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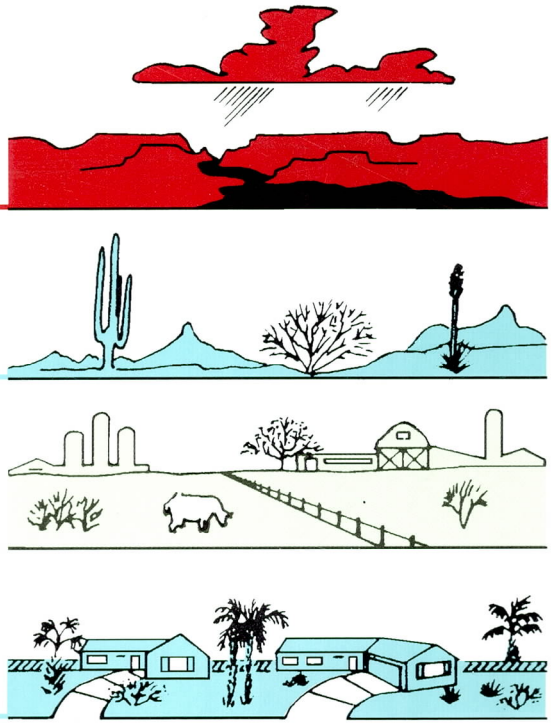

FLOOD CONTROL DISTRICT OF *MARICOPA* COUNTY

Stormwater Quality Report
City of Phoenix, Arizona

Second Quarter 2002

February 12, 2002

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report

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Second Quarter, Sampling Year 2002

October 1, 2001 through December 31, 2001

For

City of Phoenix, Arizona

February 12, 2002

Prepared by:

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Stormwater Quality Report
City of Phoenix, Arizona

Second Quarter 2002

February 12, 2002

Introduction

This report details the NPDES stormwater sampling activities during the winter of 2001, which includes the period from October 1, 2001 through December 31, 2001.

The Flood Control District of Maricopa County, in cooperation with the U.S. Geological Survey, operates and maintains seven land based stormwater quality-monitoring stations. The USGS is responsible for all maintenance and sample collection at the seven monitoring sites.

During storm events, only representative storm events are sampled. A representative storm event has occurred when the following criteria has been met

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

and there has been **no rainfall greater than 0.10 inches within the previous 72 hours.** Storm duration is defined as the time period from start to end of a sustained rainfall. Sustained rainfall is defined as rainfall that continues without a gap of greater than 150 consecutive minutes. If a gap greater than 150 consecutive minutes occurs, then the rainfall is considered to be from a separate storm event. Summer months are April through September and winter months are October through March.

Summary of Storm Events

Table 1, on Page 3-4 of this report, summarizes non-sampled storm events that occurred during the second quarter of fiscal year 2002 (October 1 – December 31, 2001). Table 2, on Pages 4-5 of this report, summarizes data retrievals from the sites. Any troubleshooting of the equipment is detailed in the Maintenance Summary section of this report.

Storm of December 4, 2001

A storm event occurred on December 4. There was sufficient rainfall at all sites to produce runoff. The sites SR49, SR45 and IB08 did sample. There were electrical problems with the sampler at SR03, and only part of the storm was recorded. We no longer have access to the site SR30, thus no samples were taken. The ISCO sampler at ACDC43 was shutdown. The flow amount at CAVE was insufficient for the sampler to pull samples.

Storm of December 4, 2001

SITE	RAINFALL	SAMPLED	REMARKS
SR49	0.52	YES	Composite and Grabs
SR03	NA	YES	Electrical Problems
SR30	NA	NO	No Access to site
SR45	0.39	YES	Composite and Grabs
ACDC43	0.53	YES	Sampler turned off – Grabs taken
IB08	0.44	YES	Composite and Grabs
CAVE	0.48	YES	Little Flow – Grabs taken

SR49 – Salt River at 67th Avenue
SR03 – Salt River at 35th Avenue
SR30 – Salt River at 27th Avenue
SR45 – Salt River at 40th Street
ACDC43 – ACDC near Peoria Avenue and 43rd Avenue
IB08 – 40th Street and Indian Bend Wash
CAVE – Cave Creek Road at Tatum Boulevard

TABLE 1
SUMMARY OF NON-SAMPLED STORM EVENTS
OCTOBER 1, 2001 – DECEMBER 31, 2001

SITE	DATE	RAIN (inches)	REASONS NOT SAMPLED
SR49	10/06/01	0.11	RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	11/05/01	0.05	RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	11/05/01	0.13	RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	12/04/01	0.10	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	12/11/01	0.31	DURATION TOO SHORT
SR45	11/05/01	0.03	RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	11/05/01	0.13	RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	12/04/01	0.03	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	12/11/01	0.21	DURATION TOO SHORT

ACDC43	11/05/01	0.06	RAIN < 0.20 INCH, DURATION TOO SHORT
ACDC43	11/05/01	0.20	DURATION TOO SHORT
ACDC43	12/04/01	0.13	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
ACDC43	12/11/01	0.22	DURATION TOO SHORT
ACDC43	12/12/01	0.07	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT

IB08	12/04/01	0.17	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
IB08	12/11/01	0.09	RAIN < 0.20 INCH, DURATION TOO SHORT

CAVE	10/07/01	0.03	RAIN < 0.20 INCH, DURATION TOO SHORT
CAVE	11/05/01	0.05	RAIN < 0.20 INCH, DURATION TOO SHORT
CAVE	11/25/01	0.06	RAIN < 0.20 INCH, DURATION TOO SHORT
CAVE	12/15/01	0.02	RAIN < 0.20 INCH, DURATION TOO SHORT

TABLE 2
SUMMARY OF DATA RETRIEVALS
JULY 1, 2001 – SEPTEMBER 30, 2001

SITE	DATE	RETRIEVAL TYPE
SR49	10/05/01	Phone - Weekly
SR49	10/06/01	Phone - Storm
SR49	10/12/01	Phone - Weekly
SR49	10/19/01	Phone - Weekly
SR49	10/26/01	Phone - Weekly
SR49	11/02/01	Phone - Weekly
SR49	11/06/01	Phone - Storm
SR49	11/09/01	Phone - Weekly
SR49	11/16/01	Phone - Weekly
SR49	11/23/01	Phone - Weekly
SR49	11/30/01	Phone - Weekly
SR49	12/05/01	Phone - Storm
SR49	12/07/01	Phone - Weekly
SR49	12/12/01	Phone - Storm
SR49	12/14/01	Phone - Weekly

SR03	10/05/01	Phone - Weekly
SR03	10/12/01	Phone - Weekly
SR03	10/19/01	Phone - Weekly
SR03	10/26/01	Phone - Weekly
SR03	11/02/01	Phone - Weekly
SR03	11/09/01	Phone - Weekly
SR03	11/16/01	Phone - Weekly
SR03	11/23/01	Phone - Weekly
SR03	11/30/01	Phone - Weekly
SR03	12/05/01	Phone - Storm
SR03	12/07/01	Phone - Weekly
SR03	12/12/01	Phone - Storm
SR03	12/14/01	Phone - Weekly

SR45	10/05/01	Phone - Weekly
SR45	10/12/01	Phone - Weekly
SR45	10/19/01	Phone - Weekly
SR45	10/26/01	Phone - Weekly
SR45	11/02/01	Phone - Weekly

SR45	11/06/01	Phone - Storm
SR45	11/09/01	Phone - Weekly
SR45	11/16/01	Phone - Weekly
SR45	11/23/01	Phone - Weekly
SR45	11/30/01	Phone - Weekly
SR45	12/05/01	Phone - Storm
SR45	12/07/01	Phone - Weekly
SR45	12/12/01	Phone - Storm
SR45	12/14/01	Phone - Weekly

ACDC43	10/05/01	Phone - Weekly
ACDC43	10/12/01	Phone - Weekly
ACDC43	10/19/01	Phone - Weekly
ACDC43	10/26/01	Phone - Weekly
ACDC43	11/02/01	Phone - Weekly
ACDC43	11/06/01	Phone - Storm
ACDC43	11/09/01	Phone - Weekly
ACDC43	11/16/01	Phone - Weekly
ACDC43	11/23/01	Phone - Weekly
ACDC43	11/30/01	Phone - Weekly
ACDC43	12/05/01	Phone - Storm
ACDC43	12/07/01	Phone - Weekly
ACDC43	12/12/01	Phone - Storm
ACDC43	12/13/01	Phone - Storm

IB-08	10/05/01	Phone - Weekly
IB-08	10/12/01	Phone - Weekly
IB-08	10/19/01	Phone - Weekly
IB-08	10/26/01	Phone - Weekly
IB-08	11/02/01	Phone - Weekly
IB-08	11/09/01	Phone - Weekly
IB-08	11/16/01	Phone - Weekly
IB-08	11/23/01	Phone - Weekly
IB-08	11/30/01	Phone - Weekly
IB-08	12/05/01	Phone - Storm
IB-08	12/07/01	Phone - Weekly
IB-08	12/12/01	Phone - Storm
IB-08	12/14/01	Phone - Weekly

CAVE	10/01/01	Onsite
CAVE	11/13/01	Onsite
CAVE	12/03/01	Onsite
CAVE	12/07/01	Onsite – Storm
CAVE	12/12/01	Onsite – Storm

Maintenance Summary

This section details maintenance activities and problems that occurred during the second quarter of fiscal year 2002. All water quality samplers are ISCO Model 3700 with the exception of Station IB08. Station IB08 utilizes a SIGMA Model 900 sampler. The current ISCO sample collection bottle setup is one 5-gallon glass bottle. The current SIGMA sample collection bottle setup is eight 2-liter glass bottles.

SR49 – Salt River at 67th Avenue

The phone battery was replaced on October 1, 10, November 13, 26 and December 13, 14, 19, 31. All sampler tubing and collection bottle were cleaned on November 5 and December 6, 7, 12. The data logger battery was replaced on December 14.

SR03 – Salt River at 35th Avenue

The phone battery was replaced on October 1, 10, November 13, 26 and December 13, 19, 31. The data logger battery was replaced on October 1, 10 and December 3, 13. All sampler tubing and collection bottle were cleaned on November 5, 6. The datalogger and modem were replaced on December 13.

SR30 – Salt River at 27th Avenue

The phone battery was replaced on October 1. Access to site has been blocked by new land owner since October 1.

SR45 – Salt River at 40th Street

All sampler tubing and collection bottle were cleaned on November 6 and December 7, 12. The data logger battery was replaced on December 12. Intake tubing connector was replaced and raingage was cleaned on December 13.

ACDC43 – ACDC near Peoria Avenue and 43rd Avenue

All sampler tubing and collection bottle were cleaned on December 12, 13. The data logger battery was replaced on December 3. Isco sampler battery was replaced on December 12. Raingage was cleaned on December 13.

IB08 – 40th Street at Indian Bend Wash

Switched to winter sampling protocol on October 1. Reset sampler on October 1, November 5, 6 and December 7, 12, 17. All sampler tubing and collection bottles were cleaned on December 7, 12. The SIGMA 900 sampler battery was replaced on October 1 and December 12.

CAVE - Cave Creek Road and Tatum Boulevard

Pulled data from datalogger on October 1, November 13 and December 3, 7, 12. Cleaned out plugged raingage on December 13.

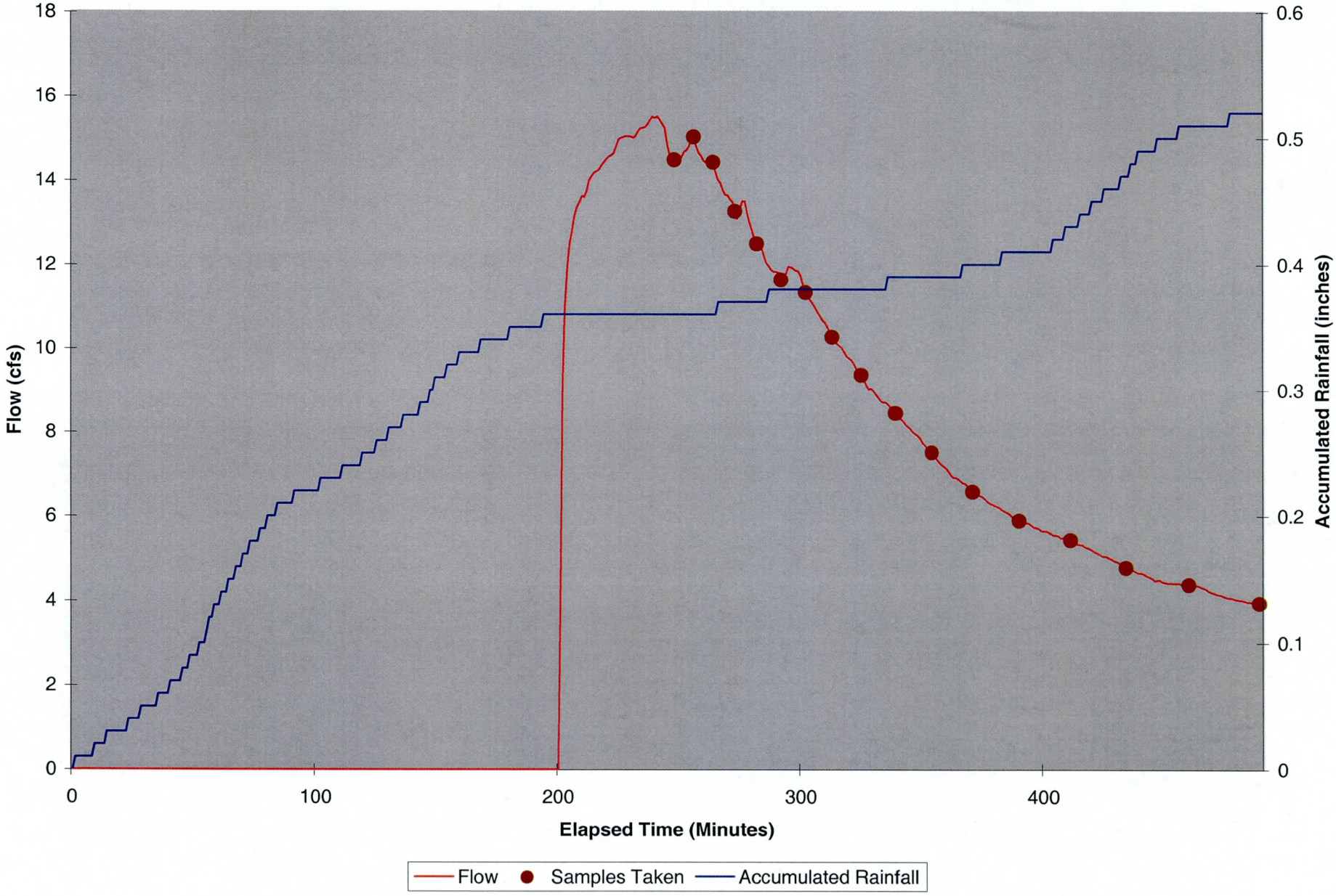
Data from 1ST Quarter 2002

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

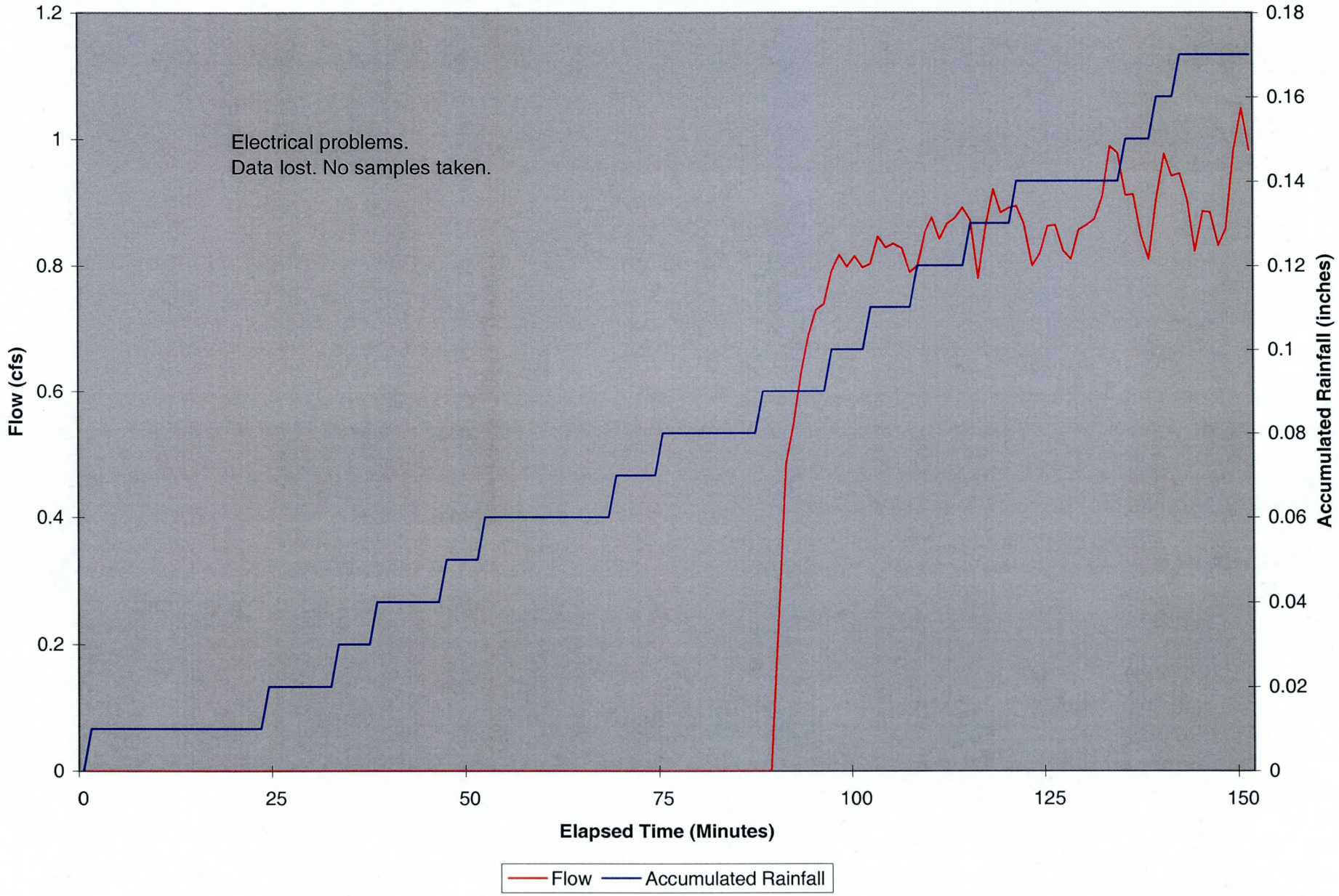
- Storm Hydrographs for representative storm events.
- Rainfall data for seven Phoenix NPDES raingages.
- Rainfall data for twenty-eight Phoenix ALERT raingages.
- Printed tables of data for representative storm events.
- Data Validation Tables.
- Hard copies of lab results.
- Hard copies of quality control data.
- Copies of operation and maintenance and storm event log sheets.

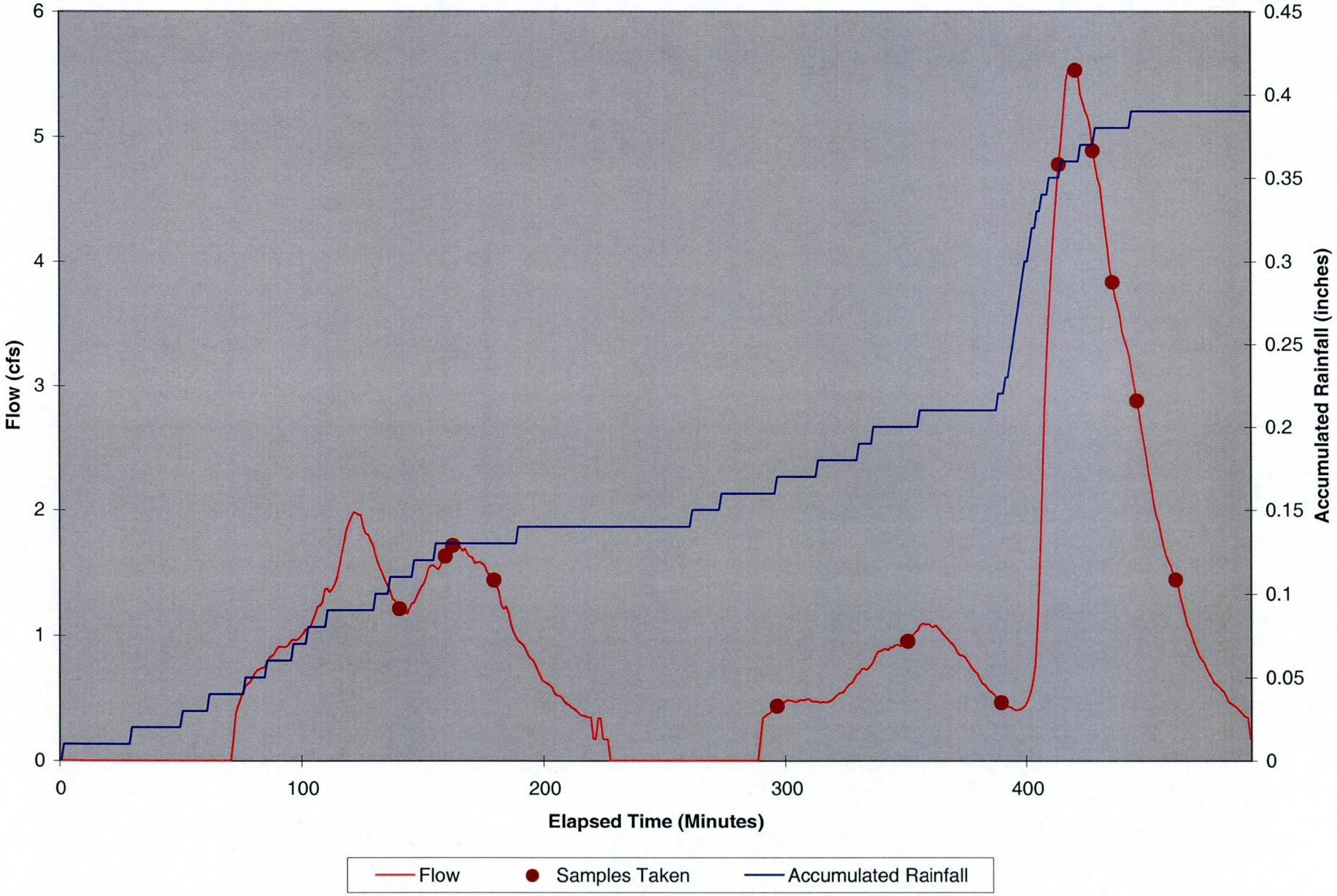
Storm Hydrographs

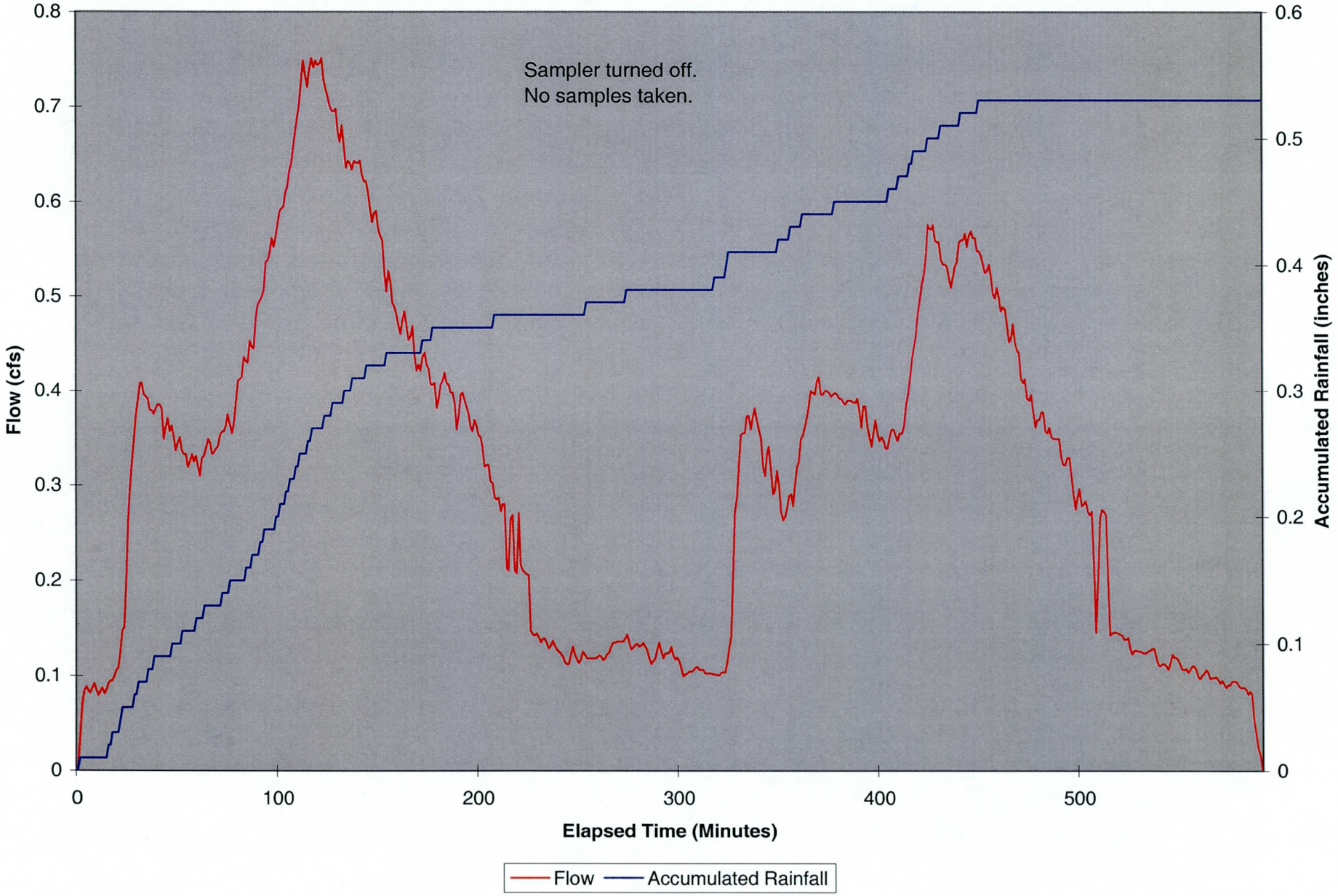
SR-49 - Salt River at 67th Avenue
Storm of December 4, 2001

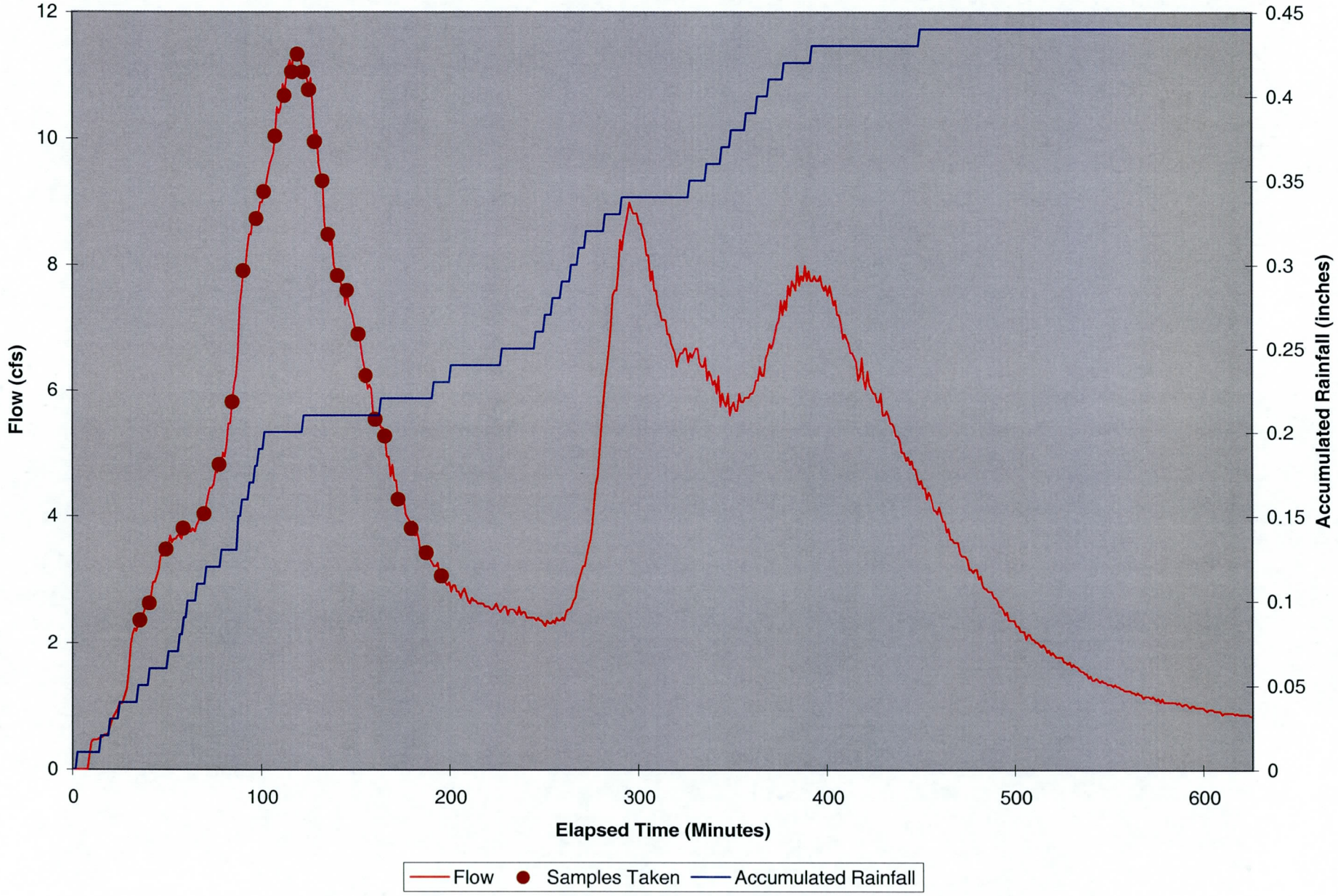


SR-03 - Salt River at 35th Avenue
Storm of December 4, 2001

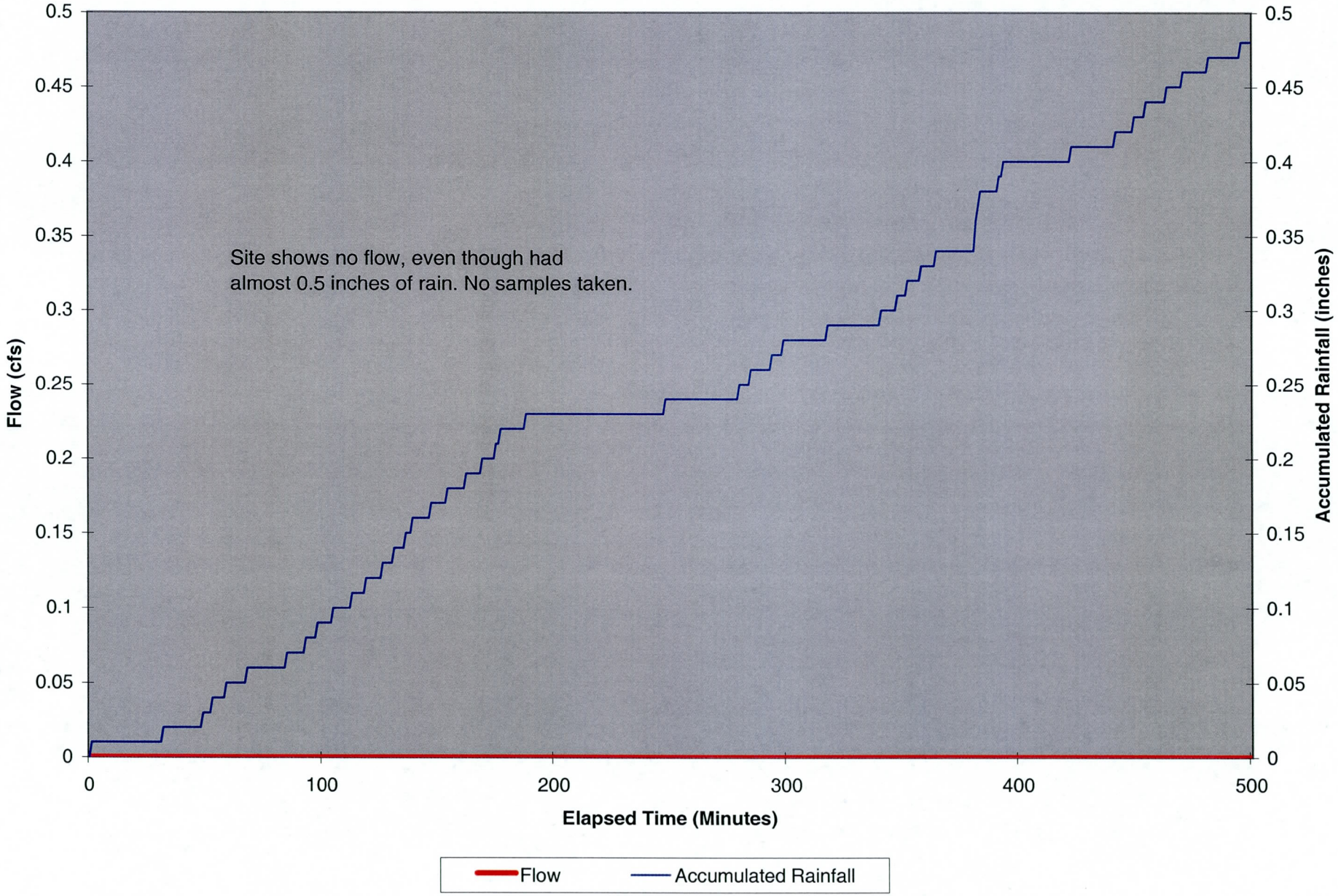



SR-45 - Salt River at 40th Street
Storm of December 4, 2001
Flow (cfs)
Accumulated Rainfall (inches)
Elapsed Time (Minutes)
0
1
2
3
4
5
6
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0
100
200
300
400
Flow
Samples Taken
Accumulated Rainfall


ACDC43 - ACDC near Peoria Avenue and 43rd Avenue
Storm of December 4, 2001
Sampler turned off.
No samples taken.
Flow (cfs)
Accumulated Rainfall (inches)
Elapsed Time (Minutes)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0
100
200
300
400
500
Flow
Accumulated Rainfall


IB08 - 40th St. and Indian Bend Wash
Storm of December 4, 2001
Flow (cfs)
Accumulated Rainfall (inches)
Elapsed Time (Minutes)
0
2
4
6
8
10
12
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0
100
200
300
400
500
600
Flow
Samples Taken
Accumulated Rainfall

CAVE - Cave Creek Road and Tatum Boulevard
Storm of December 4, 2001



Rainfall Data Tables (NPDES raingages)

Gauge Rainfall (inches)

Gage Number	SR49
Location	Salt River at 67th Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.62						
5					0.18							
6	0.02			0.11								
7												
8												
9		0.10										
10		0.06										
11						0.31						
12												
13			0.16									
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.05											
30	0.12											
31												
Month Total	0.19	0.16	0.16	0.11	0.18	0.93	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	SR03
Location	Salt River at 35th Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1		"										
2		"										
3		"										
4		"				gage						
5		"				not						
6		"				operating						
7		gage				"						
8		not				"						
9		operating				gage						
10						not						
11						operating						
12												
13												
14												
15												
16												
17		0.18										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27	gage											
28	not											
29	operating											
30	"											
31	"											
Month Total	0.00	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	SR30
Location	Salt River at 27th Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1				Access	"	"						
2				to	"	"						
3				site	"	"						
4				denied	"	"						
5				"	"	"						
6	0.04			"	"	"						
7				"	"	"						
8				"	"	"						
9		0.47		"	"	"						
10				"	"	"						
11				"	"	"						
12				"	"	"						
13				"	"	"						
14				"	"	"						
15				"	"	"						
16				"	"	"						
17		0.11		"	"	"						
18				"	"	"						
19				"	"	"						
20				"	"	"						
21				"	"	"						
22				"	"	"						
23				"	"	"						
24				"	"	"						
25				"	"	"						
26				"	"	"						
27				"	"	"						
28				"	"	Access						
29	0.04			"	"	to						
30	0.12			"	"	site						
31				"		denied						
Month Total	0.20	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	SR45
Location	Salt River at 40th Street

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.42						
5					0.16							
6	0.07											
7												
8												
9	0.21	0.23										
10												
11						0.21						
12												
13												
14												
15												
16												
17	0.21	0.05										
18												
19												
20												
21												
22												
23												
24												
25	0.04											
26												
27												
28												
29	0.27											
30	0.04											
31												
Month Total	0.84	0.28	0.00	0.00	0.16	0.63	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	ACDC43
Location	ACDC near Peoria Avenue and 43rd Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1		not										
2		working										
3												
4						0.66						
5					0.26							
6	0.16											
7												
8												
9		0.91										
10		0.07										
11		0.25				0.22						
12						0.07						
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25	gage											
26	not											
27	working											
28	"											
29	"											
30	"											
31	gage											
Month Total	0.16	1.23	0.00	0.00	0.26	0.95	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	IB08
Location	40th Street at Indian Bend Wash

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.61						
5	0.02											
6	0.05											
7												
8												
9		0.25										
10												
11						0.09						
12												
13												
14												
15												
16												
17		0.63										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.22											
30	0.11											
31												
Month Total	0.40	0.88	0.00	0.00	0.00	0.70	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	CAVE
Location	Cave Creek Road and Tatum Boulevard

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1	gage											
2	not											
3	working											
4	"	0.04				0.48						
5	"				0.05							
6	"											
7	"			0.03								
8	"	0.04										
9	"	0.34										
10	"											
11	"	0.18										
12	"											
13	"	0.05										
14	"	0.30										
15	"					0.02						
16	"											
17	"	0.09										
18	"											
19	"											
20	"											
21	"											
22	"											
23	"											
24	"											
25	"				0.06							
26	"											
27	"											
28	gage											
29	not											
30	working											
31												
Month Total	0.00	1.04	0.00	0.03	0.11	0.50	0.00	0.00	0.00	0.00	0.00	0.00

Rainfall Data Tables (ALERT raingages)

Gauge Rainfall (inches)

Gage Number	4500
Location	Cesar Chavez Park

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.51						
5					0.20							
6												
7												
8												
9		0.08										
10												
11						0.24						
12												
13			0.12									
14												
15												
16												
17		0.08										
18		---										
19		---										
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.04											
30	0.20											
31												
Month Total	0.24	0.16	0.12	0.00	0.20	0.75	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4510
Location	Roeser at Second Street

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.31						
5					0.20							
6	0.04											
7												
8												
9		0.28										
10												
11						0.08						
12												
13												
14												
15												
16												
17		0.04										
18												
19												
20												
21												
22												
23												
24												
25	0.08											
26												
27												
28												
29	0.04											
30	0.08											
31												
Month Total	0.24	0.32	0.00	0.00	0.20	0.39	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4600
Location	IBW at McKellips Road

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.59						
5					0.16							
6	0.08				0.04							
7												
8												
9		0.43										
10	0.20											
11						0.20						
12												
13												
14												
15												
16												
17	0.35											
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	1.30											
30	0.08	0.20										
31												
Month Total	2.01	0.63	0.00	0.00	0.20	0.79	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4610
Location	IBW at Indian Bend Road

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.59						
5					0.28							
6	0.04											
7												
8												
9	0.51	0.35										
10												
11						0.08						
12												
13												
14	0.35											
15												
16												
17	0.12											
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.51											
30	0.16											
31												
Month Total	1.69	0.35	0.00	0.00	0.28	0.67	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4630
Location	Thunderbird Academy - near Thunderbird and Scottsdale Roads

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.59						
5					0.16							
6												
7												
8												
9	0.08	0.39										
10												
11												
12												
13												
14	0.08											
15												
16												
17		0.12										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.39											
30	0.08											
31												
Month Total	0.63	0.51	0.00	0.00	0.16	0.59	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4640
Location	IBW and Sweetwater Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.59						
5	0.04				0.04							
6	0.08											
7												
8												
9		0.28										
10												
11						0.08						
12												
13												
14												
15												
16												
17		0.47										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.08											
30	0.12											
31												
Month Total	0.32	0.75	0.00	0.00	0.04	0.67	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4650
Location	Paradise Valley Park - near Union Hills Drive at 32nd Street

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.59						
5					0.08	0.04						
6	0.08											
7												
8												
9		0.28	---									
10												
11												
12												
13		0.08										
14		0.04										
15												
16												
17		0.47										
18												
19												
20												
21												
22												
23												
24												
25					0.04							
26												
27												
28												
29												
30	0.16											
31												
Month Total	0.24	0.87	0.00	0.00	0.12	0.63	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4700
Location	FCD - Durango Street at 27th Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.47						
5					0.24							
6	0.08											
7												
8												
9	0.04	0.31										
10												
11						0.20						
12												
13												
14												
15												
16												
17		0.24										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.08											
30	0.08											
31												
Month Total	0.28	0.55	0.00	0.00	0.24	0.67	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4710
Location	Jefferson at 4th Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.51						
5					0.08							
6	0.08											
7												
8						---						
9	0.12	0.43				---						
10												
11						0.20						
12												
13												
14												
15												
16												
17		0.12										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.12											
30	0.16											
31												
Month Total	0.48	0.55	0.00	0.00	0.08	0.71	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4730
Location	near Thomas Road and 32nd Street

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3			---									
4						0.43						
5					0.08							
6	0.08											
7												
8												
9	0.04	0.20		0.08								
10												
11						0.24						
12						0.08						
13												
14	0.16											
15												
16												
17		0.04										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.28											
30	0.16											
31												
Month Total	0.72	0.24	0.00	0.08	0.08	0.75	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4740
Location	Papago Park - near McDowell Road and 52nd Street

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.51						
5					0.12							
6	0.12				---							
7					---							
8												
9	0.04	0.31										
10												
11						0.20						
12						0.04						
13												
14	0.04											
15												
16												
17	0.16											
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.20											
30	0.08											
31												
Month Total	0.64	0.31	0.00	0.00	0.12	0.75	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4750
Location	Thomas Road at 48th Street

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.51						
5					0.12							
6	0.12											
7												
8												
9		0.35										
10												
11						0.16						
12						0.04						
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.47											
30	0.04											
31												
Month Total	0.63	0.35	0.00	0.00	0.12	0.71	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4760
Location	Maryvale Municipal Golf Course - near Indian School Road and 59th Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3	0.04											
4						0.59						
5	0.04					---						
6	0.08											
7												
8												
9		0.28										
10		0.04										
11						0.31						
12												
13												
14												
15												
16												
17		0.63										
18												
19												
20												
21												
22												
23	---											
24	---											
25	0.39											
26												
27												
28												
29	0.43											
30	0.16											
31												
Month Total	1.14	0.95	0.00	0.00	0.00	0.90	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4780
Location	Missouri Avenue at 16th Street

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.55						
5					0.20							
6	0.16											
7												
8												
9	0.04	0.31										
10		0.16										
11		---				0.12						
12		---				0.16						
13												
14												
15												
16												
17		0.04										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.71											
30	0.20											
31												
Month Total	1.11	0.51	0.00	0.00	0.20	0.83	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4800
Location	Dreamy Draw Dam

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.55						
5					0.12							
6	0.04											
7												
8												
9		0.24										
10		0.16										
11						0.12						
12						0.08						
13												
14												
15												
16												
17		0.28										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.71											
30	0.12											
31												
Month Total	0.87	0.68	0.00	0.00	0.12	0.75	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4820
Location	ACDC at 43rd Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.63						
5					0.20							
6	0.12											
7												
8												
9		0.79										
10		0.04										
11		0.20				0.24						
12						0.04						
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25	0.16											
26												
27												
28												
29	0.91											
30	0.16											
31												
Month Total	1.35	1.03	0.00	0.00	0.20	0.91	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4830
Location	Cave Creek Wash at Cactus Road

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.55						
5					0.08							
6	0.12											
7												
8												
9		0.35										
10		0.08										
11						0.16						
12						0.20						
13												
14												
15												
16												
17		0.04										
18		---										
19		---										
20						0.04						
21												
22												
23												
24												
25	0.04											
26												
27												
28												
29	0.20											
30	0.20											
31												
Month Total	0.56	0.47	0.00	0.00	0.08	0.95	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	4840
Location	Greenway Road at 32nd Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.47						
5					0.08							
6	0.20											
7												
8												
9		0.51										
10		0.04										
11		0.28				0.08						
12						0.24						
13												
14		0.08										
15						---						
16												
17												
18												
19												
20												
21												
22												
23												
24												
25		---			0.04							
26		---										
27												
28												
29	0.20											
30	0.24											
31												
Month Total	0.64	0.91	0.00	0.00	0.12	0.79	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4900

Location Cave Buttes Dam

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3	0.11											
4						0.39						
5												
6												
7				---								
8				---								
9		0.11										
10		0.05										
11												
12												
13												
14		0.16										
15												
16												
17		0.05										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29						---						
30	0.27											
31												
Month Total	0.38	0.37	0.00	0.00	0.00	0.39	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	5400
Location	Agua Fria at Buckeye Road

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.39						
5					0.43							
6				0.31								
7												
8												
9		0.08										
10		0.04										
11						0.31						
12												
13												
14												
15												
16												
17	0.08	0.12										
18												
19												
20												
21												
22												
23												
24												
25		---										
26		---										
27												
28												
29												
30	0.20											
31												
Month Total	0.28	0.24	0.00	0.31	0.43	0.70	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number: 5505

Location: New River at Glendale Avenue

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3	0.12											
4	---					0.39						
5	---				0.12							
6	0.12											
7	---											
8	---											
9		0.16										
10		0.04										
11		0.20				0.12						
12												
13												
14	0.04					0.04						
15		0.04										
16												
17		0.16										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.43											
30	0.12											
31												
Month Total	0.83	0.60	0.00	0.00	0.12	0.55	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	5535
Location	Adobe Dam

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.47						
5					0.04							
6	0.12											
7												
8												
9		0.39										
10												
11												
12						0.12						
13												
14		0.04										
15						0.04						
16												
17												
18												
19												
20												
21												
22												
23												
24												
25	0.04				0.04							
26												
27												
28												
29	0.04											
30	0.08											
31												
Month Total	0.28	0.43	0.00	0.00	0.08	0.63	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	5550
Location	Deer Valley Airport

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3	0.04											
4						0.47						
5					0.04							
6	0.16											
7												
8												
9		0.04										
10		0.24										
11		0.12										
12												
13												
14		0.39				---						
15												
16						---						
17		0.24										
18												
19												
20												
21												
22												
23												
24												
25					0.08							
26												
27												
28												
29												
30	0.24											
31												
Month Total	0.44	1.03	0.00	0.00	0.12	0.47	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	5565
Location	Skunk Creek at I-17

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3	0.08											
4			0.12			0.12						
5					0.04							
6	0.16				0.04							
7												
8												
9		0.28										
10												
11		0.08										
12						0.04						
13												
14		0.47										
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25					0.04							
26												
27												
28												
29	0.04											
30	0.24											
31												
Month Total	0.52	0.83	0.12	0.00	0.12	0.16	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	5595
Location	New River and Bell Road

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3	0.16											
4						0.43						
5					0.12							
6	0.08											
7												
8												
9		0.39										
10		0.04										
11		0.04				0.12						
12						0.04						
13		0.04										
14		0.08										
15						0.04						
16												
17		0.39										
18												
19												
20												
21												
22												
23												
24												
25	0.16											
26												
27												
28												
29	0.39											
30	0.08											
31												
Month Total	0.87	0.98	0.00	0.00	0.12	0.63	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	6500
Location	Guadalupe FRS

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.59						
5					0.24							
6	0.08			0.04								
7												
8												
9		0.28										
10	0.04			---								
11				---		0.16						
12				---		0.04						
13				---								
14				---								
15												
16												
17	0.12	0.04										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.43											
30	0.08	0.31										
31												
Month Total	0.75	0.63	0.00	0.04	0.24	0.79	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	6510
Location	South Mountain Park

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.63						
5					0.20							
6												
7												
8												
9		0.43										
10												
11						0.28						
12												
13												
14												
15												
16												
17	0.04											
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.20											
30	0.12	0.31										
31												
Month Total	0.36	0.74	0.00	0.00	0.20	0.91	0.00	0.00	0.00	0.00	0.00	0.00

Gauge Rainfall (inches)

Gage Number	6560
Location	South Mountain Fan

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1			---									
2												
3			---									
4						0.67						
5					0.20							
6				0.12								
7												
8												
9		0.08										
10												
11						0.28						
12												
13			0.20									
14												
15												
16												
17		0.28										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.24											
30	0.08											
31												
Month Total	0.32	0.36	0.20	0.12	0.20	0.95	0.00	0.00	0.00	0.00	0.00	0.00

Data Tables

Phoenix SR49 Salt River at 67th Avenue	
Date of Sampling	12/4/01
Time	0830
Representative Storm Event	Y
Agency Collecting Sample	USGS
Agency Analyzing Sample	DELMAR
Drainage Area (acres) (DA)	4738
Impervious Area (acres) (IA)	NM
Land Use - Residential	590
Land Use - Commercial	0
Land Use - Industrial	1241
Land Use - Undeveloped	2896
Sampling Duration (minutes) (DRN)	242
Storm Duration (minutes)	477
Runoff Sampled (cubic feet) (RUN)	114900
Total Storm Runoff (cubic feet)	154900
Instantaneous Discharge (cfs)	15.5
Preceeding Dry Period (days) (ANT)	29
Total Storm Rainfall (inch)	0.52
Rainfall Sampled (inch) (TRN)	0.16
Maximum 5-minute rain intensity (MAX5)	0.24
Sample Temperature (deg. C)	1.0
Effluent Temperature (deg. C)	18.5
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	735
pH, Effluent (standard units)	7.7
pH, Lab (standard units)	6.9
Specific Conductance, FIELD (us/cm)	159
Specific Conductance, LAB (umhos/cm)	220
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	8.32
BOD5 (mg/l)	12
COD High Level (mg/l)	160
Chloride Total (mg/l as Cl)	23
Flouride Total (mg/l as F)	0.5
Sulfate, Total (mg/l)	14
Sulfide Total (mg/l)	0.1
Cyanide Total (mg/l as Cn)	<0.02
Fecal Coliform (MPN/100mL)	240
Fecal Streptococci (MPN/100mL)	>16000
E. Coli (MPN/100mL)	240
Total Dissolved Solids (mg/l)	160
Total Suspended Solids (mg/l)	86
Nitrogen NO_2 + NO_3, Total (mg/l as N)	1.4
TKN Nitrogen (mg/l as N)	5.1
Nitrogen, Ammonia + Organic, Total (mg/l as N)	5.1
Nitrogen Nitrate Total (mg/l as N)	1.3
Nitrogen Nitrite Total (mg/l as N)	0.11
Nitrogen Ammonia Total (mg/l as N)	2.7
Nitrogen Organic Total (mg/l as N)	3.3
Phosphorous Total (mg/l as P)	0.88
Phosphorous Dissolved (mg/l as P)	0.87
Phosphorous Ortho (mg/l as P)	<0.5
Phenols Total Recoverable (ug/l)	11
Oil and Grease Total Recoverable (mg/l)	9

Phoenix SR49 **Salt River at 67th Avenue**	
Date of Sampling	12/4/01
Organic Carbon, Total (mg/l)	NA
Total Recoverable Petroleum Hydrocarbons (mg/l)	6
Bicarbonate Whole Field (mg/l as HCO_3)	46
Bicarbonate Dissolved, Field (mg/l as HCO_3)	40
Carbonate Water Field (mg/l as CO_3)	0
Carbonate Water Dissolved, Field, (mg/l as CO_3)	0
Alkalinity Water Field Total (mg/l as $CaCO_3$)	38
Alkalinity Dissolved Water Field Total (mg/l as $CaCO_3$)	32
Alkalinity LAB (mg/l as $CaCO_3$)	51
Hardness (mg/l)	66
Arsenic Total (ug/l as As)	2.4
Arsenic Dissolved (ug/l as As)	5.6
Beryllium Total Recoverable (ug/l as Be)	<0.5
Beryllium Dissolved (ug/l as Be)	<0.5
Cadmium Total Recoverable (ug/l as Cd)	<0.5
Cadmium Dissolved (ug/l as Cd)	<0.5
Calcium, Total Recoverable (mg/l as Ca)	18
Chromium Total Recoverable (ug/l as Cr)	11
Chromium Dissolved (ug/l as Cr)	<4
Copper, Total Recoverable, (ug/l as Cu)	46
Copper, Dissolved, (ug/l as Cu)	54
Lead, Total Recoverable, (ug/l as Pb)	13
Lead, Dissolved, (ug/l as Pb)	<2
Magnesium, Total Recoverable (mg/l as Mg)	5.4
Nickel, Total Recoverable, (ug/l as Ni)	13
Nickel, Dissolved, (ug/l as Ni)	8.3
Potassium, Total Recoverable (mg/l as K)	6.2
Silver, Total Recoverable, (ug/l as Ag)	<5
Silver, Dissolved, (ug/l as Ag)	<1
Sodium, Total Recoverable (mg/l as Na)	21
Zinc, Total Recoverable, (ug/l as Zn)	170
Zinc, Dissolved, (ug/l as Zn)	120
P,P' DDE, Total, (ug/l)	<0.1
Acetone, Total, (ug/l)	26
Benzene, Total, (ug/l)	<2
Bromodichloromethane, Total, (ug/l)	<2
Bromoform, Total, (ug/l)	<2
Bromomethane (ug/l)	<5
Carbon Tetrachloride, Total, (ug/l)	<2.5
Chlorobenzene, Total, (ug/l)	<2
Dibromochloromethane, Total, (ug/l)	<2
Chloroethane, (ug/l)	<5
Chloroform, Total, (ug/l)	<2
Chloromethane, Total (ug/l)	<5
1,2- Dichlorobenzene, Total, (ug/l)	<2
1,3- Dichlorobenzene, Total, (ug/l)	<2
1,4- Dichlorobenzene, Total, (ug/l)	<2
1,1- Dichloroethane, Total, (ug/l)	<2
1,2- Dichloroethane, Total, (ug/l)	<2
1,1- Dichloroethene, Total, (ug/l)	<5
trans-1,2- Dichloroethene, (ug/l)	<2
1,2- Dichloropropane, Total, (ug/l)	<2

Phoenix SR49 Salt River at 67th Avenue	
Date of Sampling	12/4/01
cis-1,3-Dichloropropene, (ug/l)	<2
trans-1,3- Dichloropropene, (ug/l)	<2
Ethylbenzene, Total, (ug/l)	<2
Methylene Chloride, Total, (ug/l)	<5
1,1,2,2-Tetrachloroethane, Total, (ug/l)	<2
Tetrachloroethene, PCE, Total, (ug/l)	<2
Toluene, Total, (ug/l)	<2
1,1,1- Trichloroethane, Total, (ug/l)	<2
1,1,2- Trichloroethane, Total, (ug/l)	<2
Trichloroethene, Total, (ug/l)	<2
Trichlorofluoromethane, Total, (ug/l)	<5
Vinyl Chloride, Total, (ug/l)	<2
Chrysene, Total, (ug/l)	<10
Phenol, Total, (ug/l)	<10
Benzoic Acid, Total, (ug/l)	<50

Phoenix SR45 Salt River and 40th Street	
Date of Sampling	12/4/01
Time	1203
Representative Storm Event	Y
Agency Collecting Sample	USGS
Agency Analyzing Sample	DEL MAR
Drainage Area (acres) (DA)	880
Impervious Area (acres) (IA)	NM
Land Use - Residential	5
Land Use - Commercial	0
Land Use - Industrial	564
Land Use - Undeveloped	310
Sampling Duration (minutes) (DRN)	322
Storm Duration (minutes)	443
Runoff Sampled (cubic feet) (RUN)	22500
Total Storm Runoff (cubic feet)	28700
Instantaneous Discharge (cfs)	5.54
Preceeding Dry Period (days) (ANT)	29
Total Storm Rainfall (inch)	0.39
Rainfall Sampled (inch) (TRN)	0.28
Maximum 5-minute rain intensity (MAX5)	0.6
Sample Temperature (deg. C)	1.0
Effluent Temperature (deg. C)	17.0
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	731
pH, Effluent (standard units)	7.9
pH, Lab (standard units)	7.1
Specific Conductance, FIELD (us/cm)	169
Specific Conductance, LAB (us/cm)	230
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	8.07
BOD5 (mg/l)	11
COD High Level (mg/l)	320
Chloride Total (mg/l as Cl)	18
Flouride Total (mg/l as F)	0.34
Sulfate Total (mg/l)	23
Sulfide Total (mg/l)	0.1
Cyanide Total (mg/l as Cn)	<0.02
Fecal Coliform (MPN/100mL)	>16000
Fecal Streptococci (MPN/100mL)	>16000
E. Coli (MPN/100ml)	240
Total Dissolved Solids (mg/l)	150
Total Suspended Solids (mg/l)	340
Nitrogen No2 + No3, Total (mg/l as N)	1.5
TKN Nitrogen (mg/l as N)	6.9
Nitrogen, Ammonia + Organic, Total (mg/l as N)	12
Nitrogen Nitrate Total (mg/l as N)	1.4
Nitrogen Nitrite Total (mg/l as N)	0.13
Nitrogen Ammonia Total (mg/l as N)	2
Nitrogen Organic Total (mg/l as N)	11
Phosphorous Total (mg/l as P)	2.5
Phosphorous Dissolved (mg/l as P)	2.1
Phosphorous Ortho (mg/l as P)	2
Phenols Total Recoverable (ug/l)	8.9
Oil and Grease Total Recoverable (mg/l)	14

Phoenix SR45 Salt River and 40th Street	
Date of Sampling	12/4/01
Organic Carbon, Total (mg/l)	NA
Total Recoverable Petroleum Hydrocarbons (mg/l)	9
Bicarbonate Whole Field (mg/l as HCo3)	93
Bicarbonate Dissolved, Field (mg/l as HCo3)	32
Carbonate Water Field (mg/l as Co3)	0
Carbonate Water Dissolved, Field, (mg/l as Co3)	0
Alkalinity Water Field Total (mg/l as CaCo3)	76
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)	26
Alkalinity LAB (mg/l as CaCo3)	71
Hardness (mg/l)	110
Arsenic Total (ug/l as As)	3.7
Arsenic Dissolved (ug/l as As)	4.1
Beryllium Total Recoverable (ug/l as Be)	<0.5
Beryllium Dissolved (ug/l as Be)	<0.5
Cadmium Total Recoverable (ug/l as Cd)	0.91
Cadmium Dissolved (ug/l as Cd)	<0.5
Calcium Total Recoverable (mg/l as Ca)	33
Chromium Total Recoverable (ug/l as Cr)	17
Chromium Dissolved (ug/l as Cr)	<4
Copper, Total Recoverable, (ug/l as Cu)	190
Copper, Dissolved, (ug/l as Cu)	110
Lead, Total Recoverable, (ug/l as Pb)	55
Lead, Dissolved, (ug/l as Pb)	2.2
Magnesium Total Recoverable (mg/l as Mg)	5.9
Nickel, Total Recoverable, (ug/l as Ni)	19
Nickel, Dissolved, (ug/l as Ni)	17
Potassium, Total Recoverable (mg/l as K)	6.4
Silver, Total Recoverable, (ug/l as Ag)	<5
Silver, Dissolved, (ug/l as Ag)	<1
Sodium, Total Recoverable (mg/l as Na)	14
Zinc, Total Recoverable, (ug/l as Zn)	470
Zinc, Dissolved, (ug/l as Zn)	230
P,P' DDE, Total, (ug/l)	<0.1
Acetone, Total, (ug/l)	38
Benzene, Total, (ug/l)	<2
Bromodichloromethane, Total, (ug/l)	<2
Bromoform, Total, (ug/l)	<5
Bromomethane (ug/l)	<5
Carbon Tetrachloride, Total, (ug/l)	<2.5
Chlorobenzene, Total, (ug/l)	<2
Dibromochloromethane, Total, (ug/l)	<2
Chloroethane, (ug/l)	<5
Chloroform, Total, (ug/l)	<2
Chloromethane, Total (ug/l)	<5
1,2- Dichlorobenzene, Total, (ug/l)	<2
1,3- Dichlorobenzene, Total, (ug/l)	<2
1,4- Dichlorobenzene, Total, (ug/l)	<2
1,1- Dichloroethane, Total, (ug/l)	<2
1,2- Dichloroethane, Total, (ug/l)	<2
1,1- Dichloroethene, Total, (ug/l)	<5
trans-1,2- Dichloroethene, (ug/l)	<2
1,2- Dichloropropane, Total, (ug/l)	<2
cis-1,3-Dichloropropene, (ug/l)	<2

Phoenix SR45 Salt River and 40th Street	
Date of Sampling	12/4/01
trans-1,3- Dichloropropene, (ug/l)	<2
Ethyl-Benzene, Total, (ug/l)	6.1
Methylene Chloride, Total, (ug/l)	<5
1,1,2,2-Tetrachloroethane, Total, (ug/l)	<2
Tetrachloroethene, PCE, Total, (ug/l)	<2
Toluene, Total, (ug/l)	23
1,1,1- Trichloroethane, Total, (ug/l)	<2
1,1,2- Trichloroethane, Total, (ug/l)	<2
Trichloroethene, Total, (ug/l)	<2
Trichlorofluoromethane, Total, (ug/l)	<5
Vinyl Chloride, Total, (ug/l)	<2
Chrysene, Total, (ug/l)	<10
Phenol, Total, (ug/l)	<10
Benzoic Acid, Total, (ug/l)	67

Phoenix ACDC

ACDC near Peoria Avenue and 43rd Avenue

Date of Sampling	12/4/01
Time	0702
Representative Storm Event	Y
Agency Collecting Sample	USGS
Agency Analyzing Sample	DELMAR
Drainage Area (acres) (DA)	3.4
Impervious Area (acres) (IA)	3.2
Land Use - Residential	0
Land Use - Commercial	3.2
Land Use - Industrial	0
Land Use - Undeveloped	0.2
Sampling Duration (minutes) (DRN)	NM
Storm Duration (minutes)	450
Runoff Sampled (cubic feet) (RUN)	NM
Total Storm Runoff (cubic feet)	11300
Instantaneous Discharge (cfs)	0.75
Preceeding Dry Period (days) (ANT)	29
Total Storm Rainfall (inch) (TRN)	0.53
Rainfall Sampled (inch)	NM
Maximum 5-minute rain intensity (MAX5)	0.24
Sample Temperature (deg. C)	1.0
Effluent Temperature (deg. C)	14.0
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	728
pH, Effluent (standard units)	6.9
pH, Lab (standard units)	NA
Specific Conductance, FIELD (us/cm)	71
Specific Conductance, LAB (umhos/cm)	NA
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	10.10
Fecal Coliform (MPN/100mL)	9000
Fecal Streptococci (MPN/100mL)	>16000
E. Coli (MPN/100mL)	5000
P,P' DDE, Total, (ug/l)	<0.1
Acetone, Total, (ug/l)	25
Benzene, Total, (ug/l)	<2
Bromodichloromethane, Total, (ug/l)	<2
Bromoform, Total, (ug/l)	<2
Bromomethane, Total (ug/l)	<5
Carbon Tetrachloride, Total, (ug/l)	<2.5
Chlorobenzene, Total, (ug/l)	<2
Dibromochloromethane, Total (ug/l)	<2
Chloroethane, (ug/l)	<5
Chloroform, Total, (ug/l)	<2
Chloromethane, Total (ug/l)	<5
1,2- Dichlorobenzene, Total, (ug/l)	<2
1,3- Dichlorobenzene, Total, (ug/l)	<2
1,4- Dichlorobenzene, Total, (ug/l)	<2
1,1- Dichloroethane, Total, (ug/l)	<2
1,2- Dichloroethane, Total, (ug/l)	<2
1,1- Dichloroethene, Total, (ug/l)	<5
trans-1,2- Dichloroethene, (ug/l)	<2
1,2- Dichloropropane, Total, (ug/l)	<2
cis-1,3-Dichloropropene, (ug/l)	<2

Phoenix ACDC ACDC near Peoria Avenue and 43rd Avenue	
Date of Sampling	12/4/01
trans-1,3- Dichloropropene, (ug/l)	<2
Ethylbenzene, Total, (ug/l)	<2
Methylene Chloride, Total, (ug/l)	<5
1,1,2,2-Tetrachloroethane, Total, (ug/l)	<2
Tetrachloroethene, PCE, Total, (ug/l)	<2
Toluene, Total, (ug/l)	<2
1,1,1- Trichloroethane, Total, (ug/l)	<2
1,1,2- Trichloroethane, Total, (ug/l)	<2
Trichloroethene, Total, (ug/l)	<2
Trichlorofluoromethane, Total, (ug/l)	<5
Vinyl Chloride, Total, (ug/l)	<2
Chrysene, Total, (ug/l)	<10
Phenol, Total, (ug/l)	<10
Benzoic Acid, Total, (ug/l)	<50

Phoenix IB08 40th Street at Indian Bend Wash	
Date of Sampling	12/4/01
Time	0756
Representative Storm Event	Y
Agency Collecting Sample	USGS
Agency Analyzing Sample	DEL MAR
Drainage Area (acres) (DA)	801
Impervious Area (acres) (IA)	UA
Land Use - Residential	659
Land Use - Commercial	62
Land Use - Industrial	0
Land Use - Undeveloped	81
Sampling Duration (minutes) (DRN)	161
Storm Duration (minutes)	448
Runoff Sampled (cubic feet) (RUN)	59900
Total Storm Runoff (cubic feet)	163900
Instantaneous Discharge (cfs)	11.4
Preceeding Dry Period (days) (ANT)	109
Total Storm Rainfall (inch)	0.44
Rainfall Sampled (inch) (TRN)	0.18
Maximum 5-minute rain intensity (MAX5)	0.36
Sample Temperature (deg. C)	1.0
Effluent Temperature (deg. C)	17.0
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	724
pH, Effluent (standard units)	7.5
pH, Lab (standard units)	7.2
Specific Conductance, FIELD (us/cm)	111
Specific Conductance, LAB (us/cm)	1700
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	8.82
BOD5 (mg/l)	15
COD High Level (mg/l)	170
Chloride Total (mg/l as Cl)	9.4
Flouride Total (mg/l as F)	0.63
Sulfate Total (mg/l)	18
Sulfide Total (mg/l)	<0.1
Cyanide Total (mg/l as Cn)	<0.02
Fecal Coliform (MPN/100mL)	>16000
Fecal Streptococci (MPN/100mL)	>16000
E. Coli (MPN/100ml)	16000
Total Dissolved Solids (mg/l)	110
Total Suspended Solids (mg/l)	760
Nitrogen No2 + No3, Total (mg/l as N)	1
TKN Nitrogen (mg/l as N)	4.2
Nitrogen, Ammonia + Organic, Total (mg/l as N)	5
Nitrogen Nitrate Total (mg/l as N)	0.92
Nitrogen Nitrite Total (mg/l as N)	0.11
Nitrogen Ammonia Total (mg/l as N)	1.9
Nitrogen Organic Total (mg/l as N)	3.5
Phosphorous Total (mg/l as P)	0.74
Phosphorous Dissolved (mg/l as P)	0.81
Phosphorous Ortho (mg/l as P)	<0.5
Phenols Total Recoverable (ug/l)	5.4
Oil and Grease Total Recoverable (mg/l)	7.7

Phoenix IB08 **40th Street at Indian Bend Wash**	
Date of Sampling	12/4/01
Organic Carbon, Total (mg/l)	NA
Total Recoverable Petroleum Hydrocarbons (mg/l)	5
Bicarbonate Whole Field (mg/l as HCo3)	41
Bicarbonate Dissolved, Field (mg/l as HCo3)	NM
Carbonate Water Field (mg/l as Co3)	0
Carbonate Water Dissolved, Field, (mg/l as Co3)	NM
Alkalinity Water Field Total (mg/l as CaCo3)	34
Alkalinity Dissolved Water Field Total (mg/l as CaCo3)	NM
Alkalinity LAB (mg/l as CaCo3)	50
Hardness (mg/l)	78
Arsenic Total (ug/l as As)	3.5
Arsenic Dissolved (ug/l as As)	2.7
Beryllium Total Recoverable (ug/l as Be)	<0.5
Beryllium Dissolved (ug/l as Be)	<0.5
Cadmium Total Recoverable (ug/l as Cd)	<0.5
Cadmium Dissolved (ug/l as Cd)	<0.5
Calcium Total Recoverable (mg/l as Ca)	21
Chromium Total Recoverable (ug/l as Cr)	13
Chromium Dissolved (ug/l as Cr)	<4
Copper, Total Recoverable, (ug/l as Cu)	73
Copper, Dissolved, (ug/l as Cu)	68
Lead, Total Recoverable, (ug/l as Pb)	22
Lead, Dissolved, (ug/l as Pb)	<2
Magnesium, Total Recoverable (mg/l as Mg)	6.1
Nickel, Total Recoverable, (ug/l as Ni)	16
Nickel, Dissolved, (ug/l as Ni)	6
Potassium, Total Recoverable (mg/l as K)	5.3
Silver, Total Recoverable, (ug/l as Ag)	<5
Silver, Dissolved, (ug/l as Ag)	<1
Sodium, Total Recoverable (mg/l as Na)	12
Zinc, Total Recoverable, (ug/l as Zn)	270
Zinc, Dissolved, (ug/l as Zn)	<50
P,P' DDE, Total, (ug/l)	<0.1
Acetone, Total, (ug/l)	<20
Benzene, Total, (ug/l)	<2
Bromodichloromethane, Total, (ug/l)	<2
Bromoform, Total, (ug/l)	<5
Bromomethane (ug/l)	<5
Carbon Tetrachloride, Total, (ug/l)	<2.5
Chlorobenzene, Total, (ug/l)	<2
Chloroethane, (ug/l)	<5
Chloroform, Total, (ug/l)	<2
Chloromethane, Total (ug/l)	<5
1,2- Dichlorobenzene, Total, (ug/l)	<2
1,3- Dichlorobenzene, Total, (ug/l)	<2
1,4- Dichlorobenzene, Total, (ug/l)	<2
1,1- Dichloroethane, Total, (ug/l)	<2
1,2- Dichloroethane, Total, (ug/l)	<2
1,1- Dichloroethene, Total, (ug/l)	<5
trans-1,2- Dichloroethene, (ug/l)	<2
1,2- Dichloropropane, Total, (ug/l)	<2
cis-1,3-Dichloropropene, (ug/l)	<2
trans-1,3- Dichloropropene, (ug/l)	<2

Phoenix IB08 40th Street at Indian Bend Wash	
Date of Sampling	12/4/01
Ethyl-Benzene, Total, (ug/l)	<2
Methylene Chloride, Total, (ug/l)	<5
1,1,2,2-Tetrachloroethane, Total, (ug/l)	<2
Tetrachloroethene, PCE, Total, (ug/l)	<2
Toluene, Total, (ug/l)	<2
1,1,1- Trichloroethane, Total, (ug/l)	<2
1,1,2- Trichloroethane, Total, (ug/l)	<2
Trichloroethene, Total, (ug/l)	<2
Trichlorofluoromethane, Total, (ug/l)	<5
Vinyl Chloride, Total, (ug/l)	<2
Chrysene, Total, (ug/l)	<10
Phenol, Total, (ug/l)	<10
Benzoic Acid, Total, (ug/l)	<50

Phoenix CAVE Cave Creek Road at Tatum Boulevard	
Date of Sampling	12/4/01
Time	NM
Representative Storm Event	Y
Agency Collecting Sample	USGS
Agency Analyzing Sample	DELMAR
Drainage Area (acres) (DA)	NM
Impervious Area (acres) (IA)	NM
Land Use - Residential	NM
Land Use - Commercial	NM
Land Use - Industrial	NM
Land Use - Undeveloped	NM
Sampling Duration (minutes) (DRN)	NM
Storm Duration (minutes)	496
Runoff Sampled (cubic feet) (RUN)	NM
Total Storm Runoff (cubic feet)	NM
Instantaneous Discharge (cfs)	NM
Preceeding Dry Period (days) (ANT)	9
Total Storm Rainfall (inch)	0.48
Rainfall Sampled (inch) (TRN)	NM
Maximum 5-minute rain intensity (MAX5)	0.48
Sample Temperature (deg. C)	1
Effluent Temperature (deg. C)	14
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	712
pH, Effluent (standard units)	7.7
pH, Lab (standard units)	NA
Specific Conductance, FIELD (us/cm)	77
Specific Conductance, LAB (us/cm)	NA
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	9.52
Fecal Coliform (MPN/100ml)	9000
Fecal Streptococci (MPN/100ml)	5000
E. Coli (MPN/100ml)	5000
Oil and Grease Total Recoverable (mg/l)	9.3
Total Recoverable Petroleum Hydrocarbons (mg/l)	7
P,P' DDE, Total, (ug/l)	<0.1
Acetone, Total, (ug/l)	<20
Benzene, Total, (ug/l)	<2
Bromodichloromethane, Total, (ug/l)	<2
Bromoform, Total, (ug/l)	<5
Bromomethane (ug/l)	<5
Carbon Tetrachloride, Total, (ug/l)	<2.5
Chlorobenzene, Total, (ug/l)	<2
Dibromochloromethane (ug/l)	<2
Chloroethane, (ug/l)	<5
Chloroform, Total, (ug/l)	<2
Chloromethane, Total (ug/l)	<5
1,2- Dichlorobenzene, Total, (ug/l)	<2
1,3- Dichlorobenzene, Total, (ug/l)	<2
1,4- Dichlorobenzene, Total, (ug/l)	<2
1,1- Dichloroethane, Total, (ug/l)	<2
1,2- Dichloroethane, Total, (ug/l)	<2
1,1- Dichloroethene, Total, (ug/l)	<5
trans-1,2- Dichloroethene, (ug/l)	<2

Phoenix CAVE Cave Creek Road at Tatum Boulevard	
Date of Sampling	12/4/01
1,2- Dichloropropane, Total, (ug/l)	<2
cis-1,3-Dichloropropene, (ug/l)	<2
trans-1,3- Dichloropropene, (ug/l)	<2
Ethylbenzene, Total, (ug/l)	<2
Methylene Chloride, Total, (ug/l)	<5
1,1,2,2-Tetrachloroethane, Total, (ug/l)	<2
Tetrachloroethene, PCE, Total, (ug/l)	<2
Toluene, Total, (ug/l)	4.5
1,1,1- Trichloroethane, Total, (ug/l)	<2
1,1,2- Trichloroethane, Total, (ug/l)	<2
Trichloroethene, Total, (ug/l)	<2
Trichlorofluoromethane, Total, (ug/l)	<5
Vinyl Chloride, Total, (ug/l)	<2
Chrysene, Total, (ug/l)	<10
Phenol, Total, (ug/l)	<10
Benzoic Acid, Total, (ug/l)	<50

Validation Tables

Phoenix SR49

Salt River at 67th Avenue
Storm of December 4, 2001

	Method	Result	Units	Method Reporting Limit	Data Qualifiers	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)	Lab	1	deg. C	0.5		12/4/01	Immediate							
Effluent Temperature (deg. C)	Field	18.5	deg. C	0.5		12/4/01	Immediate							
Ambient Temperature (deg. C)	Field	NM	deg. C	0.5			Immediate							
Barometric Pressure (mm Hg)	Field	735	mm Hg	1		12/4/01	Immediate							
pH, Effluent, FIELD (standard units)	Field	7.68	std units	0.1		12/4/01	Immediate							
pH, Lab (standard units)	USGS	6.9	std units	0.1		1/31/02	6 months							
Specific Conductance, FIELD (us/cm)	Field	159	umhos/cm	2		12/4/01	Immediate							
Specific Conductance, LAB (umhos/cm)	SM2510B	220	umhos/cm	2		12/7/01	6 months			<10	0.7			
Oxygen Dissolved (% saturation)	Field	NM	%	1			Immediate							
Oxygen Dissolved (mg/l)	Field	8.32	mg/l	0.1		12/4/01	Immediate							
BOD5 (mg/l)	405.1	12	mg/l	2	K2,L3	12/10/01	48 hours			<20	14			Blank spike recovery high, estimated value
COD High Level (mg/l)	410.4	160	mg/l	20		12/13/01	28 days	<20	3	<20	1			
Chloride (mg/l)	300.0	23	mg/l	5	M1	12/5/01	28 days	<15	0.5	<20	2			Matrix spike recovery high
Flouride (mg/l)	300.0	0.5	mg/l	0.1		12/5/01	28 days	<20	6	<20	3			
Sulfate (mg/l)	300.0	14	mg/l	0.5	M2	12/5/01	28 days	<15	0.6	<20	2			Matrix spike recovery low
Sulfide (mg/l)	4500-S-C,D	0.1	mg/l	0.1		12/5/01	28 days	<20	3					
Cyanide, Total (mg/l as CN)	4500CN,C-E	<0.02	mg/l	0.02		12/17/01	14 days	<15	0					
Fecal Coliform (MPN/100ml)	9221E	240	MPN/100ml	2		12/4/01	6 hours							
Fecal Streptococci (MPN/100ml)	9230B	>16000	MPN/100ml	2		12/4/01	6 hours							
E. Coli (MPN/100ml)	9221F	240	MPN/100ml	2		12/4/01	6 hours							
Total Dissolved Solids (mg/l)	2540C	160	mg/l	20		12/7/01	7 days			<20	4			
Total Suspended Solids (mg/l)	160.2	86	mg/l	10		12/7/01	7 days							
Nitrogen NO_2 + NO_3, Total (mg/l as N)	300.0	1.4	mg/l	0.1		12/5/01	28 days							
TKN Nitrogen (mg/l as N)	4500-N-O,C	5.1	mg/l	1		12/10/01	28 days							
Nitrogen, Ammonia + Organic, Total (mg/l as N)	calculation	1.8	mg/l	0.1		1/16/02	calculation							Did not meet hold time
Nitrogen Nitrate Total (mg/l as N)	300.0	1.3	mg/l	0.1		12/5/01	48 hours	<20	0.6	<20	3			
Nitrogen Nitrite Total (mg/l as N)	300.0	0.11	mg/l	0.1	M2	12/5/01	48 hours	<20	5	<20	0.7			Matrix spike recovery low
Nitrogen Ammonia Total (mg/l as N)	350.3	2.7	mg/l	0.1		12/11/01	28 days	<20	3					
Nitrogen Organic Total (mg/l as N)	calculation	3.3	mg/l	0.1		1/16/02	calculation							Did not meet hold time
Phosphorous Total (mg/l as P)	365.3	0.88	mg/l	0.05		1/15/02	28 days							Did not meet hold time
Phosphorous Dissolved (mg/l as P)	365.3	0.87	mg/l	0.05		12/11/01	28 days	<15	1	<20	8			
Phosphorous Ortho (mg/l as P)	365.3	<0.5	mg/l	0.5	L3	12/5/01	48 hours	<20	13	<20	3			Blank spike recovery high
Phenols Total Recoverable (ug/l)	420.1	11	ug/l	5		12/20/01	28 days			<20	1			
Oil and Grease Total Recoverable (mg/l)	413.2	9	mg/l	1		12/11/01	28 days			<20	6			
Total Recoverable Petroleum Hydrocarbons (mg/l)	418.1	6	mg/l	1		12/11/01	28 days			<20	2			
Bicarbonate Whole Field (mg/l as HCO_3)	USGS	46	mg/l	0.1		12/5/01	14 days							
Bicarbonate Dissolved, Field (mg/l as HCO_3)	USGS	40	mg/l	0.1		12/5/01	14 days							
Carbonate Water Field (mg/l as CO_3)	USGS	0	mg/l	0.1		12/5/01	14 days							
Carbonate Water Dissolved, Field, (mg/l as CO_3)	USGS	0	mg/l	0.1		12/5/01	14 days							
Alkalinity Water Field Total (mg/l as $CaCO_3$)	USGS	38	mg/l	0.1		12/5/01	14 days							
Alkalinity Dissolved Water Field Total (mg/l as $CaCO_3$)	USGS	32	mg/l	0.1		12/5/01	14 days							
Alkalinity LAB (mg/l as $CaCO_3$)	SM2320B	51	mg/l	5		12/13/01	14 days							
Hardness Total (mg/l as $CaCO_3$)	SM2340B	66	mg/l	1		12/10/01	14 days							
Arsenic Total (ug/l as As)	200.8	2.4	ug/l	1		12/11/01	6 months	<20	7.4					
Arsenic Dissolved (ug/l as As)	200.8	5.6	ug/l	1		12/11/01	6 months	<20	3.4					
Beryllium Total Recoverable (ug/l as Be)	200.9	<0.5	ug/l	0.5	M1	12/11/01	6 months	<20	4	<20	1			Matrix spike recovery high
Beryllium Dissolved (ug/l as Be)	200.8	<0.5	ug/l	0.5		12/11/01	6 months	<20	11.5					
Cadmium Total Recoverable (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/8/01	6 months	<20	0.6	<20	3			
Cadmium Dissolved (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/12/01	6 months	<20	9	<20	1			
Calcium Total Recoverable (mg/l as Ca)	200.7	18	mg/l	2		12/10/01	6 months	<20	0.4	<20	0.9			
Chromium Total Recoverable (ug/l as Cr)	200.9	11	ug/l	4		12/12/01	6 months	<20	1	<20	11			
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		12/12/01	6 months	<20	2	<20	0.5			

Phoenix SR49 Salt River at 67th Avenue Storm of December 4, 2001	Method	Result	Units	Method Reporting Limit	Data Qualifiers	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
Copper, Total Recoverable, (ug/l as Cu)	200.9	46	ug/l	8		12/11/01	6 months	<20	4	<20	2			
Copper, Dissolved, (ug/l as Cu)	200.8	54	ug/l	1		12/11/01	6 months	<20	13.9					
Lead, Total Recoverable, (ug/l as Pb)	200.9	13	ug/l	2		12/7/01	6 months	<20	6	<20	1			
Lead, Dissolved, (ug/l as Pb)	200.9	<2	ug/l	2		12/12/01	6 months	<20	2	<20	1			
Magnesium Total Recoverable (mg/l as Mg)	200.7	5.4	mg/l	0.5		12/10/01	6 months	<20	1	<20	0			
Nickel, Total Recoverable, (ug/l as Ni)	200.9	13	ug/l	4		12/12/01	6 months	<20	1	<20	7			
Nickel, Dissolved, (ug/l as Ni)	200.9	8.3	ug/l	4		12/13/01	6 months	<20	2.00	<20	5			
Potassium, Total Recoverable (mg/l as K)	258.1	6.2	mg/l	1		12/11/01	6 months	<20	0	<20	0			
Silver, Total Recoverable, (ug/l as Ag)	200.9	<5	ug/l	5		12/12/01	6 months	<20	8	<20	4			
Silver, Dissolved, (ug/l as Ag)	200.8	<1	ug/l	1		12/11/01	6 months	<20	0.4					
Sodium, Total Recoverable (mg/l as Na)	273.1	21	mg/l	5	M3	12/11/01	6 months	<20	12	<20	0.4			Spike recovery accuracy reduced
Zinc, Total Recoverable, (ug/l as Zn)	200.7	170	ug/l	50		12/12/01	6 months	<20	1	<20	3			
Zinc, Dissolved, (ug/l as Zn)	200.7	120	ug/l	50		12/11/01	6 months	<20	2	<20	2			
EPA Method 608 Extraction	608						7 days							
P,P' DDE, Total, (ug/l)	608	<0.1	ug/l	0.1	Q8	12/11/01	40 days			<20	1			Insufficient sample for QC requirements.
EPA Method 624 Extraction	624						7 days							
Benzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	11			
Bromodichloromethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	9			
Bromoform, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	2	<20	6			
Bromomethane (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	5	<20	14			
Carbon Tetrachloride, Total, (ug/l)	624	<2.5	ug/l	2.5		12/18/01	14 days	<20	2	<20	10			
Chlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	12			
Dibromochloromethane (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.9	<20	8			
Chloroethane, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	3	<20	14			
Chloroform, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	6	<20	10			
Chloromethane, Total (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	4	<20	14			
1,2- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	12			
1,3- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	5	<20	11			
1,4- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	9			
1,1- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	6	<20	10			
1,2- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	9			
1,1- Dichloroethene, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	6	<20	12			
trans-1,2- Dichloroethene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	5	<20	11			
1,2- Dichloropropane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	10			
cis-1,3-Dichloropropene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	2	<20	9			
trans-1,3- Dichloropropene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.9	<20	8			
Ethylbenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	5	<20	13			
Methylene Chloride, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	4	<20	15			
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	7			
Tetrachloroethene, PCE, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
Toluene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	10			
1,1,1- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
1,1,2- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.8	<20	9			
Trichloroethene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
Trichlorofluoromethane, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	6	<20	12			
Vinyl Chloride, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	12	<20	11			
Acetone, Total, (ug/l)	624	26	ug/l	20	T2	12/18/01	14 days	<20	3	<20	10			ADHS method does not contain this analyte
EPA Method 625 Extraction	625						7 days							
Chrysene, Total, (ug/l)	625	<10	ug/l	10		12/11/01	40 days	<20	2	<20	1			
Phenol, Total, (ug/l)	625	<10	ug/l	10		12/11/01	40 days	<20	4	<20	4			
Benzoic Acid, Total, (ug/l)	625	<50	ug/l	50		12/11/01	40 days							

Phoenix SR45

Salt River at 40th Street
Storm of December 4, 2001

	Method	Result	Units	Method Reporting Limit	Data Qualifiers	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)	Lab	1.0	deg. C	0.5		12/4/01	Immediate							
Effluent Temperature (deg. C)	Field	17.0	deg. C	0.5		12/4/01	Immediate							
Ambient Temperature (deg. C)	Field	---	deg. C	0.5			Immediate							
Barometric Pressure (mm Hg)	Field	731	mm Hg	1		12/4/01	Immediate							
pH, Effluent, FIELD (standard units)	Field	7.92	std units	0.1		12/4/01	Immediate							
pH, Lab (standard units)	USGS	7.1	std units	0.1		1/31/02	6 months							
Specific Conductance, FIELD (us/cm)	Field	169	umhos/cm	2		12/4/01	Immediate							
Specific Conductance, LAB (umhos/cm)	SM2510B	230	umhos/cm	2		12/7/01	6 months			<10	0.7			
Oxygen Dissolved (% saturation)	Field	---	%	1			Immediate							
Oxygen Dissolved (mg/l)	Field	8.07	mg/l	0.1		12/4/01	Immediate							
BOD5 (mg/l)	405.1	11	mg/l	3	K2,L3	12/10/01	48 hours			<20	14			Blank spike recovery high, estimated value
COD High Level (mg/l)	410.4	320	mg/l	20		12/13/01	28 days	<20	3	<20	1			
Chloride (mg/l)	300.0	18	mg/l	0.5		12/5/01	28 days	<15	0.5	<20	2			
Flouride (mg/l)	300.0	0.34	mg/l	0.1		12/5/01	28 days	<20	6	<20	3			
Sulfate (mg/l)	300.0	23	mg/l	5	M2	12/5/01	28 days	<15	0.6	<20	2			Matrix spike recovery low
Sulfide (mg/l)	4500-S-C,D	0.1	mg/l	0.1		12/5/01	28 days	<20	3					
Cyanide, Total (mg/l as CN)	4500CN,C-E	<0.02	mg/l	0.02		12/17/01	14 days	<15	0					
Fecal Coliform (MPN/100ml)	9221E	>16000	MPN/100ml	2		12/4/01	6 hours							
Fecal Streptococci (MPN/100ml)	9230B	>16000	MPN/100ml	2		12/4/01	6 hours							
E. Coli (MPN/100ml)	9221F	240	MPN/100ml	2		12/4/01	6 hours							
Total Dissolved Solids (mg/l)	2540C	150	mg/l	20		12/7/01	7 days			<20	4			
Total Suspended Solids (mg/l)	160.2	340	mg/l	20		12/7/01	7 days							
Nitrogen NO_2 + NO_3, Total (mg/l as N)	300.0	1.5	mg/l	0.1		12/5/01	28 days							
TKN Nitrogen (mg/l as N)	4500-N-O,C	6.9	mg/l	1		12/11/01	28 days							
Nitrogen, Ammonia + Organic, Total (mg/l as N)	calculation	12	mg/l	0.1		1/16/02	calculation							Did not meet hold time
Nitrogen Nitrate Total (mg/l as N)	300.0	1.4	mg/l	0.1		12/5/01	48 hours	<15	0.6	<20	3			
Nitrogen Nitrite Total (mg/l as N)	300.0	0.13	mg/l	0.1		12/5/01	48 hours	<20	5	<20	0.7			
Nitrogen Ammonia Total (mg/l as N)	350.3	2	mg/l	0.05		12/11/01	28 days	<20	3					
Nitrogen Organic Total (mg/l as N)	calculation	11	mg/l	0.05		1/16/02	calculation							Did not meet hold time
Phosphorous Total (mg/l as P)	365.3	2.5	mg/l	0.05		1/16/01	28 days							Did not meet hold time
Phosphorous Dissolved (mg/l as P)	365.3	2.1	mg/l	0.25		12/12/01	28 days	<15	2	<20	3			
Phosphorous Ortho (mg/l as P)	365.3	2	mg/l	0.25	M3	12/6/01	48 hours	<20	1					Spike recovery accuracy reduced
Phenols Total Recoverable (ug/l)	420.1	8.9	ug/l	5		12/20/01	28 days	<20	1					
Oil and Grease Total Recoverable (mg/l)	413.2	14	mg/l	1		12/11/01	28 days			<20	6			
Total Recoverable Petroleum Hydrocarbons (mg/l)	418.1	9	mg/l	1		12/11/01	28 days			<20	2			
Bicarbonate Whole Field (mg/l as HCO_3)	USGS	93	mg/l	0.1		12/5/01	14 days							
Bicarbonate Dissolved, Field (mg/l as HCO_3)	USGS	32	mg/l	0.1		12/5/01	14 days							
Carbonate Water Field (mg/l as CO_3)	USGS	0	mg/l	0.1		12/5/01	14 days							
Carbonate Water Dissolved, Field, (mg/l as CO_3)	USGS	0	mg/l	0.1		12/5/01	14 days							
Alkalinity Water Field Total (mg/l as $CaCO_3$)	USGS	76	mg/l	0.1		12/5/01	14 days							
Alkalinity Dissolved Water Field Total (mg/l as $CaCO_3$)	USGS	26	mg/l	0.1		12/5/01	14 days							
Alkalinity LAB (mg/l as $CaCO_3$)	SM2320B	71	mg/l	5		12/13/01	14 days							
Hardness Total (mg/l as $CaCO_3$)	SM2340B	110	mg/l	1		12/11/01	14 days							
Arsenic Total (ug/l as As)	200.8	3.7	ug/l	1		12/11/01	6 months	<20	7.4					
Arsenic Dissolved (ug/l as As)	200.8	4.1	ug/l	1		12/11/01	6 months	<20	3.4					
Beryllium Total Recoverable (ug/l as Be)	200.9	<0.5	ug/l	0.5	M5	12/12/01	6 months	<20	4	<20	1			Value determined by MSA
Beryllium Dissolved (ug/l as Be)	200.8	<0.5	ug/l	0.5		12/11/01	6 months	<20	11.5					
Cadmium Total Recoverable (ug/l as Cd)	200.9	0.91	ug/l	0.5		12/8/01	6 months	<20	0.6	<20	3			
Cadmium Dissolved (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/12/01	6 months	<20	9	<20	1			
Calcium Total Recoverable (mg/l as Ca)	200.7	33	mg/l	2		12/11/01	6 months	<20	2	<20	3			
Chromium Total Recoverable (ug/l as Cr)	200.9	17	ug/l	4		12/12/01	6 months	<20	1	<20	11			
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		12/12/01	6 months	<20	2	<20	0.5			

Phoenix SR45 Salt River at 40th Street Storm of December 4, 2001	Method	Result	Units	Method Reporting Limit	Data Qualifiers	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
Copper, Total Recoverable, (ug/l as Cu)	200.9	190	ug/l	40		12/11/01	6 months	<20	4	<20	2			
Copper, Dissolved, (ug/l as Cu)	200.8	110	ug/l	1		12/11/01	6 months	<20	13.9					
Lead, Total Recoverable, (ug/l as Pb)	200.9	55	ug/l	4		12/7/01	6 months	<20	6	<20	1			
Lead, Dissolved, (ug/l as Pb)	200.9	2.2	ug/l	2		12/12/01	6 months	<20	2	<20	1			
Magnesium Total Recoverable (mg/l as Mg)	200.7	5.9	mg/l	0.5		12/11/01	6 months	<20	2	<20	1			
Nickel, Total Recoverable, (ug/l as Ni)	200.9	19	ug/l	4		12/12/01	6 months	<20	1	<20	7			
Nickel, Dissolved, (ug/l as Ni)	200.9	17	ug/l	4		12/13/01	6 months	<20	2	<20	5			
Potassium, Total Recoverable (mg/l as K)	258.1	6.4	mg/l	1		12/12/01	6 months	<20	5	<20	0.9			
Silver, Total Recoverable, (ug/l as Ag)	200.9	<5	ug/l	5		12/12/01	6 months	<20	8	<20	4			
Silver, Dissolved, (ug/l as Ag)	200.8	<1	ug/l	1		12/12/01	6 months	<20	0.4					
Sodium, Total Recoverable (mg/l as Na)	273.1	14	mg/l	5		12/11/01	6 months	<20	2	<20	0.4			
Zinc, Total Recoverable, (ug/l as Zn)	200.7	470	ug/l	50		12/11/01	6 months	<20	2	<20	2			
Zinc, Dissolved, (ug/l as Zn)	200.7	230	ug/l	50		12/11/01	6 months	<20	2	<20	2			
EPA Method 608 Extraction	608						7 days							
P,P' DDE, Total, (ug/l)	608	<0.1	ug/l	0.1	Q8	12/11/01	40 days			<20	1			Insufficient sample for QC requirements.
EPA Method 624 Extraction	624						7 days							
Benzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	11			
Bromodichloromethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	9			
Bromoform, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	2	<20	6			
Bromomethane (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	5	<20	14			
Carbon Tetrachloride, Total, (ug/l)	624	<2.5	ug/l	2.5		12/18/01	14 days	<20	2	<20	10			
Chlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	12			
Dibromochloromethane (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.9	<20	8			
Chloroethane, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	3	<20	14			
Chloroform, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	6	<20	10			
Chloromethane, Total (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	4	<20	14			
1,2- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	12			
1,3- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	5	<20	11			
1,4- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	9			
1,1- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	6	<20	10			
1,2- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	9			
1,1- Dichloroethene, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	6	<20	12			
trans-1,2- Dichloroethene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	5	<20	11			
1,2- Dichloropropane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	10			
cis-1,3-Dichloropropene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	2	<20	9			
trans-1,3- Dichloropropene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.9	<20	8			
Ethylbenzene, Total, (ug/l)	624	6.1	ug/l	2		12/18/01	14 days	<20	5	<20	13			
Methylene Chloride, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	4	<20	15			
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	7			
Tetrachloroethene, PCE, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
Toluene, Total, (ug/l)	624	23	ug/l	2		12/18/01	14 days	<20	3	<20	10			
1,1,1- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
1,1,2- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.8	<20	9			
Trichloroethene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
Trichlorofluoromethane, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	6	<20	12			
Vinyl Chloride, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	12	<20	11			
Acetone, Total, (ug/l)	624	38	ug/l	20	T2	12/18/01	14 days	<20	3	<20	10			
EPA Method 625 Extraction	625						7 days							
Chrysene, Total, (ug/l)	625	<10	ug/l	10		12/6/01	40 days	<20	2	<20	1			
Phenol, Total, (ug/l)	625	<10	ug/l	10		12/6/01	40 days	<20	4	<20	4			
Benzoic Acid, Total, (ug/l)	625	67	ug/l	50		12/6/01	40 days							

Phoenix ACDC43

ACDC near Peoria Avenue and 43rd Avenue
Storm of December 4, 2001

	Method	Result	Units	Method Reporting Limit	Data Qualifiers	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)	Lab	1	deg. C	0.5		12/4/01	Immediate							
Effluent Temperature (deg. C)	Field	14	deg. C	0.5		12/4/01	Immediate							
Ambient Temperature (deg. C)	Field	---	deg. C	0.5			Immediate							
Barometric Pressure (mm Hg)	Field	728	mm Hg	1		12/4/01	Immediate							
pH, Effluent, FIELD (standard units)	Field	6.9	std units	0.1		12/4/01	Immediate							
pH, Lab (standard units)	USGS	---	std units	0.1			6 months							
Specific Conductance, FIELD (us/cm)	Field	71	umhos/cm	2		12/4/01	Immediate							
Oxygen Dissolved (% saturation)	Field	---	%	1			Immediate							
Oxygen Dissolved (mg/l)	Field	10.10	mg/l	0.1		12/4/01	Immediate							
Fecal Coliform (MPN/100ml)	9221E	9,000	MPN/100ml	2		12/4/01	6 hours							
Fecal Streptococci (MPN/100ml)	9230B	>16000	MPN/100ml	2		12/4/01	6 hours							
E. Coli (MPN/100ml)	9221F	5000	MPN/100ml	2		12/4/01	6 hours							
Oil and Grease Total Recoverable (mg/l)	413.2	10	mg/l	1		12/11/01	28 days			<20	6			
Total Recoverable Petroleum Hydrocarbons (mg/l)	418.1	6.7	mg/l	1		12/11/01	28 days			<20	2			
EPA Method 608 Extraction	608						7 days							
P,P' DDE, Total, (ug/l)	608	<0.1	ug/l	0.1	Q8	12/11/01	40 days			<20	1			Insufficient sample for QC requirements.
EPA Method 624 Extraction	624						7 days							
Benzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	11			
Bromodichloromethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	9			
Bromoform, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	2	<20	6			
Bromomethane (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	5	<20	14			
Carbon Tetrachloride, Total, (ug/l)	624	<2.5	ug/l	2.5		12/18/01	14 days	<20	2	<20	10			
Chlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	12			
Dibromochloromethane (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.9	<20	8			
Chloroethane, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	3	<20	14			
Chloroform, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	6	<20	10			
Chloromethane, Total (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	4	<20	14			
1,2- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	12			
1,3- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	5	<20	11			
1,4- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	9			
1,1- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	6	<20	10			
1,2- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	9			
1,1- Dichloroethene, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	6	<20	12			
trans-1,2- Dichloroethene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	5	<20	11			
1,2- Dichloropropane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	10			
cis-1,3-Dichloropropene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	2	<20	9			
trans-1,3- Dichloropropene, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.9	<20	8			
Ethylbenzene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	5	<20	13			
Methylene Chloride, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	4	<20	15			
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	7			
Tetrachloroethene, PCE, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
Toluene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	3	<20	10			
1,1,1- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
1,1,2- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	0.8	<20	9			
Trichloroethene, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	4	<20	11			
Trichlorofluoromethane, Total, (ug/l)	624	<5	ug/l	5		12/18/01	14 days	<20	6	<20	12			
Vinyl Chloride, Total, (ug/l)	624	<2	ug/l	2		12/18/01	14 days	<20	12	<20	11			
Acetone, Total, (ug/l)	624	25	ug/l	20	T2	12/18/01	14 days	<20	3	<20	10			
EPA Method 625 Extraction	625						7 days							
Chrysene, Total, (ug/l)	625	<10	ug/l	10		12/6/01	40 days	<20	2	<20	1			
Phenol, Total, (ug/l)	625	<10	ug/l	10		12/6/01	40 days	<20	4	<20	4			
Benzoic Acid, Total, (ug/l)	625	<50	ug/l	50		12/6/01	40 days							

Phoenix IB08
40th Street at Indian Bend Wash
Storm of December 4, 2001

	Method	Result	Units	Method Reporting Limit	Data Qualifiers	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)	Lab	1.0	deg. C	0.5		12/4/01	Immediate							
Effluent Temperature (deg. C)	Field	17.0	deg. C	0.5		12/4/01	Immediate							
Ambient Temperature (deg. C)	Field	NM	deg. C	0.5			Immediate							
Barometric Pressure (mm Hg)	Field	724	mm Hg	1		12/4/01	Immediate							
pH, Effluent, FIELD (standard units)	Field	7.47	std units	0.1		12/4/01	Immediate							
pH, Lab (standard units)	USGS	7.2	std units	0.1		1/31/02	6 months							
Specific Conductance, FIELD (umhos/cm)	Field	111	umhos/cm	2		12/4/01	Immediate							
Specific Conductance, LAB (umhos/cm)	SM2510B	1700	umhos/cm	2		12/7/01	6 months			<10	0.7			
Oxygen Dissolved (% saturation)	Field	NM	%	1			Immediate							
Oxygen Dissolved (mg/l)	Field	8.82	mg/l	0.1		12/4/01	Immediate							
BOD5 (mg/l)	405.1	15	mg/l	2	L3,K2	12/10/01	48 hours			<20	14			Blank spike recovery above limits, estimated value
COD High Level (mg/l)	410.4	170	mg/l	20		12/12/01	28 days	<20	1	<20	0			
Chloride (mg/l)	300.0	9.4	mg/l	0.5		12/5/01	28 days	<15	0.5	<20	2			
Flouride (mg/l)	300.0	0.63	mg/l	0.1		12/5/01	28 days	<20	6	<20	3			
Sulfate (mg/l)	300.0	18	mg/l	5	M2	12/5/01	28 days	<15	0.6	<20	2			Matrix spike recovery low
Sulfide (mg/l)	4500-S-C,D	<0.1	mg/l	0.1		12/5/01	28 days	<20	3					
Cyanide, Total (mg/l as CN)	4500CN,C-E	<0.02	mg/l	0.02		12/17/01	14 days	<15	0					
Fecal Coliform (MPN/100ml)	9221E	>16000	MPN/100ml	2		12/4/01	6 hours							
Fecal Streptococci (MPN/100ml)	9230B	>16000	MPN/100ml	2		12/4/01	6 hours							
E. Coli (MPN/100ml)	9221F	16000	MPN/100ml	2		12/4/01	6 hours							
Total Dissolved Solids (mg/l)	2540C	110	mg/l	20		12/7/01	7 days			<20	4			
Total Suspended Solids (mg/l)	160.2	760	mg/l	20		12/7/01	7 days							
Nitrogen NO_2 + NO_3, Total (mg/l as N)	300.0	1	mg/l	0.1		12/5/01	28 days							
TKN Nitrogen (mg/l as N)	351.2	4.2	mg/l	0.5		12/10/01	28 days			<20	1			
Nitrogen, Ammonia + Organic, Total (mg/l as N)	calculation	5	mg/l	0.1		1/16/02	28 days							Did not meet hold time
Nitrogen Nitrate Total (mg/l as N)	300.0	0.92	mg/l	0.1		12/5/01	48 hours	<15	0.6	<20	3			
Nitrogen Nitrite Total (mg/l as N)	300.0	0.11	mg/l	0.1		12/5/01	48 hours	<20	5	<20	0.7			
Nitrogen Ammonia Total (mg/l as N)	350.3	1.9	mg/l	0.1		12/11/01	28 days	<20	3					
Nitrogen Organic Total (mg/l as N)	calculation	3.5	mg/l	0.1		1/16/02	28 days							Did not meet hold time
Phosphorous Total (mg/l as P)	365.3	0.74	mg/l	0.05		1/15/02	28 days							Did not meet hold time
Phosphorous Dissolved (mg/l as P)	365.3	0.81	mg/l	0.05		12/11/01	28 days	<15	1	<20	8			
Phosphorous Ortho (mg/l as P)	300.0	<0.5	mg/l	0.5	L3	12/5/01	48 hours	<20	13	<20	3			Blank spike recovery above limits
Phenols Total Recoverable (ug/l)	420.1	5.4	ug/l	5		12/20/01	28 days	<20	1	<20	1			
Oil and Grease Total Recoverable (mg/l)	413.2	7.7	mg/l	1		12/11/01	28 days			<20	6			
Total Recoverable Petroleum Hydrocarbons (mg/l)	418.1	5	mg/l	1		12/11/01	28 days			<20	2			
Bicarbonate Whole Field (mg/l as HCO_3)	USGS	41	mg/l	0.1		12/5/01	14 days							
Bicarbonate Dissolved, Field (mg/l as HCO_3)	USGS	NM	mg/l	0.1			14 days							Sample contaminated
Carbonate Water Field (mg/l as CO_3)	USGS	0	mg/l	0.1		12/5/01	14 days							
Carbonate Water Dissolved, Field, (mg/l as CO_3)	USGS	NM	mg/l	0.1			14 days							Sample contaminated
Alkalinity Water Field Total (mg/l as $CaCO_3$)	USGS	34	mg/l	0.1		12/5/01	14 days							
Alkalinity Dissolved Water Field Total (mg/l as $CaCO_3$)	USGS	NM	mg/l	0.1			14 days							Sample contaminated
Alkalinity LAB (mg/l as $CaCO_3$)	SM2320B	50	mg/l	5		12/13/01	14 days							
Hardness Total (mg/l as $CaCO_3$)	SM2340B	78	mg/l	1		12/11/01	14 days							
Arsenic Total (ug/l as As)	200.8	3.5	ug/l	1		12/8/01	6 months	<20	1.7					
Arsenic Dissolved (ug/l as As)	200.8	2.7	ug/l	1		12/11/01	6 months	<20	3.4					
Beryllium Total Recoverable (ug/l as Be)	200.9	<0.5	ug/l	0.5	M1,M5	12/12/01	6 months	<20	3	<20	2			Matrix spike recovery high, value determined by MSA
Beryllium Dissolved (ug/l as Be)	200.8	<0.5	ug/l	0.5		12/12/01	6 months	<20	11.5					
Cadmium Total Recoverable (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/12/01	6 months	<20	9	<20	1			
Cadmium Dissolved (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/13/01	6 months	<20	1	<20	7			
Calcium Total Recoverable (mg/l as Ca)	200.7	21	mg/l	2		12/11/01	6 months	<20	2	<20	3			
Chromium Total Recoverable (ug/l as Cr)	200.9	13	ug/l	4		12/12/01	6 months	<20	2	<20	0.5			
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		12/18/01	6 months	<20	2	<20	0.7			

Phoenix IB08
40th Street at Indian Bend Wash
Storm of December 4, 2001

	Method	Result	Units	Method Reporting Limit	Data Qualifiers	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
Copper, Total Recoverable, (ug/l as Cu)	200.9	73	ug/l	16		12/11/01	6 months	<20	9	<20	1			
Copper, Dissolved, (ug/l as Cu)	200.8	68	ug/l	1		12/12/01	6 months	<20	13.9					
Lead, Total Recoverable, (ug/l as Pb)	200.9	22	ug/l	2		12/12/01	6 months	<20	2	<20	1			
Lead, Dissolved, (ug/l as Pb)	200.9	<2	ug/l	2		12/14/01	6 months	<20	3	<20	2			
Magnesium, Total Recoverable (mg/l as Mg)	200.7	6.1	mg/l	0.5		12/11/01	6 months	<20	2	<20	1			
Nickel, Total Recoverable, (ug/l as Ni)	200.9	16	ug/l	4		12/13/01	6 months	<20	2	<20	5			
Nickel, Dissolved, (ug/l as Ni)	200.9	6	ug/l	4		12/13/01	6 months	<20	1	<20	11			
Potassium, Total Recoverable (mg/l as K)	258.1	5.3	mg/l	1		12/12/01	6 months	<20	5	<20	0.9			
Silver, Total Recoverable, (ug/l as Ag)	200.9	<5	ug/l	5		12/12/01	6 months	<20	10	<20	1			
Silver, Dissolved, (ug/l as Ag)	200.8	<1	ug/l	1		12/12/01	6 months	<20	0.4					
Sodium, Total Recoverable (mg/l as Na)	273.1	12	mg/l	5		12/11/01	6 months	<20	2	<20	0.4			
Zinc, Total Recoverable, (ug/l as Zn)	200.7	270	ug/l	50		12/11/01	6 months	<20	2	<20	2			
Zinc, Dissolved, (ug/l as Zn)	200.7	<50	ug/l	50	L3	12/28/01	6 months	<20	0.8	<20	0			Blank spike recovery above limits
EPA Method 608 Extraction	608						7 days							
P,P' DDE, Total, (ug/l)	608	<0.1	ug/l	0.1	Q8	12/11/01	40 days			<20	1			Insufficient sample to meet QC requirements
EPA Method 624 Extraction	624						7 days							
Benzene, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	2	<20	2			
Bromodichloromethane, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	3	<20	2			
Bromoform, Total, (ug/l)	624	<5	ug/l	5		12/14/01	14 days	<20	10	<20	4			
Bromomethane (ug/l)	624	<5	ug/l	5		12/14/01	14 days	<20	4	<20	0.4			
Carbon Tetrachloride, Total, (ug/l)	624	<2.5	ug/l	2.5		12/14/01	14 days	<20	0.4	<20	3			
Chlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	0.9	<20	2			
Dibromochloromethane (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	6	<20	3			
Chloroethane, (ug/l)	624	<5	ug/l	5		12/14/01	14 days	<20	2	<20	1			
Chloroform, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	2	<20	1			
Chloromethane, Total (ug/l)	624	<5	ug/l	5		12/14/01	14 days	<20	1	<20	1			
1,2- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	4	<20	3			
1,3- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	2	<20	2			
1,4- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	2	<20	2			
1,1- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	2	<20	1			
1,2- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	7	<20	2			
1,1- Dichloroethene, Total, (ug/l)	624	<5	ug/l	5		12/14/01	14 days	<20	1	<20	2			
trans-1,2- Dichloroethene, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	2	<20	2			
1,2- Dichloropropane, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	1	<20	2			
cis-1,3-Dichloropropene, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	3	<20	1			
trans-1,3- Dichloropropene, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	6	<20	2			
Ethylbenzene, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	1	<20	2			
Methylene Chloride, Total, (ug/l)	624	<5	ug/l	5		12/14/01	14 days	<20	2	<20	0.8			
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	15	<20	4			
Tetrachloroethene, PCE, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	0.4	<20	3			
Toluene, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	1	<20	1			
1,1,1- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	3	<20	2			
1,1,2- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	8	<20	2			
Trichloroethene, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	2	<20	1			
Trichlorofluoromethane, Total, (ug/l)	624	<5	ug/l	5		12/14/01	14 days	<20	3	<20	1			
Vinyl Chloride, Total, (ug/l)	624	<2	ug/l	2		12/14/01	14 days	<20	0.5	<20	1			
Acetone, Total, (ug/l)	624	<20	ug/l	20	T2	12/14/01	14 days	<20	19	<20	7			ADHS method does not include this analyte
EPA Method 625 Extraction	625						7 days							
Chrysene, Total, (ug/l)	625	<10	ug/l	10		12/11/01	40 days	<20	2	<20	1			
Phenol, Total, (ug/l)	625	<10	ug/l	10		12/11/01	40 days	<20	4	<20	4			
Benzoic Acid, Total, (ug/l)	625	<50	ug/l	50		12/11/01	40 days							

Phoenix CAVE

Cave Creek Road and Tatum Boulevard
Storm of December 4, 2001

	Method	Result	Units	Method Reporting Limit	Data Qualifiers	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)	Lab	1	deg. C	0.5		12/4/01	Immediate							
Effluent Temperature (deg. C)	Field	14	deg. C	0.5		12/4/01	Immediate							
Ambient Temperature (deg. C)	Field	---	deg. C	0.5			Immediate							
Barometric Pressure (mm Hg)	Field	712	mm Hg	1		12/4/01	Immediate							
pH, Effluent, FIELD (standard units)	Field	7.72	std units	0.1		12/4/01	Immediate							
pH, Lab (standard units)	USGS	---	std units	0.1			6 months							
Specific Conductance, FIELD (us/cm)	Field	77	umhos/cm	2		12/4/01	Immediate							
Oxygen Dissolved (% saturation)	Field	---	%	1			Immediate							
Oxygen Dissolved (mg/l)	Field	9.52	mg/l	0.1		12/4/01	Immediate							
Fecal Coliform (MPN/100ml)	9221E	9,000	MPN/100ml	2		12/4/01	6 hours							
Fecal Streptococci (MPN/100ml)	9230B	5,000	MPN/100ml	2		12/4/01	6 hours							
E. Coli (MPN/100ml)	9221F	5000	MPN/100ml	2		12/4/01	6 hours							
Oil and Grease Total Recoverable (mg/l)	413.2	9.3	mg/l	1		12/11/01	28 days			<20	6			
Total Recoverable Petroleum Hydrocarbons (mg/l)	418.1	7	mg/l	1		12/11/01	28 days			<20	2			
EPA Method 608 Extraction	608						7 days							
P,P' DDE, Total, (ug/l)	608	<0.1	ug/l	0.1	Q8	12/11/01	40 days			<20	1			Insufficient sample for QC requirements.
EPA Method 624 Extraction	624						7 days							
Benzene, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	2	<20	2			
Bromodichloromethane, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	3	<20	2			
Bromoform, Total, (ug/l)	624	<5	ug/l	5		12/13/01	14 days	<20	10	<20	4			
Bromomethane (ug/l)	624	<5	ug/l	5		12/13/01	14 days	<20	4	<20	0.4			
Carbon Tetrachloride, Total, (ug/l)	624	<2.5	ug/l	2.5		12/13/01	14 days	<20	0.4	<20	3			
Chlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	0.9	<20	2			
Dibromochloromethane (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	6	<20	3			
Chloroethane, (ug/l)	624	<5	ug/l	5		12/13/01	14 days	<20	2	<20	1			
Chloroform, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	2	<20	1			
Chloromethane, Total (ug/l)	624	<5	ug/l	5		12/13/01	14 days	<20	1	<20	1			
1,2- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	4	<20	3			
1,3- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	2	<20	2			
1,4- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	2	<20	2			
1,1- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	2	<20	1			
1,2- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	7	<20	2			
1,1- Dichloroethene, Total, (ug/l)	624	<5	ug/l	5		12/13/01	14 days	<20	1	<20	2			
trans-1,2- Dichloroethene, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	2	<20	2			
1,2- Dichloropropane, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	1	<20	2			
cis-1,3-Dichloropropene, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	3	<20	1			
trans-1,3- Dichloropropene, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	6	<20	2			
Ethylbenzene, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	1	<20	2			
Methylene Chloride, Total, (ug/l)	624	<5	ug/l	5		12/13/01	14 days	<20	2	<20	0			
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	15	<20	4			
Tetrachloroethene, PCE, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	0.4	<20	3			
Toluene, Total, (ug/l)	624	4.5	ug/l	2		12/13/01	14 days	<20	1	<20	1			
1,1,1- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	3	<20	2			
1,1,2- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	8	<20	2			
Trichloroethene, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	2	<20	1			
Trichlorofluoromethane, Total, (ug/l)	624	<5	ug/l	5		12/13/01	14 days	<20	3	<20	1			
Vinyl Chloride, Total, (ug/l)	624	<2	ug/l	2		12/13/01	14 days	<20	0.5	<20	1			
Acetone, Total, (ug/l)	624	<20	ug/l	20	T2	12/13/01	14 days	<20	19	<20	7			
EPA Method 625 Extraction	625						7 days							
Chrysene, Total, (ug/l)	625	<10	ug/l	10		12/6/01	40 days	<20	2	<20	1			
Phenol, Total, (ug/l)	625	<10	ug/l	10		12/6/01	40 days	<20	4	<20	4			
Benzoic Acid, Total, (ug/l)	625	<50	ug/l	50		12/6/01	40 days							

Lab Reports and Quality Control Data

Record Number: 00200044 SINT: Begin Date: 12-04-2001 08:30 End Date: Medium: 9
Site ID: USGS 332430112101001 Station Name: 67th Avenue and the Salt River at Phoenix, Az. State: 04 County: 013
Lab ID Number: Project: 470416800 Geologic Unit: Data Types: CH ME NU
Sample Status: H Sample Source: 9 Hydrologic Condition: 9 Sample Type: 9 Hydrologic Event: J
Organism (ITIS): Body-part id: Processing Status: R Number Parameters: 33
Sample Field Comment--Pared NPDES Sample. Send to Ocala Lab.
Sample Lab Comment--OCALA LABID ID NUMBER: 200202451

*	PCODE	ME T	RPLV	RLCOD	--PARAMETER NAME--	-----UNITS-----	--VALUE--	RE M	QUAL CODES 1 2 3	N L Q	D Q I	Q A	P R C	PRP-DATE	ANL-DATE
	00010		--		WATER TEMPERATURE	(DEGREES C)	18.5				S	I	3		
	00025		--		AIR PRESSURE	(MM OF HG)	735				S	I	3		
	00027		--		COLLECTING AGENCY	(CODE NUMBER)	1028				S	I	4		
U	00028	A	--		ANALYZING AGENCY	(CODE NUMBER)	81213				S	A	5		
	00061		--		DISCHARGE, INST.	CFS	15.58				S	I	2		
	00063		--		NUMBER OF SAMPLING P	(COUNT)	1				S	I	1		
	00065		--		GAGE HEIGHT	(FEET)	1.26				S	I	3		
	00095		--		SPECIFIC CONDUCTANCE	US/CM @ 25C	159				S	I	3		
	00300		--		OXYGEN DISSOLVED	(MG/L)	8.32				S	I	2		
N	00340	0	--		COD HIGH LEVEL MG/L	(MG/L)	61				S	A	2		
	00400		--		PH, WH, FIELD	(STANDARD UNITS)	7.68				S	I	2		
N	00403	A	--		PH, WH, LABORATORY	(STANDARD UNITS)	6.9				S	A	2		
	00419	B	--		ANC, IT, FIELD	(MG/L AS CACO3)	38				S	I	2		
	00447	B	--		ANC CARB IT FIELD	(MG/L AS CO3)	0				S	I	1		
	00450	B	--		ANC BICARB IT FIELD	(MG/L AS HCO3)	46				S	I	2		
	00452	B	--		CARBONATE,DIS,IT,F	(MG/L AS CO3)	0				S	I	1		
	00453	B	--		BICARBONATE,DIS,IT,F	(MG/L AS HCO3)	40				S	I	2		
N	00530	B	--		RESIDUE TOTAL	(MG/L)	275				S	A	3		
C	00605		--		NITROGEN ORGANIC T.	(MG/L AS N)	3.3								
N	00610	F	--		NITROGEN AMMONIA T.	(MG/L AS N)	1.8				S	A	2		
N	00625	D	--		NITROGEN AMM+ORG TOT	(MG/L AS N)	5.1				S	A	2		
N	00630	E	--		NO2 + NO3 TOTAL	(MG/L AS N)	1.4				S	A	2		
N	00665	D	--		PHOSPHORUS TOTAL	(MG/L AS P)	.88				S	A	2		
N	00666	D	--		PHOSPHORUS DISS.	(MG/L AS P)	.38				S	A	2		
N	01027	4	--		CADMIUM TOTAL	(UG/L AS CD)	.6				S	A	1		
N	01042	1	--		COPPER TOTAL	(UG/L AS CU)	64				S	A	2		
N	01051	4	--		LEAD TOTAL	(UG/L AS PB)	23				S	A	2		
N	01092	1	--		ZINC TOTAL	(UG/L AS ZN)	277				S	A	3		
	39086	B	--		ALKALINITY,DIS,IT,F	(MG/L AS CACO3)	32				S	I	2		
N	70300	A	--		RESIDUE DIS 180C	MG/L	151				S	A	3		
	82398		--		SAMPLING METHOD	METHOD, CODES	30				S	I	2		
N	90410	A	--		ANC, TIT. 4.5, LAB	MG/L AS CACO3	43				S	A	2		
N	99898	0	--		OCALA LAB ID		200202451				S	A	9		
N	99899	0	--		JULIAN DATE OCALA	YYDDD	2001342				S	A	9		

********** ERROR REPORT AND MESSAGES TO/FROM LAB FOR TRANSACTION NO. 26 **********
PARAMETER 00028 CHANGED FROM 1028 REM/QA/MET/SIG = (I 4) TO 81213 REM/QA/MET/SIG = (AA5)
MESSAGE FROM LAB: OCALA LABID ID NUMBER: 200202451
PARAMETER 01051 VALUE 23 EXCEEDS DW ALERT LIMIT OF 15.000
RESIDUE AT 180 C/SPECIFIC CONDUCTANCE RATIO OUTSIDE LIMITS .55 TO .81
RECORD NUMBER: 00200044
STATION ID: USGS 332430112101001
STATION NAME: 67th Avenue and the Salt River at Phoenix, Az.
COLLECTION DATE: 12-04-2001 0830 - -

PARTIAL BALANCE

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
			BICARB., DIS, IT, FLD	40	0.656
			CARB., DIS, IT, FLD	0	0.001
TOTAL		0.001	TOTAL		0.656

PERCENT DIFFERENCE =-100.00

U.S. Geological Survey, WRD - Ocala Water Quality & Research Laboratory
4500 SW 40th Avenue - Ocala, Florida
Telephone (352)237-5514 FLDEP CompQAP # 910161G
Processing Date: 2/11/2002 1:04:36 PM

****

Lab ID Number: 200202451 Field ID Number: 430112101001 Station ID Number: 332430112101001
Sample Date: 12/04/2001 Sample Time: 08:30 Site Type: N/A Station Name: 67TH AVE @ THE SALT RIVER, AT PHOENIX
State Code: 4 County Code: 13 NWIS Record #: N/A SMS Control #: N/A Sample Medium: 9
Geologic Unit: N/A Analysis Status: H Analysis Source: 9 Hydrologic Condition: 9 Sample Type: 9
Hydrologic Event: J Project Account: 470416800 Analysis Cost: $145.50 District/User Code: 04

****

Lab Code	Watstore Number	Parameter Name	Analysis Method	Reporting Units	Reported Value	Remark Code	Analysis Date /Time
0027	70300(A)	RESIDUE DISSOLVED AT 180 C	I-1750-85	mg/L	151		1/9/2002
0068	00403(A)	PH (LABORATORY)	I-1586-85	pH Units	6.9		1/31/2002 11:06:00 AM
0070	90410(A)	ALKALINITY TOT AS CACO3 (LAB)	I-2030-85	mg/L	43		1/31/2002 11:06:00 AM
0169	00530(B)	RESIDUE TOT NON-FILT AT 105C	I-3765-85	mg/L	275		1/14/2002
1983	00666(D)	PHOSPHORUS AS P DISSOLVED	I-2600-85	mg/L	0.38		1/15/2002 11:47:00 AM
1984	00665(D)	PHOSPHORUS AS P TOTAL	I-4600-85	mg/L	0.88		1/15/2002 11:49:00 AM
1986	00625(D)	NITROGEN NH3+ORG-N TOTAL	I-4552-85	mg/L	5.1		1/16/2002 1:02:00 PM
3000	99898(0)	QWSU LAB ID NUMBER	- -	Number	200202451		2/7/2002 6:12:53 AM
3001	99899(0)	JULIAN LOGIN DATE	- -	Number	2001342		2/7/2002 6:12:53 AM
3014	01027(4)	CADMIUM TOTAL (ICP/T)	EPA-200.7	ug/L	0.6		1/24/2002
3025	01042(1)	COPPER TOTAL (ICP/T)	EPA-200.7	ug/L	64		1/24/2002
3029	01051(4)	LEAD TOTAL (ICP/T)	EPA-200.7	ug/L	23		1/24/2002
3056	01092(1)	ZINC TOTAL (ICP/T)	EPA-200.7	ug/L	277		1/24/2002
3063	00340(0)	CHEMICAL OXYGEN DEMAND (EPA)	EPA-410.4	mg/L	61		2/4/2002
3071	00610(F)	NITROGEN NH3-N TOTAL	I-4522-85	mg/L	1.8		12/18/2001 10:59:00 AM
3073	00630(E)	NITROGEN NO2+NO3-N TOTAL	I-4545-85	mg/L	1.4		12/18/2001 10:57:00 AM

Parameter Name	Lab Code	Watstore Code	Method	Detection Level	Bottle Requirements
RESIDUE DISSOLVED AT 180 C	27	70300(A)	I-1750-85	1 mg/L	FU
PH (LABORATORY)	68	00403(A)	I-1586-85	0.1 pH Units	RU
ALKALINITY TOT AS CACO3 (LAB)	70	90410(A)	I-2030-85	1 mg/L	RU
RESIDUE TOT NON-FILT AT 105C	169	00530(B)	I-3765-85	1 mg/L	SUSO
PHOSPHORUS AS P DISSOLVED	1983	00666(D)	I-2600-85	0.02 mg/L	FCA
PHOSPHORUS AS P TOTAL	1984	00665(D)	I-4600-85	0.02 mg/L	WCA
NITROGEN NH3+ORG-N TOTAL	1986	00625(D)	I-4552-85	0.2 mg/L	WCA
CADMIUM TOTAL (ICP/T)	3014	01027(4)	EPA-200.7	0.5 ug/L	RA
COPPER TOTAL (ICP/T)	3025	01042(1)	EPA-200.7	2 ug/L	RA
LEAD TOTAL (ICP/T)	3029	01051(4)	EPA-200.7	2 ug/L	RA
ZINC TOTAL (ICP/T)	3056	01092(1)	EPA-200.7	2 ug/L	RA
CHEMICAL OXYGEN DEMAND (EPA)	3063	00340(0)	EPA-410.4	5 mg/L	COD
NITROGEN NH3-N TOTAL	3071	00610(F)	I-4522-85	0.01 mg/L	RCC
NITROGEN NO2-N TOTAL	3072	00615(B)	I-4540-85	0.01 mg/L	RCC
NITROGEN NO2+NO3-N TOTAL	3073	00630(E)	I-4545-85	0.02 mg/L	RCC
PHOSPHORUS PO4-P TOTAL	3074	70507(H)	I-4601-85	0.01 mg/L	RCC

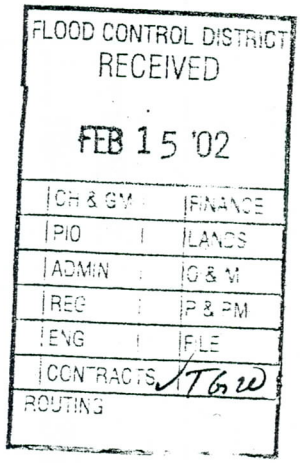
Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Maricopa County -Flood Control District 2801 West Durango Street Phoenix, AZ 85009 Attention: Todd Williams	Client Project ID: PHOENIX NPDES STORMWATER Report Number: PKL0071	Sampled: 12/04/01 Received: 12/04/01 Issued: 12/14/01-2/14/02 Revised: 2/14/02

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0071-01	67TH + SALT-COMP	Water
PKL0071-02	67TH + SALT-COMP	Water



SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: This report has been revised to include the cyanide analysis which was omitted from the original report dated 12/14/01.

SUBCONTRACTED: Analyses were subcontracted to Del Mar Analytical - Irvine, CA (AZ0428), NEL Laboratorie - Phoenix, AZ (AZ0520) and Transwest Geochem - Phoenix, AZ (AZ0133). Results are attached.

QA/QC CRITERIA: The L3 flag on the BOD indicates that the Laboratory Control Sample recovery was above the method control limits. See Corrective Action report.

EXPLANATION OF DATA QUALIFIERS: The L3 flagt on the orthophosphate indicates that the Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0071

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0071-01 (67TH + SALT-COMP - Water)								
Beryllium	EPA 200.9	P1L0521	0.00050	ND	1	12/5/01	12/11/01	
Cadmium	EPA 200.9	P1L0521	0.00050	ND	1	12/5/01	12/8/01	
Calcium	EPA 200.7	P1L0710	2.0	**18**	1	12/7/01	12/10/01	
Chromium	EPA 200.9	P1L0521	0.0040	**0.011**	1	12/5/01	12/12/01	
Copper	EPA 200.9	P1L0521	0.0080	**0.046**	2	12/5/01	12/11/01	
Lead	EPA 200.9	P1L0521	0.0020	**0.013**	1	12/5/01	12/7/01	
Magnesium	EPA 200.7	P1L0710	0.50	**5.4**	1	12/7/01	12/10/01	
Nickel	EPA 200.9	P1L0521	0.0040	**0.013**	1	12/5/01	12/12/01	
Potassium	EPA 258.1	P1L0710	1.0	**6.2**	1	12/7/01	12/11/01	
Silver	EPA 200.9	P1L0521	0.0050	ND	1	12/5/01	12/12/01	
Sodium	EPA 273.1	P1L0710	5.0	**21**	1	12/7/01	12/11/01	
Sample ID: PKL0071-01RE1 (67TH + SALT-COMP - Water)								
Zinc	EPA 200.7	P1L1124	0.050	**0.17**	1	12/11/01	12/12/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0071

Sampled: 12/04/01
Received: 12/04/01

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0071-02 (67TH + SALT-COMP - Water)								
Cadmium, Dissolved	EPA 200.9	P1L1009	0.00050	ND	1	12/10/01	12/12/01	
Chromium, Dissolved	EPA 200.9	P1L1009	0.0040	ND	1	12/10/01	12/12/01	
Lead, Dissolved	EPA 200.9	P1L1009	0.0020	ND	1	12/10/01	12/12/01	
Nickel, Dissolved	EPA 200.9	P1L1009	0.0040	**0.0083**	1	12/10/01	12/13/01	
Zinc, Dissolved	EPA 200.7	P1L1012	0.050	**0.12**	1	12/10/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0071

Sampled: 12/04/01
Received: 12/04/01

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			mg/l	mg/l				
Sample ID: PKL0071-01 (67TH + SALT-COMP - Water)								
Alkalinity as CaCO3	SM2320B	P1L1319	5.0	**51**	1	12/13/01	12/13/01	
Ammonia-N	EPA 350.3	P1L1202	0.10	**2.7**	2	12/11/01	12/11/01	
Biochemical Oxygen Demand	EPA 405.1	P1L1107	2.0	**12**	1	12/5/01	12/10/01	K2
			%	%				
Sample ID: PKL0071-01 (67TH + SALT-COMP - Water)								
Cation/Anion Balance	Calculation	P1L1415	NA	**6.80**	1	12/14/01	12/14/01	
			mg/l	mg/l				
Sample ID: PKL0071-01 (67TH + SALT-COMP - Water)								
Chemical Oxygen Demand	EPA 410.4	P1L1308	20	**160**	1	12/12/01	12/13/01	
Chloride	EPA 300.0	P1L0609	5.0	**23**	10	12/5/01	12/5/01	
Fluoride	EPA 300.0	P1L0609	0.10	**0.50**	1	12/5/01	12/5/01	
Hardness (CaCO3)	SM2340B	P1L0710	1.0	**66**	1	12/7/01	12/10/01	
Nitrate-N	EPA 300.0	P1L0609	0.10	**1.3**	1	12/5/01	12/5/01	
Nitrate/Nitrite-N	EPA 300.0	P1L0609	0.10	**1.4**	1	12/5/01	12/5/01	
Nitrite-N	EPA 300.0	P1L0609	0.10	**0.11**	1	12/5/01	12/5/01	
Orthophosphate	EPA 300.0	P1L0609	0.50	ND	1	12/5/01	12/5/01	L3
Phosphorus	EPA 365.3	P1L1129	0.050	**0.87**	1	12/11/01	12/11/01	
			umhos/cm	umhos/cm				
Sample ID: PKL0071-01 (67TH + SALT-COMP - Water)								
Specific Conductance	SM2510B	P1L0708	2.0	**220**	1	12/7/01	12/7/01	
			mg/l	mg/l				
Sample ID: PKL0071-01 (67TH + SALT-COMP - Water)								
Sulfate	EPA 300.0	P1L0609	0.50	**14**	1	12/5/01	12/5/01	
Sulfide	SM4500-S-C,D	P1L0602	0.10	**0.10**	1	12/5/01	12/5/01	
Total Dissolved Solids	SM2540C	P1L1005	20	**160**	1	12/7/01	12/7/01	
Total Suspended Solids	EPA 160.2	P1L1004	10	**86**	1	12/7/01	12/7/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0071

Sampled: 12/04/01
Received: 12/04/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0071-01 (67TH + SALT-COMP - Water)								
Total Cyanide	SM4500-CN-C,E	I1L1453	0.020	ND	1	12/14/01	12/17/01	

DEL MAR ANALYTICAL, IRVINE (AZ0428)

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Report Number: PKL0071

Sampled: 12/04/01
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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0521 Extracted: 12/05/01										
Blank Analyzed: 12/11/01 (P1L0521-BLK1)										
Beryllium	ND	0.00050	mg/l							
Cadmium	ND	0.00050	mg/l							
Chromium	ND	0.0040	mg/l							
Copper	ND	0.0040	mg/l							
Lead	ND	0.0020	mg/l							
Nickel	ND	0.0040	mg/l							
Silver	ND	0.0050	mg/l							
Blank Analyzed: 12/11/01 (P1L0521-BLK2)										
Beryllium	ND	0.00050	mg/l							
Cadmium	ND	0.00050	mg/l							
Chromium	ND	0.0040	mg/l							
Copper	ND	0.0040	mg/l							
Lead	ND	0.0020	mg/l							
Nickel	ND	0.0040	mg/l							
Silver	ND	0.0050	mg/l							
LCS Analyzed: 12/11/01 (P1L0521-BS1)										
Beryllium	**0.00192**	0.0010	mg/l	0.00200		96	85-115			
Cadmium	**0.00178**	0.0010	mg/l	0.00200		89	85-115			
Chromium	**0.0391**	0.0080	mg/l	0.0400		98	85-115			
Copper	**0.0399**	0.0080	mg/l	0.0400		100	85-115			
Lead	**0.0413**	0.0040	mg/l	0.0400		103	85-115			
Nickel	**0.0434**	0.0080	mg/l	0.0400		108	85-115			
Silver	**0.0197**	0.010	mg/l	0.0200		98	85-115			
LCS Dup Analyzed: 12/11/01 (P1L0521-BSD1)										
Beryllium	**0.00194**	0.0010	mg/l	0.00200		97	85-115	1	20	
Cadmium	**0.00183**	0.0010	mg/l	0.00200		91	85-115	3	20	
Chromium	**0.0350**	0.0080	mg/l	0.0400		88	85-115	11	20	
Copper	**0.0408**	0.0080	mg/l	0.0400		102	85-115	2	20	
Lead	**0.0417**	0.0040	mg/l	0.0400		104	85-115	1	20	
Nickel	**0.0405**	0.0080	mg/l	0.0400		101	85-115	7	20	
Silver	**0.0206**	0.010	mg/l	0.0200		103	85-115	4	20	

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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0521 Extracted: 12/05/01										
Matrix Spike Analyzed: 12/11/01 (P1L0521-MS1)					Source: PKL0060-01					
Beryllium	**0.00283**	0.0010	mg/l	0.00200	ND	132	70-130			M1
Cadmium	**0.00166**	0.0010	mg/l	0.00200	ND	83	70-130			
Chromium	**0.0320**	0.0080	mg/l	0.0400	ND	72	70-130			
Copper	**0.0561**	0.0080	mg/l	0.0400	0.014	105	70-130			
Lead	**0.0452**	0.0040	mg/l	0.0400	0.0044	102	70-130			
Nickel	**0.0480**	0.0080	mg/l	0.0400	ND	104	70-130			
Silver	**0.0207**	0.010	mg/l	0.0200	ND	104	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L0521-MSD1)					Source: PKL0060-01					
Beryllium	**0.00294**	0.0010	mg/l	0.00200	ND	138	70-130	4	20	M1
Cadmium	**0.00165**	0.0010	mg/l	0.00200	ND	82	70-130	0.6	20	
Chromium	**0.0324**	0.0080	mg/l	0.0400	ND	73	70-130	1	20	
Copper	**0.0582**	0.0080	mg/l	0.0400	0.014	110	70-130	4	20	
Lead	**0.0479**	0.0040	mg/l	0.0400	0.0044	109	70-130	6	20	
Nickel	**0.0474**	0.0080	mg/l	0.0400	ND	103	70-130	1	20	
Silver	**0.0224**	0.010	mg/l	0.0200	ND	112	70-130	8	20	
Batch: P1L0710 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L0710-BLK1)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Potassium	ND	1.0	mg/l							
Sodium	ND	5.0	mg/l							
LCS Analyzed: 12/07/01 (P1L0710-BS1)										
Calcium	**10.7**	2.0	mg/l	10.0		107	85-115			
Magnesium	**10.1**	0.50	mg/l	10.0		101	85-115			
Potassium	**11.4**	1.0	mg/l	10.0		114	85-115			
Sodium	**52.6**	5.0	mg/l	50.0		105	85-115			

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TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0710 Extracted: 12/07/01										
LCS Dup Analyzed: 12/07/01 (P1L0710-BSD1)										
Calcium	10.6	2.0	mg/l	10.0		106	85-115	0.9	20	
Magnesium	10.1	0.50	mg/l	10.0		101	85-115	0	20	
Potassium	11.4	1.0	mg/l	10.0		114	85-115	0	20	
Sodium	52.4	5.0	mg/l	50.0		105	85-115	0.4	20	
Matrix Spike Analyzed: 12/07/01 (P1L0710-MS1)					**Source: PKL0061-01**					
Calcium	55.6	2.0	mg/l	10.0	46	96	70-130			
Magnesium	41.7	0.50	mg/l	10.0	33	87	70-130			
Potassium	27.5	1.0	mg/l	10.0	17	105	85-115			
Sodium	416	5.0	mg/l	50.0	420	-8	85-115			M3
Matrix Spike Dup Analyzed: 12/07/01 (P1L0710-MSD1)					**Source: PKL0061-01**					
Calcium	55.8	2.0	mg/l	10.0	46	98	70-130	0.4	20	
Magnesium	42.2	0.50	mg/l	10.0	33	92	70-130	1	20	
Potassium	27.5	1.0	mg/l	10.0	17	105	85-115	0	20	
Sodium	467	5.0	mg/l	50.0	420	94	85-115	12	20	
Batch: P1L1124 Extracted: 12/11/01										
Blank Analyzed: 12/12/01 (P1L1124-BLK1)										
Zinc	ND	0.050	mg/l							
LCS Analyzed: 12/12/01 (P1L1124-BS1)										
Zinc	1.10	0.050	mg/l	1.00		110	85-115			
LCS Dup Analyzed: 12/12/01 (P1L1124-BSD1)										
Zinc	1.07	0.050	mg/l	1.00		107	85-115	3	20	

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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1124 Extracted: 12/11/01										
Matrix Spike Analyzed: 12/12/01 (P1L1124-MS1)					**Source: PKL0168-01**					
Zinc	1.51	0.050	mg/l	1.00	0.45	106	70-130			
Matrix Spike Dup Analyzed: 12/12/01 (P1L1124-MSD1)					**Source: PKL0168-01**					
Zinc	1.49	0.050	mg/l	1.00	0.45	104	70-130	1	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1009 Extracted: 12/10/01										
Blank Analyzed: 12/12/01 (P1L1009-BLK1)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
Blank Analyzed: 12/12/01 (P1L1009-BLK2)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
LCS Analyzed: 12/12/01 (P1L1009-BS1)										
Cadmium, Dissolved	**0.00190**	0.0010	mg/l	0.00200		95	85-115			
Chromium, Dissolved	**0.0408**	0.0080	mg/l	0.0400		102	85-115			
Lead, Dissolved	**0.0388**	0.0040	mg/l	0.0400		97	85-115			
Nickel, Dissolved	**0.0405**	0.0080	mg/l	0.0400		101	85-115			
LCS Dup Analyzed: 12/12/01 (P1L1009-BSD1)										
Cadmium, Dissolved	**0.00188**	0.0010	mg/l	0.00200		94	85-115	1	20	
Chromium, Dissolved	**0.0410**	0.0080	mg/l	0.0400		102	85-115	0.5	20	
Lead, Dissolved	**0.0383**	0.0040	mg/l	0.0400		96	85-115	1	20	
Nickel, Dissolved	**0.0425**	0.0080	mg/l	0.0400		106	85-115	5	20	
Matrix Spike Analyzed: 12/12/01 (P1L1009-MS1)					**Source: PKL0115-01**					
Cadmium, Dissolved	**0.00174**	0.0010	mg/l	0.00200	ND	87	70-130			
Chromium, Dissolved	**0.0424**	0.0080	mg/l	0.0400	ND	106	70-130			
Lead, Dissolved	**0.0386**	0.0040	mg/l	0.0400	ND	97	70-130			
Nickel, Dissolved	**0.0395**	0.0080	mg/l	0.0400	ND	99	70-130			

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Maricopa County -Flood Control District
2801 West Durango Street
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Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1009 Extracted: 12/10/01										
Matrix Spike Dup Analyzed: 12/12/01 (P1L1009-MSD1)					**Source: PKL0115-01**					
Cadmium, Dissolved	**0.00190**	0.0010	mg/l	0.00200	ND	95	70-130	9	20	
Chromium, Dissolved	**0.0432**	0.0080	mg/l	0.0400	ND	108	70-130	2	20	
Lead, Dissolved	**0.0392**	0.0040	mg/l	0.0400	ND	98	70-130	2	20	
Nickel, Dissolved	**0.0401**	0.0080	mg/l	0.0400	ND	100	70-130	2	20	
Batch: P1L1012 Extracted: 12/10/01										
Blank Analyzed: 12/11/01 (P1L1012-BLK1)										
Zinc, Dissolved	ND	0.050	mg/l							
Blank Analyzed: 12/11/01 (P1L1012-BLK2)										
Zinc, Dissolved	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1012-BS1)										
Zinc, Dissolved	**1.11**	0.050	mg/l	1.00		111	85-115			
LCS Dup Analyzed: 12/11/01 (P1L1012-BSD1)										
Zinc, Dissolved	**1.09**	0.050	mg/l	1.00		109	85-115	2	20	
Matrix Spike Analyzed: 12/11/01 (P1L1012-MS1)					**Source: PKL0115-01**					
Zinc, Dissolved	**1.09**	0.050	mg/l	1.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1012-MSD1)					**Source: PKL0115-01**					
Zinc, Dissolved	**1.07**	0.050	mg/l	1.00	ND	104	70-130	2	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
atch: P1L0602 Extracted: 12/05/01										
Blank Analyzed: 12/05/01 (P1L0602-BLK1)										
Sulfide	ND	0.10	mg/l							
CS Analyzed: 12/05/01 (P1L0602-BS1)										
lfide	**1.06**	0.20	mg/l	1.05		101	80-120			
Matrix Spike Analyzed: 12/05/01 (P1L0602-MS1)					**Source: PKK0505-01**					
lfide	**0.504**	0.10	mg/l	0.527	ND	96	80-120			
atrix Spike Dup Analyzed: 12/05/01 (P1L0602-MSD1)					**Source: PKK0505-01**					
Sulfide	**0.519**	0.10	mg/l	0.527	ND	98	80-120	3	20	
atch: P1L0609 Extracted: 12/05/01										
ank Analyzed: 12/05/01 (P1L0609-BLK1)										
Chloride	ND	0.50	mg/l							
Fluoride	ND	0.10	mg/l							
trate-N	ND	0.10	mg/l							
Nitrate/Nitrite-N	ND	0.10	mg/l							
Nitrite-N	ND	0.10	mg/l							
thophosphate	ND	0.50	mg/l							
lfate	ND	0.50	mg/l							
LCS Analyzed: 12/05/01 (P1L0609-BS1)										
hloride	**5.18**	0.50	mg/l	5.00		104	90-110			
uoride	**2.52**	0.10	mg/l	2.50		101	90-110			
trate-N	**2.68**	0.10	mg/l	2.50		107	90-110			
Nitrite-N	**2.69**	0.10	mg/l	2.50		108	90-110			
thophosphate	**5.42**	0.50	mg/l	5.00		108	90-110			
lfate	**5.30**	0.50	mg/l	5.00		106	90-110			

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0609 Extracted: 12/05/01										
LCS Dup Analyzed: 12/05/01 (P1L0609-BSD1)										
Chloride	5.26	0.50	mg/l	5.00		105	90-110	2	20	
Fluoride	2.60	0.10	mg/l	2.50		104	90-110	3	20	
Nitrate-N	2.76	0.10	mg/l	2.50		110	90-110	3	20	
Nitrite-N	2.71	0.10	mg/l	2.50		108	90-110	0.7	20	
Orthophosphate	5.57	0.50	mg/l	5.00		111	90-110	3	20	L3
Sulfate	5.42	0.50	mg/l	5.00		108	90-110	2	20	
Matrix Spike Analyzed: 12/05/01 (P1L0609-MS1)					**Source: PKL0041-01RE1**					
Chloride	388	5.0	mg/l	5.00	380	160	80-120			M1
Fluoride	3.42	1.0	mg/l	2.50	1.0	97	80-120			
Nitrate-N	6.51	1.0	mg/l	2.50	3.8	108	80-120			
Nitrite-N	1.96	1.0	mg/l	2.50	ND	78	80-120			M2
Orthophosphate	9.30	5.0	mg/l	5.00	ND	118	80-120			
Sulfate	160	5.0	mg/l	5.00	160	0	80-120			M2
Matrix Spike Dup Analyzed: 12/05/01 (P1L0609-MSD1)					**Source: PKL0041-01RE1**					
Chloride	386	5.0	mg/l	5.00	380	120	80-120	0.5	15	
Fluoride	3.64	1.0	mg/l	2.50	1.0	106	80-120	6	20	
Nitrate-N	6.47	1.0	mg/l	2.50	3.8	107	80-120	0.6	15	
Nitrite-N	2.06	1.0	mg/l	2.50	ND	82	80-120	5	20	
Orthophosphate	10.6	5.0	mg/l	5.00	ND	144	80-120	13	20	M1
Sulfate	161	5.0	mg/l	5.00	160	20	80-120	0.6	15	M2
Batch: P1L0708 Extracted: 12/07/01										
Duplicate Analyzed: 12/07/01 (P1L0708-DUP1)					**Source: PKL0042-01**					
Specific Conductance	783	2.0	umhos/cm		770			2	10	

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0708 Extracted: 12/07/01										
Duplicate Analyzed: 12/07/01 (P1L0708-DUP2)					**Source: PKL0115-01**					
Specific Conductance	417	2.0	umhos/cm		420			0.7	10	
Reference Analyzed: 12/07/01 (P1L0708-SRM1)										
Specific Conductance	**1400**	2.0	umhos/cm	1410		99	90-110			
Batch: P1L1004 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1004-BLK1)										
Total Suspended Solids	ND	10	mg/l							
Duplicate Analyzed: 12/07/01 (P1L1004-DUP1)					**Source: PKL0028-01**					
Total Suspended Solids	ND	1000	mg/l		ND				5	
Duplicate Analyzed: 12/07/01 (P1L1004-DUP2)					**Source: PKL0079-01**					
Total Suspended Solids	ND	10	mg/l		ND				5	
Reference Analyzed: 12/07/01 (P1L1004-SRM1)										
Total Suspended Solids	**60.0**	10	mg/l	62.2		96	85-107			
Batch: P1L1005 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1005-BLK1)										
Total Dissolved Solids	ND	20	mg/l							
LCS Analyzed: 12/07/01 (P1L1005-BS1)										
Total Dissolved Solids	**388**	20	mg/l	400		97	80-115			

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1005 Extracted: 12/07/01										
LCS Dup Analyzed: 12/07/01 (P1L1005-BSD1)										
Total Dissolved Solids	**402**	20	mg/l	400		100	80-115	4	200	
Duplicate Analyzed: 12/07/01 (P1L1005-DUP1)					**Source: PKL0126-01**					
Total Dissolved Solids	**646**	20	mg/l		670			4	5	
Duplicate Analyzed: 12/07/01 (P1L1005-DUP2)					**Source: PKL0071-01**					
Total Dissolved Solids	**160**	20	mg/l		160			0	5	
Batch: P1L1107 Extracted: 12/05/01										
Blank Analyzed: 12/10/01 (P1L1107-BLK1)										
Biochemical Oxygen Demand	ND	2.0	mg/l							
LCS Analyzed: 12/10/01 (P1L1107-BS1)										
Biochemical Oxygen Demand	**205**	2.0	mg/l	198		104	85-115			
LCS Dup Analyzed: 12/10/01 (P1L1107-BSD1)										
Biochemical Oxygen Demand	**237**	2.0	mg/l	198		120	85-115	14	20	L3
Duplicate Analyzed: 12/10/01 (P1L1107-DUP1)					**Source: PKL0028-01**					
Biochemical Oxygen Demand	**3430**	100	mg/l		3400			0.9	20	
Duplicate Analyzed: 12/10/01 (P1L1107-DUP2)					**Source: PKL0079-03**					
Biochemical Oxygen Demand	**550**	20	mg/l		520			6	20	
Batch: P1L1129 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1129-BLK1)										
Phosphorus	ND	0.050	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1129 Extracted: 12/11/01										
LCS Analyzed: 12/11/01 (P1L1129-BS1)										
Phosphorus	**0.512**	0.050	mg/l	0.500		102	80-120			
LCS Dup Analyzed: 12/11/01 (P1L1129-BSD1)										
Phosphorus	**0.557**	0.050	mg/l	0.500		111	80-120	8	20	
Matrix Spike Analyzed: 12/11/01 (P1L1129-MS1)					**Source: PKL0115-01**					
Phosphorus	**0.605**	0.050	mg/l	0.500	ND	119	75-125			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1129-MSD1)					**Source: PKL0115-01**					
Phosphorus	**0.599**	0.050	mg/l	0.500	ND	118	75-125	1	15	
Batch: P1L1202 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1202-BLK1)										
Ammonia-N	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1202-BS1)										
Ammonia-N	**0.470**	0.050	mg/l	0.500		94	85-115			
Matrix Spike Analyzed: 12/11/01 (P1L1202-MS1)					**Source: PKL0121-01**					
Ammonia-N	**0.515**	0.050	mg/l	0.500	ND	95	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1202-MSD1)					**Source: PKL0121-01**					
Ammonia-N	**0.532**	0.050	mg/l	0.500	ND	98	70-130	3	20	
Batch: P1L1308 Extracted: 12/12/01										
Blank Analyzed: 12/13/01 (P1L1308-BLK1)										
Chemical Oxygen Demand	ND	20	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1308 Extracted: 12/12/01										
LCS Analyzed: 12/13/01 (P1L1308-BS1)										
Chemical Oxygen Demand	202	20	mg/l	200		101	90-110			
LCS Dup Analyzed: 12/13/01 (P1L1308-BSD1)										
Chemical Oxygen Demand	199	20	mg/l	200		100	90-110	1	20	
Matrix Spike Analyzed: 12/13/01 (P1L1308-MS1)					Source: PKL0089-01					
Chemical Oxygen Demand	237	20	mg/l	200	35	101	65-130			
Matrix Spike Dup Analyzed: 12/13/01 (P1L1308-MSD1)					Source: PKL0089-01					
Chemical Oxygen Demand	244	20	mg/l	200	35	104	65-130	3	20	
Batch: P1L1319 Extracted: 12/13/01										
Duplicate Analyzed: 12/13/01 (P1L1319-DUP1)					Source: PKL0205-01					
Alkalinity as CaCO3	55.0	5.0	mg/l		55			0	20	
Duplicate Analyzed: 12/13/01 (P1L1319-DUP2)					Source: PKL0115-01					
Alkalinity as CaCO3	214	5.0	mg/l		210			2	20	
Reference Analyzed: 12/13/01 (P1L1319-SRM1)										
Alkalinity as CaCO3	92.0	5.0	mg/l	92.2		100	90-114			

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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L1453 Extracted: 12/14/01										
Blank Analyzed: 12/17/01 (I1L1453-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 12/17/01 (I1L1453-BS1)										
Total Cyanide	**0.201**	0.020	mg/l	0.200		100	85-115			
Matrix Spike Analyzed: 12/17/01 (I1L1453-MS1)					**Source: IKL0608-01**					
Total Cyanide	**0.197**	0.020	mg/l	0.200	ND	98	70-115			
Matrix Spike Dup Analyzed: 12/17/01 (I1L1453-MSD1)					**Source: IKL0608-01**					
Total Cyanide	**0.197**	0.020	mg/l	0.200	ND	98	70-115	0	15	

Linda Eshelman
Project Manager

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Maricopa County -Flood Control District 2801 West Durango Street Phoenix, AZ 85009 Attention: Todd Williams	Client Project ID: PHOENIX NPDES STORMWATER Report Number: PKL0071	Sampled: 12/04/01 Received: 12/04/01	

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

B1	Target analyte detected in method blank at or above the method reporting limit.
K2	The sample dilutions set-up for the BOD analysis did not meet the criteria of a residual dissolved oxygen of at least 1 mg/L. Any reported result is an estimated value.
L3	The associated blank spike recovery was above method acceptance limits. See case narrative.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

Linda Eshelman
Project Manager

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CORRECTIVE ACTION REPORT

Department: Wet Chemistry
Date: 12/05/2001
Batch: P1L1107
Method: 405.1 (BOD)
Matrix: Water
Associated Samples: PKL0069-01, PKL0071-01, PKL0072-01, PKL0079-01, PKL0079-03, PKL0032-01 – PKL0032-03, PKL0039-01 – PKL0039-02, PKL0046-01, PKL0047-01, PKL0048-01, PKL0028-01, PKL0030-01 & PKL0049-01

Identification and Definition of Problem:

The Laboratory Control Sample Duplicate (LCSD) was high (120%) and outside of the acceptance limits of 85% – 115%.

Determination of the Cause of the Problem:

No definite cause has been determined for the high recovery.

Corrective Action:

Re-analysis could not be performed due to the 48 hour holding time. The Laboratory Control Sample was within acceptance limits. Also, both sample / sample duplicate pairs associated with the batch are within acceptance limits. The LCSD has been flagged "L3" to indicate the high recovery. The associated samples may be biased high.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 12/14/2001
Quality Assurance Manager

NEL LABORATORIES
Reno • Las Vegas
Phoenix • Boise

Reno Division
4750 Longley Lane, Suite 106 • Reno, Nevada 89502
775-348-2522 • Fax: 775-348-2546
1-800-368-5221

CLIENT: Del Mar Analytical
9830 S. 51st. St. Ste. B-120
Phoenix, AZ 85044
ATTN: Linda Eshelman

PROJECT NAME: PKL0071-MCFC
PROJECT #: NA

NEL ORDER ID: P0112003

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 12/5/01.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.

Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.

Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (602) 437-0099.

Bob George
Lab Manager

12/12/01
Date

CERTIFICATIONS:	Reno	Las Vegas		Reno	Las Vegas
Arizona	AZ0520	AZ0518	Idaho	Certified	Certified
California	1707	2002	Montana	Certified	Certified
US Army Corps of Engineers	Certified	Certified	Nevada	NV033	NV052

NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKL0071-MCFC
PROJECT #: NA

CLIENT ID: **PKL0071-01**
DATE SAMPLED: 12/4/01
NEL SAMPLE ID: P0112003-01

TEST: **Metals**
MATRIX: Aqueous

ANALYST: JY Reno

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	0.0024	0.001 mg/L	1	EPA 200.8	12/6/01	12/11/01

D.F. - Dilution Factor

ND - Not Detected

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CLIENT: Del Mar Analytical
PROJECT ID: PKL0071-MCFC
PROJECT #: NA

CLIENT ID: **PKL0071-02**
DATE SAMPLED: 12/4/01
NEL SAMPLE ID: P0112003-02

TEST: **Dissolved Metals**
MATRIX: Aqueous

ANALYST: JY Reno

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	0.0056	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	NA	12/11/01
Copper, Dissolved	0.054	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01

D.F. - Dilution Factor

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKL0071-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: 1206-6.1-BLK

TEST: **Metals**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	ND	0.001 mg/L	1	EPA 200.8	12/6/01	12/11/01

D.F. - Dilution Factor

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

CLIENT: Del Mar Analytical
PROJECT ID: PKL0071-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: 1206-6.3-BLK

TEST: **Dissolved Metals**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	NA	12/11/01
Copper, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01

D.F. - Dilution Factor

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

CLIENT: Del Mar Analytical
PROJECT ID: PKL0071-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic	1206-6.1-LCS	0.01	0.00987	99	85 - 115	
Arsenic	P0112003-01-MS	0.01	0.0122	98	75 - 125	
Arsenic	P0112003-01-MSD	0.1	0.0115	91	75 - 125	7.4

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

CLIENT: Del Mar Analytical
PROJECT ID: PKL0071-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic, Dissolved	1206-6.3-LCS	0.1	0.0899	90	85 - 115	
Arsenic, Dissolved	P0112002-02-MS	0.1	0.12	116	75 - 125	
Arsenic, Dissolved	P0112002-02-MSD	0.01	0.124	120	75 - 125	3.4
Beryllium, Dissolved	1206-6.3-LCS	0.1	0.106	106	85 - 115	
Beryllium, Dissolved	P0112002-02-MS	0.1	0.104	104	75 - 125	
Beryllium, Dissolved	P0112002-02-MSD	0.1	0.0927	93	75 - 125	11.5
Copper, Dissolved	1206-6.3-LCS	0.05	0.0441	88	85 - 115	
Copper, Dissolved	P0112002-02-MS	0.05	0.167	94	75 - 125	
Copper, Dissolved	P0112002-02-MSD	0.5	0.174	108	75 - 125	13.9
Silver, Dissolved	1206-6.3-LCS	0.05	0.0548	110	85 - 115	
Silver, Dissolved	P0112002-02-MS	0.05	0.0592	110	75 - 125	
Silver, Dissolved	P0112002-02-MSD	0.5	0.059	110	75 - 125	0.4

ND - Not Detected

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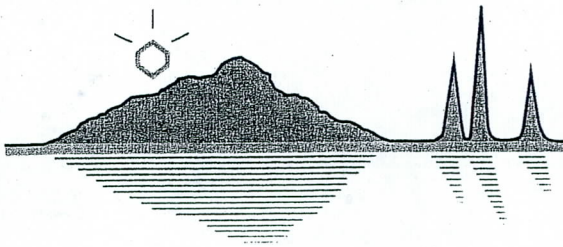


TRANSWEST GEOCHEM

December 21, 2001

Linda Eshelman
Del Mar Analytical
9830 S. 51st Street
Suite B-120
Phoenix, AZ 85044

RE: PKL0071-MCFC
Work Order No.: 0112038

Dear Linda,
Transwest Geochem, Inc. received 1 sample on 12/5/2001 11:30:00 AM for the analyses presented in the following report.

The Case Narrative of this report addresses any Quality Control and/or Quality Assurance issues associated with this Work Order.

If you have any questions regarding these test results, please feel free to call us at (602) 437-0330.

Sincerely,

Mehrel Proffitt for:

Beth Proffitt
Project Manager

ADHS License No. AZM133/AZ0133

Client: Del Mar Analytical
Work Order: 0112038
Project Name:
Project Number: PKL0071-MCFC

Date Printed: 21-Dec-01

CASE NARRATIVE

Transwest Geochem, Inc. uses the methods outlined in the following references:

Code of Federal Regulations, 40CFR, Part 136, Revised July 1995.

Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992 and 19th Edition, 1995.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised March 1983.

Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, Revised August 1993.

Methods for the Determination of Metals in Environmental Samples, EPA/600/R-94/111, Revised May 1994.

Hach, Water Analysis Handbook, 2nd Edition, 1992.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

Metals were analyzed using multi-element ICP instrumentation. Some metals reported in the QC report may not be associated with this Work Order.

Secondary Source QC Sample (LCSV) results may not be reported for all methods and/or analysis dates.

The sample introduction technique for Method 8015AZ used by this laboratory is direct injection.

All method blanks, laboratory spikes, and/or matrix spikes met quality control objectives for the parameters associated with this Work Order.

Data qualifiers ("flags") contained within this analytical report have been issued to explain a quality control deficiency, and do not affect the quality (validity) of the data unless noted otherwise in the case narrative.

3725 E. Atlanta Ave. • Suite 2 • Phoenix, Arizona 85040 • (602) 437-0330 • 1-800-927-5183 • Fax (602) 437-0660

TRANSWEST GEOCHEM

Date Printed 21-Dec-01
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0071-MCFC
Work Order: 0112038
Date Received: 05-Dec-01

Work Order Sample Summary

Client Sample ID	Lab Sample ID	Test Code	Collection Date
PKL0071-01	0112038-01A	EPA420.1	12/4/2001 1:00:00 PM
	0112038-01B	EPA351.2	12/4/2001 1:00:00 PM

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0071-MCFC
Work Order: 0112038
Date Received: 05-Dec-01

Definitions

Analytical Spike (AS)	The AS is a known amount of a target analyte added to a sample after it has been distilled, digested, or extracted and is ready for analysis. The AS is generally performed if the MS has failed. It is used to indicate interference that arises from sample distillation, digestion, or extraction as opposed to interference that is innate to the matrix.
Continuing Curve Verification (CCV)	The CCV is also referred to as a curve check. This is a standard analyzed at specified intervals during an analysis. The CCV verifies the stability and accuracy of the calibration curve. There are specific CCV recovery acceptance criteria for each method.
Dilution Factor (DF)	The DF is an indication of how much a sample had to be diluted in order to quantitate it on a standard curve. The DF is indicated in the reported sample result. The sample PQL increases as the dilution increases.
Internal Standard (IS)	The IS is a compound that is similar to the organic compound of interest in terms of chemical composition but is unique in that it is rare in the environment. The same concentration of IS is added to every sample for some organic methods.
Laboratory Control Sample (LCS)	The LCS is also referred to as a blank spike. The LCS is an addition of a known amount of a target analyte (from the same source as calibration standards or spikes) to an aliquot of deionized water or other appropriate clean matrix. The LCS is processed through the entire method procedure in the same manner as samples.
Matrix Spike (MS)	The MS is a known amount of a target analyte added to a sample. The MS is processed through the entire method procedure in the same manner as samples.
Method Blank (MB)	The MB is an aliquot of deionized water or other appropriate clean matrix that is thought to be free of the analyte in question. The MB is processed through the entire extraction or analysis procedure and is used to indicate contamination in the lab.
Method Detection Limit (MDL)	The MDL is the lowest level of detection of which a method is capable.
Practical Quantitation Limit (PQL)	The PQL is the lowest value at which Transwest Geochem can detect an analyte in matrix with a high degree of confidence. The PQL will increase as the DF increases. The PQL is greater than or equal to the MDL.
Relative Percent Difference (RPD)	The RPD is a measure of precision (the ability to obtain the same result on re-analysis of the same sample). It is calculated using the result of a sample, MS, LCS, or LCSV and its associated duplicate result.
Secondary Source QC Sample (LCSV)	The LCSV is also referred to as a second source laboratory control sample. It is the same type of standard as a calibration or spiking standard but is obtained from a different source. The LCSV is an indication of the primary standard quality, method performance, and instrument performance.
Surrogate	A surrogate compound is similar to the organic compound of interest in terms of chemical composition but is unique in that it is rare in the environment. When surrogates are used, they are added to every sample, blank and standard. Surrogate recovery is used as an indication of extraction and/or analytical success.
Trip Blank (TB)	The TB is a portion of deionized water preserved in the same manner as the samples. The TB travels from the lab, to the field, and then back to the lab with the samples from the field. The TB serves as an indication of contamination introduced during sample transportation.

TRANSWEST GEOCHEM

Date Printed 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112038
Lab ID: 0112038-01
Project Name:
Project Number: PKL0071-MCFC

Client Sample ID: PKL0071-01
Collection Date: 12/4/2001 1:00:00 PM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	0.011	0.0050		mg/L	1	EPA420.1	12/19/01	12/20/01	KMB	420.1-12/20/2001
Nitrogen, Kjeldahl, Total	5.1	1.0		mg/L	2	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001A

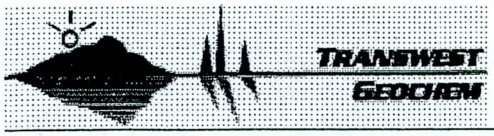
Confidential and Privileged

CLIENT: Del Mar Analytical
Work Order: 0112038
Project: PKL0071-MCFC

QC SUMMARY REPORT

Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Nitrogen, Kjeldahl, Total	<0.50	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001A
Phenolics, Total Recoverable	<0.0050	0.0050		mg/L	1	EPA420.1	12/19/01	12/20/01	KMB	420.1-12/20/2001



Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112038
Project: PKL0071-MCFC

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: **0112032-01AD** Batch ID: TKN_W-12/10/2001A											
Client ID:											
Nitrogen, Kjeldahl, Total	1.5	0.50	mg/L	1.557	1%	20	EPA351.2	N/A	12/10/01	TL	

TRANSWEST GEOCHEM

Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112038
Project: PKL0071-MCFC

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: **0112032-01AS**	Batch ID: TKN_W-12/10/2001A			Test Code: EPA351.2				Date Analyzed: 12/10/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	3.620	0.50	2.500	1.121	100%	90	110				
Sample ID: **0112033-01ASD**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
Client ID:				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1025	0.0050	0.1000	<0.0050	103%	80	120	0.1034	1%	20	
Sample ID: **0112033-01AS**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
Client ID:				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1034	0.0050	0.1000	<0.0050	103%	80	120				

TRANSWEST GEOCHEM

Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112038
Project: PKL0071-MCFC

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: TKN_W-12/10/2001A			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.393	0.50	2.500	<0.50	96%	90	110				
Sample ID: **LCSD**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1021	0.0050	0.1000	<0.0050	102%	85	115	0.1012	1%	20	
Sample ID: **LCS**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1012	0.0050	0.1000	<0.0050	101%	85	115				

TRANSWEST GEOCHEM

Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112038
Project: PKL0071-MCFC

QC SUMMARY REPORT

Secondary Source Blank Spike

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: TKN_W-12/10/2001A			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.506	0.50	2.500	<0.50	100%	90	110				

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/19/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0053-01	67TH+SALT-GRAB	Water
PKL0053-02	TRIP BLANK	Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: Analysis was subcontracted to Aquatic Consult. & Testing - 1525 W. University Dr., #106, Tempe, AZ (AZ0003). Results are attached.

QA/QC CRITERIA: All analyses met method criteria.

EXPLANATION OF DATA QUALIFIERS: No further explanation of data qualifiers needed.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-085

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0053-01 (67TH+SALT-GRAB - Water)								
Total Recoverable Hydrocarbon	EPA 418.1	P1L1123	1.0	**6.0**	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Beth Price For Linda Eshelman
Project Manager

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0053-01 (67TH+SALT-GRAB - Water)								
Oil & Grease	EPA 413.2	P1L1122	1.0	**9.0**	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0053-01 (67TH+SALT-GRAB - Water)								
Acetone	EPA 624	P1L1725	20	**26**	1	12/17/01	12/18/01	T2
Benzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Bromodichloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Bromoform	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Bromomethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Carbon tetrachloride	EPA 624	P1L1725	2.5	ND	1	12/17/01	12/18/01	
Chlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Dibromochloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Chloroethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Chloroform	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Chloromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
1,2-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,3-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,4-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,2-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1-Dichloroethene	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
trans-1,2-Dichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,2-Dichloropropane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
cis-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
trans-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Ethylbenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Methylene chloride	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Tetrachloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Toluene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1,1-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1,2-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Trichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Trichlorofluoromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Vinyl chloride	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Surrogate: Dibromofluoromethane (80-120%)				*98 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*95 %*				
Surrogate: Toluene-d8 (80-120%)				*100 %*				

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0053-02 (TRIP BLANK - Water)								
Acetone	EPA 624	P1L1725	20	ND	1	12/17/01	12/17/01	T2
Benzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Bromodichloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Bromoform	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Bromomethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Carbon tetrachloride	EPA 624	P1L1725	2.5	ND	1	12/17/01	12/17/01	
Chlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Dibromochloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Chloroethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Chloroform	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Chloromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
1,2-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,3-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,4-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,2-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1-Dichloroethene	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
trans-1,2-Dichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,2-Dichloropropane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
cis-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
trans-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Ethylbenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Methylene chloride	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Tetrachloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Toluene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1,1-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1,2-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Trichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Trichlorofluoromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Vinyl chloride	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Surrogate: Dibromofluoromethane (80-120%)				*103 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*96 %*				
Surrogate: Toluene-d8 (80-120%)				*98 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0053-01 (67TH+SALT-GRAB - Water)								
Chrysene	EPA 625	P1L0613	10	ND	1	12/6/01	12/11/01	
Phenol	EPA 625	P1L0613	10	ND	1	12/6/01	12/11/01	
Benzoic acid	EPA 625	P1L0613	50	ND	1	12/6/01	12/11/01	
Surrogate: 2-Fluorophenol (20-120%)				*56 %*				
Surrogate: Phenol-d6 (15-115%)				*60 %*				
Surrogate: 2,4,6-Tribromophenol (35-135%)				*78 %*				
Surrogate: Nitrobenzene-d5 (25-120%)				*64 %*				
Surrogate: 2-Fluorobiphenyl (25-145%)				*63 %*				
Surrogate: Terphenyl-d14 (40-130%)				*90 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0053-01 (67TH+SALT-GRAB - Water)								
4,4'-DDE	EPA 608	I1L0730	0.10	ND	1	12/7/01	12/11/01	
Surrogate: Tetrachloro-m-xylene (30-120%)				*66 %*				
Surrogate: Decachlorobiphenyl (30-120%)				*70 %*				

DEL MAR ANALYTICAL, IRVINE (AZ0428)

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1123 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1123-BLK1)										
Total Recoverable Hydrocarbons	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1123-BS1)										
Total Recoverable Hydrocarbons	**12.0**	1.0	mg/l	10.0		120	95-145			
LCS Dup Analyzed: 12/11/01 (P1L1123-BSD1)										
Total Recoverable Hydrocarbons	**12.3**	1.0	mg/l	10.0		123	95-145	2	20	

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Phoenix, AZ 85009
Attention: Todd Williams

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Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1122 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1122-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1122-BS1)										
Oil & Grease	**12.0**	1.0	mg/l	10.0		120	90-145			
LCS Dup Analyzed: 12/11/01 (P1L1122-BSD1)										
Oil & Grease	**12.7**	1.0	mg/l	10.0		127	90-145	6	20	

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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Blank Analyzed: 12/17/01 (P1L1725-BLK1)										
Acetone	ND	20	ug/l							T2
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			

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Attention: Todd Williams

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Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Analyzed: 12/17/01 (P1L1725-BS1)										
Acetone	ND	20	ug/l	25.0		66	40-150			T2
Benzene	23.6	2.0	ug/l	25.0		94	37-151			
Bromodichloromethane	23.8	2.0	ug/l	25.0		95	35-155			
Bromoform	23.9	5.0	ug/l	25.0		96	45-169			
Bromomethane	24.2	5.0	ug/l	25.0		97	5-242			
Carbon tetrachloride	25.3	2.5	ug/l	25.0		101	70-140			
Chlorobenzene	23.3	2.0	ug/l	25.0		93	37-160			
Dibromochloromethane	23.8	2.0	ug/l	25.0		95	53-149			
Chloroethane	23.9	5.0	ug/l	25.0		96	14-230			
Chloroform	23.8	2.0	ug/l	25.0		95	51-138			
Chloromethane	21.1	5.0	ug/l	25.0		84	5-273			
1,2-Dichlorobenzene	22.6	2.0	ug/l	25.0		90	18-190			
1,3-Dichlorobenzene	22.6	2.0	ug/l	25.0		90	59-156			
1,4-Dichlorobenzene	23.3	2.0	ug/l	25.0		93	18-190			
1,1-Dichloroethane	24.0	2.0	ug/l	25.0		96	59-155			
1,2-Dichloroethane	24.7	2.0	ug/l	25.0		99	49-155			
1,1-Dichloroethene	24.4	5.0	ug/l	25.0		98	5-234			
trans-1,2-Dichloroethene	23.7	2.0	ug/l	25.0		95	54-156			
1,2-Dichloropropane	24.7	2.0	ug/l	25.0		99	5-210			
cis-1,3-Dichloropropene	25.2	2.0	ug/l	25.0		101	5-227			
trans-1,3-Dichloropropene	23.1	2.0	ug/l	25.0		92	17-183			
Ethylbenzene	25.4	2.0	ug/l	25.0		102	37-162			
Methylene chloride	21.2	5.0	ug/l	25.0		85	5-221			
1,1,2,2-Tetrachloroethane	23.1	2.0	ug/l	25.0		92	46-157			
Tetrachloroethene	25.4	2.0	ug/l	25.0		102	64-148			
Toluene	23.8	2.0	ug/l	25.0		95	47-150			
1,1,1-Trichloroethane	25.1	2.0	ug/l	25.0		100	52-162			
1,1,2-Trichloroethane	23.8	2.0	ug/l	25.0		95	52-150			
Trichloroethene	25.2	2.0	ug/l	25.0		101	71-157			
Trichlorofluoromethane	24.5	5.0	ug/l	25.0		98	17-181			
Vinyl chloride	23.5	2.0	ug/l	25.0		94	5-251			
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Dup Analyzed: 12/17/01 (P1L1725-BSD1)										
Acetone	ND	20	ug/l	25.0		74	40-150	10	20	T2
Benzene	**26.3**	2.0	ug/l	25.0		105	37-151	11	20	
Bromodichloromethane	**26.0**	2.0	ug/l	25.0		104	35-155	9	20	
Bromoform	**25.3**	5.0	ug/l	25.0		101	45-169	6	20	
Bromomethane	**27.8**	5.0	ug/l	25.0		111	5-242	14	20	
Carbon tetrachloride	**28.0**	2.5	ug/l	25.0		112	70-140	10	20	
Chlorobenzene	**26.2**	2.0	ug/l	25.0		105	37-160	12	20	
Dibromochloromethane	**25.8**	2.0	ug/l	25.0		103	53-149	8	20	
Chloroethane	**27.4**	5.0	ug/l	25.0		110	14-230	14	20	
Chloroform	**26.4**	2.0	ug/l	25.0		106	51-138	10	20	
Chloromethane	**24.3**	5.0	ug/l	25.0		97	5-273	14	20	
1,2-Dichlorobenzene	**25.5**	2.0	ug/l	25.0		102	18-190	12	20	
1,3-Dichlorobenzene	**25.2**	2.0	ug/l	25.0		101	59-156	11	20	
1,4-Dichlorobenzene	**25.6**	2.0	ug/l	25.0		102	18-190	9	20	
1,1-Dichloroethane	**26.5**	2.0	ug/l	25.0		106	59-155	10	20	
1,2-Dichloroethane	**27.0**	2.0	ug/l	25.0		108	49-155	9	20	
1,1-Dichloroethene	**27.4**	5.0	ug/l	25.0		110	5-234	12	20	
trans-1,2-Dichloroethene	**26.4**	2.0	ug/l	25.0		106	54-156	11	20	
1,2-Dichloropropane	**27.3**	2.0	ug/l	25.0		109	5-210	10	20	
cis-1,3-Dichloropropene	**27.6**	2.0	ug/l	25.0		110	5-227	9	20	
trans-1,3-Dichloropropene	**25.1**	2.0	ug/l	25.0		100	17-183	8	20	
Ethylbenzene	**28.8**	2.0	ug/l	25.0		115	37-162	13	20	
Methylene chloride	**24.7**	5.0	ug/l	25.0		99	5-221	15	20	
1,1,2,2-Tetrachloroethane	**24.7**	2.0	ug/l	25.0		99	46-157	7	20	
Tetrachloroethene	**28.4**	2.0	ug/l	25.0		114	64-148	11	20	
Toluene	**26.4**	2.0	ug/l	25.0		106	47-150	10	20	
1,1,1-Trichloroethane	**28.0**	2.0	ug/l	25.0		112	52-162	11	20	
1,1,2-Trichloroethane	**26.1**	2.0	ug/l	25.0		104	52-150	9	20	
Trichloroethene	**28.0**	2.0	ug/l	25.0		112	71-157	11	20	
Trichlorofluoromethane	**27.7**	5.0	ug/l	25.0		111	17-181	12	20	
Vinyl chloride	**21.0**	2.0	ug/l	25.0		84	5-251	11	20	
Surrogate: Dibromofluoromethane	*24.0*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Analyzed: 12/17/01 (P1L1725-MS1)					Source: PKL0127-01RE1					
Acetone	1020	1000	ug/l	1250	ND	82	25-150			T2
Benzene	1240	100	ug/l	1250	ND	99	37-151			
Bromodichloromethane	1210	100	ug/l	1250	ND	97	35-155			
Bromoform	1130	250	ug/l	1250	ND	90	45-169			
Bromomethane	1330	250	ug/l	1250	ND	106	5-242			
Carbon tetrachloride	1300	120	ug/l	1250	ND	104	70-140			
Chlorobenzene	1210	100	ug/l	1250	ND	97	37-160			
Dibromochloromethane	1170	100	ug/l	1250	ND	94	53-149			
Chloroethane	1310	250	ug/l	1250	ND	105	14-230			
Chloroform	1270	100	ug/l	1250	ND	102	51-138			
Chloromethane	1120	250	ug/l	1250	ND	90	5-273			
1,2-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,3-Dichlorobenzene	1190	100	ug/l	1250	ND	95	59-156			
1,4-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,1-Dichloroethane	1270	100	ug/l	1250	ND	102	59-155			
1,2-Dichloroethane	1270	100	ug/l	1250	ND	102	49-155			
1,1-Dichloroethene	1310	250	ug/l	1250	ND	105	5-234			
trans-1,2-Dichloroethene	1260	100	ug/l	1250	ND	101	54-156			
1,2-Dichloropropane	1270	100	ug/l	1250	ND	102	5-210			
cis-1,3-Dichloropropene	1260	100	ug/l	1250	ND	101	5-227			
trans-1,3-Dichloropropene	1140	100	ug/l	1250	ND	91	17-183			
Ethylbenzene	1330	100	ug/l	1250	ND	106	37-162			
Methylene chloride	1170	250	ug/l	1250	ND	94	5-221			
1,1,2,2-Tetrachloroethane	1140	100	ug/l	1250	ND	91	46-157			
Tetrachloroethene	1320	100	ug/l	1250	ND	106	64-148			
Toluene	1230	100	ug/l	1250	ND	98	47-150			
1,1,1-Trichloroethane	1320	100	ug/l	1250	ND	106	52-162			
1,1,2-Trichloroethane	1190	100	ug/l	1250	ND	95	52-150			
Trichloroethene	1320	100	ug/l	1250	ND	106	71-157			
Trichlorofluoromethane	1260	250	ug/l	1250	ND	101	17-181			
Vinyl chloride	990	100	ug/l	1250	ND	79	5-251			
Surrogate: Dibromofluoromethane	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Dup Analyzed: 12/17/01 (P1L1725-MSD1)					**Source: PKL0127-01RE1**					
Acetone	1050	1000	ug/l	1250	ND	84	25-150	3	20	T2
Benzene	1200	100	ug/l	1250	ND	96	37-151	3	20	
Bromodichloromethane	1170	100	ug/l	1250	ND	94	35-155	3	20	
Bromoform	1150	250	ug/l	1250	ND	92	45-169	2	20	
Bromomethane	1270	250	ug/l	1250	ND	102	5-242	5	20	
Carbon tetrachloride	1270	120	ug/l	1250	ND	102	70-140	2	20	
Chlorobenzene	1160	100	ug/l	1250	ND	93	37-160	4	20	
Dibromochloromethane	1160	100	ug/l	1250	ND	93	53-149	0.9	20	
Chloroethane	1270	250	ug/l	1250	ND	102	14-230	3	20	
Chloroform	1200	100	ug/l	1250	ND	96	51-138	6	20	
Chloromethane	1080	250	ug/l	1250	ND	86	5-273	4	20	
1,2-Dichlorobenzene	1170	100	ug/l	1250	ND	94	18-190	3	20	
1,3-Dichlorobenzene	1130	100	ug/l	1250	ND	90	59-156	5	20	
1,4-Dichlorobenzene	1170	100	ug/l	1250	ND	94	18-190	3	20	
1,1-Dichloroethane	1200	100	ug/l	1250	ND	96	59-155	6	20	
1,2-Dichloroethane	1220	100	ug/l	1250	ND	98	49-155	4	20	
1,1-Dichloroethene	1230	250	ug/l	1250	ND	98	5-234	6	20	
trans-1,2-Dichloroethene	1200	100	ug/l	1250	ND	96	54-156	5	20	
1,2-Dichloropropane	1220	100	ug/l	1250	ND	98	5-210	4	20	
cis-1,3-Dichloropropene	1230	100	ug/l	1250	ND	98	5-227	2	20	
trans-1,3-Dichloropropene	1130	100	ug/l	1250	ND	90	17-183	0.9	20	
Ethylbenzene	1270	100	ug/l	1250	ND	102	37-162	5	20	
Methylene chloride	1120	250	ug/l	1250	ND	90	5-221	4	20	
1,1,2,2-Tetrachloroethane	1180	100	ug/l	1250	ND	94	46-157	3	20	
Tetrachloroethene	1270	100	ug/l	1250	ND	102	64-148	4	20	
Toluene	1190	100	ug/l	1250	ND	95	47-150	3	20	
1,1,1-Trichloroethane	1270	100	ug/l	1250	ND	102	52-162	4	20	
1,1,2-Trichloroethane	1200	100	ug/l	1250	ND	96	52-150	0.8	20	
Trichloroethene	1270	100	ug/l	1250	ND	102	71-157	4	20	
Trichlorofluoromethane	1190	250	ug/l	1250	ND	95	17-181	6	20	
Vinyl chloride	878	100	ug/l	1250	ND	70	5-251	12	20	
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

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Project Manager

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Maricopa County -Flood Control District
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Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Blank Analyzed: 12/11/01 (P1L0613-BLK1)										
Chrysene	ND	10	ug/l							
Phenol	ND	10	ug/l							
Benzoic acid	ND	50	ug/l							
Surrogate: 2-Fluorophenol	*56.2*		*ug/l*	*100*		*56*	*20-120*			
Surrogate: Phenol-d6	*32.1*		*ug/l*	*100*		*32*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*73.0*		*ug/l*	*100*		*73*	*35-135*			
Surrogate: Nitrobenzene-d5	*32.4*		*ug/l*	*50.0*		*65*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*30.3*		*ug/l*	*50.0*		*61*	*25-145*			
Surrogate: Terphenyl-d14	*39.6*		*ug/l*	*50.0*		*79*	*40-130*			
LCS Analyzed: 12/11/01 (P1L0613-BS1)										
Chrysene	**49.1**	10	ug/l	50.0		98	17-168			
Phenol	**41.4**	10	ug/l	50.0		83	5-112			
Surrogate: 2-Fluorophenol	*66.9*		*ug/l*	*100*		*67*	*20-120*			
Surrogate: Phenol-d6	*71.3*		*ug/l*	*100*		*71*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*93.1*		*ug/l*	*100*		*93*	*35-135*			
Surrogate: Nitrobenzene-d5	*37.0*		*ug/l*	*50.0*		*74*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.4*		*ug/l*	*50.0*		*77*	*25-145*			
Surrogate: Terphenyl-d14	*44.4*		*ug/l*	*50.0*		*89*	*40-130*			
LCS Dup Analyzed: 12/11/01 (P1L0613-BSD1)										
Chrysene	**49.6**	10	ug/l	50.0		99	17-168	1	20	
Phenol	**39.8**	10	ug/l	50.0		80	5-112	4	20	
Surrogate: 2-Fluorophenol	*65.9*		*ug/l*	*100*		*66*	*20-120*			
Surrogate: Phenol-d6	*69.4*		*ug/l*	*100*		*69*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*91.7*		*ug/l*	*100*		*92*	*35-135*			
Surrogate: Nitrobenzene-d5	*36.2*		*ug/l*	*50.0*		*72*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.0*		*ug/l*	*50.0*		*76*	*25-145*			
Surrogate: Terphenyl-d14	*44.6*		*ug/l*	*50.0*		*89*	*40-130*			

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METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Matrix Spike Analyzed: 12/11/01 (P1L0613-MS1)					Source: PKL0039-02					
Chrysene	**51.6**	10	ug/l	50.0	ND	103	17-168			
Phenol	**46.0**	10	ug/l	50.0	ND	92	5-112			
Surrogate: 2-Fluorophenol	*73.4*		*ug/l*	*100*		*73*	*20-120*			
Surrogate: Phenol-d6	*76.8*		*ug/l*	*100*		*77*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.2*		*ug/l*	*100*		*90*	*35-135*			
Surrogate: Nitrobenzene-d5	*45.7*		*ug/l*	*50.0*		*91*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*45.2*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.1*		*ug/l*	*50.0*		*92*	*40-130*			
Matrix Spike Dup Analyzed: 12/11/01 (P1L0613-MSD1)					Source: PKL0039-02					
Chrysene	**50.6**	10	ug/l	50.0	ND	101	17-168	2	20	
Phenol	**44.1**	10	ug/l	50.0	ND	88	5-112	4	20	
Surrogate: 2-Fluorophenol	*71.4*		*ug/l*	*100*		*71*	*20-120*			
Surrogate: Phenol-d6	*73.6*		*ug/l*	*100*		*74*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*88.3*		*ug/l*	*100*		*88*	*35-135*			
Surrogate: Nitrobenzene-d5	*44.4*		*ug/l*	*50.0*		*89*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*44.9*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.4*		*ug/l*	*50.0*		*93*	*40-130*			

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Report Number: PKL0053

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Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
Blank Analyzed: 12/10/01 (I1L0730-BLK1)										
Aldrin	ND	0.10	ug/l							
alpha-BHC	ND	0.10	ug/l							
beta-BHC	ND	0.10	ug/l							
delta-BHC	ND	0.20	ug/l							
gamma-BHC (Lindane)	ND	0.10	ug/l							
Chlordane	ND	1.0	ug/l							
4,4'-DDD	ND	0.10	ug/l							
4,4'-DDE	ND	0.10	ug/l							
4,4'-DDT	ND	0.10	ug/l							
Dieldrin	ND	0.10	ug/l							
Endosulfan I	ND	0.10	ug/l							
Endosulfan II	ND	0.10	ug/l							
Endosulfan sulfate	ND	0.20	ug/l							
Endrin	ND	0.10	ug/l							
Endrin aldehyde	ND	0.10	ug/l							
Endrin ketone	ND	0.10	ug/l							
Heptachlor	ND	0.10	ug/l							
Heptachlor epoxide	ND	0.10	ug/l							
Methoxychlor	ND	0.10	ug/l							
Toxaphene	ND	5.0	ug/l							
Surrogate: Tetrachloro-m-xylene	*0.366*		*ug/l*	*0.500*		*73*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.515*		*ug/l*	*0.500*		*103*	*30-120*			
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Aldrin	**0.382**	0.10	ug/l	0.500		76	42-115			
alpha-BHC	**0.378**	0.10	ug/l	0.500		76	37-115			
beta-BHC	**0.439**	0.10	ug/l	0.500		88	45-115			
delta-BHC	**0.465**	0.20	ug/l	0.500		93	45-130			
gamma-BHC (Lindane)	**0.418**	0.10	ug/l	0.500		84	40-115			
4,4'-DDD	**0.542**	0.10	ug/l	0.500		108	55-120			
4,4'-DDE	**0.487**	0.10	ug/l	0.500		97	50-115			
4,4'-DDT	**0.520**	0.10	ug/l	0.500		104	55-115			
Dieldrin	**0.444**	0.10	ug/l	0.500		89	50-115			
Endosulfan I	**0.410**	0.10	ug/l	0.500		82	45-115			
Endosulfan II	**0.434**	0.10	ug/l	0.500		87	50-115			
Endosulfan sulfate	**0.460**	0.20	ug/l	0.500		92	65-120			
Endrin	**0.452**	0.10	ug/l	0.500		90	45-115			

Beth Price For Linda Eshelman
Project Manager

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-08

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Endrin aldehyde	0.496	0.10	ug/l	0.500		99	45-115			
Endrin ketone	0.471	0.10	ug/l	0.500		94	55-140			
Heptachlor	0.412	0.10	ug/l	0.500		82	35-115			
Heptachlor epoxide	0.410	0.10	ug/l	0.500		82	40-115			
Methoxychlor	0.528	0.10	ug/l	0.500		106	55-120			
Surrogate: Tetrachloro-m-xylene	*0.336*		*ug/l*	*0.500*		*67*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.495*		*ug/l*	*0.500*		*99*	*30-120*			
LCS Dup Analyzed: 12/11/01 (I1L0730-BSD1)										
Aldrin	0.357	0.10	ug/l	0.500		71	42-115	7	20	Q8
alpha-BHC	0.330	0.10	ug/l	0.500		66	37-115	14	20	Q8
beta-BHC	0.415	0.10	ug/l	0.500		83	45-115	6	20	Q8
delta-BHC	0.443	0.20	ug/l	0.500		89	45-130	5	20	Q8
gamma-BHC (Lindane)	0.377	0.10	ug/l	0.500		75	40-115	10	20	Q8
4,4'-DDD	0.544	0.10	ug/l	0.500		109	55-120	0.4	20	Q8
4,4'-DDE	0.482	0.10	ug/l	0.500		96	50-115	1	20	Q8
4,4'-DDT	0.513	0.10	ug/l	0.500		103	55-115	1	20	Q8
Dieldrin	0.439	0.10	ug/l	0.500		88	50-115	1	20	Q8
Endosulfan I	0.402	0.10	ug/l	0.500		80	45-115	2	20	Q8
Endosulfan II	0.433	0.10	ug/l	0.500		87	50-115	0.2	20	Q8
Endosulfan sulfate	0.461	0.20	ug/l	0.500		92	65-120	0.2	20	Q8
Endrin	0.447	0.10	ug/l	0.500		89	45-115	1	20	Q8
Endrin aldehyde	0.465	0.10	ug/l	0.500		93	45-115	6	20	Q8
Endrin ketone	0.472	0.10	ug/l	0.500		94	55-140	0.2	20	Q8
Heptachlor	0.378	0.10	ug/l	0.500		76	35-115	9	20	Q8
Heptachlor epoxide	0.396	0.10	ug/l	0.500		79	40-115	3	20	Q8
Methoxychlor	0.513	0.10	ug/l	0.500		103	55-120	3	20	Q8
Surrogate: Tetrachloro-m-xylene	*0.259*		*ug/l*	*0.500*		*52*	*30-120*			*Q8*
Surrogate: Decachlorobiphenyl	*0.491*		*ug/l*	*0.500*		*98*	*30-120*			*Q8*

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0053

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

Q8	Insufficient sample received to meet method QC requirements. QC requirements satisfy ADEQ policies 0154 and 0155.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

Beth Price For Linda Eshelman
Project Manager

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AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • FAX: (480) 921-0049 Lic. No. AZ0003

LABORATORY REPORT

Client: Del Mar Analytical
9830 S. 51st Street
Suite B120
Phoenix, AZ 85044

Attn: Linda Eshelman

Date Submitted: 12/4/01
Date Reported: 01/02/02

Project: MCFC

RESULTS

Client ID: PKL0045-01
ACT Lab No.: BH09419

Sample Type: Water
Sample Time: 12/04/01 11:20

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	900	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	16000	MPN/100mL	MW

Client ID: PKL0046-01
ACT Lab No.: BH09420

Sample Type: Water
Sample Time: 12/04/01 10:29

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	2400	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0047-01
ACT Lab No.: BH09421

Sample Type: Water
Sample Time: 12/04/01 12:10

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	1600	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	2200	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

RESULTS

Client ID: PKL0048-01
ACT Lab No.: BH09422
Sample Type: Water
Sample Time: 12/04/01 13:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0049-01
ACT Lab No.: BH09423
Sample Type: Water
Sample Time: 12/04/01 12:35

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	3000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0050-01
ACT Lab No.: BH09424
Sample Type: Water
Sample Time: 12/04/01 10:30

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	16000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0051-01
ACT Lab No.: BH09425
Sample Type: Water
Sample Time: 12/04/01 11:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	5000	MPN/100mL	MW

RESULTS

Client ID: PKL0052-01
ACT Lab No.: BH09426
Sample Type: Water
Sample Time: 12/04/01 12:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0053-01
ACT Lab No.: BH09427
Sample Type: Water
Sample Time: 12/04/01 13:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	240	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0054-01
ACT Lab No.: BH09428
Sample Type: Water
Sample Time: 12/04/01 13:50

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Reviewed by: _____
Frederick A. Amalfi, Ph.D.
Laboratory Director

ba

Record Number: 00200043 SINT: Begin Date: 12-04-2001 12:03 End Date: Medium: 9
Site ID: USGS 332409111594101 Station Name: 40th Street and the Salt River at Phoenix, Az. State: 04 County: 013
Lab ID Number: Project: 470416800 Geologic Unit: Data Types: CH ME NU
Sample Status: H Sample Source: 9 Hydrologic Condition: 9 Sample Type: 9 Hydrologic Event: J
Organism (ITIS): Body-part id: Processing Status: R Number Parameters: 33
Sample Field Comment--Pared NPDES Sample. Send to Ocala Lab.
Sample Lab Comment--OCALA LABID ID NUMBER: 200202453

*	PCODE	ME T	RPLV	RLCOD	--PARAMETER NAME--	-----UNITS-----	--VALUE--	R E M	QUAL CODES 1 2 3	N L Q	D Q I	Q A	P R C	PRP-DATE	ANL-DATE
	00010		--		WATER TEMPERATURE	(DEGREES C)	17.0				S	I	3		
	00025		--		AIR PRESSURE	(MM OF HG)	731				S	I	3		
	00027		--		COLLECTING AGENCY	(CODE NUMBER)	1028				S	I	4		
U	00028	A	--		ANALYZING AGENCY	(CODE NUMBER)	81213				S	A	5		
	00061		--		DISCHARGE, INST.	CFS	5.58				S	I	2		
	00063		--		NUMBER OF SAMPLING P	(COUNT)	1				S	I	1		
	00065		--		GAGE HEIGHT	(FEET)	.876				S	I	2		
	00095		--		SPECIFIC CONDUCTANCE	US/CM @ 25C	169				S	I	3		
	00300		--		OXYGEN DISSOLVED	(MG/L)	8.07				S	I	2		
N	00340	0	--		COD HIGH LEVEL MG/L	(MG/L)	98				S	A	2		
	00400		--		PH, WH, FIELD	(STANDARD UNITS)	7.92				S	I	2		
N	00403	A	--		PH, WH, LABORATORY	(STANDARD UNITS)	7.1				S	A	2		
	00419	B	--		ANC, IT, FIELD	(MG/L AS CACO3)	76				S	I	2		
	00447	B	--		ANC CARB IT FIELD	(MG/L AS CO3)	0				S	I	1		
	00450	B	--		ANC BICARB IT FIELD	(MG/L AS HCO3)	93				S	I	2		
	00452	B	--		CARBONATE,DIS,IT,F	(MG/L AS CO3)	0				S	I	1		
	00453	B	--		BICARBONATE,DIS,IT,F	(MG/L AS HCO3)	32				S	I	2		
N	00530	B	--		RESIDUE TOTAL	(MG/L)	629				S	A	3		
C	00605		--		NITROGEN ORGANIC T.	(MG/L AS N)	11								
N	00610	F	--		NITROGEN AMMONIA T.	(MG/L AS N)	.55				S	A	2		
N	00625	D	--		NITROGEN AMM+ORG TOT	(MG/L AS N)	12				S	A	2		
N	00630	E	--		NO2 + NO3 TOTAL	(MG/L AS N)	.21				S	A	2		
N	00665	D	--		PHOSPHORUS TOTAL	(MG/L AS P)	2.5				S	A	2		
N	00666	D	--		PHOSPHORUS DISS.	(MG/L AS P)	.7				S	A	2		
N	01027	4	--		CADMIUM TOTAL	(UG/L AS CD)	5.1				S	A	2		
N	01042	1	--		COPPER TOTAL	(UG/L AS CU)	452				S	A	3		
N	01051	4	--		LEAD TOTAL	(UG/L AS PB)	135				S	A	3		
N	01092	1	--		ZINC TOTAL	(UG/L AS ZN)	1320				S	A	3		
	39086	B	--		ALKALINITY,DIS,IT,F	(MG/L AS CACO3)	26				S	I	2		
N	70300	A	--		RESIDUE DIS 180C	MG/L	146				S	A	3		
	82398		--		SAMPLING METHOD	METHOD, CODES	30				S	I	2		
N	90410	A	--		ANC, TIT. 4.5, LAB	MG/L AS CACO3	132				S	A	3		
N	99898	0	--		OCALA LAB ID		200202453				S	A	9		
N	99899	0	--		JULIAN DATE OCALA	YYDDD	2001342				S	A	9		

********** ERROR REPORT AND MESSAGES TO/FROM LAB FOR TRANSACTION NO. 28 **********
PARAMETER 00028 CHANGED FROM 1028 REM/QA/MET/SIG = (I 4) TO 81213 REM/QA/MET/SIG = (AA5)
MESSAGE FROM LAB: OCALA LABID ID NUMBER: 200202453
PARAMETER 01027 VALUE 5.10 EXCEEDS DW ALERT LIMIT OF 5.000
PARAMETER 01051 VALUE 135 EXCEEDS DW ALERT LIMIT OF 15.000
RESIDUE AT 180 C/SPECIFIC CONDUCTANCE RATIO OUTSIDE LIMITS .55 TO .81
RECORD NUMBER: 00200043
STATION ID: USGS 332409111594101
STATION NAME: 40th Street and the Salt River at Phoenix, Az.
COLLECTION DATE: 12-04-2001 1203 - -

PARTIAL BALANCE

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
			BICARB., DIS, IT, FLD	32	0.525
			CARB., DIS, IT, FLD	0	0.001
TOTAL		0.001	TOTAL		0.525

PERCENT DIFFERENCE =-100.00

U.S. Geological Survey, WRD - Ocala Water Quality & Research Laboratory
4500 SW 40th Avenue - Ocala, Florida
Telephone (352)237-5514 FLDEP CompQAP # 910161G
Processing Date: 2/11/2002 1:05:10 PM

****

Lab ID Number: 200202453 Field ID Number: 409111594101 Station ID Number: 332409111594101
Sample Date: 12/04/2001 Sample Time: 12:03 Site Type: N/A Station Name: SALT RIVER AND 40TH ST.
State Code: 4 County Code: 13 NWIS Record #: N/A SMS Control #: N/A Sample Medium: 9
Geologic Unit: N/A Analysis Status: H Analysis Source: 9 Hydrologic Condition: 9 Sample Type: 9
Hydrologic Event: J Project Account: 470416800 Analysis Cost: $145.50 District/User Code: 04

****

Lab Code	Watstore Number	Parameter Name	Analysis Method	Reporting Units	Reported Value	Remark Code	Analysis Date /Time
0027	70300(A)	RESIDUE DISSOLVED AT 180 C	I-1750-85	mg/L	146		1/9/2002
0068	00403(A)	PH (LABORATORY)	I-1586-85	pH Units	7.1		1/31/2002 11:10:00 AM
0070	90410(A)	ALKALINITY TOT AS CACO3 (LAB)	I-2030-85	mg/L	132		1/31/2002 11:10:00 AM
0169	00530(B)	RESIDUE TOT NON-FILT AT 105C	I-3765-85	mg/L	629		1/14/2002
1983	00666(D)	PHOSPHORUS AS P DISSOLVED	I-2600-85	mg/L	0.7		1/15/2002 11:55:00 AM
1984	00665(D)	PHOSPHORUS AS P TOTAL	I-4600-85	mg/L	2.5		1/16/2002 8:28:00 PM
1986	00625(D)	NITROGEN NH3+ORG-N TOTAL	I-4552-85	mg/L	12		1/16/2002 1:10:00 PM
3000	99898(0)	QWSU LAB ID NUMBER	- -	Number	200202453		2/7/2002 6:12:53 AM
3001	99899(0)	JULIAN LOGIN DATE	- -	Number	2001342		2/7/2002 6:12:53 AM
3014	01027(4)	CADMIUM TOTAL (ICP/T)	EPA-200.7	ug/L	5.1		1/24/2002
3025	01042(1)	COPPER TOTAL (ICP/T)	EPA-200.7	ug/L	452		1/24/2002
3029	01051(4)	LEAD TOTAL (ICP/T)	EPA-200.7	ug/L	135		1/24/2002
3056	01092(1)	ZINC TOTAL (ICP/T)	EPA-200.7	ug/L	1320		1/24/2002
3063	00340(0)	CHEMICAL OXYGEN DEMAND (EPA)	EPA-410.4	mg/L	98		2/4/2002
3071	00610(F)	NITROGEN NH3-N TOTAL	I-4522-85	mg/L	0.55		12/15/2001 10:54:00 AM
3073	00630(E)	NITROGEN NO2+NO3-N TOTAL	I-4545-85	mg/L	0.21		12/18/2001 11:01:00 AM

Parameter Name	Lab Code	Watstore Code	Method	Detection Level	Bottle Requirements
RESIDUE DISSOLVED AT 180 C	27	70300(A)	I-1750-85	1 mg/L	FU
PH (LABORATORY)	68	00403(A)	I-1586-85	0.1 pH Units	RU
ALKALINITY TOT AS CACO3 (LAB)	70	90410(A)	I-2030-85	1 mg/L	RU
RESIDUE TOT NON-FILT AT 105C	169	00530(B)	I-3765-85	1 mg/L	SUSO
PHOSPHORUS AS P DISSOLVED	1983	00666(D)	I-2600-85	0.02 mg/L	FCA
PHOSPHORUS AS P TOTAL	1984	00665(D)	I-4600-85	0.02 mg/L	WCA
NITROGEN NH3+ORG-N TOTAL	1986	00625(D)	I-4552-85	0.2 mg/L	WCA
CADMIUM TOTAL (ICP/T)	3014	01027(4)	EPA-200.7	0.5 ug/L	RA
COPPER TOTAL (ICP/T)	3025	01042(1)	EPA-200.7	2 ug/L	RA
LEAD TOTAL (ICP/T)	3029	01051(4)	EPA-200.7	2 ug/L	RA
ZINC TOTAL (ICP/T)	3056	01092(1)	EPA-200.7	2 ug/L	RA
CHEMICAL OXYGEN DEMAND (EPA)	3063	00340(0)	EPA-410.4	5 mg/L	COD
NITROGEN NH3-N TOTAL	3071	00610(F)	I-4522-85	0.01 mg/L	RCC
NITROGEN NO2-N TOTAL	3072	00615(B)	I-4540-85	0.01 mg/L	RCC
NITROGEN NO2+NO3-N TOTAL	3073	00630(E)	I-4545-85	0.02 mg/L	RCC
PHOSPHORUS PO4-P TOTAL	3074	70507(H)	I-4601-85	0.01 mg/L	RCC

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

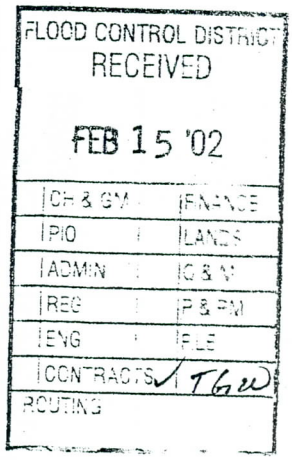
Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0072

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/14/01-2/14/02
Revised: 2/14/02

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0072-01	40TH+SALT-COMP	Water
PKL0072-02	40TH+SALT-COMP	Water



SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: This report has been revised to include the cyanide analysis which was omitted from the original report dated 12/14/01.

SUBCONTRACTED: Analyses were subcontracted to Del Mar Analytical - , Irvine, CA (AZ0428), Transwest Geochem - Phoenix, AZ (AZ0133) and NEL Laboratories - Phoenix, AZ (AZ0520). Results are attached.

QA/QC CRITERIA: All analyses met method criteria.

EXPLANATION OF DATA QUALIFIERS: The L3 flag on the BOD indicates that the Laboratory Control Sample recovery was above the method control limits. See Corrective Action report.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0072

Sampled: 12/04/01
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TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0072-01 (40TH+SALT-COMP - Water)								
Beryllium	EPA 200.9	P1L0521	0.00050	ND	1	12/5/01	12/12/01	M5
Cadmium	EPA 200.9	P1L0521	0.00050	**0.00091**	1	12/5/01	12/8/01	
Calcium	EPA 200.7	P1L1012	2.0	**33**	1	12/10/01	12/11/01	
Chromium	EPA 200.9	P1L0521	0.0040	**0.017**	1	12/5/01	12/12/01	
Copper	EPA 200.9	P1L0521	0.040	**0.19**	10	12/5/01	12/11/01	
Lead	EPA 200.9	P1L0521	0.0040	**0.055**	2	12/5/01	12/7/01	
Magnesium	EPA 200.7	P1L1012	0.50	**5.9**	1	12/10/01	12/11/01	
Nickel	EPA 200.9	P1L0521	0.0040	**0.019**	1	12/5/01	12/12/01	
Silver	EPA 200.9	P1L0521	0.0050	ND	1	12/5/01	12/12/01	
Sodium	EPA 273.1	P1L1012	5.0	**14**	1	12/10/01	12/11/01	
Zinc	EPA 200.7	P1L1012	0.050	**0.47**	1	12/10/01	12/11/01	
Sample ID: PKL0072-01RE1 (40TH+SALT-COMP - Water)								
Potassium	EPA 258.1	P1L1124	1.0	**6.4**	1	12/11/01	12/12/01	

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Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0072

Sampled: 12/04/01
Received: 12/04/01

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0072-02 (40TH+SALT-COMP - Water)								
Cadmium, Dissolved	EPA 200.9	P1L1009	0.00050	ND	1	12/10/01	12/12/01	
Chromium, Dissolved	EPA 200.9	P1L1009	0.0040	ND	1	12/10/01	12/12/01	
Lead, Dissolved	EPA 200.9	P1L1009	0.0020	**0.0022**	1	12/10/01	12/12/01	
Nickel, Dissolved	EPA 200.9	P1L1009	0.0040	**0.017**	1	12/10/01	12/13/01	
Zinc, Dissolved	EPA 200.7	P1L1012	0.050	**0.23**	1	12/10/01	12/11/01	

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Sampled: 12/04/01
Received: 12/04/01

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			mg/l	mg/l				
Sample ID: PKL0072-01 (40TH+SALT-COMP - Water)								
Alkalinity as CaCO3	SM2320B	P1L1319	5.0	**71**	1	12/13/01	12/13/01	
Ammonia-N	EPA 350.3	P1L1202	0.10	**2.0**	2	12/11/01	12/11/01	
Biochemical Oxygen Demand	EPA 405.1	P1L1107	2.0	**11**	1	12/5/01	12/10/01	K2
			%	%				
Sample ID: PKL0072-01 (40TH+SALT-COMP - Water)								
Cation/Anion Balance	Calculation	P1L1415	NA	**6.60**	1	12/14/01	12/14/01	
			mg/l	mg/l				
Sample ID: PKL0072-01 (40TH+SALT-COMP - Water)								
Chemical Oxygen Demand	EPA 410.4	P1L1308	20	**320**	1	12/12/01	12/13/01	
Chloride	EPA 300.0	P1L0609	0.50	**18**	1	12/5/01	12/5/01	
Fluoride	EPA 300.0	P1L0609	0.10	**0.34**	1	12/5/01	12/5/01	
Hardness (CaCO3)	SM2340B	P1L1012	1.0	**110**	1	12/10/01	12/11/01	
Nitrate-N	EPA 300.0	P1L0609	0.10	**1.4**	1	12/5/01	12/5/01	
Nitrate/Nitrite-N	EPA 300.0	P1L0609	0.10	**1.5**	1	12/5/01	12/5/01	
Nitrite-N	EPA 300.0	P1L0609	0.10	**0.13**	1	12/5/01	12/5/01	
Orthophosphate	EPA 365.3	P1L1017	0.25	**2.0**	5	12/6/01	12/6/01	
			umhos/cm	umhos/cm				
Sample ID: PKL0072-01 (40TH+SALT-COMP - Water)								
Specific Conductance	SM2510B	P1L0708	2.0	**230**	1	12/7/01	12/7/01	
			mg/l	mg/l				
Sample ID: PKL0072-01 (40TH+SALT-COMP - Water)								
Sulfate	EPA 300.0	P1L0609	5.0	**23**	10	12/5/01	12/5/01	
Sulfide	SM4500-S-C,D	P1L0602	0.10	**0.10**	1	12/5/01	12/5/01	
Total Dissolved Solids	SM2540C	P1L1005	20	**150**	1	12/7/01	12/7/01	
Total Suspended Solids	EPA 160.2	P1L1004	10	**340**	1	12/7/01	12/7/01	

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Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0072

Sampled: 12/04/01
Received: 12/04/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0072-01RE1 (40TH+SALT-COMP - Water)								
Phosphorus	EPA 365.3	P1L1301	0.25	**2.1**	5	12/12/01	12/12/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0072

Sampled: 12/04/01
Received: 12/04/01

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			mg/l	mg/l				
Sample ID: PKL0072-01 (40TH+SALT-COMP - Water)								
Total Cyanide	SM4500-CN-C,E	I1L1453	0.020	ND	1	12/14/01	12/17/01	

DEL MAR ANALYTICAL, IRVINE (AZ0428)

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Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0072

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0521 Extracted: 12/05/01										
Blank Analyzed: 12/11/01 (P1L0521-BLK1)										
Beryllium	ND	0.00050	mg/l							
Cadmium	ND	0.00050	mg/l							
Chromium	ND	0.0040	mg/l							
Copper	ND	0.0040	mg/l							
Lead	ND	0.0020	mg/l							
Nickel	ND	0.0040	mg/l							
Silver	ND	0.0050	mg/l							
Blank Analyzed: 12/11/01 (P1L0521-BLK2)										
Beryllium	ND	0.00050	mg/l							
Cadmium	ND	0.00050	mg/l							
Chromium	ND	0.0040	mg/l							
Copper	ND	0.0040	mg/l							
Lead	ND	0.0020	mg/l							
Nickel	ND	0.0040	mg/l							
Silver	ND	0.0050	mg/l							
LCS Analyzed: 12/11/01 (P1L0521-BS1)										
Beryllium	**0.00192**	0.0010	mg/l	0.00200		96	85-115			
Cadmium	**0.00178**	0.0010	mg/l	0.00200		89	85-115			
Chromium	**0.0391**	0.0080	mg/l	0.0400		98	85-115			
Copper	**0.0399**	0.0080	mg/l	0.0400		100	85-115			
Lead	**0.0413**	0.0040	mg/l	0.0400		103	85-115			
Nickel	**0.0434**	0.0080	mg/l	0.0400		108	85-115			
Silver	**0.0197**	0.010	mg/l	0.0200		98	85-115			
LCS Dup Analyzed: 12/11/01 (P1L0521-BSD1)										
Beryllium	**0.00194**	0.0010	mg/l	0.00200		97	85-115	1	20	
Cadmium	**0.00183**	0.0010	mg/l	0.00200		91	85-115	3	20	
Chromium	**0.0350**	0.0080	mg/l	0.0400		88	85-115	11	20	
Copper	**0.0408**	0.0080	mg/l	0.0400		102	85-115	2	20	
Lead	**0.0417**	0.0040	mg/l	0.0400		104	85-115	1	20	
Nickel	**0.0405**	0.0080	mg/l	0.0400		101	85-115	7	20	
Silver	**0.0206**	0.010	mg/l	0.0200		103	85-115	4	20	

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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0521 Extracted: 12/05/01										
Matrix Spike Analyzed: 12/11/01 (P1L0521-MS1)					Source: PKL0060-01					
Beryllium	**0.00283**	0.0010	mg/l	0.00200	ND	132	70-130			M1
Cadmium	**0.00166**	0.0010	mg/l	0.00200	ND	83	70-130			
Chromium	**0.0320**	0.0080	mg/l	0.0400	ND	72	70-130			
Copper	**0.0561**	0.0080	mg/l	0.0400	0.014	105	70-130			
Lead	**0.0452**	0.0040	mg/l	0.0400	0.0044	102	70-130			
Nickel	**0.0480**	0.0080	mg/l	0.0400	ND	104	70-130			
Silver	**0.0207**	0.010	mg/l	0.0200	ND	104	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L0521-MSD1)					Source: PKL0060-01					
Beryllium	**0.00294**	0.0010	mg/l	0.00200	ND	138	70-130	4	20	M1
Cadmium	**0.00165**	0.0010	mg/l	0.00200	ND	82	70-130	0.6	20	
Chromium	**0.0324**	0.0080	mg/l	0.0400	ND	73	70-130	1	20	
Copper	**0.0582**	0.0080	mg/l	0.0400	0.014	110	70-130	4	20	
Lead	**0.0479**	0.0040	mg/l	0.0400	0.0044	109	70-130	6	20	
Nickel	**0.0474**	0.0080	mg/l	0.0400	ND	103	70-130	1	20	
Silver	**0.0224**	0.010	mg/l	0.0200	ND	112	70-130	8	20	
Batch: P1L1012 Extracted: 12/10/01										
Blank Analyzed: 12/11/01 (P1L1012-BLK1)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Sodium	ND	5.0	mg/l							
Zinc	ND	0.050	mg/l							
Blank Analyzed: 12/11/01 (P1L1012-BLK2)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Zinc	ND	0.050	mg/l							

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Report Number: PKL0072

Sampled: 12/04/01
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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1012 Extracted: 12/10/01										
LCS Analyzed: 12/11/01 (P1L1012-BS1)										
Calcium	**11.2**	2.0	mg/l	10.0		112	85-115			
Magnesium	**10.4**	0.50	mg/l	10.0		104	85-115			
Sodium	**52.8**	5.0	mg/l	50.0		106	85-115			
Zinc	**1.11**	0.050	mg/l	1.00		111	85-115			
LCS Dup Analyzed: 12/11/01 (P1L1012-BSD1)										
Calcium	**10.9**	2.0	mg/l	10.0		109	85-115	3	20	
Magnesium	**10.5**	0.50	mg/l	10.0		105	85-115	1	20	
Sodium	**53.0**	5.0	mg/l	50.0		106	85-115	0.4	20	
Zinc	**1.09**	0.050	mg/l	1.00		109	85-115	2	20	
Matrix Spike Analyzed: 12/11/01 (P1L1012-MS1)					**Source: PKL0115-01**					
Calcium	**71.2**	2.0	mg/l	10.0	58	132	70-130			M1
Magnesium	**23.3**	0.50	mg/l	10.0	12	113	70-130			
Sodium	**64.5**	5.0	mg/l	50.0	13	103	85-115			
Zinc	**1.09**	0.050	mg/l	1.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1012-MSD1)					**Source: PKL0115-01**					
Calcium	**69.6**	2.0	mg/l	10.0	58	116	70-130	2	20	
Magnesium	**22.9**	0.50	mg/l	10.0	12	109	70-130	2	20	
Sodium	**63.1**	5.0	mg/l	50.0	13	100	85-115	2	20	
Zinc	**1.07**	0.050	mg/l	1.00	ND	104	70-130	2	20	
Batch: P1L1124 Extracted: 12/11/01										
Blank Analyzed: 12/12/01 (P1L1124-BLK1)										
Potassium	ND	1.0	mg/l							

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0072

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1124 Extracted: 12/11/01										
LCS Analyzed: 12/12/01 (P1L1124-BS1)										
Potassium	10.6	1.0	mg/l	10.0		106	85-115			
LCS Dup Analyzed: 12/12/01 (P1L1124-BSD1)										
Potassium	10.7	1.0	mg/l	10.0		107	85-115	0.9	20	
Matrix Spike Analyzed: 12/12/01 (P1L1124-MS1)					**Source: PKL0168-01**					
Potassium	15.5	1.0	mg/l	10.0	4.7	108	85-115			
Matrix Spike Dup Analyzed: 12/12/01 (P1L1124-MSD1)					**Source: PKL0168-01**					
Potassium	14.8	1.0	mg/l	10.0	4.7	101	85-115	5	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1009 Extracted: 12/10/01										
Blank Analyzed: 12/12/01 (P1L1009-BLK1)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
Blank Analyzed: 12/12/01 (P1L1009-BLK2)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
LCS Analyzed: 12/12/01 (P1L1009-BS1)										
Cadmium, Dissolved	**0.00190**	0.0010	mg/l	0.00200		95	85-115			
Chromium, Dissolved	**0.0408**	0.0080	mg/l	0.0400		102	85-115			
Lead, Dissolved	**0.0388**	0.0040	mg/l	0.0400		97	85-115			
Nickel, Dissolved	**0.0405**	0.0080	mg/l	0.0400		101	85-115			
LCS Dup Analyzed: 12/12/01 (P1L1009-BSD1)										
Cadmium, Dissolved	**0.00188**	0.0010	mg/l	0.00200		94	85-115	1	20	
Chromium, Dissolved	**0.0410**	0.0080	mg/l	0.0400		102	85-115	0.5	20	
Lead, Dissolved	**0.0383**	0.0040	mg/l	0.0400		96	85-115	1	20	
Nickel, Dissolved	**0.0425**	0.0080	mg/l	0.0400		106	85-115	5	20	
Matrix Spike Analyzed: 12/12/01 (P1L1009-MS1)					**Source: PKL0115-01**					
Cadmium, Dissolved	**0.00174**	0.0010	mg/l	0.00200	ND	87	70-130			
Chromium, Dissolved	**0.0424**	0.0080	mg/l	0.0400	ND	106	70-130			
Lead, Dissolved	**0.0386**	0.0040	mg/l	0.0400	ND	97	70-130			
Nickel, Dissolved	**0.0395**	0.0080	mg/l	0.0400	ND	99	70-130			

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DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1009 Extracted: 12/10/01										
Matrix Spike Dup Analyzed: 12/12/01 (P1L1009-MSD1)					Source: PKL0115-01					
Cadmium, Dissolved	**0.00190**	0.0010	mg/l	0.00200	ND	95	70-130	9	20	
Chromium, Dissolved	**0.0432**	0.0080	mg/l	0.0400	ND	108	70-130	2	20	
Lead, Dissolved	**0.0392**	0.0040	mg/l	0.0400	ND	98	70-130	2	20	
Nickel, Dissolved	**0.0401**	0.0080	mg/l	0.0400	ND	100	70-130	2	20	
Batch: P1L1012 Extracted: 12/10/01										
Blank Analyzed: 12/11/01 (P1L1012-BLK1)										
Zinc, Dissolved	ND	0.050	mg/l							
Blank Analyzed: 12/11/01 (P1L1012-BLK2)										
Zinc, Dissolved	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1012-BS1)										
Zinc, Dissolved	**1.11**	0.050	mg/l	1.00		111	85-115			
LCS Dup Analyzed: 12/11/01 (P1L1012-BSD1)										
Zinc, Dissolved	**1.09**	0.050	mg/l	1.00		109	85-115	2	20	
Matrix Spike Analyzed: 12/11/01 (P1L1012-MS1)					Source: PKL0115-01					
Zinc, Dissolved	**1.09**	0.050	mg/l	1.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1012-MSD1)					Source: PKL0115-01					
Zinc, Dissolved	**1.07**	0.050	mg/l	1.00	ND	104	70-130	2	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0602 Extracted: 12/05/01										
Blank Analyzed: 12/05/01 (P1L0602-BLK1)										
Sulfide	ND	0.10	mg/l							
LCS Analyzed: 12/05/01 (P1L0602-BS1)										
Sulfide	**1.06**	0.20	mg/l	1.05		101	80-120			
Matrix Spike Analyzed: 12/05/01 (P1L0602-MS1)					**Source: PKK0505-01**					
Sulfide	**0.504**	0.10	mg/l	0.527	ND	96	80-120			
Matrix Spike Dup Analyzed: 12/05/01 (P1L0602-MSD1)					**Source: PKK0505-01**					
Sulfide	**0.519**	0.10	mg/l	0.527	ND	98	80-120	3	20	
Batch: P1L0609 Extracted: 12/05/01										
Blank Analyzed: 12/05/01 (P1L0609-BLK1)										
Chloride	ND	0.50	mg/l							
Fluoride	ND	0.10	mg/l							
Nitrate-N	ND	0.10	mg/l							
Nitrate/Nitrite-N	ND	0.10	mg/l							
Nitrite-N	ND	0.10	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 12/05/01 (P1L0609-BS1)										
Chloride	**5.18**	0.50	mg/l	5.00		104	90-110			
Fluoride	**2.52**	0.10	mg/l	2.50		101	90-110			
Nitrate-N	**2.68**	0.10	mg/l	2.50		107	90-110			
Nitrite-N	**2.69**	0.10	mg/l	2.50		108	90-110			
Sulfate	**5.30**	0.50	mg/l	5.00		106	90-110			

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0609 Extracted: 12/05/01										
LCS Dup Analyzed: 12/05/01 (P1L0609-BSD1)										
Chloride	5.26	0.50	mg/l	5.00		105	90-110	2	20	
Fluoride	2.60	0.10	mg/l	2.50		104	90-110	3	20	
Nitrate-N	2.76	0.10	mg/l	2.50		110	90-110	3	20	
Nitrite-N	2.71	0.10	mg/l	2.50		108	90-110	0.7	20	
Sulfate	5.42	0.50	mg/l	5.00		108	90-110	2	20	
Matrix Spike Analyzed: 12/05/01 (P1L0609-MS1)					**Source: PKL0041-01RE1**					
Chloride	388	5.0	mg/l	5.00	380	160	80-120			M1
Fluoride	3.42	1.0	mg/l	2.50	1.0	97	80-120			
Nitrate-N	6.51	1.0	mg/l	2.50	3.8	108	80-120			
Nitrite-N	1.96	1.0	mg/l	2.50	ND	78	80-120			M2
Sulfate	160	5.0	mg/l	5.00	160	0	80-120			M2
Matrix Spike Dup Analyzed: 12/05/01 (P1L0609-MSD1)					**Source: PKL0041-01RE1**					
Chloride	386	5.0	mg/l	5.00	380	120	80-120	0.5	15	
Fluoride	3.64	1.0	mg/l	2.50	1.0	106	80-120	6	20	
Nitrate-N	6.47	1.0	mg/l	2.50	3.8	107	80-120	0.6	15	
Nitrite-N	2.06	1.0	mg/l	2.50	ND	82	80-120	5	20	
Sulfate	161	5.0	mg/l	5.00	160	20	80-120	0.6	15	M2
Batch: P1L0708 Extracted: 12/07/01										
Duplicate Analyzed: 12/07/01 (P1L0708-DUP1)					**Source: PKL0042-01**					
Specific Conductance	783	2.0	umhos/cm		770			2	10	
Duplicate Analyzed: 12/07/01 (P1L0708-DUP2)					**Source: PKL0115-01**					
Specific Conductance	417	2.0	umhos/cm		420			0.7	10	

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0708 Extracted: 12/07/01										
Reference Analyzed: 12/07/01 (P1L0708-SRM1)										
Specific Conductance	**1400**	2.0	umhos/cm	1410		99	90-110			
Batch: P1L1004 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1004-BLK1)										
Total Suspended Solids	ND	10	mg/l							
Duplicate Analyzed: 12/07/01 (P1L1004-DUP1)					**Source: PKL0028-01**					
Total Suspended Solids	ND	1000	mg/l		ND				5	
Duplicate Analyzed: 12/07/01 (P1L1004-DUP2)					**Source: PKL0079-01**					
Total Suspended Solids	ND	10	mg/l		ND				5	
Reference Analyzed: 12/07/01 (P1L1004-SRM1)										
Total Suspended Solids	**60.0**	10	mg/l	62.2		96	85-107			
Batch: P1L1005 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1005-BLK1)										
Total Dissolved Solids	ND	20	mg/l							
LCS Analyzed: 12/07/01 (P1L1005-BS1)										
Total Dissolved Solids	**388**	20	mg/l	400		97	80-115			
LCS Dup Analyzed: 12/07/01 (P1L1005-BSD1)										
Total Dissolved Solids	**402**	20	mg/l	400		100	80-115	4	200	

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1005 Extracted: 12/07/01										
Duplicate Analyzed: 12/07/01 (P1L1005-DUP1)					**Source: PKL0126-01**					
Total Dissolved Solids	646	20	mg/l		670			4	5	
Duplicate Analyzed: 12/07/01 (P1L1005-DUP2)					**Source: PKL0071-01**					
Total Dissolved Solids	160	20	mg/l		160			0	5	
Batch: P1L1017 Extracted: 12/06/01										
Blank Analyzed: 12/06/01 (P1L1017-BLK1)										
Orthophosphate	ND	0.050	mg/l							
LCS Analyzed: 12/06/01 (P1L1017-BS1)										
Orthophosphate	0.554	0.050	mg/l	0.500		111	80-120			
Matrix Spike Analyzed: 12/06/01 (P1L1017-MS1)					**Source: PKL0060-01**					
Orthophosphate	1.74	0.10	mg/l	0.500	0.62	224	75-125			M3
Matrix Spike Dup Analyzed: 12/06/01 (P1L1017-MSD1)					**Source: PKL0060-01**					
Orthophosphate	1.72	0.10	mg/l	0.500	0.62	220	75-125	1	20	M3
Batch: P1L1107 Extracted: 12/05/01										
Blank Analyzed: 12/10/01 (P1L1107-BLK1)										
Biochemical Oxygen Demand	ND	2.0	mg/l							
LCS Analyzed: 12/10/01 (P1L1107-BS1)										
Biochemical Oxygen Demand	205	2.0	mg/l	198		104	85-115			

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1107 Extracted: 12/05/01										
LCS Dup Analyzed: 12/10/01 (P1L1107-BSD1)										
Biochemical Oxygen Demand	**237**	2.0	mg/l	198		120	85-115	14	20	L3
Duplicate Analyzed: 12/10/01 (P1L1107-DUP1)					**Source: PKL0028-01**					
Biochemical Oxygen Demand	**3430**	100	mg/l		3400			0.9	20	
Duplicate Analyzed: 12/10/01 (P1L1107-DUP2)					**Source: PKL0079-03**					
Biochemical Oxygen Demand	**550**	20	mg/l		520			6	20	
Batch: P1L1202 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1202-BLK1)										
Ammonia-N	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1202-BS1)										
Ammonia-N	**0.470**	0.050	mg/l	0.500		94	85-115			
Matrix Spike Analyzed: 12/11/01 (P1L1202-MS1)					**Source: PKL0121-01**					
Ammonia-N	**0.515**	0.050	mg/l	0.500	ND	95	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1202-MSD1)					**Source: PKL0121-01**					
Ammonia-N	**0.532**	0.050	mg/l	0.500	ND	98	70-130	3	20	
Batch: P1L1301 Extracted: 12/12/01										
Blank Analyzed: 12/12/01 (P1L1301-BLK1)										
Phosphorus	ND	0.050	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1301 Extracted: 12/12/01										
LCS Analyzed: 12/12/01 (P1L1301-BS1)										
Phosphorus	0.568	0.050	mg/l	0.500		114	80-120			
LCS Dup Analyzed: 12/12/01 (P1L1301-BSD1)										
Phosphorus	0.551	0.050	mg/l	0.500		110	80-120	3	20	
Matrix Spike Analyzed: 12/12/01 (P1L1301-MS1)					Source: PKL0072-01RE1					
Phosphorus	4.39	0.25	mg/l	2.50	2.1	92	75-125			
Matrix Spike Dup Analyzed: 12/12/01 (P1L1301-MSD1)					Source: PKL0072-01RE1					
Phosphorus	4.47	0.25	mg/l	2.50	2.1	95	75-125	2	15	
Batch: P1L1308 Extracted: 12/12/01										
Blank Analyzed: 12/13/01 (P1L1308-BLK1)										
Chemical Oxygen Demand	ND	20	mg/l							
LCS Analyzed: 12/13/01 (P1L1308-BS1)										
Chemical Oxygen Demand	202	20	mg/l	200		101	90-110			
LCS Dup Analyzed: 12/13/01 (P1L1308-BSD1)										
Chemical Oxygen Demand	199	20	mg/l	200		100	90-110	1	20	
Matrix Spike Analyzed: 12/13/01 (P1L1308-MS1)					Source: PKL0089-01					
Chemical Oxygen Demand	237	20	mg/l	200	35	101	65-130			
Matrix Spike Dup Analyzed: 12/13/01 (P1L1308-MSD1)					Source: PKL0089-01					
Chemical Oxygen Demand	244	20	mg/l	200	35	104	65-130	3	20	

Linda Eshelman
Project Manager

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0072

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1319 Extracted: 12/13/01										
Duplicate Analyzed: 12/13/01 (P1L1319-DUP1)					**Source: PKL0205-01**					
Alkalinity as CaCO3	55.0	5.0	mg/l		55			0	20	
Duplicate Analyzed: 12/13/01 (P1L1319-DUP2)					**Source: PKL0115-01**					
Alkalinity as CaCO3	214	5.0	mg/l		210			2	20	
Reference Analyzed: 12/13/01 (P1L1319-SRM1)										
Alkalinity as CaCO3	92.0	5.0	mg/l	92.2		100	90-114			

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0072

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L1453 Extracted: 12/14/01										
Blank Analyzed: 12/17/01 (I1L1453-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 12/17/01 (I1L1453-BS1)										
Total Cyanide	**0.201**	0.020	mg/l	0.200		100	85-115			
Matrix Spike Analyzed: 12/17/01 (I1L1453-MS1)					**Source: IKL0608-01**					
Total Cyanide	**0.197**	0.020	mg/l	0.200	ND	98	70-115			
Matrix Spike Dup Analyzed: 12/17/01 (I1L1453-MSD1)					**Source: IKL0608-01**					
Total Cyanide	**0.197**	0.020	mg/l	0.200	ND	98	70-115	0	15	

Linda Eshelman
Project Manager

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Maricopa County -Flood Control District 2801 West Durango Street Phoenix, AZ 85009 Attention: Todd Williams	Client Project ID: PHOENIX NPDES STORMWATER Report Number: PKL0072	Sampled: 12/04/01 Received: 12/04/01	

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

K2	The sample dilutions set-up for the BOD analysis did not meet the criteria of a residual dissolved oxygen of at least 1 mg/L. Any reported result is an estimated value.
L3	The associated blank spike recovery was above method acceptance limits. See case narrative.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
M5	Analyte concentration was determined by the method of standard addition (MSA).
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

Linda Eshelman
Project Manager

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CORRECTIVE ACTION REPORT

Department: Wet Chemistry
Method: 405.1 (BOD)
Date: 12/05/2001
Matrix: Water
Batch: P1L1107
Associated Samples: PKL0069-01, PKL0071-01, PKL0072-01, PKL0079-01, PKL0079-03, PKL0032-01 – PKL0032-03, PKL0039-01 – PKL0039-02, PKL0046-01, PKL0047-01, PKL0048-01, PKL0028-01, PKL0030-01 & PKL0049-01

Identification and Definition of Problem:

The Laboratory Control Sample Duplicate (LCSD) was high (120%) and outside of the acceptance limits of 85% – 115%.

Determination of the Cause of the Problem:

No definite cause has been determined for the high recovery.

Corrective Action:

Re-analysis could not be performed due to the 48 hour holding time. The Laboratory Control Sample was within acceptance limits. Also, both sample / sample duplicate pairs associated with the batch are within acceptance limits. The LCSD has been flagged "L3" to indicate the high recovery. The associated samples may be biased high.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 12/14/2001
Quality Assurance Manager

TRANSWEST
GEOCHEM

December 21, 2001

Linda Eshelman
Del Mar Analytical
9830 S. 51st Street
Suite B-120
Phoenix, AZ 85044

RE: PKL0072-MCFC
Work Order No.: 0112039

Dear Linda,
Transwest Geochem, Inc. received 1 sample on 12/5/2001 11:30:00 AM for the analyses presented in the following report.

The Case Narrative of this report addresses any Quality Control and/or Quality Assurance issues associated with this Work Order.

If you have any questions regarding these test results, please feel free to call us at (602) 437-0330.

Sincerely,

Michelle Barker for:

Beth Proffitt
Project Manager

ADHS License No. AZM133/AZ0133

Client: Del Mar Analytical
Work Order: 0112039
Project Name:
Project Number: PKL0072-MCFC

Date Printed: 21-Dec-01

CASE NARRATIVE

Transwest Geochem, Inc. uses the methods outlined in the following references:

Code of Federal Regulations, 40CFR, Part 136, Revised July 1995.

Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992 and 19th Edition, 1995.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised March 1983.

Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, Revised August 1993.

Methods for the Determination of Metals in Environmental Samples, EPA/600/R-94/111, Revised May 1994.

Hach, Water Analysis Handbook, 2nd Edition, 1992.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

Metals were analyzed using multi-element ICP instrumentation. Some metals reported in the QC report may not be associated with this Work Order.

Secondary Source QC Sample (LCSV) results may not be reported for all methods and/or analysis dates.

The sample introduction technique for Method 8015AZ used by this laboratory is direct injection.

All method blanks, laboratory spikes, and/or matrix spikes met quality control objectives for the parameters associated with this Work Order.

Data qualifiers ("flags") contained within this analytical report have been issued to explain a quality control deficiency, and do not affect the quality (validity) of the data unless noted otherwise in the case narrative.

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TRANSWEST GEOCHEM

Date Printed 21-Dec-01
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0072-MCFC
Work Order: 0112039
Date Received: 05-Dec-01

Work Order Sample Summary

Client Sample ID	Lab Sample ID	Test Code	Collection Date
PKL0072-01	0112039-01A	EPA420.1	12/4/2001 1:00:00 PM
	0112039-01B	EPA351.2	12/4/2001 1:00:00 PM

TRANSWEST GEOCHEM

Date Printed 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0072-MCFC
Work Order: 0112039
Date Received: 05-Dec-01

Definitions

Analytical Spike (AS)	The AS is a known amount of a target analyte added to a sample after it has been distilled, digested, or extracted and is ready for analysis. The AS is generally performed if the MS has failed. It is used to indicate interference that arises from sample distillation, digestion, or extraction as opposed to interference that is innate to the matrix.
Continuing Curve Verification (CCV)	The CCV is also referred to as a curve check. This is a standard analyzed at specified intervals during an analysis. The CCV verifies the stability and accuracy of the calibration curve. There are specific CCV recovery acceptance criteria for each method.
Dilution Factor (DF)	The DF is an indication of how much a sample had to be diluted in order to quantitate it on a standard curve. The DF is indicated in the reported sample result. The sample PQL increases as the dilution increases.
Internal Standard (IS)	The IS is a compound that is similar to the organic compound of interest in terms of chemical composition but is unique in that it is rare in the environment. The same concentration of IS is added to every sample for some organic methods.
Laboratory Control Sample (LCS)	The LCS is also referred to as a blank spike. The LCS is an addition of a known amount of a target analyte (from the same source as calibration standards or spikes) to an aliquot of deionized water or other appropriate clean matrix. The LCS is processed through the entire method procedure in the same manner as samples.
Matrix Spike (MS)	The MS is a known amount of a target analyte added to a sample. The MS is processed through the entire method procedure in the same manner as samples.
Method Blank (MB)	The MB is an aliquot of deionized water or other appropriate clean matrix that is thought to be free of the analyte in question. The MB is processed through the entire extraction or analysis procedure and is used to indicate contamination in the lab.
Method Detection Limit (MDL)	The MDL is the lowest level of detection of which a method is capable.
Practical Quantitation Limit (PQL)	The PQL is the lowest value at which Transwest Geochem can detect an analyte in matrix with a high degree of confidence. The PQL will increase as the DF increases. The PQL is greater than or equal to the MDL.
Relative Percent Difference (RPD)	The RPD is a measure of precision (the ability to obtain the same result on re-analysis of the same sample). It is calculated using the result of a sample, MS, LCS, or LCSV and its associated duplicate result.
Secondary Source QC Sample (LCSV)	The LCSV is also referred to as a second source laboratory control sample. It is the same type of standard as a calibration or spiking standard but is obtained from a different source. The LCSV is an indication of the primary standard quality, method performance, and instrument performance.
Surrogate	A surrogate compound is similar to the organic compound of interest in terms of chemical composition but is unique in that it is rare in the environment. When surrogates are used, they are added to every sample, blank and standard. Surrogate recovery is used as an indication of extraction and/or analytical success.
Trip Blank (TB)	The TB is a portion of deionized water preserved in the same manner as the samples. The TB travels from the lab, to the field, and then back to the lab with the samples from the field. The TB serves as an indication of contamination introduced during sample transportation.

TRANSWEST GEOCHEM

Date Printed 21-Dec-01

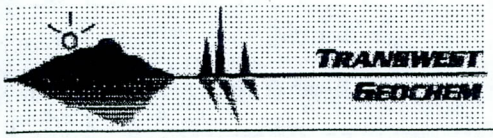
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112039
Lab ID: 0112039-01
Project Name:
Project Number: PKL0072-MCFC

Client Sample ID: PKL0072-01
Collection Date: 12/4/2001 1:00:00 PM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	0.0089	0.0050		mg/L	1	EPA420.1	12/19/01	12/20/01	KMB	420.1-12/20/2001
Nitrogen, Kjeldahl, Total	6.9	1.0		mg/L	2	EPA351.2	N/A	12/11/01	TL	TKN_W-12/11/2001

Confidential and Privileged



Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112039
Project: PKL0072-MCFC

QC SUMMARY REPORT

Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Nitrogen, Kjeldahl, Total	<0.50	0.50		mg/L	1	EPA351.2	N/A	12/11/01	TL	TKN_W-12/11/2001
Phenolics, Total Recoverable	<0.0050	0.0050		mg/L	1	EPA420.1	12/19/01	12/20/01	KMB	420.1-12/20/2001

CLIENT: Del Mar Analytical
Work Order: 0112039
Project: PKL0072-MCFC

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: **0112080-02AD**		Batch ID:	TKN_W-12/11/2001								
Client ID:											
Nitrogen, Kjeldahl, Total	1.6	0.50	mg/L	1.624	0%	20	EPA351.2	N/A	12/11/01	TL	

CLIENT: Del Mar Analytical
Work Order: 0112039
Project: PKL0072-MCFC

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: **0112080-02AS**	Batch ID: TKN_W-12/11/2001			Test Code: EPA351.2				Date Analyzed: 12/11/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	4.365	0.50	2.500	1.628	109%	90	110				
Sample ID: **0112033-01ASD**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
Client ID:				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1025	0.0050	0.1000	<0.0050	103%	80	120	0.1034	1%	20	
Sample ID: **0112033-01AS**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
Client ID:				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1034	0.0050	0.1000	<0.0050	103%	80	120				

TRANSWEST GEOCHEM

Date: 21-Dec-01

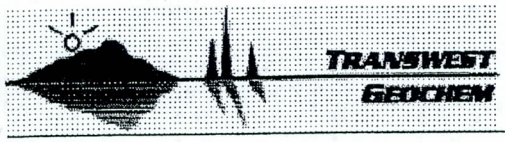
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112039
Project: PKL0072-MCFC

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: TKN_W-12/11/2001			Test Code: EPA351.2				Date Analyzed: 12/11/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.666	0.50	2.500	<0.50	107%	90	110				
Sample ID: **LCSD**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1021	0.0050	0.1000	<0.0050	102%	85	115	0.1012	1%	20	
Sample ID: **LCS**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1012	0.0050	0.1000	<0.0050	101%	85	115				



Date: 21-Dec-01

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CLIENT: Del Mar Analytical
Work Order: 0112039
Project: PKL0072-MCFC

QC SUMMARY REPORT

Secondary Source Blank Spike

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: TKN_W-12/11/2001			Test Code: EPA351.2				Date Analyzed: 12/11/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.495	0.50	2.500	<0.50	100%	90	110				

NEL LABORATORIES
Reno • Las Vegas
Phoenix • Boise

Reno Division
4750 Longley Lane, Suite 106 • Reno, Nevada 89502
775-348-2522 • Fax: 775-348-2546
1-800-368-5221

CLIENT: Del Mar Analytical
9830 S. 51st. St. Ste. B-120
Phoenix, AZ 85044
ATTN: Linda Eshelman

PROJECT NAME: PKL0072-MCFC NEL ORDER ID: P0112002
PROJECT #: NA

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 12/5/01.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.

Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.

Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (602) 437-0099.

Bob George
Lab Manager

12/12/01
Date

CERTIFICATIONS:	Reno	Las Vegas		Reno	Las Vegas
Arizona	AZ0520	AZ0518	Idaho	Certified	Certified
California	1707	2002	Montana	Certified	Certified
US Army Corps of Engineers	Certified	Certified	Nevada	NV033	NV052

NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKL0072-MCFC
PROJECT #: NA

TEST: **Metals**
MATRIX: Aqueous

CLIENT ID: **SAMPLE SPILLED**
DATE SAMPLED: 12/4/01
NEL SAMPLE ID: P0112002-01

ANALYST: JY Reno

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	0.0037	0.001 mg/L	1	EPA 200.8	12/6/01	12/11/01

D.F. - Dilution Factor

ND - Not Detected

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CLIENT: Del Mar Analytical
PROJECT ID: PKL0072-MCFC
PROJECT #: NA

CLIENT ID: **PKL0072-02**
DATE SAMPLED: 12/4/01
NEL SAMPLE ID: P0112002-02

TEST: **Dissolved Metals**
MATRIX: Aqueous

ANALYST: JY Reno

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	0.0041	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	NA	12/11/01
Copper, Dissolved	0.11	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

LIENT: Del Mar Analytical
ROJECT ID: PKL0072-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: 1206-6.1-BLK

EST: **Metals**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
rsenic	ND	0.001 mg/L	1	EPA 200.8	12/6/01	12/11/01

D.F. - Dilution Factor

D - Not Detected

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CLIENT: Del Mar Analytical
PROJECT ID: PKL0072-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: 1206-6.3-BLK

TEST: **Dissolved Metals**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	NA	12/11/01
Copper, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01

D.F. - Dilution Factor

ND - Not Detected

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CLIENT: Del Mar Analytical
PROJECT ID: PKL0072-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic	1206-6.1-LCS	0.01	0.00987	99	85 - 115	
Arsenic	P0112003-01-MS	0.01	0.0122	98	75 - 125	
Arsenic	P0112003-01-MSD	0.1	0.0115	91	75 - 125	7.4

ND - Not Detected

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CLIENT: Del Mar Analytical
PROJECT ID: PKL0072-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic, Dissolved	1206-6.3-LCS	0.1	0.0899	90	85 - 115	
Arsenic, Dissolved	P0112002-02-MS	0.1	0.12	116	75 - 125	
Arsenic, Dissolved	P0112002-02-MSD	0.01	0.124	120	75 - 125	3.4
Beryllium, Dissolved	1206-6.3-LCS	0.1	0.106	106	85 - 115	
Beryllium, Dissolved	P0112002-02-MS	0.1	0.104	104	75 - 125	
Beryllium, Dissolved	P0112002-02-MSD	0.1	0.0927	93	75 - 125	11.5
Copper, Dissolved	1206-6.3-LCS	0.05	0.0441	88	85 - 115	
Copper, Dissolved	P0112002-02-MS	0.05	0.167	94	75 - 125	
Copper, Dissolved	P0112002-02-MSD	0.5	0.174	108	75 - 125	13.9
Silver, Dissolved	1206-6.3-LCS	0.05	0.0548	110	85 - 115	
Silver, Dissolved	P0112002-02-MS	0.05	0.0592	110	75 - 125	
Silver, Dissolved	P0112002-02-MSD	0.5	0.059	110	75 - 125	0.4

ND - Not Detected

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/19/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0054-01	40TH+SALT-GRAB	Water
PKL0054-02	TRIP BLANK	Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: Analyses were subcontracted to and Aquatic Consult. & Testing - 1525 W. University Dr., #106, Tempe, AZ (AZ0003). Results are attached.

QA/QC CRITERIA: All analyses met method criteria.

EXPLANATION OF DATA QUALIFIERS: No further explanation of data qualifiers needed.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0054-01 (40TH+SALT-GRAB - Water)								
Total Recoverable Hydrocarbon	EPA 418.1	P1L1123	1.0	**9.0**	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ042C

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0054-01 (40TH+SALT-GRAB - Water)								
Oil & Grease	EPA 413.2	P1L1122	1.0	14	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0054-01 (40TH+SALT-GRAB - Water)								
Acetone	EPA 624	P1L1725	20	**38**	1	12/17/01	12/18/01	T2
Benzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Bromodichloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Bromoform	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Bromomethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Carbon tetrachloride	EPA 624	P1L1725	2.5	ND	1	12/17/01	12/18/01	
Chlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Dibromochloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Chloroethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Chloroform	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Chloromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
1,2-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,3-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,4-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,2-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1-Dichloroethene	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
trans-1,2-Dichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,2-Dichloropropane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
cis-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
trans-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Ethylbenzene	EPA 624	P1L1725	2.0	**6.1**	1	12/17/01	12/18/01	
Methylene chloride	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Tetrachloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Toluene	EPA 624	P1L1725	2.0	**23**	1	12/17/01	12/18/01	
1,1,1-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1,2-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Trichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Trichlorofluoromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Vinyl chloride	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Surrogate: Dibromofluoromethane (80-120%)				*98 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*99 %*				
Surrogate: Toluene-d8 (80-120%)				*100 %*				

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0054-02 (TRIP BLANK - Water)								
Acetone	EPA 624	P1L1725	20	ND	1	12/17/01	12/18/01	T2
Benzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Bromodichloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Bromoform	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Bromomethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Carbon tetrachloride	EPA 624	P1L1725	2.5	ND	1	12/17/01	12/18/01	
Chlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Dibromochloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Chloroethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Chloroform	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Chloromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
1,2-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,3-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,4-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,2-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1-Dichloroethene	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
trans-1,2-Dichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,2-Dichloropropane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
cis-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
trans-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Ethylbenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Methylene chloride	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Tetrachloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Toluene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1,1-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1,2-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Trichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Trichlorofluoromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Vinyl chloride	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Surrogate: Dibromofluoromethane (80-120%)				*99 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*95 %*				
Surrogate: Toluene-d8 (80-120%)				*99 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0054-01 (40TH+SALT-GRAB - Water)								
Chrysene	EPA 625	P1L0613	10	ND	1	12/6/01	12/11/01	
Phenol	EPA 625	P1L0613	10	ND	1	12/6/01	12/11/01	
Benzoic acid	EPA 625	P1L0613	50	**67**	1	12/6/01	12/11/01	
Surrogate: 2-Fluorophenol (20-120%)				*54 %*				
Surrogate: Phenol-d6 (15-115%)				*58 %*				
Surrogate: 2,4,6-Tribromophenol (35-135%)				*78 %*				
Surrogate: Nitrobenzene-d5 (25-120%)				*60 %*				
Surrogate: 2-Fluorobiphenyl (25-145%)				*66 %*				
Surrogate: Terphenyl-d14 (40-130%)				*82 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ042

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0054-01 (40TH+SALT-GRAB - Water)								
4,4'-DDE	EPA 608	I1L0730	0.10	ND	1	12/7/01	12/11/01	
Surrogate: Tetrachloro-m-xylene (30-120%)				*62 %*				
Surrogate: Decachlorobiphenyl (30-120%)				*69 %*				

DEL MAR ANALYTICAL, IRVINE (AZ0428)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1123 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1123-BLK1)										
Total Recoverable Hydrocarbons	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1123-BS1)										
Total Recoverable Hydrocarbons	**12.0**	1.0	mg/l	10.0		120	95-145			
LCS Dup Analyzed: 12/11/01 (P1L1123-BSD1)										
Total Recoverable Hydrocarbons	**12.3**	1.0	mg/l	10.0		123	95-145	2	20	

Beth Price For Linda Eshelman
Project Manager

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1122 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1122-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1122-BS1)										
Oil & Grease	12.0	1.0	mg/l	10.0		120	90-145			
LCS Dup Analyzed: 12/11/01 (P1L1122-BSD1)										
Oil & Grease	12.7	1.0	mg/l	10.0		127	90-145	6	20	

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Blank Analyzed: 12/17/01 (P1L1725-BLK1)										
Acetone	ND	20	ug/l							T2
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Analyzed: 12/17/01 (P1L1725-BS1)										
Acetone	ND	20	ug/l	25.0		66	40-150			T2
Benzene	23.6	2.0	ug/l	25.0		94	37-151			
Bromodichloromethane	23.8	2.0	ug/l	25.0		95	35-155			
Bromoform	23.9	5.0	ug/l	25.0		96	45-169			
Bromomethane	24.2	5.0	ug/l	25.0		97	5-242			
Carbon tetrachloride	25.3	2.5	ug/l	25.0		101	70-140			
Chlorobenzene	23.3	2.0	ug/l	25.0		93	37-160			
Dibromochloromethane	23.8	2.0	ug/l	25.0		95	53-149			
Chloroethane	23.9	5.0	ug/l	25.0		96	14-230			
Chloroform	23.8	2.0	ug/l	25.0		95	51-138			
Chloromethane	21.1	5.0	ug/l	25.0		84	5-273			
1,2-Dichlorobenzene	22.6	2.0	ug/l	25.0		90	18-190			
1,3-Dichlorobenzene	22.6	2.0	ug/l	25.0		90	59-156			
1,4-Dichlorobenzene	23.3	2.0	ug/l	25.0		93	18-190			
1,1-Dichloroethane	24.0	2.0	ug/l	25.0		96	59-155			
1,2-Dichloroethane	24.7	2.0	ug/l	25.0		99	49-155			
1,1-Dichloroethene	24.4	5.0	ug/l	25.0		98	5-234			
trans-1,2-Dichloroethene	23.7	2.0	ug/l	25.0		95	54-156			
1,2-Dichloropropane	24.7	2.0	ug/l	25.0		99	5-210			
cis-1,3-Dichloropropene	25.2	2.0	ug/l	25.0		101	5-227			
trans-1,3-Dichloropropene	23.1	2.0	ug/l	25.0		92	17-183			
Ethylbenzene	25.4	2.0	ug/l	25.0		102	37-162			
Methylene chloride	21.2	5.0	ug/l	25.0		85	5-221			
1,1,2,2-Tetrachloroethane	23.1	2.0	ug/l	25.0		92	46-157			
Tetrachloroethene	25.4	2.0	ug/l	25.0		102	64-148			
Toluene	23.8	2.0	ug/l	25.0		95	47-150			
1,1,1-Trichloroethane	25.1	2.0	ug/l	25.0		100	52-162			
1,1,2-Trichloroethane	23.8	2.0	ug/l	25.0		95	52-150			
Trichloroethene	25.2	2.0	ug/l	25.0		101	71-157			
Trichlorofluoromethane	24.5	5.0	ug/l	25.0		98	17-181			
Vinyl chloride	23.5	2.0	ug/l	25.0		94	5-251			
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Dup Analyzed: 12/17/01 (P1L1725-BSD1)										
Acetone	ND	20	ug/l	25.0		74	40-150	10	20	T2
Benzene	**26.3**	2.0	ug/l	25.0		105	37-151	11	20	
Bromodichloromethane	**26.0**	2.0	ug/l	25.0		104	35-155	9	20	
Bromoform	**25.3**	5.0	ug/l	25.0		101	45-169	6	20	
Bromomethane	**27.8**	5.0	ug/l	25.0		111	5-242	14	20	
Carbon tetrachloride	**28.0**	2.5	ug/l	25.0		112	70-140	10	20	
Chlorobenzene	**26.2**	2.0	ug/l	25.0		105	37-160	12	20	
Dibromochloromethane	**25.8**	2.0	ug/l	25.0		103	53-149	8	20	
Chloroethane	**27.4**	5.0	ug/l	25.0		110	14-230	14	20	
Chloroform	**26.4**	2.0	ug/l	25.0		106	51-138	10	20	
Chloromethane	**24.3**	5.0	ug/l	25.0		97	5-273	14	20	
1,2-Dichlorobenzene	**25.5**	2.0	ug/l	25.0		102	18-190	12	20	
1,3-Dichlorobenzene	**25.2**	2.0	ug/l	25.0		101	59-156	11	20	
1,4-Dichlorobenzene	**25.6**	2.0	ug/l	25.0		102	18-190	9	20	
1,1-Dichloroethane	**26.5**	2.0	ug/l	25.0		106	59-155	10	20	
1,2-Dichloroethane	**27.0**	2.0	ug/l	25.0		108	49-155	9	20	
1,1-Dichloroethene	**27.4**	5.0	ug/l	25.0		110	5-234	12	20	
trans-1,2-Dichloroethene	**26.4**	2.0	ug/l	25.0		106	54-156	11	20	
1,2-Dichloropropane	**27.3**	2.0	ug/l	25.0		109	5-210	10	20	
cis-1,3-Dichloropropene	**27.6**	2.0	ug/l	25.0		110	5-227	9	20	
trans-1,3-Dichloropropene	**25.1**	2.0	ug/l	25.0		100	17-183	8	20	
Ethylbenzene	**28.8**	2.0	ug/l	25.0		115	37-162	13	20	
Methylene chloride	**24.7**	5.0	ug/l	25.0		99	5-221	15	20	
1,1,2,2-Tetrachloroethane	**24.7**	2.0	ug/l	25.0		99	46-157	7	20	
Tetrachloroethene	**28.4**	2.0	ug/l	25.0		114	64-148	11	20	
Toluene	**26.4**	2.0	ug/l	25.0		106	47-150	10	20	
1,1,1-Trichloroethane	**28.0**	2.0	ug/l	25.0		112	52-162	11	20	
1,1,2-Trichloroethane	**26.1**	2.0	ug/l	25.0		104	52-150	9	20	
Trichloroethene	**28.0**	2.0	ug/l	25.0		112	71-157	11	20	
Trichlorofluoromethane	**27.7**	5.0	ug/l	25.0		111	17-181	12	20	
Vinyl chloride	**21.0**	2.0	ug/l	25.0		84	5-251	11	20	
Surrogate: Dibromofluoromethane	*24.0*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Analyzed: 12/17/01 (P1L1725-MS1)					Source: PKL0127-01RE1					
Acetone	1020	1000	ug/l	1250	ND	82	25-150			T2
Benzene	1240	100	ug/l	1250	ND	99	37-151			
Bromodichloromethane	1210	100	ug/l	1250	ND	97	35-155			
Bromoform	1130	250	ug/l	1250	ND	90	45-169			
Bromomethane	1330	250	ug/l	1250	ND	106	5-242			
Carbon tetrachloride	1300	120	ug/l	1250	ND	104	70-140			
Chlorobenzene	1210	100	ug/l	1250	ND	97	37-160			
Dibromochloromethane	1170	100	ug/l	1250	ND	94	53-149			
Chloroethane	1310	250	ug/l	1250	ND	105	14-230			
Chloroform	1270	100	ug/l	1250	ND	102	51-138			
Chloromethane	1120	250	ug/l	1250	ND	90	5-273			
1,2-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,3-Dichlorobenzene	1190	100	ug/l	1250	ND	95	59-156			
1,4-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,1-Dichloroethane	1270	100	ug/l	1250	ND	102	59-155			
1,2-Dichloroethane	1270	100	ug/l	1250	ND	102	49-155			
1,1-Dichloroethene	1310	250	ug/l	1250	ND	105	5-234			
trans-1,2-Dichloroethene	1260	100	ug/l	1250	ND	101	54-156			
1,2-Dichloropropane	1270	100	ug/l	1250	ND	102	5-210			
cis-1,3-Dichloropropene	1260	100	ug/l	1250	ND	101	5-227			
trans-1,3-Dichloropropene	1140	100	ug/l	1250	ND	91	17-183			
Ethylbenzene	1330	100	ug/l	1250	ND	106	37-162			
Methylene chloride	1170	250	ug/l	1250	ND	94	5-221			
1,1,2,2-Tetrachloroethane	1140	100	ug/l	1250	ND	91	46-157			
Tetrachloroethene	1320	100	ug/l	1250	ND	106	64-148			
Toluene	1230	100	ug/l	1250	ND	98	47-150			
1,1,1-Trichloroethane	1320	100	ug/l	1250	ND	106	52-162			
1,1,2-Trichloroethane	1190	100	ug/l	1250	ND	95	52-150			
Trichloroethene	1320	100	ug/l	1250	ND	106	71-157			
Trichlorofluoromethane	1260	250	ug/l	1250	ND	101	17-181			
Vinyl chloride	990	100	ug/l	1250	ND	79	5-251			
Surrogate: Dibromofluoromethane	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Dup Analyzed: 12/17/01 (P1L1725-MSD1)					Source: PKL0127-01RE1					
Acetone	1050	1000	ug/l	1250	ND	84	25-150	3	20	T2
Benzene	1200	100	ug/l	1250	ND	96	37-151	3	20	
Bromodichloromethane	1170	100	ug/l	1250	ND	94	35-155	3	20	
Bromoform	1150	250	ug/l	1250	ND	92	45-169	2	20	
Bromomethane	1270	250	ug/l	1250	ND	102	5-242	5	20	
Carbon tetrachloride	1270	120	ug/l	1250	ND	102	70-140	2	20	
Chlorobenzene	1160	100	ug/l	1250	ND	93	37-160	4	20	
Dibromochloromethane	1160	100	ug/l	1250	ND	93	53-149	0.9	20	
Chloroethane	1270	250	ug/l	1250	ND	102	14-230	3	20	
Chloroform	1200	100	ug/l	1250	ND	96	51-138	6	20	
Chloromethane	1080	250	ug/l	1250	ND	86	5-273	4	20	
1,2-Dichlorobenzene	1170	100	ug/l	1250	ND	94	18-190	3	20	
1,3-Dichlorobenzene	1130	100	ug/l	1250	ND	90	59-156	5	20	
1,4-Dichlorobenzene	1170	100	ug/l	1250	ND	94	18-190	3	20	
1,1-Dichloroethane	1200	100	ug/l	1250	ND	96	59-155	6	20	
1,2-Dichloroethane	1220	100	ug/l	1250	ND	98	49-155	4	20	
1,1-Dichloroethene	1230	250	ug/l	1250	ND	98	5-234	6	20	
trans-1,2-Dichloroethene	1200	100	ug/l	1250	ND	96	54-156	5	20	
1,2-Dichloropropane	1220	100	ug/l	1250	ND	98	5-210	4	20	
cis-1,3-Dichloropropene	1230	100	ug/l	1250	ND	98	5-227	2	20	
trans-1,3-Dichloropropene	1130	100	ug/l	1250	ND	90	17-183	0.9	20	
Ethylbenzene	1270	100	ug/l	1250	ND	102	37-162	5	20	
Methylene chloride	1120	250	ug/l	1250	ND	90	5-221	4	20	
1,1,2,2-Tetrachloroethane	1180	100	ug/l	1250	ND	94	46-157	3	20	
Tetrachloroethene	1270	100	ug/l	1250	ND	102	64-148	4	20	
Toluene	1190	100	ug/l	1250	ND	95	47-150	3	20	
1,1,1-Trichloroethane	1270	100	ug/l	1250	ND	102	52-162	4	20	
1,1,2-Trichloroethane	1200	100	ug/l	1250	ND	96	52-150	0.8	20	
Trichloroethene	1270	100	ug/l	1250	ND	102	71-157	4	20	
Trichlorofluoromethane	1190	250	ug/l	1250	ND	95	17-181	6	20	
Vinyl chloride	878	100	ug/l	1250	ND	70	5-251	12	20	
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Blank Analyzed: 12/11/01 (P1L0613-BLK1)										
Chrysene	ND	10	ug/l							
Phenol	ND	10	ug/l							
Benzoic acid	ND	50	ug/l							
Surrogate: 2-Fluorophenol	*56.2*		*ug/l*	*100*		*56*	*20-120*			
Surrogate: Phenol-d6	*32.1*		*ug/l*	*100*		*32*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*73.0*		*ug/l*	*100*		*73*	*35-135*			
Surrogate: Nitrobenzene-d5	*32.4*		*ug/l*	*50.0*		*65*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*30.3*		*ug/l*	*50.0*		*61*	*25-145*			
Surrogate: Terphenyl-d14	*39.6*		*ug/l*	*50.0*		*79*	*40-130*			
LCS Analyzed: 12/11/01 (P1L0613-BS1)										
Chrysene	**49.1**	10	ug/l	50.0		98	17-168			
Phenol	**41.4**	10	ug/l	50.0		83	5-112			
Surrogate: 2-Fluorophenol	*66.9*		*ug/l*	*100*		*67*	*20-120*			
Surrogate: Phenol-d6	*71.3*		*ug/l*	*100*		*71*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*93.1*		*ug/l*	*100*		*93*	*35-135*			
Surrogate: Nitrobenzene-d5	*37.0*		*ug/l*	*50.0*		*74*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.4*		*ug/l*	*50.0*		*77*	*25-145*			
Surrogate: Terphenyl-d14	*44.4*		*ug/l*	*50.0*		*89*	*40-130*			
LCS Dup Analyzed: 12/11/01 (P1L0613-BSD1)										
Chrysene	**49.6**	10	ug/l	50.0		99	17-168	1	20	
Phenol	**39.8**	10	ug/l	50.0		80	5-112	4	20	
Surrogate: 2-Fluorophenol	*65.9*		*ug/l*	*100*		*66*	*20-120*			
Surrogate: Phenol-d6	*69.4*		*ug/l*	*100*		*69*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*91.7*		*ug/l*	*100*		*92*	*35-135*			
Surrogate: Nitrobenzene-d5	*36.2*		*ug/l*	*50.0*		*72*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.0*		*ug/l*	*50.0*		*76*	*25-145*			
Surrogate: Terphenyl-d14	*44.6*		*ug/l*	*50.0*		*89*	*40-130*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Matrix Spike Analyzed: 12/11/01 (P1L0613-MS1)					Source: PKL0039-02					
Chrysene	51.6	10	ug/l	50.0	ND	103	17-168			
Phenol	46.0	10	ug/l	50.0	ND	92	5-112			
Surrogate: 2-Fluorophenol	*73.4*		*ug/l*	*100*		*73*	*20-120*			
Surrogate: Phenol-d6	*76.8*		*ug/l*	*100*		*77*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.2*		*ug/l*	*100*		*90*	*35-135*			
Surrogate: Nitrobenzene-d5	*45.7*		*ug/l*	*50.0*		*91*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*45.2*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.1*		*ug/l*	*50.0*		*92*	*40-130*			
Matrix Spike Dup Analyzed: 12/11/01 (P1L0613-MSD1)					Source: PKL0039-02					
Chrysene	50.6	10	ug/l	50.0	ND	101	17-168	2	20	
Phenol	44.1	10	ug/l	50.0	ND	88	5-112	4	20	
Surrogate: 2-Fluorophenol	*71.4*		*ug/l*	*100*		*71*	*20-120*			
Surrogate: Phenol-d6	*73.6*		*ug/l*	*100*		*74*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*88.3*		*ug/l*	*100*		*88*	*35-135*			
Surrogate: Nitrobenzene-d5	*44.4*		*ug/l*	*50.0*		*89*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*44.9*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.4*		*ug/l*	*50.0*		*93*	*40-130*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
Blank Analyzed: 12/10/01 (I1L0730-BLK1)										
Aldrin	ND	0.10	ug/l							
alpha-BHC	ND	0.10	ug/l							
beta-BHC	ND	0.10	ug/l							
delta-BHC	ND	0.20	ug/l							
gamma-BHC (Lindane)	ND	0.10	ug/l							
Chlordane	ND	1.0	ug/l							
4,4'-DDD	ND	0.10	ug/l							
4,4'-DDE	ND	0.10	ug/l							
4,4'-DDT	ND	0.10	ug/l							
Dieldrin	ND	0.10	ug/l							
Endosulfan I	ND	0.10	ug/l							
Endosulfan II	ND	0.10	ug/l							
Endosulfan sulfate	ND	0.20	ug/l							
Endrin	ND	0.10	ug/l							
Endrin aldehyde	ND	0.10	ug/l							
Endrin ketone	ND	0.10	ug/l							
Heptachlor	ND	0.10	ug/l							
Heptachlor epoxide	ND	0.10	ug/l							
Methoxychlor	ND	0.10	ug/l							
Toxaphene	ND	5.0	ug/l							
Surrogate: Tetrachloro-m-xylene	*0.366*		*ug/l*	*0.500*		*73*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.515*		*ug/l*	*0.500*		*103*	*30-120*			
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Aldrin	**0.382**	0.10	ug/l	0.500		76	42-115			
alpha-BHC	**0.378**	0.10	ug/l	0.500		76	37-115			
beta-BHC	**0.439**	0.10	ug/l	0.500		88	45-115			
delta-BHC	**0.465**	0.20	ug/l	0.500		93	45-130			
gamma-BHC (Lindane)	**0.418**	0.10	ug/l	0.500		84	40-115			
4,4'-DDD	**0.542**	0.10	ug/l	0.500		108	55-120			
4,4'-DDE	**0.487**	0.10	ug/l	0.500		97	50-115			
4,4'-DDT	**0.520**	0.10	ug/l	0.500		104	55-115			
Dieldrin	**0.444**	0.10	ug/l	0.500		89	50-115			
Endosulfan I	**0.410**	0.10	ug/l	0.500		82	45-115			
Endosulfan II	**0.434**	0.10	ug/l	0.500		87	50-115			
Endosulfan sulfate	**0.460**	0.20	ug/l	0.500		92	65-120			
Endrin	**0.452**	0.10	ug/l	0.500		90	45-115			

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Endrin aldehyde	**0.496**	0.10	ug/l	0.500		99	45-115			
Endrin ketone	**0.471**	0.10	ug/l	0.500		94	55-140			
Heptachlor	**0.412**	0.10	ug/l	0.500		82	35-115			
Heptachlor epoxide	**0.410**	0.10	ug/l	0.500		82	40-115			
Methoxychlor	**0.528**	0.10	ug/l	0.500		106	55-120			
Surrogate: Tetrachloro-m-xylene	*0.336*		*ug/l*	*0.500*		*67*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.495*		*ug/l*	*0.500*		*99*	*30-120*			
LCS Dup Analyzed: 12/11/01 (I1L0730-BSD1)										
Aldrin	**0.357**	0.10	ug/l	0.500		71	42-115	7	20	Q8
alpha-BHC	**0.330**	0.10	ug/l	0.500		66	37-115	14	20	Q8
beta-BHC	**0.415**	0.10	ug/l	0.500		83	45-115	6	20	Q8
delta-BHC	**0.443**	0.20	ug/l	0.500		89	45-130	5	20	Q8
gamma-BHC (Lindane)	**0.377**	0.10	ug/l	0.500		75	40-115	10	20	Q8
4,4'-DDD	**0.544**	0.10	ug/l	0.500		109	55-120	0.4	20	Q8
4,4'-DDE	**0.482**	0.10	ug/l	0.500		96	50-115	1	20	Q8
4,4'-DDT	**0.513**	0.10	ug/l	0.500		103	55-115	1	20	Q8
Dieldrin	**0.439**	0.10	ug/l	0.500		88	50-115	1	20	Q8
Endosulfan I	**0.402**	0.10	ug/l	0.500		80	45-115	2	20	Q8
Endosulfan II	**0.433**	0.10	ug/l	0.500		87	50-115	0.2	20	Q8
Endosulfan sulfate	**0.461**	0.20	ug/l	0.500		92	65-120	0.2	20	Q8
Endrin	**0.447**	0.10	ug/l	0.500		89	45-115	1	20	Q8
Endrin aldehyde	**0.465**	0.10	ug/l	0.500		93	45-115	6	20	Q8
Endrin ketone	**0.472**	0.10	ug/l	0.500		94	55-140	0.2	20	Q8
Heptachlor	**0.378**	0.10	ug/l	0.500		76	35-115	9	20	Q8
Heptachlor epoxide	**0.396**	0.10	ug/l	0.500		79	40-115	3	20	Q8
Methoxychlor	**0.513**	0.10	ug/l	0.500		103	55-120	3	20	Q8
Surrogate: Tetrachloro-m-xylene	*0.259*		*ug/l*	*0.500*		*52*	*30-120*			*Q8*
Surrogate: Decachlorobiphenyl	*0.491*		*ug/l*	*0.500*		*98*	*30-120*			*Q8*

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0054

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

Q8 Insufficient sample received to meet method QC requirements. QC requirements satisfy ADEQ policies 0154 and 0155.

T2 Cited ADHS licensed method does not contain this analyte as part of method compound list.

ND Analyte NOT DETECTED at or above the reporting limit

NR Not reported.

RPD Relative Percent Difference

Beth Price For Linda Eshelman
Project Manager

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AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • FAX: (480) 921-0049

Lic. No. AZ0003

LABORATORY REPORT

Client: Del Mar Analytical
9830 S. 51st Street
Suite B120
Phoenix, AZ 85044

Attn: Linda Eshelman

Date Submitted: 12/4/01
Date Reported: 01/02/02

Project: MCFC

RESULTS

Client ID: PKL0045-01
ACT Lab No.: BH09419

Sample Type: Water
Sample Time: 12/04/01 11:20

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	900	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	16000	MPN/100mL	MW

Client ID: PKL0046-01
ACT Lab No.: BH09420

Sample Type: Water
Sample Time: 12/04/01 10:29

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	2400	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0047-01
ACT Lab No.: BH09421

Sample Type: Water
Sample Time: 12/04/01 12:10

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	1600	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	2200	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

RESULTS

Client ID: PKL0048-01
ACT Lab No.: BH09422
Sample Type: Water
Sample Time: 12/04/01 13:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0049-01
ACT Lab No.: BH09423
Sample Type: Water
Sample Time: 12/04/01 12:35

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	3000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0050-01
ACT Lab No.: BH09424
Sample Type: Water
Sample Time: 12/04/01 10:30

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	16000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0051-01
ACT Lab No.: BH09425
Sample Type: Water
Sample Time: 12/04/01 11:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	5000	MPN/100mL	MW

RESULTS

Client ID: PKL0052-01
ACT Lab No.: BH09426
Sample Type: Water
Sample Time: 12/04/01 12:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0053-01
ACT Lab No.: BH09427
Sample Type: Water
Sample Time: 12/04/01 13:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	240	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0054-01
ACT Lab No.: BH09428
Sample Type: Water
Sample Time: 12/04/01 13:50

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Reviewed by: _____
Frederick A. Amalfi, Ph.D.
Laboratory Director

ba

Del Mar Analytical

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/19/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0052-01	43RD+PEORIA-GRAB	Water
PKL0052-02	TRIP BLANK	Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: Analysis was subcontracted to Aquatic Consult. & Testing - 1525 W. University Dr., #106, Tempe, AZ (AZ0003). Results are attached.

QA/QC CRITERIA: All analyses met method criteria.

EXPLANATION OF DATA QUALIFIERS: No further explanation of data qualifiers needed.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0052-01 (43RD+PEORIA-GRAB - Water)								
Total Recoverable Hydrocarbon	EPA 418.1	P1L1123	1.0	6.7	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ042(

Beth Price For Linda Eshelman
Project Manager

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Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0052-01 (43RD+PEORIA-GRAB - Water)								
Oil & Grease	EPA 413.2	P1L1122	1.0	**10**	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0052-01 (43RD+PEORIA-GRAB - Water)								
Acetone	EPA 624	P1L1817	20	**25**	1	12/18/01	12/18/01	T2
Benzene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Bromodichloromethane	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Bromoform	EPA 624	P1L1817	5.0	ND	1	12/18/01	12/18/01	
Bromomethane	EPA 624	P1L1817	5.0	ND	1	12/18/01	12/18/01	
Carbon tetrachloride	EPA 624	P1L1817	2.5	ND	1	12/18/01	12/18/01	
Chlorobenzene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Dibromochloromethane	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Chloroethane	EPA 624	P1L1817	5.0	ND	1	12/18/01	12/18/01	
Chloroform	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Chloromethane	EPA 624	P1L1817	5.0	ND	1	12/18/01	12/18/01	
1,2-Dichlorobenzene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
1,3-Dichlorobenzene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
1,4-Dichlorobenzene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
1,1-Dichloroethane	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
1,2-Dichloroethane	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
1,1-Dichloroethene	EPA 624	P1L1817	5.0	ND	1	12/18/01	12/18/01	
trans-1,2-Dichloroethene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
1,2-Dichloropropane	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
cis-1,3-Dichloropropene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
trans-1,3-Dichloropropene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Ethylbenzene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Methylene chloride	EPA 624	P1L1817	5.0	ND	1	12/18/01	12/18/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Tetrachloroethene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Toluene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
1,1,1-Trichloroethane	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
1,1,2-Trichloroethane	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Trichloroethene	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Trichlorofluoromethane	EPA 624	P1L1817	5.0	ND	1	12/18/01	12/18/01	
Vinyl chloride	EPA 624	P1L1817	2.0	ND	1	12/18/01	12/18/01	
Surrogate: Dibromofluoromethane (80-120%)				*93 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*93 %*				
Surrogate: Toluene-d8 (80-120%)				*97 %*				

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0052-02 (TRIP BLANK - Water)								
Acetone	EPA 624	P1L1725	20	ND	1	12/17/01	12/18/01	T2
Benzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Bromodichloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Bromoform	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Bromomethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Carbon tetrachloride	EPA 624	P1L1725	2.5	ND	1	12/17/01	12/18/01	
Chlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Dibromochloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Chloroethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Chloroform	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Chloromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
1,2-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,3-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,4-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,2-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1-Dichloroethene	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
trans-1,2-Dichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,2-Dichloropropane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
cis-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
trans-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Ethylbenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Methylene chloride	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Tetrachloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Toluene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1,1-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
1,1,2-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Trichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Trichlorofluoromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/18/01	
Vinyl chloride	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/18/01	
Surrogate: Dibromofluoromethane (80-120%)				*99 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*97 %*				
Surrogate: Toluene-d8 (80-120%)				*100 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0052-01 (43RD+PEORIA-GRAB - Water)								
Chrysene	EPA 625	P1L0613	10	ND	1	12/6/01	12/13/01	
Phenol	EPA 625	P1L0613	10	ND	1	12/6/01	12/13/01	
Benzoic acid	EPA 625	P1L0613	50	ND	1	12/6/01	12/13/01	
Surrogate: 2-Fluorophenol (20-120%)				*61 %*				
Surrogate: Phenol-d6 (15-115%)				*63 %*				
Surrogate: 2,4,6-Tribromophenol (35-135%)				*71 %*				
Surrogate: Nitrobenzene-d5 (25-120%)				*74 %*				
Surrogate: 2-Fluorobiphenyl (25-145%)				*81 %*				
Surrogate: Terphenyl-d14 (40-130%)				*86 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0052-01 (43RD+PEORIA-GRAB - Water)								
4,4'-DDE	EPA 608	I1L0730	0.10	ND	0.952	12/7/01	12/11/01	
Surrogate: Tetrachloro-m-xylene (30-120%)				*59 %*				
Surrogate: Decachlorobiphenyl (30-120%)				*75 %*				

DEL MAR ANALYTICAL, IRVINE (AZ0428)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1123 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1123-BLK1)										
Total Recoverable Hydrocarbons	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1123-BS1)										
Total Recoverable Hydrocarbons	**12.0**	1.0	mg/l	10.0		120	95-145			
LCS Dup Analyzed: 12/11/01 (P1L1123-BSD1)										
Total Recoverable Hydrocarbons	**12.3**	1.0	mg/l	10.0		123	95-145	2	20	

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1122 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1122-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1122-BS1)										
Oil & Grease	**12.0**	1.0	mg/l	10.0		120	90-145			
LCS Dup Analyzed: 12/11/01 (P1L1122-BSD1)										
Oil & Grease	**12.7**	1.0	mg/l	10.0		127	90-145	6	20	

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Maricopa County -Flood Control District
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Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Blank Analyzed: 12/17/01 (P1L1725-BLK1)										
Acetone	ND	20	ug/l							T2
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			

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Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Analyzed: 12/17/01 (P1L1725-BS1)										
Acetone	ND	20	ug/l	25.0		66	40-150			T2
Benzene	23.6	2.0	ug/l	25.0		94	37-151			
Bromodichloromethane	23.8	2.0	ug/l	25.0		95	35-155			
Bromoform	23.9	5.0	ug/l	25.0		96	45-169			
Bromomethane	24.2	5.0	ug/l	25.0		97	5-242			
Carbon tetrachloride	25.3	2.5	ug/l	25.0		101	70-140			
Chlorobenzene	23.3	2.0	ug/l	25.0		93	37-160			
Dibromochloromethane	23.8	2.0	ug/l	25.0		95	53-149			
Chloroethane	23.9	5.0	ug/l	25.0		96	14-230			
Chloroform	23.8	2.0	ug/l	25.0		95	51-138			
Chloromethane	21.1	5.0	ug/l	25.0		84	5-273			
1,2-Dichlorobenzene	22.6	2.0	ug/l	25.0		90	18-190			
1,3-Dichlorobenzene	22.6	2.0	ug/l	25.0		90	59-156			
1,4-Dichlorobenzene	23.3	2.0	ug/l	25.0		93	18-190			
1,1-Dichloroethane	24.0	2.0	ug/l	25.0		96	59-155			
1,2-Dichloroethane	24.7	2.0	ug/l	25.0		99	49-155			
1,1-Dichloroethene	24.4	5.0	ug/l	25.0		98	5-234			
trans-1,2-Dichloroethene	23.7	2.0	ug/l	25.0		95	54-156			
1,2-Dichloropropane	24.7	2.0	ug/l	25.0		99	5-210			
cis-1,3-Dichloropropene	25.2	2.0	ug/l	25.0		101	5-227			
trans-1,3-Dichloropropene	23.1	2.0	ug/l	25.0		92	17-183			
Ethylbenzene	25.4	2.0	ug/l	25.0		102	37-162			
Methylene chloride	21.2	5.0	ug/l	25.0		85	5-221			
1,1,2,2-Tetrachloroethane	23.1	2.0	ug/l	25.0		92	46-157			
Tetrachloroethene	25.4	2.0	ug/l	25.0		102	64-148			
Toluene	23.8	2.0	ug/l	25.0		95	47-150			
1,1,1-Trichloroethane	25.1	2.0	ug/l	25.0		100	52-162			
1,1,2-Trichloroethane	23.8	2.0	ug/l	25.0		95	52-150			
Trichloroethene	25.2	2.0	ug/l	25.0		101	71-157			
Trichlorofluoromethane	24.5	5.0	ug/l	25.0		98	17-181			
Vinyl chloride	23.5	2.0	ug/l	25.0		94	5-251			
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Dup Analyzed: 12/17/01 (P1L1725-BSD1)										
Acetone	ND	20	ug/l	25.0		74	40-150	10	20	T2
Benzene	**26.3**	2.0	ug/l	25.0		105	37-151	11	20	
Bromodichloromethane	**26.0**	2.0	ug/l	25.0		104	35-155	9	20	
Bromoform	**25.3**	5.0	ug/l	25.0		101	45-169	6	20	
Bromomethane	**27.8**	5.0	ug/l	25.0		111	5-242	14	20	
Carbon tetrachloride	**28.0**	2.5	ug/l	25.0		112	70-140	10	20	
Chlorobenzene	**26.2**	2.0	ug/l	25.0		105	37-160	12	20	
Dibromochloromethane	**25.8**	2.0	ug/l	25.0		103	53-149	8	20	
Chloroethane	**27.4**	5.0	ug/l	25.0		110	14-230	14	20	
Chloroform	**26.4**	2.0	ug/l	25.0		106	51-138	10	20	
Chloromethane	**24.3**	5.0	ug/l	25.0		97	5-273	14	20	
1,2-Dichlorobenzene	**25.5**	2.0	ug/l	25.0		102	18-190	12	20	
1,3-Dichlorobenzene	**25.2**	2.0	ug/l	25.0		101	59-156	11	20	
1,4-Dichlorobenzene	**25.6**	2.0	ug/l	25.0		102	18-190	9	20	
1,1-Dichloroethane	**26.5**	2.0	ug/l	25.0		106	59-155	10	20	
1,2-Dichloroethane	**27.0**	2.0	ug/l	25.0		108	49-155	9	20	
1,1-Dichloroethene	**27.4**	5.0	ug/l	25.0		110	5-234	12	20	
trans-1,2-Dichloroethene	**26.4**	2.0	ug/l	25.0		106	54-156	11	20	
1,2-Dichloropropane	**27.3**	2.0	ug/l	25.0		109	5-210	10	20	
cis-1,3-Dichloropropene	**27.6**	2.0	ug/l	25.0		110	5-227	9	20	
trans-1,3-Dichloropropene	**25.1**	2.0	ug/l	25.0		100	17-183	8	20	
Ethylbenzene	**28.8**	2.0	ug/l	25.0		115	37-162	13	20	
Methylene chloride	**24.7**	5.0	ug/l	25.0		99	5-221	15	20	
1,1,2,2-Tetrachloroethane	**24.7**	2.0	ug/l	25.0		99	46-157	7	20	
Tetrachloroethene	**28.4**	2.0	ug/l	25.0		114	64-148	11	20	
Toluene	**26.4**	2.0	ug/l	25.0		106	47-150	10	20	
1,1,1-Trichloroethane	**28.0**	2.0	ug/l	25.0		112	52-162	11	20	
1,1,2-Trichloroethane	**26.1**	2.0	ug/l	25.0		104	52-150	9	20	
Trichloroethene	**28.0**	2.0	ug/l	25.0		112	71-157	11	20	
Trichlorofluoromethane	**27.7**	5.0	ug/l	25.0		111	17-181	12	20	
Vinyl chloride	**21.0**	2.0	ug/l	25.0		84	5-251	11	20	
Surrogate: Dibromofluoromethane	*24.0*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Analyzed: 12/17/01 (P1L1725-MS1)					**Source: PKL0127-01RE1**					
Acetone	1020	1000	ug/l	1250	ND	82	25-150			T2
Benzene	1240	100	ug/l	1250	ND	99	37-151			
Bromodichloromethane	1210	100	ug/l	1250	ND	97	35-155			
Bromoform	1130	250	ug/l	1250	ND	90	45-169			
Bromomethane	1330	250	ug/l	1250	ND	106	5-242			
Carbon tetrachloride	1300	120	ug/l	1250	ND	104	70-140			
Chlorobenzene	1210	100	ug/l	1250	ND	97	37-160			
Dibromochloromethane	1170	100	ug/l	1250	ND	94	53-149			
Chloroethane	1310	250	ug/l	1250	ND	105	14-230			
Chloroform	1270	100	ug/l	1250	ND	102	51-138			
Chloromethane	1120	250	ug/l	1250	ND	90	5-273			
1,2-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,3-Dichlorobenzene	1190	100	ug/l	1250	ND	95	59-156			
1,4-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,1-Dichloroethane	1270	100	ug/l	1250	ND	102	59-155			
1,2-Dichloroethane	1270	100	ug/l	1250	ND	102	49-155			
1,1-Dichloroethene	1310	250	ug/l	1250	ND	105	5-234			
trans-1,2-Dichloroethene	1260	100	ug/l	1250	ND	101	54-156			
1,2-Dichloropropane	1270	100	ug/l	1250	ND	102	5-210			
cis-1,3-Dichloropropene	1260	100	ug/l	1250	ND	101	5-227			
trans-1,3-Dichloropropene	1140	100	ug/l	1250	ND	91	17-183			
Ethylbenzene	1330	100	ug/l	1250	ND	106	37-162			
Methylene chloride	1170	250	ug/l	1250	ND	94	5-221			
1,1,2,2-Tetrachloroethane	1140	100	ug/l	1250	ND	91	46-157			
Tetrachloroethene	1320	100	ug/l	1250	ND	106	64-148			
Toluene	1230	100	ug/l	1250	ND	98	47-150			
1,1,1-Trichloroethane	1320	100	ug/l	1250	ND	106	52-162			
1,1,2-Trichloroethane	1190	100	ug/l	1250	ND	95	52-150			
Trichloroethene	1320	100	ug/l	1250	ND	106	71-157			
Trichlorofluoromethane	1260	250	ug/l	1250	ND	101	17-181			
Vinyl chloride	990	100	ug/l	1250	ND	79	5-251			
Surrogate: Dibromofluoromethane	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Dup Analyzed: 12/17/01 (P1L1725-MSD1)					**Source: PKL0127-01RE1**					
Acetone	**1050**	1000	ug/l	1250	ND	84	25-150	3	20	T2
Benzene	**1200**	100	ug/l	1250	ND	96	37-151	3	20	
Bromodichloromethane	**1170**	100	ug/l	1250	ND	94	35-155	3	20	
Bromoform	**1150**	250	ug/l	1250	ND	92	45-169	2	20	
Bromomethane	**1270**	250	ug/l	1250	ND	102	5-242	5	20	
Carbon tetrachloride	**1270**	120	ug/l	1250	ND	102	70-140	2	20	
Chlorobenzene	**1160**	100	ug/l	1250	ND	93	37-160	4	20	
Dibromochloromethane	**1160**	100	ug/l	1250	ND	93	53-149	0.9	20	
Chloroethane	**1270**	250	ug/l	1250	ND	102	14-230	3	20	
Chloroform	**1200**	100	ug/l	1250	ND	96	51-138	6	20	
Chloromethane	**1080**	250	ug/l	1250	ND	86	5-273	4	20	
1,2-Dichlorobenzene	**1170**	100	ug/l	1250	ND	94	18-190	3	20	
1,3-Dichlorobenzene	**1130**	100	ug/l	1250	ND	90	59-156	5	20	
1,4-Dichlorobenzene	**1170**	100	ug/l	1250	ND	94	18-190	3	20	
1,1-Dichloroethane	**1200**	100	ug/l	1250	ND	96	59-155	6	20	
1,2-Dichloroethane	**1220**	100	ug/l	1250	ND	98	49-155	4	20	
1,1-Dichloroethene	**1230**	250	ug/l	1250	ND	98	5-234	6	20	
trans-1,2-Dichloroethene	**1200**	100	ug/l	1250	ND	96	54-156	5	20	
1,2-Dichloropropane	**1220**	100	ug/l	1250	ND	98	5-210	4	20	
cis-1,3-Dichloropropene	**1230**	100	ug/l	1250	ND	98	5-227	2	20	
trans-1,3-Dichloropropene	**1130**	100	ug/l	1250	ND	90	17-183	0.9	20	
Ethylbenzene	**1270**	100	ug/l	1250	ND	102	37-162	5	20	
Methylene chloride	**1120**	250	ug/l	1250	ND	90	5-221	4	20	
1,1,2,2-Tetrachloroethane	**1180**	100	ug/l	1250	ND	94	46-157	3	20	
Tetrachloroethene	**1270**	100	ug/l	1250	ND	102	64-148	4	20	
Toluene	**1190**	100	ug/l	1250	ND	95	47-150	3	20	
1,1,1-Trichloroethane	**1270**	100	ug/l	1250	ND	102	52-162	4	20	
1,1,2-Trichloroethane	**1200**	100	ug/l	1250	ND	96	52-150	0.8	20	
Trichloroethene	**1270**	100	ug/l	1250	ND	102	71-157	4	20	
Trichlorofluoromethane	**1190**	250	ug/l	1250	ND	95	17-181	6	20	
Vinyl chloride	**878**	100	ug/l	1250	ND	70	5-251	12	20	
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1817 Extracted: 12/18/01										
Blank Analyzed: 12/18/01 (P1L1817-BLK1)										
Acetone	ND	20	ug/l							T2
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*24.0*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.8*		*ug/l*	*25.0*		*95*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

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Project Manager

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Maricopa County -Flood Control District
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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1817 Extracted: 12/18/01										
LCS Analyzed: 12/18/01 (P1L1817-BS1)										
Acetone	ND	20	ug/l	25.0		76	40-150			T2
Benzene	**23.8**	2.0	ug/l	25.0		95	37-151			
Bromodichloromethane	**23.8**	2.0	ug/l	25.0		95	35-155			
Bromoform	**23.2**	5.0	ug/l	25.0		93	45-169			
Bromomethane	**25.4**	5.0	ug/l	25.0		102	5-242			
Carbon tetrachloride	**25.1**	2.5	ug/l	25.0		100	70-140			
Chlorobenzene	**22.6**	2.0	ug/l	25.0		90	37-160			
Dibromochloromethane	**22.5**	2.0	ug/l	25.0		90	53-149			
Chloroethane	**25.4**	5.0	ug/l	25.0		102	14-230			
Chloroform	**24.2**	2.0	ug/l	25.0		97	51-138			
Chloromethane	**22.5**	5.0	ug/l	25.0		90	5-273			
1,2-Dichlorobenzene	**23.0**	2.0	ug/l	25.0		92	18-190			
1,3-Dichlorobenzene	**22.6**	2.0	ug/l	25.0		90	59-156			
1,4-Dichlorobenzene	**23.3**	2.0	ug/l	25.0		93	18-190			
1,1-Dichloroethane	**24.4**	2.0	ug/l	25.0		98	59-155			
1,2-Dichloroethane	**25.2**	2.0	ug/l	25.0		101	49-155			
1,1-Dichloroethene	**25.1**	5.0	ug/l	25.0		100	5-234			
trans-1,2-Dichloroethene	**24.0**	2.0	ug/l	25.0		96	54-156			
1,2-Dichloropropane	**25.0**	2.0	ug/l	25.0		100	5-210			
cis-1,3-Dichloropropene	**25.1**	2.0	ug/l	25.0		100	5-227			
trans-1,3-Dichloropropene	**23.1**	2.0	ug/l	25.0		92	17-183			
Ethylbenzene	**24.6**	2.0	ug/l	25.0		98	37-162			
Methylene chloride	**21.6**	5.0	ug/l	25.0		86	5-221			
1,1,2,2-Tetrachloroethane	**23.2**	2.0	ug/l	25.0		93	46-157			
Tetrachloroethene	**24.1**	2.0	ug/l	25.0		96	64-148			
Toluene	**24.1**	2.0	ug/l	25.0		96	47-150			
1,1,1-Trichloroethane	**25.3**	2.0	ug/l	25.0		101	52-162			
1,1,2-Trichloroethane	**24.1**	2.0	ug/l	25.0		96	52-150			
Trichloroethene	**25.2**	2.0	ug/l	25.0		101	71-157			
Trichlorofluoromethane	**24.8**	5.0	ug/l	25.0		99	17-181			
Vinyl chloride	**20.9**	2.0	ug/l	25.0		84	5-251			
Surrogate: Dibromofluoromethane	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.8*		*ug/l*	*25.0*		*95*	*80-120*			
Surrogate: Toluene-d8	*24.8*		*ug/l*	*25.0*		*99*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1817 Extracted: 12/18/01										
LCS Dup Analyzed: 12/18/01 (P1L1817-BSD1)										
Acetone	ND	20	ug/l	25.0		67	40-150	12	20	T2
Benzene	23.6	2.0	ug/l	25.0		94	37-151	0.8	20	
Bromodichloromethane	23.2	2.0	ug/l	25.0		93	35-155	3	20	
Bromoform	21.5	5.0	ug/l	25.0		86	45-169	8	20	
Bromomethane	25.5	5.0	ug/l	25.0		102	5-242	0.4	20	
Carbon tetrachloride	25.1	2.5	ug/l	25.0		100	70-140	0	20	
Chlorobenzene	23.3	2.0	ug/l	25.0		93	37-160	3	20	
Dibromochloromethane	22.3	2.0	ug/l	25.0		89	53-149	0.9	20	
Chloroethane	25.4	5.0	ug/l	25.0		102	14-230	0	20	
Chloroform	24.1	2.0	ug/l	25.0		96	51-138	0.4	20	
Chloromethane	22.1	5.0	ug/l	25.0		88	5-273	2	20	
1,2-Dichlorobenzene	22.2	2.0	ug/l	25.0		89	18-190	4	20	
1,3-Dichlorobenzene	22.3	2.0	ug/l	25.0		89	59-156	1	20	
1,4-Dichlorobenzene	23.0	2.0	ug/l	25.0		92	18-190	1	20	
1,1-Dichloroethane	24.3	2.0	ug/l	25.0		97	59-155	0.4	20	
1,2-Dichloroethane	24.4	2.0	ug/l	25.0		98	49-155	3	20	
1,1-Dichloroethene	24.9	5.0	ug/l	25.0		100	5-234	0.8	20	
trans-1,2-Dichloroethene	24.3	2.0	ug/l	25.0		97	54-156	1	20	
1,2-Dichloropropane	24.5	2.0	ug/l	25.0		98	5-210	2	20	
cis-1,3-Dichloropropene	24.6	2.0	ug/l	25.0		98	5-227	2	20	
trans-1,3-Dichloropropene	22.2	2.0	ug/l	25.0		89	17-183	4	20	
Ethylbenzene	25.5	2.0	ug/l	25.0		102	37-162	4	20	
Methylene chloride	21.3	5.0	ug/l	25.0		85	5-221	1	20	
1,1,2,2-Tetrachloroethane	21.3	2.0	ug/l	25.0		85	46-157	9	20	
Tetrachloroethene	25.0	2.0	ug/l	25.0		100	64-148	4	20	
Toluene	23.8	2.0	ug/l	25.0		95	47-150	1	20	
1,1,1-Trichloroethane	25.6	2.0	ug/l	25.0		102	52-162	1	20	
1,1,2-Trichloroethane	22.6	2.0	ug/l	25.0		90	52-150	6	20	
Trichloroethene	25.0	2.0	ug/l	25.0		100	71-157	0.8	20	
Trichlorofluoromethane	24.4	5.0	ug/l	25.0		98	17-181	2	20	
Vinyl chloride	20.9	2.0	ug/l	25.0		84	5-251	0	20	
Surrogate: Dibromofluoromethane	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.8*		*ug/l*	*25.0*		*99*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1817 Extracted: 12/18/01										
Matrix Spike Analyzed: 12/18/01 (P1L1817-MS1)					Source: PKL0166-01					
Acetone	22.1	20	ug/l	25.0	ND	88	25-150			T2
Benzene	25.5	2.0	ug/l	25.0	ND	102	37-151			
Bromodichloromethane	25.4	2.0	ug/l	25.0	ND	102	35-155			
Bromoform	23.5	5.0	ug/l	25.0	ND	94	45-169			
Bromomethane	29.4	5.0	ug/l	25.0	ND	118	5-242			
Carbon tetrachloride	26.2	2.5	ug/l	25.0	ND	105	70-140			
Chlorobenzene	24.6	2.0	ug/l	25.0	ND	98	37-160			
Dibromochloromethane	24.2	2.0	ug/l	25.0	ND	97	53-149			
Chloroethane	28.7	5.0	ug/l	25.0	ND	115	14-230			
Chloroform	28.0	2.0	ug/l	25.0	ND	112	51-138			
Chloromethane	24.7	5.0	ug/l	25.0	ND	99	5-273			
1,2-Dichlorobenzene	23.8	2.0	ug/l	25.0	ND	95	18-190			
1,3-Dichlorobenzene	23.8	2.0	ug/l	25.0	ND	95	59-156			
1,4-Dichlorobenzene	24.2	2.0	ug/l	25.0	ND	97	18-190			
1,1-Dichloroethane	27.1	2.0	ug/l	25.0	ND	108	59-155			
1,2-Dichloroethane	28.0	2.0	ug/l	25.0	ND	112	49-155			
1,1-Dichloroethene	27.6	5.0	ug/l	25.0	ND	110	5-234			
trans-1,2-Dichloroethene	26.6	2.0	ug/l	25.0	ND	106	54-156			
1,2-Dichloropropane	26.4	2.0	ug/l	25.0	ND	106	5-210			
cis-1,3-Dichloropropene	26.1	2.0	ug/l	25.0	ND	104	5-227			
trans-1,3-Dichloropropene	24.0	2.0	ug/l	25.0	ND	96	17-183			
Ethylbenzene	27.0	2.0	ug/l	25.0	ND	108	37-162			
Methylene chloride	23.5	5.0	ug/l	25.0	ND	94	5-221			
1,1,2,2-Tetrachloroethane	25.1	2.0	ug/l	25.0	ND	100	46-157			
Tetrachloroethene	32.1	2.0	ug/l	25.0	6.4	103	64-148			
Toluene	25.2	2.0	ug/l	25.0	ND	101	47-150			
1,1,1-Trichloroethane	27.9	2.0	ug/l	25.0	ND	112	52-162			
1,1,2-Trichloroethane	25.8	2.0	ug/l	25.0	ND	103	52-150			
Trichloroethene	39.5	2.0	ug/l	25.0	11	114	71-157			
Trichlorofluoromethane	26.1	5.0	ug/l	25.0	ND	104	17-181			
Vinyl chloride	21.9	2.0	ug/l	25.0	ND	88	5-251			
Surrogate: Dibromofluoromethane	*25.6*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: Toluene-d8	*24.8*		*ug/l*	*25.0*		*99*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1817 Extracted: 12/18/01										
Matrix Spike Dup Analyzed: 12/18/01 (P1L1817-MSD1)					Source: PKL0166-01					
Acetone	ND	20	ug/l	25.0	ND	65	25-150	30	20	R4,T2
Benzene	24.3	2.0	ug/l	25.0	ND	97	37-151	5	20	
Bromodichloromethane	23.6	2.0	ug/l	25.0	ND	94	35-155	7	20	
Bromoform	20.6	5.0	ug/l	25.0	ND	82	45-169	13	20	
Bromomethane	27.2	5.0	ug/l	25.0	ND	109	5-242	8	20	
Carbon tetrachloride	25.5	2.5	ug/l	25.0	ND	102	70-140	3	20	
Chlorobenzene	23.7	2.0	ug/l	25.0	ND	95	37-160	4	20	
Dibromochloromethane	22.0	2.0	ug/l	25.0	ND	88	53-149	10	20	
Chloroethane	26.9	5.0	ug/l	25.0	ND	108	14-230	6	20	
Chloroform	26.3	2.0	ug/l	25.0	ND	105	51-138	6	20	
Chloromethane	23.6	5.0	ug/l	25.0	ND	94	5-273	5	20	
1,2-Dichlorobenzene	22.9	2.0	ug/l	25.0	ND	92	18-190	4	20	
1,3-Dichlorobenzene	23.5	2.0	ug/l	25.0	ND	94	59-156	1	20	
1,4-Dichlorobenzene	23.5	2.0	ug/l	25.0	ND	94	18-190	3	20	
1,1-Dichloroethane	25.6	2.0	ug/l	25.0	ND	102	59-155	6	20	
1,2-Dichloroethane	24.6	2.0	ug/l	25.0	ND	98	49-155	13	20	
1,1-Dichloroethene	26.1	5.0	ug/l	25.0	ND	104	5-234	6	20	
trans-1,2-Dichloroethene	25.1	2.0	ug/l	25.0	ND	100	54-156	6	20	
1,2-Dichloropropane	24.8	2.0	ug/l	25.0	ND	99	5-210	6	20	
cis-1,3-Dichloropropene	24.2	2.0	ug/l	25.0	ND	97	5-227	8	20	
trans-1,3-Dichloropropene	21.6	2.0	ug/l	25.0	ND	86	17-183	11	20	
Ethylbenzene	26.2	2.0	ug/l	25.0	ND	105	37-162	3	20	
Methylene chloride	22.7	5.0	ug/l	25.0	ND	91	5-221	3	20	
1,1,2,2-Tetrachloroethane	20.9	2.0	ug/l	25.0	ND	84	46-157	18	20	
Tetrachloroethene	31.7	2.0	ug/l	25.0	6.4	101	64-148	1	20	
Toluene	24.1	2.0	ug/l	25.0	ND	96	47-150	4	20	
1,1,1-Trichloroethane	26.4	2.0	ug/l	25.0	ND	106	52-162	6	20	
1,1,2-Trichloroethane	22.2	2.0	ug/l	25.0	ND	89	52-150	15	20	
Trichloroethene	38.0	2.0	ug/l	25.0	11	108	71-157	4	20	
Trichlorofluoromethane	24.4	5.0	ug/l	25.0	ND	98	17-181	7	20	
Vinyl chloride	22.4	2.0	ug/l	25.0	ND	90	5-251	2	20	
Surrogate: Dibromofluoromethane	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Blank Analyzed: 12/11/01 (P1L0613-BLK1)										
Chrysene	ND	10	ug/l							
Phenol	ND	10	ug/l							
Benzoic acid	ND	50	ug/l							
Surrogate: 2-Fluorophenol	*56.2*		*ug/l*	*100*		*56*	*20-120*			
Surrogate: Phenol-d6	*32.1*		*ug/l*	*100*		*32*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*73.0*		*ug/l*	*100*		*73*	*35-135*			
Surrogate: Nitrobenzene-d5	*32.4*		*ug/l*	*50.0*		*65*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*30.3*		*ug/l*	*50.0*		*61*	*25-145*			
Surrogate: Terphenyl-d14	*39.6*		*ug/l*	*50.0*		*79*	*40-130*			
LCS Analyzed: 12/11/01 (P1L0613-BS1)										
Chrysene	**49.1**	10	ug/l	50.0		98	17-168			
Phenol	**41.4**	10	ug/l	50.0		83	5-112			
Surrogate: 2-Fluorophenol	*66.9*		*ug/l*	*100*		*67*	*20-120*			
Surrogate: Phenol-d6	*71.3*		*ug/l*	*100*		*71*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*93.1*		*ug/l*	*100*		*93*	*35-135*			
Surrogate: Nitrobenzene-d5	*37.0*		*ug/l*	*50.0*		*74*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.4*		*ug/l*	*50.0*		*77*	*25-145*			
Surrogate: Terphenyl-d14	*44.4*		*ug/l*	*50.0*		*89*	*40-130*			
LCS Dup Analyzed: 12/11/01 (P1L0613-BSD1)										
Chrysene	**49.6**	10	ug/l	50.0		99	17-168	1	20	
Phenol	**39.8**	10	ug/l	50.0		80	5-112	4	20	
Surrogate: 2-Fluorophenol	*65.9*		*ug/l*	*100*		*66*	*20-120*			
Surrogate: Phenol-d6	*69.4*		*ug/l*	*100*		*69*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*91.7*		*ug/l*	*100*		*92*	*35-135*			
Surrogate: Nitrobenzene-d5	*36.2*		*ug/l*	*50.0*		*72*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.0*		*ug/l*	*50.0*		*76*	*25-145*			
Surrogate: Terphenyl-d14	*44.6*		*ug/l*	*50.0*		*89*	*40-130*			

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Project Manager

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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Matrix Spike Analyzed: 12/11/01 (P1L0613-MS1)					Source: PKL0039-02					
Chrysene	**51.6**	10	ug/l	50.0	ND	103	17-168			
Phenol	**46.0**	10	ug/l	50.0	ND	92	5-112			
Surrogate: 2-Fluorophenol	*73.4*		*ug/l*	*100*		*73*	*20-120*			
Surrogate: Phenol-d6	*76.8*		*ug/l*	*100*		*77*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.2*		*ug/l*	*100*		*90*	*35-135*			
Surrogate: Nitrobenzene-d5	*45.7*		*ug/l*	*50.0*		*91*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*45.2*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.1*		*ug/l*	*50.0*		*92*	*40-130*			
Matrix Spike Dup Analyzed: 12/11/01 (P1L0613-MSD1)					Source: PKL0039-02					
Chrysene	**50.6**	10	ug/l	50.0	ND	101	17-168	2	20	
Phenol	**44.1**	10	ug/l	50.0	ND	88	5-112	4	20	
Surrogate: 2-Fluorophenol	*71.4*		*ug/l*	*100*		*71*	*20-120*			
Surrogate: Phenol-d6	*73.6*		*ug/l*	*100*		*74*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*88.3*		*ug/l*	*100*		*88*	*35-135*			
Surrogate: Nitrobenzene-d5	*44.4*		*ug/l*	*50.0*		*89*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*44.9*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.4*		*ug/l*	*50.0*		*93*	*40-130*			

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
Blank Analyzed: 12/10/01 (I1L0730-BLK1)										
Aldrin	ND	0.10	ug/l							
alpha-BHC	ND	0.10	ug/l							
beta-BHC	ND	0.10	ug/l							
delta-BHC	ND	0.20	ug/l							
gamma-BHC (Lindane)	ND	0.10	ug/l							
Chlordane	ND	1.0	ug/l							
4,4'-DDD	ND	0.10	ug/l							
4,4'-DDE	ND	0.10	ug/l							
4,4'-DDT	ND	0.10	ug/l							
Dieldrin	ND	0.10	ug/l							
Endosulfan I	ND	0.10	ug/l							
Endosulfan II	ND	0.10	ug/l							
Endosulfan sulfate	ND	0.20	ug/l							
Endrin	ND	0.10	ug/l							
Endrin aldehyde	ND	0.10	ug/l							
Endrin ketone	ND	0.10	ug/l							
Heptachlor	ND	0.10	ug/l							
Heptachlor epoxide	ND	0.10	ug/l							
Methoxychlor	ND	0.10	ug/l							
Toxaphene	ND	5.0	ug/l							
Surrogate: Tetrachloro-m-xylene	*0.366*		*ug/l*	*0.500*		*73*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.515*		*ug/l*	*0.500*		*103*	*30-120*			
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Aldrin	**0.382**	0.10	ug/l	0.500		76	42-115			
alpha-BHC	**0.378**	0.10	ug/l	0.500		76	37-115			
beta-BHC	**0.439**	0.10	ug/l	0.500		88	45-115			
delta-BHC	**0.465**	0.20	ug/l	0.500		93	45-130			
gamma-BHC (Lindane)	**0.418**	0.10	ug/l	0.500		84	40-115			
4,4'-DDD	**0.542**	0.10	ug/l	0.500		108	55-120			
4,4'-DDE	**0.487**	0.10	ug/l	0.500		97	50-115			
4,4'-DDT	**0.520**	0.10	ug/l	0.500		104	55-115			
Dieldrin	**0.444**	0.10	ug/l	0.500		89	50-115			
Endosulfan I	**0.410**	0.10	ug/l	0.500		82	45-115			
Endosulfan II	**0.434**	0.10	ug/l	0.500		87	50-115			
Endosulfan sulfate	**0.460**	0.20	ug/l	0.500		92	65-120			
Endrin	**0.452**	0.10	ug/l	0.500		90	45-115			

Beth Price For Linda Eshelman
Project Manager

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Endrin aldehyde	0.496	0.10	ug/l	0.500		99	45-115			
Endrin ketone	0.471	0.10	ug/l	0.500		94	55-140			
Heptachlor	0.412	0.10	ug/l	0.500		82	35-115			
Heptachlor epoxide	0.410	0.10	ug/l	0.500		82	40-115			
Methoxychlor	0.528	0.10	ug/l	0.500		106	55-120			
Surrogate: Tetrachloro-m-xylene	*0.336*		*ug/l*	*0.500*		*67*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.495*		*ug/l*	*0.500*		*99*	*30-120*			
LCS Dup Analyzed: 12/11/01 (I1L0730-BSD1)										
Aldrin	0.357	0.10	ug/l	0.500		71	42-115	7	20	Q8
alpha-BHC	0.330	0.10	ug/l	0.500		66	37-115	14	20	Q8
beta-BHC	0.415	0.10	ug/l	0.500		83	45-115	6	20	Q8
delta-BHC	0.443	0.20	ug/l	0.500		89	45-130	5	20	Q8
gamma-BHC (Lindane)	0.377	0.10	ug/l	0.500		75	40-115	10	20	Q8
4,4'-DDD	0.544	0.10	ug/l	0.500		109	55-120	0.4	20	Q8
4,4'-DDE	0.482	0.10	ug/l	0.500		96	50-115	1	20	Q8
4,4'-DDT	0.513	0.10	ug/l	0.500		103	55-115	1	20	Q8
Dieldrin	0.439	0.10	ug/l	0.500		88	50-115	1	20	Q8
Endosulfan I	0.402	0.10	ug/l	0.500		80	45-115	2	20	Q8
Endosulfan II	0.433	0.10	ug/l	0.500		87	50-115	0.2	20	Q8
Endosulfan sulfate	0.461	0.20	ug/l	0.500		92	65-120	0.2	20	Q8
Endrin	0.447	0.10	ug/l	0.500		89	45-115	1	20	Q8
Endrin aldehyde	0.465	0.10	ug/l	0.500		93	45-115	6	20	Q8
Endrin ketone	0.472	0.10	ug/l	0.500		94	55-140	0.2	20	Q8
Heptachlor	0.378	0.10	ug/l	0.500		76	35-115	9	20	Q8
Heptachlor epoxide	0.396	0.10	ug/l	0.500		79	40-115	3	20	Q8
Methoxychlor	0.513	0.10	ug/l	0.500		103	55-120	3	20	Q8
Surrogate: Tetrachloro-m-xylene	*0.259*		*ug/l*	*0.500*		*52*	*30-120*			*Q8*
Surrogate: Decachlorobiphenyl	*0.491*		*ug/l*	*0.500*		*98*	*30-120*			*Q8*

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0052

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

Q8	Insufficient sample received to meet method QC requirements. QC requirements satisfy ADEQ policies 0154 and 0155.
R4	MS/MSD RPD exceeded the method control limit. Recovery met acceptance criteria.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

Beth Price For Linda Eshelman
Project Manager

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AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • FAX: (480) 921-0049 Lic. No. AZ0003

LABORATORY REPORT

Client: Del Mar Analytical
9830 S. 51st Street
Suite B120
Phoenix, AZ 85044

Attn: Linda Eshelman

Date Submitted: 12/4/01
Date Reported: 01/02/02

Project: MCFC

RESULTS

Client ID: PKL0045-01
ACT Lab No.: BH09419

Sample Type: Water
Sample Time: 12/04/01 11:20

Parameter	Analysis Date Start	Analysis Date End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	900	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	16000	MPN/100mL	MW

Client ID: PKL0046-01
ACT Lab No.: BH09420

Sample Type: Water
Sample Time: 12/04/01 10:29

Parameter	Analysis Date Start	Analysis Date End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	2400	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0047-01
ACT Lab No.: BH09421

Sample Type: Water
Sample Time: 12/04/01 12:10

Parameter	Analysis Date Start	Analysis Date End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	1600	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	2200	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

RESULTS

Client ID: PKL0048-01
ACT Lab No.: BH09422
Sample Type: Water
Sample Time: 12/04/01 13:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0049-01
ACT Lab No.: BH09423
Sample Type: Water
Sample Time: 12/04/01 12:35

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	3000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0050-01
ACT Lab No.: BH09424
Sample Type: Water
Sample Time: 12/04/01 10:30

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	16000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0051-01
ACT Lab No.: BH09425
Sample Type: Water
Sample Time: 12/04/01 11:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	5000	MPN/100mL	MW

RESULTS

Client ID: PKL0052-01
ACT Lab No.: BH09426
Sample Type: Water
Sample Time: 12/04/01 12:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0053-01
ACT Lab No.: BH09427
Sample Type: Water
Sample Time: 12/04/01 13:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	240	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0054-01
ACT Lab No.: BH09428
Sample Type: Water
Sample Time: 12/04/01 13:50

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Reviewed by: _____
Frederick A. Amalfi, Ph.D.
Laboratory Director

ba

Record Number: 00200045 SINT: Begin Date: 12-04-2001 07:56 End Date: Medium: 9
Site ID: USGS 333557111594201 Station Name: Indian Bend Wash at 40th Street at Phoenix, Az. State: 04 County: 013
Lab ID Number: Project: 470416800 Geologic Unit: Data Types: CH ME NU
Sample Status: H Sample Source: 9 Hydrologic Condition: 9 Sample Type: 9 Hydrologic Event: J
Organism (ITIS): Body-part id: Processing Status: R Number Parameters: 30
Sample Field Comment--Pared NPDES Sample. Send to Ocala Lab.
Sample Lab Comment--OCALA LABID ID NUMBER: 200202454

*	PCODE	MET	RPLV	RLCOD	--PARAMETER NAME--	-----UNITS-----	--VALUE--	REM	QUAL CODES 1 2 3	NLQ	DQI	AQA	PRC	PRP-DATE	ANL-DATE
	00010		--		WATER TEMPERATURE	(DEGREES C)	17.0				S	I	3		
	00025		--		AIR PRESSURE	(MM OF HG)	724				S	I	3		
	00027		--		COLLECTING AGENCY	(CODE NUMBER)	1028				S	I	4		
U	00028	A	--		ANALYZING AGENCY	(CODE NUMBER)	81213				S	A	5		
	00061		--		DISCHARGE, INST.	CFS	11.43				S	I	2		
	00063		--		NUMBER OF SAMPLING P	(COUNT)	1				S	I	1		
	00065		--		GAGE HEIGHT	(FEET)	1.13				S	I	3		
	00095		--		SPECIFIC CONDUCTANCE	US/CM @ 25C	111				S	I	3		
	00300		--		OXYGEN DISSOLVED	(MG/L)	8.82				S	I	2		
N	00340	0	--		COD HIGH LEVEL MG/L	(MG/L)	53				S	A	2		
	00400		--		PH, WH, FIELD	(STANDARD UNITS)	7.47				S	I	2		
N	00403	A	--		PH, WH, LABORATORY	(STANDARD UNITS)	7.2				S	A	2		
	00419	B	--		ANC, IT, FIELD	(MG/L AS CACO3)	34				S	I	2		
	00447	B	--		ANC CARB IT FIELD	(MG/L AS CO3)	0				S	I	1		
	00450	B	--		ANC BICARB IT FIELD	(MG/L AS HCO3)	41				S	I	2		
N	00530	B	--		RESIDUE TOTAL	(MG/L)	190				S	A	3		
C	00605		--		NITROGEN ORGANIC T.	(MG/L AS N)	3.5								
N	00610	F	--		NITROGEN AMMONIA T.	(MG/L AS N)	1.5				S	A	2		
N	00625	D	--		NITROGEN AMM+ORG TOT	(MG/L AS N)	5				S	A	2		
N	00630	E	--		NO2 + NO3 TOTAL	(MG/L AS N)	.94				S	A	2		
N	00665	D	--		PHOSPHORUS TOTAL	(MG/L AS P)	.74				S	A	2		
N	00666	D	--		PHOSPHORUS DISS.	(MG/L AS P)	.31				S	A	2		
N	01027	4	--		CADMIUM TOTAL	(UG/L AS CD)	.5	<			S	A	1		
N	01042	1	--		COPPER TOTAL	(UG/L AS CU)	74				S	A	2		
N	01051	4	--		LEAD TOTAL	(UG/L AS PB)	25				S	A	2		
N	01092	1	--		ZINC TOTAL	(UG/L AS ZN)	306				S	A	3		
N	70300	A	--		RESIDUE DIS 180C	MG/L	126				S	A	3		
	82398		--		SAMPLING METHOD	METHOD, CODES	30				S	I	2		
N	90410	A	--		ANC, TIT. 4.5, LAB	MG/L AS CACO3	39				S	A	2		
N	99898	0	--		OCALA LAB ID		200202454				S	A	9		
N	99899	0	--		JULIAN DATE OCALA	YYDDD	2001342				S	A	9		

********** ERROR REPORT AND MESSAGES TO/FROM LAB FOR TRANSACTION NO. 29 **********
PARAMETER 00028 CHANGED FROM 1028 REM/QA/MET/SIG = (I 4) TO 81213 REM/QA/MET/SIG = (AA5)
MESSAGE FROM LAB: OCALA LABID ID NUMBER: 200202454
PARAMETER 01051 VALUE 25 EXCEEDS DW ALERT LIMIT OF 15.000
RESIDUE AT 180 C/SPECIFIC CONDUCTANCE RATIO OUTSIDE LIMITS .55 TO .81
RECORD NUMBER: 00200045
STATION ID: USGS 333557111594201
STATION NAME: Indian Bend Wash at 40th Street at Phoenix, Az.
COLLECTION DATE: 12-04-2001 0756 - -

PARTIAL BALANCE

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
			BICARB., WHL, IT, FLD	41	0.672
			CARB., WHL, IT, FLD	0	0.001
TOTAL		0.001	TOTAL		0.672

PERCENT DIFFERENCE =-100.00

[redacted]

U.S. Geological Survey, WRD - Ocala Water Quality & Research Laboratory
4500 SW 40th Avenue - Ocala, Florida
Telephone (352)237-5514 FLDEP CompQAP # 910161G
Processing Date: 2/11/2002 1:05:28 PM

****

Lab ID Number: 200202454 Field ID Number: 557111594201 Station ID Number: 333557111594201
Sample Date: 12/04/2001 Sample Time: 07:56 Site Type: N/A Station Name: 40TH ST. AND IBW
State Code: 4 County Code: 13 NWIS Record #: N/A SMS Control #: N/A Sample Medium: 9
Geologic Unit: N/A Analysis Status: H Analysis Source: 9 Hydrologic Condition: 9 Sample Type: 9
Hydrologic Event: J Project Account: 470416800 Analysis Cost: $145.50 District/User Code: 04

****

Lab Code	Watstore Number	Parameter Name	Analysis Method	Reporting Units	Reported Value	Remark Code	Analysis Date /Time
0027	70300(A)	RESIDUE DISSOLVED AT 180 C	I-1750-85	mg/L	126		1/9/2002
0068	00403(A)	PH (LABORATORY)	I-1586-85	pH Units	7.2		1/31/2002 11:12:00 AM
0070	90410(A)	ALKALINITY TOT AS CACO3 (LAB)	I-2030-85	mg/L	39		1/31/2002 11:12:00 AM
0169	00530(B)	RESIDUE TOT NON-FILT AT 105C	I-3765-85	mg/L	190		1/14/2002
1983	00666(D)	PHOSPHORUS AS P DISSOLVED	I-2600-85	mg/L	0.31		1/15/2002 12:01:00 PM
1984	00665(D)	PHOSPHORUS AS P TOTAL	I-4600-85	mg/L	0.74		1/15/2002 12:03:00 PM
1986	00625(D)	NITROGEN NH3+ORG-N TOTAL	I-4552-85	mg/L	5		1/16/2002 1:12:00 PM
3000	99898(0)	QWSU LAB ID NUMBER	- -	Number	200202454		2/7/2002 6:12:53 AM
3001	99899(0)	JULIAN LOGIN DATE	- -	Number	2001342		2/7/2002 6:12:53 AM
3014	01027(4)	CADMIUM TOTAL (ICP/T)	EPA-200.7	ug/L	< 0.5		1/24/2002
3025	01042(1)	COPPER TOTAL (ICP/T)	EPA-200.7	ug/L	74		1/24/2002
3029	01051(4)	LEAD TOTAL (ICP/T)	EPA-200.7	ug/L	25		1/24/2002
3056	01092(1)	ZINC TOTAL (ICP/T)	EPA-200.7	ug/L	306		1/24/2002
3063	00340(0)	CHEMICAL OXYGEN DEMAND (EPA)	EPA-410.4	mg/L	53		2/4/2002
3071	00610(F)	NITROGEN NH3-N TOTAL	I-4522-85	mg/L	1.5		12/18/2001 11:03:00 AM
3073	00630(E)	NITROGEN NO2+NO3-N TOTAL	I-4545-85	mg/L	0.94		12/15/2001 10:58:00 AM

Parameter Name	Lab Code	Watstore Code	Method	Detection Level	Bottle Requirements
RESIDUE DISSOLVED AT 180 C	27	70300(A)	I-1750-85	1 mg/L	FU
PH (LABORATORY)	68	00403(A)	I-1586-85	0.1 pH Units	RU
ALKALINITY TOT AS CACO3 (LAB)	70	90410(A)	I-2030-85	1 mg/L	RU
RESIDUE TOT NON-FILT AT 105C	169	00530(B)	I-3765-85	1 mg/L	SUSO
PHOSPHORUS AS P DISSOLVED	1983	00666(D)	I-2600-85	0.02 mg/L	FCA
PHOSPHORUS AS P TOTAL	1984	00665(D)	I-4600-85	0.02 mg/L	WCA
NITROGEN NH3+ORG-N TOTAL	1986	00625(D)	I-4552-85	0.2 mg/L	WCA
CADMIUM TOTAL (ICP/T)	3014	01027(4)	EPA-200.7	0.5 ug/L	RA
COPPER TOTAL (ICP/T)	3025	01042(1)	EPA-200.7	2 ug/L	RA
LEAD TOTAL (ICP/T)	3029	01051(4)	EPA-200.7	2 ug/L	RA
ZINC TOTAL (ICP/T)	3056	01092(1)	EPA-200.7	2 ug/L	RA
CHEMICAL OXYGEN DEMAND (EPA)	3063	00340(0)	EPA-410.4	5 mg/L	COD
NITROGEN NH3-N TOTAL	3071	00610(F)	I-4522-85	0.01 mg/L	RCC
NITROGEN NO2-N TOTAL	3072	00615(B)	I-4540-85	0.01 mg/L	RCC
NITROGEN NO2+NO3-N TOTAL	3073	00630(E)	I-4545-85	0.02 mg/L	RCC
PHOSPHORUS PO4-P TOTAL	3074	70507(H)	I-4601-85	0.01 mg/L	RCC

Del Mar Analytical

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/31/01-2/14/02
Revised: 2/14/02

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0069-01	40TH ST.+IBW-COMP	Water
PKL0069-02	40TH ST.+IBW-COMP	Water
PKL0069-02RE4	40TH ST.+IBW-COMP	Water

FLOOD CONTROL DISTRICT
RECEIVED
FEB 15 '02

CP & GM	FINANCE
PIO	LANDS
ADMIN	O & M
REC	P & PM
ENG	PLE
CONTRACTS	TGW
ROUTING	

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: This report has been revised to include the cyanide results which were omitted on the original report dated 12/31/01.

SUBCONTRACTED: Analyses were subcontracted to Del Mar Analytical - Irvine, CA (AZ0428), NEL Laboratories - Phoenix, AZ (AZ0520) and Transwest Geochem - Phoenix, AZ (AZ0133). Results are attached.

QA/QC CRITERIA: The L3 flag on the BOD indicates that the Laboratory Control Sample recovery was above the method control limits. See Corrective Action report.

EXPLANATION OF DATA QUALIFIERS: The L3 flag on the zinc and orthophosphate indicates that the Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0069-01 (40TH ST.+IBW-COMP - Water)								
Beryllium	EPA 200.9	P1L1009	0.00050	ND	1	12/10/01	12/12/01	M5
Cadmium	EPA 200.9	P1L1009	0.00050	ND	1	12/10/01	12/12/01	
Calcium	EPA 200.7	P1L1012	2.0	**21**	1	12/10/01	12/11/01	
Chromium	EPA 200.9	P1L1009	0.0040	**0.013**	1	12/10/01	12/12/01	
Copper	EPA 200.9	P1L1009	0.016	**0.073**	4	12/10/01	12/11/01	
Lead	EPA 200.9	P1L1009	0.0020	**0.022**	1	12/10/01	12/12/01	
Magnesium	EPA 200.7	P1L1012	0.50	**6.1**	1	12/10/01	12/11/01	
Nickel	EPA 200.9	P1L1009	0.0040	**0.016**	1	12/10/01	12/13/01	
Silver	EPA 200.9	P1L1009	0.0050	ND	1	12/10/01	12/12/01	
Sodium	EPA 273.1	P1L1012	5.0	**12**	1	12/10/01	12/11/01	
Zinc	EPA 200.7	P1L1012	0.050	**0.27**	1	12/10/01	12/11/01	
Sample ID: PKL0069-01RE1 (40TH ST.+IBW-COMP - Water)								
Potassium	EPA 258.1	P1L1124	1.0	**5.3**	1	12/11/01	12/12/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
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Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0069-02 (40TH ST.+IBW-COMP - Water)								
Cadmium, Dissolved	EPA 200.9	P1L1210	0.00050	ND	1	12/12/01	12/13/01	
Chromium, Dissolved	EPA 200.9	P1L1210	0.0040	ND	1	12/12/01	12/18/01	
Lead, Dissolved	EPA 200.9	P1L1210	0.0020	ND	1	12/12/01	12/14/01	
Nickel, Dissolved	EPA 200.9	P1L1210	0.0040	**0.0060**	1	12/12/01	12/13/01	
Sample ID: PKL0069-02RE4 (40TH ST.+IBW-COMP - Water)								
Zinc, Dissolved	EPA 200.7	P1L2709	0.050	ND	1	12/27/01	12/28/01	L3

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Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			mg/l	mg/l				
Sample ID: PKL0069-01 (40TH ST.+IBW-COMP - Water)								
Alkalinity as CaCO3	SM2320B	P1L1319	5.0	**50**	1	12/13/01	12/13/01	
Ammonia-N	EPA 350.3	P1L1202	0.10	**1.9**	2	12/11/01	12/11/01	
Biochemical Oxygen Demand	EPA 405.1	P1L1107	2.0	**15**	1	12/5/01	12/10/01	K2
			%	%				
Sample ID: PKL0069-01 (40TH ST.+IBW-COMP - Water)								
Cation/Anion Balance	Calculation	P1L1415	NA	**11.4**	1	12/14/01	12/14/01	
			mg/l	mg/l				
Sample ID: PKL0069-01 (40TH ST.+IBW-COMP - Water)								
Chemical Oxygen Demand	EPA 410.4	P1L1307	20	**170**	1	12/12/01	12/12/01	
Chloride	EPA 300.0	P1L0609	0.50	**9.4**	1	12/5/01	12/5/01	
Fluoride	EPA 300.0	P1L0609	0.10	**0.63**	1	12/5/01	12/5/01	
Hardness (CaCO3)	SM2340B	P1L1012	1.0	**78**	1	12/10/01	12/11/01	
Nitrate-N	EPA 300.0	P1L0609	0.10	**0.92**	1	12/5/01	12/5/01	
Nitrate/Nitrite-N	EPA 300.0	P1L0609	0.10	**1.0**	1	12/5/01	12/5/01	
Nitrite-N	EPA 300.0	P1L0609	0.10	**0.11**	1	12/5/01	12/5/01	
Orthophosphate	EPA 300.0	P1L0609	0.50	ND	1	12/5/01	12/5/01	L3
Phosphorus	EPA 365.3	P1L1129	0.050	**0.81**	1	12/11/01	12/11/01	
			umhos/cm	umhos/cm				
Sample ID: PKL0069-01 (40TH ST.+IBW-COMP - Water)								
Specific Conductance	SM2510B	P1L0708	2.0	**1700**	1	12/7/01	12/7/01	
			mg/l	mg/l				
Sample ID: PKL0069-01 (40TH ST.+IBW-COMP - Water)								
Sulfate	EPA 300.0	P1L0609	5.0	**18**	10	12/5/01	12/5/01	
Sulfide	SM4500-S-C,D	P1L0602	0.10	ND	1	12/5/01	12/5/01	
Total Dissolved Solids	SM2540C	P1L1005	20	**110**	1	12/7/01	12/7/01	
Total Suspended Solids	EPA 160.2	P1L1004	20	**760**	1	12/7/01	12/7/01	

The reporting limit for this sample was adjusted by a factor of 2 to account for the applicable preparation factor.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0069-01 (40TH ST.+IBW-COMP - Water)								
Total Cyanide	SM4500-CN-C,E	I1L1453	0.020	ND	1	12/14/01	12/17/01	

DEL MAR ANALYTICAL, IRVINE (AZ0428)

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Project Manager

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Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1009 Extracted: 12/10/01										
Blank Analyzed: 12/12/01 (P1L1009-BLK1)										
Beryllium	ND	0.00050	mg/l							
Cadmium	ND	0.00050	mg/l							
Chromium	ND	0.0040	mg/l							
Copper	ND	0.0040	mg/l							
Lead	ND	0.0020	mg/l							
Nickel	ND	0.0040	mg/l							
Silver	ND	0.0050	mg/l							
Blank Analyzed: 12/12/01 (P1L1009-BLK2)										
Beryllium	ND	0.00050	mg/l							
Cadmium	ND	0.00050	mg/l							
Chromium	ND	0.0040	mg/l							
Copper	ND	0.0040	mg/l							
Lead	ND	0.0020	mg/l							
Nickel	ND	0.0040	mg/l							
Silver	ND	0.0050	mg/l							
LCS Analyzed: 12/12/01 (P1L1009-BS1)										
Beryllium	**0.00198**	0.0010	mg/l	0.00200		99	85-115			
Cadmium	**0.00190**	0.0010	mg/l	0.00200		95	85-115			
Chromium	**0.0408**	0.0080	mg/l	0.0400		102	85-115			
Copper	**0.0439**	0.0080	mg/l	0.0400		110	85-115			
Lead	**0.0388**	0.0040	mg/l	0.0400		97	85-115			
Nickel	**0.0405**	0.0080	mg/l	0.0400		101	85-115			
Silver	**0.0210**	0.010	mg/l	0.0200		105	85-115			
LCS Dup Analyzed: 12/12/01 (P1L1009-BSD1)										
Beryllium	**0.00201**	0.0010	mg/l	0.00200		100	85-115	2	20	
Cadmium	**0.00188**	0.0010	mg/l	0.00200		94	85-115	1	20	
Chromium	**0.0410**	0.0080	mg/l	0.0400		102	85-115	0.5	20	
Copper	**0.0444**	0.0080	mg/l	0.0400		111	85-115	1	20	
Lead	**0.0383**	0.0040	mg/l	0.0400		96	85-115	1	20	
Nickel	**0.0425**	0.0080	mg/l	0.0400		106	85-115	5	20	
Silver	**0.0213**	0.010	mg/l	0.0200		106	85-115	1	20	

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Report Number: PKL0069

Sampled: 12/04/01
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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1009 Extracted: 12/10/01										
Matrix Spike Analyzed: 12/12/01 (P1L1009-MS1)					Source: PKL0115-01					
Beryllium	**0.00271**	0.0010	mg/l	0.00200	ND	136	70-130			M1
Cadmium	**0.00174**	0.0010	mg/l	0.00200	ND	87	70-130			
Chromium	**0.0424**	0.0080	mg/l	0.0400	ND	106	70-130			
Copper	**0.0426**	0.0080	mg/l	0.0400	ND	106	70-130			
Lead	**0.0386**	0.0040	mg/l	0.0400	ND	97	70-130			
Nickel	**0.0395**	0.0080	mg/l	0.0400	ND	99	70-130			
Silver	**0.0209**	0.010	mg/l	0.0200	ND	104	70-130			
Matrix Spike Dup Analyzed: 12/12/01 (P1L1009-MSD1)					Source: PKL0115-01					
Beryllium	**0.00278**	0.0010	mg/l	0.00200	ND	139	70-130	3	20	M1
Cadmium	**0.00190**	0.0010	mg/l	0.00200	ND	95	70-130	9	20	
Chromium	**0.0432**	0.0080	mg/l	0.0400	ND	108	70-130	2	20	
Copper	**0.0466**	0.0080	mg/l	0.0400	ND	116	70-130	9	20	
Lead	**0.0392**	0.0040	mg/l	0.0400	ND	98	70-130	2	20	
Nickel	**0.0401**	0.0080	mg/l	0.0400	ND	100	70-130	2	20	
Silver	**0.0231**	0.010	mg/l	0.0200	ND	116	70-130	10	20	
Batch: P1L1012 Extracted: 12/10/01										
Blank Analyzed: 12/11/01 (P1L1012-BLK1)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Sodium	ND	5.0	mg/l							
Zinc	ND	0.050	mg/l							
Blank Analyzed: 12/11/01 (P1L1012-BLK2)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Zinc	ND	0.050	mg/l							

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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1012 Extracted: 12/10/01										
LCS Analyzed: 12/11/01 (P1L1012-BS1)										
Calcium	**11.2**	2.0	mg/l	10.0		112	85-115			
Magnesium	**10.4**	0.50	mg/l	10.0		104	85-115			
Sodium	**52.8**	5.0	mg/l	50.0		106	85-115			
Zinc	**1.11**	0.050	mg/l	1.00		111	85-115			
LCS Dup Analyzed: 12/11/01 (P1L1012-BSD1)										
Calcium	**10.9**	2.0	mg/l	10.0		109	85-115	3	20	
Magnesium	**10.5**	0.50	mg/l	10.0		105	85-115	1	20	
Sodium	**53.0**	5.0	mg/l	50.0		106	85-115	0.4	20	
Zinc	**1.09**	0.050	mg/l	1.00		109	85-115	2	20	
Matrix Spike Analyzed: 12/11/01 (P1L1012-MS1)					**Source: PKL0115-01**					
Calcium	**71.2**	2.0	mg/l	10.0	58	132	70-130			M1
Magnesium	**23.3**	0.50	mg/l	10.0	12	113	70-130			
Sodium	**64.5**	5.0	mg/l	50.0	13	103	85-115			
Zinc	**1.09**	0.050	mg/l	1.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1012-MSD1)					**Source: PKL0115-01**					
Calcium	**69.6**	2.0	mg/l	10.0	58	116	70-130	2	20	
Magnesium	**22.9**	0.50	mg/l	10.0	12	109	70-130	2	20	
Sodium	**63.1**	5.0	mg/l	50.0	13	100	85-115	2	20	
Zinc	**1.07**	0.050	mg/l	1.00	ND	104	70-130	2	20	
Batch: P1L1124 Extracted: 12/11/01										
Blank Analyzed: 12/12/01 (P1L1124-BLK1)										
Potassium	ND	1.0	mg/l							

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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1124 Extracted: 12/11/01										
LCS Analyzed: 12/12/01 (P1L1124-BS1)										
Potassium	**10.6**	1.0	mg/l	10.0		106	85-115			
LCS Dup Analyzed: 12/12/01 (P1L1124-BSD1)										
Potassium	**10.7**	1.0	mg/l	10.0		107	85-115	0.9	20	
Matrix Spike Analyzed: 12/12/01 (P1L1124-MS1)					**Source: PKL0168-01**					
Potassium	**15.5**	1.0	mg/l	10.0	4.7	108	85-115			
Matrix Spike Dup Analyzed: 12/12/01 (P1L1124-MSD1)					**Source: PKL0168-01**					
Potassium	**14.8**	1.0	mg/l	10.0	4.7	101	85-115	5	20	

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Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1210 Extracted: 12/12/01										
Blank Analyzed: 12/13/01 (P1L1210-BLK1)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
Blank Analyzed: 12/13/01 (P1L1210-BLK2)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
LCS Analyzed: 12/13/01 (P1L1210-BS1)										
Cadmium, Dissolved	**0.00193**	0.0010	mg/l	0.00200		96	85-115			
Chromium, Dissolved	**0.0422**	0.0080	mg/l	0.0400		106	85-115			
Lead, Dissolved	**0.0432**	0.0040	mg/l	0.0400		108	85-115			
Nickel, Dissolved	**0.0408**	0.0080	mg/l	0.0400		102	85-115			
LCS Dup Analyzed: 12/13/01 (P1L1210-BSD1)										
Cadmium, Dissolved	**0.00180**	0.0010	mg/l	0.00200		90	85-115	7	20	
Chromium, Dissolved	**0.0425**	0.0080	mg/l	0.0400		106	85-115	0.7	20	
Lead, Dissolved	**0.0425**	0.0040	mg/l	0.0400		106	85-115	2	20	
Nickel, Dissolved	**0.0455**	0.0080	mg/l	0.0400		114	85-115	11	20	
Matrix Spike Analyzed: 12/13/01 (P1L1210-MS1)					**Source: PKL0179-01**					
Cadmium, Dissolved	**0.00196**	0.0010	mg/l	0.00200	ND	90	70-130			
Chromium, Dissolved	**0.0558**	0.0080	mg/l	0.0400	0.011	112	70-130			
Lead, Dissolved	**0.0489**	0.0040	mg/l	0.0400	0.0058	108	70-130			
Nickel, Dissolved	**0.0521**	0.0080	mg/l	0.0400	0.012	100	70-130			

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1210 Extracted: 12/12/01										
Matrix Spike Dup Analyzed: 12/13/01 (P1L1210-MSD1)					**Source: PKL0179-01**					
Cadmium, Dissolved	**0.00198**	0.0010	mg/l	0.00200	ND	90	70-130	1	20	
Chromium, Dissolved	**0.0547**	0.0080	mg/l	0.0400	0.011	109	70-130	2	20	
Lead, Dissolved	**0.0503**	0.0040	mg/l	0.0400	0.0058	111	70-130	3	20	
Nickel, Dissolved	**0.0527**	0.0080	mg/l	0.0400	0.012	102	70-130	1	20	
Batch: P1L2709 Extracted: 12/27/01										
Blank Analyzed: 12/28/01 (P1L2709-BLK1)										
Zinc, Dissolved	**0.169**	0.050	mg/l							B4
Blank Analyzed: 12/28/01 (P1L2709-BLK2)										
Zinc, Dissolved	**0.115**	0.050	mg/l							B4
LCS Analyzed: 12/28/01 (P1L2709-BS1)										
Zinc, Dissolved	**1.21**	0.050	mg/l	1.00		121	85-115			L3
LCS Dup Analyzed: 12/28/01 (P1L2709-BSD1)										
Zinc, Dissolved	**1.21**	0.050	mg/l	1.00		121	85-115	0	20	L3
Matrix Spike Analyzed: 12/28/01 (P1L2709-MS1)					**Source: PKL0423-01RE1**					
Zinc, Dissolved	**1.18**	0.050	mg/l	1.00	0.11	107	70-130			
Matrix Spike Dup Analyzed: 12/28/01 (P1L2709-MSD1)					**Source: PKL0423-01RE1**					
Zinc, Dissolved	**1.19**	0.050	mg/l	1.00	0.11	108	70-130	0.8	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0602 Extracted: 12/05/01										
Blank Analyzed: 12/05/01 (P1L0602-BLK1)										
Sulfide	ND	0.10	mg/l							
LCS Analyzed: 12/05/01 (P1L0602-BS1)										
Sulfide	**1.06**	0.20	mg/l	1.05		101	80-120			
Matrix Spike Analyzed: 12/05/01 (P1L0602-MS1)					**Source: PKK0505-01**					
Sulfide	**0.504**	0.10	mg/l	0.527	ND	96	80-120			
Matrix Spike Dup Analyzed: 12/05/01 (P1L0602-MSD1)					**Source: PKK0505-01**					
Sulfide	**0.519**	0.10	mg/l	0.527	ND	98	80-120	3	20	
Batch: P1L0609 Extracted: 12/05/01										
Blank Analyzed: 12/05/01 (P1L0609-BLK1)										
Chloride	ND	0.50	mg/l							
Fluoride	ND	0.10	mg/l							
Nitrate-N	ND	0.10	mg/l							
Nitrate/Nitrite-N	ND	0.10	mg/l							
Nitrite-N	ND	0.10	mg/l							
Orthophosphate	ND	0.50	mg/l							
Sulfate	ND	0.50	mg/l							
LCS Analyzed: 12/05/01 (P1L0609-BS1)										
Chloride	**5.18**	0.50	mg/l	5.00		104	90-110			
Fluoride	**2.52**	0.10	mg/l	2.50		101	90-110			
Nitrate-N	**2.68**	0.10	mg/l	2.50		107	90-110			
Nitrite-N	**2.69**	0.10	mg/l	2.50		108	90-110			
Orthophosphate	**5.42**	0.50	mg/l	5.00		108	90-110			
Sulfate	**5.30**	0.50	mg/l	5.00		106	90-110			

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0609 Extracted: 12/05/01										
LCS Dup Analyzed: 12/05/01 (P1L0609-BSD1)										
Chloride	5.26	0.50	mg/l	5.00		105	90-110	2	20	
Fluoride	2.60	0.10	mg/l	2.50		104	90-110	3	20	
Nitrate-N	2.76	0.10	mg/l	2.50		110	90-110	3	20	
Nitrite-N	2.71	0.10	mg/l	2.50		108	90-110	0.7	20	
Orthophosphate	5.57	0.50	mg/l	5.00		111	90-110	3	20	L3
Sulfate	5.42	0.50	mg/l	5.00		108	90-110	2	20	
Matrix Spike Analyzed: 12/05/01 (P1L0609-MS1)					**Source: PKL0041-01RE1**					
Chloride	388	5.0	mg/l	5.00	380	160	80-120			M1
Fluoride	3.42	1.0	mg/l	2.50	1.0	97	80-120			
Nitrate-N	6.51	1.0	mg/l	2.50	3.8	108	80-120			
Nitrite-N	1.96	1.0	mg/l	2.50	ND	78	80-120			M2
Orthophosphate	9.30	5.0	mg/l	5.00	ND	118	80-120			
Sulfate	160	5.0	mg/l	5.00	160	0	80-120			M2
Matrix Spike Dup Analyzed: 12/05/01 (P1L0609-MSD1)					**Source: PKL0041-01RE1**					
Chloride	386	5.0	mg/l	5.00	380	120	80-120	0.5	15	
Fluoride	3.64	1.0	mg/l	2.50	1.0	106	80-120	6	20	
Nitrate-N	6.47	1.0	mg/l	2.50	3.8	107	80-120	0.6	15	
Nitrite-N	2.06	1.0	mg/l	2.50	ND	82	80-120	5	20	
Orthophosphate	10.6	5.0	mg/l	5.00	ND	144	80-120	13	20	M1
Sulfate	161	5.0	mg/l	5.00	160	20	80-120	0.6	15	M2
Batch: P1L0708 Extracted: 12/07/01										
Duplicate Analyzed: 12/07/01 (P1L0708-DUP1)					**Source: PKL0042-01**					
Specific Conductance	783	2.0	umhos/cm		770			2	10	

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0708 Extracted: 12/07/01										
Duplicate Analyzed: 12/07/01 (P1L0708-DUP2)					**Source: PKL0115-01**					
Specific Conductance	**417**	2.0	umhos/cm		420			0.7	10	
Reference Analyzed: 12/07/01 (P1L0708-SRM1)										
Specific Conductance	**1400**	2.0	umhos/cm	1410		99	90-110			
Batch: P1L1004 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1004-BLK1)										
Total Suspended Solids	ND	10	mg/l							
Duplicate Analyzed: 12/07/01 (P1L1004-DUP1)					**Source: PKL0028-01**					
Total Suspended Solids	ND	1000	mg/l		ND				5	
Duplicate Analyzed: 12/07/01 (P1L1004-DUP2)					**Source: PKL0079-01**					
Total Suspended Solids	ND	10	mg/l		ND				5	
Reference Analyzed: 12/07/01 (P1L1004-SRM1)										
Total Suspended Solids	**60.0**	10	mg/l	62.2		96	85-107			
Batch: P1L1005 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1005-BLK1)										
Total Dissolved Solids	ND	20	mg/l							
LCS Analyzed: 12/07/01 (P1L1005-BS1)										
Total Dissolved Solids	**388**	20	mg/l	400		97	80-115			

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1005 Extracted: 12/07/01										
LCS Dup Analyzed: 12/07/01 (P1L1005-BSD1)										
Total Dissolved Solids	402	20	mg/l	400		100	80-115	4	200	
Duplicate Analyzed: 12/07/01 (P1L1005-DUP1)					**Source: PKL0126-01**					
Total Dissolved Solids	646	20	mg/l		670			4	5	
Duplicate Analyzed: 12/07/01 (P1L1005-DUP2)					**Source: PKL0071-01**					
Total Dissolved Solids	160	20	mg/l		160			0	5	
Batch: P1L1107 Extracted: 12/05/01										
Blank Analyzed: 12/10/01 (P1L1107-BLK1)										
Biochemical Oxygen Demand	ND	2.0	mg/l							
LCS Analyzed: 12/10/01 (P1L1107-BS1)										
Biochemical Oxygen Demand	205	2.0	mg/l	198		104	85-115			
LCS Dup Analyzed: 12/10/01 (P1L1107-BSD1)										
Biochemical Oxygen Demand	237	2.0	mg/l	198		120	85-115	14	20	L3
Duplicate Analyzed: 12/10/01 (P1L1107-DUP1)					**Source: PKL0028-01**					
Biochemical Oxygen Demand	3430	100	mg/l		3400			0.9	20	
Duplicate Analyzed: 12/10/01 (P1L1107-DUP2)					**Source: PKL0079-03**					
Biochemical Oxygen Demand	550	20	mg/l		520			6	20	
Batch: P1L1129 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1129-BLK1)										
Phosphorus	ND	0.050	mg/l							

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1129 Extracted: 12/11/01										
LCS Analyzed: 12/11/01 (P1L1129-BS1)										
Phosphorus	**0.512**	0.050	mg/l	0.500		102	80-120			
LCS Dup Analyzed: 12/11/01 (P1L1129-BSD1)										
Phosphorus	**0.557**	0.050	mg/l	0.500		111	80-120	8	20	
Matrix Spike Analyzed: 12/11/01 (P1L1129-MS1)					**Source: PKL0115-01**					
Phosphorus	**0.605**	0.050	mg/l	0.500	ND	119	75-125			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1129-MSD1)					**Source: PKL0115-01**					
Phosphorus	**0.599**	0.050	mg/l	0.500	ND	118	75-125	1	15	
Batch: P1L1202 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1202-BLK1)										
Ammonia-N	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1202-BS1)										
Ammonia-N	**0.470**	0.050	mg/l	0.500		94	85-115			
Matrix Spike Analyzed: 12/11/01 (P1L1202-MS1)					**Source: PKL0121-01**					
Ammonia-N	**0.515**	0.050	mg/l	0.500	ND	95	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1202-MSD1)					**Source: PKL0121-01**					
Ammonia-N	**0.532**	0.050	mg/l	0.500	ND	98	70-130	3	20	
Batch: P1L1307 Extracted: 12/12/01										
Blank Analyzed: 12/12/01 (P1L1307-BLK1)										
Chemical Oxygen Demand	ND	20	mg/l							

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1307 Extracted: 12/12/01										
LCS Analyzed: 12/12/01 (P1L1307-BS1)										
Chemical Oxygen Demand	209	20	mg/l	200		104	90-110			
LCS Dup Analyzed: 12/12/01 (P1L1307-BSD1)										
Chemical Oxygen Demand	209	20	mg/l	200		104	90-110	0	20	
Matrix Spike Analyzed: 12/12/01 (P1L1307-MS1)					Source: PKL0042-05					
Chemical Oxygen Demand	272	20	mg/l	200	77	98	65-130			
Matrix Spike Dup Analyzed: 12/12/01 (P1L1307-MSD1)					Source: PKL0042-05					
Chemical Oxygen Demand	268	20	mg/l	200	77	96	65-130	1	20	
Batch: P1L1319 Extracted: 12/13/01										
Duplicate Analyzed: 12/13/01 (P1L1319-DUP1)					Source: PKL0205-01					
Alkalinity as CaCO3	55.0	5.0	mg/l		55			0	20	
Duplicate Analyzed: 12/13/01 (P1L1319-DUP2)					Source: PKL0115-01					
Alkalinity as CaCO3	214	5.0	mg/l		210			2	20	
Reference Analyzed: 12/13/01 (P1L1319-SRM1)										
Alkalinity as CaCO3	92.0	5.0	mg/l	92.2		100	90-114			

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INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L1453 Extracted: 12/14/01										
Blank Analyzed: 12/17/01 (I1L1453-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 12/17/01 (I1L1453-BS1)										
Total Cyanide	**0.201**	0.020	mg/l	0.200		100	85-115			
Matrix Spike Analyzed: 12/17/01 (I1L1453-MS1)					**Source: PKL0069-01**					
Total Cyanide	**0.197**	0.020	mg/l	0.200	ND	98	70-115			
Matrix Spike Dup Analyzed: 12/17/01 (I1L1453-MSD1)					**Source: PKL0069-01**					
Total Cyanide	**0.197**	0.020	mg/l	0.200	ND	98	70-115	0	15	

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

B1	Target analyte detected in method blank at or above the method reporting limit.
B4	Target analyte detected in blank at/above method acceptance criteria.
K2	The sample dilutions set-up for the BOD analysis did not meet the criteria of a residual dissolved oxygen of at least 1 mg/L. Any reported result is an estimated value.
L3	The associated blank spike recovery was above method acceptance limits. See case narrative.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
M2	Matrix spike recovery was low, the method control sample recovery was acceptable.
M5	Analyte concentration was determined by the method of standard addition (MSA).
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/31/01-2/14/02
Revised: 2/14/02

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			Data included from: \\phoenixelement\element\TransferIn\PKL0069 TRAN S
P1L0609-BSD1	Orthophosphate (300)	Orthophosphate	L3
P1L0609-BSD1	Orthophosphate (300)	Orthophosphate	Exceeds upper control limit
P1L0609-MS1	Chloride (300.0)	Chloride	Exceeds upper control limit
P1L0609-MS1	Chloride (300.0)	Chloride	M1
P1L0609-MS1	Nitrite-N (300.0)	Nitrite-N	M2
P1L0609-MS1	Nitrite-N (300.0)	Nitrite-N	Exceeds lower control limit
P1L0609-MS1	Sulfate (300.0)	Sulfate	Exceeds lower control limit
P1L0609-MS1	Sulfate (300.0)	Sulfate	M2
P1L0609-MSD1	Orthophosphate (300)	Orthophosphate	Exceeds upper control limit
P1L0609-MSD1	Orthophosphate (300)	Orthophosphate	M1
P1L0609-MSD1	Sulfate (300.0)	Sulfate	Exceeds lower control limit
P1L0609-MSD1	Sulfate (300.0)	Sulfate	M2
P1L1009-MS1	AA Beryllium 200.9	Beryllium	M1
P1L1009-MS1	AA Beryllium 200.9	Beryllium	Exceeds upper control limit
P1L1009-MSD1	AA Beryllium 200.9	Beryllium	M1
P1L1009-MSD1	AA Beryllium 200.9	Beryllium	Exceeds upper control limit
P1L1012-MS1	ICP Calcium	Calcium	M1
P1L1012-MS1	ICP Calcium	Calcium	Exceeds upper control limit
P1L1107-BSD1	BOD	Biochemical Oxygen Demand	L3
P1L1107-BSD1	BOD	Biochemical Oxygen Demand	Exceeds upper control limit
P1L1405-BLK2	ICP Dis Zinc	Zinc, Dissolved	B4
P1L1813-MSD1	FLAA Sodium	Sodium	M2
P1L2012-BS1	ICP Dis Zinc	Zinc, Dissolved	L3
P1L2012-BS1	ICP Zinc	Zinc	L3
P1L2709-BLK1	ICP Dis Zinc	Zinc, Dissolved	Blank >1 x MRL
P1L2709-BLK1	ICP Dis Zinc	Zinc, Dissolved	B4
P1L2709-BLK2	ICP Dis Zinc	Zinc, Dissolved	Blank >1 x MRL
P1L2709-BLK2	ICP Dis Zinc	Zinc, Dissolved	B4
P1L2709-BS1	ICP Dis Zinc	Zinc, Dissolved	Exceeds upper control limit
P1L2709-BS1	ICP Dis Zinc	Zinc, Dissolved	L3
P1L2709-BSD1	ICP Dis Zinc	Zinc, Dissolved	Exceeds upper control limit
P1L2709-BSD1	ICP Dis Zinc	Zinc, Dissolved	L3
PKL0069-01	AA Beryllium 200.9	Beryllium	M5
PKL0069-01	BOD	Biochemical Oxygen Demand	K2
PKL0069-01	Orthophosphate (300)	Orthophosphate	L3

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
KL0069-02RE4	ICP Dis Zinc	Zinc, Dissolved	L3

Linda Eshelman
Project Manager

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-362

CORRECTIVE ACTION REPORT

Department: Wet Chemistry Method: 405.1 (BOD)
Date: 12/05/2001 Matrix: Water
Batch: P1L1107
Associated Samples: PKL0069-01, PKL0071-01, PKL0072-01, PKL0079-01, PKL0079-03, PKL0032-01 – PKL0032-03, PKL0039-01 – PKL0039-02, PKL0046-01, PKL0047-01, PKL0048-01, PKL0028-01, PKL0030-01 & PKL0049-01

Identification and Definition of Problem:

The Laboratory Control Sample Duplicate (LCSD) was high (120%) and outside of the acceptance limits of 85% – 115%.

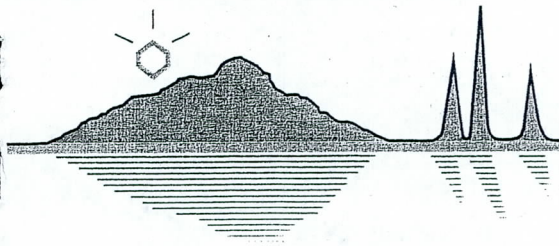
Determination of the Cause of the Problem:

No definite cause has been determined for the high recovery.

Corrective Action:

Re-analysis could not be performed due to the 48 hour holding time. The Laboratory Control Sample was within acceptance limits. Also, both sample / sample duplicate pairs associated with the batch are within acceptance limits. The LCSD has been flagged "L3" to indicate the high recovery. The associated samples may be biased high.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 1/2 /2002
Quality Assurance Manager



TRANSWEST GEOCHEM

December 21, 2001

Linda Eshelman
Del Mar Analytical
9830 S. 51st Street
Suite B-120
Phoenix, AZ 85044

RE: PKL0069-MCFC
Work Order No.: 0112037

Dear Linda,
Transwest Geochem, Inc. received 1 sample on 12/5/2001 11:30:00 AM for the analyses presented in the following report.

The Case Narrative of this report addresses any Quality Control and/or Quality Assurance issues associated with this Work Order.

If you have any questions regarding these test results, please feel free to call us at (602) 437-0330.

Sincerely,

Michael Farber for:

Beth Proffitt
Project Manager

ADHS License No. AZM133/AZ0133

Client: Del Mar Analytical
Work Order: 0112037
Project Name:
Project Number: PKL0069-MCFC

Date Printed: 21-Dec-01

CASE NARRATIVE

Transwest Geochem, Inc. uses the methods outlined in the following references:

Code of Federal Regulations, 40CFR, Part 136, Revised July 1995.

Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992 and 19th Edition, 1995.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised March 1983.

Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, Revised August 1993.

Methods for the Determination of Metals in Environmental Samples, EPA/600/R-94/111, Revised May 1994.

Hach, Water Analysis Handbook, 2nd Edition, 1992.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

Metals were analyzed using multi-element ICP instrumentation. Some metals reported in the QC report may not be associated with this Work Order.

Secondary Source QC Sample (LCSV) results may not be reported for all methods and/or analysis dates.

The sample introduction technique for Method 8015AZ used by this laboratory is direct injection.

All method blanks, laboratory spikes, and/or matrix spikes met quality control objectives for the parameters associated with this Work Order.

Data qualifiers ("flags") contained within this analytical report have been issued to explain a quality control deficiency, and do not affect the quality (validity) of the data unless noted otherwise in the case narrative.

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TRANSWEST GEOCHEM

Date Printed 21-Dec-01
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0069-MCFC
Work Order: 0112037
Date Received: 05-Dec-01

Work Order Sample Summary

Client Sample ID	Lab Sample ID	Test Code	Collection Date
PKL0069-01	0112037-01A	EPA420.1	12/4/2001 1:00:00 PM
	0112037-01B	EPA351.2	12/4/2001 1:00:00 PM

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0069-MCFC
Work Order: 0112037
Date Received: 05-Dec-01

Definitions

Analytical Spike (AS)	The AS is a known amount of a target analyte added to a sample after it has been distilled, digested, or extracted and is ready for analysis. The AS is generally performed if the MS has failed. It is used to indicate interference that arises from sample distillation, digestion, or extraction as opposed to interference that is innate to the matrix.
Continuing Curve Verification (CCV)	The CCV is also referred to as a curve check. This is a standard analyzed at specified intervals during an analysis. The CCV verifies the stability and accuracy of the calibration curve. There are specific CCV recovery acceptance criteria for each method.
Dilution Factor (DF)	The DF is an indication of how much a sample had to be diluted in order to quantitate it on a standard curve. The DF is indicated in the reported sample result. The sample PQL increases as the dilution increases.
Internal Standard (IS)	The IS is a compound that is similar to the organic compound of interest in terms of chemical composition but is unique in that it is rare in the environment. The same concentration of IS is added to every sample for some organic methods.
Laboratory Control Sample (LCS)	The LCS is also referred to as a blank spike. The LCS is an addition of a known amount of a target analyte (from the same source as calibration standards or spikes) to an aliquot of deionized water or other appropriate clean matrix. The LCS is processed through the entire method procedure in the same manner as samples.
Matrix Spike (MS)	The MS is a known amount of a target analyte added to a sample. The MS is processed through the entire method procedure in the same manner as samples.
Method Blank (MB)	The MB is an aliquot of deionized water or other appropriate clean matrix that is thought to be free of the analyte in question. The MB is processed through the entire extraction or analysis procedure and is used to indicate contamination in the lab.
Method Detection Limit (MDL)	The MDL is the lowest level of detection of which a method is capable.
Practical Quantitation Limit (PQL)	The PQL is the lowest value at which Transwest Geochem can detect an analyte in matrix with a high degree of confidence. The PQL will increase as the DF increases. The PQL is greater than or equal to the MDL.
Relative Percent Difference (RPD)	The RPD is a measure of precision (the ability to obtain the same result on re-analysis of the same sample). It is calculated using the result of a sample, MS, LCS, or LCSV and its associated duplicate result.
Secondary Source QC Sample (LCSV)	The LCSV is also referred to as a second source laboratory control sample. It is the same type of standard as a calibration or spiking standard but is obtained from a different source. The LCSV is an indication of the primary standard quality, method performance, and instrument performance.
Surrogate	A surrogate compound is similar to the organic compound of interest in terms of chemical composition but is unique in that it is rare in the environment. When surrogates are used, they are added to every sample, blank and standard. Surrogate recovery is used as an indication of extraction and/or analytical success.
Trip Blank (TB)	The TB is a portion of deionized water preserved in the same manner as the samples. The TB travels from the lab, to the field, and then back to the lab with the samples from the field. The TB serves as an indication of contamination introduced during sample transportation.

TRANSWEST GEOCHEM

Date Printed 21-Dec-01

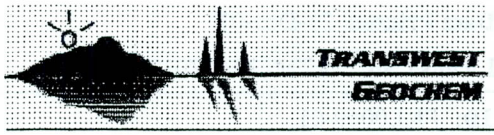
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Lab ID: 0112037-01
Project Name:
Project Number: PKL0069-MCFC

Client Sample ID: PKL0069-01
Collection Date: 12/4/2001 1:00:00 PM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	0.0054	0.0050		mg/L	1	EPA420.1	12/19/01	12/20/01	KMB	420.1-12/20/2001
Nitrogen, Kjeldahl, Total	4.2	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001

Confidential and Privileged



Date: 21-Dec-01

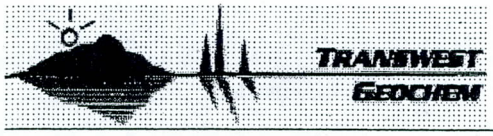
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

QC SUMMARY REPORT

Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Nitrogen, Kjeldahl, Total	<0.50	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001
Phenolics, Total Recoverable	<0.0050	0.0050		mg/L	1	EPA420.1	12/19/01	12/20/01	KMB	420.1-12/20/2001



Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

QC SUMMARY REPORT

Sample Duplicate

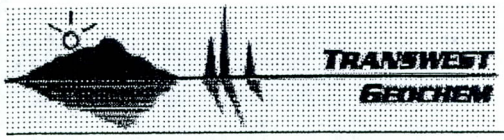
Analyte	Result	PQL	Units	RPD Ref Val	% RPD	RPD Limit	Test Code	Date Prepared	Date Analyzed	Analyst	Qual
Sample ID: **0112081-02AD** Batch ID: TKN_W-12/10/2001											
Client ID:											
Nitrogen, Kjeldahl, Total	0.81	0.50	mg/L	0.8035	1%	20	EPA351.2	N/A	12/10/01	TL	
Sample ID: **0112079-01AD** Batch ID: TKN_W-12/10/2001											
Client ID:											
Nitrogen, Kjeldahl, Total	<0.50	0.50	mg/L	<0.50	0%	20	EPA351.2	N/A	12/10/01	TL	

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

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: **0112081-02AS**	Batch ID: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	3.679	0.50	2.500	0.9797	108%	90	110				
Sample ID: **0112079-01AS**	Batch ID: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.368	0.50	2.500	<0.50	95%	90	110				
Sample ID: **0112033-01ASD**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
Client ID:				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1025	0.0050	0.1000	<0.0050	103%	80	120	0.1034	1%	20	
Sample ID: **0112033-01AS**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
Client ID:				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1034	0.0050	0.1000	<0.0050	103%	80	120				



Date: 21-Dec-01

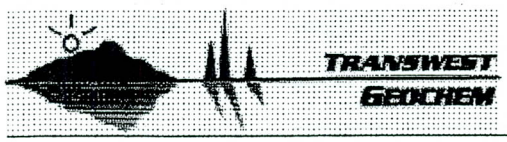
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

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: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.379	0.50	2.500	<0.50	95%	90	110				
Sample ID: **LCSD**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1021	0.0050	0.1000	<0.0050	102%	85	115	0.1012	1%	20	
Sample ID: **LCS**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1012	0.0050	0.1000	<0.0050	101%	85	115				



Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

QC SUMMARY REPORT

Secondary Source Blank Spike

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: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.454	0.50	2.500	<0.50	98%	90	110				

NEL LABORATORIES
Reno • Las Vegas
Phoenix • Boise

Reno Division
4750 Longley Lane, Suite 106 • Reno, Nevada 89502
775-348-2522 • Fax: 775-348-2546
1-800-368-5221

CLIENT: Del Mar Analytical
9830 S. 51st. St. Ste. B-120
Phoenix, AZ 85044
ATTN: Linda Eshelman

PROJECT NAME: PKL0069-MCFC
PROJECT #: NA

NEL ORDER ID: P0112004

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 12/5/01.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.

Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.

Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (602) 437-0099.

Bob George
Lab Manager

12/12/01
Date

CERTIFICATIONS:	Reno	Las Vegas		Reno	Las Vegas
Arizona	AZ0520	AZ0518	Idaho	Certified	Certified
California	1707	2002	Montana	Certified	Certified
US Army Corps of Engineers	Certified	Certified	Nevada	NV033	NV052

Del Mar Analytical

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKL0069

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/31/01

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
P1L0609-BSD1	Orthophosphate (300)	Orthophosphate	L3
P1L0609-BSD1	Orthophosphate (300)	Orthophosphate	Exceeds upper control limit
P1L0609-MS1	Chloride (300.0)	Chloride	Exceeds upper control limit
P1L0609-MS1	Chloride (300.0)	Chloride	M1
P1L0609-MS1	Nitrite-N (300.0)	Nitrite-N	M2
P1L0609-MS1	Nitrite-N (300.0)	Nitrite-N	Exceeds lower control limit
P1L0609-MS1	Sulfate (300.0)	Sulfate	M2
P1L0609-MS1	Sulfate (300.0)	Sulfate	Exceeds lower control limit
P1L0609-MSD1	Orthophosphate (300)	Orthophosphate	Exceeds upper control limit
P1L0609-MSD1	Orthophosphate (300)	Orthophosphate	M1
P1L0609-MSD1	Sulfate (300.0)	Sulfate	Exceeds lower control limit
P1L0609-MSD1	Sulfate (300.0)	Sulfate	M2
P1L1009-MS1	AA Beryllium 200.9	Beryllium	M1
P1L1009-MS1	AA Beryllium 200.9	Beryllium	Exceeds upper control limit
P1L1009-MSD1	AA Beryllium 200.9	Beryllium	M1
P1L1009-MSD1	AA Beryllium 200.9	Beryllium	Exceeds upper control limit
P1L1012-MS1	ICP Calcium	Calcium	M1
P1L1012-MS1	ICP Calcium	Calcium	Exceeds upper control limit
P1L1107-BSD1	BOD	Biochemical Oxygen Demand	L3
P1L1107-BSD1	BOD	Biochemical Oxygen Demand	Exceeds upper control limit
P1L1405-BLK2	ICP Dis Zinc	Zinc, Dissolved	B4
P1L1813-MSD1	FLAA Sodium	Sodium	M2
P1L2012-BS1	ICP Dis Zinc	Zinc, Dissolved	L3
P1L2012-BS1	ICP Zinc	Zinc	L3
P1L2709-BLK1	ICP Dis Zinc	Zinc, Dissolved	Blank >1 x MRL
P1L2709-BLK1	ICP Dis Zinc	Zinc, Dissolved	B4
P1L2709-BLK2	ICP Dis Zinc	Zinc, Dissolved	B4
P1L2709-BLK2	ICP Dis Zinc	Zinc, Dissolved	Blank >1 x MRL
P1L2709-BS1	ICP Dis Zinc	Zinc, Dissolved	Exceeds upper control limit
P1L2709-BS1	ICP Dis Zinc	Zinc, Dissolved	L3
P1L2709-BSD1	ICP Dis Zinc	Zinc, Dissolved	Exceeds upper control limit
P1L2709-BSD1	ICP Dis Zinc	Zinc, Dissolved	L3
PKL0069-01	AA Beryllium 200.9	Beryllium	M5
PKL0069-01	BOD	Biochemical Oxygen Demand	K2
PKL0069-01	Orthophosphate (300)	Orthophosphate	L3
PKL0069-02RE4	ICP Dis Zinc	Zinc, Dissolved	L3

Linda Eshelman
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

Del Mar Analytical

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2520 E. Sunset Rd. #3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

CORRECTIVE ACTION REPORT

Department: Wet Chemistry
Date: 12/05/2001
Batch: P1L1107
Method: 405.1 (BOD)
Matrix: Water

Associated Samples: PKL0069-01, PKL0071-01, PKL0072-01, PKL0079-01, PKL0079-03, PKL0032-01 – PKL0032-03, PKL0039-01 – PKL0039-02, PKL0046-01, PKL0047-01, PKL0048-01, PKL0028-01, PKL0030-01 & PKL0049-01

Identification and Definition of Problem:

The Laboratory Control Sample Duplicate (LCSD) was high (120%) and outside of the acceptance limits of 85% – 115%.

Determination of the Cause of the Problem:

No definite cause has been determined for the high recovery.

Corrective Action:

Re-analysis could not be performed due to the 48 hour holding time. The Laboratory Control Sample was within acceptance limits. Also, both sample / sample duplicate pairs associated with the batch are within acceptance limits. The LCSD has been flagged "L3" to indicate the high recovery. The associated samples may be biased high.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 1/2 /2002
Quality Assurance Manager

TRANSWEST
GEOCHEM

December 21, 2001

Linda Eshelman
Del Mar Analytical
9830 S. 51st Street
Suite B-120
Phoenix, AZ 85044

RE: PKL0069-MCFC
Work Order No.: 0112037

Dear Linda,
Transwest Geochem, Inc. received 1 sample on 12/5/2001 11:30:00 AM for the analyses presented in the following report.

The Case Narrative of this report addresses any Quality Control and/or Quality Assurance issues associated with this Work Order.

If you have any questions regarding these test results, please feel free to call us at (602) 437-0330.

Sincerely,

Michael Farber for:

Beth Proffitt
Project Manager

ADHS License No. AZM133/AZ0133

Date Printed: 21-Dec-01

Client: Del Mar Analytical
Work Order: 0112037
Project Name:
Project Number: PKL0069-MCFC

CASE NARRATIVE

Transwest Geochem, Inc. uses the methods outlined in the following references:

Code of Federal Regulations, 40CFR, Part 136, Revised July 1995.

Standard Methods for the Examination of Water and Wastewater, 18th Edition, 1992 and 19th Edition, 1995.

Methods for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, Revised March 1983.

Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, Revised August 1993.

Methods for the Determination of Metals in Environmental Samples, EPA/600/R-94/111, Revised May 1994.

Hach, Water Analysis Handbook, 2nd Edition, 1992.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW846, 3rd Edition.

Metals were analyzed using multi-element ICP instrumentation. Some metals reported in the QC report may not be associated with this Work Order.

Secondary Source QC Sample (LCSV) results may not be reported for all methods and/or analysis dates.

The sample introduction technique for Method 8015AZ used by this laboratory is direct injection.

All method blanks, laboratory spikes, and/or matrix spikes met quality control objectives for the parameters associated with this Work Order.

Data qualifiers ("flags") contained within this analytical report have been issued to explain a quality control deficiency, and do not affect the quality (validity) of the data unless noted otherwise in the case narrative.

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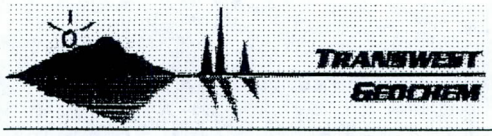
TRANSWEST GEOCHEM

Date Printed 21-Dec-01
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0069-MCFC
Work Order: 0112037
Date Received: 05-Dec-01

Work Order Sample Summary

Client Sample ID	Lab Sample ID	Test Code	Collection Date
PKL0069-01	0112037-01A	EPA420.1	12/4/2001 1:00:00 PM
	0112037-01B	EPA351.2	12/4/2001 1:00:00 PM



Date Printed 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0069-MCFC
Work Order: 0112037
Date Received: 05-Dec-01

Definitions

Analytical Spike (AS)	The AS is a known amount of a target analyte added to a sample after it has been distilled, digested, or extracted and is ready for analysis. The AS is generally performed if the MS has failed. It is used to indicate interference that arises from sample distillation, digestion, or extraction as opposed to interference that is innate to the matrix.
Continuing Curve Verification (CCV)	The CCV is also referred to as a curve check. This is a standard analyzed at specified intervals during an analysis. The CCV verifies the stability and accuracy of the calibration curve. There are specific CCV recovery acceptance criteria for each method.
Dilution Factor (DF)	The DF is an indication of how much a sample had to be diluted in order to quantitate it on a standard curve. The DF is indicated in the reported sample result. The sample PQL increases as the dilution increases.
Internal Standard (IS)	The IS is a compound that is similar to the organic compound of interest in terms of chemical composition but is unique in that it is rare in the environment. The same concentration of IS is added to every sample for some organic methods.
Laboratory Control Sample (LCS)	The LCS is also referred to as a blank spike. The LCS is an addition of a known amount of a target analyte (from the same source as calibration standards or spikes) to an aliquot of deionized water or other appropriate clean matrix. The LCS is processed through the entire method procedure in the same manner as samples.
Matrix Spike (MS)	The MS is a known amount of a target analyte added to a sample. The MS is processed through the entire method procedure in the same manner as samples.
Method Blank (MB)	The MB is an aliquot of deionized water or other appropriate clean matrix that is thought to be free of the analyte in question. The MB is processed through the entire extraction or analysis procedure and is used to indicate contamination in the lab.
Method Detection Limit (MDL)	The MDL is the lowest level of detection of which a method is capable.
Practical Quantitation Limit (PQL)	The PQL is the lowest value at which Transwest Geochem can detect an analyte in matrix with a high degree of confidence. The PQL will increase as the DF increases. The PQL is greater than or equal to the MDL.
Relative Percent Difference (RPD)	The RPD is a measure of precision (the ability to obtain the same result on re-analysis of the same sample). It is calculated using the result of a sample, MS, LCS, or LCSV and its associated duplicate result.
Secondary Source QC Sample (LCSV)	The LCSV is also referred to as a second source laboratory control sample. It is the same type of standard as a calibration or spiking standard but is obtained from a different source. The LCSV is an indication of the primary standard quality, method performance, and instrument performance.
Surrogate	A surrogate compound is similar to the organic compound of interest in terms of chemical composition but is unique in that it is rare in the environment. When surrogates are used, they are added to every sample, blank and standard. Surrogate recovery is used as an indication of extraction and/or analytical success.
Trip Blank (TB)	The TB is a portion of deionized water preserved in the same manner as the samples. The TB travels from the lab, to the field, and then back to the lab with the samples from the field. The TB serves as an indication of contamination introduced during sample transportation.

TRANSWEST GEOCHEM

Date Printed 21-Dec-01

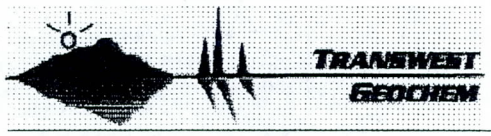
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Lab ID: 0112037-01
Project Name:
Project Number: PKL0069-MCFC

Client Sample ID: PKL0069-01
Collection Date: 12/4/2001 1:00:00 PM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	0.0054	0.0050		mg/L	1	EPA420.1	12/19/01	12/20/01	KMB	420.1-12/20/2001
Nitrogen, Kjeldahl, Total	4.2	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001

Confidential and Privileged



Date: 21-Dec-01

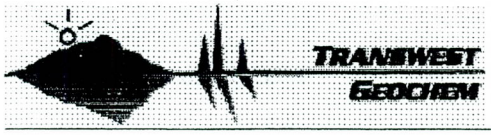
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

QC SUMMARY REPORT

Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Nitrogen, Kjeldahl, Total	<0.50	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001
Phenolics, Total Recoverable	<0.0050	0.0050		mg/L	1	EPA420.1	12/19/01	12/20/01	KMB	420.1-12/20/2001



Date: 21-Dec-01

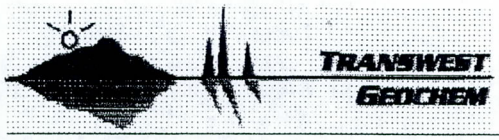
License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

QC SUMMARY REPORT

Sample Duplicat

Analyte	Result	PQL	Units	RPD Ref Val	% RPD	RPD Limit	Test Code	Date Prepared	Date Analyzed	Analyst	Qual
Sample ID: **0112081-02AD** Batch ID: TKN_W-12/10/2001											
Client ID:											
Nitrogen, Kjeldahl, Total	0.81	0.50	mg/L	0.8035	1%	20	EPA351.2	N/A	12/10/01	TL	
Sample ID: **0112079-01AD** Batch ID: TKN_W-12/10/2001											
Client ID:											
Nitrogen, Kjeldahl, Total	<0.50	0.50	mg/L	<0.50	0%	20	EPA351.2	N/A	12/10/01	TL	



Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

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: **0112081-02AS**	Batch ID: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	3.679	0.50	2.500	0.9797	108%	90	110				
Sample ID: **0112079-01AS**	Batch ID: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.368	0.50	2.500	<0.50	95%	90	110				
Sample ID: **0112033-01ASD**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
Client ID:				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1025	0.0050	0.1000	<0.0050	103%	80	120	0.1034	1%	20	
Sample ID: **0112033-01AS**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
Client ID:				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1034	0.0050	0.1000	<0.0050	103%	80	120				

Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

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: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.379	0.50	2.500	<0.50	95%	90	110				
Sample ID: **LCSD**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1021	0.0050	0.1000	<0.0050	102%	85	115	0.1012	1%	20	
Sample ID: **LCS**	Batch ID: 420.1-12/20/2001			Test Code: EPA420.1				Date Analyzed: 12/20/01			
				Units: mg/L				Date Prepared: 12/19/01			
Phenolics, Total Recoverable	0.1012	0.0050	0.1000	<0.0050	101%	85	115				

TRANSWEST GEOCHEM

Date: 21-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112037
Project: PKL0069-MCFC

QC SUMMARY REPORT

Secondary Source Blank Spike

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: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.454	0.50	2.500	<0.50	98%	90	110				

NEL LABORATORIES
Reno • Las Vegas
Phoenix • Boise

Reno Division
4750 Longley Lane, Suite 106 • Reno, Nevada 89502
775-348-2522 • Fax: 775-348-2546
1-800-368-5221

CLIENT: Del Mar Analytical
9830 S. 51st. St. Ste. B-120
Phoenix, AZ 85044
ATTN: Linda Eshelman

PROJECT NAME: PKL0069-MCFC NEL ORDER ID: P0112004
PROJECT #: NA

Attached are the analytical results for samples in support of the above referenced project.

Samples submitted for this project were not sampled by NEL Laboratories. Samples were received by NEL in good condition, under chain of custody on 12/5/01.

Samples were analyzed as received.

Where applicable we have included the following quality control data:

Method blank - used to demonstrate absence of contamination or interferences in the analytical process.

Laboratory Control Spike (LCS) - used to demonstrate laboratory ability to perform the method within specifications by spiking representative analytes into a clean matrix.

Surrogates - compounds added to each sample to ensure that the method requirements are met for each individual sample.

Should you have any questions or comments, please feel free to contact our Client Services department at (602) 437-0099.

Bob George
Lab Manager

12/12/01
Date

CERTIFICATIONS:	Reno	Las Vegas		Reno	Las Vegas
Arizona	AZ0520	AZ0518	Idaho	Certified	Certified
California	1707	2002	Montana	Certified	Certified
US Army Corps of Engineers	Certified	Certified	Nevada	NV033	NV052

CLIENT: Del Mar Analytical
PROJECT ID: PKL0069-MCFC
PROJECT #: NA

CLIENT ID: **PKL0069-01**
DATE SAMPLED: 12/4/01
NEL SAMPLE ID: P0112004-01

TEST: **Metals**
MATRIX: Aqueous

ANALYST: JY Reno

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	0.0035	0.001 mg/L	1	EPA 200.8	12/7/01	12/8/01

D.F. - Dilution Factor

ND - Not Detected

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CLIENT: Del Mar Analytical
PROJECT ID: PKL0069-MCFC
PROJECT #: NA

CLIENT ID: **PKL0069-02**
DATE SAMPLED: 12/4/01
NEL SAMPLE ID: P0112004-02

TEST: **Dissolved Metals**
MATRIX: Aqueous

ANALYST: JY Reno

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	0.0027	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	NA	12/11/01
Copper, Dissolved	0.068	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01

D.F. - Dilution Factor

ND - Not Detected

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CLIENT: Del Mar Analytical
PROJECT ID: PKL0069-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: 1206-6.3-BLK

TEST: **Dissolved Metals**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	NA	12/11/01
Copper, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	NA	12/11/01

D.F. - Dilution Factor

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

CLIENT: Del Mar Analytical
PROJECT ID: PKL0069-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: 1207-4.2-BLK

TEST: **Metals**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	ND	0.001 mg/L	1	EPA 200.8	12/7/01	12/8/01

D.F. - Dilution Factor

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

CLIENT: Del Mar Analytical
PROJECT ID: PKL0069-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic, Dissolved	1206-6.3-LCS	0.1	0.0899	90	85 - 115	
Arsenic, Dissolved	P0112002-02-MS	0.1	0.12	116	75 - 125	
Arsenic, Dissolved	P0112002-02-MSD	0.01	0.124	120	75 - 125	3.4
Beryllium, Dissolved	1206-6.3-LCS	0.1	0.106	106	85 - 115	
Beryllium, Dissolved	P0112002-02-MS	0.1	0.104	104	75 - 125	
Beryllium, Dissolved	P0112002-02-MSD	0.1	0.0927	93	75 - 125	11.5
Copper, Dissolved	1206-6.3-LCS	0.05	0.0441	88	85 - 115	
Copper, Dissolved	P0112002-02-MS	0.05	0.167	94	75 - 125	
Copper, Dissolved	P0112002-02-MSD	0.5	0.174	108	75 - 125	13.9
Silver, Dissolved	1206-6.3-LCS	0.05	0.0548	110	85 - 115	
Silver, Dissolved	P0112002-02-MS	0.05	0.0592	110	75 - 125	
Silver, Dissolved	P0112002-02-MSD	0.5	0.059	110	75 - 125	0.4

ND - Not Detected

This report shall not be reproduced except in full, without the written approval of the laboratory.

CLIENT: Del Mar Analytical
PROJECT ID: PKL0069-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic	1207-4.2-LCS	0.1	0.0879	88	85 - 115	
Arsenic	P0112004-01-MS	0.1	0.0896	86	75 - 125	
Arsenic	P0112004-01-MSD	0.1	0.0911	88	75 - 125	1.7

ND - Not Detected

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Del Mar Analytical

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7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-9596 FAX (858) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/19/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0050-01	40th+IBW-GRAB	Water
PKL0050-02	TRIP BLANK	Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: Analysis was subcontracted to Aquatic Consult. & Testing - 1525 W. University Dr., #106, Tempe, AZ (AZ0003). Results are attached.

QA/QC CRITERIA: All analyses met method criteria.

EXPLANATION OF DATA QUALIFIERS: No further explanation of data qualifiers needed.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0050-01 (40th+IBW-GRAB - Water)								
Total Recoverable Hydrocarbon	EPA 418.1	P1L1123	1.0	**5.0**	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0050-01 (40th+IBW-GRAB - Water)								
Oil & Grease	EPA 413.2	P1L1122	1.0	7.7	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0050-01 (40th+IBW-GRAB - Water)								
Acetone	EPA 624	P1L1402	20	ND	1	12/13/01	12/14/01	T2
Benzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Bromodichloromethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Bromoform	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
Bromomethane	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
Carbon tetrachloride	EPA 624	P1L1402	2.5	ND	1	12/13/01	12/14/01	
Chlorobenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Dibromochloromethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Chloroethane	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
Chloroform	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Chloromethane	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
1,2-Dichlorobenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,3-Dichlorobenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,4-Dichlorobenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,1-Dichloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,2-Dichloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,1-Dichloroethene	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
trans-1,2-Dichloroethene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,2-Dichloropropane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
cis-1,3-Dichloropropene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
trans-1,3-Dichloropropene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Ethylbenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Methylene chloride	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Tetrachloroethene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Toluene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,1,1-Trichloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,1,2-Trichloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Trichloroethene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Trichlorofluoromethane	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
Vinyl chloride	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Surrogate: Dibromofluoromethane (80-120%)				*92 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*88 %*				
Surrogate: Toluene-d8 (80-120%)				*84 %*				

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0050-02 (TRIP BLANK - Water)								
Acetone	EPA 624	P1L1725	20	ND	1	12/17/01	12/17/01	T2
Benzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Bromodichloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Bromoform	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Bromomethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Carbon tetrachloride	EPA 624	P1L1725	2.5	ND	1	12/17/01	12/17/01	
Chlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Dibromochloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Chloroethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Chloroform	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Chloromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
1,2-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,3-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,4-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,2-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1-Dichloroethene	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
trans-1,2-Dichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,2-Dichloropropane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
cis-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
trans-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Ethylbenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Methylene chloride	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Tetrachloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Toluene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1,1-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1,2-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Trichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Trichlorofluoromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Vinyl chloride	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Surrogate: Dibromofluoromethane (80-120%)				*97 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*95 %*				
Surrogate: Toluene-d8 (80-120%)				*99 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0050-01 (40th+IBW-GRAB - Water)								
Chrysene	EPA 625	P1L0613	10	ND	1	12/6/01	12/11/01	
Phenol	EPA 625	P1L0613	10	ND	1	12/6/01	12/11/01	
Benzoic acid	EPA 625	P1L0613	50	ND	1	12/6/01	12/11/01	
Surrogate: 2-Fluorophenol (20-120%)				*63 %*				
Surrogate: Phenol-d6 (15-115%)				*67 %*				
Surrogate: 2,4,6-Tribromophenol (35-135%)				*94 %*				
Surrogate: Nitrobenzene-d5 (25-120%)				*72 %*				
Surrogate: 2-Fluorobiphenyl (25-145%)				*72 %*				
Surrogate: Terphenyl-d14 (40-130%)				*89 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0050-01 (40th+IBW-GRAB - Water)								
4,4'-DDE	EPA 608	I1L0730	0.10	ND	1	12/7/01	12/11/01	
Surrogate: Tetrachloro-m-xylene (30-120%)				*69 %*				
Surrogate: Decachlorobiphenyl (30-120%)				*77 %*				

DEL MAR ANALYTICAL, IRVINE (AZ0428)

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Project Manager

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2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1123 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1123-BLK1)										
Total Recoverable Hydrocarbons	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1123-BS1)										
Total Recoverable Hydrocarbons	**12.0**	1.0	mg/l	10.0		120	95-145			
LCS Dup Analyzed: 12/11/01 (P1L1123-BSD1)										
Total Recoverable Hydrocarbons	**12.3**	1.0	mg/l	10.0		123	95-145	2	20	

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1122 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1122-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1122-BS1)										
Oil & Grease	**12.0**	1.0	mg/l	10.0		120	90-145			
LCS Dup Analyzed: 12/11/01 (P1L1122-BSD1)										
Oil & Grease	**12.7**	1.0	mg/l	10.0		127	90-145	6	20	

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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
Blank Analyzed: 12/13/01 (P1L1402-BLK1)										
Acetone	ND	20	ug/l							T2
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.7*		*ug/l*	*25.0*		*91*	*80-120*			
Surrogate: Toluene-d8	*21.6*		*ug/l*	*25.0*		*86*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
LCS Analyzed: 12/13/01 (P1L1402-BS1)										
Acetone	ND	20	ug/l	25.0		68	40-150			T2
Benzene	25.3	2.0	ug/l	25.0		101	37-151			
Bromodichloromethane	23.4	2.0	ug/l	25.0		94	35-155			
Bromoform	25.0	5.0	ug/l	25.0		100	45-169			
Bromomethane	25.3	5.0	ug/l	25.0		101	5-242			
Carbon tetrachloride	24.0	2.5	ug/l	25.0		96	70-140			
Chlorobenzene	25.1	2.0	ug/l	25.0		100	37-160			
Dibromochloromethane	24.2	2.0	ug/l	25.0		97	53-149			
Chloroethane	24.2	5.0	ug/l	25.0		97	14-230			
Chloroform	25.7	2.0	ug/l	25.0		103	51-138			
Chloromethane	20.1	5.0	ug/l	25.0		80	5-273			
1,2-Dichlorobenzene	23.4	2.0	ug/l	25.0		94	18-190			
1,3-Dichlorobenzene	24.1	2.0	ug/l	25.0		96	59-156			
1,4-Dichlorobenzene	24.6	2.0	ug/l	25.0		98	18-190			
1,1-Dichloroethane	25.4	2.0	ug/l	25.0		102	59-155			
1,2-Dichloroethane	24.3	2.0	ug/l	25.0		97	49-155			
1,1-Dichloroethene	24.2	5.0	ug/l	25.0		97	5-234			
trans-1,2-Dichloroethene	26.0	2.0	ug/l	25.0		104	54-156			
1,2-Dichloropropane	25.4	2.0	ug/l	25.0		102	5-210			
cis-1,3-Dichloropropene	24.1	2.0	ug/l	25.0		96	5-227			
trans-1,3-Dichloropropene	21.5	2.0	ug/l	25.0		86	17-183			
Ethylbenzene	27.4	2.0	ug/l	25.0		110	37-162			
Methylene chloride	23.5	5.0	ug/l	25.0		94	5-221			
1,1,2,2-Tetrachloroethane	26.6	2.0	ug/l	25.0		106	46-157			
Tetrachloroethene	25.7	2.0	ug/l	25.0		103	64-148			
Toluene	24.0	2.0	ug/l	25.0		96	47-150			
1,1,1-Trichloroethane	26.3	2.0	ug/l	25.0		105	52-162			
1,1,2-Trichloroethane	23.4	2.0	ug/l	25.0		94	52-150			
Trichloroethene	25.9	2.0	ug/l	25.0		104	71-157			
Trichlorofluoromethane	31.8	5.0	ug/l	25.0		127	17-181			
Vinyl chloride	20.9	2.0	ug/l	25.0		84	5-251			
Surrogate: Dibromofluoromethane	*25.3*		*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.7*		*ug/l*	*25.0*		*95*	*80-120*			
Surrogate: Toluene-d8	*22.6*		*ug/l*	*25.0*		*90*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
LCS Dup Analyzed: 12/13/01 (P1L1402-BSD1)										
Acetone	ND	20	ug/l	25.0		64	40-150	7	20	T2
Benzene	**25.8**	2.0	ug/l	25.0		103	37-151	2	20	
Bromodichloromethane	**23.8**	2.0	ug/l	25.0		95	35-155	2	20	
Bromoform	**26.1**	5.0	ug/l	25.0		104	45-169	4	20	
Bromomethane	**25.2**	5.0	ug/l	25.0		101	5-242	0.4	20	
Carbon tetrachloride	**24.7**	2.5	ug/l	25.0		99	70-140	3	20	
Chlorobenzene	**25.7**	2.0	ug/l	25.0		103	37-160	2	20	
Dibromochloromethane	**25.0**	2.0	ug/l	25.0		100	53-149	3	20	
Chloroethane	**23.9**	5.0	ug/l	25.0		96	14-230	1	20	
Chloroform	**26.0**	2.0	ug/l	25.0		104	51-138	1	20	
Chloromethane	**19.9**	5.0	ug/l	25.0		80	5-273	1	20	
1,2-Dichlorobenzene	**24.0**	2.0	ug/l	25.0		96	18-190	3	20	
1,3-Dichlorobenzene	**24.5**	2.0	ug/l	25.0		98	59-156	2	20	
1,4-Dichlorobenzene	**25.1**	2.0	ug/l	25.0		100	18-190	2	20	
1,1-Dichloroethane	**25.7**	2.0	ug/l	25.0		103	59-155	1	20	
1,2-Dichloroethane	**24.9**	2.0	ug/l	25.0		100	49-155	2	20	
1,1-Dichloroethene	**24.7**	5.0	ug/l	25.0		99	5-234	2	20	
trans-1,2-Dichloroethene	**26.6**	2.0	ug/l	25.0		106	54-156	2	20	
1,2-Dichloropropane	**25.9**	2.0	ug/l	25.0		104	5-210	2	20	
cis-1,3-Dichloropropene	**24.4**	2.0	ug/l	25.0		98	5-227	1	20	
trans-1,3-Dichloropropene	**22.0**	2.0	ug/l	25.0		88	17-183	2	20	
Ethylbenzene	**28.0**	2.0	ug/l	25.0		112	37-162	2	20	
Methylene chloride	**23.7**	5.0	ug/l	25.0		95	5-221	0.8	20	
1,1,2,2-Tetrachloroethane	**27.7**	2.0	ug/l	25.0		111	46-157	4	20	
Tetrachloroethene	**26.5**	2.0	ug/l	25.0		106	64-148	3	20	
Toluene	**24.3**	2.0	ug/l	25.0		97	47-150	1	20	
1,1,1-Trichloroethane	**26.7**	2.0	ug/l	25.0		107	52-162	2	20	
1,1,2-Trichloroethane	**23.8**	2.0	ug/l	25.0		95	52-150	2	20	
Trichloroethene	**26.2**	2.0	ug/l	25.0		105	71-157	1	20	
Trichlorofluoromethane	**32.2**	5.0	ug/l	25.0		129	17-181	1	20	
Vinyl chloride	**21.2**	2.0	ug/l	25.0		85	5-251	1	20	
Surrogate: Dibromofluoromethane	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*22.3*		*ug/l*	*25.0*		*89*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
Matrix Spike Analyzed: 12/13/01 (P1L1402-MS1)					Source: PKK0497-01					
Acetone	ND	20	ug/l	25.0	ND	50	25-150			T2
Benzene	**23.8**	2.0	ug/l	25.0	ND	95	37-151			
Bromodichloromethane	**22.3**	2.0	ug/l	25.0	ND	89	35-155			
Bromoform	**25.6**	5.0	ug/l	25.0	ND	102	45-169			
Bromomethane	**23.2**	5.0	ug/l	25.0	ND	93	5-242			
Carbon tetrachloride	**22.2**	2.5	ug/l	25.0	ND	89	70-140			
Chlorobenzene	**23.4**	2.0	ug/l	25.0	ND	94	37-160			
Dibromochloromethane	**23.8**	2.0	ug/l	25.0	ND	95	53-149			
Chloroethane	**22.2**	5.0	ug/l	25.0	ND	89	14-230			
Chloroform	**24.5**	2.0	ug/l	25.0	ND	98	51-138			
Chloromethane	**17.8**	5.0	ug/l	25.0	ND	71	5-273			
1,2-Dichlorobenzene	**22.6**	2.0	ug/l	25.0	ND	90	18-190			
1,3-Dichlorobenzene	**22.6**	2.0	ug/l	25.0	ND	90	59-156			
1,4-Dichlorobenzene	**23.4**	2.0	ug/l	25.0	ND	94	18-190			
1,1-Dichloroethane	**23.9**	2.0	ug/l	25.0	ND	96	59-155			
1,2-Dichloroethane	**44.7**	2.0	ug/l	25.0	18	107	49-155			
1,1-Dichloroethene	**22.3**	5.0	ug/l	25.0	ND	89	5-234			
trans-1,2-Dichloroethene	**24.6**	2.0	ug/l	25.0	ND	98	54-156			
1,2-Dichloropropane	**23.8**	2.0	ug/l	25.0	ND	95	5-210			
cis-1,3-Dichloropropene	**22.7**	2.0	ug/l	25.0	ND	91	5-227			
trans-1,3-Dichloropropene	**20.9**	2.0	ug/l	25.0	ND	84	17-183			
Ethylbenzene	**25.4**	2.0	ug/l	25.0	ND	102	37-162			
Methylene chloride	**21.2**	5.0	ug/l	25.0	ND	85	5-221			
1,1,2,2-Tetrachloroethane	**28.8**	2.0	ug/l	25.0	ND	115	46-157			
Tetrachloroethene	**23.8**	2.0	ug/l	25.0	ND	95	64-148			
Toluene	**22.3**	2.0	ug/l	25.0	ND	89	47-150			
1,1,1-Trichloroethane	**24.6**	2.0	ug/l	25.0	ND	98	52-162			
1,1,2-Trichloroethane	**23.3**	2.0	ug/l	25.0	ND	93	52-150			
Trichloroethene	**24.3**	2.0	ug/l	25.0	ND	97	71-157			
Trichlorofluoromethane	**28.5**	5.0	ug/l	25.0	ND	114	17-181			
Vinyl chloride	**18.6**	2.0	ug/l	25.0	ND	74	5-251			
Surrogate: Dibromofluoromethane	*25.1*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.4*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*21.9*		*ug/l*	*25.0*		*88*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
Matrix Spike Dup Analyzed: 12/13/01 (P1L1402-MSD1)					**Source: PKK0497-01**					
Acetone	ND	20	ug/l	25.0	ND	41	25-150	19	20	T2
Benzene	**23.3**	2.0	ug/l	25.0	ND	93	37-151	2	20	
Bromodichloromethane	**21.7**	2.0	ug/l	25.0	ND	87	35-155	3	20	
Bromoform	**23.1**	5.0	ug/l	25.0	ND	92	45-169	10	20	
Bromomethane	**22.2**	5.0	ug/l	25.0	ND	89	5-242	4	20	
Carbon tetrachloride	**22.3**	2.5	ug/l	25.0	ND	89	70-140	0.4	20	
Chlorobenzene	**23.2**	2.0	ug/l	25.0	ND	93	37-160	0.9	20	
Dibromochloromethane	**22.5**	2.0	ug/l	25.0	ND	90	53-149	6	20	
Chloroethane	**21.8**	5.0	ug/l	25.0	ND	87	14-230	2	20	
Chloroform	**23.9**	2.0	ug/l	25.0	ND	96	51-138	2	20	
Chloromethane	**17.6**	5.0	ug/l	25.0	ND	70	5-273	1	20	
1,2-Dichlorobenzene	**21.7**	2.0	ug/l	25.0	ND	87	18-190	4	20	
1,3-Dichlorobenzene	**22.1**	2.0	ug/l	25.0	ND	88	59-156	2	20	
1,4-Dichlorobenzene	**22.9**	2.0	ug/l	25.0	ND	92	18-190	2	20	
1,1-Dichloroethane	**23.4**	2.0	ug/l	25.0	ND	94	59-155	2	20	
1,2-Dichloroethane	**41.6**	2.0	ug/l	25.0	18	94	49-155	7	20	
1,1-Dichloroethene	**22.0**	5.0	ug/l	25.0	ND	88	5-234	1	20	
trans-1,2-Dichloroethene	**24.2**	2.0	ug/l	25.0	ND	97	54-156	2	20	
1,2-Dichloropropane	**23.5**	2.0	ug/l	25.0	ND	94	5-210	1	20	
cis-1,3-Dichloropropene	**22.0**	2.0	ug/l	25.0	ND	88	5-227	3	20	
trans-1,3-Dichloropropene	**19.6**	2.0	ug/l	25.0	ND	78	17-183	6	20	
Ethylbenzene	**25.1**	2.0	ug/l	25.0	ND	100	37-162	1	20	
Methylene chloride	**21.6**	5.0	ug/l	25.0	ND	86	5-221	2	20	
1,1,2,2-Tetrachloroethane	**24.8**	2.0	ug/l	25.0	ND	99	46-157	15	20	
Tetrachloroethene	**23.7**	2.0	ug/l	25.0	ND	95	64-148	0.4	20	
Toluene	**22.0**	2.0	ug/l	25.0	ND	88	47-150	1	20	
1,1,1-Trichloroethane	**23.9**	2.0	ug/l	25.0	ND	96	52-162	3	20	
1,1,2-Trichloroethane	**21.6**	2.0	ug/l	25.0	ND	86	52-150	8	20	
Trichloroethene	**23.8**	2.0	ug/l	25.0	ND	95	71-157	2	20	
Trichlorofluoromethane	**27.6**	5.0	ug/l	25.0	ND	110	17-181	3	20	
Vinyl chloride	**18.7**	2.0	ug/l	25.0	ND	75	5-251	0.5	20	
Surrogate: Dibromofluoromethane	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.4*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*21.7*		*ug/l*	*25.0*		*87*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Blank Analyzed: 12/17/01 (P1L1725-BLK1)										
Acetone	ND	20	ug/l							T2
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			

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Project Manager

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Maricopa County -Flood Control District
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Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Analyzed: 12/17/01 (P1L1725-BS1)										
Acetone	ND	20	ug/l	25.0		66	40-150			T2
Benzene	**23.6**	2.0	ug/l	25.0		94	37-151			
Bromodichloromethane	**23.8**	2.0	ug/l	25.0		95	35-155			
Bromoform	**23.9**	5.0	ug/l	25.0		96	45-169			
Bromomethane	**24.2**	5.0	ug/l	25.0		97	5-242			
Carbon tetrachloride	**25.3**	2.5	ug/l	25.0		101	70-140			
Chlorobenzene	**23.3**	2.0	ug/l	25.0		93	37-160			
Dibromochloromethane	**23.8**	2.0	ug/l	25.0		95	53-149			
Chloroethane	**23.9**	5.0	ug/l	25.0		96	14-230			
Chloroform	**23.8**	2.0	ug/l	25.0		95	51-138			
Chloromethane	**21.1**	5.0	ug/l	25.0		84	5-273			
1,2-Dichlorobenzene	**22.6**	2.0	ug/l	25.0		90	18-190			
1,3-Dichlorobenzene	**22.6**	2.0	ug/l	25.0		90	59-156			
1,4-Dichlorobenzene	**23.3**	2.0	ug/l	25.0		93	18-190			
1,1-Dichloroethane	**24.0**	2.0	ug/l	25.0		96	59-155			
1,2-Dichloroethane	**24.7**	2.0	ug/l	25.0		99	49-155			
1,1-Dichloroethene	**24.4**	5.0	ug/l	25.0		98	5-234			
trans-1,2-Dichloroethene	**23.7**	2.0	ug/l	25.0		95	54-156			
1,2-Dichloropropane	**24.7**	2.0	ug/l	25.0		99	5-210			
cis-1,3-Dichloropropene	**25.2**	2.0	ug/l	25.0		101	5-227			
trans-1,3-Dichloropropene	**23.1**	2.0	ug/l	25.0		92	17-183			
Ethylbenzene	**25.4**	2.0	ug/l	25.0		102	37-162			
Methylene chloride	**21.2**	5.0	ug/l	25.0		85	5-221			
1,1,2,2-Tetrachloroethane	**23.1**	2.0	ug/l	25.0		92	46-157			
Tetrachloroethene	**25.4**	2.0	ug/l	25.0		102	64-148			
Toluene	**23.8**	2.0	ug/l	25.0		95	47-150			
1,1,1-Trichloroethane	**25.1**	2.0	ug/l	25.0		100	52-162			
1,1,2-Trichloroethane	**23.8**	2.0	ug/l	25.0		95	52-150			
Trichloroethene	**25.2**	2.0	ug/l	25.0		101	71-157			
Trichlorofluoromethane	**24.5**	5.0	ug/l	25.0		98	17-181			
Vinyl chloride	**23.5**	2.0	ug/l	25.0		94	5-251			
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Dup Analyzed: 12/17/01 (P1L1725-BSD1)										
Acetone	ND	20	ug/l	25.0		74	40-150	10	20	T2
Benzene	26.3	2.0	ug/l	25.0		105	37-151	11	20	
Bromodichloromethane	26.0	2.0	ug/l	25.0		104	35-155	9	20	
Bromoform	25.3	5.0	ug/l	25.0		101	45-169	6	20	
Bromomethane	27.8	5.0	ug/l	25.0		111	5-242	14	20	
Carbon tetrachloride	28.0	2.5	ug/l	25.0		112	70-140	10	20	
Chlorobenzene	26.2	2.0	ug/l	25.0		105	37-160	12	20	
Dibromochloromethane	25.8	2.0	ug/l	25.0		103	53-149	8	20	
Chloroethane	27.4	5.0	ug/l	25.0		110	14-230	14	20	
Chloroform	26.4	2.0	ug/l	25.0		106	51-138	10	20	
Chloromethane	24.3	5.0	ug/l	25.0		97	5-273	14	20	
1,2-Dichlorobenzene	25.5	2.0	ug/l	25.0		102	18-190	12	20	
1,3-Dichlorobenzene	25.2	2.0	ug/l	25.0		101	59-156	11	20	
1,4-Dichlorobenzene	25.6	2.0	ug/l	25.0		102	18-190	9	20	
1,1-Dichloroethane	26.5	2.0	ug/l	25.0		106	59-155	10	20	
1,2-Dichloroethane	27.0	2.0	ug/l	25.0		108	49-155	9	20	
1,1-Dichloroethene	27.4	5.0	ug/l	25.0		110	5-234	12	20	
trans-1,2-Dichloroethene	26.4	2.0	ug/l	25.0		106	54-156	11	20	
1,2-Dichloropropane	27.3	2.0	ug/l	25.0		109	5-210	10	20	
cis-1,3-Dichloropropene	27.6	2.0	ug/l	25.0		110	5-227	9	20	
trans-1,3-Dichloropropene	25.1	2.0	ug/l	25.0		100	17-183	8	20	
Ethylbenzene	28.8	2.0	ug/l	25.0		115	37-162	13	20	
Methylene chloride	24.7	5.0	ug/l	25.0		99	5-221	15	20	
1,1,2,2-Tetrachloroethane	24.7	2.0	ug/l	25.0		99	46-157	7	20	
Tetrachloroethene	28.4	2.0	ug/l	25.0		114	64-148	11	20	
Toluene	26.4	2.0	ug/l	25.0		106	47-150	10	20	
1,1,1-Trichloroethane	28.0	2.0	ug/l	25.0		112	52-162	11	20	
1,1,2-Trichloroethane	26.1	2.0	ug/l	25.0		104	52-150	9	20	
Trichloroethene	28.0	2.0	ug/l	25.0		112	71-157	11	20	
Trichlorofluoromethane	27.7	5.0	ug/l	25.0		111	17-181	12	20	
Vinyl chloride	21.0	2.0	ug/l	25.0		84	5-251	11	20	
Surrogate: Dibromofluoromethane	*24.0*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Analyzed: 12/17/01 (P1L1725-MS1)					Source: PKL0127-01RE1					
Acetone	1020	1000	ug/l	1250	ND	82	25-150			T2
Benzene	1240	100	ug/l	1250	ND	99	37-151			
Bromodichloromethane	1210	100	ug/l	1250	ND	97	35-155			
Bromoform	1130	250	ug/l	1250	ND	90	45-169			
Bromomethane	1330	250	ug/l	1250	ND	106	5-242			
Carbon tetrachloride	1300	120	ug/l	1250	ND	104	70-140			
Chlorobenzene	1210	100	ug/l	1250	ND	97	37-160			
Dibromochloromethane	1170	100	ug/l	1250	ND	94	53-149			
Chloroethane	1310	250	ug/l	1250	ND	105	14-230			
Chloroform	1270	100	ug/l	1250	ND	102	51-138			
Chloromethane	1120	250	ug/l	1250	ND	90	5-273			
1,2-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,3-Dichlorobenzene	1190	100	ug/l	1250	ND	95	59-156			
1,4-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,1-Dichloroethane	1270	100	ug/l	1250	ND	102	59-155			
1,2-Dichloroethane	1270	100	ug/l	1250	ND	102	49-155			
1,1-Dichloroethene	1310	250	ug/l	1250	ND	105	5-234			
trans-1,2-Dichloroethene	1260	100	ug/l	1250	ND	101	54-156			
1,2-Dichloropropane	1270	100	ug/l	1250	ND	102	5-210			
cis-1,3-Dichloropropene	1260	100	ug/l	1250	ND	101	5-227			
trans-1,3-Dichloropropene	1140	100	ug/l	1250	ND	91	17-183			
Ethylbenzene	1330	100	ug/l	1250	ND	106	37-162			
Methylene chloride	1170	250	ug/l	1250	ND	94	5-221			
1,1,2,2-Tetrachloroethane	1140	100	ug/l	1250	ND	91	46-157			
Tetrachloroethene	1320	100	ug/l	1250	ND	106	64-148			
Toluene	1230	100	ug/l	1250	ND	98	47-150			
1,1,1-Trichloroethane	1320	100	ug/l	1250	ND	106	52-162			
1,1,2-Trichloroethane	1190	100	ug/l	1250	ND	95	52-150			
Trichloroethene	1320	100	ug/l	1250	ND	106	71-157			
Trichlorofluoromethane	1260	250	ug/l	1250	ND	101	17-181			
Vinyl chloride	990	100	ug/l	1250	ND	79	5-251			
Surrogate: Dibromofluoromethane	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Dup Analyzed: 12/17/01 (P1L1725-MSD1)					**Source: PKL0127-01RE1**					
Acetone	1050	1000	ug/l	1250	ND	84	25-150	3	20	T2
Benzene	1200	100	ug/l	1250	ND	96	37-151	3	20	
Bromodichloromethane	1170	100	ug/l	1250	ND	94	35-155	3	20	
Bromoform	1150	250	ug/l	1250	ND	92	45-169	2	20	
Bromomethane	1270	250	ug/l	1250	ND	102	5-242	5	20	
Carbon tetrachloride	1270	120	ug/l	1250	ND	102	70-140	2	20	
Chlorobenzene	1160	100	ug/l	1250	ND	93	37-160	4	20	
Dibromochloromethane	1160	100	ug/l	1250	ND	93	53-149	0.9	20	
Chloroethane	1270	250	ug/l	1250	ND	102	14-230	3	20	
Chloroform	1200	100	ug/l	1250	ND	96	51-138	6	20	
Chloromethane	1080	250	ug/l	1250	ND	86	5-273	4	20	
1,2-Dichlorobenzene	1170	100	ug/l	1250	ND	94	18-190	3	20	
1,3-Dichlorobenzene	1130	100	ug/l	1250	ND	90	59-156	5	20	
1,4-Dichlorobenzene	1170	100	ug/l	1250	ND	94	18-190	3	20	
1,1-Dichloroethane	1200	100	ug/l	1250	ND	96	59-155	6	20	
1,2-Dichloroethane	1220	100	ug/l	1250	ND	98	49-155	4	20	
1,1-Dichloroethene	1230	250	ug/l	1250	ND	98	5-234	6	20	
trans-1,2-Dichloroethene	1200	100	ug/l	1250	ND	96	54-156	5	20	
1,2-Dichloropropane	1220	100	ug/l	1250	ND	98	5-210	4	20	
cis-1,3-Dichloropropene	1230	100	ug/l	1250	ND	98	5-227	2	20	
trans-1,3-Dichloropropene	1130	100	ug/l	1250	ND	90	17-183	0.9	20	
Ethylbenzene	1270	100	ug/l	1250	ND	102	37-162	5	20	
Methylene chloride	1120	250	ug/l	1250	ND	90	5-221	4	20	
1,1,2,2-Tetrachloroethane	1180	100	ug/l	1250	ND	94	46-157	3	20	
Tetrachloroethene	1270	100	ug/l	1250	ND	102	64-148	4	20	
Toluene	1190	100	ug/l	1250	ND	95	47-150	3	20	
1,1,1-Trichloroethane	1270	100	ug/l	1250	ND	102	52-162	4	20	
1,1,2-Trichloroethane	1200	100	ug/l	1250	ND	96	52-150	0.8	20	
Trichloroethene	1270	100	ug/l	1250	ND	102	71-157	4	20	
Trichlorofluoromethane	1190	250	ug/l	1250	ND	95	17-181	6	20	
Vinyl chloride	878	100	ug/l	1250	ND	70	5-251	12	20	
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Blank Analyzed: 12/11/01 (P1L0613-BLK1)										
Chrysene	ND	10	ug/l							
Phenol	ND	10	ug/l							
Benzoic acid	ND	50	ug/l							
Surrogate: 2-Fluorophenol	*56.2*		*ug/l*	*100*		*56*	*20-120*			
Surrogate: Phenol-d6	*32.1*		*ug/l*	*100*		*32*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*73.0*		*ug/l*	*100*		*73*	*35-135*			
Surrogate: Nitrobenzene-d5	*32.4*		*ug/l*	*50.0*		*65*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*30.3*		*ug/l*	*50.0*		*61*	*25-145*			
Surrogate: Terphenyl-d14	*39.6*		*ug/l*	*50.0*		*79*	*40-130*			
LCS Analyzed: 12/11/01 (P1L0613-BS1)										
Chrysene	**49.1**	10	ug/l	50.0		98	17-168			
Phenol	**41.4**	10	ug/l	50.0		83	5-112			
Surrogate: 2-Fluorophenol	*66.9*		*ug/l*	*100*		*67*	*20-120*			
Surrogate: Phenol-d6	*71.3*		*ug/l*	*100*		*71*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*93.1*		*ug/l*	*100*		*93*	*35-135*			
Surrogate: Nitrobenzene-d5	*37.0*		*ug/l*	*50.0*		*74*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.4*		*ug/l*	*50.0*		*77*	*25-145*			
Surrogate: Terphenyl-d14	*44.4*		*ug/l*	*50.0*		*89*	*40-130*			
LCS Dup Analyzed: 12/11/01 (P1L0613-BSD1)										
Chrysene	**49.6**	10	ug/l	50.0		99	17-168	1	20	
Phenol	**39.8**	10	ug/l	50.0		80	5-112	4	20	
Surrogate: 2-Fluorophenol	*65.9*		*ug/l*	*100*		*66*	*20-120*			
Surrogate: Phenol-d6	*69.4*		*ug/l*	*100*		*69*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*91.7*		*ug/l*	*100*		*92*	*35-135*			
Surrogate: Nitrobenzene-d5	*36.2*		*ug/l*	*50.0*		*72*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.0*		*ug/l*	*50.0*		*76*	*25-145*			
Surrogate: Terphenyl-d14	*44.6*		*ug/l*	*50.0*		*89*	*40-130*			

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Project Manager

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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Matrix Spike Analyzed: 12/11/01 (P1L0613-MS1)					Source: PKL0039-02					
Chrysene	**51.6**	10	ug/l	50.0	ND	103	17-168			
Phenol	**46.0**	10	ug/l	50.0	ND	92	5-112			
Surrogate: 2-Fluorophenol	*73.4*		*ug/l*	*100*		*73*	*20-120*			
Surrogate: Phenol-d6	*76.8*		*ug/l*	*100*		*77*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.2*		*ug/l*	*100*		*90*	*35-135*			
Surrogate: Nitrobenzene-d5	*45.7*		*ug/l*	*50.0*		*91*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*45.2*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.1*		*ug/l*	*50.0*		*92*	*40-130*			
Matrix Spike Dup Analyzed: 12/11/01 (P1L0613-MSD1)					Source: PKL0039-02					
Chrysene	**50.6**	10	ug/l	50.0	ND	101	17-168	2	20	
Phenol	**44.1**	10	ug/l	50.0	ND	88	5-112	4	20	
Surrogate: 2-Fluorophenol	*71.4*		*ug/l*	*100*		*71*	*20-120*			
Surrogate: Phenol-d6	*73.6*		*ug/l*	*100*		*74*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*88.3*		*ug/l*	*100*		*88*	*35-135*			
Surrogate: Nitrobenzene-d5	*44.4*		*ug/l*	*50.0*		*89*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*44.9*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.4*		*ug/l*	*50.0*		*93*	*40-130*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
Blank Analyzed: 12/10/01 (I1L0730-BLK1)										
Aldrin	ND	0.10	ug/l							
alpha-BHC	ND	0.10	ug/l							
beta-BHC	ND	0.10	ug/l							
delta-BHC	ND	0.20	ug/l							
gamma-BHC (Lindane)	ND	0.10	ug/l							
Chlordane	ND	1.0	ug/l							
4,4'-DDD	ND	0.10	ug/l							
4,4'-DDE	ND	0.10	ug/l							
4,4'-DDT	ND	0.10	ug/l							
Dieldrin	ND	0.10	ug/l							
Endosulfan I	ND	0.10	ug/l							
Endosulfan II	ND	0.10	ug/l							
Endosulfan sulfate	ND	0.20	ug/l							
Endrin	ND	0.10	ug/l							
Endrin aldehyde	ND	0.10	ug/l							
Endrin ketone	ND	0.10	ug/l							
Heptachlor	ND	0.10	ug/l							
Heptachlor epoxide	ND	0.10	ug/l							
Methoxychlor	ND	0.10	ug/l							
Toxaphene	ND	5.0	ug/l							
Surrogate: Tetrachloro-m-xylene	*0.366*		*ug/l*	*0.500*		*73*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.515*		*ug/l*	*0.500*		*103*	*30-120*			
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Aldrin	**0.382**	0.10	ug/l	0.500		76	42-115			
alpha-BHC	**0.378**	0.10	ug/l	0.500		76	37-115			
beta-BHC	**0.439**	0.10	ug/l	0.500		88	45-115			
delta-BHC	**0.465**	0.20	ug/l	0.500		93	45-130			
gamma-BHC (Lindane)	**0.418**	0.10	ug/l	0.500		84	40-115			
4,4'-DDD	**0.542**	0.10	ug/l	0.500		108	55-120			
4,4'-DDE	**0.487**	0.10	ug/l	0.500		97	50-115			
4,4'-DDT	**0.520**	0.10	ug/l	0.500		104	55-115			
Dieldrin	**0.444**	0.10	ug/l	0.500		89	50-115			
Endosulfan I	**0.410**	0.10	ug/l	0.500		82	45-115			
Endosulfan II	**0.434**	0.10	ug/l	0.500		87	50-115			
Endosulfan sulfate	**0.460**	0.20	ug/l	0.500		92	65-120			
Endrin	**0.452**	0.10	ug/l	0.500		90	45-115			

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Endrin aldehyde	**0.496**	0.10	ug/l	0.500		99	45-115			
Endrin ketone	**0.471**	0.10	ug/l	0.500		94	55-140			
Heptachlor	**0.412**	0.10	ug/l	0.500		82	35-115			
Heptachlor epoxide	**0.410**	0.10	ug/l	0.500		82	40-115			
Methoxychlor	**0.528**	0.10	ug/l	0.500		106	55-120			
Surrogate: Tetrachloro-m-xylene	*0.336*		*ug/l*	*0.500*		*67*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.495*		*ug/l*	*0.500*		*99*	*30-120*			
LCS Dup Analyzed: 12/11/01 (I1L0730-BSD1)										
Aldrin	**0.357**	0.10	ug/l	0.500		71	42-115	7	20	Q8
alpha-BHC	**0.330**	0.10	ug/l	0.500		66	37-115	14	20	Q8
beta-BHC	**0.415**	0.10	ug/l	0.500		83	45-115	6	20	Q8
delta-BHC	**0.443**	0.20	ug/l	0.500		89	45-130	5	20	Q8
gamma-BHC (Lindane)	**0.377**	0.10	ug/l	0.500		75	40-115	10	20	Q8
4,4'-DDD	**0.544**	0.10	ug/l	0.500		109	55-120	0.4	20	Q8
4,4'-DDE	**0.482**	0.10	ug/l	0.500		96	50-115	1	20	Q8
4,4'-DDT	**0.513**	0.10	ug/l	0.500		103	55-115	1	20	Q8
Dieldrin	**0.439**	0.10	ug/l	0.500		88	50-115	1	20	Q8
Endosulfan I	**0.402**	0.10	ug/l	0.500		80	45-115	2	20	Q8
Endosulfan II	**0.433**	0.10	ug/l	0.500		87	50-115	0.2	20	Q8
Endosulfan sulfate	**0.461**	0.20	ug/l	0.500		92	65-120	0.2	20	Q8
Endrin	**0.447**	0.10	ug/l	0.500		89	45-115	1	20	Q8
Endrin aldehyde	**0.465**	0.10	ug/l	0.500		93	45-115	6	20	Q8
Endrin ketone	**0.472**	0.10	ug/l	0.500		94	55-140	0.2	20	Q8
Heptachlor	**0.378**	0.10	ug/l	0.500		76	35-115	9	20	Q8
Heptachlor epoxide	**0.396**	0.10	ug/l	0.500		79	40-115	3	20	Q8
Methoxychlor	**0.513**	0.10	ug/l	0.500		103	55-120	3	20	Q8
Surrogate: Tetrachloro-m-xylene	*0.259*		*ug/l*	*0.500*		*52*	*30-120*			*Q8*
Surrogate: Decachlorobiphenyl	*0.491*		*ug/l*	*0.500*		*98*	*30-120*			*Q8*

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0050

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

Q8 Insufficient sample received to meet method QC requirements. QC requirements satisfy ADEQ policies 0154 and 0155.

T2 Cited ADHS licensed method does not contain this analyte as part of method compound list.

ND Analyte NOT DETECTED at or above the reporting limit

NR Not reported.

RPD Relative Percent Difference

Beth Price For Linda Eshelman
Project Manager

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AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • FAX: (480) 921-0049 Lic. No. AZ0003

LABORATORY REPORT

Client: Del Mar Analytical
9830 S. 51st Street
Suite B120
Phoenix, AZ 85044

Attn: Linda Eshelman

Date Submitted: 12/4/01
Date Reported: 01/02/02

Project: MCFC

RESULTS

Client ID: PKL0045-01
ACT Lab No.: BH09419

Sample Type: Water
Sample Time: 12/04/01 11:20

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	900	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	16000	MPN/100mL	MW

Client ID: PKL0046-01
ACT Lab No.: BH09420

Sample Type: Water
Sample Time: 12/04/01 10:29

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	2400	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0047-01
ACT Lab No.: BH09421

Sample Type: Water
Sample Time: 12/04/01 12:10

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	1600	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	2200	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

RESULTS

Client ID: PKL0048-01
ACT Lab No.: BH09422
Sample Type: Water
Sample Time: 12/04/01 13:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0049-01
ACT Lab No.: BH09423
Sample Type: Water
Sample Time: 12/04/01 12:35

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	3000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0050-01
ACT Lab No.: BH09424
Sample Type: Water
Sample Time: 12/04/01 10:30

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	16000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0051-01
ACT Lab No.: BH09425
Sample Type: Water
Sample Time: 12/04/01 11:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	5000	MPN/100mL	MW

RESULTS

Client ID: PKL0052-01
ACT Lab No.: BH09426
Sample Type: Water
Sample Time: 12/04/01 12:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0053-01
ACT Lab No.: BH09427
Sample Type: Water
Sample Time: 12/04/01 13:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	240	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0054-01
ACT Lab No.: BH09428
Sample Type: Water
Sample Time: 12/04/01 13:50

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Reviewed by: _____
Frederick A. Amalfi, Ph.D.
Laboratory Director

ba

Del Mar Analytical

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/19/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0051-01	CAVE CR+TATUM-GRAB	Water
PKL0051-02	TRIP BLANK	Water

SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: Analysis was subcontracted to Aquatic Consult. & Testing - 1525 W. University Dr., #106, Tempe, AZ (AZ000 Results are attached.

QA/QC CRITERIA: All analyses met method criteria.

EXPLANATION OF DATA QUALIFIERS: No further explanation of data qualifiers needed.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0051-01 (CAVE CR+TATUM-GRAB - Water)								
Total Recoverable Hydrocarbon	EPA 418.1	P1L1123	1.0	**7.0**	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0051-01 (CAVE CR+TATUM-GRAB - Water)								
Oil & Grease	EPA 413.2	P1L1122	1.0	9.3	1	12/11/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Beth Price For Linda Eshelman
Project Manager

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2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0051-01 (CAVE CR+TATUM-GRAB - Water)								
Acetone	EPA 624	P1L1402	20	ND	1	12/13/01	12/14/01	T2
Benzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Bromodichloromethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Bromoform	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
Bromomethane	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
Carbon tetrachloride	EPA 624	P1L1402	2.5	ND	1	12/13/01	12/14/01	
Chlorobenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Dibromochloromethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Chloroethane	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
Chloroform	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Chloromethane	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
1,2-Dichlorobenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,3-Dichlorobenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,4-Dichlorobenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,1-Dichloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,2-Dichloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,1-Dichloroethene	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
trans-1,2-Dichloroethene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,2-Dichloropropane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
cis-1,3-Dichloropropene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
trans-1,3-Dichloropropene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Ethylbenzene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Methylene chloride	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Tetrachloroethene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Toluene	EPA 624	P1L1402	2.0	4.5	1	12/13/01	12/14/01	
1,1,1-Trichloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
1,1,2-Trichloroethane	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Trichloroethene	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Trichlorofluoromethane	EPA 624	P1L1402	5.0	ND	1	12/13/01	12/14/01	
Vinyl chloride	EPA 624	P1L1402	2.0	ND	1	12/13/01	12/14/01	
Surrogate: Dibromofluoromethane (80-120%)				*94 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*90 %*				
Surrogate: Toluene-d8 (80-120%)				*85 %*				

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0051-02 (TRIP BLANK - Water)								
Acetone	EPA 624	P1L1725	20	ND	1	12/17/01	12/17/01	T2
Benzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Bromodichloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Bromoform	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Bromomethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Carbon tetrachloride	EPA 624	P1L1725	2.5	ND	1	12/17/01	12/17/01	
Chlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Dibromochloromethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Chloroethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Chloroform	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Chloromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
1,2-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,3-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,4-Dichlorobenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,2-Dichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1-Dichloroethene	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
trans-1,2-Dichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,2-Dichloropropane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
cis-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
trans-1,3-Dichloropropene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Ethylbenzene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Methylene chloride	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Tetrachloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Toluene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1,1-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
1,1,2-Trichloroethane	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Trichloroethene	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Trichlorofluoromethane	EPA 624	P1L1725	5.0	ND	1	12/17/01	12/17/01	
Vinyl chloride	EPA 624	P1L1725	2.0	ND	1	12/17/01	12/17/01	
Surrogate: Dibromofluoromethane (80-120%)				*96 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*95 %*				
Surrogate: Toluene-d8 (80-120%)				*99 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0051-01 (CAVE CR+TATUM-GRAB - Water)								
Chrysene	EPA 625	P1L0613	10	ND	1	12/6/01	12/13/01	
Phenol	EPA 625	P1L0613	10	ND	1	12/6/01	12/13/01	
Benzoic acid	EPA 625	P1L0613	50	ND	1	12/6/01	12/13/01	
Surrogate: 2-Fluorophenol (20-120%)				*58 %*				
Surrogate: Phenol-d6 (15-115%)				*63 %*				
Surrogate: 2,4,6-Tribromophenol (35-135%)				*74 %*				
Surrogate: Nitrobenzene-d5 (25-120%)				*72 %*				
Surrogate: 2-Fluorobiphenyl (25-145%)				*77 %*				
Surrogate: Terphenyl-d14 (40-130%)				*83 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0051-01 (CAVE CR+TATUM-GRAB - Water)								
4,4'-DDE	EPA 608	I1L0730	0.10	ND	0.952	12/7/01	12/11/01	
Surrogate: Tetrachloro-m-xylene (30-120%)				*55 %*				
Surrogate: Decachlorobiphenyl (30-120%)				*70 %*				

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1123 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1123-BLK1)										
Total Recoverable Hydrocarbons	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1123-BS1)										
Total Recoverable Hydrocarbons	**12.0**	1.0	mg/l	10.0		120	95-145			
LCS Dup Analyzed: 12/11/01 (P1L1123-BSD1)										
Total Recoverable Hydrocarbons	**12.3**	1.0	mg/l	10.0		123	95-145	2	20	

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Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1122 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1122-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 12/11/01 (P1L1122-BS1)										
Oil & Grease	**12.0**	1.0	mg/l	10.0		120	90-145			
LCS Dup Analyzed: 12/11/01 (P1L1122-BSD1)										
Oil & Grease	**12.7**	1.0	mg/l	10.0		127	90-145	6	20	

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Maricopa County -Flood Control District
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Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
Blank Analyzed: 12/13/01 (P1L1402-BLK1)										
Acetone	ND	20	ug/l							T2
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.7*		*ug/l*	*25.0*		*91*	*80-120*			
Surrogate: Toluene-d8	*21.6*		*ug/l*	*25.0*		*86*	*80-120*			

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Report Number: PKL0051

Sampled: 12/04/01
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
LCS Analyzed: 12/13/01 (P1L1402-BS1)										
Acetone	ND	20	ug/l	25.0		68	40-150			T2
Benzene	25.3	2.0	ug/l	25.0		101	37-151			
Bromodichloromethane	23.4	2.0	ug/l	25.0		94	35-155			
Bromoform	25.0	5.0	ug/l	25.0		100	45-169			
Bromomethane	25.3	5.0	ug/l	25.0		101	5-242			
Carbon tetrachloride	24.0	2.5	ug/l	25.0		96	70-140			
Chlorobenzene	25.1	2.0	ug/l	25.0		100	37-160			
Dibromochloromethane	24.2	2.0	ug/l	25.0		97	53-149			
Chloroethane	24.2	5.0	ug/l	25.0		97	14-230			
Chloroform	25.7	2.0	ug/l	25.0		103	51-138			
Chloromethane	20.1	5.0	ug/l	25.0		80	5-273			
1,2-Dichlorobenzene	23.4	2.0	ug/l	25.0		94	18-190			
1,3-Dichlorobenzene	24.1	2.0	ug/l	25.0		96	59-156			
1,4-Dichlorobenzene	24.6	2.0	ug/l	25.0		98	18-190			
1,1-Dichloroethane	25.4	2.0	ug/l	25.0		102	59-155			
1,2-Dichloroethane	24.3	2.0	ug/l	25.0		97	49-155			
1,1-Dichloroethene	24.2	5.0	ug/l	25.0		97	5-234			
trans-1,2-Dichloroethene	26.0	2.0	ug/l	25.0		104	54-156			
1,2-Dichloropropane	25.4	2.0	ug/l	25.0		102	5-210			
cis-1,3-Dichloropropene	24.1	2.0	ug/l	25.0		96	5-227			
trans-1,3-Dichloropropene	21.5	2.0	ug/l	25.0		86	17-183			
Ethylbenzene	27.4	2.0	ug/l	25.0		110	37-162			
Methylene chloride	23.5	5.0	ug/l	25.0		94	5-221			
1,1,2,2-Tetrachloroethane	26.6	2.0	ug/l	25.0		106	46-157			
Tetrachloroethene	25.7	2.0	ug/l	25.0		103	64-148			
Toluene	24.0	2.0	ug/l	25.0		96	47-150			
1,1,1-Trichloroethane	26.3	2.0	ug/l	25.0		105	52-162			
1,1,2-Trichloroethane	23.4	2.0	ug/l	25.0		94	52-150			
Trichloroethene	25.9	2.0	ug/l	25.0		104	71-157			
Trichlorofluoromethane	31.8	5.0	ug/l	25.0		127	17-181			
Vinyl chloride	20.9	2.0	ug/l	25.0		84	5-251			
Surrogate: Dibromofluoromethane	*25.3*		*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.7*		*ug/l*	*25.0*		*95*	*80-120*			
Surrogate: Toluene-d8	*22.6*		*ug/l*	*25.0*		*90*	*80-120*			

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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
LCS Dup Analyzed: 12/13/01 (P1L1402-BSD1)										
Acetone	ND	20	ug/l	25.0		64	40-150	7	20	T2
Benzene	**25.8**	2.0	ug/l	25.0		103	37-151	2	20	
Bromodichloromethane	**23.8**	2.0	ug/l	25.0		95	35-155	2	20	
Bromoform	**26.1**	5.0	ug/l	25.0		104	45-169	4	20	
Bromomethane	**25.2**	5.0	ug/l	25.0		101	5-242	0.4	20	
Carbon tetrachloride	**24.7**	2.5	ug/l	25.0		99	70-140	3	20	
Chlorobenzene	**25.7**	2.0	ug/l	25.0		103	37-160	2	20	
Dibromochloromethane	**25.0**	2.0	ug/l	25.0		100	53-149	3	20	
Chloroethane	**23.9**	5.0	ug/l	25.0		96	14-230	1	20	
Chloroform	**26.0**	2.0	ug/l	25.0		104	51-138	1	20	
Chloromethane	**19.9**	5.0	ug/l	25.0		80	5-273	1	20	
1,2-Dichlorobenzene	**24.0**	2.0	ug/l	25.0		96	18-190	3	20	
1,3-Dichlorobenzene	**24.5**	2.0	ug/l	25.0		98	59-156	2	20	
1,4-Dichlorobenzene	**25.1**	2.0	ug/l	25.0		100	18-190	2	20	
1,1-Dichloroethane	**25.7**	2.0	ug/l	25.0		103	59-155	1	20	
1,2-Dichloroethane	**24.9**	2.0	ug/l	25.0		100	49-155	2	20	
1,1-Dichloroethene	**24.7**	5.0	ug/l	25.0		99	5-234	2	20	
trans-1,2-Dichloroethene	**26.6**	2.0	ug/l	25.0		106	54-156	2	20	
1,2-Dichloropropane	**25.9**	2.0	ug/l	25.0		104	5-210	2	20	
cis-1,3-Dichloropropene	**24.4**	2.0	ug/l	25.0		98	5-227	1	20	
trans-1,3-Dichloropropene	**22.0**	2.0	ug/l	25.0		88	17-183	2	20	
Ethylbenzene	**28.0**	2.0	ug/l	25.0		112	37-162	2	20	
Methylene chloride	**23.7**	5.0	ug/l	25.0		95	5-221	0.8	20	
1,1,2,2-Tetrachloroethane	**27.7**	2.0	ug/l	25.0		111	46-157	4	20	
Tetrachloroethene	**26.5**	2.0	ug/l	25.0		106	64-148	3	20	
Toluene	**24.3**	2.0	ug/l	25.0		97	47-150	1	20	
1,1,1-Trichloroethane	**26.7**	2.0	ug/l	25.0		107	52-162	2	20	
1,1,2-Trichloroethane	**23.8**	2.0	ug/l	25.0		95	52-150	2	20	
Trichloroethene	**26.2**	2.0	ug/l	25.0		105	71-157	1	20	
Trichlorofluoromethane	**32.2**	5.0	ug/l	25.0		129	17-181	1	20	
Vinyl chloride	**21.2**	2.0	ug/l	25.0		85	5-251	1	20	
Surrogate: Dibromofluoromethane	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*22.3*		*ug/l*	*25.0*		*89*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
Matrix Spike Analyzed: 12/13/01 (P1L1402-MS1)					Source: PKK0497-01					
Acetone	ND	20	ug/l	25.0	ND	50	25-150			T2
Benzene	**23.8**	2.0	ug/l	25.0	ND	95	37-151			
Bromodichloromethane	**22.3**	2.0	ug/l	25.0	ND	89	35-155			
Bromoform	**25.6**	5.0	ug/l	25.0	ND	102	45-169			
Bromomethane	**23.2**	5.0	ug/l	25.0	ND	93	5-242			
Carbon tetrachloride	**22.2**	2.5	ug/l	25.0	ND	89	70-140			
Chlorobenzene	**23.4**	2.0	ug/l	25.0	ND	94	37-160			
Dibromochloromethane	**23.8**	2.0	ug/l	25.0	ND	95	53-149			
Chloroethane	**22.2**	5.0	ug/l	25.0	ND	89	14-230			
Chloroform	**24.5**	2.0	ug/l	25.0	ND	98	51-138			
Chloromethane	**17.8**	5.0	ug/l	25.0	ND	71	5-273			
1,2-Dichlorobenzene	**22.6**	2.0	ug/l	25.0	ND	90	18-190			
1,3-Dichlorobenzene	**22.6**	2.0	ug/l	25.0	ND	90	59-156			
1,4-Dichlorobenzene	**23.4**	2.0	ug/l	25.0	ND	94	18-190			
1,1-Dichloroethane	**23.9**	2.0	ug/l	25.0	ND	96	59-155			
1,2-Dichloroethane	**44.7**	2.0	ug/l	25.0	18	107	49-155			
1,1-Dichloroethene	**22.3**	5.0	ug/l	25.0	ND	89	5-234			
trans-1,2-Dichloroethene	**24.6**	2.0	ug/l	25.0	ND	98	54-156			
1,2-Dichloropropane	**23.8**	2.0	ug/l	25.0	ND	95	5-210			
cis-1,3-Dichloropropene	**22.7**	2.0	ug/l	25.0	ND	91	5-227			
trans-1,3-Dichloropropene	**20.9**	2.0	ug/l	25.0	ND	84	17-183			
Ethylbenzene	**25.4**	2.0	ug/l	25.0	ND	102	37-162			
Methylene chloride	**21.2**	5.0	ug/l	25.0	ND	85	5-221			
1,1,2,2-Tetrachloroethane	**28.8**	2.0	ug/l	25.0	ND	115	46-157			
Tetrachloroethene	**23.8**	2.0	ug/l	25.0	ND	95	64-148			
Toluene	**22.3**	2.0	ug/l	25.0	ND	89	47-150			
1,1,1-Trichloroethane	**24.6**	2.0	ug/l	25.0	ND	98	52-162			
1,1,2-Trichloroethane	**23.3**	2.0	ug/l	25.0	ND	93	52-150			
Trichloroethene	**24.3**	2.0	ug/l	25.0	ND	97	71-157			
Trichlorofluoromethane	**28.5**	5.0	ug/l	25.0	ND	114	17-181			
Vinyl chloride	**18.6**	2.0	ug/l	25.0	ND	74	5-251			
Surrogate: Dibromofluoromethane	*25.1*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.4*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*21.9*		*ug/l*	*25.0*		*88*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1402 Extracted: 12/13/01										
Matrix Spike Dup Analyzed: 12/13/01 (P1L1402-MSD1)					Source: PKK0497-01					
Acetone	ND	20	ug/l	25.0	ND	41	25-150	19	20	T2
Benzene	23.3	2.0	ug/l	25.0	ND	93	37-151	2	20	
Bromodichloromethane	21.7	2.0	ug/l	25.0	ND	87	35-155	3	20	
Bromoform	23.1	5.0	ug/l	25.0	ND	92	45-169	10	20	
Bromomethane	22.2	5.0	ug/l	25.0	ND	89	5-242	4	20	
Carbon tetrachloride	22.3	2.5	ug/l	25.0	ND	89	70-140	0.4	20	
Chlorobenzene	23.2	2.0	ug/l	25.0	ND	93	37-160	0.9	20	
Dibromochloromethane	22.5	2.0	ug/l	25.0	ND	90	53-149	6	20	
Chloroethane	21.8	5.0	ug/l	25.0	ND	87	14-230	2	20	
Chloroform	23.9	2.0	ug/l	25.0	ND	96	51-138	2	20	
Chloromethane	17.6	5.0	ug/l	25.0	ND	70	5-273	1	20	
1,2-Dichlorobenzene	21.7	2.0	ug/l	25.0	ND	87	18-190	4	20	
1,3-Dichlorobenzene	22.1	2.0	ug/l	25.0	ND	88	59-156	2	20	
1,4-Dichlorobenzene	22.9	2.0	ug/l	25.0	ND	92	18-190	2	20	
1,1-Dichloroethane	23.4	2.0	ug/l	25.0	ND	94	59-155	2	20	
1,2-Dichloroethane	41.6	2.0	ug/l	25.0	18	94	49-155	7	20	
1,1-Dichloroethene	22.0	5.0	ug/l	25.0	ND	88	5-234	1	20	
trans-1,2-Dichloroethene	24.2	2.0	ug/l	25.0	ND	97	54-156	2	20	
1,2-Dichloropropane	23.5	2.0	ug/l	25.0	ND	94	5-210	1	20	
cis-1,3-Dichloropropene	22.0	2.0	ug/l	25.0	ND	88	5-227	3	20	
trans-1,3-Dichloropropene	19.6	2.0	ug/l	25.0	ND	78	17-183	6	20	
Ethylbenzene	25.1	2.0	ug/l	25.0	ND	100	37-162	1	20	
Methylene chloride	21.6	5.0	ug/l	25.0	ND	86	5-221	2	20	
1,1,2,2-Tetrachloroethane	24.8	2.0	ug/l	25.0	ND	99	46-157	15	20	
Tetrachloroethene	23.7	2.0	ug/l	25.0	ND	95	64-148	0.4	20	
Toluene	22.0	2.0	ug/l	25.0	ND	88	47-150	1	20	
1,1,1-Trichloroethane	23.9	2.0	ug/l	25.0	ND	96	52-162	3	20	
1,1,2-Trichloroethane	21.6	2.0	ug/l	25.0	ND	86	52-150	8	20	
Trichloroethene	23.8	2.0	ug/l	25.0	ND	95	71-157	2	20	
Trichlorofluoromethane	27.6	5.0	ug/l	25.0	ND	110	17-181	3	20	
Vinyl chloride	18.7	2.0	ug/l	25.0	ND	75	5-251	0.5	20	
Surrogate: Dibromofluoromethane	*25.0*		*ug/l*	*25.0*		*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.4*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*21.7*		*ug/l*	*25.0*		*87*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Blank Analyzed: 12/17/01 (P1L1725-BLK1)										
Acetone	ND	20	ug/l							T2
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		*ug/l*	*25.0*		*94*	*80-120*			
Surrogate: Toluene-d8	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			

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Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Analyzed: 12/17/01 (P1L1725-BS1)										
Acetone	ND	20	ug/l	25.0		66	40-150			T2
Benzene	23.6	2.0	ug/l	25.0		94	37-151			
Bromodichloromethane	23.8	2.0	ug/l	25.0		95	35-155			
Bromoform	23.9	5.0	ug/l	25.0		96	45-169			
Bromomethane	24.2	5.0	ug/l	25.0		97	5-242			
Carbon tetrachloride	25.3	2.5	ug/l	25.0		101	70-140			
Chlorobenzene	23.3	2.0	ug/l	25.0		93	37-160			
Dibromochloromethane	23.8	2.0	ug/l	25.0		95	53-149			
Chloroethane	23.9	5.0	ug/l	25.0		96	14-230			
Chloroform	23.8	2.0	ug/l	25.0		95	51-138			
Chloromethane	21.1	5.0	ug/l	25.0		84	5-273			
1,2-Dichlorobenzene	22.6	2.0	ug/l	25.0		90	18-190			
1,3-Dichlorobenzene	22.6	2.0	ug/l	25.0		90	59-156			
1,4-Dichlorobenzene	23.3	2.0	ug/l	25.0		93	18-190			
1,1-Dichloroethane	24.0	2.0	ug/l	25.0		96	59-155			
1,2-Dichloroethane	24.7	2.0	ug/l	25.0		99	49-155			
1,1-Dichloroethene	24.4	5.0	ug/l	25.0		98	5-234			
trans-1,2-Dichloroethene	23.7	2.0	ug/l	25.0		95	54-156			
1,2-Dichloropropane	24.7	2.0	ug/l	25.0		99	5-210			
cis-1,3-Dichloropropene	25.2	2.0	ug/l	25.0		101	5-227			
trans-1,3-Dichloropropene	23.1	2.0	ug/l	25.0		92	17-183			
Ethylbenzene	25.4	2.0	ug/l	25.0		102	37-162			
Methylene chloride	21.2	5.0	ug/l	25.0		85	5-221			
1,1,2,2-Tetrachloroethane	23.1	2.0	ug/l	25.0		92	46-157			
Tetrachloroethene	25.4	2.0	ug/l	25.0		102	64-148			
Toluene	23.8	2.0	ug/l	25.0		95	47-150			
1,1,1-Trichloroethane	25.1	2.0	ug/l	25.0		100	52-162			
1,1,2-Trichloroethane	23.8	2.0	ug/l	25.0		95	52-150			
Trichloroethene	25.2	2.0	ug/l	25.0		101	71-157			
Trichlorofluoromethane	24.5	5.0	ug/l	25.0		98	17-181			
Vinyl chloride	23.5	2.0	ug/l	25.0		94	5-251			
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

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Project Manager

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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
LCS Dup Analyzed: 12/17/01 (P1L1725-BSD1)										
Acetone	ND	20	ug/l	25.0		74	40-150	10	20	T2
Benzene	**26.3**	2.0	ug/l	25.0		105	37-151	11	20	
Bromodichloromethane	**26.0**	2.0	ug/l	25.0		104	35-155	9	20	
Bromoform	**25.3**	5.0	ug/l	25.0		101	45-169	6	20	
Bromomethane	**27.8**	5.0	ug/l	25.0		111	5-242	14	20	
Carbon tetrachloride	**28.0**	2.5	ug/l	25.0		112	70-140	10	20	
Chlorobenzene	**26.2**	2.0	ug/l	25.0		105	37-160	12	20	
Dibromochloromethane	**25.8**	2.0	ug/l	25.0		103	53-149	8	20	
Chloroethane	**27.4**	5.0	ug/l	25.0		110	14-230	14	20	
Chloroform	**26.4**	2.0	ug/l	25.0		106	51-138	10	20	
Chloromethane	**24.3**	5.0	ug/l	25.0		97	5-273	14	20	
1,2-Dichlorobenzene	**25.5**	2.0	ug/l	25.0		102	18-190	12	20	
1,3-Dichlorobenzene	**25.2**	2.0	ug/l	25.0		101	59-156	11	20	
1,4-Dichlorobenzene	**25.6**	2.0	ug/l	25.0		102	18-190	9	20	
1,1-Dichloroethane	**26.5**	2.0	ug/l	25.0		106	59-155	10	20	
1,2-Dichloroethane	**27.0**	2.0	ug/l	25.0		108	49-155	9	20	
1,1-Dichloroethene	**27.4**	5.0	ug/l	25.0		110	5-234	12	20	
trans-1,2-Dichloroethene	**26.4**	2.0	ug/l	25.0		106	54-156	11	20	
1,2-Dichloropropane	**27.3**	2.0	ug/l	25.0		109	5-210	10	20	
cis-1,3-Dichloropropene	**27.6**	2.0	ug/l	25.0		110	5-227	9	20	
trans-1,3-Dichloropropene	**25.1**	2.0	ug/l	25.0		100	17-183	8	20	
Ethylbenzene	**28.8**	2.0	ug/l	25.0		115	37-162	13	20	
Methylene chloride	**24.7**	5.0	ug/l	25.0		99	5-221	15	20	
1,1,2,2-Tetrachloroethane	**24.7**	2.0	ug/l	25.0		99	46-157	7	20	
Tetrachloroethene	**28.4**	2.0	ug/l	25.0		114	64-148	11	20	
Toluene	**26.4**	2.0	ug/l	25.0		106	47-150	10	20	
1,1,1-Trichloroethane	**28.0**	2.0	ug/l	25.0		112	52-162	11	20	
1,1,2-Trichloroethane	**26.1**	2.0	ug/l	25.0		104	52-150	9	20	
Trichloroethene	**28.0**	2.0	ug/l	25.0		112	71-157	11	20	
Trichlorofluoromethane	**27.7**	5.0	ug/l	25.0		111	17-181	12	20	
Vinyl chloride	**21.0**	2.0	ug/l	25.0		84	5-251	11	20	
Surrogate: Dibromofluoromethane	*24.0*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Analyzed: 12/17/01 (P1L1725-MS1)					Source: PKL0127-01RE1					
Acetone	1020	1000	ug/l	1250	ND	82	25-150			T2
Benzene	1240	100	ug/l	1250	ND	99	37-151			
Bromodichloromethane	1210	100	ug/l	1250	ND	97	35-155			
Bromoform	1130	250	ug/l	1250	ND	90	45-169			
Bromomethane	1330	250	ug/l	1250	ND	106	5-242			
Carbon tetrachloride	1300	120	ug/l	1250	ND	104	70-140			
Chlorobenzene	1210	100	ug/l	1250	ND	97	37-160			
Dibromochloromethane	1170	100	ug/l	1250	ND	94	53-149			
Chloroethane	1310	250	ug/l	1250	ND	105	14-230			
Chloroform	1270	100	ug/l	1250	ND	102	51-138			
Chloromethane	1120	250	ug/l	1250	ND	90	5-273			
1,2-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,3-Dichlorobenzene	1190	100	ug/l	1250	ND	95	59-156			
1,4-Dichlorobenzene	1200	100	ug/l	1250	ND	96	18-190			
1,1-Dichloroethane	1270	100	ug/l	1250	ND	102	59-155			
1,2-Dichloroethane	1270	100	ug/l	1250	ND	102	49-155			
1,1-Dichloroethene	1310	250	ug/l	1250	ND	105	5-234			
trans-1,2-Dichloroethene	1260	100	ug/l	1250	ND	101	54-156			
1,2-Dichloropropane	1270	100	ug/l	1250	ND	102	5-210			
cis-1,3-Dichloropropene	1260	100	ug/l	1250	ND	101	5-227			
trans-1,3-Dichloropropene	1140	100	ug/l	1250	ND	91	17-183			
Ethylbenzene	1330	100	ug/l	1250	ND	106	37-162			
Methylene chloride	1170	250	ug/l	1250	ND	94	5-221			
1,1,2,2-Tetrachloroethane	1140	100	ug/l	1250	ND	91	46-157			
Tetrachloroethene	1320	100	ug/l	1250	ND	106	64-148			
Toluene	1230	100	ug/l	1250	ND	98	47-150			
1,1,1-Trichloroethane	1320	100	ug/l	1250	ND	106	52-162			
1,1,2-Trichloroethane	1190	100	ug/l	1250	ND	95	52-150			
Trichloroethene	1320	100	ug/l	1250	ND	106	71-157			
Trichlorofluoromethane	1260	250	ug/l	1250	ND	101	17-181			
Vinyl chloride	990	100	ug/l	1250	ND	79	5-251			
Surrogate: Dibromofluoromethane	*24.3*		*ug/l*	*25.0*		*97*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.4*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.5*		*ug/l*	*25.0*		*98*	*80-120*			

Beth Price For Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1725 Extracted: 12/17/01										
Matrix Spike Dup Analyzed: 12/17/01 (P1L1725-MSD1)					Source: PKL0127-01RE1					
Acetone	**1050**	1000	ug/l	1250	ND	84	25-150	3	20	T2
Benzene	**1200**	100	ug/l	1250	ND	96	37-151	3	20	
Bromodichloromethane	**1170**	100	ug/l	1250	ND	94	35-155	3	20	
Bromoform	**1150**	250	ug/l	1250	ND	92	45-169	2	20	
Bromomethane	**1270**	250	ug/l	1250	ND	102	5-242	5	20	
Carbon tetrachloride	**1270**	120	ug/l	1250	ND	102	70-140	2	20	
Chlorobenzene	**1160**	100	ug/l	1250	ND	93	37-160	4	20	
Dibromochloromethane	**1160**	100	ug/l	1250	ND	93	53-149	0.9	20	
Chloroethane	**1270**	250	ug/l	1250	ND	102	14-230	3	20	
Chloroform	**1200**	100	ug/l	1250	ND	96	51-138	6	20	
Chloromethane	**1080**	250	ug/l	1250	ND	86	5-273	4	20	
1,2-Dichlorobenzene	**1170**	100	ug/l	1250	ND	94	18-190	3	20	
1,3-Dichlorobenzene	**1130**	100	ug/l	1250	ND	90	59-156	5	20	
1,4-Dichlorobenzene	**1170**	100	ug/l	1250	ND	94	18-190	3	20	
1,1-Dichloroethane	**1200**	100	ug/l	1250	ND	96	59-155	6	20	
1,2-Dichloroethane	**1220**	100	ug/l	1250	ND	98	49-155	4	20	
1,1-Dichloroethene	**1230**	250	ug/l	1250	ND	98	5-234	6	20	
trans-1,2-Dichloroethene	**1200**	100	ug/l	1250	ND	96	54-156	5	20	
1,2-Dichloropropane	**1220**	100	ug/l	1250	ND	98	5-210	4	20	
cis-1,3-Dichloropropene	**1230**	100	ug/l	1250	ND	98	5-227	2	20	
trans-1,3-Dichloropropene	**1130**	100	ug/l	1250	ND	90	17-183	0.9	20	
Ethylbenzene	**1270**	100	ug/l	1250	ND	102	37-162	5	20	
Methylene chloride	**1120**	250	ug/l	1250	ND	90	5-221	4	20	
1,1,2,2-Tetrachloroethane	**1180**	100	ug/l	1250	ND	94	46-157	3	20	
Tetrachloroethene	**1270**	100	ug/l	1250	ND	102	64-148	4	20	
Toluene	**1190**	100	ug/l	1250	ND	95	47-150	3	20	
1,1,1-Trichloroethane	**1270**	100	ug/l	1250	ND	102	52-162	4	20	
1,1,2-Trichloroethane	**1200**	100	ug/l	1250	ND	96	52-150	0.8	20	
Trichloroethene	**1270**	100	ug/l	1250	ND	102	71-157	4	20	
Trichlorofluoromethane	**1190**	250	ug/l	1250	ND	95	17-181	6	20	
Vinyl chloride	**878**	100	ug/l	1250	ND	70	5-251	12	20	
Surrogate: Dibromofluoromethane	*23.9*		*ug/l*	*25.0*		*96*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			
Surrogate: Toluene-d8	*24.6*		*ug/l*	*25.0*		*98*	*80-120*			

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Blank Analyzed: 12/11/01 (P1L0613-BLK1)										
Chrysene	ND	10	ug/l							
Phenol	ND	10	ug/l							
Benzoic acid	ND	50	ug/l							
Surrogate: 2-Fluorophenol	*56.2*		*ug/l*	*100*		*56*	*20-120*			
Surrogate: Phenol-d6	*32.1*		*ug/l*	*100*		*32*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*73.0*		*ug/l*	*100*		*73*	*35-135*			
Surrogate: Nitrobenzene-d5	*32.4*		*ug/l*	*50.0*		*65*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*30.3*		*ug/l*	*50.0*		*61*	*25-145*			
Surrogate: Terphenyl-d14	*39.6*		*ug/l*	*50.0*		*79*	*40-130*			
LCS Analyzed: 12/11/01 (P1L0613-BS1)										
Chrysene	**49.1**	10	ug/l	50.0		98	17-168			
Phenol	**41.4**	10	ug/l	50.0		83	5-112			
Surrogate: 2-Fluorophenol	*66.9*		*ug/l*	*100*		*67*	*20-120*			
Surrogate: Phenol-d6	*71.3*		*ug/l*	*100*		*71*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*93.1*		*ug/l*	*100*		*93*	*35-135*			
Surrogate: Nitrobenzene-d5	*37.0*		*ug/l*	*50.0*		*74*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.4*		*ug/l*	*50.0*		*77*	*25-145*			
Surrogate: Terphenyl-d14	*44.4*		*ug/l*	*50.0*		*89*	*40-130*			
LCS Dup Analyzed: 12/11/01 (P1L0613-BSD1)										
Chrysene	**49.6**	10	ug/l	50.0		99	17-168	1	20	
Phenol	**39.8**	10	ug/l	50.0		80	5-112	4	20	
Surrogate: 2-Fluorophenol	*65.9*		*ug/l*	*100*		*66*	*20-120*			
Surrogate: Phenol-d6	*69.4*		*ug/l*	*100*		*69*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*91.7*		*ug/l*	*100*		*92*	*35-135*			
Surrogate: Nitrobenzene-d5	*36.2*		*ug/l*	*50.0*		*72*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*38.0*		*ug/l*	*50.0*		*76*	*25-145*			
Surrogate: Terphenyl-d14	*44.6*		*ug/l*	*50.0*		*89*	*40-130*			

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0613 Extracted: 12/06/01										
Matrix Spike Analyzed: 12/11/01 (P1L0613-MS1)					Source: PKL0039-02					
Chrysene	**51.6**	10	ug/l	50.0	ND	103	17-168			
Phenol	**46.0**	10	ug/l	50.0	ND	92	5-112			
Surrogate: 2-Fluorophenol	*73.4*		*ug/l*	*100*		*73*	*20-120*			
Surrogate: Phenol-d6	*76.8*		*ug/l*	*100*		*77*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.2*		*ug/l*	*100*		*90*	*35-135*			
Surrogate: Nitrobenzene-d5	*45.7*		*ug/l*	*50.0*		*91*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*45.2*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.1*		*ug/l*	*50.0*		*92*	*40-130*			
Matrix Spike Dup Analyzed: 12/11/01 (P1L0613-MSD1)					Source: PKL0039-02					
Chrysene	**50.6**	10	ug/l	50.0	ND	101	17-168	2	20	
Phenol	**44.1**	10	ug/l	50.0	ND	88	5-112	4	20	
Surrogate: 2-Fluorophenol	*71.4*		*ug/l*	*100*		*71*	*20-120*			
Surrogate: Phenol-d6	*73.6*		*ug/l*	*100*		*74*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*88.3*		*ug/l*	*100*		*88*	*35-135*			
Surrogate: Nitrobenzene-d5	*44.4*		*ug/l*	*50.0*		*89*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*44.9*		*ug/l*	*50.0*		*90*	*25-145*			
Surrogate: Terphenyl-d14	*46.4*		*ug/l*	*50.0*		*93*	*40-130*			

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Maricopa County -Flood Control District
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Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
Blank Analyzed: 12/10/01 (I1L0730-BLK1)										
Aldrin	ND	0.10	ug/l							
alpha-BHC	ND	0.10	ug/l							
beta-BHC	ND	0.10	ug/l							
delta-BHC	ND	0.20	ug/l							
gamma-BHC (Lindane)	ND	0.10	ug/l							
Chlordane	ND	1.0	ug/l							
4,4'-DDD	ND	0.10	ug/l							
4,4'-DDE	ND	0.10	ug/l							
4,4'-DDT	ND	0.10	ug/l							
Dieldrin	ND	0.10	ug/l							
Endosulfan I	ND	0.10	ug/l							
Endosulfan II	ND	0.10	ug/l							
Endosulfan sulfate	ND	0.20	ug/l							
Endrin	ND	0.10	ug/l							
Endrin aldehyde	ND	0.10	ug/l							
Endrin ketone	ND	0.10	ug/l							
Heptachlor	ND	0.10	ug/l							
Heptachlor epoxide	ND	0.10	ug/l							
Methoxychlor	ND	0.10	ug/l							
Toxaphene	ND	5.0	ug/l							
Surrogate: Tetrachloro-m-xylene	*0.366*		*ug/l*	*0.500*		*73*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.515*		*ug/l*	*0.500*		*103*	*30-120*			
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Aldrin	**0.382**	0.10	ug/l	0.500		76	42-115			
alpha-BHC	**0.378**	0.10	ug/l	0.500		76	37-115			
beta-BHC	**0.439**	0.10	ug/l	0.500		88	45-115			
delta-BHC	**0.465**	0.20	ug/l	0.500		93	45-130			
gamma-BHC (Lindane)	**0.418**	0.10	ug/l	0.500		84	40-115			
4,4'-DDD	**0.542**	0.10	ug/l	0.500		108	55-120			
4,4'-DDE	**0.487**	0.10	ug/l	0.500		97	50-115			
4,4'-DDT	**0.520**	0.10	ug/l	0.500		104	55-115			
Dieldrin	**0.444**	0.10	ug/l	0.500		89	50-115			
Endosulfan I	**0.410**	0.10	ug/l	0.500		82	45-115			
Endosulfan II	**0.434**	0.10	ug/l	0.500		87	50-115			
Endosulfan sulfate	**0.460**	0.20	ug/l	0.500		92	65-120			
Endrin	**0.452**	0.10	ug/l	0.500		90	45-115			

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Project Manager

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Maricopa County -Flood Control District
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Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater
Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1L0730 Extracted: 12/07/01										
LCS Analyzed: 12/11/01 (I1L0730-BS1)										
Endrin aldehyde	**0.496**	0.10	ug/l	0.500		99	45-115			
Endrin ketone	**0.471**	0.10	ug/l	0.500		94	55-140			
Heptachlor	**0.412**	0.10	ug/l	0.500		82	35-115			
Heptachlor epoxide	**0.410**	0.10	ug/l	0.500		82	40-115			
Methoxychlor	**0.528**	0.10	ug/l	0.500		106	55-120			
Surrogate: Tetrachloro-m-xylene	*0.336*		*ug/l*	*0.500*		*67*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.495*		*ug/l*	*0.500*		*99*	*30-120*			
LCS Dup Analyzed: 12/11/01 (I1L0730-BSD1)										
Aldrin	**0.357**	0.10	ug/l	0.500		71	42-115	7	20	Q8
alpha-BHC	**0.330**	0.10	ug/l	0.500		66	37-115	14	20	Q8
beta-BHC	**0.415**	0.10	ug/l	0.500		83	45-115	6	20	Q8
delta-BHC	**0.443**	0.20	ug/l	0.500		89	45-130	5	20	Q8
gamma-BHC (Lindane)	**0.377**	0.10	ug/l	0.500		75	40-115	10	20	Q8
4,4'-DDD	**0.544**	0.10	ug/l	0.500		109	55-120	0.4	20	Q8
4,4'-DDE	**0.482**	0.10	ug/l	0.500		96	50-115	1	20	Q8
4,4'-DDT	**0.513**	0.10	ug/l	0.500		103	55-115	1	20	Q8
Dieldrin	**0.439**	0.10	ug/l	0.500		88	50-115	1	20	Q8
Endosulfan I	**0.402**	0.10	ug/l	0.500		80	45-115	2	20	Q8
Endosulfan II	**0.433**	0.10	ug/l	0.500		87	50-115	0.2	20	Q8
Endosulfan sulfate	**0.461**	0.20	ug/l	0.500		92	65-120	0.2	20	Q8
Endrin	**0.447**	0.10	ug/l	0.500		89	45-115	1	20	Q8
Endrin aldehyde	**0.465**	0.10	ug/l	0.500		93	45-115	6	20	Q8
Endrin ketone	**0.472**	0.10	ug/l	0.500		94	55-140	0.2	20	Q8
Heptachlor	**0.378**	0.10	ug/l	0.500		76	35-115	9	20	Q8
Heptachlor epoxide	**0.396**	0.10	ug/l	0.500		79	40-115	3	20	Q8
Methoxychlor	**0.513**	0.10	ug/l	0.500		103	55-120	3	20	Q8
Surrogate: Tetrachloro-m-xylene	*0.259*		*ug/l*	*0.500*		*52*	*30-120*			*Q8*
Surrogate: Decachlorobiphenyl	*0.491*		*ug/l*	*0.500*		*98*	*30-120*			*Q8*

Beth Price For Linda Eshelman
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Phoenix NPDES Stormwater

Report Number: PKL0051

Sampled: 12/04/01
Received: 12/04/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

Q8	Insufficient sample received to meet method QC requirements. QC requirements satisfy ADEQ policies 0154 and 0155.
T2	Cited ADHS licensed method does not contain this analyte as part of method compound list.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

Beth Price For Linda Eshelman
Project Manager

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AQUATIC CONSULTING & TESTING, INC.

1525 W. University Drive, Suite 106
P.O. Box 1510
Tempe, Arizona 85281
Phone: (480) 921-8044 • FAX: (480) 921-0049 Lic. No. AZ0003

LABORATORY REPORT

Client: Del Mar Analytical
9830 S. 51st Street
Suite B120
Phoenix, AZ 85044

Attn: Linda Eshelman

Date Submitted: 12/4/01
Date Reported: 01/02/02

Project: MCFC

RESULTS

Client ID: PKL0045-01
ACT Lab No.: BH09419

Sample Type: Water
Sample Time: 12/04/01 11:20

Parameter	Analysis Date Start	Analysis Date End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	900	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	16000	MPN/100mL	MW

Client ID: PKL0046-01
ACT Lab No.: BH09420

Sample Type: Water
Sample Time: 12/04/01 10:29

Parameter	Analysis Date Start	Analysis Date End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	2400	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0047-01
ACT Lab No.: BH09421

Sample Type: Water
Sample Time: 12/04/01 12:10

Parameter	Analysis Date Start	Analysis Date End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	1600	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	2200	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

RESULTS

Client ID: PKL0048-01
ACT Lab No.: BH09422
Sample Type: Water
Sample Time: 12/04/01 13:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	3000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0049-01
ACT Lab No.: BH09423
Sample Type: Water
Sample Time: 12/04/01 12:35

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	3000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0050-01
ACT Lab No.: BH09424
Sample Type: Water
Sample Time: 12/04/01 10:30

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	16000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0051-01
ACT Lab No.: BH09425
Sample Type: Water
Sample Time: 12/04/01 11:15

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	5000	MPN/100mL	MW

RESULTS

Client ID: PKL0052-01
ACT Lab No.: BH09426
Sample Type: Water
Sample Time: 12/04/01 12:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	5000	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	9000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0053-01
ACT Lab No.: BH09427
Sample Type: Water
Sample Time: 12/04/01 13:00

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	240	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Client ID: PKL0054-01
ACT Lab No.: BH09428
Sample Type: Water
Sample Time: 12/04/01 13:50

Parameter	Analysis Date Start	End	Method No.	MDL	Result	Unit	Analyst
E. coli	12/4/01	12/7/01	SM 9221 F	2	240	MPN/100 mL	MW
Fecal Coliform - MPN	12/4/01	12/7/01	SM 9221 E	2	>16000	MPN/100mL	MW
Fecal Streptococcus	12/4/01	12/7/01	SM 9230 B	2	>16000	MPN/100mL	MW

Reviewed by: _____
Frederick A. Amalfi, Ph.D.
Laboratory Director

ba

Maintenance and Storm Event Log Sheets

STORMWATER O&M LOG SHEET

SITE	67TH AVE + SALT			DATE	10/1/01
ARRIVAL TIME	1115	DEPARTURE TIME	1125	SERVICED BY	FOSSUM
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.5 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED PHONE BATTERY

2

3

STORMWATER O&M LOG SHEET

SITE	67TH AVE + SALT		DATE	10-10-01	
ARRIVAL TIME	6:20	DEPARTURE TIME 6:25	SERVICED BY	FOSSUM	
SAMPLER	SIGMA OR (ISCO)		MODEL NUMBER	800 900	(other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.6 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED PHONE BATTERY - PULLED SAMPLE BATTERY

2

3

STORMWATER O&M LOG SHEET

SITE	67th AVE & SR			DATE	11-D-01
ARRIVAL TIME	10:45	DEPARTURE TIME	11:05	SERVICED BY	BJN, NS
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

STORMWATER O&M LOG SHEET

SITE	67th Ave / ~~OLIVE~~ SR		DATE	11-13-01	
ARRIVAL TIME	11:30	DEPARTURE TIME 11:45	SERVICED BY	NOS BJW	
SAMPLER	SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)	

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	Δ BATTERY, CELL PHONE BLINKING volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

NEED TO TRY NEW BATTERY

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

STORMWATER O&M LOG SHEET

SITE	67th Ave & SR	DATE	11-26-01
ARRIVAL TIME	12:06	DEPARTURE TIME	12:09
SERVICED BY	BDN, NDS		
SAMPLER	SIGMA OR (ISCO)	MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK ✓	(YES) NO	A BATTERY volts
SOLAR PANEL CLEAN ✓	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

STORM EVENT LOG SHEET

1. Site: 67TH AVE & SALT Your Name: FOSSUM

2. Date: 12/4/01 Time: 13:00

SAMPLER PARAMETERS

3. Rainfall: .52 **in**

4. Flow: 3.88 **cfs**

5. Level: .64 **ft**

O&M PARAMETERS

6. Did sampling equipment operate during event? **Yes or No?** Describe problems.

7. Battery voltage: 12.2 **volts**

8. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

9. Discharge (flow) at time of grabs 3.88 **cfs**

10. pH 7.68 **std units**

11. Temperature 18.5 **deg. C**

12. Specific Conductance 159 **uS/cm**

13. Dissolved Oxygen 8.32 **mg/L**

14. Barometric Pressure 735 **mmHg**

GRAB SAMPLES Take grabs from discharge only!

15. Grab samples taken? **Yes or No?**

16. Preservatives added to bottles? **Yes or No?**

STORMWATER O&M LOG SHEET

SITE	67th + S. R.		DATE	12-6-01	
ARRIVAL TIME	12.45	DEPARTURE TIME	1:0[illegible]	SERVICED BY	B and SLM
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	—
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Returned bottle and cooler to site

2

3

STORMWATER O&M LOG SHEET

SITE	67th + Salk			DATE	07-Dec-01
ARRIVAL TIME	09:20	DEPARTURE TIME	09:40	SERVICED BY	KF, JCM
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Reset, cleaned bottles & sampler

2

3

STORMWATER O&M LOG SHEET

SITE	67TH + SR			DATE	12/12/01
ARRIVAL TIME	13:00	DEPARTURE TIME	13:20	SERVICED BY	KDF, NDS
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.4 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	(YES) NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CLEANED, RESET

2

3

STORMWATER O&M LOG SHEET

SITE	67th + Salt			DATE	13-December-01
ARRIVAL TIME	12:00	DEPARTURE TIME	12:20	SERVICED BY	JM, NOS, KDF
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED OUT PHONE, CLEAN GARBAGE

2

3

STORMWATER O&M LOG SHEET

SITE	67TH & SR			DATE	12/14/01
ARRIVAL TIME	12:40	DEPARTURE TIME	12:50	SERVICED BY	RDF
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	CHANGED CR10 - BATTERY 12.7 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED CR-10 AND PHONE BATTERY.

2

3

STORMWATER O&M LOG SHEET

SITE	67th Ave + S.R.		DATE	12-19-01	
ARRIVAL TIME	1215	DEPARTURE TIME	12:25	SERVICED BY	bjw
SAMPLER	SIGMA OR ISCO		MODEL NUMBER	800 900	other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	wiped off
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Intake is covered with sand. Changed phone battery.

2

3

STORMWATER O&M LOG SHEET

SITE	67th / SALT	DATE	12-21-01
ARRIVAL TIME	930	DEPARTURE TIME	935
SERVICED BY	JLM NOS		
SAMPLER	SIGMA OR (ISCO)	MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	- Phone was unhooked. OK
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

STORMWATER O&M LOG SHEET

SITE	67 1/3 SR			DATE	31-Dec-01
ARRIVAL TIME	12:30	DEPARTURE TIME	12:35	SERVICED BY	NOS. Jcm
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	changed volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

STORMWATER O&M LOG SHEET

SITE	35TH AVE & SALT			DATE	10/1/01		
ARRIVAL TIME	1140	DEPARTURE TIME	1150	SERVICED BY	FOSSUM		
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800	900	(other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.5 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED CR-10 AND PHONE BATTERY

2

3

Date: 8/23/01

STORMWATER O&M LOG SHEET

SITE	35TH AVE & SALT			DATE	10-10-01
ARRIVAL TIME	5:45	DEPARTURE TIME	6:00	SERVICED BY	FOSSUM
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.6 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 REPLACED CR-10 AND PHONE BATTERY

2

3

STORMWATER O&M LOG SHEET

SITE	35th Ave + SR.			DATE	11-5-2001
ARRIVAL TIME	10:00	DEPARTURE TIME	10:15	SERVICED BY	B, AW, N.S
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
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STORMWATER O&M LOG SHEET

SITE	35th Ave @ S.R.		DATE	06 · November - 01	
ARRIVAL TIME	12:35	DEPARTURE TIME	12:51	SERVICED BY	JLM, BJW
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	(YES) NO	depth (in)
CALIBRATED SAMPLE VOLUME	(YES) NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
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STORMWATER O&M LOG SHEET

SITE	35th AVE & SR		DATE	11-13-01	
ARRIVAL TIME	11:10	DEPARTURE TIME	11:22	SERVICED BY	NOS, BJW.
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	CHANGE BATTERY volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
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STORMWATER O&M LOG SHEET

SITE	35th Ave & SR		DATE	11-26-01	
ARRIVAL TIME	11:40	DEPARTURE TIME	11:52	SERVICED BY	BSW, NB
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK ✓	(YES) NO	Δ BATTERY volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
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STORMWATER O&M LOG SHEET

SITE	35th Ave & S.R.		DATE	12-03-01	
ARRIVAL TIME	1:35	DEPARTURE TIME 2:10	SERVICED BY	BTN, JLM, KDF	
SAMPLER	SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)	

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	charged volts
SOLAR PANEL CLEAN	YES (NO)	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Problem: Unable to connect to phone on site.

2 Pulled car out then replaced C-10 battery

3 ~~Co probe~~ Ken was able to get through after changing CR10

Date: 8/2/01

STORMWATER O&M LOG SHEET

SITE	35TH / SALT			DATE	12-13-01 JLM, NOS, KDF	
ARRIVAL TIME	12:35	DEPARTURE TIME	1:20	SERVICED BY		
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)	

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED OUT CR10, MODEM

2 CHANGE BOTH BATTERY

3

STORMWATER O&M LOG SHEET

SITE	35th Ave + S.R.			DATE	12-19-01	
ARRIVAL TIME	1:45	DEPARTURE TIME	1:56	SERVICED BY	DJW	
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)	

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Switched out phone battery

2

3

STORMWATER O&M LOG SHEET

SITE	35th and Salt		DATE	31-Dec-01	
ARRIVAL TIME	12:30	DEPARTURE TIME 12:55	SERVICED BY	NOS, JCM	
SAMPLER		SIGMA OR (ISCO)	MODEL NUMBER	800 900	(other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Changed Battery

2

3

STORMWATER O&M LOG SHEET

SITE	27TH AVE. & SALT		DATE	10/1/01	
ARRIVAL TIME	1200	DEPARTURE TIME 1210	SERVICED BY	FOSSUM	
SAMPLER	SIGMA OR (ISCO)		MODEL NUMBER	800 900	(other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.1 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED PHONE BATTERY

2 NEED N_2 TANK AND CR-1D BATTERY

3

Date: 8/23/01

STORMWATER O&M LOG SHEET

SITE	40th St. & S. R.			DATE	11-06-01
ARRIVAL TIME	12:05	DEPARTURE TIME	12:75	SERVICED BY	BJW + XM
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Switched out bottle w/ a clean one.

2

3

STORM EVENT LOG SHEET

1. Site: 40TH & SR Your Name: FOSSUM

2. Date: 12/4/01 Time: 13:50

SAMPLER PARAMETERS

3. Rainfall: .39 **in**

4. Flow: TRICKLE **cfs**

5. Level: 0.04 **ft**

O&M PARAMETERS

6. Did sampling equipment operate during event? **Yes or No?** Describe problems.

7. Battery voltage: 12.2 **volts**

8. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

9. Discharge (flow) at time of grabs _____ **cfs**

10. pH 7.92 **std units**

11. Temperature 17.0 **deg. C**

12. Specific Conductance 169 **uS/cm**

13. Dissolved Oxygen 8.07 **mg/L**

14. Barometric Pressure 731 **mmHg**

GRAB SAMPLES Take grabs from discharge only!

15. Grab samples taken? **Yes or No?**

16. Preservatives added to bottles? **Yes or No?**

STORMWATER O&M LOG SHEET

SITE	40th & Salt R			DATE	07-Dec-01
ARRIVAL TIME	7:30	DEPARTURE TIME	7:50	SERVICED BY	JCM, KDF
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Cleaned

2

3

STORMWATER O&M LOG SHEET

SITE	40TH & SR			DATE	12/12/01		
ARRIVAL TIME	13:50	DEPARTURE TIME	14:05	SERVICED BY	KDF, NDS		
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800	900	other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	CHANGED BATTERY 12.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CLEANED, RESET, CHANGED CR10 BATTERY

2

3

STORMWATER O&M LOG SHEET

SITE	40TH / SALT			DATE	12-13-01		
ARRIVAL TIME	1:40	DEPARTURE TIME	2:00	SERVICED BY	JLM, NOJ, KOF		
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800	900	other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	~~YES~~ NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES ~~NO~~	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES ~~NO~~	CLEANED - FULL OF DOO
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED OUT CONNECTER ON TUBING

2

3

STORMWATER O&M LOG SHEET

SITE	Peoria			DATE	06-November-01		
ARRIVAL TIME	2:25	DEPARTURE TIME	2:40	SERVICED BY	JCM, BJW		
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800	900	(other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1 Cleaned intake
2
3

STORMWATER O&M LOG SHEET

SITE	Peoria			DATE	12-03-01		
ARRIVAL TIME	2:45	DEPARTURE TIME	2:50	SERVICED BY	JM, BJW		
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800	900	(other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	changed CR10 battery volts
SOLAR PANEL CLEAN	YES (NO)	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 changed out CR10 battery

2

3

STORM EVENT LOG SHEET

1. Site: PEORIA Your Name: Fossum

2. Date: 12/4/01 Time: 12:00

SAMPLER PARAMETERS

3. Rainfall: .49 **in**

4. Flow: .53 **cfs**

5. Level: .24 **ft**

O&M PARAMETERS

6. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Isco turned off.

7. Battery voltage: 12.7 **volts**

8. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

9. Discharge (flow) at time of grabs .53 **cfs**

10. pH 6.90 **std units**

11. Temperature 14.0 **deg. C**

12. Specific Conductance 71 **uS/cm**

13. Dissolved Oxygen 10.10 **mg/L**

14. Barometric Pressure 728 **mmHg**

GRAB SAMPLES Take grabs from discharge only!

15. Grab samples taken? **Yes or No?**

16. Preservatives added to bottles? **Yes or No?**

STORMWATER O&M LOG SHEET

SITE	43RD + PEORIA			DATE	12/12/01
ARRIVAL TIME	1130	DEPARTURE TIME	1140	SERVICED BY	KDF, NDS
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.6 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	(YES) NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 ISCO BATTERY REPLACED

2

3

STORMWATER O&M LOG SHEET

SITE	Peoria		DATE	13-December-01	
ARRIVAL TIME	11:15	DEPARTURE TIME	11:22	SERVICED BY	SCM, NOS, KDF
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Cleaned Rain gage

2 Cleaned reset sampler

3

STORMWATER O&M LOG SHEET

SITE	40TH ST. + IBW			DATE	10/1/01
ARRIVAL TIME	0900	DEPARTURE TIME	0910	SERVICED BY	Fossum
SAMPLER		(SIGMA) OR ISCO		MODEL NUMBER	800 (900) other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	13.0 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES (NO)	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	(YES) NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CHANGED BATTERY, SWITCHED TO WINTER SAMPLING

2 PROTOCOL, RESET SAMPLER.

3

STORMWATER O&M LOG SHEET

SITE	IBW			DATE	11-5-01
ARRIVAL TIME	2:03	DEPARTURE TIME	2:10	SERVICED BY	BJW, NS
SAMPLER	(SIGMA) OR ISCO			MODEL NUMBER	800 (900) other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

STORMWATER O&M LOG SHEET

SITE	IBW			DATE	06-Nov-01
ARRIVAL TIME	4:15	DEPARTURE TIME	4:25	SERVICED BY	JLM, BJW
SAMPLER	(SIGMA) OR ISCO			MODEL NUMBER	800 (900) other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Tipped raingage which set of sampler

2

3

STORM EVENT LOG SHEET

1. Site: 40TH + IBW Your Name: FOSSUM

2. Date: 12/4/01 Time: 10:30

SAMPLER PARAMETERS

3. Rainfall: .28 **in**

4. Flow: 3.64 **cfs**

5. Level: 6.24 in.

O&M PARAMETERS

6. Did sampling equipment operate during event? **(Yes) or No?** Describe problems.

7. Battery voltage: 12.4 **volts**

8. Power **(On) or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

9. Discharge (flow) at time of grabs 3.64 **cfs**

10. pH 7.47 **std units**

11. Temperature 17.0 **deg. C**

12. Specific Conductance 111 **uS/cm**

13. Dissolved Oxygen 8.82 **mg/L**

14. Barometric Pressure 724 **mmHg**

GRAB SAMPLES Take grabs from discharge only!

15. Grab samples taken? **(Yes) or No?**

16. Preservatives added to bottles? **(Yes) or No?**

STORMWATER O&M LOG SHEET

SITE	IBW & 40th			DATE	07-DEC-01		
ARRIVAL TIME	10:15	DEPARTURE TIME	10:35	SERVICED BY	KF, JCM		
SAMPLER	(SIGMA) OR ISCO			MODEL NUMBER	800	(900)	other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Rain Guage needs to be tightned

2 Cleaned bottles and sampler. Set reset

3

STORMWATER O&M LOG SHEET

SITE	40TH + IBW			DATE	12/12/01
ARRIVAL TIME	0830	DEPARTURE TIME	0845	SERVICED BY	KDE, NOS
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 (900) other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	BATTERY CHANGED 12.7 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	(YES) NO	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 CLEANED & RESET, CHANGED BATTERY

2

3

STORMWATER O&M LOG SHEET

SITE	IBW			DATE	12-17-01		
ARRIVAL TIME	9:40	DEPARTURE TIME	9:45	SERVICED BY	JLM . NOS		
SAMPLER		(SIGMA) OR ISCO		MODEL NUMBER	800	(900)	other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	(YES) NO	
PHONE TONE	(YES) NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1 RESET SAMPLER.
2
3

STORMWATER O&M LOG SHEET

SITE	CAVE CREEK			DATE	10/1/01
ARRIVAL TIME	0930	DEPARTURE TIME	0940	SERVICED BY	FOSSUM
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.4 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 PULLED DATA

2

3

Date: 8/23/01

STORMWATER O&M LOG SHEET

SITE	CAVE CREEK			DATE	11-13-01		
ARRIVAL TIME	12:37	DEPARTURE TIME	13:08	SERVICED BY	NOS, BJW		
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800	900	(other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK N/A	YES NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 COMPUTER DOWNLOAD

2

3

STORMWATER O&M LOG SHEET

SITE	Cave Creek			DATE	12-03-01		
ARRIVAL TIME	3.25	DEPARTURE TIME	4:30	SERVICED BY	JLM, BJN		
SAMPLER		SIGMA OR (ISCO)		MODEL NUMBER	800	900	(other)

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	OK volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES ~~NO~~	
PHONE TONE	YES ~~NO~~	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1 Downloaded Csv
2
3

STORM EVENT LOG SHEET

1. Site: CAVE CREEK Your Name: FOSSUM

2. Date: 12/4/01 Time: 11:15

SAMPLER PARAMETERS

3. Rainfall: [redacted] .38 **in**

4. Flow: TRICKLE **cfs**

5. Level: .09 **ft**

O&M PARAMETERS

6. Did sampling equipment operate during event? **Yes or (No)?** Describe problems.
FLOW NEVER GOT DEEP ENOUGH FOR SAMPLER TO TAKE SAMPLES. NEED A WEIR TO GET FLOW DEEP ENOUGH.

7. Battery voltage: 12.4 **volts**

8. Power **(On) or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

9. Discharge (flow) at time of grabs TRICKLE **cfs**

10. pH 7.72 **std units**

11. Temperature 14.0 **deg. C**

12. Specific Conductance 77 **uS/cm**

13. Dissolved Oxygen 9.52 **mg/L**

14. Barometric Pressure 712 **mmHg**

GRAB SAMPLES Take grabs from discharge only!

15. Grab samples taken? **(Yes) or No?**

16. Preservatives added to bottles? **(Yes) or No?**

STORMWATER O&M LOG SHEET

SITE	Cave Creek & Tatum		DATE	Dec- 07-Dec-01	
ARRIVAL TIME	9:45	DEPARTURE TIME 9:50	SERVICED BY	KF, JCM	
SAMPLER	SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)	

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Pulled data & Reset

2

3

STORMWATER O&M LOG SHEET

SITE	CAVE & TATUM		DATE	12/12/01	
ARRIVAL TIME	0900	DEPARTURE TIME	0915	SERVICED BY	RDF, NOS
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.3 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 PULLED DATA, NO RAIN RECORDED, BRING

2 LADDER TO CLEAN RAINGAGE.

3

STORMWATER O&M LOG SHEET

SITE	Cave Creek		DATE	13-December-01	
ARRIVAL TIME	9:40	DEPARTURE TIME 9:55	SERVICED BY	JCM, NOS, KDF	
SAMPLER	SIGMA OR (ISCO)		MODEL NUMBER	800 900 (other)	

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.2 volts
SOLAR PANEL CLEAN	(YES) NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	(YES) NO	Cleaned
SAMPLE TUBING (intake, pump, distributor)	(YES) NO	
CLEANED SAMPLE TUBING AND COLLECTION BOTTLE	YES (NO)	
CALIBRATED DEPTH SENSOR	YES (NO)	depth (in)
CALIBRATED SAMPLE VOLUME	YES (NO)	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

Chain of Custody Forms

Del Mar Analytical
2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-9596 FAX (858) 505-9689

CHAIN OF CUSTODY FORM

Client Name/Address: JULIE COX
FCDMC
2801 W. DURANGO
PHOENIX, AZ 85009

Project/PO Number: PHOENIX
NPDES STORMWATER

Project Manager: JULIE COX

Phone Number: 602-506-8401

Sampler: FOSSUM

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: 2 TPH	1 Fecal Strep	1 Fecal Coliform	1 E. Coli	2 Oil + Grease	1 608	4 624	3 625		Special Instructions
67TH + SAGT - GRAB	S	MISC	13	12/4/01	1300	4	X	X	X	X	X	X	X	X		SEE ATTACHED PHX ANALYSES FORM.

Relinquished By: [signature] Date /Time: 12/4/01 1530
Received by: Date /Time:

Relinquished By: Date /Time:
Received by: Date /Time:

Relinquished By: Date /Time:
Received in Lab by: Date /Time: 12/4/01 1530

Turnaround Time: (Check) SEE CONTRACT
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Del Mar Analytical
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9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-9596 FAX (858) 505-9689

TOTAL + DISS

CHAIN OF CUSTODY FORM

Client Name/Address: JULIE COX
FCDMC
2801 W. DURANGO
PHOENIX, AZ 85009

Project Manager: JULIE COX

Sampler: FOSSUM

Project/PO Number: PHOENIX
NPDES STORMWATER

Phone Number: 602-506-8401

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: As, Be, Cd, Cr, Cu, Pb, Ni, Ag, Zn	P Total, P Ortho	NH_3, NO_3, NO_2 NO_2+NO_3, TKN	BOD/COD	CN⁻	TDS/TSS	Hardness/Alkalinity	Phenolics		Special Instructions
67TH + SALT - COMP.	S	MISC	1	12/4/01	0830	N	X	X	X	X	X	X	X	X		SEE ATTACHED PHX ANALYSES FORM

Relinquished By: [signature] Date /Time: 12/4/01 1530
Received by: Date /Time:

Relinquished By: Date /Time:
Received by: Date /Time:

Relinquished By: Date /Time:
Received in Lab by: Date /Time: 12/4/01 1530

Turnaround Time: (Check) SEE CONTRACT
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:
Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851
Project Manager: Linda Eshelman
Project: PKL0053 - MCFC

RECEIVING LABORATORY:
Aquatic Consulting & Testing (ou
1525 W. University Dr. 106
Tempe, AZ 85281
Phone: 480-921-8044
Fax: 480-921-0049

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☐ Y ☐ N _____ Initials
on ice: ☐ Y ☐ N _____ Initials
Temp: °C ☐ Y ☐ N _____ Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0053-01	Water	12/04/01 13:00	EColiform-O	Standard TAT	12/05/01 13:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0053-01	Water	12/04/01 13:00	Fecal Coliform-O	Standard TAT	12/04/01 17:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0053-01	Water	12/04/01 13:00	Fecal Strep-O	Standard TAT	12/04/01 17:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions: None

BH09427

1610 C. D. 12/4/01		D Richards 12/4/01 1620	
Relinquished By	Date/Time:	Received By:	Date/Time:
D. Richards 12/4/01 1637		M McClean 12/4/01 1637	
Relinquished By	Date/Time:	Received By:	Date/Time:

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

Due 12/12/01

PO112003

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:

Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851
Project Manager: Linda Eshelman
Project: PKL0071 - MCFC 6 Hr Salt-Comp

RECEIVING LABORATORY:

NEL Laboratories
3021 S. 35th St., Bldg. B-Suite 6
Phoenix, AZ 85034
Phone: (602) 437-0099
Fax: (602) 437-2225

SAMPLE INTEGRITY:

Please complete upon receipt

intact: [X] Y [ ] N Initials
on ice: [X] Y [ ] N Initials
Temp: °C [X] Y [ ] N Initials
5°C

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0071-01	Water	12/04/01 13:00	AA Arsenic - MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
PKL0071-02	Water	12/04/01 13:00	AA DIS Arsenic-MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
PKL0071-02	Water	12/04/01 13:00	AA DIS Beryll-MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
PKL0071-02	Water	12/04/01 13:00	ICPMS DisCopper-MCFC by EPA 200.8	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
PKL0071-02	Water	12/04/01 13:00	ICPMS DisSilver-MCFC by EPA 200.8	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other

-01

-02

Special Instructions:
NEL - Needs a reporting limit of 0.001 mg/l

Special Instructions:
NEL - Needs a reporting limit of 0.001 mg/l

Special Instructions:
NEL - Needs a reporting limit of 0.001 mg/l

Special Instructions:
NEL - Needs a reporting limit of 0.002 mg/l

Special Instructions:
NEL - Needs a reporting limit of 0.001 mg/l

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

C. [illegible] 12/5/01 1446
Relinquished By Date/Time:

D.W. Johnson 12/5/01 15:21
Relinquished By Date/Time:

Tonda Thomas 12/5/01 1630
Via Fed exp.

D.W. Johnson 12/5/01 1446
Received By: Date/Time:

Tonda Thomas 12/5/01 1521
Received By: Date/Time:

VIA FEDEX

Sal Miller 12-6-01 / 9:15

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

0112038

SENDING LABORATORY:
Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851
Project Manager: Linda Eshelman
Project: PKL0071 -617 Salt-Comp mCFC

RECEIVING LABORATORY:
Transwest Geochem (out)
3725 E. Atlanta Ave Ste 1
Phoenix, AZ 85040-2961
Phone: 602-437-0330
Fax: 602-470-0660

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☒ Y ☐ N SM Initials
on ice: (wet) ☒ Y ☐ N SM Initials
Temp: °C ☒ Y ☐ N SM Initials
4.6

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0071-01	Water	12/04/01 13:00	Phenols (420.1)-I	Standard TAT	12/18/01 13:00	1	☐ Voa ☐ Amber Voa ☒ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
-01A							
Special Instructions: **Needs a D.L. of 5ppb. Send to Transwest**							
PKL0071-01	Water	12/04/01 13:00	TKN-C	Standard TAT	01/01/02 13:00	1	☐ Voa ☐ Amber Voa ☒ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
-01B							
Special Instructions: **None**							

C. Perez 12/3/01 1130
Relinquished By Date/Time:

Bibb Warhall 12/5/01 1130
Received By: Date/Time:

Relinquished By Date/Time:

Received By: Date/Time:

U.S. GEOLOGICAL SURVEY, WRD, SURFACE-WATER QUALITY FIELD NOTES

BQA-1 3/92 (3rd printing, 1st ed.)

Proj. Name, No. MARICOPA URBAN - 470416800 Date DEC. 4, 2001

Station 67TH AVE. @ THE SALT R. @ PHOENIX, AZ Sta.No. 332430112101001

Sampled By FOSSUM Mean Time 0830 SMS Cntrl. No. _____

Record No. 00200044 Sample Purpose (71999) :

SAMPLES COLLECTED

Nutrients	☒	TOC	☐
Major Ions	☐	DOC	☐
SOC	☐	Vol. Filt. _____ mL	
BOD	☐	Turbidity	☐
COD	☒	_____	☐
		_____	☐

ORGANICS		TR. ELEMENTS	
Pesticide	☐	Unfiltered	☒
VOC	☐	Filtered	☐
BNA	☐	Suspended	☐
_____	☐	Bottom	☐

Sediment Conc.	☐
Sediment Size	☐
Sed. Bot. Material	☐
Sand Split/Break	☐
Radiochemical	☐
Isotope	☐
	☐

LABORATORY SCHEDULES

Lab Schedules Req. (or copy of lab request form attached ☒)

3134

Lab Codes Add (A) Delete (D) :

3072(D), 3074(D)

FIELD MEASUREMENTS

				R	F	
Q. Inst. (00061)	15.58	cfs meas.	Alkalinity (00419/39086)	38	32	mg/L
Gage Ht (00065)	1.26	ft. rating est.	Bicarbonate (00450/00453)	46	40	mg/L
Temp. Water (00010)	18.5	°C	Carbonate (00447/00452)	0	0	mg/L
Temp. Air (00020)	____	°C	Hydroxide (____)	____		mg/L
pH (00400)	7.68	units	E. Coli (31633)	____		col./100 mL; Rmk
Sp. Cond. (00095)	159	µS/cm 25 °C	FC (31625)	____		col./100 mL; Rmk
Dis. Oxy. (00300)	8.32	mg/L	FS (31673)	____		col./100 mL; Rmk
DO Sat. (00301)	____	%	Other:			
Bar. Press. (00025)	735	mm Hg				

SAMPLING CONDITIONS

Location: Wading, cable, ice, boat, bridge, upstr., downstr., side bridge @ ft mile, above, below (gage) and

Sampling site: Pool Riffle (Open Channel) Braided Backwater Sampler Type AUTO - ISCO

Sample Method: EWI EDI (OTHER) AUTO-SAMPLER Sampler ID _____

Nozzle size 3/8" Nozzle Made of TEFLON Bottle type, size 15 GAL GLASS

Sample Split: (Churn) Cone Other _____ Made of TEFLON

LB _____ RB _____ Stream Width _____ Sampling Pts. CENTROID OF FLOW

Bottom: Bedrock Rock Cobble Gravel Sand Mud (Concrete) Other _____

Stage Conditions:

A	Not Determined	(9)	Stable, normal	7	Peak
4	Stable, low	5	Falling	8	Rising
		6	Stable, high		

Hydrologic Event: 9 Routine samp. A Spg. breakup B Ice Cover
1 Drought 2 Spill 3 Reg. Flow 4 Snowmelt 7 Flood
(Other) J-STORM Ice Thickness _____ Ice cover _____

Stream color(s) (brown) green blue gray other _____

Stream Mixing: Excellent (Good) Fair Poor Clarity/Turbidity: _____

Weather: Clear Partly Cloudy (Cloudy) (Light) Medium Heavy Snow (Rain)
Calm Light Breeze Very (Gusty) Windy Very (Cold) Warm Hot Other

Observations:

(Codes: 0-none 1-mild 2-moderate 3-serious 4-extreme)
(option: LEAVE BLANK IF NONE)

Floating debris	(01345) :	____
Floating garbage	(01320) :	____
Floating algae mats	(01325) :	____
Fish kill	(01340) :	____
Detergent suds	(01305) :	____
Turbidity	(01350) :	____
Atms. Odor	(01330) :	____
Oil-grease	(01300) :	____

Sampling	GHT	
Start Time	____	____
Mean Time =	____	____
	____	____
End Time	____	____

Other Observations

81395(MGD) =
82381 (PRECIP) =
00129 (MAX 5) =
00135 (STM. LENG.) =
00132 (DRY DAYS) =

(Cont. p. 3,4)

Checked by _____ Date _____

TEMPERATURE Lab Tested Thermometer used? ☐ Yes ☒ No If NO, explain in remarks

Thermometer Checked w/ASTM within ± 0.5°C; Date

AMPULE LOT NUMBERS: nitric acid _____ mercuric chloride _____ nitric acid/potassium dichromate

pH

Mtr W-no. W-495251 METER Make/Model CORNING CHECKMATE 90

electrode no. electrode type

pH Buffer	pH Buffer Temp °C	Initial Reading	Adj. Reading	Remarks
7.00	17.0	7.00	7.00	OK
10.01	17.0	10.01	10.01	OK
___.___				
___.___				

☒ unfiltered sample ☐ filtered sample

Temp correction factors for buffers applied? ☒ YES ☐ NO

stirrer used? ☐ YES ☒ NO

if yes, ☐ magnetic stirrer ☐ manually stirred

pH subsample from or pH measurement location : Churn sample bottle (single point at) ____ sta ____ depth vertical avg of ____ points

x-sec average of ____ points

Sample Temp = 18.5 °C

FIELD pH = 7.68 **USE :** 7.68

SPECIFIC CONDUCTANCE

Mtr W-no. W-495251 METER Make/Model CORNING CHECKMATE 90

probe no.

standard value	Temp Std °C	Initial Reading	Adj. Reading	Remarks
0	17.0	0	0	OK
1413 µS	17.0	1413 µS	1413 µS	OK

correction factor applied? ☐ YES ☒ NO

☒ auto temp compensated meter

☐ manual temp compensated meter

corr. factor = _____

SC subsample from or SC measurement location : Churn sample bottle (single point at) ____ sta ____ depth vertical avg of ____ points

x-sec avg of ____ points

FIELD CONDUCTANCE = 159 **USE :** 159

DISSOLVED OXYGEN W-no. _____ METER Make/Model 45I-55

D.O. measurement location or D.O. subsample from : (single point at) ____ sta ____ depth vertical avg of ____ points x-sec avg of ____ points

Calibration : BOD bottle

☒ Air Calibration in Water ☐ Air Calibration Chamber in Air

☐ Air-Saturation Deionized Water ☐ Calibration by Winkler Titration (attach Supplementary Winkler page)

D.O. Zero Check (using zero D.O. solution) ☐ YES ☒ NO

Thermister Check ☐ YES ☒ NO

BAR. PRESS 735 mm Hg; (mm = in. X 25.4)

Salinity Corr. Factor ____ H_2O Temp. 18.5 °C

Chart D.O. Sat. _____ mg/L stirrer used? ☐ YES ☒ NO if yes, ☐ magnetic stirrer ☐ manually stirred

Meter D.O. Sat. _____ mg/L; Adjusted to _____ (if corr. factor applicable)

DISSOLVED OXYGEN IN STREAM = 8.32

QUALITY ASSURANCE SAMPLES

Were quality assurance samples collected? ☐ YES ☒ NO If YES indicate type(s) :

	Organic-free	DI	water from sampling site
Replicate	☐	☐	☐
Spike	☐	☐	☐
Field Blank	☐	☐	Supplementary page w/additional
Trip Blank	☐	☐	QA sample info attached ☐

Other ☐ Indicate Type(s) :

Calibration Notes and Remarks

USED INTERNAL THERMISTOR IN CORNING METER.

ALKALINITY

pH	△ pH	Vol acid DC or mL	△Vol acid DC or mL	△ pH / △ Vol acid
RAW				
7.45		0		
5.98	1.47	100	100	.015
5.50	.48	145	45	.011
5.37	.13	152	7	.018
5.31	.06	157	5	.012
5.21	.10	163	6	.016
5.08	.13	169	6	.022
5.03	.05	172	3	.016
4.93	.10	177	5	.02
4.82	.11	182	5	.022
4.66	.16	188	6	.026
4.54	.12	193	5	.024
4.42	.12	198	5	.024
4.30	.12	203	5	.024
4.14	.16	210	7	.023
3.97	.17	220	10	.017
FILTERED				
7.24		0		
5.40	1.84	125	125	.015
5.30	.10	130	5	.02
5.17	.13	135	5	.026
5.09	.08	138	3	.026
4.94	.15	142	4	.038
4.85	.09	145	3	.03
4.80	.05	148	3	.017
4.67	.13	151	3	.043
4.60	.07	154	3	.023
4.51	.09	157	3	.03
(OVER ON BACK)				

Acid: 1.60 N (0.1600 N) 0.01639N OTHER _____

Acid Lot No.: A1131 EXP. 11/02

Sample Volume: 50 mL

☒ Filtered ☒ Unfiltered

Sample stirred: ☒ magnetically ☐ manually

pH: Start 7.45 End 3.97

DC (Digital Counts) or Vol. titrated at End Point near pH 8.3:	R	F
	0	0
Digital Counts or Vol. titrated at End Point near pH 4.5:	188	160

☒ Incremental Equivalence ☐ Fixed End Point ☐ Gran Titration

Date 12/5/01 Time 2:00

CALCULATIONS:

$$CO_3^{-2} = A \times \frac{F_1}{\text{mL sample}} \times CF \quad *$$

$$HCO_3^{-1} = [B - 2(A)] \times \frac{F_2}{\text{mL sample}} \times CF; \quad *$$

$$\text{ALKALINITY as } CaCO_3 = B \times \frac{F_3}{\text{mL sample}} \times CF \quad *$$

DIGITAL COUNT TITRATION (DC) FACTORS	Using 0.1600 normal	Using 1.60 normal
F_1	12.0	120
F_2	12.2	122
F_3	10.0	100

	R	F
A = DC or mLs acid from initial pH to endpoint near 8.3 =	0	0
B = DC or mLs acid from initial pH to endpoint near 4.5 =	188	160

* APPLY CORRECTION FACTOR (CF) IF ACID USED FOR BURETTE TITRATION HAS NONSTANDARD NORMALITY--
CF = corr. factor = H_2SO_4 normality/0.01639

BURETTE TITRATION (mL) * FACTORS	Using ml of 0.01639 normal H_2SO_4
F_1	983.5
F_2	1000
F_3	820.2

(IMPORTANT: CF NOT APPLICABLE FOR THE DIGITAL TITRATION FACTORS SHOWN; use only with nonstandard normality BURETTE titration)

	R	F	
ALKALINITY (00419/39086)	38	32	mg/L as $CaCO_3$
BICARBONATE (00450/00453)	46	40	mg/L as HCO_3^{-1}
CARBONATE (00447/00452)	0	0	mg/L as CO_3^{-2}

NOTE: ATTACH OUTPUT COPY IF ALKALINITY VALUES ARE CALCULATED USING A COMPUTER PROGRAM

OBSERVATIONS/CALCULATIONS:

ALKALINITY TITRANT HAS A CORRECTION FACTOR OF 1.013

RAW

ALK = 188 X .2 X 1.013 = 38

BICARB = 188 X .244 X 1.013 = 46

FILTERED

ALK = 160 X .2 X 1.013 = 32

BICARB = 160 X .244 X 1.013 = 40

E. COLI (31633)

Time collected : _____

Time in @ 35°C : _____ Date : _____

Time in @ 44.5°C : _____

Time out : Date :

Vol. (mL)	Count	Used in calculation?	Remarks *
Blank			
Blank			

* Remarks 1 = Less than 0 = Est. ct. 2 = Greater than K = non ideal ct.

Incub. Time 2 hrs @ 35°C followed by :

filt. size _____ 20-24 hrs @ 44.5°C

Ideal count 20-80 col.

E. COLI COUNT /100 mL_____; Rmk____

FECAL STREPTOCOCCI (31673)

Time collected : _____

Time in : _____ Date : _____

Time out : Date :

Vol. (mL)	Count	Used in calculation?	Remarks *
Blank			
Blank			

* Remarks 1 = Less than 0 = Est. ct. 2 = Greater than K = non ideal ct.

Incub. Time 46-50 hrs filt. size .45µM

Ideal count 20-100 col. Incub. Temp 35°C

FS COUNT / 100 mL_____; Rmk_____

FECAL COLIFORM (31625)

Time collected : _____

Time in : _____ Date : _____

Time out : Date :

Vol. (mL)	Count	Used in calculation?	Remarks *
Blank			
Blank			

* Remarks 1 = Less than 0 = Est. ct. 2 = Greater than K = non ideal ct.

Incub. Time 22-26 hrs filt. size .65µM

Ideal count 20-60 col. Incub. Temp 44.5°C

FC COUNT / 100 mL_____; Rmk_____

CALCULATIONS

Miscellaneous Section (Notes/Sketches/Calculations/X-Sec. & Etc.)

CROSS SECTIONAL MEASUREMENTS

~~Time~~ pH	ΔpH ~~FT FROM L BANK (00009) or R BANK (72108)~~	DC ~~TIME~~	Δ DC ~~DEPTH 84065~~	ΔpH/ΔDC ~~Vel 00400~~	T °C 00010	SC 00095	DO 00300	DO Sat 00301	GHT 00065	SUB Q (INST)
4.37	.14	160	3	.047						
4.29	.08	163	3	.027						
4.22	.07	166	3	.023						
4.15	.07	169	3	.023						
4.12	.03	172	3	.01						
4.00	.12	177	5	.024						
3.96	.04	180	3	.013						

U.S. GEOLOGICAL SURVEY – NATIONAL WATER QUALITY LABORATORY
ANALYTICAL SERVICES REQUEST

THIS SECTION MANDATORY FOR SAMPLE LOGIN

NWIS RECORD NUMBER / SAMPLE TRACKING ID	User Code	Project Account	LAB USE ONLY / NWQL LABORATORY ID
	004	470416800	

STATION ID	Begin Date (YYYYMMDD)	Begin Time	Medium Code	Sample Type
332430112101001	20011204	0830	9	9

District Contact Phone Number	End Date (YYYYMMDD)	End Time	District Contact Email
480-736-1093 ~~602-379-3089~~ EXT. 230			kdfossum@usgs.gov

SITE / SAMPLE / SPECIAL PROJECT INFORMATION (Optional)

State	County	Geologic Unit Code	Analysis Status*	Analysis Source*	Hydrologic Condition*	Hydrologic Event*	Chain of Custody	Sample Set
04	013	—	H	9	9	J		

NWQL Proposal Number	NWQL Contact Name	NWQL Contact Email	Program/Project

Station Name: 67TH AVE @ THE SALT RIVER, AT PHOENIX Field ID: 332430112101001

Comments to NWQL: PARED NPDES SAMPLE. SEND TO OCALA LAB

Hazard (please explain):

ANALYTICAL WORK REQUESTS: SCHEDULES AND LAB CODES (CIRCLE A=add D=delete)

SCHED 1: 3134 SCHED 2: _____ SCHED 3: _____ SCHED 4: _____ SCHED 5: _____ SCHED 6: _____

Lab Code: 3071 A (D)	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D
Lab Code: 3074 A (D)	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D
Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D

SHIPPING INFORMATION (Please fill in number of containers sent)

___ ALF	1 COD	___ FA	– FCN	___ IQE	___ IRM	1 RA	1 RU	___ SUR	___ TPCN
___ BGC	___ CRB	___ FAM	1 FU	___ IQL	___ MBAS	___ RAM	___ RUR	1 SUSO	___ UAS
___ C18	___ CU	___ FAR	___ FUS	___ IQM	___ OAG	___ RAR	___ RURCT	___ TBI	1 WCA
___ CC	___ CUR	1 FCA	___ GCC	___ IRE	___ PHE	___ RCB	___ RURCV	___ TBY	[redacted]
___ CHY	___ DOC	___ FCC	___ GCV	___ IRL	___ PIC	___ RCN	___ RUS	___ TOC	1 RCC

NWQL Login Comments:

Collected by: KEN FOSSUM Phone No. 480-736-1093 ~~602-379-3089~~ Ex. 230 Date Shipped 12/6/01

FIELD VALUES

Lab/P Code	Value	Remark	Lab/P Code	Value	Remark	Lab/P Code	Value	Remark
21/00095 Specific Conductance uS/cm @ 25 deg C	159		51/00400 pH Standard Units	7.68		2/39086 Alkalinity mg/L as CaCO3	~~33~~ 32	

Field Comments:

*MANDATORY FOR NWIS

Revised 04/00

FedEx Express **USA Airbill**

FedEx Tracking Number: 8312 4472 9953

Sender's Copy

1 From *Please print and press hard.*

Date: 12/6/01 Sender's FedEx Account Number: 1426-9217-1

Sender's Name: KEN FOSSUM Phone: (480) 736-1556

Company: US GEOLOGICAL SURVEY

Address: 1769 W UNIVERSITY DR STE 175 Dept./Floor/Suite/Room

City: TEMPE State: AZ ZIP: 85281

2 Your Internal Billing Reference First 24 characters will appear on invoice. ACCT. No: 470416800

3 To

Recipient's Name: OCALA LAB Phone: (352) 237-5514

Company: U.S. GEOLOGICAL SURVEY

Address: 4500 SW 40TH AVE. Dept./Floor/Suite/Room

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

City: OCALA State: FL ZIP: 34470-5731

Try online shipping at fedex.com

By using this Airbill you agree to the service conditions on the back of this Airbill and in our current Service Guide, including terms that limit our liability.

Questions? Visit our Web site at fedex.com
or call 1.800.Go.FedEx® 800.463.3339.

0199339088

4a Express Package Service — *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [X] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day
- [ ] NEW FedEx Extra Hours — Later drop-off with next business afternoon delivery for select locations

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service — *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation: _____

5 Packaging — * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [X] Other Pkg. — Includes FedEx Box, FedEx Tube, and customer pkg.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery Available ONLY for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location NOT Available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 _____ x _____ kg

Dangerous Goods (incl. Dry Ice) cannot be shipped in FedEx packaging or with FedEx Extra Hours service.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value†	FedEx Use Only
1	29	$ .00	

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

447

SRF • Rev. Date 7/01 • Part #157252S • ©1994–2001 FedEx • PRINTED IN U.S.A.

PULL AND RETAIN THIS COPY BEFORE AFFIXING TO THE PACKAGE.

Ship & Save!

Track Shipments

Detailed Results

Quick Help

Tracking Number	831244729953
Reference Number	ACCT NO 47041L800
Ship Date	12/06/2001
Delivered To	
Delivery Location	OCALA FL
Delivery Date/Time	12/07/2001 10:44
Signed For By	V.MAYCALF
Service Type	Priority Overnight

Tracking Options
- Obtain a Signature Proof of Delivery
- Email these tracking results to one or more recipients
- Track More Shipments

Scan Activity	Date/Time	Comments
Delivered OCALA FL	12/07/2001 10:44	

Email Your Detailed Tracking Results

Enter your email (optional), up to three email addresses as recipients, add your message, and click on **Send Email**.

From

To

To

To

Add a message to this email.

Send Email

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FedEx Express
Customer Support Trace
3875 Airways Boulevard
Module H, 4th Floor
Memphis, TN 38116

U.S. Mail: PO Box 727
Memphis, TN 38194-4643

Telephone: 901-369-3600

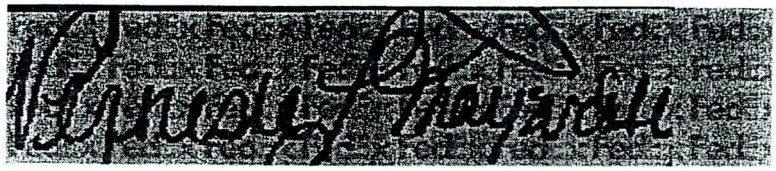
1/8/2002

Dear Customer:

Here is the proof of delivery for the shipment with tracking number **831244729953**. Our records reflect the following information.

Delivery Information:

Signed For By: V.MAYCALF



Delivery Location: 4500 SW 40
Delivery Date: December 7, 2001
Delivery Time: 1044

Shipping Information:

Tracking No: 831244729953

Ship Date: December 6, 2001

Recipient:
OCALA LAB
U S GEOLOGICAL SURVEY
4500 SW 40TH AVE
OCALA, FL 34470
US

Shipper:
KEN FCSSUM
US GEOLOGICAL SURVEY
1545 W UNIVERSITY DR
TEMPE, AZ 852813227

Shipment Reference Information: ACCT NO 47041L800

Thank you for choosing FedEx Express. We look forward to working with you in the future.

FedEx Worldwide Customer Service
1-800-Go-FedEx®
Reference No.: R2002010800040757891

Del Mar Analytical
2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CHAIN OF CUSTODY FORM

Client Name/Address: JULIE COX
FCDMC
2801 W. DURANGO
PHOENIX, AZ 85009

Project/PO Number: PHOENIX
NPDES STORMWATER

Project Manager: JULIE COX

Phone Number: 602-506-8401

Sampler: FOSSUM

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Analysis Required: 2 TPH	1 Fecal Strep	1 Fecal Coli.	1 E. Coli.	2 Oil + Grease	1 608	4 624	3 625		Special Instructions
40TH ST + SALT - GRAB	SW	MISC.	15	1350 12/4/01	4	X	X	X	X	X	X	X	X		SEE CONTRACT

Relinquished By: [signature] Date /Time: 12/4/01 1550 Received by: Date /Time:

Relinquished By: Date /Time: Received by: Date /Time:

Relinquished By: Date /Time: Received in Lab by: Date /Time: 12/4/01 1530

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓ SEE CONTRACT

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

PLEASE NOTE TEMP
TO ~0. 10°

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CHAIN OF CUSTODY FORM

Page 1 of 1

Client Name/Address: JULIE COX
FCDMC
2801 W. DURANGO
PHOENIX, AZ 85009

Project/PO Number: PHOENIX
NPDES STORMWATER

Project Manager: JULIE COX

Phone Number: 602-506-8401

Sampler: FOSSUM

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Analysis Required: As, Be, Cd, Cr, Cu, Pb, Ni, Ag, Zn (TOTAL + DISS.)	P, TOTAL, PORTHO	NH_3, NO_3, NO_2 NO_2+NO_3, TKN	BOD, COD	CN^-	TDS, TSS	ALKALINITY, HARDNESS	PHENOLICS		Special Instructions
40TH ST. + SALT - COMP	SW	5 gal glass	1	12/4/01	N	X	X	X	X	X	X	X	X		SEE CONTRACT PKL0072-01

Relinquished By: [signature] Date /Time: 12/4/01 1530 Received by: Date /Time:

Relinquished By: Date /Time: Received by: Date /Time:

Relinquished By: Date /Time: Received in Lab by: [signature] Date /Time: 12/4/01 1530

Turnaround Time: (Check)
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓ SEE CONTRACT

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

PLEASE NOTE TEMP
Temp 1°C

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:
Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851 40ml+Sat-Grab
Project Manager: Linda Eshelman
Project: PKL0054 — MCFC

RECEIVING LABORATORY:
Aquatic Consulting & Testing (ou
1525 W. University Dr. 106
Tempe, AZ 85281
Phone: 480-921-8044
Fax: 480-921-0049

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☐ Y ☐ N _____ Initials
on ice: ☐ Y ☐ N _____ Initials
Temp: °C ☐ Y ☐ N _____ Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0054-01	Water	12/04/01 13:50	EColiform-O	Standard TAT	12/05/01 13:50	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0054-01	Water	12/04/01 13:50	Fecal Coliform-O	Standard TAT	12/04/01 18:38	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0054-01	Water	12/04/01 13:50	Fecal Strep-O	Standard TAT	12/04/01 18:38	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other

Special Instructions: None

BH0 9428

[illegible] L-D. 12/4/01		D Rehaas 12/4/01 1620	
Relinquished By	Date/Time:	Received By:	Date/Time:
D Rehaas 12/4/01 1637		MMCClean 12/4/01 1637	
Relinquished By	Date/Time:	Received By:	Date/Time:

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

0112039

SENDING LABORATORY:

Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851 40ht SLH - Comp
Project Manager: Linda Eshelman
Project: PKL0072 – MCFC

RECEIVING LABORATORY:

Transwest Geochem (out)
3725 E. Atlanta Ave Ste 1
Phoenix, AZ 85040-2961
Phone: 602-437-0330
Fax: 602-470-0660

SAMPLE INTEGRITY:

Please complete upon receipt

intact: ☑ Y ☐ N SLH Initials
on ice: ☑ Y ☐ N SLH Initials
Temp: °C ☑ Y ☐ N SLH Initials

46

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0072-01 -01A	Water	12/04/01 13:00	Phenols (420.1)-I	Standard TAT	12/18/01 13:00	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
PKL0072-01 -02A	Water	12/04/01 13:00	TKN-C	Standard TAT	01/01/02 13:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
Needs a D.L. of 5ppb. Send to Transwest

Special Instructions:
None

C. Hook 12/5/01 1130
Relinquished By Date/Time:

Bill Wathall 12/6/01 1130
Received By: Date/Time:

Relinquished By Date/Time:

Received By: Date/Time:

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

P011002

Due 12/12/01

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:
Del Mar Analytical - Phoenix
9830 South 51st Street. Suite B-120
Phoenix. AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851 40ht + Salt Comp.
Project Manager: Linda Eshelman
Project: PKL0072 - MCFC

RECEIVING LABORATORY:
NEL Laboratories
3021 S. 35th St., Bldg. B-Suite 6
Phoenix, AZ 85034
Phone: (602) 437-0099
Fax: (602) 437-2225

SAMPLE INTEGRITY:
Please complete upon receipt
intact: [X] Y [ ] N Initials
on ice: [X] Y [ ] N Initials
Temp: °C [ ] Y [ ] N 5°C Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0072-01	Water	12/04/01 13:00	AA Arsenic - MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [x] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l			-01				
PKL0072-02	Water	12/04/01 13:00	AA DIS Arsenic-MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [x] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							
PKL0072-02	Water	12/04/01 13:00	AA DIS Beryll-MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l			-02				
PKL0072-02	Water	12/04/01 13:00	ICPMS DisCopper-MCFC by EPA 200.8	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.002 mg/l							
PKL0072-02	Water	12/04/01 13:00	ICPMS DisSilver-MCFC by EPA 200.8	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							

Del Mar Analytical

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1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM

SUBCONTRACT ORDER

[signature] 12/5/01 1446
Relinquished By Date/Time:

[signature] 12/5/01 1446
Received By: Date/Time:

[signature] 12/5/01 1521
Relinquished By Date/Time:

Tonda Thomas 12/5/01 1521
Received By: Date/Time:

Tonda Thomas 12/5/01 16[30]
via Fed Exp.

VIA FEDEX
L. Arnold 12-6-01/9:15

Fraction -01 bottle lid was open sample spilled. Called Tonda 12-6-01 she will notify customer.

U.S. GEOLOGICAL SURVEY, WRD, SURFACE-WATER QUALITY FIELD NOTES

BQA-1 3/92 (3rd printing, 1st ed.)

Proj. Name, No. MARICOPA URBAN - 470416800 Date DECEMBER 4, 2001

Station 40TH ST. AND THE SALT RIVER Sta.No. 332409111594101

Sampled By FOSSUM Mean Time 1203 SMS Cntrl. No. _____

Record No. 00200043 Sample Purpose (71999) :

SAMPLES COLLECTED

Nutrients [X] TOC [ ]
Major Ions [ ] DOC [ ]
SOC [ ] Vol. Filt. _____ mL
BOD [ ] Turbidity [ ]
COD [X] _____ [ ]
_____ [ ]

ORGANICS: Pesticide [ ] VOC [ ] BNA [ ] _____ [ ]
TR. ELEMENTS: Unfiltered [X] Filtered [ ] Suspended [ ] Bottom [ ]

Sediment Conc. [ ]
Sediment Size [ ]
Sed. Bot. Material [ ]
Sand Split/Break [ ]
Radiochemical [ ]
Isotope [ ]
[ ]

LABORATORY SCHEDULES

Lab Schedules Req. (or copy of lab request form attached [X])

3134

Lab Codes Add (A) Delete (D) :

3072(D), 3074(D)

FIELD MEASUREMENTS

				R	F	
Q. Inst. (00061)	5.58	cfs	meas.	Alkalinity (00419/39086)	76	26	mg/L
Gage Ht (00065)	.876	ft.	rating est.	Bicarbonate (00450/00453)	93	32	mg/L
Temp. Water (00010)	17.0	°C		Carbonate (00447/00452)	0	0	mg/L
Temp. Air (00020)	—	°C		Hydroxide (—)	—		mg/L
pH (00400)	7.92	units		E. Coli (31633)	—		col./100 mL; Rmk
Sp. Cond. (00095)	169	µS/cm 25 °C		FC (31625)	—		col./100 mL; Rmk
Dis. Oxy. (00300)	8.07	mg/L		FS (31673)	—		col./100 mL; Rmk
DO Sat. (00301)	—	%		Other:			
Bar. Press. (00025)	731	mm Hg					

SAMPLING CONDITIONS

Location: Wading, cable, ice, boat, bridge, upstr., downstr., side bridge @ ft mile, above, below gage, and

Sampling site: Pool Riffle (Open Channel) Braided Backwater Sampler Type AUTO-ISCO

Sample Method: EWI EDI (OTHER) AUTO-SAMPLER Sampler ID _____

Nozzle size 3/8" Nozzle Made of TEFLON Bottle type, size 5 GAL - GLASS

Sample Split: (Churn) Cone Other _____ Made of TEFLON

LB _____ RB _____ Stream Width _____ Sampling Pts. CENTROID OF FLOW

Bottom: Bedrock Rock Cobble Gravel Sand Mud (Concrete) Other _____

Stage Conditions:
A Not Determined
4 Stable, low
(9 Stable, normal)
5 Falling
6 Stable, high
7 Peak
8 Rising

Hydrologic Event: (9 Routine samp.) A Spg. breakup B Ice Cover
1 Drought 2 Spill 3 Reg. Flow 4 Snowmelt 7 Flood
(Other) J-STORM Ice Thickness _____ Ice cover _____

Stream color(s): (brown) green blue gray other _____

Stream Mixing: Excellent (Good) Fair Poor Clarity/Turbidity: _____

Weather: Clear Partly Cloudy (Cloudy) (Light) Medium Heavy Snow (Rain)
Calm Light Breeze Very Gusty (Windy) Very (Cold) Warm Hot Other

Other Observations

Observations:

(Codes: 0-none 1-mild 2-moderate 3-serious 4-extreme)
(option: LEAVE BLANK IF NONE)

Floating debris	(01345) :	____
Floating garbage	(01320) :	____
Floating algae mats	(01325) :	____
Fish kill	(01340) :	____
Detergent suds	(01305) :	____
Turbidity	(01350) :	____
Atms. Odor	(01330) :	____
Oil-grease	(01300) :	____

Sampling	GHT	
Start Time	____	____
Mean Time =	____	____
	____	____
	____	____
End Time	____	____

(Cont. p. 3,4)

Checked by _____ Date _____

TEMPERATURE Lab Tested Thermometer used? ☐ Yes ☒ No If NO, explain in remarks

Thermometer Checked w/ASTM within ± 0.5 °C; Date

AMPULE LOT NUMBERS: nitric acid _____ mercuric chloride _____

nitric acid/potassium dichromate

pH

Mtr W-no. W-495251 METER Make/Model CORNING CHECKMATE 90

electrode no. electrode type

pH Buffer	pH Buffer Temp °C	Initial Reading	Adj. Reading	Remarks
7.00	17.0	7.00	7.00	OK
10.01	17.0	10.01	10.01	OK
___.___				
___.___				

☒ unfiltered sample ☐ filtered sample

Temp correction factors for buffers applied? ☒ YES ☐ NO

stirrer used? ☐ YES ☒ NO

if yes, ☐ magnetic stirrer ☐ manually stirred

pH subsample from or pH measurement location : Churn sample bottle (single point at) ____ sta ____ depth vertical avg of ____ points

x-sec average of ____ points

Sample Temp = 17.0 °C

FIELD pH = 7.92 **USE :** 7.92

SPECIFIC CONDUCTANCE

Mtr W-no. W-495251 METER Make/Model CORNING CHECKMATE 90

probe no.

standard value	Temp Std °C	Initial Reading	Adj. Reading	Remarks
0	17.0	0	0	OK
1413 µS	17.0	1413 µS	1413 µS	OK

correction factor applied? ☐ YES ☒ NO

☒ auto temp compensated meter

☐ manual temp compensated meter

corr. factor = _____

SC subsample from or SC measurement location : Churn sample bottle (single point at) ____ sta ____ depth vertical avg of ____ points

x-sec avg of ____ points

FIELD CONDUCTANCE = 169 **USE :** 169

DISSOLVED OXYGEN W-no. _____ METER Make/Model YSI-55

D.O. measurement location or D.O. subsample from : (single point at) ____ sta ____ depth vertical avg of ____ points x-sec avg of ____ points

Calibration : BOD bottle

☒ Air Calibration in Water ☐ Air Calibration Chamber in Air

☐ Air-Saturation Deionized Water ☐ Calibration by Winkler Titration (attach Supplementary Winkler page)

D.O. Zero Check (using zero D.O. solution) ☐ YES ☒ NO

Thermister Check ☐ YES ☒ NO

BAR. PRESS 731 mm Hg; (mm = in. X 25.4)

Salinity Corr. Factor ____ H_2O Temp. 17.0 °C

Chart D.O. Sat. _____ mg/L

stirrer used? ☐ YES ☒ NO if yes, ☐ magnetic stirrer ☐ manually stirred

Meter D.O. Sat. _____ mg/L; Adjusted to _____ (if corr. factor applicable)

DISSOLVED OXYGEN IN STREAM = 8.07

QUALITY ASSURANCE SAMPLES

Were quality assurance samples collected?

☐ YES ☒ NO If YES indicate type(s) :

	Organic-free	DI	water from sampling site
Replicate	☐	☐	☐
Spike	☐	☐	☐
Field Blank	☐	☐	
Trip Blank	☐	☐	

Supplementary page w/additional QA sample info attached ☐

Other ☐ Indicate Type(s) :

Calibration Notes and Remarks

USED INTERNAL THERMISTER IN CORNING METER

ALKALINITY

pH	△ pH	Vol acid DC or mL	△Vol acid DC or mL	△ pH / △ Vol acid
RAW				
7.26		0		
5.17	2.09	315	315	.007
5.04	.13	325	10	.013
4.92	.12	335	10	.012
4.82	.10	345	10	.01
4.74	.08	355	10	.008
4.65	.09	365	10	.009
4.48	.17	375	10	.017
4.40	.08	385	10	.008
4.29	.11	395	10	.011
4.18	.11	405	10	.011
4.09	.09	415	10	.009
3.98	.11	435	20	.006
FILTERED				
7.23		0		
5.38	1.85	110	110	.017
5.25	.13	114	4	.032
5.13	.12	118	4	.03
5.05	.08	122	4	.02
4.99	.06	126	4	.015
4.85	.14	130	4	.035
4.76	.09	134	4	.022
4.67	.09	138	4	.022
4.57	.10	142	4	.025
4.48	.09	146	4	.022
4.39	.09	150	4	.022
4.35	.04	154	4	.01
4.20	.15	162	8	.019
4.06	.14	170	8	.018
3.94	.12	178	8	.015

Acid: 1.60 N (0.1600 N) 0.01639N OTHER _____

Acid Lot No. : A1131 EXP. 11/02

Sample Volume : 50 mL

☒ Filtered ☒ Unfiltered

Sample stirred : ☒ magnetically ☐ manually

pH: Start 7.26 End 3.98

	R	F
DC (Digital Counts) or Vol. titrated at End Point near pH 8.3 :	0	0
Digital Counts or Vol. titrated at End Point near pH 4.5 :	375	130

☒ Incremental Equivalence ☐ Fixed End Point ☐ Gran Titration

Date 12/5/01 Time 1545

CALCULATIONS :

$$CO_3^{-2} = A \times \frac{F_1}{mL\ sample} \times CF \ *$$

$$HCO_3^{-1} = [B - 2(A)] \times \frac{F_2}{mL\ sample} \times CF; \ *$$

$$\text{ALKALINITY as } CaCO_3 = B \times \frac{F_3}{mL\ sample} \times CF \ *$$

A = DC or mLs acid from initial pH to endpoint near 8.3 = R: 0, F: 0

B = DC or mLs acid from initial pH to endpoint near 4.5 = R: 375, F: 130

* APPLY CORRECTION FACTOR (CF) IF ACID USED FOR BURETTE TITRATION HAS NONSTANDARD NORMALITY–
CF = corr. factor = H_2SO_4 normality/0.01639

FACTORS	DIGITAL COUNT TITRATION (DC) Using 0.1600 normal	Using 1.60 normal
F_1	12.0	120
F_2	12.2	122
F_3	10.0	100

FACTORS	BURETTE * TITRATION (mL) Using ml of 0.01639 normal H_2SO_4
F_1	983.5
F_2	1000
F_3	820.2

(IMPORTANT : CF NOT APPLICABLE FOR THE DIGITAL TITRATION FACTORS SHOWN; use only with nonstandard normality BURETTE titration)

	R	F	
ALKALINITY (00419/39086)	76	26	mg/L as $CaCO_3$
BICARBONATE (00450/00453)	93	32	mg/L as HCO_3^{-1}
CARBONATE (00447/00452)	0	0	mg/L as CO_3^{-2}

NOTE: ATTACH OUTPUT COPY IF ALKALINITY VALUES ARE CALCULATED USING A COMPUTER PROGRAM

OBSERVATIONS/CALCULATIONS :

ALKALINITY TITRANT HAS A CORRECTION FACTOR OF 1.013

RAW

ALK = 375 x .2 x 1.013 = 76

BICARB = 375 x .244 x 1.013 = 93

FILTERED

ALK = 130 x .2 x 1.013 = 26

BICARB = 130 x .244 x 1.013 = 32

U.S. GEOLOGICAL SURVEY – NATIONAL WATER QUALITY LABORATORY
ANALYTICAL SERVICES REQUEST

THIS SECTION MANDATORY FOR SAMPLE LOGIN

NWIS RECORD NUMBER / SAMPLE TRACKING ID	User Code	Project Account	LAB USE ONLY / NWQL LABORATORY ID
	004	470416800	

STATION ID	Begin Date (YYYYMMDD)	Begin Time	Medium Code	Sample Type
332409111594101	20011204	1203	9	9

District Contact Phone Number	End Date (YYYYMMDD)	End Time	District Contact Email
480-736-1093 ~~602-379-3089~~ EXT. 230			kdfossum@usgs.gov

SITE / SAMPLE / SPECIAL PROJECT INFORMATION (Optional)

State	County	Geologic Unit Code	Analysis Status*	Analysis Source*	Hydrologic Condition*	Hydrologic Event*	Chain of Custody	Sample Set
04	013	—	H	9	9	J		

NWQL Proposal Number	NWQL Contact Name	NWQL Contact Email	Program/Project

Station Name: SALT RIVER AND 40TH ST. Field ID: 332409111594101

Comments to NWQL: PARED NPDES SAMPLE. SEND TO OCALA LAB

Hazard (please explain):

ANALYTICAL WORK REQUESTS: SCHEDULES AND LAB CODES (CIRCLE A=add D=delete)

SCHED 1: 3134 SCHED 2: _____ SCHED 3: _____ SCHED 4: _____ SCHED 5: _____ SCHED 6: _____

Lab Code: 3072 A (D)	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D
Lab Code: 3074 A (D)	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D
Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code: _____ A D

SHIPPING INFORMATION (Please fill in number of containers sent)

___ ALF	1 COD	___ FA	___ FCN	___ IQE	___ IRM	1 RA	1 RU	___ SUR	___ TPCN
___ BGC	___ CRB	___ FAM	1 FU	___ IQL	___ MBAS	___ RAM	___ RUR	___ SUSO	___ UAS
___ C18	___ CU	___ FAR	___ FUS	___ IQM	___ OAG	___ RAR	___ RURCT	___ TBI	1 WCA
___ CC	___ CUR	1 FCA	___ GCC	___ IRE	___ PHE	___ RCB	___ RURCV	___ TBY	[redacted]
___ CHY	___ DOC	___ FCC	___ GCV	___ IRL	___ PIC	___ RCN	___ RUS	___ TOC	1 RCC

NWQL Login Comments:

480-736-1093

Collected by: KEN FOSSUM Phone No. ~~602-379-3089~~ Ex. 230 Date Shipped 12/6/01

FIELD VALUES

Lab/P Code	Value	Remark	Lab/P Code	Value	Remark	Lab/P Code	Value	Remark
21/00095 Specific Conductance uS/cm @ 25 deg C	169		51/00400 pH Standard Units	7.92		2 39086 Alkalinity [illegible]	26	

Field Comments:

*MANDATORY FOR NWIS

Revised 04/00

FedEx® USA Airbill Express

FedEx Tracking Number 8312 4472 9953

0215 Sender's Copy

1 From *Please print and press hard.*

Date 12/6/01 Sender's FedEx Account Number 1426-9217-1

Sender's Name KEN FOSSUM Phone (480) 736-1556

Company US GEOLOGICAL SURVEY

Address 1769 W UNIVERSITY DR STE 175 Dept./Floor/Suite/Room

City TEMPE State AZ ZIP 85281

2 Your Internal Billing Reference First 24 characters will appear on invoice. ACCT. No: 470416800

3 To

Recipient's Name OCALA LAB Phone (352) 237-5514

Company U.S. GEOLOGICAL SURVEY

Address 4500 SW 40TH AVE. Dept./Floor/Suite/Room

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

City OCALA State FL ZIP 34470-5731

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Questions? Visit our Web site at fedex.com
or call 1.800.Go.FedEx® 800.463.3339.

0199339088

4a Express Package Service *Packages up to 150 lbs.* Delivery commitment may be later in some areas.

- [X] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day
- [ ] NEW FedEx Extra Hours — Later drop-off with next business afternoon delivery for select locations

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service *Packages over 150 lbs.* Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [X] Other Pkg. — Includes FedEx Box, FedEx Tube, and customer pkg.

6 Special Handling Include FedEx address in Section 3.

- [ ] SATURDAY Delivery Available ONLY for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location NOT Available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg
- [ ] Cargo Aircraft Only

Dangerous Goods (incl. Dry Ice) cannot be shipped in FedEx packaging or with FedEx Extra Hours service.

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value†	FedEx Use Only
1	29	$ .00	

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

447

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Ship & Save!

Track Shipments
Detailed Results

Quick Help

Tracking Number	831244729953
Reference Number	ACCT NO 47041L800
Ship Date	12/06/2001
Delivered To	
Delivery Location	OCALA FL
Delivery Date/Time	12/07/2001 10:44
Signed For By	V.MAYCALF
Service Type	Priority Overnight

Tracking Options
- Obtain a Signature Proof of Delivery
- Email these tracking results to one or more recipients
- Track More Shipments

Scan Activity	Date/Time	Comments
Delivered OCALA FL	12/07/2001 10:44	

Email Your Detailed Tracking Results

Enter your email (optional), up to three email addresses as recipients, add your message, and click on **Send Email**.

From

To

To

To

Add a message to this email.

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Customer Support Trace
3875 Airways Boulevard
Module H, 4th Floor
Memphis, TN 38116

U.S. Mail: PO Box 727
Memphis, TN 38194-4643

Telephone: 901-369-3600

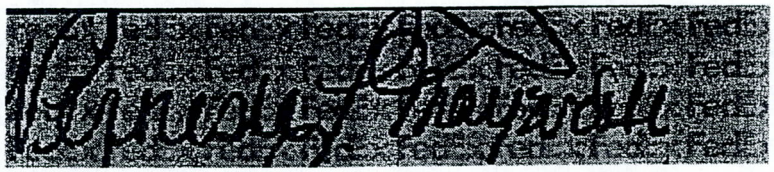
1/8/2002

Dear Customer:

Here is the proof of delivery for the shipment with tracking number **831244729953**. Our records reflect the following information.

Delivery Information:

Signed For By: V.MAYCALF



Delivery Location: 4500 SW 40
Delivery Date: December 7, 2001
Delivery Time: 1044

Shipping Information:

Tracking No: 831244729953

Ship Date: December 6, 2001

Recipient:
OCALA LAB
U S GEOLOGICAL SURVEY
4500 SW 40TH AVE
OCALA, FL 34470
US

Shipper:
KEN FCSSUM
US GEOLOGICAL SURVEY
1545 W UNIVERSITY DR
TEMPE, AZ 852813227

Shipment Reference Information: ACCT NO 47041L800

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1-800-Go-FedEx®
Reference No.: R2002010800040757891

Del Mar Analytical
2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CHAIN OF CUSTODY FORM

Quote #: _____ Page 1 of 1

Client Name/Address: JULIE COX
FCDMC
2801 W. DURANGO
PHX, AZ 85009

Project/PO Number: PHOENIX
NPDES STORMWATER

Project Manager: JULIE COX

Phone Number: 602-506-8401

Sampler: FOSSUM

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Analysis Required: 2 TPH	1 Fecal Strep	1 Fecal Colif.	1 E. Coli	2 Oil + Grease	1 608	2 624	3 625					Special Instructions
43RD + PEORIA - GRAB	S	MISC	13	1200 12/4/01	4	X	X	X	X	X	X	X	X					

Relinquished By: _____ Date/Time: 12/4/01 1530

Relinquished By: _____ Date/Time: _____

Relinquished By: _____ Date/Time: _____

Received by: _____ Date/Time: _____

Received by: _____ Date/Time: _____

Received in Lab by: _____ Date/Time: 12/4/01 1530

Turnaround Time: (Check) SEE CONTRACT
same day _____ 72 hours _____
24 hours _____ 5 days _____
48 hours _____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:
Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851
Project Manager: Linda Eshelman
Project: PKL0052 - MCFC

43rd + Peoria - Grab

RECEIVING LABORATORY:
Aquatic Consulting & Testing (ou
1525 W. University Dr. 106
Tempe, AZ 85281
Phone: 480-921-8044
Fax: 480-921-0049

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☐ Y ☐ N _____ Initials
on ice: ☐ Y ☐ N _____ Initials
Temp: °C ☐ Y ☐ N _____ Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0052-01	Water	12/04/01 12:00	EColiform-O	Standard TAT	12/05/01 12:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0052-01	Water	12/04/01 12:00	Fecal Coliform-O	Standard TAT	12/04/01 16:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0052-01	Water	12/04/01 12:00	Fecal Strep-O	Standard TAT	12/04/01 16:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other

Special Instructions: None

BH09426

1620 C.D 12/4/01
Relinquished By Date/Time:

D. Rolando 12/4/01 1620
Received By: Date/Time:

D. Rolando 12/4/01 1637
Relinquished By Date/Time:

M. McClean 12/4/01 1637
Received By: Date/Time:

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CHAIN OF CUSTODY FORM

Client Name/Address: JULIE COX
FCDMC
2801 W. DURANGO
PHOENIX, AZ 85009

Project Manager: JULIE COX

Sampler: FOSSUM

Project/PO Number: PHOENIX
NPDES STORMWATER

Phone Number: 602-506-8401

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Analysis Required: 2 TPH	1 FECAL STREP	1 FECAL COLI.	1 E. COLI.	2 OIL + GREASE	1 608	4 624	3 625		Special Instructions
40TH & IBW - GRAB	SW	MISC	~~##~~ 15	1030 12/4/01	4	X	X	X	X	X	X	X	X		SEE CONTRACT

Relinquished By: Kenneth Fox	Date /Time: 12/4/01 15:30	Received by:	Date /Time:	Turnaround Time: (Check) SEE CONTRACT
Relinquished By:	Date /Time:	Received by:	Date /Time:	same day ____ 72 hours ____ 24 hours ____ 5 days ____ 48 hours ____ normal ✓
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time: 12/4/01 1530	Sample Integrity: (Check) intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Temp 1°C

PLEASE NOTE TEMP.

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12/4/01

TOTAL & DISS.

CHAIN OF CUSTODY FORM

Quote #: _____ Page 1 of 2

Client Name/Address: JULIE COX FCDMC 2801 W. DURANGO PHOENIX, AZ 85009	Project/PO Number: PHOENIX NPDES STORMWATER,
Project Manager: JULIE COX	Phone Number: 602-506-8401
Sampler: FOSSUM + SHAW	Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Analysis Required: As, Be, Cd, Ca, Cu, Pb, Ni, Ag, Zn	Analysis Required: P (ortho), P (total)	Analysis Required: NH_3, NO_3, NO_2, NO_2+NO_3, TKN	Analysis Required: BOD/COD	Analysis Required: CN-	Analysis Required: TDS/TSS	Analysis Required: Hardness	Analysis Required: Phenolics	Special Instructions
40TH ST. + IBLO-COMP.	S	~~Misc~~	1	0756	N	X	X	X	X	X	X	X	X	SEE ATTACHED PHX ANALYSES FORM!
		5 gal glass	1	12/4/01										

Relinquished By:	Date/Time:	Received by:	Date/Time:
[signature]	12/4/01 4:45	[signature]	12/4/01 4:45
Relinquished By: [signature]	Date/Time: 12/4/01 5:15	Received by: [signature]	Date/Time:
Relinquished By:	Date/Time: 12/4/01	Received in Lab by: [signature]	Date/Time: 12/4/01 17:15

Turnaround Time: (Check) SEE CONTRACT
same day _____ 72 hours _____
24 hours _____ 5 days _____
48 hours _____ normal ✓

Sample Integrity: (Check) ice
intact ✓ TEMP on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

COC.GB

Del Mar Analytical

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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:
Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043 40th St. + IBW
Fax: (480) 785-0851 - Grab
Project Manager: Linda Eshelman
Project: PKL0050 - MCFC

RECEIVING LABORATORY:
Aquatic Consulting & Testing (ou
1525 W. University Dr. 106
Tempe, AZ 85281
Phone: 480-921-8044
Fax: 480-921-0049

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☐ Y ☐ N _____ Initials
on ice: ☐ Y ☐ N _____ Initials
Temp: °C ☐ Y ☐ N _____ Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0050-01	Water	12/04/01 10:30	EColiform-O	Standard TAT	12/05/01 10:30	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0050-01	Water	12/04/01 10:30	Fecal Coliform-O	Standard TAT	12/04/01 15:18	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0050-01	Water	12/04/01 10:30	Fecal Strep-O	Standard TAT	12/04/01 15:18	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other

Special Instructions:
None

BH09424

1620 C.D	12/4/01	D Richards 12/4/01	1620
Relinquished By	Date/Time:	Received By:	Date/Time:
D Richards 12/4/01	1637	M McClearn 12/4/01	1637
Relinquished By	Date/Time:	Received By:	Date/Time:

Del Mar Analytical

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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

0112037

SENDING LABORATORY:

Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851
Project Manager: Linda Eshelman
Project: PKL0069

40th St. + IBW - comp
- MCFC

RECEIVING LABORATORY:

Transwest Geochem (out)
3725 E. Atlanta Ave Ste 1
Phoenix, AZ 85040-2961
Phone: 602-437-0330
Fax: 602-470-0660

SAMPLE INTEGRITY:

Please complete upon receipt

intact: ☑ Y ☐ N SM Initials
on ice: wet ☑ Y ☐ N SM Initials
Temp: °C ☑ Y ☐ N SM Initials
4.6°

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0069-01 -01A	Water	12/04/01 13:00	Phenols (420.1)-I	Standard TAT	12/18/01 13:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: Needs a D.L. of 5ppb. Send to Transwest							
PKL0069-01 -01B	Water	12/04/01 13:00	TKN-C	Standard TAT	01/01/02 13:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: None							

Relinquished By	12/5/01 1130 Date/Time:	Received By: Bill Wadhell	12/5/01 1130 Date/Time:
Relinquished By	Date/Time:	Received By:	Date/Time:

Del Mar Analytical

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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

0112037

SENDING LABORATORY:

Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043 40th St. + IBW
Fax: (480) 785-0851 - Comp.
Project Manager: Linda Eshelman
Project: PKL0069 — mCFC

RECEIVING LABORATORY:

Transwest Geochem (out)
3725 E. Atlanta Ave Ste 1
Phoenix, AZ 85040-2961
Phone: 602-437-0330
Fax: 602-470-0660

SAMPLE INTEGRITY:

Please complete upon receipt

intact: ☑ Y ☐ N SM Initials
on ice: ☑ Y ☐ N SM Initials
Temp: °C ☑ Y ☐ N SM Initials
4.6°

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0069-01 -01A	Water	12/04/01 13:00	Phenols (420.1)-I	Standard TAT	12/18/01 13:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleev ☐ Other
PKL0069-01 -01B	Water	12/04/01 13:00	TKN-C	Standard TAT	01/01/02 13:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleev ☐ Other

Special Instructions:
Needs a D.L. of 5ppb. Send to Transwest

Special Instructions:
None

Relinquished By	Date/Time:	Received By:	Date/Time:
[signature]	12/5/01 1130	Bill Wadsell - 12/5/01 - 1130	

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

Due 12/12/01

CHAIN OF CUSTODY FORM P0112004

SUBCONTRACT ORDER

SENDING LABORATORY:

Del Mar Analytical - Phoenix
9830 South 51st Street. Suite B-120
Phoenix. AZ 85044
Phone: (480) 785-0043 40th St. + IBW
Fax: (480) 785-0851 - Comp.
Project Manager: Linda Eshelman
Project: PKL0069 - MCFC

RECEIVING LABORATORY:

NEL Laboratories
3021 S. 35th St.. Bldg. B-Suite 6
Phoenix. AZ 85034
Phone: (602) 437-0099
Fax: (602) 437-2225

SAMPLE INTEGRITY:

Please complete upon receipt

intact: [X] Y [ ] N Initials
on ice: [X] Y [ ] N Initials
Temp: °C [X] Y [ ] N Initials
5C

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0069-01	Water	12/04/01 13:00	AA Arsenic - MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							
PKL0069-02	Water	12/04/01 13:00	AA DIS Arsenic-MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							
PKL0069-02	Water	12/04/01 13:00	AA DIS Beryll-MCFC	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							
PKL0069-02	Water	12/04/01 13:00	ICPMS DisCopper-MCFC by EPA 200.8	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.002 mg/l							
PKL0069-02	Water	12/04/01 13:00	ICPMS DisSilver-MCFC by EPA 200.8	Standard TAT	06/02/02 13:00	1	[ ] Voa [ ] Amber Voa [ ] Poly [ ] Glass Jar [ ] Amber [ ] Brass Sleeve [ ] Other
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							

-01
-02
-03
-04
-05

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CHAIN OF CUSTODY FORM

SUBCONTRACT ORDER

C. Johnson 12/5/01 1446
Relinquished By Date/Time:

D. Johnson 12/5/01 1446
Received By: Date/Time:

D. Johnson 12/5/01 1521
Relinquished By Date/Time:

Tonda Thomas 12/5/01 15[illegible]
Received By: Date/Time:

Tonda Thomas 12/5/01 16[30]
Via Fed exp.

VIA FED EX
Saul Miller 12-6-01 / 9:15

U.S. GEOLOGICAL SURVEY, WRD, SURFACE-WATER QUALITY FIELD NOTES

BQA-1 3/92 (3rd printing, 1st ed.)

Proj. Name, No. MARICOPA URBAN - 4704-16800 Date DECEMBER 4, 2001

Station 40TH ST. + IBW Sta.No. 333557111594201

Sampled By FOSSUM Mean Time 0756 SMS Cntrl. No. _____

Record No. 00200045 Sample Purpose (71999) :

SAMPLES COLLECTED

Nutrients [X] TOC [ ]
Major Ions [ ] DOC [ ]
SOC [ ] Vol. Filt. _____ mL
BOD [ ] Turbidity [ ]
COD [X] _____ [ ]
_____ [ ]

ORGANICS / TR. ELEMENTS
Pesticide [ ] Unfiltered [X]
VOC [ ] Filtered [ ]
BNA [ ] Suspended [ ]
_____ [ ] Bottom [ ]

Sediment Conc. [ ]
Sediment Size [ ]
Sed. Bot. Material [ ]
Sand Split/Break [ ]
Radiochemical [ ]
Isotope [ ]
[ ]

FIELD MEASUREMENTS

Q. Inst. (00061)	11.43	cfs	meas.	Alkalinity (00419/39086)	R 34 / F — mg/L
Gage Ht (00065)	1.13	ft.	rating est.	Bicarbonate (00450/00453)	41 — mg/L
Temp. Water (00010)	17.0	°C		Carbonate (00447/00452)	0 — mg/L
Temp. Air (00020)	—	°C		Hydroxide (—)	— mg/L
pH (00400)	7.47	units		E. Coli (31633)	— col./100 mL; Rmk
Sp. Cond. (00095)	111	µS/cm 25 °C		FC (31625)	— col./100 mL; Rmk
Dis. Oxy. (00300)	8.82	mg/L		FS (31673)	— col./100 mL; Rmk
DO Sat. (00301)	—	%		Other:	
Bar. Press. (00025)	724	mm Hg			

SAMPLING CONDITIONS

Location: Wading, cable, ice, boat, bridge, upstr., downstr., side bridge (@) ft mile, above, below gage, and

Sampling site: Pool Riffle (Open Channel) Braided Backwater Sampler Type AUTO-SIGMA

Sample Method: EWI EDI (OTHER) AUTO-SAMPLER Sampler ID _____

Nozzle size 3/8" Nozzle Made of TEFLON Bottle type, size 8L 2L (GLASS)

Sample Split: (Churn) Cone Other _____ Made of TEFLON

LB _____ RB _____ Stream Width _____ Sampling Pts. CENTROID OF FLOW

Bottom: Bedrock Rock Cobble Gravel Sand Mud (Concrete) Other _____

Stage Conditions:
A Not Determined; 4 Stable, low; (9 Stable, normal); 5 Falling; 6 Stable, high; 7 Peak; 8 Rising

LABORATORY SCHEDULES

Lab Schedules Req. (or copy of lab request form attached [X])

3134

Lab Codes Add (A) Delete (D) :

Observations:

(Codes: 0-none 1-mild 2-moderate 3-serious 4-extreme)
(option: LEAVE BLANK IF NONE)

Floating debris	(01345) :	____
Floating garbage	(01320) :	____
Floating algae mats	(01325) :	____
Fish kill	(01340) :	____
Detergent suds	(01305) :	____
Turbidity	(01350) :	____
Atms. Odor	(01330) :	____
Oil-grease	(01300) :	____

Hydrologic Event: 9 Routine samp. A Spg. breakup B Ice Cover
1 Drought 2 Spill 3 Reg. Flow 4 Snowmelt 7 Flood
(Other) T-STORM Ice Thickness _____ Ice cover _____

Stream color(s): (brown) green blue gray other _____

Stream Mixing: Excellent (Good) Fair Poor Clarity/Turbidity: _____

Weather: Clear Partly (Cloudy) Cloudy (Light) Medium Heavy Snow (Rain)
Calm Light Breeze Very Gusty (Windy) Very (Cold) Warm Hot Other

Other Observations

81395 (MGD) =
82381 (PRECIP) =
00129 (MAXS) =
00135 (STM. LENG.) =
00132 (DRY DAYS) =

	GHT
Sampling Start Time	____
Mean Time =	____
End Time	____

(Cont. p. 3,4)

Checked by _____ Date _____

TEMPERATURE Lab Tested Thermometer used? ☐ Yes ☒ No If NO, explain in remarks

Thermometer Checked w/ASTM within ± 0.5 °C; Date

AMPULE LOT NUMBERS: nitric acid _____ mercuric chloride _____ nitric acid/potassium dichromate

pH

Mtr W-no. W-49525 | METER Make/Model CORNING CHECKMATE 90

electrode no. | electrode type

pH Buffer	pH Buffer Temp °C	Initial Reading	Adj. Reading	Remarks
7.00	17.0	7.00	7.00	OK
10.01	17.0	10.01	10.01	OK
___.___				
___.___				

☒ unfiltered sample ☐ filtered sample

Temp correction factors for buffers applied? ☒ YES ☐ NO

stirrer used? ☐ YES ☒ NO

if yes, ☐ magnetic stirrer ☐ manually stirred

pH subsample from or pH measurement location : Churn sample bottle (single point at) ____ sta ____ depth vertical avg of ____ points x-sec average of ____ points

Sample Temp = 17.0 °C

FIELD pH = 7.47 USE : 7.47

SPECIFIC CONDUCTANCE

Mtr W-no. W-49525 | METER Make/Model CORNING CHECKMATE 90

probe no.

standard value	Temp Std °C	Initial Reading	Adj. Reading	Remarks
0	17.0	0	0	OK
1413 µS	17.0	1413 µS	1413 µS	OK

correction factor applied? ☐ YES ☒ NO

☒ auto temp compensated meter

☐ manual temp compensated meter

corr. factor = _____

SC subsample from or SC measurement location : Churn sample bottle (single point at) ____ sta ____ depth vertical avg of ____ points x-sec avg of ____ points

FIELD CONDUCTANCE = 111 USE : 111

DISSOLVED OXYGEN W-no. _____ METER Make/Model YSI-55

D.O. measurement location or D.O. subsample from : (single point at) ____ sta ____ depth vertical avg of ____ points x-sec avg of ____ points

Calibration : BOD bottle

☒ Air Calibration in Water ☐ Air Calibration Chamber in Air

☐ Air-Saturation Deionized Water ☐ Calibration by Winkler Titration (attach Supplementary Winkler page)

D.O. Zero Check (using zero D.O. solution) ☐ YES ☒ NO

Thermister Check ☐ YES ☒ NO

BAR. PRESS 724 mm Hg; (mm = in. X 25.4)

Salinity Corr. Factor ____ H_2O Temp. 17.0 °C

Chart D.O. Sat. _____ mg/L

stirrer used? ☐ YES ☒ NO if yes, ☐ magnetic stirrer ☐ manually stirred

Meter D.O. Sat. _____ mg/L; Adjusted to _____ (if corr. factor applicable)

DISSOLVED OXYGEN IN STREAM = 8.82

QUALITY ASSURANCE SAMPLES

Were quality assurance samples collected?

☐ YES ☒ NO If YES indicate type(s) :

	Organic-free	DI	water from sampling site
Replicate	☐	☐	☐
Spike	☐	☐	☐
Field Blank	☐	☐	Supplementary page w/additional
Trip Blank	☐	☐	QA sample info attached ☐

Other ☐ Indicate Type(s) :

Calibration Notes and Remarks

USED INTERNAL THERMISTOR IN CORNING METER

ALKALINITY

pH	△ pH	Vol acid DC or mL	△Vol acid DC or mL	△ pH / △ Vol acid
RAW				
7.31		0		
5.52	1.79	120	120	.015
5.49	.03	123	3	.01
5.41	.08	128	5	.016
5.28	.13	134	6	.022
5.15	.13	139	5	.026
5.06	.09	144	5	.018
5.01	.05	156	12	.004
4.91	.10	161	5	.02
4.77	.14	166	5	.028
4.67	.10	170	4	.025
4.57	.10	175	5	.02
4.46	.11	180	5	.022
4.37	.09	185	5	.018
4.30	.07	190	5	.014
4.19	.11	197	7	.016
4.08	.11	207	10	.011
3.97	.11	215	8	.014

Acid: 1.60 N (0.1600 N) 0.01639N OTHER _____

Acid Lot No. : A1131 EXP 11/02

Sample Volume : 50 mL

☒ Filtered ☒ Unfiltered

Sample stirred : ☒ magnetically ☐ manually

pH: Start 7.31 End 3.97

DC (Digital Counts) or Vol. titrated at End Point near pH 8.3 : R 0 | F ✓

Digital Counts or Vol. titrated at End Point near pH 4.5 : 166 | ✓

☒ Incremental Equivalence ☐ Fixed End Point ☐ Gran Titration

Date 12/5/01 Time 1100

CALCULATIONS :

$$CO_3^{-2} = A \times \frac{F_1}{mL\ sample} \times CF \quad *$$

$$HCO_3^{-1} = [B - 2(A)] \times \frac{F_2}{mL\ sample} \times CF; \quad *$$

$$\text{ALKALINITY as } CaCO_3 = B \times \frac{F_3}{mL\ sample} \times CF \quad *$$

FACTORS	DIGITAL COUNT TITRATION (DC) Using 0.1600 normal	Using 1.60 normal
F_1	12.0	120
F_2	12.2	122
F_3	10.0	100

A = DC or mLs acid from initial pH to endpoint near 8.3 = R 0 | F ✓

B = DC or mLs acid from initial pH to endpoint near 4.5 = 166 | ✓

FACTORS	BURETTE * TITRATION (mL) Using ml of 0.01639 normal H_2SO_4
F_1	983.5
F_2	1000
F_3	820.2

* APPLY CORRECTION FACTOR (CF) IF ACID USED FOR BURETTE TITRATION HAS NONSTANDARD NORMALITY-- CF = corr. factor = H_2SO_4 normality/0.01639

(IMPORTANT : CF NOT APPLICABLE FOR THE DIGITAL TITRATION FACTORS SHOWN; use only with nonstandard normality BURETTE titration)

	R	F	
ALKALINITY (00419/39086)	34	✓	mg/L as $CaCO_3$
BICARBONATE (00450/00453)	41	✓	mg/L as HCO_3^{-1}
CARBONATE (00447/00452)	0	✓	mg/L as CO_3^{-2}

NOTE: ATTACH OUTPUT COPY IF ALKALINITY VALUES ARE CALCULATED USING A COMPUTER PROGRAM

OBSERVATIONS/CALCULATIONS :

TITRANT HAS A CORRECTION FACTOR OF 1.013

ALK = 166 X .2 X 1.013 = 34

BICARB = 166 X .244 X 1.013 = 41

U.S. GEOLOGICAL SURVEY – NATIONAL WATER QUALITY LABORATORY
ANALYTICAL SERVICES REQUEST

THIS SECTION MANDATORY FOR SAMPLE LOGIN

NWIS RECORD NUMBER / SAMPLE TRACKING ID	User Code	Project Account	LAB USE ONLY / NWQL LABORATORY ID
	004	470416800	

STATION ID	Begin Date (YYYYMMDD)	Begin Time	Medium Code	Sample Type
333557111594201	20011204	0756	9	9

District Contact Phone Number	End Date (YYYYMMDD)	End Time	District Contact Email
480-736-1093 ~~602-379-3089~~ EXT. 230			kdfossum@usgs.gov

SITE / SAMPLE / SPECIAL PROJECT INFORMATION (Optional)

State	County	Geologic Unit Code	Analysis Status*	Analysis Source*	Hydrologic Condition*	Hydrologic Event*	Chain of Custody	Sample Set
04	013	—	H	9	9	J		

NWQL Proposal Number	NWQL Contact Name	NWQL Contact Email	Program/Project

Station Name: 40th St. & IBW Field ID: 333557111594201

Comments to NWQL: PARED NPDES SAMPLE. SEND TO OCALA LAB

Hazard (please explain):

ANALYTICAL WORK REQUESTS: SCHEDULES AND LAB CODES (CIRCLE A=add D=delete)

SCHED 1: 3134 SCHED 2: _____ SCHED 3: _____ SCHED 4: _____ SCHED 5: _____ SCHED 6: _____

Lab Code: 3072 A (D)	Lab Code: _____ A D	Lab Code: _____ A D	Lab Code _____ A D	Lab Code: _____ A D
Lab Code 3074 A (D)	Lab Code _____ A D	Lab Code: _____ A D	Lab Code _____ A D	Lab Code _____ A D
Lab Code: _____ A D	Lab Code _____ A D	Lab Code: _____ A D	Lab Code _____ A D	Lab Code: _____ A D

SHIPPING INFORMATION (Please fill in number of containers sent)

ALF	COD	FA	FCN	IQE	IRM	RA	RU	SUR	TPCN
BGC	CRB	FAM	1 FU	IQL	MBAS	RAM	RUR	1 SUSO	UAS
C18	CU	FAR	FUS	IQM	OAG	RAR	RURC	TBI	1 WCA
CC	CUR	1 FCA	GCC	IRF	PHE	RCB	RURCA	TBY	[redacted]
CHY	DOC	FCL	GCV	IRI	PIC	RCN	RUS	TOC	1 Rcc

NWQL Login Comments

Directed by: KEN FOSSUM Phone No: 480-736-1093 ~~602-379-3089~~ Ex. 230 Date Shipped: 12/6/01

FIELD VALUES

Lab P Code	Value	Remarks	Lab P Code	Value	Remark	Lab P Code	Value	Remarks
	111			7.47			34	

Field Comments:

*MANDATORY FOR NWIS

Revised 04-00

FedEx Express USA Airbill

FedEx Tracking Number 8312 4472 9953

0215

Sender's Copy

1 From Please print and press hard.

Date 12/6/01 Sender's FedEx Account Number 1426-9217-1

Sender's Name KEN FOSSUM Phone (480) 736-1556

Company US GEOLOGICAL SURVEY

Address 1769 W UNIVERSITY DR STE 175 Dept./Floor/Suite/Room

City TEMPE State AZ ZIP 85281

2 Your Internal Billing Reference First 24 characters will appear on invoice. ACCT. No: 470416800

3 To

Recipient's Name OCALA LAB Phone (352) 237-5514

Company U.S. GEOLOGICAL SURVEY

Address 4500 SW 40TH AVE. Dept./Floor/Suite/Room

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

City OCALA State FL ZIP 34470-5731

4a Express Package Service — Packages up to 150 lbs. Delivery commitment may be later in some areas.

- [X] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day
- [ ] NEW FedEx Extra Hours — Later drop-off with next business afternoon delivery for select locations

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service — Packages over 150 lbs. Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging — * Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [X] Other Pkg. — Includes FedEx Box, FedEx Tube, and customer pkg.

6 Special Handling — Include FedEx address in Section 3.

- [ ] SATURDAY Delivery Available ONLY for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] HOLD Weekday at FedEx Location NOT Available for FedEx First Overnight
- [ ] HOLD Saturday at FedEx Location Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [X] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (incl. Dry Ice) cannot be shipped in FedEx packaging or with FedEx Extra Hours service.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:* Enter FedEx Acct. No. or Credit Card No. below.

- [X] Sender — Acct. No. in Section 1 will be billed.
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check

FedEx Acct. No. / Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value†
1	29	$ .00

†Our liability is limited to $100 unless you declare a higher value. See back for details. FedEx Use Only

8 Release Signature Sign to authorize delivery without obtaining signature.

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

447

Try online shipping at fedex.com

By using this Airbill you agree to the service conditions on the back of this Airbill and in our current Service Guide, including terms that limit our liability.

Questions? Visit our Web site at fedex.com or call 1.800.Go.FedEx® 800.463.3339.

0199339088

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Ship & Save!

Track Shipments
Detailed Results

Quick Help

Tracking Number	831244729953
Reference Number	ACCT NO 47041L800
Ship Date	12/06/2001
Delivered To	
Delivery Location	OCALA FL
Delivery Date/Time	12/07/2001 10:44
Signed For By	V.MAYCALF
Service Type	Priority Overnight

Tracking Options
- Obtain a Signature Proof of Delivery
- Email these tracking results to one or more recipients
- Track More Shipments

Scan Activity	Date/Time	Comments
Delivered OCALA FL	12/07/2001 10:44	

Email Your Detailed Tracking Results

Enter your email (optional), up to three email addresses as recipients, add your message, and click on **Send Email**.

From

To

To

To

Add a message to this email.

Send Email

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FedEx Express
Customer Support Trace
3875 Airways Boulevard
Module H, 4th Floor
Memphis, TN 38116

U.S. Mail: PO Box 727
Memphis, TN 38194-4643

Telephone: 901-369-3600

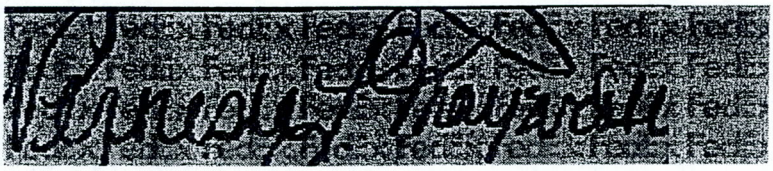
1/8/2002

Dear Customer:

Here is the proof of delivery for the shipment with tracking number **831244729953**. Our records reflect the following information.

Delivery Information:

Signed For By: V.MAYCALF



Delivery Location: 4500 SW 40
Delivery Date: December 7, 2001
Delivery Time: 1044

Shipping Information:

Tracking No: 831244729953

Ship Date: December 6, 2001

Recipient:
OCALA LAB
U S GEOLOGICAL SURVEY
4500 SW 40TH AVE
OCALA, FL 34470
US

Shipper:
KEN FCSSUM
US GEOLOGICAL SURVEY
1545 W UNIVERSITY DR
TEMPE, AZ 852813227

Shipment Reference Information: ACCT NO 47041L800

Thank you for choosing FedEx Express. We look forward to working with you in the future.

FedEx Worldwide Customer Service
1-800-Go-FedEx®
Reference No.: R2002010800040757891

Del Mar Analytical
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16525 Sherman Way, Suite C-11, Van Nuys, CA 92406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (619) 505-9596 FAX (619) 505-9689
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

CHAIN OF CUSTODY FORM

Quote #: _____ Page 1 of 1

Client Name/Address: JULIE COX
FCDMC
2801W DURANGO
PHX, AZ 85009

Project/PO Number: PHOENIX
NPDES STORMWATER

Project Manager: JULIE COX

Phone Number: 602-506-8401

Sampler: FOSSUM

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Analysis Required: 2 TPH	1 Fecal Strep	1 Fecal Coli.	1 E. Coli.	2 Oil + Grease	1 608	2 624	3 625					Special Instructions
CAVE CR + TATUM - GRAB	S	MISC	13	11/5	4	X	X	X	X	X	X	X	X					
				12/4/01														

Relinquished By: _____ Date /Time: 12/4/01 1530
Received by: _____ Date /Time: _____

Relinquished By: _____ Date /Time: 12/4/01
Received by: _____ Date /Time: _____

Relinquished By: _____ Date /Time: _____
Received in Lab by: _____ Date /Time: 12/4/01 1530

Turnaround Time: (Check) SEE CONTRACT
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days

T.

COC

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:

Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043 Cave Creek + Tatum - Grab
Fax: (480) 785-0851
Project Manager: Linda Eshelman
Project: PKL0051 _ MCFC

RECEIVING LABORATORY:

Aquatic Consulting & Testing (ou
1525 W. University Dr. 106
Tempe, AZ 85281
Phone: 480-921-8044
Fax: 480-921-0049

SAMPLE INTEGRITY:

Please complete upon receipt

intact: ☐ Y ☐ N _____ Initials
on ice: ☐ Y ☐ N _____ Initials
Temp: °C ☐ Y ☐ N _____ Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0051-01	Water	12/04/01 11:15	EColiform-O	Standard TAT	12/05/01 11:15	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0051-01	Water	12/04/01 11:15	Fecal Coliform-O	Standard TAT	12/04/01 16:03	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
PKL0051-01	Water	12/04/01 11:15	Fecal Strep-O	Standard TAT	12/04/01 16:03	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other

Special Instructions: None

BH09425

1637 C-D	12/4/01	ARelado	12/4/01 1620
Relinquished By	Date/Time:	Received By:	Date/Time:
ARelado	12/4/01 1637	MMcClearn	12/4/01 1637
Relinquished By	Date/Time:	Received By:	Date/Time:

Del Mar Analytical

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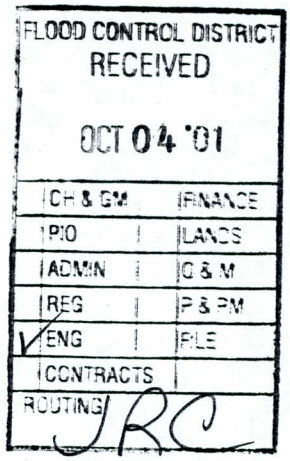
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Maricopa County -Flood Control District 2801 West Durango Street Phoenix, AZ 85009 Attention: Julie Cox	Client Project ID:	Phoenix-NPDES STORMWATER	Sampled: 07/30/01 Received: 07/30/01 Issued: 8/9/01 Revised: 10/02/01
	Report Number:	PKG0504	

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKG0504-01	40TH + IBW-GRAB	Water
PKG0504-02	TRIP BLANK	Water



SAMPLE RECEIPT: Samples were received intact, on ice, and with chain of custody documentation.

HOLDING TIMES: Holding times were met.

PRESERVATION: Samples requiring preservation were verified prior to sample analysis.

OBSERVATIONS: This report has been revised to reflect the correct parameter list for the 624 QC data.

SUBCONTRACTED: Analysis was subcontracted to ES Environmental Services/Severn Trent - 3333 S. Price Road, Chandler, AZ (AZ0021). Results are attached.

QA/QC CRITERIA: The S7 flag on the 625 indicates that the surrogate recovery was below acceptance limits. See Corrective Action Report.

EXPLANATION OF DATA QUALIFIERS: The D1 flag on the 625 indicates that the reporting limit was raised due to high concentrations of non-target analytes.

DEL MAR ANALYTICAL , PHOENIX (AZ0426)

Linda Eshelman
Project Manager

The results pertain only to the samples tested in the laboratory. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical.

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER

Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKG0504-01 (40TH + IBW-GRAB - Water)								
Total Recoverable Hydrocarbons	EPA 418.1	P1H0226	1.0	ND	1	8/2/01	8/2/01	

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER
Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKG0504-01 (40TH + IBW-GRAB - Water)								
Oil & Grease	EPA 413.2	P1H0225	1.0	**2.6**	1	8/2/01	8/2/01	

Linda Eshelman
Project Manager

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9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER
Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKG0504-01 (40TH + IBW-GRAB - Water)								
Acetone	EPA 624	P1G3121	20	**31**	1	7/31/01	8/1/01	
Benzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Bromodichloromethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Bromoform	EPA 624	P1G3121	5.0	ND	1	7/31/01	8/1/01	
Bromomethane	EPA 624	P1G3121	5.0	ND	1	7/31/01	8/1/01	
Carbon tetrachloride	EPA 624	P1G3121	2.5	ND	1	7/31/01	8/1/01	
Chlorobenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Dibromochloromethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Chloroethane	EPA 624	P1G3121	5.0	ND	1	7/31/01	8/1/01	
Chloroform	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Chloromethane	EPA 624	P1G3121	5.0	ND	1	7/31/01	8/1/01	
1,2-Dichlorobenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
1,3-Dichlorobenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
1,4-Dichlorobenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
1,1-Dichloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
1,2-Dichloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
1,1-Dichloroethene	EPA 624	P1G3121	5.0	ND	1	7/31/01	8/1/01	
trans-1,2-Dichloroethene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
1,2-Dichloropropane	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
cis-1,3-Dichloropropene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
trans-1,3-Dichloropropene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Ethylbenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Methylene chloride	EPA 624	P1G3121	5.0	ND	1	7/31/01	8/1/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Tetrachloroethene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Toluene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
1,1,1-Trichloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
1,1,2-Trichloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Trichloroethene	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Trichlorofluoromethane	EPA 624	P1G3121	5.0	ND	1	7/31/01	8/1/01	
Vinyl chloride	EPA 624	P1G3121	2.0	ND	1	7/31/01	8/1/01	
Surrogate: Dibromofluoromethane (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*116 %*				
Surrogate: Toluene-d8 (80-120%)				*114 %*				

Linda Eshelman
Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER

Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

PURGEABLES BY GC/MS (EPA 624)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKG0504-02 (TRIP BLANK - Water)								
Acetone	EPA 624	P1G3121	20	ND	1	7/31/01	7/31/01	
Benzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Bromodichloromethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Bromoform	EPA 624	P1G3121	5.0	ND	1	7/31/01	7/31/01	
Bromomethane	EPA 624	P1G3121	5.0	ND	1	7/31/01	7/31/01	
Carbon tetrachloride	EPA 624	P1G3121	2.5	ND	1	7/31/01	7/31/01	
Chlorobenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Dibromochloromethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Chloroethane	EPA 624	P1G3121	5.0	ND	1	7/31/01	7/31/01	
Chloroform	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Chloromethane	EPA 624	P1G3121	5.0	ND	1	7/31/01	7/31/01	
1,2-Dichlorobenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
1,3-Dichlorobenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
1,4-Dichlorobenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
1,1-Dichloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
1,2-Dichloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
1,1-Dichloroethene	EPA 624	P1G3121	5.0	ND	1	7/31/01	7/31/01	
trans-1,2-Dichloroethene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
1,2-Dichloropropane	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
cis-1,3-Dichloropropene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
trans-1,3-Dichloropropene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Ethylbenzene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Methylene chloride	EPA 624	P1G3121	5.0	ND	1	7/31/01	7/31/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Tetrachloroethene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Toluene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
1,1,1-Trichloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
1,1,2-Trichloroethane	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Trichloroethene	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Trichlorofluoromethane	EPA 624	P1G3121	5.0	ND	1	7/31/01	7/31/01	
Vinyl chloride	EPA 624	P1G3121	2.0	ND	1	7/31/01	7/31/01	
Surrogate: Dibromofluoromethane (80-120%)				*102 %*				
Surrogate: 4-Bromofluorobenzene (80-120%)				*118 %*				
Surrogate: Toluene-d8 (80-120%)				*116 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426

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Project Manager

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER
Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKG0504-01 (40TH + IBW-GRAB - Water)								
Chrysene	EPA 625	P1G3025	50	ND	5	7/30/01	8/1/01	D1
Phenol	EPA 625	P1G3025	50	ND	5	7/30/01	8/1/01	D1
Benzoic acid	EPA 625	P1G3025	250	ND	5	7/30/01	8/1/01	D1
Surrogate: 2-Fluorophenol (20-120%)				*49.6 %*				D1
Surrogate: Phenol-d6 (15-115%)				*56.2 %*				D1
Surrogate: 2,4,6-Tribromophenol (35-135%)				*62.6 %*				D1
Surrogate: Nitrobenzene-d5 (25-120%)				*22.4 %*				S7 , D1
Surrogate: 2-Fluorobiphenyl (25-145%)				*79.6 %*				D1
Surrogate: Terphenyl-d14 (40-130%)				*78.2 %*				D1

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Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKG0504-01 (40TH + IBW-GRAB - Water)								
4,4'-DDE	EPA 608	I1H0125	0.10	ND	0.962	8/1/01	8/2/01	
Surrogate: Tetrachloro-m-xylene (30-120%)				*84.4 %*				
Surrogate: Decachlorobiphenyl (30-120%)				*76.5 %*				

DEL MAR ANALYTICAL, IRVINE (AZ0428

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Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

METHOD BLANK/QC DATA

TOTAL RECOVERABLE PETROLEUM HYDROCARBONS (EPA 418.1)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H0226 Extracted: 08/02/01										
Blank Analyzed: 08/02/01 (P1H0226-BLK1)										
Total Recoverable Hydrocarbons	ND	1.0	mg/l							
LCS Analyzed: 08/02/01 (P1H0226-BS1)										
Total Recoverable Hydrocarbons	**12.8**	1.0	mg/l	10.0		128	95-130			
LCS Dup Analyzed: 08/02/01 (P1H0226-BSD1)										
Total Recoverable Hydrocarbons	**12.9**	1.0	mg/l	10.0		129	95-130	0.778	20	

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METHOD BLANK/QC DATA

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1H0225 Extracted: 08/02/01										
Blank Analyzed: 08/02/01 (P1H0225-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 08/02/01 (P1H0225-BS1)										
Oil & Grease	**12.0**	1.0	mg/l	10.0		120	100-130			
LCS Dup Analyzed: 08/02/01 (P1H0225-BSD1)										
Oil & Grease	**12.4**	1.0	mg/l	10.0		124	100-130	3.28	20	

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Sampled: 07/30/01
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1G3121 Extracted: 07/31/01										
Blank Analyzed: 07/31/01 (P1G3121-BLK1)										
Acetone	ND	20	ug/l							
Benzene	ND	2.0	ug/l							
Bromodichloromethane	ND	2.0	ug/l							
Bromoform	ND	5.0	ug/l							
Bromomethane	ND	5.0	ug/l							
Carbon tetrachloride	ND	2.5	ug/l							
Chlorobenzene	ND	2.0	ug/l							
Dibromochloromethane	ND	2.0	ug/l							
Chloroethane	ND	5.0	ug/l							
Chloroform	ND	2.0	ug/l							
Chloromethane	ND	5.0	ug/l							
1,2-Dichlorobenzene	ND	2.0	ug/l							
1,3-Dichlorobenzene	ND	2.0	ug/l							
1,4-Dichlorobenzene	ND	2.0	ug/l							
1,1-Dichloroethane	ND	2.0	ug/l							
1,2-Dichloroethane	ND	2.0	ug/l							
1,1-Dichloroethene	ND	5.0	ug/l							
trans-1,2-Dichloroethene	ND	2.0	ug/l							
1,2-Dichloropropane	ND	2.0	ug/l							
cis-1,3-Dichloropropene	ND	2.0	ug/l							
trans-1,3-Dichloropropene	ND	2.0	ug/l							
Ethylbenzene	ND	2.0	ug/l							
Methylene chloride	ND	5.0	ug/l							
1,1,2,2-Tetrachloroethane	ND	2.0	ug/l							
Tetrachloroethene	ND	2.0	ug/l							
Toluene	ND	2.0	ug/l							
1,1,1-Trichloroethane	ND	2.0	ug/l							
1,1,2-Trichloroethane	ND	2.0	ug/l							
Trichloroethene	ND	2.0	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	2.0	ug/l							
Surrogate: Dibromofluoromethane	*25.2*		*ug/l*	*25.0*		*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*27.4*		*ug/l*	*25.0*		*110*	*80-120*			
Surrogate: Toluene-d8	*28.3*		*ug/l*	*25.0*		*113*	*80-120*			

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Sampled: 07/30/01
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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1G3121 Extracted: 07/31/01										
LCS Analyzed: 07/31/01 (P1G3121-BS1)										
Acetone	ND	20	ug/l	25.0		68.8	30-200			
Benzene	**23.7**	2.0	ug/l	25.0		94.8	37-151			
Bromodichloromethane	**22.9**	2.0	ug/l	25.0		91.6	35-155			
Bromoform	**27.9**	5.0	ug/l	25.0		112	45-169			
Bromomethane	**24.8**	5.0	ug/l	25.0		99.2	5-242			
Carbon tetrachloride	**23.7**	2.5	ug/l	25.0		94.8	70-140			
Chlorobenzene	**27.1**	2.0	ug/l	25.0		108	37-160			
Dibromochloromethane	**25.9**	2.0	ug/l	25.0		104	53-149			
Chloroethane	**23.0**	5.0	ug/l	25.0		92.0	14-230			
Chloroform	**24.1**	2.0	ug/l	25.0		96.4	51-138			
Chloromethane	**23.0**	5.0	ug/l	25.0		92.0	5-273			
1,2-Dichlorobenzene	**25.0**	2.0	ug/l	25.0		100	18-190			
1,3-Dichlorobenzene	**25.1**	2.0	ug/l	25.0		100	59-156			
1,4-Dichlorobenzene	**25.2**	2.0	ug/l	25.0		101	18-190			
1,1-Dichloroethane	**23.0**	2.0	ug/l	25.0		92.0	59-155			
1,2-Dichloroethane	**21.7**	2.0	ug/l	25.0		86.8	49-155			
1,1-Dichloroethene	**24.8**	5.0	ug/l	25.0		99.2	5-234			
trans-1,2-Dichloroethene	**25.4**	2.0	ug/l	25.0		102	54-156			
1,2-Dichloropropane	**22.7**	2.0	ug/l	25.0		90.8	5-210			
cis-1,3-Dichloropropene	**22.8**	2.0	ug/l	25.0		91.2	5-227			
trans-1,3-Dichloropropene	**23.7**	2.0	ug/l	25.0		94.8	17-183			
Ethylbenzene	**26.1**	2.0	ug/l	25.0		104	37-162			
Methylene chloride	**22.1**	5.0	ug/l	25.0		88.4	5-221			
1,1,2,2-Tetrachloroethane	**24.8**	2.0	ug/l	25.0		99.2	46-157			
Tetrachloroethene	**27.3**	2.0	ug/l	25.0		109	64-148			
Toluene	**26.5**	2.0	ug/l	25.0		106	47-150			
1,1,1-Trichloroethane	**24.2**	2.0	ug/l	25.0		96.8	52-162			
1,1,2-Trichloroethane	**27.4**	2.0	ug/l	25.0		110	52-150			
Trichloroethene	**24.1**	2.0	ug/l	25.0		96.4	71-157			
Trichlorofluoromethane	**22.0**	5.0	ug/l	25.0		88.0	17-181			
Vinyl chloride	**23.4**	2.0	ug/l	25.0		93.6	5-251			
Surrogate: Dibromofluoromethane	*25.6*		*ug/l*	*25.0*		*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*27.1*		*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Toluene-d8	*29.2*		*ug/l*	*25.0*		*117*	*80-120*			

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METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1G3121 Extracted: 07/31/01										
LCS Dup Analyzed: 07/31/01 (P1G3121-BSD1)										
Acetone	ND	20	ug/l	25.0		59.6	30-200	14.3	20	
Benzene	**24.0**	2.0	ug/l	25.0		96.0	37-151	1.26	20	
Bromodichloromethane	**23.2**	2.0	ug/l	25.0		92.8	35-155	1.30	20	
Bromoform	**28.6**	5.0	ug/l	25.0		114	45-169	2.48	20	
Bromomethane	**22.1**	5.0	ug/l	25.0		88.4	5-242	11.5	20	
Carbon tetrachloride	**24.0**	2.5	ug/l	25.0		96.0	70-140	1.26	20	
Chlorobenzene	**26.6**	2.0	ug/l	25.0		106	37-160	1.86	20	
Dibromochloromethane	**26.0**	2.0	ug/l	25.0		104	53-149	0.385	20	
Chloroethane	**23.2**	5.0	ug/l	25.0		92.8	14-230	0.866	20	
Chloroform	**23.6**	2.0	ug/l	25.0		94.4	51-138	2.10	20	
Chloromethane	**24.8**	5.0	ug/l	25.0		99.2	5-273	7.53	20	
1,2-Dichlorobenzene	**25.6**	2.0	ug/l	25.0		102	18-190	2.37	20	
1,3-Dichlorobenzene	**25.4**	2.0	ug/l	25.0		102	59-156	1.19	20	
1,4-Dichlorobenzene	**25.6**	2.0	ug/l	25.0		102	18-190	1.57	20	
1,1-Dichloroethane	**22.7**	2.0	ug/l	25.0		90.8	59-155	1.31	20	
1,2-Dichloroethane	**22.2**	2.0	ug/l	25.0		88.8	49-155	2.28	20	
1,1-Dichloroethene	**25.1**	5.0	ug/l	25.0		100	5-234	1.20	20	
trans-1,2-Dichloroethene	**24.6**	2.0	ug/l	25.0		98.4	54-156	3.20	20	
1,2-Dichloropropane	**22.6**	2.0	ug/l	25.0		90.4	5-210	0.442	20	
cis-1,3-Dichloropropene	**23.5**	2.0	ug/l	25.0		94.0	5-227	3.02	20	
trans-1,3-Dichloropropene	**23.9**	2.0	ug/l	25.0		95.6	17-183	0.840	20	
Ethylbenzene	**27.3**	2.0	ug/l	25.0		109	37-162	4.49	20	
Methylene chloride	**22.4**	5.0	ug/l	25.0		89.6	5-221	1.35	20	
1,1,2,2-Tetrachloroethane	**25.6**	2.0	ug/l	25.0		102	46-157	3.17	20	
Tetrachloroethene	**27.2**	2.0	ug/l	25.0		109	64-148	0.367	20	
Toluene	**26.1**	2.0	ug/l	25.0		104	47-150	1.52	20	
1,1,1-Trichloroethane	**23.7**	2.0	ug/l	25.0		94.8	52-162	2.09	20	
1,1,2-Trichloroethane	**27.6**	2.0	ug/l	25.0		110	52-150	0.727	20	
Trichloroethene	**24.5**	2.0	ug/l	25.0		98.0	71-157	1.65	20	
Trichlorofluoromethane	**22.7**	5.0	ug/l	25.0		90.8	17-181	3.13	20	
Vinyl chloride	**23.7**	2.0	ug/l	25.0		94.8	5-251	1.27	20	
Surrogate: Dibromofluoromethane	*25.7*		*ug/l*	*25.0*		*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.8*		*ug/l*	*25.0*		*107*	*80-120*			
Surrogate: Toluene-d8	*28.5*		*ug/l*	*25.0*		*114*	*80-120*			

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER
Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1G3121 Extracted: 07/31/01										
Matrix Spike Analyzed: 07/31/01 (P1G3121-MS1)					**Source: PKG0361-01**					
Acetone	ND	20	ug/l	25.0	ND	68.4	30-200			
Benzene	**24.8**	2.0	ug/l	25.0	ND	99.2	37-151			
Bromodichloromethane	**23.7**	2.0	ug/l	25.0	ND	94.8	35-155			
Bromoform	**29.8**	5.0	ug/l	25.0	ND	119	45-169			
Bromomethane	**23.6**	5.0	ug/l	25.0	ND	94.4	5-242			
Carbon tetrachloride	**24.9**	2.5	ug/l	25.0	ND	99.6	70-140			
Chlorobenzene	**26.9**	2.0	ug/l	25.0	ND	108	37-160			
Dibromochloromethane	**26.9**	2.0	ug/l	25.0	ND	108	53-149			
Chloroethane	**23.8**	5.0	ug/l	25.0	ND	95.2	14-230			
Chloroform	**24.7**	2.0	ug/l	25.0	ND	98.8	51-138			
Chloromethane	**24.6**	5.0	ug/l	25.0	ND	98.4	5-273			
1,2-Dichlorobenzene	**25.5**	2.0	ug/l	25.0	ND	102	18-190			
1,3-Dichlorobenzene	**26.0**	2.0	ug/l	25.0	ND	104	59-156			
1,4-Dichlorobenzene	**25.7**	2.0	ug/l	25.0	ND	103	18-190			
1,1-Dichloroethane	**23.9**	2.0	ug/l	25.0	ND	95.6	59-155			
1,2-Dichloroethane	**23.2**	2.0	ug/l	25.0	ND	92.8	49-155			
1,1-Dichloroethene	**25.4**	5.0	ug/l	25.0	ND	102	5-234			
trans-1,2-Dichloroethene	**25.8**	2.0	ug/l	25.0	ND	103	54-156			
1,2-Dichloropropane	**23.7**	2.0	ug/l	25.0	ND	94.8	5-210			
cis-1,3-Dichloropropene	**23.3**	2.0	ug/l	25.0	ND	93.2	5-227			
trans-1,3-Dichloropropene	**24.3**	2.0	ug/l	25.0	ND	97.2	17-183			
Ethylbenzene	**26.8**	2.0	ug/l	25.0	ND	107	37-162			
Methylene chloride	**22.8**	5.0	ug/l	25.0	ND	91.2	5-221			
1,1,2,2-Tetrachloroethane	**28.4**	2.0	ug/l	25.0	ND	114	46-157			
Tetrachloroethene	**26.9**	2.0	ug/l	25.0	ND	108	64-148			
Toluene	**26.8**	2.0	ug/l	25.0	ND	107	47-150			
1,1,1-Trichloroethane	**24.5**	2.0	ug/l	25.0	ND	98.0	52-162			
1,1,2-Trichloroethane	**29.1**	2.0	ug/l	25.0	ND	116	52-150			
Trichloroethene	**24.4**	2.0	ug/l	25.0	ND	97.6	71-157			
Trichlorofluoromethane	**23.6**	5.0	ug/l	25.0	ND	94.4	17-181			
Vinyl chloride	**24.3**	2.0	ug/l	25.0	ND	97.2	5-251			
Surrogate: Dibromofluoromethane	*26.4*		*ug/l*	*25.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*27.1*		*ug/l*	*25.0*		*108*	*80-120*			
Surrogate: Toluene-d8	*28.7*		*ug/l*	*25.0*		*115*	*80-120*			

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Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER
Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

METHOD BLANK/QC DATA

PURGEABLES BY GC/MS (EPA 624)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1G3121 Extracted: 07/31/01										
Matrix Spike Dup Analyzed: 07/31/01 (P1G3121-MSD1)					**Source: PKG0361-01**					
Acetone	ND	20	ug/l	25.0	ND	75.6	30-200	10.0	20	
Benzene	**24.5**	2.0	ug/l	25.0	ND	98.0	37-151	1.22	20	
Bromodichloromethane	**23.3**	2.0	ug/l	25.0	ND	93.2	35-155	1.70	20	
Bromoform	**30.2**	5.0	ug/l	25.0	ND	121	45-169	1.33	20	
Bromomethane	**24.4**	5.0	ug/l	25.0	ND	97.6	5-242	3.33	20	
Carbon tetrachloride	**24.7**	2.5	ug/l	25.0	ND	98.8	70-140	0.806	20	
Chlorobenzene	**27.0**	2.0	ug/l	25.0	ND	108	37-160	0.371	20	
Dibromochloromethane	**26.9**	2.0	ug/l	25.0	ND	108	53-149	0.00	20	
Chloroethane	**24.0**	5.0	ug/l	25.0	ND	96.0	14-230	0.837	20	
Chloroform	**24.6**	2.0	ug/l	25.0	ND	98.4	51-138	0.406	20	
Chloromethane	**24.8**	5.0	ug/l	25.0	ND	99.2	5-273	0.810	20	
1,2-Dichlorobenzene	**25.6**	2.0	ug/l	25.0	ND	102	18-190	0.391	20	
1,3-Dichlorobenzene	**25.4**	2.0	ug/l	25.0	ND	102	59-156	2.33	20	
1,4-Dichlorobenzene	**25.5**	2.0	ug/l	25.0	ND	102	18-190	0.781	20	
1,1-Dichloroethane	**24.0**	2.0	ug/l	25.0	ND	96.0	59-155	0.418	20	
1,2-Dichloroethane	**22.6**	2.0	ug/l	25.0	ND	90.4	49-155	2.62	20	
1,1-Dichloroethene	**25.9**	5.0	ug/l	25.0	ND	104	5-234	1.95	20	
trans-1,2-Dichloroethene	**26.1**	2.0	ug/l	25.0	ND	104	54-156	1.16	20	
1,2-Dichloropropane	**23.1**	2.0	ug/l	25.0	ND	92.4	5-210	2.56	20	
cis-1,3-Dichloropropene	**22.9**	2.0	ug/l	25.0	ND	91.6	5-227	1.73	20	
trans-1,3-Dichloropropene	**24.3**	2.0	ug/l	25.0	ND	97.2	17-183	0.00	20	
Ethylbenzene	**26.4**	2.0	ug/l	25.0	ND	106	37-162	1.50	20	
Methylene chloride	**22.6**	5.0	ug/l	25.0	ND	90.4	5-221	0.881	20	
1,1,2,2-Tetrachloroethane	**30.7**	2.0	ug/l	25.0	ND	123	46-157	7.78	20	
Tetrachloroethene	**26.5**	2.0	ug/l	25.0	ND	106	64-148	1.50	20	
Toluene	**26.9**	2.0	ug/l	25.0	ND	108	47-150	0.372	20	
1,1,1-Trichloroethane	**24.2**	2.0	ug/l	25.0	ND	96.8	52-162	1.23	20	
1,1,2-Trichloroethane	**28.8**	2.0	ug/l	25.0	ND	115	52-150	1.04	20	
Trichloroethene	**24.7**	2.0	ug/l	25.0	ND	98.8	71-157	1.22	20	
Trichlorofluoromethane	**23.6**	5.0	ug/l	25.0	ND	94.4	17-181	0.00	20	
Vinyl chloride	**25.0**	2.0	ug/l	25.0	ND	100	5-251	2.84	20	
Surrogate: Dibromofluoromethane	*26.1*		*ug/l*	*25.0*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*27.8*		*ug/l*	*25.0*		*111*	*80-120*			
Surrogate: Toluene-d8	*28.9*		*ug/l*	*25.0*		*116*	*80-120*			

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER
Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1G3025 Extracted: 07/30/01										
Blank Analyzed: 08/01/01 (P1G3025-BLK1)										
Chrysene	ND	10	ug/l							
Phenol	ND	10	ug/l							
Benzoic acid	ND	50	ug/l							
Surrogate: 2-Fluorophenol	*57.4*		*ug/l*	*100*		*57.4*	*20-120*			
Surrogate: Phenol-d6	*61.1*		*ug/l*	*100*		*61.1*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*79.7*		*ug/l*	*100*		*79.7*	*35-135*			
Surrogate: Nitrobenzene-d5	*44.0*		*ug/l*	*50.0*		*88.0*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*40.0*		*ug/l*	*50.0*		*80.0*	*25-145*			
Surrogate: Terphenyl-d14	*42.5*		*ug/l*	*50.0*		*85.0*	*40-130*			
LCS Analyzed: 08/01/01 (P1G3025-BS1)										
Phenol	**39.3**	10	ug/l	50.0		78.6	5-112			
Surrogate: 2-Fluorophenol	*66.0*		*ug/l*	*100*		*66.0*	*20-120*			
Surrogate: Phenol-d6	*74.8*		*ug/l*	*100*		*74.8*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.6*		*ug/l*	*100*		*90.6*	*35-135*			
Surrogate: Nitrobenzene-d5	*42.4*		*ug/l*	*50.0*		*84.8*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*45.4*		*ug/l*	*50.0*		*90.8*	*25-145*			
Surrogate: Terphenyl-d14	*44.7*		*ug/l*	*50.0*		*89.4*	*40-130*			
Matrix Spike Analyzed: 08/01/01 (P1G3025-MS1)					**Source: PKG0480-01**					
Phenol	**36.3**	10	ug/l	50.0	ND	72.6	5-112			
Surrogate: 2-Fluorophenol	*58.4*		*ug/l*	*100*		*58.4*	*20-120*			
Surrogate: Phenol-d6	*68.4*		*ug/l*	*100*		*68.4*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*82.3*		*ug/l*	*100*		*82.3*	*35-135*			
Surrogate: Nitrobenzene-d5	*36.8*		*ug/l*	*50.0*		*73.6*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*41.4*		*ug/l*	*50.0*		*82.8*	*25-145*			
Surrogate: Terphenyl-d14	*41.4*		*ug/l*	*50.0*		*82.8*	*40-130*			

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METHOD BLANK/QC DATA

ACID & BASE/NEUTRALS BY GC/MS (EPA 625)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1G3025 Extracted: 07/30/01										
Matrix Spike Dup Analyzed: 08/03/01 (P1G3025-MSD1)					**Source: PKG0480-01**					
Phenol	**36.6**	10	ug/l	50.0	ND	73.2	5-112	0.823	20	
Surrogate: 2-Fluorophenol	*64.4*		*ug/l*	*100*		*64.4*	*20-120*			
Surrogate: Phenol-d6	*68.6*		*ug/l*	*100*		*68.6*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*80.9*		*ug/l*	*100*		*80.9*	*35-135*			
Surrogate: Nitrobenzene-d5	*38.8*		*ug/l*	*50.0*		*77.6*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*41.4*		*ug/l*	*50.0*		*82.8*	*25-145*			
Surrogate: Terphenyl-d14	*41.4*		*ug/l*	*50.0*		*82.8*	*40-130*			

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Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1H0125 Extracted: 08/01/01										
Blank Analyzed: 08/02/01 (I1H0125-BLK1)										
Aldrin	ND	0.10	ug/l							
alpha-BHC	ND	0.10	ug/l							
beta-BHC	ND	0.10	ug/l							
delta-BHC	ND	0.20	ug/l							
gamma-BHC (Lindane)	ND	0.10	ug/l							
Chlordane	ND	1.0	ug/l							
4,4'-DDD	ND	0.10	ug/l							
4,4'-DDE	ND	0.10	ug/l							
4,4'-DDT	ND	0.10	ug/l							
Dieldrin	ND	0.10	ug/l							
Endosulfan I	ND	0.10	ug/l							
Endosulfan II	ND	0.10	ug/l							
Endosulfan sulfate	ND	0.20	ug/l							
Endrin	ND	0.10	ug/l							
Endrin aldehyde	ND	0.10	ug/l							
Endrin ketone	ND	0.10	ug/l							
Heptachlor	ND	0.10	ug/l							
Heptachlor epoxide	ND	0.10	ug/l							
Methoxychlor	ND	0.10	ug/l							
Toxaphene	ND	5.0	ug/l							
Surrogate: Tetrachloro-m-xylene	*0.269*		*ug/l*	*0.500*		*53.8*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.439*		*ug/l*	*0.500*		*87.8*	*30-120*			
LCS Analyzed: 08/02/01 (I1H0125-BS1)										
Aldrin	**0.401**	0.10	ug/l	0.500		80.2	42-115			
alpha-BHC	**0.375**	0.10	ug/l	0.500		75.0	37-115			
beta-BHC	**0.440**	0.10	ug/l	0.500		88.0	45-115			
delta-BHC	**0.458**	0.20	ug/l	0.500		91.6	45-130			
gamma-BHC (Lindane)	**0.398**	0.10	ug/l	0.500		79.6	40-115			
4,4'-DDD	**0.482**	0.10	ug/l	0.500		96.4	55-120			
4,4'-DDE	**0.478**	0.10	ug/l	0.500		95.6	50-115			
4,4'-DDT	**0.517**	0.10	ug/l	0.500		103	55-115			
Dieldrin	**0.460**	0.10	ug/l	0.500		92.0	50-115			
Endosulfan I	**0.474**	0.10	ug/l	0.500		94.8	45-115			
Endosulfan II	**0.483**	0.10	ug/l	0.500		96.6	50-115			
Endosulfan sulfate	**0.513**	0.20	ug/l	0.500		103	65-120			

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER

Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

METHOD BLANK/QC DATA

ORGANOCHLORINE PESTICIDES (EPA 608)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I1H0125 Extracted: 08/01/01										
LCS Analyzed: 08/02/01 (I1H0125-BS1)										
Endrin	**0.469**	0.10	ug/l	0.500		93.8	45-115			
Endrin aldehyde	**0.543**	0.10	ug/l	0.500		109	45-115			
Endrin ketone	**0.516**	0.10	ug/l	0.500		103	55-140			
Heptachlor	**0.405**	0.10	ug/l	0.500		81.0	35-115			
Heptachlor epoxide	**0.463**	0.10	ug/l	0.500		92.6	40-115			
Methoxychlor	**0.526**	0.10	ug/l	0.500		105	55-120			
Surrogate: Tetrachloro-m-xylene	*0.304*		*ug/l*	*0.500*		*60.8*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.502*		*ug/l*	*0.500*		*100*	*30-120*			
LCS Dup Analyzed: 08/02/01 (I1H0125-BSD1)										
Aldrin	**0.415**	0.10	ug/l	0.500		83.0	42-115	3.43	20	Q8
alpha-BHC	**0.412**	0.10	ug/l	0.500		82.4	37-115	9.40	20	Q8
beta-BHC	**0.457**	0.10	ug/l	0.500		91.4	45-115	3.79	20	Q8
delta-BHC	**0.475**	0.20	ug/l	0.500		95.0	45-130	3.64	20	Q8
gamma-BHC (Lindane)	**0.422**	0.10	ug/l	0.500		84.4	40-115	5.85	20	Q8
4,4'-DDD	**0.478**	0.10	ug/l	0.500		95.6	55-120	0.833	20	Q8
4,4'-DDE	**0.478**	0.10	ug/l	0.500		95.6	50-115	0.00	20	Q8
4,4'-DDT	**0.518**	0.10	ug/l	0.500		104	55-115	0.193	20	Q8
Dieldrin	**0.461**	0.10	ug/l	0.500		92.2	50-115	0.217	20	Q8
Endosulfan I	**0.478**	0.10	ug/l	0.500		95.6	45-115	0.840	20	Q8
Endosulfan II	**0.480**	0.10	ug/l	0.500		96.0	50-115	0.623	20	Q8
Endosulfan sulfate	**0.522**	0.20	ug/l	0.500		104	65-120	1.74	20	Q8
Endrin	**0.471**	0.10	ug/l	0.500		94.2	45-115	0.426	20	Q8
Endrin aldehyde	**0.573**	0.10	ug/l	0.500		115	45-115	5.38	20	Q8
Endrin ketone	**0.516**	0.10	ug/l	0.500		103	55-140	0.00	20	Q8
Heptachlor	**0.427**	0.10	ug/l	0.500		85.4	35-115	5.29	20	Q8
Heptachlor epoxide	**0.470**	0.10	ug/l	0.500		94.0	40-115	1.50	20	Q8
Methoxychlor	**0.528**	0.10	ug/l	0.500		106	55-120	0.380	20	Q8
Surrogate: Tetrachloro-m-xylene	*0.361*		*ug/l*	*0.500*		*72.2*	*30-120*			*Q8*
Surrogate: Decachlorobiphenyl	*0.492*		*ug/l*	*0.500*		*98.4*	*30-120*			*Q8*

Linda Eshelman
Project Manager

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Del Mar Analytical

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Maricopa County -Flood Control District
2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: Phoenix-NPDES STORMWATER

Report Number: PKG0504

Sampled: 07/30/01
Received: 07/30/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

D1 Sample required dilution due to matrix interference. See case narrative.

Q8 Insufficient sample received to meet method QC requirements. QC requirements satisfy ADEQ policies 0154 and 0155.

S7 Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

ND Analyte NOT DETECTED at or above the reporting limit

NR Not reported.

RPD Relative Percent Difference

Linda Eshelman
Project Manager

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CORRECTIVE ACTION REPORT

Department:	GC/MS	Method:	625
Date:	08/06/2001	Matrix:	Water
Batch:	P1G3025		
Sample:	PKG0480-01, PKG0480-03, PKG0484-03, PKG0499-01, PKG0501-01, PKG0502-01, PKG0504-01, PKG0509-01, PKG0510-01, PKG0515-01 – PKG0515-03 & PKG0452-01		

Identification and Definition of Problem:

The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recovered high (192% and 186% respectively) and outside of the 8-158% acceptance limits for Bis-2-ethylhexylphthalate.

Determination of the Cause of the Problem:

The cause of high recoveries could not be determined, but may have been due to matrix interference.

Corrective Action:

The Laboratory Control Sample (LCS) was within acceptance limits for Bis-2-ethylhexylphthalate. Thus validating the batch. All of the associated samples, with the exception of PKG0480-03, were non-detect for Bis-2-ethylhexylphthalate. The MS, MSD and the source sample have been flagged "N2" to indicate the high recoveries.

Elizabeth C. Wueschner: Elizabeth C. Wueschner Date: 08/07 /2001
Quality Assurance Manager

SEVERN TRENT SERVICES

Severn Trent Services

3333 S. Old Price Road Chandler, Arizona 85248 Tel: (480) 899-0191 Fax: (480) 899-0349
3788 HWY 87 Pine, Arizona 85544 Tel: (520) 476-4189 Fax: (520) 476-4230

Del Mar Analytical
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044

Attention: Linda Eshelman

Report Date: August 9, 2001
Date/Time Received: 07/30/01 0705
Project Identification: Phoenix FCD
Sample Description: Stormwater
Purchase Order Number:

LAB RESULTS

Analytical Method	Parameter Description	Sample Identification	Sample Date / Time	Analysis Date/Time	Lab Identification	Reporting Limit	Analytical Results	Units
SM9221E	Fecal Coliform by MTF	40Th& IBW Grab	07/30/01 0100	07/30/01 0830	C01-2038	1	500000	MPN/100ml
SM9221F	E. Coli - MPN			07/30/01 0830		1	7000	MPN/100ml
SM9230B	Fecal Streptococcus by MTF	40Th& IBW Grab	07/30/01 0100	07/30/01 0835	C01-2039	1	* ≥16000**	MPN/100ml

* Microbiological incubator exceeded temperature control limits during incubation period.
** Holding time expired prior to sample receipt. Analyzed per client request.
Analytes reported as N.D. were not present above the stated limit of detection.
SEVERN TRENT ENVIRONMENTAL SERVICES, Chandler - ADHS Licensure AZ0613

Tamara M. Bresette
Project Manager

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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:
Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851
Project Manager: Linda Eshelman
Project: PKG0504 - mcFC

RECEIVING LABORATORY:
ES Envirnmental Services/Severn
3333 S. Old Price Rd
Chandler, AZ 85248
Phone: 480-899-0191
Fax: 480-899-0349

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☐ Y ☐ N _____ Initials
on ice: ☐ Y ☐ N _____ Initials
Temp: °C ☐ Y ☐ N _____ Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKG0504-01	Water	07/30/01 01:00	EColiform-O	Standard TAT	07/31/01 01:00	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
PKG0504-01	Water	07/30/01 01:00	Fecal Coliform-O	Standard TAT	07/30/01 05:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
PKG0504-01	Water	07/30/01 01:00	Fecal Strep-O	Standard TAT	07/30/01 05:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
None

Carmina Perez 7/30/01
Relinquished By Date/Time:

FAXed
Received By: Date/Time:

Relinquished By Date/Time:

Received By: Date/Time:

Del Mar Analytical
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9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-9596 FAX (858) 505-9689

CHAIN OF CUSTODY FORM

Client Name/Address: JULIE COX
FCDMC
2801 W. DURANGO
PHOENIX, AZ 85009

Project/PO Number: PHOENIX
NPDES STORMWATER

Project Manager: JULIE COX

Phone Number: 602-506-8401

Sampler: DUET, FOSSUM, WILSON

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Analysis Required: 1 TPH	1 FECAL COLI.	1 FECAL STREP	1 E. COLI.	2 OIL+GREASE	1 608	1 624	3 625		Special Instructions
40T&+IBW-GRAB	S	MISC	14	7/30/01	0100	4	X	X	X	X	X	X	X	PKG 0504-01 ✓-02		sample expired - return upon receipt - client refs
								C01-2038	C01-2039	C01-2038						

Relinquished By:	Date /Time:	Received by:	Date /Time:
Robert Robert	7/30/01 0700	Samara Boot	073001 0705
Samara Boot	073001 1020	Robert Robert	7/30/01 1020
Robert Robert	7/30/01 1058	Kaewoff	7/30/01 1058

Turnaround Time: (Check) SEE CONTRACT
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

PLEASE NOTE TEMP 4°C