA 625	ND	ug/L	5.0	8/26/98
Bis(2-chloroisopropyl)ether	EPA 625	ND	ug/L	10.	8/26/98
4-Methylphenol (p-Cresol)	EPA 625	ND	ug/L	5.0	8/26/98
N-Nitrosodi-n-propylamine	EPA 625	ND	ug/L	5.0	8/26/98
Hexachloroethane	EPA 625	ND	ug/L	10.	8/26/98
Nitrobenzene	EPA 625	ND	ug/L	10.	8/26/98
Isophorone	EPA 625	ND	ug/L	10.	8/26/98
2,4-Dimethylphenol	EPA 625	ND	ug/L	10.	8/26/98
Benzoic acid	EPA 625	ND	ug/L	50.	8/26/98
2-Nitrophenol	EPA 625	ND	ug/L	10.	8/26/98
Bis(2-chloroethoxy)methane	EPA 625	ND	ug/L	10.	8/26/98
2,4-Dichlorophenol	EPA 625	ND	ug/L	10.	8/26/98
1,2,4-Trichlorobenzene	EPA 625	ND	ug/L	5.0	8/26/98

Bolin Laboratories Inc.

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Matrix: Storm Water
Sample No: 9808-05689-005

Time Sampled: 0:45
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Naphthalene	EPA 625	ND	ug/L	5.0	8/26/98
Hexachlorobutadiene	EPA 625	ND	ug/L	5.0	8/26/98
4-Chloroaniline	EPA 625	ND	ug/L	5.0	8/26/98
4-Chloro-3-methylphenol	EPA 625	ND	ug/L	5.0	8/26/98
2-Methylnaphthalene	EPA 625	ND	ug/L	5.0	8/26/98
Hexachlorocyclopentadiene	EPA 625	ND	ug/L	5.0	8/26/98
2,4,6-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/26/98
2,4,5-Trichlorophenol	EPA 625	ND	ug/L	5.0	8/26/98
2-Chloronaphthalene	EPA 625	ND	ug/L	5.0	8/26/98
2-Nitroaniline	EPA 625	ND	ug/L	5.0	8/26/98
Dimethyl Phthalate	EPA 625	ND	ug/L	5.0	8/26/98
2,6-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/26/98
Acenaphthylene	EPA 625	ND	ug/L	10.	8/26/98
3-Nitroaniline	EPA 625	ND	ug/L	5.0	8/26/98
Acenaphthene	EPA 625	ND	ug/L	5.0	8/26/98
2,4-Dinitrophenol	EPA 625	ND	ug/L	20.	8/26/98
4-Nitrophenol	EPA 625	ND	ug/L	5.0	8/26/98
Dibenzofuran	EPA 625	ND	ug/L	5.0	8/26/98
2,4-Dinitrotoluene	EPA 625	ND	ug/L	5.0	8/26/98
Diethyl Phthalate	EPA 625	ND	ug/L	5.0	8/26/98
4-Chlorophenylphenylether	EPA 625	ND	ug/L	10.	8/26/98
Fluorene	EPA 625	ND	ug/L	5.0	8/26/98
2-Methyl-4,6-Dinitrophenol	EPA 625	ND	ug/L	10.	8/26/98
4-Nitroaniline	EPA 625	ND	ug/L	5.0	8/26/98
N-Nitrosodiphenylamine	EPA 625	ND	ug/L	5.0	8/26/98
1,2-Diphenylhydrazine	EPA 625	ND *	ug/L	5.0	8/26/98
4-Bromophenylphenylether	EPA 625	ND	ug/L	5.0	8/26/98
Hexachlorobenzene	EPA 625	ND	ug/L	10.	8/26/98
Pentachlorophenol	EPA 625	ND	ug/L	10.	8/26/98
Phenanthrene	EPA 625	ND	ug/L	5.0	8/26/98
Anthracene	EPA 625	ND	ug/L	5.0	8/26/98
Di-n-butylphthalate	EPA 625	ND	ug/L	5.0	8/26/98
Fluoranthene	EPA 625	ND	ug/L	5.0	8/26/98
Benzidine	EPA 625	ND	ug/L	20.	8/26/98
Pyrene	EPA 625	ND	ug/L	5.0	8/26/98
Butylbenzyl Phthalate	EPA 625	ND	ug/L	5.0	8/26/98
Bis(2-ethylhexyl)phthalate	EPA 625	31.3	ug/L	10.	8/26/98
Benzo (a) anthracene	EPA 625	ND	ug/L	5.0	8/26/98
3,3'-Dichlorobenzidine	EPA 625	ND	ug/L	5.0	8/26/98
Chrysene	EPA 625	ND	ug/L	5.0	8/26/98
Di-n-octylphthalate	EPA 625	ND	ug/L	5.0	8/26/98
Benzo (b) fluoranthene	EPA 625	ND	ug/L	5.0	8/26/98

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Matrix: Storm Water
Sample No: 9808-05689-005

Time Sampled: 0:45
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Benzo (k) fluoranthene	EPA 625	ND	ug/L	5.0	8/26/98
Benzo (a) pyrene	EPA 625	ND	ug/L	5.0	8/26/98
Indeno (1,2,3-cd) pyrene	EPA 625	ND	ug/L	5.0	8/26/98
Dibenzo (a,h) anthracene	EPA 625	ND	ug/L	5.0	8/26/98
Benzo (g,h,i) perylene	EPA 625	ND	ug/L	5.0	8/26/98
2,3,7,8-TCDD (Screen)	EPA 625	ND T	ug/L	10.	8/26/98
Extraction	EPA 625				8/20/98
Surrogate:	EPA 625				8/26/98
***d5-Phenol	EPA 625	23	% Recovery		8/26/98
***2-Fluorophenol	EPA 625	18	% Recovery		8/26/98
***d5-Nitrobenzene	EPA 625	37	% Recovery		8/26/98
***2-Fluorobiphenyl	EPA 625	39	% Recovery		8/26/98
***2,4,6-Tribromophenol	EPA 625	66	% Recovery		8/26/98
***d14-Terphenyl	EPA 625	58	% Recovery		8/26/98
4,4'-DDD	EPA 608	ND	ug/L	1.0	8/25/98
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/25/98
4,4'-DDT	EPA 608	ND	ug/L	2.0	8/25/98
Aldrin	EPA 608	ND	ug/L	1.0	8/25/98
alpha-BHC	EPA 608	ND	ug/L	1.0	8/25/98
Chlordane	EPA 608	ND	ug/L	1.0	8/25/98
delta-BHC	EPA 608	ND	ug/L	1.0	8/25/98
Dieldrin	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan I	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan II	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan Sulfate	EPA 608	ND	ug/L	1.0	8/25/98
Endrin	EPA 608	ND	ug/L	1.0	8/25/98
Endrin Aldehyde	EPA 608	ND	ug/L	1.0	8/25/98
Heptachlor	EPA 608	ND	ug/L	1.0	8/25/98
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	8/25/98
Lindane (gamma BHC)	EPA 608	ND C	ug/L	1.0	8/25/98
PCB 1016	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1221	EPA 608	ND	ug/L	10	8/25/98
PCB 1232	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1242	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1248	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1254	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1260	EPA 608	ND	ug/L	1.0	8/25/98
Toxaphene	EPA 608	ND	ug/L	1.0	8/25/98
beta-BHC	EPA 608	ND	ug/L	1.0	8/25/98
Extraction	EPA 608				8/21/98
Surrogate:	EPA 608	130			8/25/98
***Dibutylchlorendate	EPA 608	130	% Recovery		8/25/98

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C = Continuing Calibration was above method control limits. Data was not impacted.
T = Result based on a Tentatively Identified Compound search.
* = 1,2-Diphenylhydrazine oxidizes to azobenzene under GC operating conditions. This compound was calibrated as azobenzene.

Phenol analyzed by McKenzie Labs, Phoenix AZ, #AZ0034.
Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.
Dissolved and Total Cd, Cr & Ni analyzed by BC Labs, Bakersfield CA, #AZ0345.

S. Kaufman

Project Manager
ADHS License No.: AZ0004

Data Checksheet

Site	GRANDVIEW (M4)
Municipality	MESA
Sample Date	Aug 16, 1998

Date Received	Sept 16, 1998

Laboratory Used	Bolin
Laboratory Contact	Stephanie
FCD Sample ID Number	Mesa 4-Grab / Mesa 4-Comp
Lab Sample ID Number	9808-05689-007, -008
Laboratory Invoice Number	45627

Initial Review Complete	yes	Date	10-5-98
Lab Contacted	—	Date	—
Lab Review Complete	—	Date	—
Second Review Complete	—	Date	—
Additional Review Necessary	—		

Comments

Data Validation Table Complete	yes	Date	11-12-98

Data Entered Into Database	yes	Date	11-10-98

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

Received: 8/16/98
Reported: 9/10/98
Invoice No: 045627

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05689-007
Sample ID: Mesa 4-Grab (Horne/Grandview)

Time Sampled: 1:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Biochemical Oxygen Demand	EPA 405.1	85.	mg/L	1.0	8/17/98
Dissolved Oxygen	EPA 360.1	7.77	mg/L	0.01	8/16/98
Fecal Coliform	SM 9221D	>160,000.	MPN/100ml		8/16/98
Fecal Streptococcus	SM 9230B	17,000.	MPN/100ml		8/16/98
Oil & Grease	EPA 413.1	<5.0	mg/L	5.0	8/24/98
Carbon tetrachloride	EPA 624	ND	ug/L	40	8/20/98
Bromomethane	EPA 624	ND	ug/L	100	8/20/98
Benzene	EPA 624	ND	ug/L	40	8/20/98
trans-1,3-Dichloropropene	EPA 624	ND	ug/L	40	8/20/98
trans 1,2-Dichloroethylene	EPA 624	ND	ug/L	40	8/20/98
cis 1,3-Dichloropropene	EPA 624	ND	ug/L	40	8/20/98
2-Chloroethylvinyl ether	EPA 624	ND	ug/L	40	8/20/98
1,4-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,3-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichloropropane	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichloroethane	EPA 624	ND	ug/L	40	8/20/98
1,2-Dichlorobenzene	EPA 624	ND	ug/L	40	8/20/98
1,1-Dichloroethylene	EPA 624	ND	ug/L	40	8/20/98
1,1-Dichloroethane	EPA 624	ND	ug/L	40	8/20/98
Trichloroethylene (TCE)	EPA 624	ND	ug/L	40	8/20/98
1,1,2-Trichloroethane	EPA 624	ND	ug/L	40	8/20/98
1,1,1-Trichloroethane	EPA 624	ND	ug/L	40	8/20/98
Toluene	EPA 624	ND	ug/L	40	8/20/98
Ethylbenzene	EPA 624	ND	ug/L	40	8/20/98
m,p-Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
o-Xylene	EPA 624	ND Y	ug/L	40	8/20/98
Tetrachloroethylene (PCE)	EPA 624	ND	ug/L	40	8/20/98
1,1,2,2-Tetrachloroethane	EPA 624	ND	ug/L	40	8/20/98
Chloromethane	EPA 624	ND	ug/L	100	8/20/98
Chloroform	EPA 624	ND	ug/L	40	8/20/98
Bromodichloromethane	EPA 624	ND	ug/L	40	8/20/98
Bromoform	EPA 624	ND	ug/L	40	8/20/98

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(602) 942 8220 • FAX (602) 942 1050

Matrix: Storm Water
Sample No: 9808-05689-007

Time Sampled: 1:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Chlorobenzene	EPA 624	ND	ug/L	40	8/20/98
Chloroethane	EPA 624	ND	ug/L	100	8/20/98
Dichloromethane	EPA 624	ND	ug/L	100	8/20/98
Trichlorofluoromethane	EPA 624	ND	ug/L	100	8/20/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	100	8/20/98
Vinyl Chloride	EPA 624	ND	ug/L	100	8/20/98
Dibromochloromethane	EPA 624	ND	ug/L	40	8/20/98
Total Trihalomethanes	EPA 624	ND	ug/L	40	8/20/98
Acrolein	EPA 624	ND T,Y	ug/L	1000	8/20/98
Acrylonitrile	EPA 624	ND Y	ug/L	200	8/20/98
Surrogates:	EPA 624				8/20/98
***Pentafluorobenzene	EPA 624	86.	% Recovery		8/20/98
***1,2-dichloroethane-d4	EPA 624	89.	% Recovery		8/20/98
***4-bromofluorobenzene	EPA 624	74.	% Recovery		8/20/98
***1,2-dichlorobenzene-d4	EPA 624	91.	% Recovery		8/20/98
Acetone	EPA 624	ND Y	ug/L	500	8/20/98
2-Butanone (MEK)	EPA 624	ND Y	ug/L	200	8/20/98
Carbon disulfide	EPA 624	ND Y	ug/L	200	8/20/98
2-Hexanone (MBK)	EPA 624	ND Y	ug/L	200	8/20/98
Styrene	EPA 624	ND Y	ug/L	40	8/20/98
Total Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
Trichlorotrifluoroethane	EPA 624	ND Y	ug/L	40	8/20/98
cis 1,2-Dichloroethylene	EPA 624	ND Y	ug/L	40	8/20/98
m,p-Xylenes	EPA 624	ND Y	ug/L	40	8/20/98
o-Xylene	EPA 624	ND Y	ug/L	40	8/20/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	100	8/20/98

For EPA 624, Sample was diluted due to matrix interferences.
T = Result based on a Tentatively Identified Compound search.
Y = Compound not listed in cited method.

S. Kaufman

Project Manager
ADHS License No.: AZ0004

Bolin Laboratories Inc.

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

Received: 8/16/98
Reported: 9/10/98
Invoice No: 045627

Project Name: NPDES Stormwater Analysis

Matrix: Storm Water
Sample No: 9808-05689-008
Sample ID: Mesa 4-Comp (Horne/Grandview)

Time Sampled: 1:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
pH	EPA 150.1	6.4	Std Unit		8/16/98
Chemical Oxygen Demand	EPA 410.4	180.	mg/L	20.	8/25/98
Chloride	EPA 300.0	27.	mg/L	5.0	8/17/98
Total Dissolved Solids	SM 2540C	153.	mg/L	1.	8/19/98
Solids, Total Suspended	EPA 160.2	59.	mg/L	1.	8/17/98
Nitrogen as Ammonia	EPA 350.2	1.65	mg/L	0.03	8/21/98
Nitrogen as Nitrate	EPA 300.0	1.5	mg/L	0.1	8/17/98
Nitrogen as Nitrite	EPA 300.0	<0.1	mg/L	0.1	8/17/98
Nitrate plus Nitrite	CALCULATION	1.5	mg/L		8/25/98
Organic Nitrogen	CALCULATION	0.05	mg/L		9/03/98
Total Kjeldahl Nitrogen	EPA 351.3	1.7	mg/L	0.5	8/19/98
P as Total Phosphate	EPA 365.3	0.6 D1	mg/L	0.1	8/28/98
Phosphorus, Dissolved	EPA 365.3	0.5 D1	mg/L	0.1	8/28/98
P as Orthophosphate	SM 4500 PE	0.6 D1	mg/L	0.3	8/17/98
Total Alkalinity (as CaCO3)	SM 2320B	34.	mg/L	2.	8/20/98
Sulfate, Dissolved	EPA 300.0	13.	mg/L	5.0	8/17/98
Chromium, hexavalent	SM 3500-CR D	<0.010	mg/L	0.010	8/17/98
Nitrogen, Total	CALCULATION	3.2	mg/L		8/25/98
WW Metals Digestion for ICP	EPA 200.7				8/19/98
DW/WW metals digestion-AA	SM 3030E				8/19/98
Antimony	SM 3113B	<0.005	mg/L	0.005	8/20/98
Arsenic	SM 3113B	<0.005	mg/L	0.005	8/31/98
Beryllium	EPA 200.7	<0.002	mg/L	0.002	8/31/98
Calcium	EPA 200.7	16.	mg/L	1.	8/31/98
Copper	SM 3113B	0.018	mg/L	0.005	9/08/98
Lead	SM 3113B	0.009	mg/L	0.005	8/20/98
Magnesium	EPA 200.7	3.	mg/L	1.	8/31/98
Mercury	EPA 245.1	<0.0002	mg/L	0.0002	8/19/98
Selenium	SM 3113B	<0.005	mg/L	0.005	8/28/98
Silver	EPA 200.7	<0.04	mg/L	0.04	9/01/98
Hardness, Total (Ca & Mg)	SM 2340B	52	mg/L	7.	8/31/98
Zinc	EPA 200.7	0.12	mg/L	0.03	8/31/98

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Matrix: Storm Water
Sample No: 9808-05689-008

Time Sampled: 1:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Thallium	EPA 200.9	<0.001	mg/L	0.001	8/26/98
Cadmium	EPA 213.2	0.00051	mg/L	0.0002	8/26/98
Chromium	EPA 218.2	0.0015	mg/L	0.001	8/27/98
Nickel	EPA 249.2	0.0025	mg/L	0.001	8/26/98
Antimony, Dissolved	EPA 200.9	<0.004	mg/L	0.004	8/19/98
Arsenic, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/18/98
Beryllium, Dissolved	EPA 200.7	<0.002	mg/L	0.002	9/01/98
Copper, Dissolved	EPA 200.7	<0.015	mg/L	0.015	8/31/98
Lead, Dissolved	EPA 200.9	<0.005	mg/L	0.005	9/02/98
Mercury, Dissolved	EPA 245.1	0.0007	mg/L	0.0002	8/26/98
Selenium, Dissolved	EPA 200.9	<0.005	mg/L	0.005	8/28/98
Silver, Dissolved	EPA 200.7	<0.05	mg/L	0.05	8/31/98
Thallium, Dissolved	EPA 200.9	<0.001	mg/L	0.001	8/26/98
Zinc, Dissolved	EPA 200.7	0.08	mg/L	0.02	9/04/98
Cadmium, Dissolved	EPA 213.2	<0.0002	mg/L	0.0002	8/26/98
Chromium, Dissolved	EPA 218.2	0.0026	mg/L	0.001	8/27/98
Nickel, Dissolved	EPA 249.2	0.0066	mg/L	0.001	8/26/98
4,4'-DDD	EPA 608	ND	ug/L	1.0	8/25/98
4,4'-DDE	EPA 608	ND	ug/L	1.0	8/25/98
4,4'-DDT	EPA 608	ND	ug/L	2.0	8/25/98
Aldrin	EPA 608	ND	ug/L	1.0	8/25/98
alpha-BHC	EPA 608	ND	ug/L	1.0	8/25/98
Chlordane	EPA 608	ND	ug/L	1.0	8/25/98
delta-BHC	EPA 608	ND	ug/L	1.0	8/25/98
Dieldrin	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan I	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan II	EPA 608	ND	ug/L	1.0	8/25/98
Endosulfan Sulfate	EPA 608	ND	ug/L	1.0	8/25/98
Endrin	EPA 608	ND	ug/L	1.0	8/25/98
Endrin Aldehyde	EPA 608	ND	ug/L	1.0	8/25/98
Heptachlor	EPA 608	ND	ug/L	1.0	8/25/98
Heptachlor Epoxide	EPA 608	ND	ug/L	1.0	8/25/98
Lindane (gamma BHC)	EPA 608	ND C	ug/L	1.0	8/25/98
PCB 1016	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1221	EPA 608	ND	ug/L	10	8/25/98
PCB 1232	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1242	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1248	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1254	EPA 608	ND	ug/L	1.0	8/25/98
PCB 1260	EPA 608	ND	ug/L	1.0	8/25/98
Toxaphene	EPA 608	ND	ug/L	1.0	8/25/98
beta-BHC	EPA 608	ND	ug/L	1.0	8/25/98

Bolin Laboratories Inc.

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

Matrix: Storm Water
Sample No: 9808-05689-008

Time Sampled: 1:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Extraction	EPA 608				8/21/98
Surrogate:	EPA 608	126			8/25/98
***Dibutylchlorendate	EPA 608	126	% Recovery		8/25/98

C = Continuing Calibration was above method control limits. Data was not impacted.
D1 = Sample was diluted due to high concentration of target analyte.

Ammonia analyzed by Aquatic Consulting, Tempe AZ. #AZ0003.
Dissolved and Total Cd, Cr & Ni analyzed by BC Labs, Bakersfield CA, #AZ0345.

S. Kaufman

Project Manager
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: 8/16/98
Reported: 9/10/98
Invoice No: 045627

Project Name: NPDES Stormwater Analysis

Matrix: DI Water
Sample No: 9808-05689-003
Sample ID: Travel Blank (Mesa 2,3,4)

Time Sampled: 0:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Carbon tetrachloride	EPA 624	ND	ug/L	2	8/20/98
Bromomethane	EPA 624	ND	ug/L	5	8/20/98
Benzene	EPA 624	ND	ug/L	2	8/20/98
trans-1,3-Dichloropropene	EPA 624	ND	ug/L	2	8/20/98
trans 1,2-Dichloroethylene	EPA 624	ND	ug/L	2	8/20/98
cis 1,3-Dichloropropene	EPA 624	ND	ug/L	2	8/20/98
2-Chloroethylvinyl ether	EPA 624	ND	ug/L	2	8/20/98
1,4-Dichlorobenzene	EPA 624	ND	ug/L	2	8/20/98
1,3-Dichlorobenzene	EPA 624	ND	ug/L	2	8/20/98
1,2-Dichloropropane	EPA 624	ND	ug/L	2	8/20/98
1,2-Dichloroethane	EPA 624	ND	ug/L	2	8/20/98
1,2-Dichlorobenzene	EPA 624	ND	ug/L	2	8/20/98
1,1-Dichloroethylene	EPA 624	ND	ug/L	2	8/20/98
1,1-Dichloroethane	EPA 624	ND	ug/L	2	8/20/98
Trichloroethylene (TCE)	EPA 624	ND	ug/L	2	8/20/98
1,1,2-Trichloroethane	EPA 624	ND	ug/L	2	8/20/98
1,1,1-Trichloroethane	EPA 624	ND	ug/L	2	8/20/98
Toluene	EPA 624	ND	ug/L	2	8/20/98
Ethylbenzene	EPA 624	ND	ug/L	2	8/20/98
m,p-Xylenes	EPA 624	ND Y	ug/L	2	8/20/98
o-Xylene	EPA 624	ND Y	ug/L	2	8/20/98
Tetrachloroethylene (PCE)	EPA 624	ND	ug/L	2	8/20/98
1,1,2,2-Tetrachloroethane	EPA 624	ND	ug/L	2	8/20/98
Chloromethane	EPA 624	ND	ug/L	5	8/20/98
Chloroform	EPA 624	ND	ug/L	2	8/20/98
Bromodichloromethane	EPA 624	ND	ug/L	2	8/20/98
Bromoform	EPA 624	ND	ug/L	2	8/20/98
Chlorobenzene	EPA 624	ND	ug/L	2	8/20/98
Chloroethane	EPA 624	ND	ug/L	5	8/20/98
Dichloromethane	EPA 624	ND	ug/L	5	8/20/98
Trichlorofluoromethane	EPA 624	ND	ug/L	5	8/20/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	5.	8/20/98

Bolin Laboratories Inc.

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Matrix: DI Water
Sample No: 9808-05689-003

Time Sampled: 0:00
Date Sampled: 8/16/1998

PARAMETER	METHOD	RESULTS	UNITS	PQL	DATE ANALYZED
Vinyl Chloride	EPA 624	ND	ug/L	5	8/20/98
Dibromochloromethane	EPA 624	ND	ug/L	2	8/20/98
Total Trihalomethanes	EPA 624	ND	ug/L	2	8/20/98
Acrolein	EPA 624	ND T,Y	ug/L	50	8/20/98
Acrylonitrile	EPA 624	ND Y	ug/L	10	8/20/98
Surrogates:	EPA 624				8/20/98
***Pentafluorobenzene	EPA 624	85.	% Recovery		8/20/98
***1,2-dichloroethane-d4	EPA 624	92.	% Recovery		8/20/98
***4-bromofluorobenzene	EPA 624	77.	% Recovery		8/20/98
***1,2-dichlorobenzene-d4	EPA 624	91.	% Recovery		8/20/98
Acetone	EPA 624	ND Y	ug/L	25	8/20/98
1,2,3-Trichlorobenzene	EPA 624	ND Y	ug/L	2.	8/20/98
2-Butanone (MEK)	EPA 624	ND Y	ug/L	10	8/20/98
Carbon disulfide	EPA 624	ND Y	ug/L	10	8/20/98
2-Hexanone (MBK)	EPA 624	ND Y	ug/L	10	8/20/98
Styrene	EPA 624	ND Y	ug/L	2	8/20/98
Total Xylenes	EPA 624	ND Y	ug/L	2	8/20/98
Trichlorotrifluoroethane	EPA 624	ND Y	ug/L	2	8/20/98
cis 1,2-Dichloroethylene	EPA 624	ND Y	ug/L	2	8/20/98
m,p-Xylenes	EPA 624	ND Y	ug/L	2	8/20/98
o-Xylene	EPA 624	ND Y	ug/L	2	8/20/98
Dichlorodifluoromethane	EPA 624	ND Y	ug/L	5.	8/20/98

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

S. Kaufman

Project Manager
ADHS License No.: AZ0004

Bolin Laboratories Inc.

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Quality Control Data Report

Client: MCFC
Bolin Sample ID: 9807-5689 total

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	8/31/98	1	104	107	<PQL	97	98
Calcium	EPA 200.7	8/31/98	30	102	102	<PQL	100	101
Copper	EPA 200.9/SM 3113B	9/8/98	1	125	115	<PQL	105	105
Magnesium	EPA 200.7	8/31/98	30	99	100	<PQL	99	101
Silver	EPA 200.7	9/1/98	0.5	87	88	<PQL	104	105
Zinc	EPA 200.7	8/31/98	1	105	107	<PQL	102	102
Antimony	EPA 200.9/SM 3113B	8/20/98	0.020	105	100	<PQL	110	110
Arsenic	EPA 200.9/SM 3113B	8/31/98	0.020	90	85	<PQL	100	110
Lead	EPA 200.9/SM 3113B	8/20/98	0.020	95	100	<PQL	90	90
Selenium	EPA 200.9/SM 3113B	8/28/98	0.020	80	80	<PQL	95	110
Thallium	EPA 200.9/SM 3113B	8/26/98	0.020	105	135	<PQL	100	100
Mercury	EPA 245.1	8/19/98	0.005	90	92	<PQL	96	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: MCFC
Bolin Sample ID: 9807-5689 diss

Analyte	Method	Date Analyzed	Spk Conc. (ppm)	MS %Rec	MSD %Rec	Blk (ppm)	ICV %Rec	CCV %Rec
Beryllium	EPA 200.7	8/31/98	0.2	108	108	<PQL	100	97
Copper	EPA 200.7	8/31/98	1	111	108	<PQL	99	100
Silver	EPA 200.7	8/31/98	0.5	85	86	<PQL	96	95
Zinc	EPA 200.7	9/1/98	1	118	110	<PQL	102	98
Antimony	EPA 200.9/SM 3113B	8/19/98	0.020	70	90	<PQL	95	110
Arsenic	EPA 200.9/SM 3113B	8/18/98	0.020	100	90	<PQL	100	110
Lead	EPA 200.9/SM 3113B	9/2/98	0.020	100	100	<PQL	100	100
Selenium	EPA 200.9/SM 3113B	8/28/98	0.020	100	100	<PQL	100	100
Thallium	EPA 200.9/SM 3113B	8/26/98	0.020	100	90	<PQL	90	90
Mercury	EPA 245.1	8/26/98	0.005	104	104	<PQL	102	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

Client: Maricopa County Flood Control
Bolin Sample ID: 9808-5689-1, 3, 4, 7

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	8/20/98	10	10.4	104	11.2	112	7	<PQL	-
Benzene	EPA 624	8/20/98	10	10.1	101	10.5	105	4	<PQL	-
Trichloroethylene	EPA 624	8/20/98	10	10.3	103	10.3	103	0	<PQL	-
Toluene	EPA 624	8/20/98	10	9.7	96.9	10.2	102	5	<PQL	-
Chlorobenzene	EPA 624	8/20/98	10	10.2	102	10.6	106	4	<PQL	-
Chloromethane	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	171
Vinylchloride	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	108
1,1-Dichloroethylene	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	107
1,1-Dichloroethane	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	105
Chloroform	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	109
1,2-Dichloropropane	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	103
Toluene	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	105
Chlorobenzene	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	102
Ethylbenzene	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	105
Bromoform	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	107
1,1,2,2-Tetrachloroethane	EPA 624	8/20/98	10	-	-	-	-	-	<PQL	119

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

Client: Maricopa County Flood Control
Bolin Sample ID: 9808-5689-2,5,8

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	ICV %Rec	CCV %Rec
Alpha-BHC	EPA 608	8/25/98	5.0	<PQL	4.57	91	4.71	94	103	105
Beta-BHC	EPA 608	8/25/98	5.0	<PQL	5.42	108	5.52	110	105	111
Gamma(Lindane)-BHC	EPA 608	8/25/98	5.0	<PQL	5.44	109	5.50	110	106	116*
Delta-BHC	EPA 608	8/25/98	5.0	<PQL	5.04	101	5.12	102	103	109
Heptachlor	EPA 608	8/25/98	5.0	<PQL	5.04	101	5.12	102	101	104
Aldrin	EPA 608	8/25/98	5.0	<PQL	4.80	96	4.97	99	102	105
Heptachlor Epoxide	EPA 608	8/25/98	5.0	<PQL	5.15	103	5.17	103	102	99
Endosulfan I	EPA 608	8/25/98	5.0	<PQL	4.85	97	5.05	101	102	102
Dieldrin	EPA 608	8/25/98	5.0	<PQL	5.18	104	5.36	107	102	104
4,4,-DDE	EPA 608	8/25/98	5.0	<PQL	4.31	86	4.57	91	98	98
Endrin	EPA 608	8/25/98	5.0	<PQL	5.63	113	5.78	116	102	106
Endosulfan II	EPA 608	8/25/98	5.0	<PQL	5.25	105	5.57	111	101	110
4,4-DDD	EPA 608	8/25/98	5.0	<PQL	5.25	105	5.57	111	101	110
Endrin Aldehyde	EPA 608	8/25/98	5.0	<PQL	4.15	83	4.23	85	100	102
Endosulfan Sulfate	EPA 608	8/25/98	5.0	<PQL	5.42	108	5.59	112	101	110
4,4-DDT	EPA 608	8/25/98	5.0	<PQL	5.48	110	5.76	115	100	109

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

Bolin Laboratories Inc.

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Quality Control Data Report

Client: Maricopa County Flood Control District
Bolin Sample ID: 9808-5689

Analyte	Method	Date Analyzed	Spk Conc.	MS %Rec	MSD %Rec	RPD	Blk	ICV %Rec	CCV %Rec
Biological Oxygen Demand	405.1	8/17/98	N/A	N/A	N/A	#####	<1.0	85	-
Oil and Grease	413.1	8/24/98	N/A	N/A	N/A	#####	<5.0	97	-
Chemical Oxygen Demand	410.4	8/25/98	30	101	100	0.995	<20	92	101
Chloride	300	8/17/98	20	100	100	0	<5.0	105	104
Total Dissolved Solids	SM 2540C	8/18/98	N/A	N/A	N/A	#####	<1.0	104	-
Total Suspended Solids	160.2	8/17/98	N/A	N/A	N/A	#####	<1.0	92	-
Nitrite	300	8/17/98	2.03	103	105	1.923	<0.1	100	100
Nitrate	300	8/17/98	4.54	103	104	0.966	<0.1	106	105
Total Phosphorous	365.3	8/28/98	0.1	107	97	9.804	<0.05	100	108
Disolved Phosphorous	365.2	8/28/98	0.1	108	103	4.739	<0.05	102	99
Ortho-Phosphorous	365.2	8/17/98	0.1	88	92	4.444	<0.05	105	105
Total Organic Carbons	SM 5310C	8/20/98	5	92	93	1.081	0.04	108	108
Alkalinity	SM 2320B	8/20/98	100	92	90	2.198	<2.0	94	94
Hexavalent Chromium	SM 3500	8/17/98	0.2	115	112	2.643	<0.01	103	104
Total Kjeldahl Nitrogen	351.4	8/19/98	2	90	83	8.092	<0.5	93	97
Dissolved Sulfate	300	8/17/98	20	102	101	0.985	<5.0	104	103

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: 5689-2,5

Analyte	Method	Date Analyzed	Spk Conc. (ppb)	BS Conc.	BS %Rec	BSD Conc.	BSD %Rec	RPD	BLK (ppb)	CCV %Rec
Phenol	EPA 625	8/26/98	200	58	29	49	25	17	<PQL	100
Bis(2-chloroethyl)ether	EPA 625	8/26/98	100	80	80	68	68	16	<PQL	111
2-Chlorophenol	EPA 625	8/26/98	200	131	66	112	56	16	<PQL	100
1,3-Dichlorobenzene	EPA 625	8/26/98	100	67	67	60	60	11	<PQL	103
1,4-Dichlorobenzene	EPA 625	8/26/98	100	67	67	61	61	9	<PQL	102
1,2-Dichlorobenzene	EPA 625	8/26/98	100	71	71	60	60	17	<PQL	97
Bis(2-chloroisopropyl)ether	EPA 625	8/26/98	100	69	69	61	61	12	<PQL	99
N-Nitrosodi-n-propylamine	EPA 625	8/26/98	100	80	80	68	68	16	<PQL	90
Hexachloroethane	EPA 625	8/26/98	100	79	79	65	65	19	<PQL	116
Nitrobenzene	EPA 625	8/26/98	100	78	78	69	69	12	<PQL	96
Isophorone	EPA 625	8/26/98	100	92	92	79	79	15	<PQL	94
2-Nitrophenol	EPA 625	8/26/98	200	160	80	131	66	20	<PQL	99
2,4-Dimethylphenol	EPA 625	8/26/98	200	148	74	131	66	12	<PQL	99
bis(2-Chloroethoxy)methane	EPA 625	8/26/98	100	83	83	68	68	20	<PQL	97
2,4-Dichlorophenol	EPA 625	8/26/98	200	139	70	126	63	10	<PQL	91
1,2,4-Trichlorobenzene	EPA 625	8/26/98	100	73	73	63	63	15	<PQL	94
Naphthalene	EPA 625	8/26/98	100	74	74	63	63	16	<PQL	96
Hexachlorobutadiene	EPA 625	8/26/98	100	71	71	60	60	17	<PQL	96
4-Chloro-3-methylphenol	EPA 625	8/26/98	200	169	85	153	77	10	<PQL	99
2,4,6-Trichlorophenol	EPA 625	8/26/98	200	170	85	154	77	10	<PQL	95
2-Chloronaphthalene	EPA 625	8/26/98	100	87	87	77	77	12	<PQL	92
Acenaphthylene	EPA 625	8/26/98	100	88	88	77	77	13	<PQL	94
Dimethyl phthalate	EPA 625	8/26/98	100	94	94	82	82	14	<PQL	94
2,6-Dinitrotoluene	EPA 625	8/26/98	100	100	100	86	86	15	<PQL	99
Acenaphthene	EPA 625	8/26/98	100	82	82	76	76	8	<PQL	99
2,4-Dinitrophenol	EPA 625	8/26/98	200	164	82	149	75	10	<PQL	103
2,4-Dinitrotoluene	EPA 625	8/26/98	100	94	94	91	91	3	<PQL	103
4-Nitrophenol	EPA 625	8/26/98	200	68	34	66	33	3	<PQL	106
Fluorene	EPA 625	8/26/98	100	83	83	80	80	4	<PQL	105
Diethylphthalate	EPA 625	8/26/98	100	83	83	81	81	2	<PQL	99
4-Chlorophenylphenylether	EPA 625	8/26/98	100	79	79	74	74	7	<PQL	97

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2-Methyl-4,6-dinitrophenol	EPA 625	8/26/98	200	169	85	163	82	4	<PQL	99
4-Bromophenoxybenzene	EPA 625	8/26/98	100	85	85	78	78	9	<PQL	100
Hexachlorobenzene	EPA 625	8/26/98	100	83	83	84	84	1	<PQL	101
Pentachlorophenol	EPA 625	8/26/98	200	175	88	165	83	6	<PQL	106
Phenanthrene	EPA 625	8/26/98	100	88	88	80	80	10	<PQL	99
Anthracene	EPA 625	8/26/98	100	87	87	80	80	8	<PQL	99
Di-n-butylphthalate	EPA 625	8/26/98	100	95	95	90	90	5	<PQL	107
Fluoranthene	EPA 625	8/26/98	100	90	90	87	87	3	<PQL	103
Pyrene	EPA 625	8/26/98	100	102	102	97	97	5	<PQL	106
Butylbenzylphthalate	EPA 625	8/26/98	100	93	93	89	89	4	<PQL	98
Benzo(a)anthracene	EPA 625	8/26/98	100	90	90	90	90	0	<PQL	102
Chrysene	EPA 625	8/26/98	100	97	97	95	95	2	<PQL	103
3,3'-Dichlorobenzidine	EPA 625	8/26/98	100	70	70	68	68	3	<PQL	93
bis(2-Ethylhexyl)phthalate	EPA 625	8/26/98	100	88	88	88	88	0	<PQL	104
Di-n-octylphthalate	EPA 625	8/26/98	100	85	85	80	80	6	<PQL	97
Benzo(b)fluoranthene	EPA 625	8/26/98	100	93	93	87	87	7	<PQL	102
Benzo(k)fluoranthene	EPA 625	8/26/98	100	95	95	88	88	8	<PQL	103
Benzo(a)pyrene	EPA 625	8/26/98	100	94	94	87	87	8	<PQL	103
Indeno(1,2,3-cd)pyrene	EPA 625	8/26/98	100	94	94	88	88	7	<PQL	104
Dibenzo(a,h)anthracene	EPA 625	8/26/98	100	92	92	86	86	7	<PQL	100
Benzo(g,h,i)perylene	EPA 625	8/26/98	100	93	93	86	86	8	<PQL	105

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

Bolin Laboratories Inc.

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☐ 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. 9808-05689

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
Flood Control	2801 W. Durango	Phoenix	AZ	85009	506-8401	506-4601

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

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 Storm Water

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 Attachment	624	BOD, DO, EPS	0&G, 624	Diss. Total Metals SA	COD, Phos, TKN, TSS	TDS, pH, Alk, Sdy	Cl, Cr6, NO2, NO3	OP, DP, NH3	608, 625		LAB NO
MESA 2	8/16	12:00	Broadway/Lindsay	8	9			17				X	X							(grab)	-01
MESA 3	8/16	1245	Falcon Field	11	9			20						X	X	X	X	X	X	(comp.)	-02
MESA 4	8/16	1:00	Horne/Grandview	7	7			14													~~-03~~
Travel Blank																					~~-04~~ -03

oops

Comments / Special Instructions: ★ Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn, Ca, Mg
★★ Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn

SAMPLE CONDITION UPON RECEIPT

No. of Containers	49
Temperature	on ice
Custody Seals	~~Y~~ ~~N~~
Seals Intact	~~Y~~ ~~N~~
Preserved	(Y) N

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Signature: Charles F. Klenner	Date: 8/16/98	Signature: Zeeba R. Mirza	Date: 8/16/98
	Printed Name: Charles F Klenner	Time: 0309	Printed Name: ZEEBA R. MIRZA	Time: 03:09
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

Bolin Laboratories Inc.

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(520) 327-1234 • Fax(520) 327-0518

CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory Sample No. 9808-05689

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
Flood Control	2801 W. Durango	Phoenix	AZ	85009	506-8401	506-4601

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

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 Storm water

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		624	BOD, DO, TSS	O&G 624	Total metals ★	COD, Phos, TKN, TSS	TDS, Pb, Alk, SO4	Cl, Cr6, NO2, NO3	OP, DP, NH3	608, 625	Cyanide	TOC	Phenol			LAB NO
MESA 2	8/16	12:00	Broadway/Lindsay	8	9			17				X	X									(grab)	-04			~~01~~
MESA 3	8/16	12:45	Falcon Field	11	9			20																		~~02~~
MESA 4	8/16	1:00	Horne/Grandview	7	7			14						X	X	X	X	X	X	X	X	(comp.)	-05			~~03~~
Travel Blank																							-03			~~04~~

Comments / Special Instructions: ★ Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn, Ca, Mg
★★ Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn

SAMPLE CONDITION UPON RECEIPT

No. of Containers	49
Temperature	on ice
Custody Seals	~~Y~~ N
Seals Intact	~~Y~~ N
Preserved	Y N

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Signature: Charles F Klenner	Date: 8/16/98	Signature: Zeeba R. Mirza	Date: 8/16/98
	Printed Name: Charles F Klenner	Time: 0309	Printed Name: ZEEBA R. MIRZA	Time: 03:09
②	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time
③	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time

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. 9808-05689

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
Flood Control	2801 W. Durango	Phoenix	AZ	85009	506-8401	506-4601

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

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 Stormwater

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	624	BOD, DO, F, FS	O&G, 624	Diss. Total Metals	COD, Phos, TKN, TSS	TDS, pH, Alk, SO4	Cl, Grab, Nitr, NO3	OP, DP, NH3	608							LAB NO
MESA 2	8/16	12:00	Broadway/Lindsay	8	9			17																		~~01~~
MESA 3	8/16	12:45	Falcon Field	11	9			20				X	X									(grab)-07				~~02~~
MESA 4	8/16	1:00	Horne/Grandview	7	7			14																		~~03~~
														X	X	X	X	X	X			(comp.)-08				
Travel Blank																									-03 ~~09~~	~~04~~

Comments / Special Instructions: ★ Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, As, Tl, Zn, Ca, Mg, ⊖
★★ Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, As, Tl, Zn

SAMPLE CONDITION UPON RECEIPT

No. of Containers	49
Temperature	on ice
Custody Seals	~~Y~~ ~~N~~
Seals Intact	~~Y~~ ~~N~~
Preserved	(Y) N

RELINQUISHED BY

	Signature	Date	Printed Name	Time
①	Charles F Klenner	8/16/98	Charles F Klenner	0309
②				
③				

SAMPLES RECEIVED BY

Signature	Date	Printed Name	Time
Zeeba R. Mirza	8/16/98	ZEEBA R. MIRZA	03:09

YELLOW LAB PINK CLIENT

Bolin Laboratories Inc.

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Laboratory Sample No. 9808-05689

CLIENT INFORMATION

Client Name	Address	City	State	Zip	Phone	Fax
Flood Control	2801 W. Durango	Phoenix	AZ	85009	506-8401	506-4601

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

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 STORMWATER

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	624	BOD, DO, F.C.	Diss. Tot. NH	Total Nitr. TKN	TSS, pH, Alk	Cl, Cu, Nu	NO3, OP, DP	NH3	608, 625	Zn	TDC	Phenol				LAB NO.
MESA 2	8/15	12:00	Broadway/Lindsay	8	9			17				X														-01
MESA 3	8/15	12:45	Falcon Field	11	9			20				X														~~-02~~ -04
MESA 4	8/15	1:00	Horne/Grandview	7	7			14				X														~~-03~~ -07
TRAVEL BLANK																										-08

Comments / Special Instructions:

SAMPLE CONDITION UPON RECEIPT		
No. of Containers		
Temperature		
Custody Seals	Y	N
Seals Intact	Y	N
Preserved	Y	N

WHITE-LAB YELLOW-LAB PINK-CLIENT

	RELINQUISHED BY		SAMPLES RECEIVED BY	
①	Signature: Charles F Klenner	Date: 8/16/98	Signature: Zeeba R. Mirza	Date: 8/16/98
	Printed Name: Charles F Klenner	Time: 0309	Printed Name: ZEEBA R. MIRZA	Time: 03:09
②	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time
③	Signature	Date	Signature	Date
	Printed Name	Time	Printed Name	Time

Records

Water Quality Sampler Maintenance Log Sheet

SITE	MESA 1 HORNE / SIXTH		
DATE	7/8/98	TIME	1100
SERVICED BY	CK DG		
MODEL NUMBER	1350 6005L	SERIAL NUMBER	H019511338

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE volts	YES NO	GOOD FAIR POOR	YES NO	YES NO	
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 feet in length	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS

Date: 07/08/1998

Water Quality Sampler Maintenance Log Sheet

SITE	Mesa 2 Broadway Lindsay		
DATE	7/8/98	TIME	0837
SERVICED BY	DG / CK		
MODEL NUMBER	Sigma 8000	SERIAL NUMBER	1+019511337-1350

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE volts	YES NO	GOOD FAIR POOR	YES NO	YES NO	
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 46' feet in length	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR Cal. to 6"	YES NO	GOOD FAIR POOR	~~YES~~ NO	YES NO	
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME Change Tubing Length to 46' @ 450 mL	YES NO	GOOD FAIR POOR	N/A	N/A	
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Tested cal rain gauge. Cleaned sampler & intake tubing. Cal PT & Pump. All looks good.

Date: 07/08/1998

Water Quality Sampler Maintenance Log Sheet

SITE	MESA 3 FALCON FIELD		
DATE	7/8/98	TIME	930
SERVICED BY	DEG CFK		
MODEL NUMBER	800 SL	SERIAL NUMBER	E07925067 1350

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE volts	YES NO	GOOD FAIR POOR	YES NO	YES NO	
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 feet in length	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	couldn't Check
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Volume calibration looked good

couldn't calibate depth sensor due to

standing water.

Date: 07/08/1998

Water Quality Sampler Maintenance Log Sheet

SITE	MESA 4 HORNE / GRANDVIEW		
DATE	7/8/98	TIME	1009
SERVICED BY	DOG / CFK		
MODEL NUMBER	800SL 1350	SERIAL NUMBER	E07925069

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE 12.8 volts	YES NO	GOOD FAIR POOR	YES NO	YES NO	
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 feet in length	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	6"
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	450mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS

Date: 07/08/1998

Water Quality Sampler Maintenance Log Sheet

SITE	MESA 5 DOBSON ROAD		
DATE	7/8/98	TIME	1130
SERVICED BY	DG CFK		
MODEL NUMBER	800 SL (1350)	SERIAL NUMBER	H07925066

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE volts	YES NO	GOOD FAIR POOR	YES NO	YES NO	
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 feet in length	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS calibrated in March - seemed to have no problems since that time so Equipment is not going to be altered.

Date: 07/08/1998

Storm Event Log Sheet

SITE:	MESA 1

DATE:	7/31/98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES (NO)

IF NO, WHAT WAS PROBLEM(S):

sample vol pumped was too low.

STATISTICS FOR STORM:

Storm Start Time	~~2145~~		
Effluent pH	2211		
Effluent Temperature	—		
Total Storm Rainfall	0.27	Accumulation Time	168
Rainfall Sampled	0.27	Accumulation Time	168
Total Storm Runoff	~24000	Accumulation Time	> 500n
Runoff Sampled	23416	Accumulation Time	220
Max. 5-min intensity	2.64		
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 2

DATE:	7/31/98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

STATISTICS FOR STORM:

Storm Start Time	~~~2145~~ 2212		
Effluent pH	—		
Effluent Temperature	—		
Total Storm Rainfall	0.27	Accumulation Time	181
Rainfall Sampled	0.27	Accumulation Time	181
Total Storm Runoff	~65000	Accumulation Time	7500min
Runoff Sampled	61464	Accumulation Time	463
Max. 5-min intensity	1.08		
Days since last rain	20		

Storm Event Log Sheet

SITE:	MESA 3

DATE:	7/31/98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

Standing water in pipe – as usual.

STATISTICS FOR STORM:

Storm Start Time	2225		
Effluent pH	—		
Effluent Temperature	—		
Total Storm Rainfall	0.76	Accumulation Time	185
Rainfall Sampled	0.56	Accumulation Time	29
Total Storm Runoff	7500,000	Accumulation Time	—
Runoff Sampled	219,926	Accumulation Time	95
Max. 5-min intensity	5.28		
Days since last rain	20		

Storm Event Log Sheet

SITE:	MESA 4

DATE:	7/31/98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

There may have been a problem w/ flow sensor went from 74cfs to 0 in a few minutes. Possible debris cover. Non-representative Event

STATISTICS FOR STORM:

Storm Start Time	2221		
Effluent pH	—		
Effluent Temperature	—		
Total Storm Rainfall	0.64	Accumulation Time	6
Rainfall Sampled	0.64	Accumulation Time	6
Total Storm Runoff	—	Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity	7.68		
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 5

DATE:	7/31/98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

STATISTICS FOR STORM:

Storm Start Time	2146		
Effluent pH	—		
Effluent Temperature	—		
Total Storm Rainfall	0.16	Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	Horne Cst

DATE:	8-15-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WAS PROBLEM(S):

Did not pull suffecent sample

STATISTICS FOR STORM:

Storm Start Time			
Effluent pH			
Effluent Temperature			
Total Storm Rainfall		Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	BWY Lindsay

DATE:	8/15 1150

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

Storm not sufficient for full sample,
Grab + 2 composite bottles

STATISTICS FOR STORM:

Storm Start Time	7:59		
Effluent pH	> 7.0		
Effluent Temperature			
Total Storm Rainfall	.12	Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	Falcon Field

DATE:	8/16/98 1157

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

STATISTICS FOR STORM:

Storm Start Time	7:51		
Effluent pH	7.0		
Effluent Temperature	84		
Total Storm Rainfall	.26	Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 4

DATE:	8-15-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

STATISTICS FOR STORM:

Storm Start Time			
Effluent pH			
Effluent Temperature			
Total Storm Rainfall		Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	Broadway Dobson

DATE:	8/15/98 8/12/98 ?

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

STATISTICS FOR STORM:

Storm Start Time	1820		
Effluent pH	7.79		
Effluent Temperature	82		
Total Storm Rainfall		Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Water Quality Sampler Maintenance Log Sheet

SITE	MESA 1		
DATE	8-18-98	TIME	1030
SERVICED BY	DG CK		
MODEL NUMBER		SERIAL NUMBER	

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE. volts	YES ~~NO~~	GOOD FAIR POOR	YES NO	YES NO	
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 feet in length	~~YES~~ ~~NO~~	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER PUMP TUBING	~~YES~~ NO	GOOD ~~FAIR~~ ~~POOR~~	YES ~~NO~~	~~YES~~ NO	
DEPTH SENSOR	~~YES~~ ~~NO~~	~~GOOD~~ ~~FAIR~~ POOR	YES ~~NO~~	YES ~~NO~~	
CALIBRATE DEPTH SENSOR	~~YES~~ NO	GOOD ~~FAIR~~ ~~POOR~~	N/A	N/A	
CALIBRATE SAMPLE VOLUME	~~YES~~ ~~NO~~	GOOD ~~FAIR~~ ~~POOR~~	N/A	N/A	
CLEANED SAMPLE INTAKE TUBING	~~YES~~ NO	~~GOOD~~ FAIR POOR	N/A	N/A	

NOTES / ACTIONS unsure as to why sample volume is pumping low

Water Quality Sampler Maintenance Log Sheet

SITE	MESA-1		
DATE	8-20-98	TIME	1240
SERVICED BY	CK DG		
MODEL NUMBER	1350	SERIAL NUMBER	

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE. volts	YES NO	GOOD FAIR POOR	YES NO	YES NO	
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 feet in length	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS changed pump and distributor tubing

Storm Event Log Sheet

SITE:	MESA 3

DATE:	9-6-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

samples not collected
0.06" Rain - not a representative event

STATISTICS FOR STORM:

Storm Start Time			
Effluent pH			
Effluent Temperature			
Total Storm Rainfall		Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff	0.06	Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 4

DATE:	9-6-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

insufficient rainfall / runoff for full sample.

STATISTICS FOR STORM:

Storm Start Time			
Effluent pH			
Effluent Temperature			
Total Storm Rainfall		Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 5

DATE:	9-6-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

unsufficient sample

STATISTICS FOR STORM:

Storm Start Time			
Effluent pH			
Effluent Temperature			
Total Storm Rainfall		Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 1

DATE:	9-22-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WAS PROBLEM(S):

0.24" rain - no level recorded - need to check or replace PT.

STATISTICS FOR STORM:

Storm Start Time			
Effluent pH			
Effluent Temperature			
Total Storm Rainfall		Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 2

DATE:	9-22-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WAS PROBLEM(S):

Not enough Rainfall for runoff

STATISTICS FOR STORM:

Storm Start Time			
Effluent pH			
Effluent Temperature			
Total Storm Rainfall	0.14	Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 4

DATE:	9-22-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: (YES) NO

IF NO, WHAT WAS PROBLEM(S):

samples collected but only a few finished bottle 4 - seemed like very little runoff

STATISTICS FOR STORM:

Storm Start Time	449 A		
Effluent pH			
Effluent Temperature			
Total Storm Rainfall		Accumulation Time	
Rainfall Sampled	0.22	Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Storm Event Log Sheet

SITE:	MESA 5

DATE:	9-22-98

DID EQUIPMENT OPERATE PROPERLY DURING EVENT: YES NO

IF NO, WHAT WAS PROBLEM(S):

Not enough rain/flow

STATISTICS FOR STORM:

Storm Start Time			
Effluent pH			
Effluent Temperature			
Total Storm Rainfall	0.10	Accumulation Time	
Rainfall Sampled		Accumulation Time	
Total Storm Runoff		Accumulation Time	
Runoff Sampled		Accumulation Time	
Max. 5-min intensity			
Days since last rain			

Water Quality Sampler Maintenance Log Sheet

SITE	MESA 1 HORNE AND SIXTH		
DATE	9-23-98	TIME	1100 – 1200
SERVICED BY	CK DG		
MODEL NUMBER	800 SL	SERIAL NUMBER	H019511338

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE volts	YES NO	GOOD FAIR POOR	YES NO	YES NO	
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 feet in length	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	6.25"
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	450mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

not needed

NOTES / ACTIONS

Calibrate PT to 6.25" – good

checked at ~3.5" meas 3.45" good.