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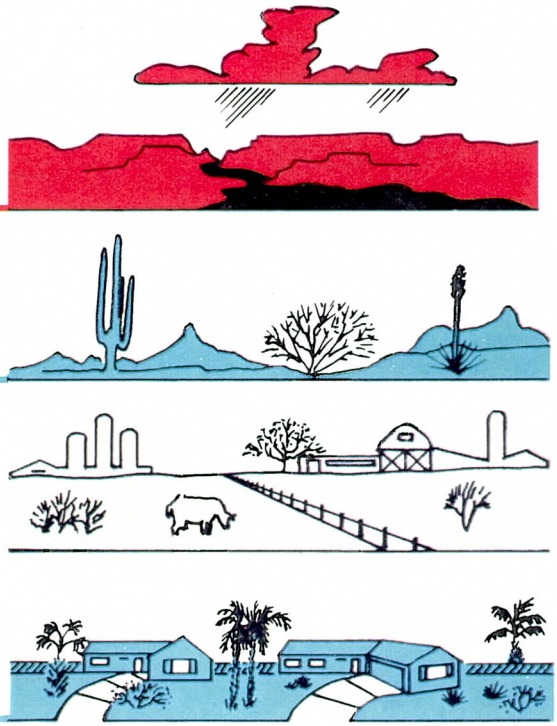

FLOOD CONTROL
DISTRICT OF
MARICOPA COUNTY

Stormwater Quality Report: Volume 1
City of Phoenix, Arizona

Third Quarter 2001

July 16, 2001

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report – Volume 1

Third Quarter, Sampling Year 2001

January 1, 2001 through March 31, 2001

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For

City of Phoenix, Arizona

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Stormwater Quality Report

Third Quarter, Sampling Year 2001

January 1, 2001 through March 31, 2001

For

City of Phoenix, Arizona

July 16, 2001

Prepared by:

Kenneth D. Fossum, USGS Hydrologist

Reviewed by:

Julie R. Cox
Water Quality Hydrologist, FCDMC

Todd G. Williams, M.Sc.
Water Quality Program Coordinator, FCDMC

Stormwater Quality Report
City of Phoenix, Arizona

Third Quarter 2001

July 16, 2001

Introduction

This report details the NPDES stormwater sampling activities during the spring of 2001, which includes the period from January 1, 2001 through March 31, 2001.

The Flood Control District of Maricopa County, in cooperation with the U.S. Geological Survey, operates and maintains six land based stormwater quality-monitoring stations. The USGS is responsible for all maintenance and sample collection at the six monitoring sites. A seventh land based stormwater quality-monitoring station was installed at the intersection of Cave Creek Road and Tatum Boulevard on March 26-27.

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 Pages 4-6 of this report, summarizes non-sampled storm events that occurred during the third quarter of fiscal year 2001 (January 1 – March 31, 2001). Any troubleshooting of the equipment is detailed in the Maintenance Summary section of this report.

Summary of Representative Storm Events

Storm of March 7, 2001

A storm event occurred on March 7. There was sufficient rainfall at all sites to produce runoff. The storm met representative criteria for both rainfall and duration at three sites: SR49, SR45, and ACDC43. Both grab and composite samples were analyzed for SR49 and ACDC43. Samples were not analyzed for SR45. The sample intake tubing at SR45 was plugged and the samples were ruined. The ISCO sampler failed at SR03. The rainfall totals were greater than the representative criteria at sites SR03, SR30, and IB08.

Storm of March 7, 2001

SITE	RAINFALL (inches)	SAMPLES ANALYZED
SR49	0.57	YES
SR03	0.72	NO
SR30	0.79	NO
SR45	0.53	NO
ACDC43	0.68	YES
IB08	0.95	NO

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

TABLE 1
SUMMARY OF NON-SAMPLED STORM EVENTS
JANUARY 1, 2001 – MARCH 31, 2001

SITE	DATE	RAIN (inches)	REASONS NOT SAMPLED
SR49	01/08/01-01/09/01	0.13	RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	01/09/01	0.02	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	01/12/01	0.52	72 HOUR RULE, DURATION TOO SHORT
SR49	01/16/01	0.15	RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	01/27/01	0.47	DURATION TOO SHORT
SR49	01/27/01	0.04	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	02/13/01	0.17	RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	02/14/01	0.23	72 HOUR RULE, DURATION TOO SHORT
SR49	02/25/01-02/26/01	0.11	RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	02/27/01	0.16	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	02/28/01	0.02	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR49	02/28/01	0.13	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR03	01/08/01-01/09/01	0.21	DURATION TOO SHORT
SR03	01/09/01	0.08	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR03	01/12/01	0.52	72 HOUR RULE, DURATION TOO SHORT
SR03	01/16/01	0.14	RAIN < 0.20 INCH, DURATION TOO SHORT
SR03	01/27/01	-----	RAINGAGE FOUND PLUGGED
SR03	02/13/01	-----	BUCKETS – KNOCKED OUT OF RAINGAGE
SR03	02/14/01	0.06	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR03	02/25/01-02/26/01	0.12	RAIN < 0.20 INCH, DURATION TOO SHORT
SR03	02/27/01	0.17	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR03	02/28/01	0.16	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR03	03/07/01	0.72	RAIN > 0.70 INCH, ISCO FAILED
SR30	01/08/01-01/09/01	0.17	RAIN < 0.20 INCH, DURATION TOO SHORT
SR30	01/09/01	0.07	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR30	01/12/01	0.28	72 HOUR RULE, DURATION TOO SHORT
SR30	01/12/01	0.07	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT

SR30	01/12/01	0.16	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR30	01/16/01	0.13	RAIN < 0.20 INCH, DURATION TOO SHORT
SR30	01/16/01	0.10	72 HOUR RULE, RAIN < 0.20 INCH
SR30	01/27/01	-----	EQUIPMENT STOLEN
SR30	02/13/01	-----	BUCKETS – KNOCKED OUT OF RAINGAGE
SR30	02/25/01-02/26/01	0.16	RAIN < 0.20 INCH, DURATION TOO SHORT
SR30	02/27/01	0.20	72 HOUR RULE, DURATION TOO SHORT
SR30	02/28/01	0.21	72 HOUR RULE, DURATION TOO SHORT
SR30	03/07/01	0.79	RAIN > 0.70 INCH

SR45	01/08/01-01/09/01	0.31	DURATION TOO SHORT
SR45	01/12/01	0.42	DURATION TOO SHORT
SR45	01/16/01	0.15	RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	01/16/01	0.06	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	01/27/01	0.42	DURATION TOO SHORT
SR45	01/27/01	0.12	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	02/13/01	0.11	RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	02/14/01	0.16	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	02/14/01	0.11	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	02/25/01	0.10	RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	02/27/01	0.14	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
SR45	02/28/01	0.19	72 HOUR RULE, RAIN < 0.20 INCH
SR45	03/07/01	0.53	INTAKE LINE PLUGGED – SAMPLE RUINED

ACDC43	01/08/01-01/09/01	0.27	DURATION TOO SHORT
ACDC43	01/09/01	0.11	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
ACDC43	01/12/01	0.61	72 HOUR RULE, DURATION TOO SHORT
ACDC43	01/12/01	0.19	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
ACDC43	01/16/01	0.04	RAIN < 0.20 INCH, DURATION TOO SHORT
ACDC43	01/27/01	0.67	DURATION TOO SHORT
ACDC43	01/27/01	0.96	72 HOUR RULE, RAIN > 0.70 INCH
ACDC43	02/13/01	0.16	RAIN < 0.20 INCH, DURATION TOO SHORT
ACDC43	02/14/01	0.34	72 HOUR RULE, DURATION TOO SHORT

ACDC43	02/14/01	0.22	72 HOUR RULE, DURATION TOO SHORT
ACDC43	02/25/01-02/26/01	0.26	DURATION TOO SHORT
ACDC43	02/27/01	0.16	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
ACDC43	02/28/01	0.06	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
ACDC43	02/28/01	0.03	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT

IB08	01/08/01-01/09/01	0.42	DURATION TOO SHORT
IB08	01/12/01	0.50	DURATION TOO SHORT
IB08	01/12/01	0.11	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
IB08	01/15/01-01/16/01	0.07	RAIN < 0.20 INCH, DURATION TOO SHORT
IB08	01/27/01	-----	BATTERY DEAD
IB08	01/27/01	0.24	72 HOUR RULE, DURATION TOO SHORT
IB08	02/13/01	0.18	RAIN < 0.20 INCH
IB08	02/14/01	0.06	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
IB08	02/25/01-02/26/01	0.17	RAIN < 0.20 INCH, DURATION TOO SHORT
IB08	02/27/01	0.10	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
IB08	02/28/01	0.04	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT
IB08	02/28/01	0.29	72 HOUR RULE, DURATION TOO SHORT
IB08	03/07/01	0.95	RAIN > 0.70 INCH
IB08	03/10/01	0.05	72 HOUR RULE, RAIN < 0.20 INCH, DURATION TOO SHORT

Maintenance Summary

This section details maintenance activities and problems that occurred during the third quarter of fiscal year 2001. 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 1.9-liter glass bottles.

SR49 – Salt River at 67th Avenue

Weekly data retrievals were done on January 5, 26, February 2, 9, 23, and March 16, 23, 30. Data retrievals were done after storm events on January 10, 13, 17, 28, February 14, 15, 27, 28, and March 1, 8, 11. The phone battery was replaced on January 16, February 6, 23, and March 9. All sampler tubing and collection bottle were cleaned on January 16, February 6, 7, 14, and March 9. The data logger battery was replaced on January 16. Isco pump was jammed with sand in the tubing on February 6, sample tubing was cleared of sand and cleaned.

SR03 – Salt River at 35th Avenue

Weekly data retrievals were done on January 5, 26, February 2, 9, 23, and March 16, 23, 30. Data retrievals were done after storm events on January 10, 13, 17, 28, February 14, 15, 27, 28, and March 1, 8, 11. The phone battery was replaced on January 16, February 8, 23, and March 9. All sampler tubing and collection bottle were cleaned on March 9. The data logger battery was replaced on January 16. Raingage and cell phone antenna were repaired on February 8. Raingage was repaired again on February 14. Replaced Isco control card and switch relay on March 9.

SR30 – Salt River at 27th Avenue

Weekly data retrievals were done on January 5, 26, February 2, 9, 23, and March 16, 23, 30. Data retrievals were done after storm events on January 10, 13, 17, 28, February 14, 15, 27, 28, and March 1, 8, 11. The phone battery was replaced on January 10, 16, February 7, 23, and March 9. All sampler tubing and collection bottle were cleaned on January 16, 31, February 8, 14, and March 9. The data logger battery was replaced on January 16. Nitrogen tank was replaced on January 11. Data can was pulled on January 16. Discovered on January 27, that cell phone and nitrogen tank had been stolen from gage house. Gage dismantled and prepared to move gage down the hill on January 30. Equipment reinstalled at gage at base of hill on January 31. Isco and cell antenna were not working on February 7, were replaced on February 8. Raingage was repaired on February 14. Modem and cell phone were replaced

on February 14 and again on February 16. Replaced nitrogen tank hose on February 20.

SR45 – Salt River at 40th Street

Weekly data retrievals were done on January 5, 26, February 2, 9, 23, and March 16, 23, 30. Data retrievals were done after storm events on January 10, 13, 17, 28, February 14, 15, 27, 28, and March 1, 8, 11. All sampler tubing and collection bottle were cleaned on January 10, 16, February 6, 7, and March 9. The data logger battery was replaced on January 16. During the March 7 storm event, it was noted that the sample intake line was plugged with sand. The samples were ruined. Grab samples were not collected.

ACDC43 – ACDC near Peoria Avenue and 43rd Avenue

Weekly data retrievals were done on January 5, 26, February 2, 9, 23, and March 16, 23, 30. Data retrievals were done after storm events on January 10, 13, 17, 28, February 14, 15, 27, 28, and March 1, 8, 11. All sampler tubing and collection bottle were cleaned on February 6, 14, 28, and March 9. Nitrogen tank was removed on January 10 and replaced on January 11. The data logger battery was replaced on January 16. The 1200 baud modem was replaced with a 9600 baud modem on February 16.

IB08 – 40th Street at Indian Bend Wash

Weekly data retrievals were done on January 5, 26, February 2, 9, 23, and March 16, 23, 30. Data retrievals were done after storm events on January 10, 13, 17, 28, February 14, 15, 27, 28, and March 1, 8, 11. All sampler tubing and collection bottles were cleaned on January 10, 17, February 6, 14, 16, and March 2, 9. The sample intake line was discovered to be leaking and was repaired on January 17. The SIGMA 900 sampler battery was found dead and was replaced on January 27.

Cave Creek Road and Tatum Boulevard

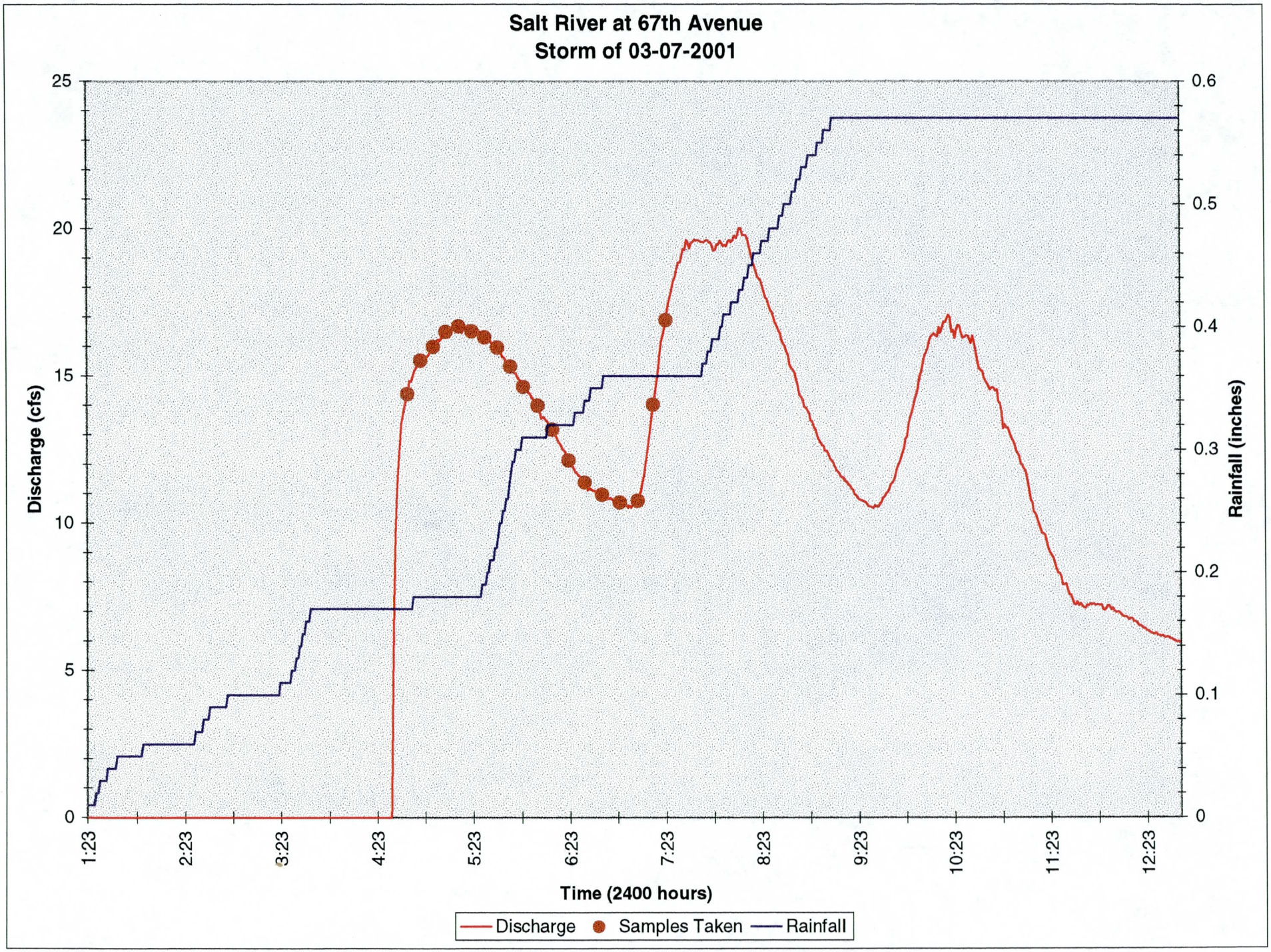
Installed Gage house, pressure transducer, sampler intake line, mast and raingage on March 26. Installed solar panels, electronic equipment, and Isco 3700 autosampler and programmed and cleaned equipment on March 27.

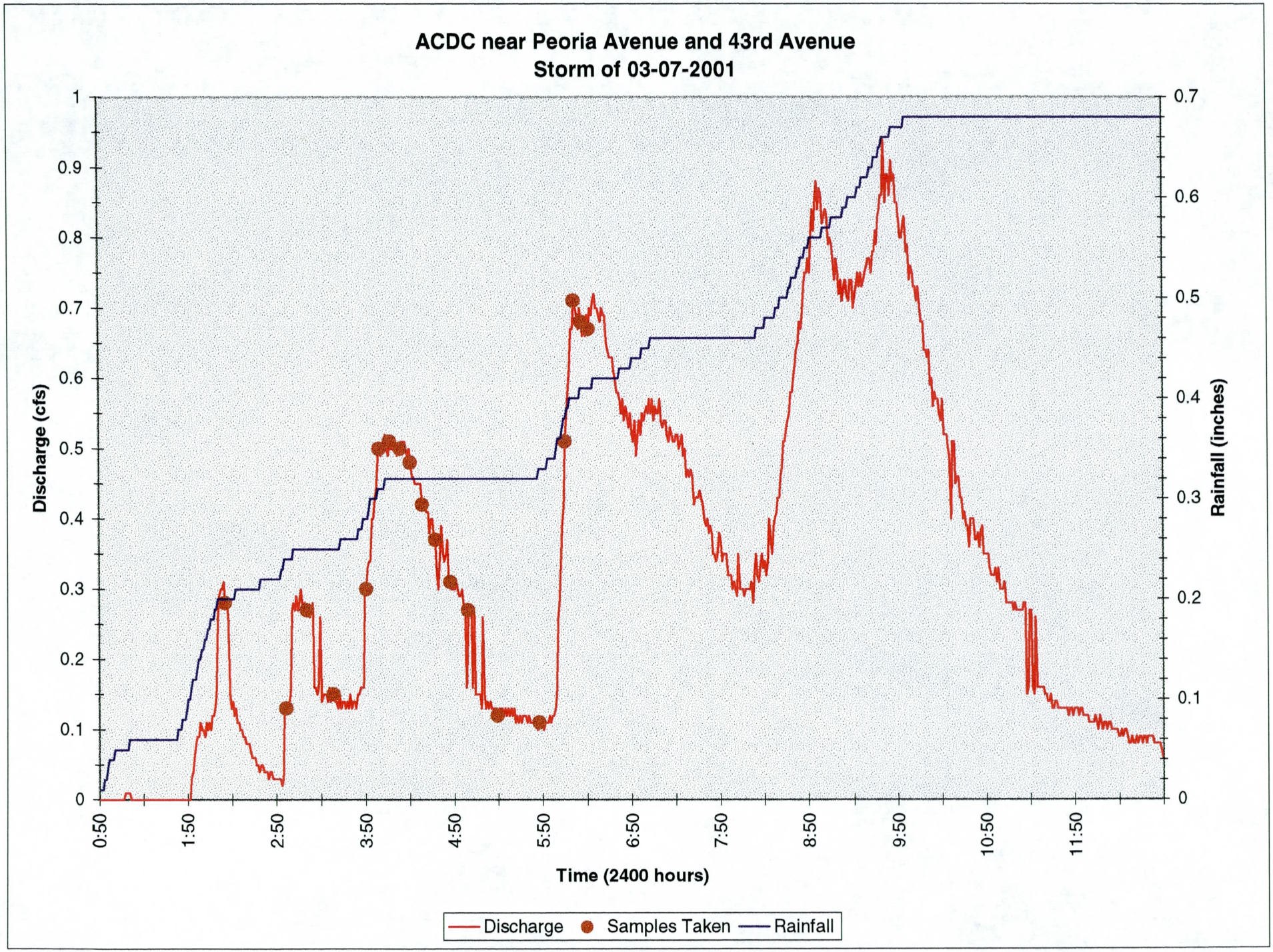
Data from 3RD Quarter 2001

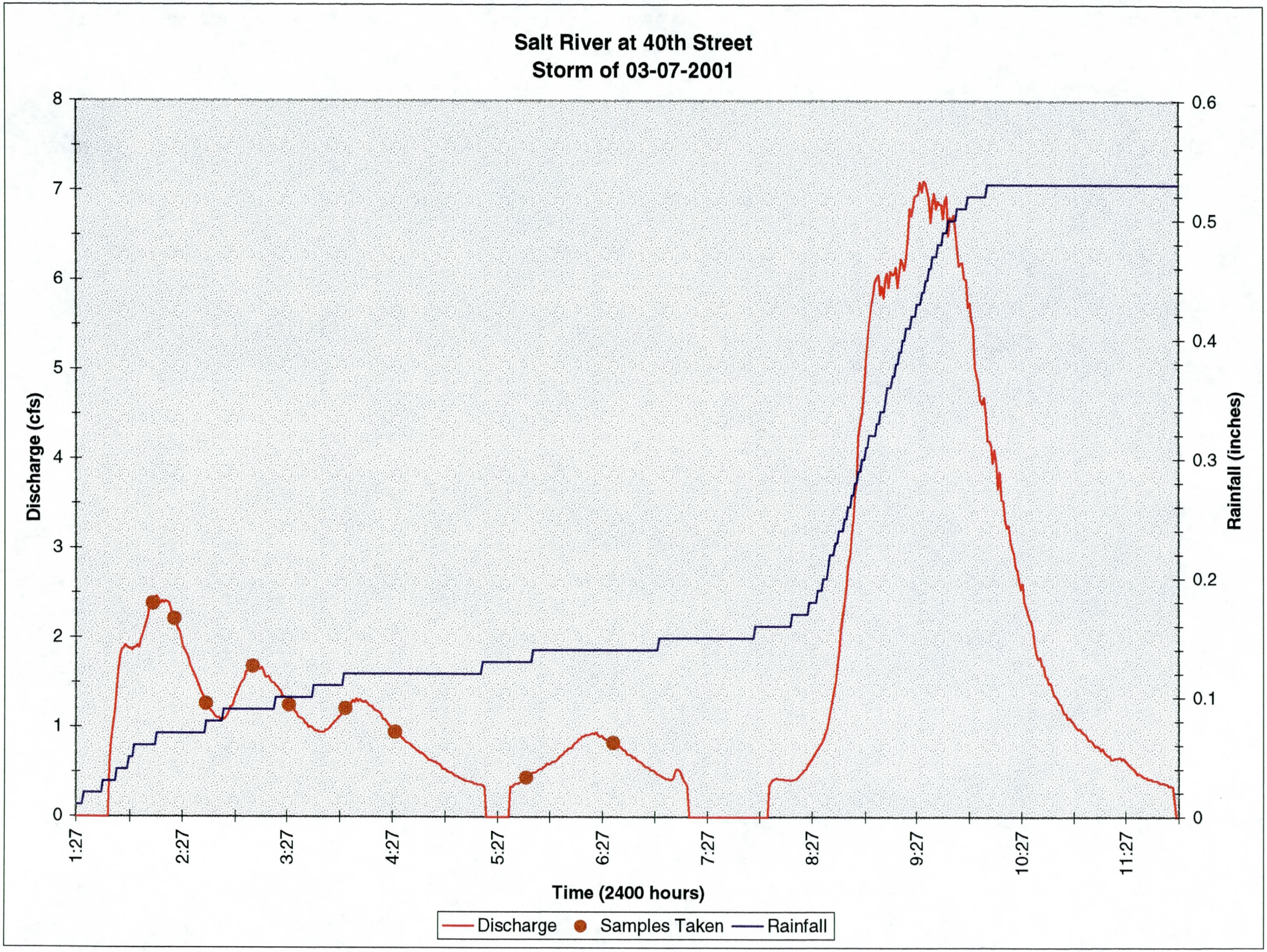
The remainder of this report contains data. The following data are included:

- Storm Hydrographs
- Rainfall Tables for six Phoenix NPDES raingages
- Rainfall Tables for twenty-eight Phoenix ALERT raingages
- Analytical Data Tables
- Data Validation Tables
- Lab Reports
- Quality Control Data
- Chain of Custody Forms
- Operation and maintenance and storm event log sheets.

Storm Hydrographs


Salt River at 67th Avenue
Storm of 03-07-2001
Discharge (cfs)
Rainfall (inches)
Time (2400 hours)
0
5
10
15
20
25
0
0.1
0.2
0.3
0.4
0.5
0.6
1:23
2:23
3:23
4:23
5:23
6:23
7:23
8:23
9:23
10:23
11:23
12:23
Discharge
Samples Taken
Rainfall


ACDC near Peoria Avenue and 43rd Avenue
Storm of 03-07-2001
Discharge (cfs)
Rainfall (inches)
Time (2400 hours)
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
0:50
1:50
2:50
3:50
4:50
5:50
6:50
7:50
8:50
9:50
10:50
11:50
Discharge
Samples Taken
Rainfall


Salt River at 40th Street
Storm of 03-07-2001
Discharge (cfs)
Rainfall (inches)
Time (2400 hours)
0
1
2
3
4
5
6
7
8
0
0.1
0.2
0.3
0.4
0.5
0.6
1:27
2:27
3:27
4:27
5:27
6:27
7:27
8:27
9:27
10:27
11:27
Discharge
Samples Taken
Rainfall

Rainfall Data

Rainfall Data Tables (ALERT raingages)

Gauge Rainfall (inches)

Gage Number: SR49

Location: Salt River at 67th Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.40								
5										0.12		
6					0.16					0.15		
7									0.57			
8							0.10					
9							0.05					
10				0.61								
11												
12							0.52					
13								0.17				
14								0.23				
15												
16							0.15					
17												
18												
19											0.04	
20												
21				0.42						0.16		
22				0.32								
23				0.29								
24				0.14								
25								0.07				
26								0.04				
27				0.31			0.51	0.16				
28								0.15				
29												
30	0.02			0.11								
31	0.02											
Month Total	0.04	0.00	0.00	2.60	0.16	0.00	1.33	0.82	0.57	0.43	0.04	0.00

Gauge Rainfall (inches)

Gage Number: SR03

Location: Salt River at 35th Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.06								
5								----		0.21		
6					0.26			----		0.16		
7								----	0.72			
8							0.13	----				
9							0.16					
10												
11												
12							0.52					
13												
14								0.06				
15												
16							0.14					
17		0.10										
18												
19				0.04								
20												
21				0.36						0.13		
22				0.41								
23				0.13								
24				0.05								
25								0.10				
26								0.02				
27				0.53			----	0.17				
28								0.16				
29												
30				0.11								
31												
Month Total	0.00	0.10	0.00	1.69	0.26	0.00	0.95	0.51	0.72	0.50	0.00	0.00

Gauge Rainfall (inches)

Gage Number: SR30

Location: Salt River at 27th Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.34								
5										0.22		
6					0.24					0.22		
7	0.12	0.16							0.79			
8							0.09					
9							0.15					
10				0.26								
11												
12							0.51	----				
13								----				
14												
15												
16							0.23					
17		0.11										
18											0.06	
19				0.19							0.07	
20												
21				0.44						0.14		
22				0.43								
23				0.11								
24				0.04								
25								0.13				
26								0.03				
27				0.81			----	0.20				
28				0.12			----	0.21				
29							----					
30				0.15			----					
31							----					
Month Total	0.12	0.27	0.00	2.89	0.24	0.00	0.98	0.57	0.79	0.58	0.13	0.00

Gauge Rainfall (inches)

Gage Number: SR45

Location: Salt River at 40th Street

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.11								
5										0.68		
6					0.43					0.10		
7	0.04								0.53			
8							0.19					
9				0.02			0.12					
10				0.44					0.07	0.06		
11				0.09								
12							0.42					
13								0.11				
14								0.27				
15												
16							0.15					
17		0.15										
18												
19												
20												
21				0.21						0.10		
22				0.30								
23				0.13								
24												
25								0.10				
26		0.22										
27				0.79			0.54	0.14				
28				0.05				0.19				
29		0.13										
30				0.22								
31												
Month Total	0.04	0.50	0.00	2.36	0.43	0.00	1.42	0.81	0.60	0.94	0.00	0.00

Gauge Rainfall (inches)

Gage Number: ACDC43

Location: ACDC near Peoria Avenue and 43rd Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.10								
5										0.30		
6					0.06					0.22		
7		0.21							0.68			
8				0.10			0.17					
9							0.21					
10				0.60	0.03					0.02		
11												
12						0.04	0.80					
13								0.16				
14								0.56				
15												
16							0.04					
17		0.16										
18				0.06								
19											0.10	
20												
21				0.13						0.30		
22				0.51								
23				0.40								
24				0.20								
25								0.22				
26								0.04				
27				0.84			1.63	0.16				
28				0.12				0.09				
29		0.11										
30		0.25		0.62								
31												
Month Total	0.00	0.73	0.00	3.68	0.09	0.04	2.85	1.23	0.68	0.84	0.10	0.00

Gauge Rainfall (inches)

Gage Number: IB08

Location: 40th Street at Indian Bend Wash

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.04	0.03							
5		0.17								0.97		
6					0.10					0.14		
7									0.95			
8							0.34					
9							0.08					
10				0.94					0.05	0.14		
11												
12							0.61					
13								0.18				
14								0.06				
15							0.03					
16							0.04					
17		0.49										
18												
19				0.06								
20												
21				0.23						0.16		
22				0.61								0.04
23				0.09								
24				0.04								
25								0.15				
26								0.02				
27				0.90			0.24	0.10				
28				0.03				0.33				
29												
30				0.34								
31												
Month Total	0.00	0.66	0.00	3.28	0.13	0.00	1.34	0.84	1.00	1.41	0.00	0.04

Rainfall Data Tables (NPDES raingages)

Gauge Rainfall (inches)

Gage Number 4500

Location Cesar Chavez Park

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1									0.04			
2												
3												
4				0.31								
5										0.08		
6					0.28					0.16		
7		0.12							0.71			
8							0.08					
9							0.08					
10				0.20								
11												
12							0.47					
13								0.04				
14								0.28				
15							0.04					
16							0.28					
17												
18												
19											0.04	
20												
21				0.39						0.16		
22				0.39								0.12
23				0.12								
24				0.12								
25								0.04				
26								0.04				
27				0.51			0.71	0.16				
28				0.16				0.16				
29												
30				0.04								
31				0.04								
Month Total	0.00	0.12	0.00	2.28	0.28	0.00	1.65	0.71	0.75	0.39	0.04	0.12

Gauge Rainfall (inches)

Gage Number 4510

Location Roeser at Second Street

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.08								
5										0.08		
6					0.24					0.08		
7					0.04				0.16			
8	0.04						0.04					
9							0.12					
10				0.08					0.04	0.04		
11												
12							0.08					
13							0.04	0.04				
14								0.08				
15												
16							0.20					
17												
18												
19												
20												
21				0.12						0.08		
22				0.12								0.04
23				0.04								
24				0.04								
25								0.04				
26								0.08				
27				0.35			0.35	0.12				
28				0.08			0.04	0.28				
29												
30		0.04		0.08								
31												
Month Total	0.04	0.04	0.00	0.99	0.28	0.00	0.87	0.63	0.20	0.28	0.00	0.04

Gauge Rainfall (inches)

Gage Number 4600

Location IBW at McKellips Road

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4												
5										0.71		
6					0.47					0.35		
7									0.83			
8							0.20					
9							0.16					
10					0.04				0.12	0.04		
11												
12							0.79					
13							0.04	0.04				
14								0.47				
15							0.04					
16							0.43					
17							0.04					
18												
19												
20												
21										0.28		
22												
23												
24												
25								0.12				
26												
27							0.63	0.04				
28								0.31				
29				funnel								
30				plugged								
31				entire month								
Month Total	0.00	0.00	0.00	0.00	0.51	0.00	2.32	0.98	0.94	1.38	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4610

Location IBW at Indian Bend Road

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.39								
5		0.04								0.79		
6	***				0.16					0.20		
7	***	0.47							0.91			
8	***	0.04					0.28					
9	***						0.31					
10				0.51					0.08	0.04		
11				0.12								
12							0.59					
13								0.04				
14								0.08				
15												
16							0.16					
17		0.08										
18												
19												
20												
21				0.12						0.24		
22			***	0.83						0.04		
23			***	0.16								
24			***	0.04								
25								0.12				
26		0.04										
27				0.55			0.63	0.12				
28								0.28				
29												
30	0.20			0.24								
31												
Month Total	0.20	0.67	0.00	2.96	0.16	0.00	1.97	0.63	0.98	1.30	0.00	0.00

Gauge Rainfall (inches)

Gage Number: 4630

Location: Thunderbird Academy - near Thunderbird and Scottsdale Roads

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.43	0.04							
5										0.67		
6					0.12					0.12		
7									0.75			
8							0.24					
9							0.39					
10				0.63					0.04	0.08		
11				0.08								
12							0.51					
13								0.20				
14								0.28				
15												
16							0.12					
17		0.12					0.04					
18												
19												
20												
21				0.16						0.16		
22				0.71						0.04		
23				0.16								
24				0.04								
25								0.04				
26								0.08				
27				0.67			0.63	0.08				
28				0.12				0.28				
29		0.16										
30		0.12		0.24								
31												
Month Total	0.00	0.40	0.00	3.24	0.16	0.00	1.93	0.94	0.79	1.06	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4640

Location IBW and Sweetwater Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.08	0.04							
5		0.16								0.67		
6					0.08					0.16		
7		0.63							0.75			
8		0.04					0.16					
9							0.24					
10				0.83	0.04				0.04	0.08		
11				0.04								
12							0.67					
13								0.20				
14								0.08				
15												
16							0.12					
17		0.35										
18												
19				0.04								
20												
21				0.20						0.20		
22				0.51								
23				0.12								
24				0.04								
25								0.12				
26												
27				0.71			0.75	0.12				
28				0.04				0.24				
29												
30	0.04			0.28								
31												
Month Total	0.04	1.18	0.00	2.89	0.16	0.00	1.93	0.75	0.79	1.10	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4650

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

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3		0.04										
4				0.08	0.04							
5										0.51		
6					0.08					0.20		
7		0.12							0.71			
8		0.08					0.16					
9							0.35					
10				1.02					0.08	0.04		
11												
12							1.06					
13							0.04	0.24				
14								0.16				
15												
16							0.04					
17		0.71										
18				0.04								
19				0.04								
20												
21				0.16						0.24		
22				0.63								
23				0.20								
24				0.08								
25								0.12				
26												
27				0.51			1.22	0.12				
28				0.20				0.24				
29												
30	0.12	1.22		0.39								
31				0.04								
Month Total	0.12	2.17	0.00	3.39	0.12	0.00	2.87	0.87	0.79	0.98	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4700

Location FCD - Durango Street at 27th Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.28								
5										0.20		
6					0.12					0.12		
7	0.04	0.08							0.63			
8							0.12					
9							0.12					
10				0.43								
11												
12							0.47					
13								0.08				
14								0.08				
15												
16							0.12					
17		0.08										
18												
19				0.24							0.04	
20												
21				0.28						0.16		
22				0.39								
23				0.12								
24				0.04								
25								0.08				
26								0.04				
27				0.71			0.63	0.12				
28								0.16				
29		0.04										
30				0.12								
31	0.04											
Month Total	0.08	0.20	0.00	2.61	0.12	0.00	1.46	0.55	0.63	0.47	0.04	0.00

Gauge Rainfall (inches)

Gage Number 4710

Location Jefferson at 4th Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.63								
5										0.31		
6					0.24					0.16		
7	0.51	0.08							0.55			
8							0.16					
9							0.16					
10				0.35					0.04			
11												
12							0.51					
13								0.04				
14								0.08				
15												
16							0.08					
17		0.39										
18												
19				0.04								
20												
21				0.20						0.28		
22				0.35								
23				0.12								
24				0.04								
25								0.12				
26												
27				0.51			0.71	0.12				
28								0.20				
29		0.12										
30	0.04			0.20								
31	0.04											
Month Total	0.59	0.59	0.00	2.44	0.24	0.00	1.61	0.55	0.59	0.75	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4730

Location near Thomas Road and 32nd Street

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.28								
5										0.59		
6					0.28					0.16		
7			***						0.79			
8			***				0.20					
9							0.16					
10				0.39					0.12	0.04		
11				0.08								
12	0.12						0.67					
13	0.04							0.04				
14								0.12				
15												
16							0.12					
17		0.24										
18												
19				0.04								
20												
21				0.28						0.35		
22				0.28								
23				0.12								
24				0.04								
25								0.12				
26		0.04						0.04				
27				0.98			0.67	0.08				
28				0.04				0.28				
29		0.08										
30				0.31								
31	0.04											
Month Total	0.20	0.36	0.00	2.84	0.28	0.00	1.81	0.67	0.91	1.14	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4740

Location Papago Park - near McDowell Road and 52nd Street

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3		0.04										
4				0.20								
5										0.51		
6					0.31					0.16		
7	0.39								0.71			
8							0.16					
9				0.04			0.16					
10				0.51					0.08	0.04		
11				0.16								
12							0.63					
13								0.04				
14								0.12				
15							0.04					
16							0.39					
17		0.35										
18												
19												
20												
21				0.24						0.12		
22		0.04		0.28						0.04		
23				0.12								
24				0.04								
25								0.12				
26		0.39										
27		0.04		0.79			0.59	0.12				
28				0.20				0.31				
29		0.08										
30	0.08			0.24								
31												
Month Total	0.47	0.94	0.00	2.82	0.31	0.00	1.97	0.71	0.79	0.87	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4750

Location Thomas Road at 48th Street

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.39								
5										0.75		
6					0.24					0.16		
7	0.12								0.67			
8		0.04					0.20					
9							0.16					
10				0.51					0.04	0.04		
11				0.12								
12							0.67					
13							0.04	0.08				
14								0.12				
15												
16							0.16					
17		0.20										
18												
19												
20												
21				0.24						0.20		
22				0.39								
23				0.12								
24				0.04				0.24				
25								0.12				
26		0.04										
27				0.75			0.63	0.12				
28				0.08								
29		0.04										
30	0.12			0.28								
31												
Month Total	0.24	0.32	0.00	2.92	0.24	0.00	1.85	0.67	0.71	1.14	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4760

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

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.08								
5										0.20		
6					0.16					0.28		
7									0.59			
8		0.04					0.12					
9							0.12					
10				0.79					0.04			
11												
12							0.51					
13							0.04	0.12				
14								0.12				
15							0.04					
16							0.12					
17												
18												
19				0.04							0.04	
20												
21				0.08						0.20		
22				0.51								
23				0.39								
24				0.12								
25								0.08				
26								0.04				
27				0.59			0.75	0.12				
28								0.08				
29												
30	0.31			0.63								
31				0.04								
Month Total	0.31	0.04	0.00	3.27	0.16	0.00	1.69	0.55	0.63	0.68	0.04	0.00

Gauge Rainfall (inches)

Gage Number 4780

Location Missouri Avenue at 16th Street

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1		***										
2		***										
3		***										
4		***		0.31								
5		***								0.47		
6		***			0.12					0.20		
7	0.08	0.35							0.67			
8							0.24					
9							0.16					
10				0.79					0.04			
11												
12							0.67					
13								0.12				
14								0.08				
15												
16							0.12					
17		0.83										
18												
19				0.20								
20												
21				0.08						0.20		
22				0.39								
23				0.24								
24				0.04								
25								0.16				
26								0.04				
27				0.59			0.79	0.08				
28				0.04				0.28				
29		0.59										
30	0.16			0.28								
31												
Month Total	0.24	1.77	0.00	2.96	0.12	0.00	1.97	0.75	0.71	0.87	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4800

Location Dreamy Draw Dam

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.28	0.04							
5										0.59		
6					0.35					0.24		
7	0.08	1.38							0.75			
8		0.12					0.43					
9							0.16					
10				0.87					0.04	0.08		
11												
12							0.67					
13								0.16				
14								0.08				
15												
16							0.16					
17		0.04										
18												
19				0.08								
20												
21				0.16						0.24		
22				0.35								
23				0.12								
24				0.08								
25								0.12				
26								0.04				
27				0.71			0.71	0.08				
28								0.28				
29		0.16										
30	0.04			0.28								
31												
Month Total	0.12	1.70	0.00	2.93	0.39	0.00	2.13	0.75	0.79	1.14	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4820

Location ACDC at 43rd Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.08								
5										0.16		
6					0.04					0.28		
7		0.16			0.04				0.59			
8				0.08			0.04					
9							0.28					
10				0.51								
11												
12						0.04	0.71					
13								0.12				
14								0.51				
15												
16							0.08					
17		0.08										
18				0.04								
19											0.04	
20												
21				0.08						0.24		
22				0.51						0.04		
23				0.35								
24				0.20								
25								0.16				
26								0.04				
27				0.79			1.42	0.16				
28				0.12				0.08				
29		0.08										
30		0.20		0.55								
31												
Month Total	0.00	0.52	0.00	3.31	0.08	0.04	2.52	1.06	0.59	0.71	0.04	0.00

Gauge Rainfall (inches)

Gage Number 4830

Location Cave Creek Wash at Cactus Road

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4												
5		0.04								0.08		
6			***		0.04					0.24		
7		0.16	***						0.51			
8		0.16	***	0.16			0.08					
9			***				0.08					
10			***	0.35					0.08			
11												
12							0.31					
13								0.12				
14								0.24				
15												
16							0.04					
17		0.16										
18		0.04		0.04								
19				0.04								
20												
21				0.08						0.24		
22				0.55								
23				0.04								
24				0.04								
25								0.08				
26								0.04				
27				0.35			1.02	0.16				
28				0.04				0.16				
29		0.35										
30				0.24								
31												
Month Total	0.00	0.91	0.00	1.93	0.04	0.00	1.54	0.79	0.59	0.55	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4840

Location Greenway Road at 32nd Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.08								
5										0.16		
6										0.20		
7		0.51							0.51			
8							0.20					
9				0.08			0.12					
10				0.43						0.04		
11												
12							0.63					
13								0.16				
14								0.20				
15												
16							0.04					
17		0.04										
18												
19												
20												
21				0.04						0.16		
22				0.55								
23				0.31								
24				0.24								
25								0.12				
26								0.04				
27				0.59			0.87	0.08				
28				0.12				0.16				
29		0.16										
30	0.04			0.39								
31												
Month Total	0.04	0.71	0.00	2.83	0.00	0.00	1.86	0.76	0.51	0.55	0.00	0.00

Gauge Rainfall (inches)

Gage Number 4900

Location Cave Buttes Dam

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.04								
5										0.33		
6										0.33		
7									0.71			
8							0.12					
9							0.28					
10				0.24					0.05	0.05		
11					0.04							
12							0.55					
13								0.16				
14								0.11				
15												
16							0.12					
17							0.04					
18												
19												
20												
21				0.08						0.05		
22				0.51						0.05		
23				0.12								
24				0.24								
25								0.22				
26								0.05				
27				0.43			0.98	0.16				
28		0.04		0.12				0.44				
29												
30				0.28								
31												
Month Total	0.00	0.04	0.00	2.06	0.04	0.00	2.09	1.15	0.77	0.82	0.00	0.00

Gauge Rainfall (inches)

Gage Number 5400

Location Agua Fria at Buckeye Road

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.31								
5										0.04		
6					0.04					0.04		
7		0.28							0.55			
8	***						0.12					
9	***						0.08					
10	***			0.43								
11	***											
12							0.59					
13								0.12				
14								0.28				
15							0.04					
16							0.20					
17												
18				0.04								
19											0.04	
20												
21				0.63						0.31		
22		0.04		0.75								
23				0.20								
24				0.12								
25								0.04				
26								0.08				
27				1.54			0.55	0.16				
28			***	0.08				0.39				
29		0.04	***									
30	0.39			0.39								
31												
Month Total	0.39	0.36	0.00	4.49	0.04	0.00	1.57	1.06	0.55	0.39	0.04	0.00

Gauge Rainfall (inches)

Gage Number 5505

Location New River at Glendale Avenue

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3				***								
4												
5										0.04		
6										0.16		
7									0.83			
8		0.08					0.08					
9							0.04					
10				0.20								
11												
12						0.04	0.59					
13								0.12				
14								0.12				
15												
16				***			0.04					
17												
18												
19				0.04							0.08	
20												
21				0.20						0.28		
22				0.16								
23				0.20								
24				0.16								
25								0.08				
26				0.04				0.04				
27				0.51			1.18	0.12				
28				0.08				0.43				
29												
30	0.04			0.31			0.04					
31												
Month Total	0.04	0.08	0.00	1.90	0.00	0.04	1.97	0.91	0.83	0.47	0.08	0.00

Gauge Rainfall (inches)

Gage Number 5535
Location Adobe Dam

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.08								
5		0.08								0.28		
6										0.24		
7		0.08							0.43			
8							0.08					
9							0.12					
10				0.12	0.04				0.04			
11												
12							0.59					
13							0.04	0.08				
14								0.04				
15							0.04					
16							0.08					
17												
18				0.08								
19												
20				***								
21				0.12						0.04		
22				0.47								
23				0.31								
24				0.20								
25								0.08				
26			0.04					0.04				
27				0.43			0.91	0.12				
28								0.39				
29		0.83										
30		0.35		0.67								
31												
Month Total	0.00	1.34	0.04	2.48	0.04	0.00	1.85	0.75	0.47	0.55	0.00	0.00

Gauge Rainfall (inches)

Gage Number 5550
Location Deer Valley Airport

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.12	0.04							
5		0.08								0.31		
6										0.20		
7		0.08							0.55			
8							0.28					
9				0.04			0.20					
10				0.43					0.12	0.04		
11												
12							1.22					
13								0.20				
14								0.04				
15							0.08					
16												
17												
18				0.08								
19												
20												
21				0.08						0.08		
22				0.75								
23				0.20								
24				0.28								
25								0.12				
26			0.12					0.04				
27				0.59			1.38	0.20				
28				0.04				0.31				
29		0.08										
30	0.12	0.12		0.39								
31												
Month Total	0.12	0.36	0.12	3.00	0.04	0.00	3.15	0.91	0.67	0.63	0.00	0.00

Gauge Rainfall (inches)

Gage Number 5565

Location Skunk Creek at I-17

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1									0.04			
2												
3												
4				0.04								
5		0.04								0.28		
6										0.31		
7									0.39			
8							0.16					
9							0.16		0.04			
10				0.20	0.04					0.04		
11												
12						0.04	0.67					
13								0.16				
14												
15							0.12					
16												
17												
18												
19												
20												
21				0.12						0.12		
22				0.63								
23		0.04		0.24								
24				0.39								
25								0.12				
26			0.20					0.04				
27				0.51			0.91	0.20				
28				0.08			0.04	0.51				
29		0.12										
30		0.04		0.59								
31												
Month Total	0.00	0.24	0.20	2.80	0.04	0.04	2.05	1.02	0.47	0.75	0.00	0.00

Gauge Rainfall (inches)

Gage Number 5595

Location New River and Bell Road

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.04	0.04							
5		0.08								0.16		
6					0.04					0.35		
7									0.59			
8		0.04					0.24					
9							0.08		0.04			
10				0.08					0.08			
11										0.04		
12							0.67					
13								0.16				
14								0.08				
15							0.04					
16							0.04					
17												
18												
19											0.04	
20												
21				0.24						0.16		
22				1.10								
23				0.24								
24				0.20								
25								0.12				
26								0.08				
27				0.63			0.87	0.08				
28								0.43				
29		0.12										
30		0.28		0.71								
31	0.04											
Month Total	0.04	0.52	0.00	3.24	0.08	0.00	1.93	0.94	0.71	0.71	0.04	0.00

Gauge Rainfall (inches)

Gage Number 6500

Location Guadalupe FRS

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1									0.04			
2												
3												
4				0.08								
5										0.63		
6					0.71					0.12		
7									0.75			
8							0.16					
9							0.12					
10				0.08	0.04				0.04	0.04		
11				0.16								
12							0.51					
13							0.04	0.04				
14								0.16				
15							0.04					
16							0.43					
17												
18				***								
19												
20												
21				1.10						0.24		
22				0.28								
23				0.16								
24		0.08										
25								0.12				
26												
27				0.67			0.75	0.20				
28		0.08		0.04				0.20				
29												
30		0.04		0.28								
31	0.04											
Month Total	0.04	0.20	0.00	2.85	0.75	0.00	2.05	0.71	0.83	1.02	0.00	0.00

Gauge Rainfall (inches)

Gage Number 6510

Location South Mountain Park

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.08								
5										1.06		
6					0.67					0.16		
7	0.16	0.08							0.67			
8							0.20					
9							0.20					
10				0.28					0.04			
11				0.08								
12							0.51					
13								0.04				
14								0.12				
15							0.04					
16							0.63					
17		0.35										
18												
19												
20												
21				0.28						0.28		
22				0.35								0.24
23				0.16								
24												
25								0.12				
26		0.12										
27				0.87			0.83	0.16				
28				0.04				0.24				
29		0.04										
30	0.24			0.16								
31												
Month Total	0.40	0.59	0.00	2.30	0.67	0.00	2.41	0.67	0.71	1.50	0.00	0.24

Gauge Rainfall (inches)

Gage Number 6560

Location South Mountain Fan

	July 2000	August 2000	September 2000	October 2000	November 2000	December 2000	January 2001	February 2001	March 2001	April 2001	May 2001	June 2001
1												
2												
3												
4				0.16								
5										0.28		
6					0.47					0.20		
7		0.04							0.75			
8	0.12						0.12					
9							0.08					
10				0.67								
11												
12							0.51					
13												
14				***				0.24				
15												
16							0.47					
17												
18												
19												
20												
21				0.71						0.31		
22				0.43								
23				0.12								
24												
25								0.08				
26								0.04				
27				0.67			1.34	0.16				
28				0.04				0.31				
29												
30	0.08			0.08								
31	0.16											
Month Total	0.36	0.04	0.00	2.88	0.47	0.00	2.52	0.83	0.75	0.79	0.00	0.00

Analytical Data Tables

SR-49 Salt River at 67th Avenue

Phoenix SR49 Salt River at 67th Avenue	
Date of Sampling	3/7/01
Time	0723
Representative Storm Event	Y
Agency Collecting Sample	USGS
Agency Analyzing Sample	DELMAR
Drainage Area (acres) (DA)	4738
Impervious Area (acres) (IA)	--
Land Use - Residential	590
Land Use - Commercial	0
Land Use - Industrial	1241
Land Use - Undeveloped	2896
Sampling Duration (minutes) (DRN)	162
Storm Duration (minutes)	465
Runoff Sampled (cubic feet) (RUN)	135,600
Total Storm Runoff (cubic feet)	421,000
Instantaneous Discharge (cfs)	20
Preceeding Dry Period (days) (ANT)	6
Total Storm Rainfall (inch)	0.57
Rainfall Sampled (inch) (TRN)	0.19
Maximum 5-minute rain intensity (MAX5)	0.48
Sample Temperature (deg. C)	0
Effluent Temperature (deg. C)	15
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	NM
pH, Effluent (standard units)	8.33
pH, Lab (standard units)	6.89
Specific Conductance, FIELD (us/cm)	93.5
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	NM
BOD5 (mg/l)	20
COD High Level (mg/l)	130
Sulfide (mg/l)	<0.1
Cyanide Total (mg/l as Cn)	<0.025
Fecal Coliform (MPN/100ml)	>=1600
Fecal Streptococci (MPN/100ml)	>=1600
E. Coli (MPN/100ml)	>=1600
Total Dissolved Solids (mg/l)	280
Total Suspended Solids (mg/l)	270
Nitrogen NO_2 + NO_3, Total (mg/l as N)	1.3
TKN Nitrogen (mg/l as N)	2.4
Nitrogen, Ammonia + Organic, Total (mg/l as N)	2.4
Nitrogen Nitrate Total (mg/l as N)	1.2
Nitrogen Nitrite Total (mg/l as N)	<0.1
Nitrogen Ammonia Total (mg/l as N)	0.77
Nitrogen Organic Total (mg/l as N)	1.63
Phosphorous Total (mg/l as P)	0.54
Phosphorous Dissolved (mg/l as P)	0.21
Phosphorous Ortho (mg/l as P)	<0.5
Hexavalent Chromium Total (mg/l)	--
Phenols Total Recoverable (ug/l)	7.1
Oil and Grease Total Recoverable (mg/l)	9.6
Organic Carbon, Total (mg/l)	--
Total Recoverable Petroleum Hydrocarbons (mg/l)	9.2
Bicarbonate Whole Field (mg/l as HCO_3)	98

NM = not measured
-- = not analyzed

Phoenix SR49

Salt River at 67th Avenue

Date of Sampling	3/7/01
Bicarbonate Dissolved, Field (mg/l as HCO_3)	62
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 $CaCO_3$)	80
Alkalinity Dissolved Water Field Total (mg/l as $CaCO_3$)	51
Silica Dissolved (mg/l as SiO_2)	--
Hardness (mg/l)	100
Antimony (ug/l as Sb)	--
Antimony Dissolved (ug/l as Sb)	--
Arsenic Total (ug/l as As)	6.8
Arsenic Dissolved (ug/l as As)	3.3
Barium Dissolved (ug/l as Ba)	--
Beryllium Total Recoverable (ug/l as Be)	0.57
Beryllium Dissolved (ug/l as Be)	<0.5
Cadmium Total Recoverable (ug/l as Cd)	0.74
Cadmium Dissolved (ug/l as Cd)	<0.5
Chromium Total Recoverable (ug/l as Cr)	24
Chromium Dissolved (ug/l as Cr)	<4
Cobalt Dissolved (ug/l as Co)	--
Copper, Total Recoverable, (ug/l as Cu)	49
Copper, Dissolved, (ug/l as Cu)	14
Iron, Dissolved, (ug/l as Fe)	--
Lead, Total Recoverable, (ug/l as Pb)	18
Lead, Dissolved, (ug/l as Pb)	<2
Lithium, Dissolved, (ug/l as Li)	--
Manganese, Dissolved, (ug/l as Mn)	--
Mercury, Total Recoverable, (ug/l as Hg)	--
Mercury, Dissolved, (ug/l as Hg)	--
Molybdenum, Dissolved, (ug/l as Mo)	--
Nickel, Total Recoverable, (ug/l as Ni)	23
Nickel, Dissolved, (ug/l as Ni)	8.4
Potassium, Dissolved, (mg/l as K)	--
Selenium, Total, (ug/l as Se)	--
Selenium, Dissolved, (ug/l as Se)	--
Silver, Total Recoverable, (ug/l as Ag)	<5
Silver, Dissolved, (ug/l as Ag)	<1
Sodium, Dissolved, (mg/l as Na)	--
Strontium, Dissolved, (ug/l as Sr)	--
Thallium, Total, (ug/l as Tl)	--
Thallium, Dissolved, (ug/l as Tl)	--
Vanadium, Dissolved, (ug/l as V)	--
Zinc, Total Recoverable, (ug/l as Zn)	170
Zinc, Dissolved, (ug/l as Zn)	<50
Diazinon, Total, (ug/l)	--
Ethion, Total, (ug/l)	--
Malathion, Total, (ug/l)	--
Methyl Parathion, Total, (ug/l)	--
Parathion, Total, (ug/l)	--
Trithion, Total, (ug/l)	--
Di-syston, Total, (ug/l)	--
Phorate, Total, (ug/l)	--
Chlorpyrifos, Total, (ug/l)	--
DEF, Total, (ug/l)	--

NM = not measured

-- = not analyzed

Phoenix SR49

Salt River at 67th Avenue

Date of Sampling	3/7/01
Fonofos(Dy-fonate), WWT, (ug/l)	--
Aldrin, Total, (ug/l)	--
BHC - ALPHA, (ug/l)	--
BHC - Gamma (Lindane), (ug/l)	--
BHC - DELTA, (ug/l)	--
Aroclor 1016, PCB, Total, (ug/l)	--
Aroclor 1221, PCB, Total, (ug/l)	--
Aroclor 1232, PCB, Total, (ug/l)	--
Aroclor 1242, PCB, Total, (ug/l)	--
Aroclor 1248, PCB, Total, (ug/l)	--
Aroclor 1254, PCB, Total, (ug/l)	--
Aroclor 1260, PCB, Total, (ug/L)	--
Chlordane, Total, (ug/l)	--
P,P' DDD, Total, (ug/l)	--
P,P' DDE, Total, (ug/l)	<0.1
P, P' DDT, Total, (ug/l)	--
Dieldrin, Total, (ug/l)	--
Endo-Sulfan Alpha, Total, (ug/l)	--
Endo-Sulfan Beta, Total, (ug/l)	--
Endo-Sulfan Sulfate, Total, (ug/l)	--
Endrin Aldehyde, Total, (ug/l)	--
Endrin, Total, (ug/l)	--
Heptachlor, Total, (ug/l)	--
Heptachlor Epoxide, Total, (ug/l)	--
Toxaphene, Total, (ug/l)	--
Methoxychlor, Total, (ug/l)	--
Beta Benzene Hexachloride, Total, (ug/l)	--
1,1,2,2-Tetrachloroethane, Total, (ug/l)	<2
1,1,1,2-Tetrachloroethane, Total,(ug/l)	--
Tetrachloroethene, PCE, 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
1,1- Dichloroethane, Total, (ug/l)	<2
1,1- Dichloroethene, Total, (ug/l)	<5
1,2- Dichloroethane, Total, (ug/l)	<2
1,2- Dichloropropane, Total, (ug/l)	<2
2- Chloroethylvinyl Ether, Total, (ug/l)	<2
cis-1,3-Dichloropropene, (ug/l)	<2
trans-1,2- Dichloroethene, (ug/l)	<2
trans-1,3- Dichloropropene, (ug/l)	<2
Benzene, Total, (ug/l)	<2
Bromodichloromethane, Total, (ug/l)	<2
Bromoform, Total, (ug/l)	<2
Carbon Tetrachloride, Total, (ug/l)	<2.5
Chlorobenzene, Total, (ug/l)	<2
Chloroethane, (ug/l)	<5
Chloroform, Total, (ug/l)	<2
Ethylbenzene, Total, (ug/l)	<2
Methylene Chloride, Total, (ug/l)	<5
Toluene, Total, (ug/l)	<2
Trichlorofluoromethane, Total, (ug/l)	<5
Vinyl Chloride, Total, (ug/l)	<2
Chlorodibromomethane, Total, (ug/l)	--

NM = not measured

-- = not analyzed

Phoenix SR49

Salt River at 67th Avenue

Date of Sampling	3/7/01
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L)	--
Acetone, Total, (ug/l)	<20
2-Butanone, (ug/l)	--
Carbon Disulfide, Total, (ug/l)	--
1,2 Dichloroethene, Total, (ug/l)	--
Xylenes, Total, (ug/l)	--
2-Hexanone, Total, (ug/l)	--
Styrene, Total, (ug/l)	--
Acrolein, Total, (ug/l)	--
Acrylonitirile, Total, (ug/l)	--
Bromobenzene, Water Whole, Total, (ug/l)	--
1,3-Dichloropropane, Water Whole, Total, (ug/l)	--
Methyl Bromide, Total, (ug/l)	--
Methyl Chloride, Total, (ug/l)	--
Parachloro Toluene, Total, (ug/l)	--
Dibromoethane, Total, (ug/l)	--
Acenaphthene, Total, (ug/l)	--
Acenaphthylene, Total, (ug/l)	--
Anthracene, Total, (ug/l)	--
Benzidine, Total, (ug/l)	--
Benzoic Acid, Total, (ug/l)	<50
Benzo (a) Anthracene, Total, (ug/l)	--
Benzo (b) Fluoranthene, Total, (ug/l)	--
Benzo (k) Fluoranthene, Total, (ug/l)	--
Benzo (ghi) Perylene, Total, (ug/l)	--
Benzo (a) Pyrene, Total, (ug/l)	--
Benzyl Alcohol, Total, (ug/l)	--
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	--
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	--
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	--
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	--
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	--
Butyl Benzyl Phthalate, Total, (ug/l)	--
2-Chloronapthalene, Total, (ug/l)	--
2-Chlorophenol, Total, (ug/l)	--
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	--
Chrysene, Total, (ug/l)	<10
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	--
Di-N-Butyl Phthalate, Total, (ug/l)	--
1,3- Dichlorobenzene, Total, (ug/l)	<2
1,4- Dichlorobenzene, Total, (ug/l)	<2
1,2- Dichlorobenzene, Total, (ug/l)	<2
3,3'- Dichlorobenzidine, Total, (ug/l)	--
2,4- Dichlorophenol, Total, (ug/l)	--
Diethyl Phthalate, Total, (ug/l)	--
2,4- Dimethylphenol, Total, (ug/l)	--
Dimethyl Phthalate, Total, (ug/l)	--
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	--
2,4- Dinitrophenol, Total, (ug/l)	--
2,4- Dinitrotoluene, Total, (ug/l)	--
2,6- Dinitrotoluene, Total, (ug/l)	--
Di-N-Octyl-Phthalate, Total, (ug/l)	--
Fluoranthene, Total, (ug/l)	--
Fluorene, Total, (ug/l)	--

NM = not measured

-- = not analyzed

Phoenix SR49 Salt River at 67th Avenue	
Date of Sampling	3/7/01
Hexachlorobenzene, Total, (ug/l)	--
Hexachlorobutadiene, Total, (ug/l)	--
Hexachlorocyclopentadiene, Total, (ug/l)	--
Hexachloroethane, Total, (ug/l)	--
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	--
Isophorone, Total, (ug/l)	--
Naphthalene, Total, (ug/l)	--
Nitrobenzene, Total, (ug/l)	--
2-Nitrophenol, Total, (ug/l)	--
4-Nitrophenol, Total, (ug/l)	--
N-Nitrosodiphenylamine, Total, (ug/l)	--
N-Nitrosodi-N-Propylamine, Total, (ug/l)	--
Pentachlorophenol, Total, (ug/l)	--
Phenanthrene, Total, (ug/l)	--
Phenol, Total, (ug/l)	<10
Pyrene, Total, (ug/l)	--
1,2,4-Trichlorobenzene, Total, (ug/l)	--
2,4,5- Trichlorophenol, Total, (ug/l)	--
2,4,6- Trichlorophenol, Total, (ug/l)	--
N-Nitrosodimethylamine, Total, (ug/l)	--
1,2- Diphenylhydrazine, Total, (ug/l)	--
Dichlorodifluoromethane, Total, (ug/l)	--
Parachloro-Meta-Cresol, Total, (ug/l)	--

NM = not measured
-- = not analyzed

ACDC43 ACDC near Peoria Avenue and 43rd Avenue

Phoenix ACDC ACDC near Peoria Avenue and 43rd Avenue	
Date of Sampling	3/7/01
Time	0622
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)	247
Storm Duration (minutes)	546
Runoff Sampled (cubic feet) (RUN)	3750
Total Storm Runoff (cubic feet)	14300
Instantaneous Discharge (cfs)	0.95
Preceeding Dry Period (days) (ANT)	6
Total Storm Rainfall (inch) (TRN)	0.68
Rainfall Sampled (inch)	0.21
Maximum 5-minute rain intensity (MAX5)	0.36
Sample Temperature (deg. C)	0
Effluent Temperature (deg. C)	15.5
Ambient Temperature (deg. C)	NM
Barometric Pressure (mm Hg)	NM
pH, Effluent (standard units)	6.59
pH, Lab (standard units)	5.84
Specific Conductance, FIELD (us/cm)	28
Oxygen Dissolved (% saturation)	NM
Oxygen Dissolved (mg/l)	NM
BOD5 (mg/l)	8.3
COD High Level (mg/l)	54
Sulfide (mg/l)	<0.1
Cyanide Total (mg/l as Cn)	<0.025
Fecal Coliform (MPN/100ml)	>=1600
Fecal Streptococci (MPN/100ml)	>=1600
E. Coli (MPN/100ml)	500
Total Dissolved Solids (mg/l)	40
Total Suspended Solids (mg/l)	27
Nitrogen NO_2 + NO_3, Total (mg/l as N)	0.28
TKN Nitrogen (mg/l as N)	0.67
Nitrogen, Ammonia + Organic, Total (mg/l as N)	0.81
Nitrogen Nitrate Total (mg/l as N)	0.26
Nitrogen Nitrite Total (mg/l as N)	<0.10
Nitrogen Ammonia Total (mg/l as N)	0.81
Nitrogen Organic Total (mg/l as N)	0
Phosphorous Total (mg/l as P)	0.15
Phosphorous Dissolved (mg/l as P)	0.07
Phosphorous Ortho (mg/l as P)	<0.50
Hexavalent Chromium Total (mg/l)	--
Phenols Total Recoverable (ug/l)	6.6
Oil and Grease Total Recoverable (mg/l)	2.5
Organic Carbon, Total (mg/l)	--
Total Recoverable Petroleum Hydrocarbons (mg/l)	2.4
Bicarbonate Whole Field (mg/l as HCO_3)	8.5

NM = not measured
-- = not analyzed

Phoenix ACDC

ACDC near Peoria Avenue and 43rd Avenue

Date of Sampling	3/7/01
Bicarbonate Dissolved, Field (mg/l as HCO_3)	5.4
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 $CaCO_3$)	7.0
Alkalinity Dissolved Water Field Total (mg/l as $CaCO_3$)	4.4
Silica Dissolved (mg/l as SiO_2)	--
Hardness (mg/l)	9.2
Antimony (ug/l as Sb)	--
Antimony Dissolved (ug/l as Sb)	--
Arsenic Total (ug/l as As)	1.2
Arsenic Dissolved (ug/l as As)	1.7
Barium Dissolved (ug/l as Ba)	--
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
Chromium Total Recoverable (ug/l as Cr)	7.0
Chromium Dissolved (ug/l as Cr)	<4
Cobalt Dissolved (ug/l as Co)	--
Copper, Total Recoverable, (ug/l as Cu)	8.6
Copper, Dissolved, (ug/l as Cu)	6.9
Iron, Dissolved, (ug/l as Fe)	--
Lead, Total Recoverable, (ug/l as Pb)	2.3
Lead, Dissolved, (ug/l as Pb)	<2
Lithium, Dissolved, (ug/l as Li)	--
Manganese, Dissolved, (ug/l as Mn)	--
Mercury, Total Recoverable, (ug/l as Hg)	--
Mercury, Dissolved, (ug/l as Hg)	--
Molybdenum, Dissolved, (ug/l as Mo)	--
Nickel, Total Recoverable, (ug/l as Ni)	4.0
Nickel, Dissolved, (ug/l as Ni)	8.4
Potassium, Dissolved, (mg/l as K)	--
Selenium, Total, (ug/l as Se)	--
Selenium, Dissolved, (ug/l as Se)	--
Silver, Total Recoverable, (ug/l as Ag)	<5
Silver, Dissolved, (ug/l as Ag)	<1
Sodium, Dissolved, (mg/l as Na)	--
Strontium, Dissolved, (ug/l as Sr)	--
Thallium, Total, (ug/l as Tl)	--
Thallium, Dissolved, (ug/l as Tl)	--
Vanadium, Dissolved, (ug/l as V)	--
Zinc, Total Recoverable, (ug/l as Zn)	75
Zinc, Dissolved, (ug/l as Zn)	<50
Diazinon, Total, (ug/l)	--
Ethion, Total, (ug/l)	--
Malathion, Total, (ug/l)	--
Methyl Parathion, Total, (ug/l)	--
Parathion, Total, (ug/l)	--
Trithion, Total, (ug/l)	--
Di-syston, Total, (ug/l)	--
Phorate, Total, (ug/l)	--
Chlorpyrifos, Total, (ug/l)	--
DEF, Total, (ug/l)	--

NM = not measured

-- = not analyzed

Phoenix ACDC

ACDC near Peoria Avenue and 43rd Avenue

Date of Sampling	3/7/01
Fonofos(Dy-fonate), WWT, (ug/l)	--
Aldrin, Total, (ug/l)	--
BHC - ALPHA, (ug/l)	--
BHC - Gamma (Lindane), (ug/l)	--
BHC - DELTA, (ug/l)	--
Aroclor 1016, PCB, Total, (ug/l)	--
Aroclor 1221, PCB, Total, (ug/l)	--
Aroclor 1232, PCB, Total, (ug/l)	--
Aroclor 1242, PCB, Total, (ug/l)	--
Aroclor 1248, PCB, Total, (ug/l)	--
Aroclor 1254, PCB, Total, (ug/l)	--
Aroclor 1260, PCB, Total, (ug/L)	--
Chlordane, Total, (ug/l)	--
P,P' DDD, Total, (ug/l)	--
P,P' DDE, Total, (ug/l)	<0.1
P, P' DDT, Total, (ug/l)	--
Dieldrin, Total, (ug/l)	--
Endo-Sulfan Alpha, Total, (ug/l)	--
Endo-Sulfan Beta, Total, (ug/l)	--
Endo-Sulfan Sulfate, Total, (ug/l)	--
Endrin Aldehyde, Total, (ug/l)	--
Endrin, Total, (ug/l)	--
Heptachlor, Total, (ug/l)	--
Heptachlor Epoxide, Total, (ug/l)	--
Toxaphene, Total, (ug/l)	--
Methoxychlor, Total, (ug/l)	--
Beta Benzene Hexachloride, Total, (ug/l)	--
1,1,2,2-Tetrachloroethane, Total, (ug/l)	<2
1,1,1,2-Tetrachloroethane, Total,(ug/l)	--
Tetrachloroethene, PCE, 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
1,1- Dichloroethane, Total, (ug/l)	<2
1,1- Dichloroethene, Total, (ug/l)	<5
1,2- Dichloroethane, Total, (ug/l)	<2
1,2- Dichloropropane, Total, (ug/l)	<2
2- Chloroethylvinyl Ether, Total, (ug/l)	<2
cis-1,3-Dichloropropene, (ug/l)	<2
trans-1,2- Dichloroethene, (ug/l)	<2
trans-1,3- Dichloropropene, (ug/l)	<2
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
Ethylbenzene, Total, (ug/l)	<2
Methylene Chloride, Total, (ug/l)	<5
Toluene, Total, (ug/l)	<2

NM = not measured

-- = not analyzed

Phoenix ACDC

ACDC near Peoria Avenue and 43rd Avenue

Date of Sampling	3/7/01
Trichlorofluoromethane, Total, (ug/l)	<5
Vinyl Chloride, Total, (ug/l)	<2
Chlorodibromomethane, Total, (ug/l)	--
4- Methyl, 2- Pentanone, (MIBK), Total, (ug/L)	--
Acetone, Total, (ug/l)	<20
2-Butanone, (ug/l)	--
Carbon Disulfide, Total, (ug/l)	--
1,2 Dichloroethene, Total, (ug/l)	--
Xylenes, Total, (ug/l)	--
2-Hexanone, Total, (ug/l)	--
Styrene, Total, (ug/l)	--
Acrolein, Total, (ug/l)	--
Acrylonitirile, Total, (ug/l)	--
Bromobenzene, Water Whole, Total, (ug/l)	--
1,3-Dichloropropane, Water Whole, Total, (ug/l)	--
Methyl Bromide, Total, (ug/l)	--
Methyl Chloride, Total, (ug/l)	--
Parachloro Toluene, Total, (ug/l)	--
Dibromoethane, Total, (ug/l)	--
Acenaphthene, Total, (ug/l)	--
Acenaphthylene, Total, (ug/l)	--
Anthracene, Total, (ug/l)	--
Benzidine, Total, (ug/l)	--
Benzoic Acid, Total, (ug/l)	<50
Benzo (a) Anthracene, Total, (ug/l)	--
Benzo (b) Fluoranthene, Total, (ug/l)	--
Benzo (k) Fluoranthene, Total, (ug/l)	--
Benzo (ghi) Perylene, Total, (ug/l)	--
Benzo (a) Pyrene, Total, (ug/l)	--
Benzyl Alcohol, Total, (ug/l)	--
Bis-(2-Chloroethoxy)-Methane, Total, (ug/l)	--
Bis-(2-Chloroethyl)-Ether, Total, (ug/l)	--
Bis-(2-Chloroisopropyl)-Ether, Total, (ug/l)	--
Bis(2-Ethyl Hexyl) Phthalate, Total, (ug/l)	--
4-Bromo-Phenyl Phenyl Ether, Total, (ug/l)	--
Butyl Benzyl Phthalate, Total, (ug/l)	--
2-Chloronapthalene, Total, (ug/l)	--
2-Chlorophenol, Total, (ug/l)	--
4-Chloro-Phenyl Phenyl Ether, Total, (ug/l)	--
Chrysene, Total, (ug/l)	<10
Dibenzo-[a,h]-Anthracene, Total, (ug/l)	--
Di-N-Butyl Phthalate, Total, (ug/l)	--
1,3- Dichlorobenzene, Total, (ug/l)	<2
1,4- Dichlorobenzene, Total, (ug/l)	<2
1,2- Dichlorobenzene, Total, (ug/l)	<2
3,3'- Dichlorobenzidine, Total, (ug/l)	--
2,4- Dichlorophenol, Total, (ug/l)	--
Diethyl Phthalate, Total, (ug/l)	--
2,4- Dimethylphenol, Total, (ug/l)	--
Dimethyl Phthalate, Total, (ug/l)	--
2-Methyl-4,6-Dinitrophenol, Total, (ug/l)	--
2,4- Dinitrophenol, Total, (ug/l)	--
2,4- Dinitrotoluene, Total, (ug/l)	--
2,6- Dinitrotoluene, Total, (ug/l)	--

NM = not measured

-- = not analyzed

Phoenix ACDC

ACDC near Peoria Avenue and 43rd Avenue

Date of Sampling	3/7/01
Di-N-Octyl-Phthalate, Total, (ug/l)	--
Fluoranthene, Total, (ug/l)	--
Fluorene, Total, (ug/l)	--
Hexachlorobenzene, Total, (ug/l)	--
Hexachlorobutadiene, Total, (ug/l)	--
Hexachlorocyclopentadiene, Total, (ug/l)	--
Hexachloroethane, Total, (ug/l)	--
Indeno (1,2,3-CD) Pyrene, Total, (ug/l)	--
Isophorone, Total, (ug/l)	--
Naphthalene, Total, (ug/l)	--
Nitrobenzene, Total, (ug/l)	--
2-Nitrophenol, Total, (ug/l)	--
4-Nitrophenol, Total, (ug/l)	--
N-Nitrosodiphenylamine, Total, (ug/l)	--
N-Nitrosodi-N-Propylamine, Total, (ug/l)	--
Pentachlorophenol, Total, (ug/l)	--
Phenanthrene, Total, (ug/l)	--
Phenol, Total, (ug/l)	<10
Pyrene, Total, (ug/l)	--
1,2,4-Trichlorobenzene, Total, (ug/l)	--
2,4,5- Trichlorophenol, Total, (ug/l)	--
2,4,6- Trichlorophenol, Total, (ug/l)	--
N-Nitrosodimethylamine, Total, (ug/l)	--
1,2- Diphenylhydrazine, Total, (ug/l)	--
Dichlorodifluoromethane, Total, (ug/l)	--
Parachloro-Meta-Cresol, Total, (ug/l)	--

NM = not measured
-- = not analyzed

Data Validation Tables

SR-49 Salt River at 67th Avenue

Phoenix SR49

67th Avenue and the Salt River
Storm of March 7, 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)		0	deg. C	0.5		3/7/01	Immediate							
Effluent Temperature (deg. C)		15	deg. C	0.5		3/7/01	Immediate							
Ambient Temperature (deg. C)		NM	deg. C	0.5			Immediate							
Barometric Pressure (mm Hg)		NM	mm Hg	1			Immediate							
pH, Effluent, FIELD (standard units)	USGS	8.33	std units	0.1		3/7/01	Immediate							
pH, Lab (standard units)	USGS	6.89	std units	0.1		3/27/01	Immediate							
Specific Conductance, FIELD (us/cm)	USGS	93.5	umhos/cm	2		3/7/01	Immediate							
Oxygen Dissolved (% saturation)	USGS	NM	%	1			Immediate							DO meter failed.
Oxygen Dissolved (mg/l)	USGS	NM	mg/l	0.1			Immediate							
BOD5 (mg/l)	405.1	20	mg/l	2	K4	3/13/01	48 hours			<20	2.02			Reported value is estimated.
COD High Level (mg/l)	410.4	130	mg/l	20		3/9/01	28 days	<20	2.92					
Sulfide (mg/l)	4500-S-C,D	<0.1	mg/l	0.1		3/8/01	28 days	<20	3.98					
Cyanide Total (mg/l as CN)	4500CN,C-E	<0.025	mg/l	0.025		3/14/01	14 days	<20	0					
Fecal Coliform (MPN/100ml)	9221E	>=1600	MPN/100ml	2		3/7/01	6 hours							Incubator exceeded temp control limit.
Fecal Streptococci (MPN/100ml)	9230B	>=1600	MPN/100ml	2		3/7/01	6 hours							Incubator exceeded temp control limit.
E. Coli (MPN/100ml)	9221F	>=1600	MPN/100ml	2		3/7/01	6 hours							
Total Dissolved Solids (mg/l)	2540C	280	mg/l	20		3/7/01	7 days			<5	0			
Total Suspended Solids (mg/l)	160.2	270	mg/l	10		3/9/01	7 days			<5	3.64			
Nitrogen NO_2 + NO_3, Total (mg/l as N)	300.0	1.3	mg/l	0.1		3/7/01	28 days							
TKN Nitrogen (mg/l as N)	4500-N-O,C	2.4	mg/l	0.5		3/15/01	28 days	<15	0					
Nitrogen, Ammonia + Organic, Total (mg/l as N)	calculation	2.4	mg/l				calculation							
Nitrogen Nitrate Total (mg/l as N)	300.0	1.2	mg/l	0.1	M3	3/7/01	48 hours	<20	0.639					Analyte conc disproportionate to spike.
Nitrogen Nitrite Total (mg/l as N)	300.0	<0.1	mg/l	0.1		3/7/01	48 hours	<20	5.10					
Nitrogen Ammonia Total (mg/l as N)	350.3	0.77	mg/l	0.05		3/19/01	28 days	<20	0.76					
Nitrogen Organic Total (mg/l as N)	calculation	1.63	mg/l				calculation							
Phosphorous Total (mg/l as P)	365.3	0.54	mg/l	0.05		3/12/01	28 days	<20	2.04					
Phosphorous Dissolved (mg/l as P)	365.3	0.21	mg/l	0.05		4/5/01	28 days							
Phosphorous Ortho (mg/l as P)	300.0	<0.5	mg/l	0.5	M2	3/7/01	48 hours	<20	4.84					MS recovery low.
Phenols Total Recoverable (ug/l)	420.1	7.1	ug/l	5		3/23/01	28 days			<20	1			
Oil and Grease Total Recoverable (mg/l)	413.2	9.6	mg/l	1		3/8/01	28 days			<20	0			
Total Recoverable Petroleum Hydrocarbons (mg/l)	418.1	9.2	mg/l	1		3/8/01	28 days			<20	0			
Bicarbonate Whole Field (mg/l as HCO_3)	USGS	98	mg/l	1		3/7/01	14 days							
Bicarbonate Dissolved, Field (mg/l as HCO_3)	USGS	62	mg/l	1		3/7/01	14 days							
Carbonate Water Field (mg/l as CO_3)	USGS	0	mg/l	1		3/7/01	14 days							
Carbonate Water Dissolved, Field, (mg/l as CO_3)	USGS	0	mg/l	1		3/7/01	14 days							
Alkalinity Water Field Total (mg/l as $CaCO_3$)	USGS	80	mg/l	1		3/7/01	14 days							
Alkalinity Dissolved Water Field Total (mg/l as $CaCO_3$)	USGS	51	mg/l	1		3/7/01	14 days							
Hardness (mg/l)	2340B	100	mg/l	1		3/16/01	6 months							
Arsenic Total (ug/l as As)	200.8	6.8	ug/l	1		3/15/01	6 months	<20	1.00					
Arsenic Dissolved (ug/l as As)	200.8	3.3	ug/l	1		3/31/01	6 months	<20	0					
Beryllium Total Recoverable (ug/l as Be)	200.9	0.57	ug/l	0.5	M1 M5	3/15/01	6 months	<20	12.3	<20	0			MS recovery high; MSA.
Beryllium Dissolved (ug/l as Be)	200.8	<0.5	ug/l	0.5		3/31/01	6 months	<20	3.80					
Cadmium Total Recoverable (ug/l as Cd)	200.9	0.74	ug/l	0.5		3/16/01	6 months	<20	2.38	<20	2.44			
Cadmium Dissolved (ug/l as Cd)	200.9	<0.5	ug/l	0.5		3/16/01	6 months	<20	14.5					
Chromium Total Recoverable (ug/l as Cr)	200.9	24	ug/l	4	M2 M5	3/16/01	6 months	<20	9.06	<20	4.68			MS recovery low; MSA.
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		3/16/01	6 months	<20	3.79					
Copper, Total Recoverable, (ug/l as Cu)	200.9	49	ug/l	8		3/14/01	6 months	<20	9.06	<20	1.57			
Copper, Dissolved, (ug/l as Cu)	200.8	14	ug/l	1		3/31/01	6 months	<20	6.00					
Lead, Total Recoverable, (ug/l as Pb)	200.9	18	ug/l	2		3/16/01	6 months	<20	3.54	<20	8.00			
Lead, Dissolved, (ug/l as Pb)	200.9	<2	ug/l	2		3/16/01	6 months	<20	8.67					
Nickel, Total Recoverable, (ug/l as Ni)	200.9	23	ug/l	4		3/19/01	6 months	<20	5.74	<20	4.90			

Phoenix SR49

67th Avenue and the Salt River
Storm of March 7, 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
Nickel, Dissolved, (ug/l as Ni)	200.9	6.9	ug/l	4	M3 M5	3/27/01	6 months	<20	1.10					Analyte conc disproportionate to spike; MSA.
Silver, Total Recoverable, (ug/l as Ag)	200.9	<5	ug/l	5		3/14/01	6 months	<20	3.60	<20	1.05			
Silver, Dissolved, (ug/l as Ag)	200.8	<1	ug/l	1		3/31/01	6 months	<20	0					
Zinc, Total Recoverable, (ug/l as Zn)	200.7	170	ug/l	50		3/16/01	6 months	<20	2.16	<20	1.59			
Zinc, Dissolved, (ug/l as Zn)	200.7	<50	ug/l	50		3/14/01	6 months	<20	2.16	<20	1.59			
EPA Method 608 Extraction	608	--				3/12/01	7 days							
P,P' DDE, Total, (ug/l)	608	<0.1	ug/l	0.1		3/13/01	40 days			<20	8.61			
EPA Method 624 Extraction	624					3/9/01	7 days							
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Tetrachloroethene, PCE, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,1,1- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,1,2- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Trichloroethene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,1- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,1- Dichloroethene, Total, (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
1,2- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,2- Dichloropropane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
2- Chloroethylvinyl Ether, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
cis-1,3-Dichloropropene, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
trans-1,2- Dichloroethene, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
trans-1,3- Dichloropropene, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Benzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Bromodichloromethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Bromoform, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Bromomethane (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Carbon Tetrachloride, Total, (ug/l)	624	<2.5	ug/l	2.5		3/9/01	14 days							
Chlorobenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Dibromochloromethane (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Chloroethane, (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Chloroform, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Chloromethane (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Ethylbenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Methylene Chloride, Total, (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Toluene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Trichlorofluoromethane, Total, (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Vinyl Chloride, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Acetone, Total, (ug/l)	624	<20	ug/l	20		3/9/01	14 days							
1,3- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	40 days							
1,4- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	40 days							
1,2- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	40 days							
EPA Method 625 Extraction	625	--				3/7/01	7 days							
Benzoic Acid, Total, (ug/l)	625	<50	ug/l	50		3/14/01	40 days							
Chrysene, Total, (ug/l)	625	<10	ug/l	10		3/14/01	40 days							
Phenol, Total, (ug/l)	625	<10	ug/l	10		3/14/01	40 days	<20	6.27					

ACDC43 ACDC near Peoria Avenue and 43rd Avenue

Phoenix ACDC43

ACDC near Peoria Avenue and 43rd Avenue
Storm of March 7, 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)		0	deg. C	0.5		3/7/01	Immediate							
Effluent Temperature (deg. C)		15.5	deg. C	0.5		3/7/01	Immediate							
Ambient Temperature (deg. C)		NM	deg. C	0.5			Immediate							
Barometric Pressure (mm Hg)		NM	mm Hg	1			Immediate							
pH, Effluent, FIELD (standard units)	USGS	6.59	std units	0.1		3/7/01	Immediate							
pH, Lab (standard units)	USGS	5.84	std units	0.1		3/27/01	Immediate							
Specific Conductance, FIELD (us/cm)	USGS	28	umhos/cm	2		3/7/01	Immediate							
Oxygen Dissolved (% saturation)	USGS	NM	%	1			Immediate							
Oxygen Dissolved (mg/l)	USGS	NM	mg/l	0.1			Immediate							DO meter failed.
BOD5 (mg/l)	405.1	8.3	mg/l	2	K1 K4	3/13/01	48 hours			<20	2.02			Reported value is estimated.
COD High Level (mg/l)	410.4	54	mg/l	20		3/9/01	28 days	<20	2.92					
Sulfide (mg/l)	4500-S-C,D	<0.1	mg/l	0.1		3/8/01	28 days	<20	3.98					
Cyanide, Total (mg/l as CN)	4500CN,C-E	<0.025	mg/l	0.025		3/14/01	14 days	<20	0					
Fecal Coliform (MPN/100ml)	9221E	>=1600	MPN/100ml	2		3/7/01	6 hours							
Fecal Streptococci (MPN/100ml)	9230B	>=1600	MPN/100ml	2		3/7/01	6 hours							
E. Coli (MPN/100m1)	9221F	500	MPN/100ml	2		3/7/01	6 hours							
Total Dissolved Solids (mg/l)	2540C	40	mg/l	20		3/12/01	7 days			<5	0			
Total Suspended Solids (mg/l)	160.2	27	mg/l	10		3/9/01	7 days			<5	3.64			
Nitrogen NO_2 + NO_3, Total (mg/l as N)	300.0	0.28	mg/l	0.1		3/8/01	28 days							
TKN Nitrogen (mg/l as N)	4500-N-O,C	0.67	mg/l	0.5		3/16/01	28 days	<15	5.94					
Nitrogen, Ammonia + Organic, Total (mg/l as N)	calculation	0.81	mg/l				calculation							
Nitrogen Nitrate Total (mg/l as N)	300.0	0.26	mg/l	0.1		3/8/01	48 hours	<20	0.738					
Nitrogen Nitrite Total (mg/l as N)	300.0	<0.1	mg/l	0.1		3/8/01	48 hours	<20	0.407					
Nitrogen Ammonia Total (mg/l as N)	350.3	0.81	mg/l	0.05		3/19/01	28 days	<20	0.76					
Nitrogen Organic Total (mg/l as N)	calculation	0	mg/l				calculation							
Phosphorous Total (mg/l as P)	365.3	0.15	mg/l	0.05		3/12/01	28 days	<20	2.04					
Phosphorous Dissolved (mg/l as P)	365.3	0.07	mg/l	0.05		4/5/01	28 days							
Phosphorous Ortho (mg/l as P)	300.0	<0.5	mg/l	0.5		3/8/01	48 hours	<20	0					
Phenols Total Recoverable (ug/l)	420.1	6.6	ug/l	5		3/23/01	28 days			<20	1			
Oil and Grease Total Recoverable (mg/l)	413.2	2.5	mg/l	1		3/8/01	28 days			<20	0			
Total Recoverable Petroleum Hydrocarbons (mg/l)	418.1	2.4	mg/l	1		3/8/01	28 days			<20	0			
Bicarbonate Whole Field (mg/l as HCO_3)	USGS	8.5	mg/l	0.1		3/7/01	14 days							
Bicarbonate Dissolved, Field (mg/l as HCO_3)	USGS	5.4	mg/l	0.1		3/7/01	14 days							
Carbonate Water Field (mg/l as CO_3)	USGS	0	mg/l	0.1		3/7/01	14 days							
Carbonate Water Dissolved, Field, (mg/l as CO_3)	USGS	0	mg/l	0.1		3/7/01	14 days							
Alkalinity Water Field Total (mg/l as $CaCO_3$)	USGS	7.0	mg/l	0.1		3/7/01	14 days							
Alkalinity Dissolved Water Field Total (mg/l as $CaCO_3$)	USGS	4.4	mg/l	0.1		3/7/01	14 days							
Hardness (mg/l)	2340B	9.2	mg/l	1		3/14/01	6 months							
Arsenic Total (ug/l as As)	200.8	1.2	ug/l	1		3/15/01	6 months	<20	1					
Arsenic Dissolved (ug/l as As)	200.8	1.7	ug/l	1		3/31/01	6 months	<20	0					
Beryllium Total Recoverable (ug/l as Be)	200.9	<0.5	ug/l	0.5	M1	3/12/01	6 months	<20	12.3	<20	0			MS recovery high.
Beryllium Dissolved (ug/l as Be)	200.8	<0.5	ug/l	0.5		3/31/01	6 months	<20	3.8					
Cadmium Total Recoverable (ug/l as Cd)	200.9	<0.5	ug/l	0.5		3/16/01	6 months	<20	2.38	<20	2.44			
Cadmium Dissolved (ug/l as Cd)	200.9	<0.5	ug/l	0.5		3/16/01	6 months	<20	14.5					
Chromium Total Recoverable (ug/l as Cr)	200.9	7	ug/l	4	M2	3/16/01	6 months	<20	13.7	<20	4.68			MS recovery low.
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		3/16/01	6 months	<20	3.79					
Copper, Total Recoverable, (ug/l as Cu)	200.9	8.6	ug/l	4		3/14/01	6 months	<20	9.06	<20	1.57			
Copper, Dissolved, (ug/l as Cu)	200.8	6.9	ug/l	1		3/31/01	6 months	<20	6					
Lead, Total Recoverable, (ug/l as Pb)	200.9	2.3	ug/l	2		3/16/01	6 months	<20	3.54	<20	8.00			
Lead, Dissolved, (ug/l as Pb)	200.9	<2	ug/l	2		3/16/01	6 months	<20	8.67					
Nickel, Total Recoverable, (ug/l as Ni)	200.9	4	ug/l	4		3/19/01	6 months	<20	5.74	<20	4.90			

Phoenix ACDC43

ACDC near Peoria Avenue and 43rd Avenue
Storm of March 7, 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
Nickel, Dissolved, (ug/l as Ni)	200.9	8.4	ug/l	4	M3 M5	3/27/01	6 months	<20	1.10	<20	1.10			Analyte conc disproportionate to spike; MSA.
Silver, Total Recoverable, (ug/l as Ag)	200.9	<5	ug/l	5		3/14/01	6 months	<20	3.60	<20	1.05			
Silver, Dissolved, (ug/l as Ag)	200.8	<1	ug/l	1		3/31/01	6 months	<20	0					
Zinc, Total Recoverable, (ug/l as Zn)	200.7	75	ug/l	50		3/14/01	6 months	<20	2.16	<20	1.59			
Zinc, Dissolved, (ug/l as Zn)	200.7	<50	ug/l	50		4/11/01	6 months							
EPA Method 608 Extraction	608	--				3/12/01	7 days							
P,P' DDE, Total, (ug/l)	608	<0.1	ug/l	0.1		3/13/01	40 days			<20	8.61			
EPA Method 624 Extraction	624					3/9/01	7 days							
1,1,2,2-Tetrachloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Tetrachloroethene, PCE, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,1,1- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,1,2- Trichloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Trichloroethene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,1- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,1- Dichloroethene, Total, (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
1,2- Dichloroethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,2- Dichloropropane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
2- Chloroethylvinyl Ether, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
cis-1,3-Dichloropropene, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
trans-1,2- Dichloroethene, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
trans-1,3- Dichloropropene, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Benzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Bromodichloromethane, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Bromoform, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Bromomethane (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Carbon Tetrachloride, Total, (ug/l)	624	<2.5	ug/l	2.5		3/9/01	14 days							
Chlorobenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Dibromochloromethane (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Chloroethane, (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Chloroform, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Chloromethane, Total (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Ethylbenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Methylene Chloride, Total, (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Toluene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Trichlorofluoromethane, Total, (ug/l)	624	<5	ug/l	5		3/9/01	14 days							
Vinyl Chloride, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
Acetone, Total, (ug/l)	624	<20	ug/l	20		3/9/01	14 days							
1,3- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,4- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
1,2- Dichlorobenzene, Total, (ug/l)	624	<2	ug/l	2		3/9/01	14 days							
EPA Method 625 Extraction	625	--				3/7/01	7 days							
Benzoic Acid, Total, (ug/l)	625	<50	ug/l	50		3/14/01	40 days							
Chrysene, Total, (ug/l)	625	<10	ug/l	10		3/14/01	40 days							
Phenol, Total, (ug/l)	625	<10	ug/l	10		3/14/01	40 days	<20	6.27					

Lab Reports and Quality Control Data

SR-49 Salt River at 67th Avenue

Lab Reports and Quality Control Data
Del Mar Analytical (composite)

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

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

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0106

Sampled: 03/07/01
Received: 03/07/01
Issued: 3/27/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKC0106-01	67TH + SALT-COMP.	Water
PKC0106-02	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 preserved upon receipt of the laboratory.

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: The arsenic, beryllium, copper, and silver analyses were subcontracted to NEL Laboratories. (ADHS #AZ0520)
The phenols analysis was subcontracted to Transwest Geochem, Inc. (ADHS #AZ0133)
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)

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: PKC0106

Sampled: 03/07/01
Received: 03/07/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKC0106-01 (67TH + SALT-COMP. - Water)								
Beryllium	EPA 200.9	P1C0910	0.00050	**0.00057**	1	3/9/01	3/15/01	M5
Cadmium	EPA 200.9	P1C0910	0.00050	**0.00074**	1	3/9/01	3/16/01	
Calcium	EPA 200.7	P1C1405	2.0	**27**	1	3/14/01	3/16/01	
Chromium	EPA 200.9	P1C0910	0.0040	**0.024**	1	3/9/01	3/16/01	M5
Copper	EPA 200.9	P1C0910	0.0080	**0.049**	2	3/9/01	3/14/01	
Lead	EPA 200.9	P1C0910	0.0020	**0.018**	1	3/9/01	3/16/01	
Magnesium	EPA 200.7	P1C1405	0.50	**8.5**	1	3/14/01	3/16/01	
Nickel	EPA 200.9	P1C0910	0.0040	**0.023**	1	3/9/01	3/19/01	
Potassium	EPA 258.1	P1C1405	1.0	**7.6**	1	3/14/01	3/14/01	
Silver	EPA 200.9	P1C0910	0.0050	ND	1	3/9/01	3/14/01	
Sodium	EPA 273.1	P1C1405	5.0	**15**	1	3/14/01	3/14/01	
Zinc	EPA 200.7	P1C1405	0.050	**0.17**	1	3/14/01	3/16/01	

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: PKC0106

Sampled: 03/07/01
Received: 03/07/01

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKC0106-02 (67TH + SALT-COMP. - Water)								
Cadmium, Dissolved	EPA 200.9	P1C1507	0.00050	ND	1	3/15/01	3/16/01	
Chromium, Dissolved	EPA 200.9	P1C1507	0.0040	ND	1	3/15/01	3/16/01	
Lead, Dissolved	EPA 200.9	P1C1507	0.0020	ND	1	3/15/01	3/16/01	
Zinc, Dissolved	EPA 200.7	P1C1405	0.050	ND	1	3/14/01	3/14/01	
Sample ID: PKC0106-02RE3 (67TH + SALT-COMP. - Water)								
Nickel, Dissolved	EPA 200.9	P1C2323	0.0040	**0.0069**	1	3/23/01	3/27/01	M5

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: PKC0106

Sampled: 03/07/01
Received: 03/07/01

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			mg/l	mg/l				
Sample ID: PKC0106-01 (67TH + SALT-COMP. - Water)								
Alkalinity as CaCO3	SM2320B	P1C1523	5.0	**70**	1	3/15/01	3/15/01	
Ammonia-N	EPA 350.3	P1C1922	0.050	**0.77**	1	3/19/01	3/19/01	
Biochemical Oxygen Demand	EPA 405.1	P1C0816	2.0	**20**	1	3/8/01	3/13/01	K4
			%	%				
Sample ID: PKC0106-01 (67TH + SALT-COMP. - Water)								
Cation/Anion Balance	Calculation	P1C2006	NA	**13.6**	1	3/20/01	3/20/01	
			mg/l	mg/l				
Sample ID: PKC0106-01 (67TH + SALT-COMP. - Water)								
Chemical Oxygen Demand	EPA 410.4	P1C0907	20	**130**	1	3/9/01	3/9/01	
Chloride	EPA 300.0	P1C0714	0.50	**15**	1	3/7/01	3/7/01	
Fluoride	EPA 300.0	P1C0714	0.10	**0.27**	1	3/7/01	3/7/01	
Hardness (CaCO3)	SM2340B	P1C1405	1.0	**100**	1	3/14/01	3/16/01	
Nitrate-N	EPA 300.0	P1C0714	0.10	**1.2**	1	3/7/01	3/7/01	
Nitrate/Nitrite-N	EPA 300.0	P1C0714	0.10	**1.3**	1	3/7/01	3/7/01	
Nitrite-N	EPA 300.0	P1C0714	0.10	ND	1	3/7/01	3/7/01	
Orthophosphate	EPA 300.0	P1C0714	0.50	ND	1	3/7/01	3/7/01	
Phosphorus	EPA 365.3	P1C1215	0.050	**0.54**	1	3/12/01	3/12/01	
			umhos/cm	umhos/cm				
Sample ID: PKC0106-01 (67TH + SALT-COMP. - Water)								
Specific Conductance	SM2510B	P1C0719	2.0	**210**	1	3/7/01	3/7/01	
			mg/l	mg/l				
Sample ID: PKC0106-01 (67TH + SALT-COMP. - Water)								
Sulfate	EPA 300.0	P1C0714	0.50	**14**	1	3/7/01	3/7/01	
Sulfide	SM4500-S-C,D	P1C0903	0.10	ND	1	3/8/01	3/8/01	
Total Cyanide	SM4500-CN,C-E	P1C1306	0.025	ND	1.25	3/13/01	3/14/01	
Total Dissolved Solids	SM2540C	P1C0720	20	**280**	1	3/7/01	3/7/01	
Total Suspended Solids	EPA 160.2	P1C0908	10	**270**	1	3/9/01	3/9/01	

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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: PKC0106

Sampled: 03/07/01
Received: 03/07/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKC0106-01 (67TH + SALT-COMP. - Water)								
Total Kjeldahl Nitrogen	SM4500-N-O,C	C1C1409	0.50	**2.4**	1	3/14/01	3/15/01	

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Report Number: PKC0106

Sampled: 03/07/01
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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: P1C0910 Extracted: 03/09/01										
Blank Analyzed: 03/12/01 (P1C0910-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							
LCS Analyzed: 03/12/01 (P1C0910-BS1)										
Beryllium	**0.00215**	0.0010	mg/l	0.00200		107	85-115			
Cadmium	**0.00202**	0.0010	mg/l	0.00200		101	85-115			
Chromium	**0.0417**	0.0080	mg/l	0.0400		104	85-115			
Copper	**0.0442**	0.0080	mg/l	0.0400		111	85-115			
Lead	**0.0384**	0.0040	mg/l	0.0400		96.0	85-115			
Nickel	**0.0358**	0.0080	mg/l	0.0400		89.5	85-115			
Silver	**0.0189**	0.010	mg/l	0.0200		94.5	85-115			
LCS Dup Analyzed: 03/12/01 (P1C0910-BSD1)										
Beryllium	**0.00215**	0.0010	mg/l	0.00200		107	85-115	0	20	
Cadmium	**0.00207**	0.0010	mg/l	0.00200		103	85-115	2.44	20	
Chromium	**0.0437**	0.0080	mg/l	0.0400		109	85-115	4.68	20	
Copper	**0.0449**	0.0080	mg/l	0.0400		112	85-115	1.57	20	
Lead	**0.0416**	0.0040	mg/l	0.0400		104	85-115	8.00	20	
Nickel	**0.0376**	0.0080	mg/l	0.0400		94.0	85-115	4.90	20	
Silver	**0.0191**	0.010	mg/l	0.0200		95.5	85-115	1.05	20	
Matrix Spike Analyzed: 03/12/01 (P1C0910-MS1)					**Source: PKC0135-01**					
Beryllium	**0.00328**	0.0010	mg/l	0.00200	ND	164	70-130			M1
Cadmium	**0.00213**	0.0010	mg/l	0.00200	ND	106	70-130			
Chromium	**0.0399**	0.0080	mg/l	0.0400	0.012	69.8	70-130			M2
Copper	**0.0450**	0.0080	mg/l	0.0400	ND	113	70-130			
Lead	**0.0403**	0.0040	mg/l	0.0400	ND	101	70-130			
Nickel	**0.0412**	0.0080	mg/l	0.0400	ND	92.0	70-130			
Silver	**0.0191**	0.010	mg/l	0.0200	ND	95.5	70-130			

Linda Eshelman
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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: PKC0106

Sampled: 03/07/01
Received: 03/07/01

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: P1C0910 Extracted: 03/09/01										
Matrix Spike Dup Analyzed: 03/12/01 (P1C0910-MSD1)					**Source: PKC0135-01**					
Beryllium	**0.00371**	0.0010	mg/l	0.00200	ND	185	70-130	12.3	20	M1
Cadmium	**0.00208**	0.0010	mg/l	0.00200	ND	104	70-130	2.38	20	
Chromium	**0.0348**	0.0080	mg/l	0.0400	0.012	57.0	70-130	13.7	20	M2
Copper	**0.0411**	0.0080	mg/l	0.0400	ND	103	70-130	9.06	20	
Lead	**0.0389**	0.0040	mg/l	0.0400	ND	97.2	70-130	3.54	20	
Nickel	**0.0389**	0.0080	mg/l	0.0400	ND	86.2	70-130	5.74	20	
Silver	**0.0198**	0.010	mg/l	0.0200	ND	99.0	70-130	3.60	20	
Batch: P1C1405 Extracted: 03/14/01										
Blank Analyzed: 03/14/01 (P1C1405-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							
Zinc	ND	0.050	mg/l							
Blank Analyzed: 03/14/01 (P1C1405-BLK2)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 03/14/01 (P1C1405-BS1)										
Calcium	**9.61**	2.0	mg/l	10.0		96.1	85-115			
Magnesium	**9.44**	0.50	mg/l	10.0		94.4	85-115			
Potassium	**10.3**	1.0	mg/l	10.0		103	85-115			
Sodium	**50.8**	5.0	mg/l	50.0		102	85-115			
Zinc	**0.935**	0.050	mg/l	1.00		93.5	85-115			

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Report Number: PKC0106

Sampled: 03/07/01
Received: 03/07/01

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: P1C1405 Extracted: 03/14/01										
LCS Dup Analyzed: 03/14/01 (P1C1405-BSD1)										
Calcium	**9.67**	2.0	mg/l	10.0		96.7	85-115	0.622	20	
Magnesium	**9.47**	0.50	mg/l	10.0		94.7	85-115	0.317	20	
Potassium	**10.3**	1.0	mg/l	10.0		103	85-115	0	20	
Sodium	**50.2**	5.0	mg/l	50.0		100	85-115	1.19	20	
Zinc	**0.950**	0.050	mg/l	1.00		95.0	85-115	1.59	20	
Matrix Spike Analyzed: 03/14/01 (P1C1405-MS1)					**Source: PKC0135-01**					
Calcium	**139**	2.0	mg/l	10.0	130	90.0	70-130			
Magnesium	**53.3**	0.50	mg/l	10.0	45	83.0	70-130			
Potassium	**17.9**	1.0	mg/l	10.0	7.3	106	85-115			
Sodium	**476**	10	mg/l	50.0	430	92.0	85-115			
Zinc	**0.915**	0.050	mg/l	1.00	ND	91.5	70-130			
Matrix Spike Dup Analyzed: 03/14/01 (P1C1405-MSD1)					**Source: PKC0135-01**					
Calcium	**140**	2.0	mg/l	10.0	130	100	70-130	0.717	20	
Magnesium	**54.8**	0.50	mg/l	10.0	45	98.0	70-130	2.78	20	
Potassium	**18.0**	1.0	mg/l	10.0	7.3	107	85-115	0.557	20	
Sodium	**471**	10	mg/l	50.0	430	82.0	85-115	1.06	20	M3
Zinc	**0.935**	0.050	mg/l	1.00	ND	93.5	70-130	2.16	20	

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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: PKC0106

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C1405 Extracted: 03/14/01										
Blank Analyzed: 03/14/01 (P1C1405-BLK1)										
Zinc, Dissolved	ND	0.050	mg/l							
Blank Analyzed: 03/14/01 (P1C1405-BLK2)										
Zinc, Dissolved	ND	0.050	mg/l							
LCS Analyzed: 03/14/01 (P1C1405-BS1)										
Zinc, Dissolved	**0.935**	0.050	mg/l	1.00		93.5	85-115			
LCS Dup Analyzed: 03/14/01 (P1C1405-BSD1)										
Zinc, Dissolved	**0.950**	0.050	mg/l	1.00		95.0	85-115	1.59	20	
Matrix Spike Analyzed: 03/14/01 (P1C1405-MS1)					**Source: PKC0135-01**					
Zinc, Dissolved	**0.915**	0.050	mg/l	1.00	ND	91.5	70-130			
Matrix Spike Dup Analyzed: 03/14/01 (P1C1405-MSD1)					**Source: PKC0135-01**					
Zinc, Dissolved	**0.935**	0.050	mg/l	1.00	ND	93.5	70-130	2.16	20	
Batch: P1C1507 Extracted: 03/15/01										
Blank Analyzed: 03/16/01 (P1C1507-BLK1)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Blank Analyzed: 03/16/01 (P1C1507-BLK2)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							

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2801 West Durango Street
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Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKC0106

Sampled: 03/07/01
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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: P1C1507 Extracted: 03/15/01										
LCS Analyzed: 03/16/01 (P1C1507-BS1)										
Cadmium, Dissolved	**0.00212**	0.0010	mg/l	0.00200		106	85-115			
Chromium, Dissolved	**0.0421**	0.0080	mg/l	0.0400		105	85-115			
Lead, Dissolved	**0.0405**	0.0040	mg/l	0.0400		101	85-115			
Matrix Spike Analyzed: 03/16/01 (P1C1507-MS1)					**Source: PKC0178-01**					
Cadmium, Dissolved	**0.00222**	0.0010	mg/l	0.00200	ND	111	70-130			
Chromium, Dissolved	**0.0376**	0.0080	mg/l	0.0400	ND	91.5	70-130			
Lead, Dissolved	**0.0421**	0.0040	mg/l	0.0400	ND	105	70-130			
Matrix Spike Dup Analyzed: 03/16/01 (P1C1507-MSD1)					**Source: PKC0178-01**					
Cadmium, Dissolved	**0.00192**	0.0010	mg/l	0.00200	ND	96.0	70-130	14.5	20	
Chromium, Dissolved	**0.0362**	0.0080	mg/l	0.0400	ND	88.0	70-130	3.79	20	
Lead, Dissolved	**0.0386**	0.0040	mg/l	0.0400	ND	96.5	70-130	8.67	20	
Batch: P1C2323 Extracted: 03/23/01										
Blank Analyzed: 03/26/01 (P1C2323-BLK1)										
Nickel, Dissolved	ND	0.0040	mg/l							
Blank Analyzed: 03/26/01 (P1C2323-BLK2)										
Nickel, Dissolved	ND	0.0040	mg/l							
LCS Analyzed: 03/26/01 (P1C2323-BS1)										
Nickel, Dissolved	**0.0401**	0.0080	mg/l	0.0400		100	85-115			
Matrix Spike Analyzed: 03/26/01 (P1C2323-MS1)					**Source: PKC0452-01**					
Nickel, Dissolved	**0.641**	0.20	mg/l	0.0400	0.55	227	70-130			M3

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Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKC0106

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C2323 Extracted: 03/23/01										
Matrix Spike Dup Analyzed: 03/26/01 (P1C2323-MSD1)					**Source: PKC0452-01**					
Nickel, Dissolved	**0.634**	0.20	mg/l	0.0400	0.55	210	70-130	1.10	20	M3

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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: P1C0714 Extracted: 03/07/01										
Blank Analyzed: 03/07/01 (P1C0714-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: 03/07/01 (P1C0714-BS1)										
Chloride	**4.61**	0.50	mg/l	5.00		92.2	90-110			
Fluoride	**2.39**	0.10	mg/l	2.50		95.6	90-110			
Nitrate-N	**2.39**	0.10	mg/l	2.50		95.6	90-110			
Nitrite-N	**2.39**	0.10	mg/l	2.50		95.6	90-110			
Orthophosphate	**4.71**	0.50	mg/l	5.00		94.2	90-110			
Sulfate	**4.76**	0.50	mg/l	5.00		95.2	90-110			
Matrix Spike Analyzed: 03/07/01 (P1C0714-MS1)					**Source: PKC0101-01**					
Chloride	**168**	0.50	mg/l	5.00	190	-440	80-120			M3
Fluoride	**2.94**	0.10	mg/l	2.50	0.23	108	80-120			
Nitrate-N	**15.7**	0.10	mg/l	2.50	11	188	80-120			M3
Nitrite-N	**2.21**	0.10	mg/l	2.50	ND	88.4	80-120			
Orthophosphate	**5.93**	0.50	mg/l	5.00	1.7	84.6	80-120			
Sulfate	ND	0.50	mg/l	5.00	270	-5400	80-120			M3
Matrix Spike Dup Analyzed: 03/07/01 (P1C0714-MSD1)					**Source: PKC0101-01**					
Chloride	**169**	0.50	mg/l	5.00	190	-420	80-120	0.593	20	M3
Fluoride	**2.83**	0.10	mg/l	2.50	0.23	104	80-120	3.81	20	
Nitrate-N	**15.6**	0.10	mg/l	2.50	11	184	80-120	0.639	20	M3
Nitrite-N	**2.10**	0.10	mg/l	2.50	ND	84.0	80-120	5.10	20	
Orthophosphate	**5.65**	0.50	mg/l	5.00	1.7	79.0	80-120	4.84	20	M2
Sulfate	ND	0.50	mg/l	5.00	270	-5400	80-120		20	M3

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Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C0719 Extracted: 03/07/01										
Duplicate Analyzed: 03/07/01 (P1C0719-DUP1)					**Source: PKC0079-01**					
Specific Conductance	**5150**	2.0	umhos/cm		5200			0.966	10	
Reference Analyzed: 03/07/01 (P1C0719-SRM1)										
Specific Conductance	**1410**	2.0	umhos/cm	1410		100	90-110			
Batch: P1C0720 Extracted: 03/07/01										
Blank Analyzed: 03/07/01 (P1C0720-BLK1)										
Total Dissolved Solids	ND	20	mg/l							
LCS Analyzed: 03/07/01 (P1C0720-BS1)										
Total Dissolved Solids	**386**	20	mg/l	400		96.5	80-115			
Duplicate Analyzed: 03/07/01 (P1C0720-DUP1)					**Source: PKC0079-01**					
Total Dissolved Solids	**3100**	100	mg/l		3100			0	5	
Batch: P1C0816 Extracted: 03/08/01										
Blank Analyzed: 03/13/01 (P1C0816-BLK1)										
Biochemical Oxygen Demand	ND	2.0	mg/l							
LCS Analyzed: 03/13/01 (P1C0816-BS1)										
Biochemical Oxygen Demand	**206**	2.0	mg/l	198		104	85-115			
Duplicate Analyzed: 03/13/01 (P1C0816-DUP1)					**Source: PKC0106-01**					
Biochemical Oxygen Demand	**19.6**	2.0	mg/l		20			2.02	20	

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: PKC0106

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C0816 Extracted: 03/08/01										
Duplicate Analyzed: 03/13/01 (P1C0816-DUP2)					**Source: PKC0125-02**					
Biochemical Oxygen Demand	**5.17**	2.0	mg/l		9.1			55.1	20	Q11
Batch: P1C0903 Extracted: 03/08/01										
Blank Analyzed: 03/08/01 (P1C0903-BLK1)										
Sulfide	ND	0.10	mg/l							
LCS Analyzed: 03/08/01 (P1C0903-BS1)										
Sulfide	**0.989**	0.20	mg/l	1.00		98.9	80-120			
Matrix Spike Analyzed: 03/08/01 (P1C0903-MS1)					**Source: PKC0045-01**					
Sulfide	**0.492**	0.10	mg/l	0.500	ND	95.6	80-120			
Matrix Spike Dup Analyzed: 03/08/01 (P1C0903-MSD1)					**Source: PKC0045-01**					
Sulfide	**0.512**	0.10	mg/l	0.500	ND	99.6	80-120	3.98	20	
Batch: P1C0907 Extracted: 03/09/01										
Blank Analyzed: 03/09/01 (P1C0907-BLK1)										
Chemical Oxygen Demand	ND	20	mg/l							
LCS Analyzed: 03/09/01 (P1C0907-BS1)										
Chemical Oxygen Demand	**213**	20	mg/l	200		107	90-110			
Matrix Spike Analyzed: 03/09/01 (P1C0907-MS1)					**Source: PKC0113-01**					
Chemical Oxygen Demand	**304**	25	mg/l	250	54	100	65-130			

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2801 West Durango Street
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Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0106

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C0907 Extracted: 03/09/01										
Matrix Spike Dup Analyzed: 03/09/01 (P1C0907-MSD1)					**Source: PKC0113-01**					
Chemical Oxygen Demand	**313**	25	mg/l	250	54	104	65-130	2.92	20	
Batch: P1C0908 Extracted: 03/09/01										
Blank Analyzed: 03/09/01 (P1C0908-BLK1)										
Total Suspended Solids	ND	10	mg/l							
Duplicate Analyzed: 03/09/01 (P1C0908-DUP1)					**Source: PKC0113-01**					
Total Suspended Solids	**28.0**	10	mg/l		27			3.64	5	
Duplicate Analyzed: 03/09/01 (P1C0908-DUP2)					**Source: PKC0140-02**					
Total Suspended Solids	ND	10	mg/l		ND				5	
Batch: P1C1215 Extracted: 03/12/01										
Blank Analyzed: 03/12/01 (P1C1215-BLK1)										
Phosphorus	ND	0.050	mg/l							
LCS Analyzed: 03/12/01 (P1C1215-BS1)										
Phosphorus	**0.568**	0.050	mg/l	0.500		114	80-120			
Matrix Spike Analyzed: 03/12/01 (P1C1215-MS1)					**Source: PKC0180-01**					
Phosphorus	**0.595**	0.050	mg/l	0.500	ND	116	75-125			
Matrix Spike Dup Analyzed: 03/12/01 (P1C1215-MSD1)					**Source: PKC0180-01**					
Phosphorus	**0.583**	0.050	mg/l	0.500	ND	114	75-125	2.04	20	

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Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0106

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C1306 Extracted: 03/13/01										
Blank Analyzed: 03/14/01 (P1C1306-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 03/14/01 (P1C1306-BS1)										
Total Cyanide	**0.0933**	0.025	mg/l	0.100		93.3	90-110			
Matrix Spike Analyzed: 03/14/01 (P1C1306-MS1)					**Source: PKC0106-01**					
Total Cyanide	**0.0933**	0.025	mg/l	0.100	ND	93.3	70-130			
Matrix Spike Dup Analyzed: 03/14/01 (P1C1306-MSD1)					**Source: PKC0106-01**					
Total Cyanide	**0.0933**	0.025	mg/l	0.100	ND	93.3	70-130	0	20	
Batch: P1C1523 Extracted: 03/15/01										
Duplicate Analyzed: 03/15/01 (P1C1523-DUP1)					**Source: PKC0022-01**					
Alkalinity as CaCO3	**242**	5.0	mg/l		240			0.830	20	
Duplicate Analyzed: 03/15/01 (P1C1523-DUP2)					**Source: PKC0154-02**					
Alkalinity as CaCO3	**242**	5.0	mg/l		240			0.830	20	
Reference Analyzed: 03/15/01 (P1C1523-SRM1)										
Alkalinity as CaCO3	**109**	5.0	mg/l	105		104	89-111			
Batch: P1C1922 Extracted: 03/19/01										
Blank Analyzed: 03/19/01 (P1C1922-BLK1)										
Ammonia-N	ND	0.050	mg/l							

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2801 West Durango Street
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Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKC0106

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C1922 Extracted: 03/19/01										
LCS Analyzed: 03/19/01 (P1C1922-BS1)										
Ammonia-N	**0.480**	0.050	mg/l	0.500		96.0	90-110			
Matrix Spike Analyzed: 03/19/01 (P1C1922-MS1)					**Source: PKC0113-03**					
Ammonia-N	**1.31**	0.050	mg/l	0.500	0.77	108	80-120			
Matrix Spike Dup Analyzed: 03/19/01 (P1C1922-MSD1)					**Source: PKC0113-03**					
Ammonia-N	**1.32**	0.050	mg/l	0.500	0.77	110	80-120	0.760	20	

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2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0106

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: C1C1409 Extracted: 03/14/01										
Blank Analyzed: 03/15/01 (C1C1409-BLK1)										
Total Kjeldahl Nitrogen	ND	0.50	mg/l							
LCS Analyzed: 03/15/01 (C1C1409-BS1)										
Total Kjeldahl Nitrogen	**9.07**	0.50	mg/l	10.0		90.7	85-120			
Matrix Spike Analyzed: 03/15/01 (C1C1409-MS1)					**Source: CKC0048-01**					
Total Kjeldahl Nitrogen	**10.1**	0.50	mg/l	10.0	ND	99.3	65-125			
Matrix Spike Dup Analyzed: 03/15/01 (C1C1409-MSD1)					**Source: CKC0048-01**					
Total Kjeldahl Nitrogen	**10.1**	0.50	mg/l	10.0	ND	99.3	65-125	0	15	

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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: PKC0106	Sampled: 03/07/01 Received: 03/07/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

K4	The seed depletion was outside the method and laboratory acceptance limits. The reported result is an estimated value.
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 addtion (MSA).
Q11	Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

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SAMPLE PKC0106-01 - 67TH AVENUE
DATE 3/20/01
ANALYST Tim

ANION	CONC. mg/L	CONC. meq	CATION	CONC. mg/L	CONC. meq
Alkalinity	70.00	1.40	Sodium	15	0.65
Chloride	14.52	0.41	Potassium	7.60	0.19
Nitrate	1.20	0.09	Calcium	27.21	1.36
Sulfate	14.44	0.30	Magnesium	8.53	0.70
Fluoride	0.27	0.01			
SUM	100.43	2.21		58.33	2.91
EC X .01 =		2.14			2.14

Anion-Cation Balance= 13.6%

EC	213.56	TDS	280
		EC X 0.65 =	138.81

Lab Reports and Quality Control Data
Del Mar Analytical (grab)

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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: PKC0119

Sampled: 03/07/01
Received: 03/07/01
Issued: 03/15/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKC0119-01	67TH + SALT-GRAB	Water
PKC0119-02	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: The Fecal Coliform, Fecal Strep, and E-Coli analyses were subcontracted to ES Environmental Services/Severn Trent - 3333 S. Price Road, Chandler, AZ (AZ0021). 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)

Linda Eshelman
Project Manager

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Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0119

Sampled: 03/07/01
Received: 03/07/01

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: PKC0119-01 (67TH + SALT-GRAB - Water)								
Total Recoverable Hydrocarbons	EPA 418.1	P1C0815	1.0	**9.2**	1	3/8/01	3/8/01	

FLOOD CONTROL DISTRICT
RECEIVED
MAR 23 '01
CH & SW | FINANCE
PIO | LANDS
ADMIN | O & M
REG | P & PM
ENG | FILE
CONTRACTS
ING

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Project Manager

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Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0119

Sampled: 03/07/01
Received: 03/07/01

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: PKC0119-01 (67TH + SALT-GRAB - Water)								
Oil & Grease	EPA 413.2	P1C0814	1.0	**9.6**	1	3/8/01	3/8/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Project Manager

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2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0119

Sampled: 03/07/01
Received: 03/07/01

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: PKC0119-01 (67TH + SALT-GRAB - Water)								
Benzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromodichloromethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromoform	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromomethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
Carbon tetrachloride	EPA 624	P1C0904	2.5	ND	1	3/9/01	3/9/01	
Chlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Dibromochloromethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloroethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
2-Chloroethyl vinyl ether	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloroform	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloromethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
1,2-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,3-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,4-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1-Dichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,2-Dichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1-Dichloroethene	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
trans-1,2-Dichloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,2-Dichloropropane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
cis-1,3-Dichloropropene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
trans-1,3-Dichloropropene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Ethylbenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Methylene chloride	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Tetrachloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Toluene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1,1-Trichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1,2-Trichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Trichloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Trichlorofluoromethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
Vinyl chloride	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Acetone	EPA 624	P1C0904	20	ND	1	3/9/01	3/9/01	
Surrogate: Dibromofluoromethane (80-120%)				*107 %*				
Surrogate: Toluene-d8 (65-125%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (65-130%)				*111 %*				

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: PKC0119

Sampled: 03/07/01
Received: 03/07/01

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: PKC0119-02 (TRIP BLANK - Water)								
Benzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromodichloromethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromoform	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromomethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
Carbon tetrachloride	EPA 624	P1C0904	2.5	ND	1	3/9/01	3/9/01	
Chlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Dibromochloromethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloroethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
2-Chloroethyl vinyl ether	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloroform	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloromethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
1,2-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,3-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,4-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1-Dichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,2-Dichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1-Dichloroethene	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
trans-1,2-Dichloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,2-Dichloropropane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
cis-1,3-Dichloropropene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
trans-1,3-Dichloropropene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Ethylbenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Methylene chloride	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Tetrachloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Toluene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1,1-Trichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1,2-Trichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Trichloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Trichlorofluoromethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
Vinyl chloride	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Acetone	EPA 624	P1C0904	20	ND	1	3/9/01	3/9/01	
Surrogate: Dibromofluoromethane (80-120%)				*106 %*				
Surrogate: Toluene-d8 (65-125%)				*104 %*				
Surrogate: 4-Bromofluorobenzene (65-130%)				*111 %*				

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: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0119

Sampled: 03/07/01
Received: 03/07/01

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: PKC0119-01 (67TH + SALT-GRAB - Water)								
Chrysene	EPA 625	P1C0722	10	ND	1	3/7/01	3/14/01	
Phenol	EPA 625	P1C0722	10	ND	1	3/7/01	3/14/01	
Benzoic acid	EPA 625	P1C0722	50	ND	1	3/7/01	3/14/01	
Surrogate: 2-Fluorophenol (20-120%)				*63.1 %*				
Surrogate: Phenol-d6 (15-115%)				*63.3 %*				
Surrogate: 2,4,6-Tribromophenol (35-135%)				*81.4 %*				
Surrogate: Nitrobenzene-d5 (25-120%)				*61.6 %*				
Surrogate: 2-Fluorobiphenyl (25-145%)				*84.8 %*				
Surrogate: Terphenyl-d14 (40-130%)				*96.8 %*				

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Project Manager

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Report Number: PKC0119

Sampled: 03/07/01
Received: 03/07/01

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: PKC0119-01 (67TH + SALT-GRAB - Water)								
4,4'-DDE	EPA 608	I1C1234	0.10	ND	1	3/12/01	3/13/01	
Surrogate: Tetrachloro-m-xylene (30-120%)				*50.8 %*				
Surrogate: Decachlorobiphenyl (30-120%)				*65.0 %*				

DEL MAR ANALYTICAL, IRVINE (AZ0428)

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Report Number: PKC0119

Sampled: 03/07/01
Received: 03/07/01

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: P1C0815 Extracted: 03/08/01										
Blank Analyzed: 03/08/01 (P1C0815-BLK1)										
Total Recoverable Hydrocarbons	ND	1.0	mg/l							
LCS Analyzed: 03/08/01 (P1C0815-BS1)										
Total Recoverable Hydrocarbons	**12.7**	1.0	mg/l	10.0		127	95-130			
LCS Dup Analyzed: 03/08/01 (P1C0815-BSD1)										
Total Recoverable Hydrocarbons	**12.7**	1.0	mg/l	10.0		127	95-130	0	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: P1C0814 Extracted: 03/08/01										
Blank Analyzed: 03/08/01 (P1C0814-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 03/08/01 (P1C0814-BS1)										
Oil & Grease	**12.6**	1.0	mg/l	10.0		126	100-130			
LCS Dup Analyzed: 03/08/01 (P1C0814-BSD1)										
Oil & Grease	**12.6**	1.0	mg/l	10.0		126	100-130	0	20	

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Sampled: 03/07/01
Received: 03/07/01

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: P1C0722 Extracted: 03/07/01										
Blank Analyzed: 03/13/01 (P1C0722-BLK1)										
Chrysene	ND	10	ug/l							
Phenol	ND	10	ug/l							
Benzoic acid	ND	50	ug/l							
Surrogate: 2-Fluorophenol	*76.6*		*ug/l*	*100*		*76.6*	*20-120*			
Surrogate: Phenol-d6	*69.1*		*ug/l*	*100*		*69.1*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.3*		*ug/l*	*100*		*90.3*	*35-135*			
Surrogate: Nitrobenzene-d5	*38.2*		*ug/l*	*50.0*		*76.4*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*51.2*		*ug/l*	*50.0*		*102*	*25-145*			
Surrogate: Terphenyl-d14	*49.6*		*ug/l*	*50.0*		*99.2*	*40-130*			
LCS Analyzed: 03/13/01 (P1C0722-BS1)										
Phenol	**39.7**	10	ug/l	50.0		79.4	5-112			
Surrogate: 2-Fluorophenol	*83.0*		*ug/l*	*100*		*83.0*	*20-120*			
Surrogate: Phenol-d6	*75.0*		*ug/l*	*100*		*75.0*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*99.6*		*ug/l*	*100*		*99.6*	*35-135*			
Surrogate: Nitrobenzene-d5	*47.0*		*ug/l*	*50.0*		*94.0*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*51.8*		*ug/l*	*50.0*		*104*	*25-145*			
Surrogate: Terphenyl-d14	*51.5*		*ug/l*	*50.0*		*103*	*40-130*			
Matrix Spike Analyzed: 03/13/01 (P1C0722-MS1)					**Source: PKC0080-01**					
Phenol	**40.2**	10	ug/l	50.0	ND	80.4	5-112			
Surrogate: 2-Fluorophenol	*72.9*		*ug/l*	*100*		*72.9*	*20-120*			
Surrogate: Phenol-d6	*74.0*		*ug/l*	*100*		*74.0*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.9*		*ug/l*	*100*		*90.9*	*35-135*			
Surrogate: Nitrobenzene-d5	*41.3*		*ug/l*	*50.0*		*82.6*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*43.7*		*ug/l*	*50.0*		*87.4*	*25-145*			
Surrogate: Terphenyl-d14	*47.9*		*ug/l*	*50.0*		*95.8*	*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: P1C0722 Extracted: 03/07/01										
Matrix Spike Dup Analyzed: 03/13/01 (P1C0722-MSD1)					**Source: PKC0080-01**					
Phenol	**42.8**	10	ug/l	50.0	ND	85.6	5-112	6.27	20	
Surrogate: 2-Fluorophenol	*79.9*		*ug/l*	*100*		*79.9*	*20-120*			
Surrogate: Phenol-d6	*80.8*		*ug/l*	*100*		*80.8*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*92.1*		*ug/l*	*100*		*92.1*	*35-135*			
Surrogate: Nitrobenzene-d5	*46.4*		*ug/l*	*50.0*		*92.8*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*50.0*		*ug/l*	*50.0*		*100*	*25-145*			
Surrogate: Terphenyl-d14	*49.4*		*ug/l*	*50.0*		*98.8*	*40-130*			

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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: I1C1234 Extracted: 03/12/01										
Blank Analyzed: 03/13/01 (I1C1234-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	*0.329*		*ug/l*	*0.500*		*65.8*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.466*		*ug/l*	*0.500*		*93.2*	*30-120*			
LCS Analyzed: 03/13/01 (I1C1234-BS1)										
Aldrin	**0.264**	0.10	ug/l	0.500		52.8	42-115			
alpha-BHC	**0.270**	0.10	ug/l	0.500		54.0	37-115			
beta-BHC	**0.334**	0.10	ug/l	0.500		66.8	45-115			
delta-BHC	**0.311**	0.20	ug/l	0.500		62.2	45-130			
gamma-BHC (Lindane)	**0.302**	0.10	ug/l	0.500		60.4	40-115			
4,4'-DDD	**0.328**	0.10	ug/l	0.500		65.6	55-120			
4,4'-DDE	**0.300**	0.10	ug/l	0.500		60.0	50-115			

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Received: 03/07/01

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: I1C1234 Extracted: 03/12/01										
LCS Analyzed: 03/13/01 (I1C1234-BS1)										
4,4'-DDT	**0.397**	0.10	ug/l	0.500		79.4	55-115			
Dieldrin	**0.264**	0.10	ug/l	0.500		52.8	50-115			
Endosulfan I	**0.281**	0.10	ug/l	0.500		56.2	45-115			
Endosulfan II	**0.318**	0.10	ug/l	0.500		63.6	50-115			
Endosulfan sulfate	**0.397**	0.20	ug/l	0.500		79.4	65-120			
Endrin	**0.311**	0.10	ug/l	0.500		62.2	45-115			
Endrin aldehyde	**0.329**	0.10	ug/l	0.500		65.8	45-115			
Endrin ketone	**0.386**	0.10	ug/l	0.500		77.2	55-140			
Heptachlor	**0.229**	0.10	ug/l	0.500		45.8	35-115			
Heptachlor epoxide	**0.304**	0.10	ug/l	0.500		60.8	40-115			
Methoxychlor	**0.424**	0.10	ug/l	0.500		84.8	55-120			
Surrogate: Tetrachloro-m-xylene	*0.252*		*ug/l*	*0.500*		*50.4*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.357*		*ug/l*	*0.500*		*71.4*	*30-120*			
LCS Dup Analyzed: 03/13/01 (I1C1234-BSD1)										
Aldrin	**0.272**	0.10	ug/l	0.500		54.4	42-115	2.99	20	
alpha-BHC	**0.280**	0.10	ug/l	0.500		56.0	37-115	3.64	20	
beta-BHC	**0.333**	0.10	ug/l	0.500		66.6	45-115	0.300	20	
delta-BHC	**0.317**	0.20	ug/l	0.500		63.4	45-130	1.91	20	
gamma-BHC (Lindane)	**0.303**	0.10	ug/l	0.500		60.6	40-115	0.331	20	
4,4'-DDD	**0.354**	0.10	ug/l	0.500		70.8	55-120	7.62	20	
4,4'-DDE	**0.327**	0.10	ug/l	0.500		65.4	50-115	8.61	20	
4,4'-DDT	**0.456**	0.10	ug/l	0.500		91.2	55-115	13.8	20	
Dieldrin	**0.285**	0.10	ug/l	0.500		57.0	50-115	7.65	20	
Endosulfan I	**0.305**	0.10	ug/l	0.500		61.0	45-115	8.19	20	
Endosulfan II	**0.337**	0.10	ug/l	0.500		67.4	50-115	5.80	20	
Endosulfan sulfate	**0.417**	0.20	ug/l	0.500		83.4	65-120	4.91	20	
Endrin	**0.320**	0.10	ug/l	0.500		64.0	45-115	2.85	20	
Endrin aldehyde	**0.373**	0.10	ug/l	0.500		74.6	45-115	12.5	20	
Endrin ketone	**0.402**	0.10	ug/l	0.500		80.4	55-140	4.06	20	
Heptachlor	**0.234**	0.10	ug/l	0.500		46.8	35-115	2.16	20	

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
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 (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: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0119

Sampled: 03/07/01
Received: 03/07/01

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: I1C1234 Extracted: 03/12/01										
LCS Dup Analyzed: 03/13/01 (I1C1234-BSD1)										
Heptachlor epoxide	**0.320**	0.10	ug/l	0.500		64.0	40-115	5.13	20	
Methoxychlor	**0.456**	0.10	ug/l	0.500		91.2	55-120	7.27	20	
Surrogate: Tetrachloro-m-xylene	*0.256*		*ug/l*	*0.500*		*51.2*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.385*		*ug/l*	*0.500*		*77.0*	*30-120*			

Linda Eshelman
Project Manager

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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 (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: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0119

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

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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Lab Reports and Quality Control Data
Severn Trent

Seve1 . Trent Services

3333 S. Old Price Road Chandler, Arizona 85248 Tel: (480) 899-0191 Fax (480) 899-0349

402 N. Neely Street Gilbert, Arizona 85233 Tel: (480) 926-3761 Fax (480) 926-3868

Del Mar Analytical
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044

Attention: Linda Eshelman

Report Date: March 20, 2001
Date/Time Received: 03/07/01 1130
Project Identification: FCD-Phoenix
Sample Description: Stormwater
Purchase Order Number:

67TH AVENUE

LAB RESULTS

Analytical Method	Parameter Description	Sample Identification	Sample Date / Time	Analysis Date	Lab Identification	Reporting Limit	Analytical Results	Units
SM9221E	Fecal Coliform by MTF	67th & Salt	03/07/01 0845	03/07/01	C01-697	2	≥ 1600	MPN/100ml
SM9221F	E. Coli - MPN			03/07/01			≥ 1600	MPN/100ml
SM9230B	Fecal Streptococcus by MTF	67th & Salt	03/07/01 0845	03/07/01	C01-698	2	≥ 1600	MPN/100ml

Analytes reported as N.D. were not present above the stated limit of detection.
SEVERN TRENT ENVIRONMENTAL SERVICES, Chandler - ADHS Licensure AZ0613

Stephen J. Rot
Laboratory Director

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Lab Reports and Quality Control Data
NEL Laboratories

NEL LABORATORIES
Reno • Las Vegas • Boise
Phoenix • Sacramento

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

PHOENIX 67TH AVE & SALT R COMPOSITE

PROJECT NAME: PKC0106-MCFC
PROJECT #: NA

NEL ORDER ID: P0103025 3/7/01

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 3/9/01.

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.

Re-issued
4-26-01

Doug McCormack
Lab Manager

Date

CERTIFICATIONS:

	Reno	Las Vegas	S. California
Arizona	AZ0520	AZ0518	AZ0605
California	1707	2002	2264
US Army Corps of Engineers	Certified	Certified	

	Reno	Las Vegas	S. California
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
L.A.C.S.D.			10228

NEL LABORATORIES

CLIENT:	Del Mar Analytical	CLIENT ID:	**PKC0106-01**
PROJECT ID:	PKC0106-MCFC	DATE SAMPLED:	3/7/01
PROJECT #:	NA	NEL SAMPLE ID:	P0103025-01
TEST:	**AZ METALS PKG**		
MATRIX:	Aqueous	ANALYST:	JTY

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	0.0068	0.001 mg/L	1	EPA 200.8	3/14/01	3/15/01

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT:	Del Mar Analytical	CLIENT ID:	**PKC0106-02**
PROJECT ID:	PKC0106-MCFC	DATE SAMPLED:	3/7/01
PROJECT #:	NA	NEL SAMPLE ID:	P0103025-02
TEST:	**Dissolved Metals**		
MATRIX:	Aqueous	ANALYST:	JTY

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	0.0033	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	3/30/01	3/31/01
Copper, Dissolved	0.014	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01

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: PKC0106-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: P03024M-BLK

TEST: **AZ METALS PKG**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	ND	0.001 mg/L	1	EPA 200.8	3/14/01	3/15/01

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: PKC0106-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: P03026M-DIS-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	3/30/01	3/31/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	3/30/01	3/31/01
Copper, Dissolved	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01

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: PKC0106-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic	P03024M-LCS	0.1	0.0966	97	85 - 115	
Arsenic	P0103024-01-MS	0.1	0.101	99	75 - 125	
Arsenic	P0103024-01-MSD	0.1	0.1	98	75 - 125	1.
Beryllium	P03024M-LCS	0.1	0.107	107	85 - 115	
Beryllium	P0103024-01-MS	0.1	0.116	116	75 - 125	
Beryllium	P0103024-01-MSD	0.1	0.12	120	75 - 125	3.4
Copper	P03024M-LCS	0.05	0.0533	107	85 - 115	
Copper	P0103024-01-MS	0.05	0.0605	107	75 - 125	
Copper	P0103024-01-MSD	0.05	0.0598	106	75 - 125	1.3
Silver	P03024M-LCS	0.1	0.094	94	85 - 115	
Silver	P0103024-01-MS	0.1	0.0954	95	75 - 125	
Silver	P0103024-01-MSD	0.1	0.0956	96	75 - 125	0.2

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: PKC0106-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic, Dissolved	P03026M-DIS-LCS	0.01	0.0104	104	85 - 115	
Arsenic, Dissolved	P0103026-02-MS	0.01	0.0122	105	70 - 130	
Arsenic, Dissolved	P0103026-02-MSD	0.01	0.0122	105	70 - 130	0.
Beryllium, Dissolved	P03026M-DIS-LCS	0.01	0.00969	97	85 - 115	
Beryllium, Dissolved	P0103026-02-MS	0.01	0.0103	103	70 - 130	
Beryllium, Dissolved	P0103026-02-MSD	0.01	0.0107	107	70 - 130	3.8
Copper, Dissolved	P03026M-DIS-LCS	0.01	0.00968	97	85 - 115	
Copper, Dissolved	P0103026-02-MS	0.01	0.0166	97	70 - 130	
Copper, Dissolved	P0103026-02-MSD	0.01	0.0172	103	70 - 130	6.
Silver, Dissolved	P03026M-DIS-LCS	0.1	0.108	108	85 - 115	
Silver, Dissolved	P0103026-02-MS	0.1	0.107	107	70 - 130	
Silver, Dissolved	P0103026-02-MSD	0.1	0.107	107	70 - 130	0.

ND - Not Detected

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Lab Reports and Quality Control Data
Transwest Geochem

TRANSWEST GEOCHEM

March 26, 2001

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

RE: PKC0106-MCFC – 67TH AVENUE
Work Order No.: 0103111

Dear Linda,
Transwest Geochem, Inc. received 1 sample on 3/12/2001 2:30:00 PM 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 Barbee for:

Beth Proffitt
Project Manager

ADHS License No. AZM133/AZ0133

Date Printed: 26-Mar-01

Client: Del Mar Analytical
Work Order: 0103111
Project Name: PKC0106-MCFC
Project Number:

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.

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

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 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name: PKC0106-MCFC
Project Number:
Work Order: 0103111
Date Received: 12-Mar-01

Work Order Sample Summary

Client Sample ID	Lab Sample ID	Test Code	Collection Date
PKC0106-01	0103111-01A	EPA420.1	3/7/2001 8:00:00 AM

Date Printed 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name: PKC0106-MCFC
Project Number:
Work Order: 0103111
Date Received: 12-Mar-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 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103111
Lab ID: 0103111-01
Project Name: PKC0106-MCFC
Project Number:

Client Sample ID: PKC0106-01
Collection Date: 3/7/2001 8:00:00 AM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	0.0071	0.0050		mg/L	1	EPA420.1	3/20/01	3/23/01	KMB	420.1-3/23/2001

Confidential and Privileged

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103111
Project: PKC0106-MCFC

QC SUMMARY REPORT

Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	<0.0050	0.0050		mg/L	1	EPA420.1	3/20/01	3/23/01	KMB	420.1-3/23/2001

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103111
Project: PKC0106-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: **0103111-01AD** Batch ID: 420.1-3/23/2001											
Client ID: **PKC0106-01**											
Phenolics, Total Recoverable	0.007000	0.0050	mg/L	0.007100	1%	20	EPA420.1	3/20/01	3/23/01	KMB	

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103111
Project: PKC0106-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: **0103111-01AS**	Batch ID: 420.1-3/23/2001			Test Code: EPA420.1				Date Analyzed: 3/23/01			
Client ID: **PKC0106-01**				Units: mg/L				Date Prepared: 3/20/01			
Phenolics, Total Recoverable	0.1022	0.0050	0.1000	0.007100	95%	80	120				

TRANSWEST GEOCHEM

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103111
Project: PKC0106-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: 420.1-3/23/2001			Test Code: EPA420.1				Date Analyzed: 3/23/01			
				Units: mg/L				Date Prepared: 3/20/01			
Phenolics, Total Recoverable	0.1025	0.0050	0.1000	<0.0050	103%	85	115				

TRANSWEST GEOCHEM

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103111
Project: PKC0106-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: 420.1-3/23/2001			Test Code: EPA420.1				Date Analyzed: 3/23/01			
				Units: mg/L				Date Prepared: 3/20/01			
Phenolics, Total Recoverable	0.1015	0.0050	0.1000	<0.0050	102%	85	115				

Lab Reports and Quality Control Data
U.S. Geological Survey

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 MARCH 7, 2001

Station 67TH AVE. AND THE SALT RIVER Sta.No. 332430112101001

Sampled By FOSSUM & WILSON Mean Time 0723 SMS Cntrl. No.

Record No. 00100133 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) :

FIELD MEASUREMENTS

				R	F	
Q. Inst. (00061)	16.9	cfs meas.	Alkalinity (00419/39086)	80	51	mg/L
Gage Ht (00065)	1.32	ft. rating est.	Bicarbonate (00450/00453)	98	62	mg/L
Temp. Water (00010)	15.0	°C	Carbonate (00447/00452)	0	0	mg/L
Temp. Air (00020)	—	°C	Hydroxide (—)	—	—	mg/L
pH (00400)	8.33	units	E. Coli (31633)	—		col./100 mL; Rmk
Sp. Cond. (00095)	93.5	µS/cm 25 °C	FC (31625)	—		col./100 mL; Rmk
Dis. Oxy. (00300)	—	mg/L	FS (31673)	—		col./100 mL; Rmk
DO Sat. (00301)	—	%	Other:			
Bar. Press. (00025)	—	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

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) :	

Other Observations

81395 (MGD) =
82381 (PRECIP) =
00129 (MAX 5) =
00135 (STM. LENGTH) =
00132 (DRY DAYS) =

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	15.0	7.00	7.00	OK
10.01	15.0	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 = 15.0°C

FIELD pH = 8.33 USE : 8.33

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	15.0	0	0	OK
1413 µS	15.0	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 = 93.5 µS USE : 93.5 µS

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 BOD bottle

Calibration :

☐ 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 _____ mm Hg; (mm = in. X 25.4)

Salinity Corr. Factor _____ H_2O Temp. _____ °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 =

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

DO METER FAILED - NO D.O.

ALKALINITY

pH	△ pH	Vol acid DC or mL	△Vol acid DC or mL	△ pH / △ Vol acid
RAW				
6.93		0		
5.42	1.51	340	340	.004
5.32	.10	350	10	.01
5.19	.13	360	10	.013
5.09	.10	370	10	.01
4.99	.10	380	10	.01
4.89	.10	390	10	.01
4.60	.29	400	10	.029
4.40	.20	410	10	.02
4.30	.10	420	10	.01
4.20	.10	430	10	.01
4.10	.10	440	10	.01
4.00	.10	450	10	.01
FILTERED				
7.25		0		
5.40	1.85	225	225	.008
5.30	.10	230	5	.02
5.19	.11	235	5	.022
5.06	.13	240	5	.026
4.90	.16	245	5	.032
4.73	.17	250	5	.034
4.55	.18	255	5	.036
4.40	.15	260	5	.03
4.26	.14	265	5	.028
4.15	.11	270	5	.022
4.05	.10	275	5	.02
3.98	.07	280	5	.014

Acid: 1.60 N (0.1600 N) 0.01639N OTHER _____

Acid Lot No. : 0280 EXP. 4-01

Sample Volume : 50 mL

☒ Filtered ☒ Unfiltered

Sample stirred : ☒ magnetically ☐ manually

pH: Start _____ End _____

DC (Digital Counts) or Vol. titrated at End Point near pH 8.3 : R 0 | F 0

Digital Counts or Vol. titrated at End Point near pH 4.5 : 400 | 255

☒ Incremental Equivalence ☐ Fixed End Point ☐ Gran Titration

Date 3-7-01 Time 1300

CALCULATIONS :

$$CO_3^{-2} = A \times \frac{F_1}{\text{mL sample}} \times CF \;*$$

$$HCO_3^{-1} = [B - 2(A)] \times \frac{F_2}{\text{mL sample}} \times CF; \;*$$

$$\text{ALKALINITY as } CaCO_3 = B \times \frac{F_3}{\text{mL sample}} \times CF \;*$$

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 0

B = DC or mLs acid from initial pH to endpoint near 4.5 = 400 | 255

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)	80	51	mg/L as $CaCO_3$
BICARBONATE	(00450/00453)	98	62	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 :

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	4704168 00	

STATION ID	Begin Date (YYYYMMDD)	Begin Time	Medium Code	Sample Type
332430112101001	20010307	0723	9	9

District Contact Phone Number	End Date (YYYYMMDD)	End Time	District Contact Email
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 and the Salt River **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: ____ 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	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	WCA
CC	CUR	1 FCA	GCC	IRE	PHE	RCB	RURCV	TBY	1 RDE
CHY	DOC	FCC	GCV	IRL	PIC	RCN	RUS	[illegible]	

NWQL Login Comments

Collected by: KEN FOSSUM Phone No. 602-379-3089 Ex. 230 Date Shipped: 3/8/01

FIELD VALUES

Lab P Code	Value	Remark	Lab P Code	Value	Remark	Lab P Code	Value	Remark
00095	93.5		400	8.33		[illegible]		

Field Comments

*MANDATORY FOR NWIS

Revised 04/00

** APR 23 2001 AT 1503 NWIS PROGRAM QACARDSIN/QWCARDSIN TRANSACTION NO.: 23

United States Department of the Interior
U.S. Geological Survey
Water Resources Division
National Laboratory
Arvada, Colorado

RECORD NO.: 00100133
SITE ID: USGS 332430112101001 LAB ID NO.: PROJECT: 470416800
STATION NAME: 67th Avenue and the Salt River at Phoenix, Az. STATE: 04
BEGIN DATE: 03-07-2001 AT 0723 END DATE: - - AT COUNTY: 013
GEOLOGIC UNIT: DATA TYPES: CH ME NU
STATUS: H SOURCE: 9 HYD. CONDITION: 9 TYPE: 9 HYD. EVENT: J
MEDIUM: 9 REMARKS TO LAB: Pared NPDES Sample. Send to Ocala Lab.
SAMPLE COST: $161.30 REMARKS FROM LAB: OCALA LABID ID NUMBER: 200104924
SCHEDULES USED:
NO. PARAMETERS: 26 PROCESSING STATUS: R

	CODE	PARAMETER NAME	UNITS	VALUE	REM	QA	MET	PREC CODE
	00010	WATER TEMPERATURE	(DEGREES C)	15.		I		3
	00027	COLLECTING AGENCY	(CODE NUMBER)	1028.		I		5
UPDATE	00028	ANALYZING AGENCY	(CODE NUMBER)	81213.		I	A	5
	00061	DISCHARGE, INST.	CFS	16.9		I		3
	00063	NUMBER OF SAMPLING P	(COUNT)	1.		I		3
	00065	GAGE HEIGHT	(FEET)	1.32		I		4
	00095	SPECIFIC CONDUCTANCE	US/CM @ 25C	93.5		I		3
NEW-->	00340	COD HIGH LEVEL MG/L	(MG/L)	62.		A	0	2
	00400	PH, WH, FIELD	(STANDARD UNITS)	8.33		I		2
NEW-->	00403	PH, WH, LABORATORY	(STANDARD UNITS)	6.89		A	A	3
	00419	ANC, IT, FIELD	(MG/L AS CACO3)	80.		I	B	2
	00447	ANC CARB IT FIELD	(MG/L AS CO3)	.0		I		3
	00450	ANC BICARB IT FIELD	(MG/L AS HCO3)	98.		I	B	2
	00452	CARBONATE,DIS,IT,F	(MG/L AS CO3)	.0		I	B	2
	00453	BICARBONATE,DIS,IT,F	(MG/L AS HCO3)	62.		I	B	2
NEW-->	00530	RESIDUE TOTAL	(MG/L)	32.		A	B	2
NEW-->	00666	PHOSPHORUS DISS.	(MG/L AS P)	.21		A	D	2
NEW-->	01027	CADMIUM TOTAL	(UG/L AS CD)	.5	1	A	4	1
NEW-->	01042	COPPER TOTAL	(UG/L AS CU)	62.		A	1	2
NEW-->	01051	LEAD TOTAL	(UG/L AS PB)	31.		A	4	2
NEW-->	01092	ZINC TOTAL	(UG/L AS ZN)	270.		A	1	2
	39086	ALKALINITY,DIS,IT,F	(MG/L AS CACO3)	51.		I	B	2
NEW-->	70300	RESIDUE DIS 180C	MG/L	136.		A	A	3
	82398	SAMPLING METHOD	METHOD, CODES	30.		I		2
NEW-->	90410	ANC, TIT. 4.5, LAB	MG/L AS CACO3	81.		A	A	2
NEW-->	99870	IN-BOTTLE DIGESTION	DDD	1.		A	8	2

********** ERROR REPORT AND MESSAGES TO AND FROM LAB FOR TRANSACTION NO. 23 **********
PARAMETER 00028 CHANGED FROM 1028. REM/QA/MET/SIG = (I 5) TO 81213. REM/QA/MET/SIG = (IA5)

MESSAGE FROM LAB OCALA LABID ID NUMBER: 200104924

PARAMETER 01051 VALUE 31 EXCEEDS DW ALERT LIMIT OF 0.000

RESIDUE AT 180 C/SPECIFIC CONDUCTANCE RATIO OUTSIDE LIMITS .55 TO .81

RECORD NUMBER: 00100133
STATION ID: USGS 332430112101001
STATION NAME: 67th Avenue and the Salt River at Phoenix, Az.
COLLECTION DATE: 03-07-2001 0723 - -

PARTIAL BALANCE

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
			BICARB., DIS, IT, FLD	62	1.017
			CARB., DIS, IT, FLD	0	0.001
TOTAL		0.001	TOTAL		1.017

PERCENT DIFFERENCE =-100.00

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	70	90410(A)	I-2030-85	1 mg/L	RU
RESIDUE TOT NON-FILT AT	169	00530(B)	I-3765-85	1 mg/L	SUSO
PHOSPHORUS AS P	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	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

```
*****************************************************
*   U.S. Geological Survey, WRD - Q.W. Service Unit   *
*        4500 S.W. 40th Avenue - Ocala, Florida       *
*  Telephone: (352) 237-5514 FLDEP CompQAP # 910161G  *
*            Processing Date: 04/23/2001              *
```

```
*****************************************************************************************************************
* Lab Id Number:  200104924  Field Id Number:                Station Id Number: 332430112101001  Date: 03/07/2001  Time: 07:23  *
* NWIS Record Number:                SMS Control Number:                Site Type:                                                *
* Station Name: 67TH AVE AND THE SALT RIVER                          State Code:  4  County Code:  13                            *
* Sample Medium: 9  Geologic Unit:            Analysis Status: H  Analysis Source: 9  Hydrologic Condition: 9  Sample Type: 9   *
* Hydrologic Event: J  Project Account: 470416800   Analysis Cost: $  161.30  District/User Code: 04                            *
*****************************************************************************************************************
```

Cation Parameter(s)	Value mg/L	Value meq/L

Anion Parameter(s)	Value mg/L	Value meq/L
Alk as CaCO3	80.55	1.609
Anion Total		1.609

Selected Parameter(s)	Reported Value
Alk as CaCO3 LAB	80.547
Sp. Cond. (FLD)	93.500
ph (LAB)	6.890
pH (FLD)	8.330
ROE at 180C	136.200

Lab Code	Watstore Number	Parameter Name	Analysis Method	Reporting Units	Reported Value	Rmk Code	Analysis Date	/ Time
0070	90410(A)	ALKALINITY TOT AS CACO3 (LAB)	I-2030-85	mg/L	81		03/27/2001	11:05
0091	00028(A)	ANALYZING AGENCY	- -	Number	81213		Parameter	
3014	01027(4)	CADMIUM TOTAL (ICP/T)	EPA-200.7	ug/L	0.5	<	04/02/2001	19:25
3063	00340(0)	CHEMICAL OXYGEN DEMAND (EPA)	EPA-410.4	mg/L	62		03/19/2001	
3025	01042(1)	COPPER TOTAL (ICP/T)	EPA-200.7	ug/L	62		04/02/2001	19:25
3157	99870(8)	DIGESTION IN BOTTLE	EPA-1638		1		03/12/2001	09:07
3001	99899(0)	JULIAN LOGIN DATE	- -	Number	1		Calculated	
3029	01051(4)	LEAD TOTAL (ICP/T)	EPA-200.7	ug/L	31		04/02/2001	19:25
1986	00625(D)	NITROGEN NH3+ORG-N TOTAL	I-4552-84	mg/L	DELETED		04/12/2001	
3071	00610(F)	NITROGEN NH3-N TOTAL	I-4522-85	mg/L	DELETED		04/03/2001	09:15
3073	00630(E)	NITROGEN NO2+NO3-N TOTAL	I-4545-84	mg/L	DELETED		04/03/2001	09:15
3072	00615(B)	NITROGEN NO2-N TOTAL	I-4540-84	mg/L	DELETED		04/03/2001	09:15
0068	00403(A)	PH (LABORATORY)	I-1586-85	pH Units	6.89		03/27/2001	
0051	00400(A)	PH FIELD	I-1586-77	pH Units	8.33		Field Data	
1983	00666(D)	PHOSPHORUS AS P DISSOLVED	I-2600-84	mg/L	0.21		04/05/2001	09:30
1984	00665(D)	PHOSPHORUS AS P TOTAL	I-4600-84	mg/L	DELETED		04/11/2001	
3077	71888( )	PHOSPHORUS DISS AS PO4		mg/L	0.64		Calculated	
3074	70507(H)	PHOSPHORUS PO4-P TOTAL	I-4601-84	mg/L	DELETED		04/03/2001	09:15
3000	99898(0)	QWSU LAB ID NUMBER	- -	Number	1		Calculated	
0027	70300(A)	RESIDUE DISSOLVED AT 180 C	I-1750-84	mg/L	136		04/10/2001	
0169	00530(B)	RESIDUE TOT NON-FILT AT 105C	I-3765-84	mg/L	32		03/30/2001	
0021	00095(A)	SP. CONDUCTANCE FLD	I-1780-85	uS/cm	94		Field Data	
3056	01092(1)	ZINC TOTAL (ICP/T)	EPA-200.7	ug/L	270		04/02/2001	19:25

Lab Review Comment(s) for Lab Id: 200104924

<COMMENT>	3014	(01027) CADMIUM TOTAL (ICP/T)	Actual value known to be less than value shown
<COMMENT>	1986	(00625) NITROGEN NH3+ORG-N TOTAL	No Bottle received Parameter Deleted
<COMMENT>	3071	(00610) NITROGEN NH3-N TOTAL	No Bottle received Parameter Deleted
<COMMENT>	3073	(00630) NITROGEN NO2+NO3-N TOTAL	No Bottle received Parameter Deleted
<COMMENT>	3072	(00615) NITROGEN NO2-N TOTAL	No Bottle received Parameter Deleted
<COMMENT>	1984	(00665) PHOSPHORUS AS P TOTAL	No Bottle received Parameter Deleted
<COMMENT>	3074	(70507) PHOSPHORUS PO4-P TOTAL	No Bottle received Parameter Deleted
<COMMENT>	DATA OK		

200104924 Salt River and 67th Avenue 03-07-2001 0723

200104924 70300 RESIDUE DISSOLVED AT 180 C Cal. Blk. ROE1000105 Value: 0.200 < 2x Detection Limit <PASSED>
200104924 70300 RESIDUE DISSOLVED AT 180 C Cal. Blk. ROE1000105 Value: 0.200 < 2x Detection Limit <PASSED>
200104924 70300 RESIDUE DISSOLVED AT 180 C Duplicate ROE1000105 Value: 487.000 0.1% RSD <PASSED>
200104924 70300 RESIDUE DISSOLVED AT 180 C Duplicate ROE1000105 Value: 267.800 0.5% RSD <PASSED>
200104924 70300 RESIDUE DISSOLVED AT 180 C Duplicate ROE1000105 Value: 208.400 0.2% RSD <PASSED>
200104924 70300 RESIDUE DISSOLVED AT 180 C Duplicate ROE1000105 Value: 173.800 1.8% RSD <PASSED>
200104924 70300 RESIDUE DISSOLVED AT 180 C QA Sample ROE1000105 Value: 753.400 Num. Sdev (0.2) <PASSED>
200104924 70300 RESIDUE DISSOLVED AT 180 C QA Sample ROE1000105 Value: 375.800 Num. Sdev (0.3) <PASSED>
200104924 70300 RESIDUE DISSOLVED AT 180 C Spike ROE1000105 Value: 99.9% Recovery <PASSED>

200104924 00403 PH (LABORATORY) QA Sample PHS20782 Value: 8.280 Num. Sdev (0.4) <PASSED>
200104924 00403 PH (LABORATORY) QA Sample PHS20782 Value: 6.660 Num. Sdev (0.3) <PASSED>

200104924 90410 ALKALINITY TOT AS CACO3 (LAB) Duplicate ALK5010861 Value: 5.825 0.6% RSD <PASSED>
200104924 90410 ALKALINITY TOT AS CACO3 (LAB) Duplicate ALK5010861 Value: 88.833 0.2% RSD <PASSED>
200104924 90410 ALKALINITY TOT AS CACO3 (LAB) Duplicate ALK5010861 Value: 10.840 1.2% RSD <PASSED>
200104924 90410 ALKALINITY TOT AS CACO3 (LAB) Duplicate ALK5010861 Value: 189.018 0.3% RSD <PASSED>
200104924 90410 ALKALINITY TOT AS CACO3 (LAB) QA Sample ALK5010861 Value: 6.073 Num. Sdev (0.0) <PASSED>
200104924 90410 ALKALINITY TOT AS CACO3 (LAB) QA Sample ALK5010861 Value: 111.554 Num. Sdev (0.1) <PASSED>
200104924 90410 ALKALINITY TOT AS CACO3 (LAB) QA Sample ALK5010861 Value: 111.222 Num. Sdev (0.1) <PASSED>

200104924 00530 RESIDUE TOT NON-FILT AT 105C Cal. Blk. RES6000130 Value: -0.500 < 2x Detection Limit <PASSED>
200104924 00530 RESIDUE TOT NON-FILT AT 105C Cal. Blk. RES6000130 Value: 0.900 < 2x Detection Limit <PASSED>
200104924 00530 RESIDUE TOT NON-FILT AT 105C Duplicate RES6000130 Value: 9.700 4.0% RSD <PASSED>
200104924 00530 RESIDUE TOT NON-FILT AT 105C Duplicate RES6000130 Value: 11.700 7.3% RSD <PASSED>

200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Std. NUT1000131 Value: 0.248 0.6% Deviation <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Std. NUT1000131 Value: 0.100 0.0% Deviation <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Std. NUT1000131 Value: 0.051 2.0% Deviation <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Std. NUT1000131 Value: 0.500 0.1% Deviation <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.001 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.001 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Corr Coef NUT1000131 Value: 1.0000 <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Duplicate NUT1000131 Value: 0.006 8.3% RSD <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Imd Std. NUT1000131 Value: 0.100 0.0% Deviation <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Imd Std. NUT1000131 Value: 0.101 1.0% Deviation <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Imd Std. NUT1000131 Value: 0.100 0.0% Deviation <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Imd Std. NUT1000131 Value: 0.249 0.4% Deviation <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.034 Num. Sdev (0.3) <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.229 Num. Sdev (0.9) <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.234 Num. Sdev (0.7) <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.036 Num. Sdev (0.1) <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.037 Num. Sdev (0.0) <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.002 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.002 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.001 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.004 < 2x Detection Limit <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Spike NUT1000131 Value: 100.0% Recovery <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Spike NUT1000131 Value: 101.5% Recovery <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Spike NUT1000131 Value: 102.0% Recovery <PASSED>
200104924 00613 NITROGEN NO2-N DISSOLVED Spike NUT1000131 Value: 104.0% Recovery <PASSED>

200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Std. NUT3000135 Value: 1.006 0.6% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Std. NUT3000135 Value: 0.490 2.0% Deviation <PASSED>

200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Std. NUT3000135 Value: 0.102 2.0% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.014 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.016 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Corr Coef NUT3000135 Value: 0.9999 <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Duplicate NUT3000135 Value: 0.097 3.0% RSD <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Duplicate NUT3000135 Value: 0.204 3.8% RSD <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.250 0.0% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 1.007 0.7% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.244 2.4% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.997 0.3% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.099 1.0% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.250 0.0% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.998 0.2% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.492 1.6% Deviation <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.077 Num. Sdev (0.3) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.203 Num. Sdev (1.1) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.075 Num. Sdev (0.1) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.440 Num. Sdev (0.5) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.397 Num. Sdev (0.2) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.041 Num. Sdev (0.4) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.432 Num. Sdev (0.8) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.188 Num. Sdev (1.0) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.075 Num. Sdev (0.2) <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.008 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.009 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.008 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.007 < 2x Detection Limit <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Spike NUT3000135 Value: 91.5% Recovery <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Spike NUT3000135 Value: 100.5% Recovery <PASSED>
200104924 00671 PHOSPHORUS PO4-P DISSOLVED Spike NUT3000135 Value: 98.5% Recovery <PASSED>

200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Std. NUT2000133 Value: 1.008 0.8% Deviation <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Std. NUT2000133 Value: 0.487 2.7% Deviation <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Std. NUT2000133 Value: 0.244 2.4% Deviation <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Std. NUT2000133 Value: 0.102 2.5% Deviation <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.011 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Corr Coef NUT2000133 Value: 0.9997 <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Duplicate NUT2000133 Value: 5.231 0.7% RSD <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Duplicate NUT2000133 Value: 0.178 0.3% RSD <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.712 Num. Sdev (0.4) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.052 Num. Sdev (1.0) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.722 Num. Sdev (0.3) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.071 Num. Sdev (0.1) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.219 Num. Sdev (0.1) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.367 Num. Sdev (0.1) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.082 Num. Sdev (0.3) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.217 Num. Sdev (0.1) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.071 Num. Sdev (0.1) <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.019 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.013 < 2x Detection Limit <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 90.0% Recovery <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 95.0% Recovery <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 101.0% Recovery <PASSED>
200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 100.0% Recovery <PASSED>

200104924 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 104.0% Recovery <PASSED>

200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Std. NUT0000139 Value: 1.000 0.0% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Std. NUT0000139 Value: 0.500 0.1% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Std. NUT0000139 Value: 0.251 0.4% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Std. NUT0000139 Value: 0.102 1.5% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Blk. NUT0000139 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Blk. NUT0000139 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Blk. NUT0000139 Value: 0.013 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Blk. NUT0000139 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Blk. NUT0000139 Value: 0.018 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Cal. Blk. NUT0000139 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Corr Coef NUT0000139 Value: 1.0000 <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Imd Std. NUT0000139 Value: 0.240 4.0% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Imd Std. NUT0000139 Value: 0.256 2.4% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Imd Std. NUT0000139 Value: 0.978 2.2% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Imd Std. NUT0000139 Value: 0.254 1.6% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Imd Std. NUT0000139 Value: 0.979 2.1% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Imd Std. NUT0000139 Value: 0.102 2.0% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Imd Std. NUT0000139 Value: 0.969 3.1% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Imd Std. NUT0000139 Value: 0.485 3.0% Deviation <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.342 Num. Sdev (0.6) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.090 Num. Sdev (0.6) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.098 Num. Sdev (1.0) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.212 Num. Sdev (0.1) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.515 Num. Sdev (0.1) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.109 Num. Sdev (1.6) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.063 Num. Sdev (1.5) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.516 Num. Sdev (0.1) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.221 Num. Sdev (0.6) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED QA Sample NUT0000139 Value: 0.277 Num. Sdev (2.0) <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Blank NUT0000139 Value: 0.012 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Blank NUT0000139 Value: 0.014 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Blank NUT0000139 Value: 0.019 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Blank NUT0000139 Value: 0.019 < 2x Detection Limit <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Spike NUT0000139 Value: 100.0% Recovery <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Spike NUT0000139 Value: 95.0% Recovery <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Spike NUT0000139 Value: 100.5% Recovery <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Spike NUT0000139 Value: 95.0% Recovery <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Spike NUT0000139 Value: 108.0% Recovery <PASSED>
200104924 00608 NITROGEN NH3-N DISSOLVED Spike NUT0000139 Value: 105.0% Recovery <PASSED>

200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Std. NUT4000056 Value: 1.979 1.0% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Std. NUT4000056 Value: 1.549 3.3% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Std. NUT4000056 Value: 0.973 2.7% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Std. NUT4000056 Value: 0.481 3.7% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Std. NUT4000056 Value: 0.247 1.2% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Std. NUT4000056 Value: 0.104 4.0% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Blk. NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Blk. NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Blk. NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Blk. NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Blk. NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Blk. NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Blk. NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Cal. Blk. NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Corr Coef NUT4000056 Value: 0.9996 <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Duplicate NUT4000056 Value: 0.009 0.0% RSD <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Duplicate NUT4000056 Value: 0.012 0.0% RSD <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 1.966 1.7% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 1.556 3.7% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 0.103 3.0% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 2.017 0.8% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 0.103 3.0% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 0.239 4.4% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 1.523 1.5% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 0.978 2.2% Deviation <PASSED>

200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 0.052 4.0% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 0.953 4.7% Deviation <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.423 Num. Sdev (1.1) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.381 Num. Sdev (1.9) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.419 Num. Sdev (1.2) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.402 Num. Sdev (0.6) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 1.640 Num. Sdev (0.0) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.920 Num. Sdev (0.0) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.949 Num. Sdev (0.9) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 1.706 Num. Sdev (0.6) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.032 Num. Sdev (0.5) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.414 Num. Sdev (0.1) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.420 Num. Sdev (1.2) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.199 Num. Sdev (0.2) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 1.638 Num. Sdev (0.0) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.406 Num. Sdev (1.6) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.918 Num. Sdev (0.1) <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Blank NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Blank NUT4000056 Value: 0.012 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Blank NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Blank NUT4000056 Value: 0.005 < 2x Detection Limit <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 105.6% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 100.4% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 105.3% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 97.7% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 103.6% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 104.1% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 108.8% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 98.6% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 93.2% Recovery <PASSED>
200104924 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 105.2% Recovery <PASSED>

200104924 01027 CADMIUM TOTAL (ICP/T) Cal. Std. CD11010921 Value: 102.900 2.9% Deviation <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Cal. Std. CD11010921 Value: 206.100 3.0% Deviation <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Cal. Std. CD11010921 Value: 516.800 3.4% Deviation <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Cal. Std. CD11010921 Value: 1028.100 2.8% Deviation <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Cal. Blk. CD11010921 Value: 0.117 < 2x Detection Limit <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Corr Coef CD11010921 Value: 1.0000 <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Duplicate CD11010921 Value: 0.580 3.4% RSD <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Duplicate CD11010921 Value: 5.486 2.2% RSD <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Duplicate CD11010921 Value: 14.140 0.1% RSD <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Imd Std. CD11010921 Value: 207.000 3.5% Deviation <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Imd Std. CD11010921 Value: 517.200 3.4% Deviation <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) QA Sample CD11010921 Value: 6.013 Num. Sdev (0.2) <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) QA Sample CD11010921 Value: 22.110 Num. Sdev (0.4) <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Blank CD11010921 Value: 0.088 < 2x Detection Limit <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Spike CD11010921 Value: 106.1% Recovery <PASSED>
200104924 01027 CADMIUM TOTAL (ICP/T) Spike CD11010921 Value: 106.9% Recovery <PASSED>

200104924 01042 COPPER TOTAL (ICP/T) Cal. Std. CU11010921 Value: 96.710 3.3% Deviation <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Cal. Std. CU11010921 Value: 191.500 4.3% Deviation <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Cal. Std. CU11010921 Value: 483.600 3.3% Deviation <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Cal. Std. CU11010921 Value: 971.800 2.8% Deviation <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Cal. Blk. CU11010921 Value: -0.932 < 2x Detection Limit <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Corr Coef CU11010921 Value: 1.0000 <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Duplicate CU11010921 Value: 8.659 1.0% RSD <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Duplicate CU11010921 Value: 36.500 0.3% RSD <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Imd Std. CU11010921 Value: 197.400 1.3% Deviation <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Imd Std. CU11010921 Value: 492.300 1.5% Deviation <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) QA Sample CU11010921 Value: 20.840 Num. Sdev (0.3) <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) QA Sample CU11010921 Value: 85.300 Num. Sdev (0.0) <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Blank CU11010921 Value: -0.462 < 2x Detection Limit <PASSED>
200104924 01042 COPPER TOTAL (ICP/T) Spike CU11010921 Value: 109.8% Recovery <PASSED>

200104924 01051 LEAD TOTAL (ICP/T) Cal. Std. PB11010921 Value: 102.300 2.3% Deviation <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Cal. Std. PB11010921 Value: 206.500 3.3% Deviation <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Cal. Std. PB11010921 Value: 515.000 3.0% Deviation <PASSED>

200104924 01051 LEAD TOTAL (ICP/T) Cal. Std. PB11010921 Value: 1025.700 2.6% Deviation <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Cal. Blk. PB11010921 Value: 0.622 < 2x Detection Limit <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Corr Coef PB11010921 Value: 1.0000 <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Duplicate PB11010921 Value: 2.392 5.3% RSD <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Duplicate PB11010921 Value: 20.590 2.0% RSD <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Duplicate PB11010921 Value: 9.791 0.9% RSD <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Imd Std. PB11010921 Value: 204.700 2.3% Deviation <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Imd Std. PB11010921 Value: 509.100 1.8% Deviation <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) QA Sample PB11010921 Value: 19.410 Num. Sdev (0.5) <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) QA Sample PB11010921 Value: 27.920 Num. Sdev (0.0) <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Blank PB11010921 Value: 0.505 < 2x Detection Limit <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Spike PB11010921 Value: 107.5% Recovery <PASSED>
200104924 01051 LEAD TOTAL (ICP/T) Spike PB11010921 Value: 108.2% Recovery <PASSED>

200104924 01092 ZINC TOTAL (ICP/T) Cal. Std. ZN11010921 Value: 105.000 5.0% Deviation <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Cal. Std. ZN11010921 Value: 210.000 5.0% Deviation <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Cal. Std. ZN11010921 Value: 524.300 4.9% Deviation <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Cal. Std. ZN11010921 Value: 1038.400 3.8% Deviation <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Cal. Blk. ZN11010921 Value: 0.116 < 2x Detection Limit <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Corr Coef ZN11010921 Value: 1.0000 <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Duplicate ZN11010921 Value: 34.070 0.7% RSD <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Duplicate ZN11010921 Value: 94.810 1.7% RSD <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Imd Std. ZN11010921 Value: 200.800 0.4% Deviation <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Imd Std. ZN11010921 Value: 499.200 0.2% Deviation <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) QA Sample ZN11010921 Value: 73.610 Num. Sdev (0.4) <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) QA Sample ZN11010921 Value: 54.350 Num. Sdev (0.3) <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Blank ZN11010921 Value: -0.550 < 2x Detection Limit <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Spike ZN11010921 Value: 108.2% Recovery <PASSED>
200104924 01092 ZINC TOTAL (ICP/T) Spike ZN11010921 Value: 105.3% Recovery <PASSED>

200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 10.000 0.0% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 20.000 0.0% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 40.000 0.0% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 60.000 0.0% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 80.000 0.0% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 100.000 0.0% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Blk. COD10211 Value: 0.000 < 2x Detection Limit <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Corr Coef COD10211 Value: 0.9993 <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Imd Std. COD10211 Value: 20.900 4.5% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Imd Std. COD10211 Value: 41.200 3.0% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Imd Std. COD10211 Value: 59.600 0.7% Deviation <PASSED>
200104924 00340 CHEMICAL OXYGEN DEMAND (EPA) Imd Std. COD10211 Value: 79.800 0.3% Deviation <PASSED>

ACDC43 ACDC near Peoria Avenue and 43rd Avenue

Lab Reports and Quality Control Data
Del Mar Analytical (composite)

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

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

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0113

Sampled: 03/07/01
Received: 03/07/01
Issued: 3/29/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKC0113-01	43RD + PEORIA-COMP	Water
PKC0113-02	43RD + PEORIA-COMP	Water
PKC0113-03	43RD + PEORIA-Dup	Water
PKC0113-04	43RD + PEORIA-DUP	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: The arsenic, beryllium, copper and silver analyses were subcontracted to NEL Laboratories. (ADHS #AZ0520)
The phenols analysis was subcontracted to Transwest Geochem. (ADHS #AZ0133)
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)

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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKC0113-01 (43RD + PEORIA-COMP - Water)								
Beryllium	EPA 200.9	P1C0910	0.00050	ND	1	3/9/01	3/12/01	
Cadmium	EPA 200.9	P1C0910	0.00050	ND	1	3/9/01	3/16/01	
Calcium	EPA 200.7	P1C1405	2.0	**2.7**	1	3/14/01	3/14/01	
Chromium	EPA 200.9	P1C0910	0.0040	**0.0070**	1	3/9/01	3/16/01	M5
Copper	EPA 200.9	P1C0910	0.0040	**0.0086**	1	3/9/01	3/14/01	
Lead	EPA 200.9	P1C0910	0.0020	**0.0023**	1	3/9/01	3/16/01	
Magnesium	EPA 200.7	P1C1405	0.50	**0.58**	1	3/14/01	3/14/01	
Nickel	EPA 200.9	P1C0910	0.0040	**0.0040**	1	3/9/01	3/19/01	
Potassium	EPA 258.1	P1C1405	1.0	ND	1	3/14/01	3/14/01	
Silver	EPA 200.9	P1C0910	0.0050	ND	1	3/9/01	3/14/01	
Sodium	EPA 273.1	P1C1405	5.0	ND	1	3/14/01	3/14/01	
Zinc	EPA 200.7	P1C1405	0.050	**0.075**	1	3/14/01	3/14/01	
Sample ID: PKC0113-03 (43RD + PEORIA-Dup - Water)								
Beryllium	EPA 200.9	P1C0910	0.00050	ND	1	3/9/01	3/15/01	
Cadmium	EPA 200.9	P1C0910	0.00050	ND	1	3/9/01	3/16/01	
Calcium	EPA 200.7	P1C1405	2.0	**2.7**	1	3/14/01	3/14/01	
Chromium	EPA 200.9	P1C0910	0.0040	ND	1	3/9/01	3/15/01	
Copper	EPA 200.9	P1C0910	0.0040	**0.0079**	1	3/9/01	3/14/01	
Lead	EPA 200.9	P1C0910	0.0020	ND	1	3/9/01	3/16/01	
Magnesium	EPA 200.7	P1C1405	0.50	**0.55**	1	3/14/01	3/14/01	
Nickel	EPA 200.9	P1C0910	0.0040	ND	1	3/9/01	3/19/01	
Potassium	EPA 258.1	P1C1405	1.0	ND	1	3/14/01	3/14/01	
Silver	EPA 200.9	P1C0910	0.0050	ND	1	3/9/01	3/14/01	
Sodium	EPA 273.1	P1C1405	5.0	ND	1	3/14/01	3/14/01	
Zinc	EPA 200.7	P1C1405	0.050	**0.080**	1	3/14/01	3/14/01	

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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKC0113-02 (43RD + PEORIA-COMP - Water)								
Cadmium, Dissolved	EPA 200.9	P1C1507	0.00050	ND	1	3/15/01	3/16/01	
Chromium, Dissolved	EPA 200.9	P1C1507	0.0040	ND	1	3/15/01	3/16/01	
Lead, Dissolved	EPA 200.9	P1C1507	0.0020	ND	1	3/15/01	3/16/01	
Zinc, Dissolved	EPA 200.7	P1D1003	0.050	ND	1	4/10/01	4/11/01	
Sample ID: PKC0113-02RE3 (43RD + PEORIA-COMP - Water)								
Nickel, Dissolved	EPA 200.9	P1C2323	0.0040	**0.0084**	1	3/23/01	3/27/01	~~S~~ M5
Sample ID: PKC0113-04 (43RD + PEORIA-DUP - Water)								
Cadmium, Dissolved	EPA 200.9	P1C1507	0.00050	ND	1	3/15/01	3/16/01	
Chromium, Dissolved	EPA 200.9	P1C1507	0.0040	ND	1	3/15/01	3/16/01	
Lead, Dissolved	EPA 200.9	P1C1507	0.0020	ND	1	3/15/01	3/16/01	
Zinc, Dissolved	EPA 200.7	P1D1003	0.050	ND	1	4/10/01	4/11/01	
Sample ID: PKC0113-04RE3 (43RD + PEORIA-DUP - Water)								
Nickel, Dissolved	EPA 200.9	P1C2323	0.0040	**0.0080**	1	3/23/01	3/27/01	~~S~~ M5

Linda Eshelman
Project Manager

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			mg/l	mg/l				
Sample ID: PKC0113-01 (43RD + PEORIA-COMP - Water)								
Alkalinity as CaCO3	SM2320B	P1C2003	5.0	**6.5**	1	3/20/01	3/20/01	
Ammonia-N	EPA 350.3	P1C1922	0.050	**0.81**	1	3/19/01	3/19/01	
Biochemical Oxygen Demand	EPA 405.1	P1C0816	2.0	**8.3**	1	3/8/01	3/13/01	K1,K4
			%	%				
Sample ID: PKC0113-01 (43RD + PEORIA-COMP - Water)								
Cation/Anion Balance	Calculation	P1C2006	NA	**11.4**	1	3/20/01	3/20/01	
			mg/l	mg/l				
Sample ID: PKC0113-01 (43RD + PEORIA-COMP - Water)								
Chemical Oxygen Demand	EPA 410.4	P1C0907	20	**54**	1	3/9/01	3/9/01	
Chloride	EPA 300.0	P1C0813	0.50	**0.91**	1	3/8/01	3/8/01	
Fluoride	EPA 300.0	P1C0813	0.10	ND	1	3/8/01	3/8/01	
Hardness (CaCO3)	SM2340B	P1C1405	1.0	**9.2**	1	3/14/01	3/14/01	
Nitrate-N	EPA 300.0	P1C0813	0.10	**0.26**	1	3/8/01	3/8/01	
Nitrate/Nitrite-N	EPA 300.0	P1C0813	0.10	**0.28**	1	3/8/01	3/8/01	
Nitrite-N	EPA 300.0	P1C0813	0.10	ND	1	3/8/01	3/8/01	
Orthophosphate	EPA 300.0	P1C0813	0.50	ND	1	3/8/01	3/8/01	
Phosphorus	EPA 365.3	P1C1215	0.050	**0.15**	1	3/12/01	3/12/01	
			umhos/cm	umhos/cm				
Sample ID: PKC0113-01 (43RD + PEORIA-COMP - Water)								
Specific Conductance	SM2510B	P1C1204	2.0	**31**	1	3/12/01	3/12/01	
			mg/l	mg/l				
Sample ID: PKC0113-01 (43RD + PEORIA-COMP - Water)								
Sulfate	EPA 300.0	P1C0813	0.50	**1.6**	1	3/8/01	3/8/01	
Sulfide	SM4500-S-C,D	P1C0903	0.10	ND	1	3/8/01	3/8/01	
Total Cyanide	SM4500-CN,C-E	P1C1306	0.025	ND	1.25	3/13/01	3/14/01	
Total Dissolved Solids	SM2540C	P1C1206	20	**40**	1	3/12/01	3/12/01	
Total Suspended Solids	EPA 160.2	P1C0908	10	**27**	1	3/9/01	3/9/01	

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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

INORGANICS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
			mg/l	mg/l				
Sample ID: PKC0113-03 (43RD + PEORIA-Dup - Water)								
Alkalinity as CaCO3	SM2320B	P1C2003	5.0	**6.5**	1	3/20/01	3/20/01	
Ammonia-N	EPA 350.3	P1C1922	0.050	**0.77**	1	3/19/01	3/19/01	
Biochemical Oxygen Demand	EPA 405.1	P1C0816	2.0	**8.4**	1	3/8/01	3/13/01	K1,K4
			%	%				
Sample ID: PKC0113-03 (43RD + PEORIA-Dup - Water)								
Cation/Anion Balance	Calculation	P1C2006	NA	**12.5**	1	3/20/01	3/20/01	
			mg/l	mg/l				
Sample ID: PKC0113-03 (43RD + PEORIA-Dup - Water)								
Chemical Oxygen Demand	EPA 410.4	P1C0907	20	**51**	1	3/9/01	3/9/01	
Chloride	EPA 300.0	P1C0813	0.50	**0.83**	1	3/8/01	3/8/01	
Fluoride	EPA 300.0	P1C0813	0.10	ND	1	3/8/01	3/8/01	
Hardness (CaCO3)	SM2340B	P1C1405	1.0	**9.1**	1	3/14/01	3/14/01	
Nitrate-N	EPA 300.0	P1C0813	0.10	**0.25**	1	3/8/01	3/8/01	
Nitrate/Nitrite-N	EPA 300.0	P1C0813	0.10	**0.27**	1	3/8/01	3/8/01	
Nitrite-N	EPA 300.0	P1C0813	0.10	ND	1	3/8/01	3/8/01	
Orthophosphate	EPA 300.0	P1C0813	0.50	ND	1	3/8/01	3/8/01	
Phosphorus	EPA 365.3	P1C1215	0.050	**0.15**	1	3/12/01	3/12/01	
			umhos/cm	umhos/cm				
Sample ID: PKC0113-03 (43RD + PEORIA-Dup - Water)								
Specific Conductance	SM2510B	P1C1204	2.0	**30**	1	3/12/01	3/12/01	
			mg/l	mg/l				
Sample ID: PKC0113-03 (43RD + PEORIA-Dup - Water)								
Sulfate	EPA 300.0	P1C0813	0.50	**1.6**	1	3/8/01	3/8/01	
Sulfide	SM4500-S-C,D	P1C0903	0.10	ND	1	3/8/01	3/8/01	
Total Cyanide	SM4500-CN,C-E	P1C1306	0.025	ND	1.25	3/13/01	3/14/01	
Total Dissolved Solids	SM2540C	P1C1206	20	**22**	1	3/12/01	3/12/01	
Total Suspended Solids	EPA 160.2	P1C0908	10	**12**	1	3/9/01	3/9/01	

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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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKC0113-01 (43RD + PEORIA-COMP - Water)								
Total Kjeldahl Nitrogen	SM4500-N-O,C	C1C1507	0.50	**0.67**	1	3/15/01	3/16/01	
Sample ID: PKC0113-03 (43RD + PEORIA-Dup - Water)								
Total Kjeldahl Nitrogen	SM4500-N-O,C	C1C1507	0.50	**2.2**	1	3/15/01	3/16/01	

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Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER
Report Number: PKC0113

Sampled: 03/07/01
Received: 03/07/01

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: P1C0910 Extracted: 03/09/01										
Blank Analyzed: 03/12/01 (P1C0910-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							
LCS Analyzed: 03/12/01 (P1C0910-BS1)										
Beryllium	**0.00215**	0.0010	mg/l	0.00200		107	85-115			
Cadmium	**0.00202**	0.0010	mg/l	0.00200		101	85-115			
Chromium	**0.0417**	0.0080	mg/l	0.0400		104	85-115			
Copper	**0.0442**	0.0080	mg/l	0.0400		111	85-115			
Lead	**0.0384**	0.0040	mg/l	0.0400		96.0	85-115			
Nickel	**0.0358**	0.0080	mg/l	0.0400		89.5	85-115			
Silver	**0.0189**	0.010	mg/l	0.0200		94.5	85-115			
LCS Dup Analyzed: 03/12/01 (P1C0910-BSD1)										
Beryllium	**0.00215**	0.0010	mg/l	0.00200		107	85-115	0	20	
Cadmium	**0.00207**	0.0010	mg/l	0.00200		103	85-115	2.44	20	
Chromium	**0.0437**	0.0080	mg/l	0.0400		109	85-115	4.68	20	
Copper	**0.0449**	0.0080	mg/l	0.0400		112	85-115	1.57	20	
Lead	**0.0416**	0.0040	mg/l	0.0400		104	85-115	8.00	20	
Nickel	**0.0376**	0.0080	mg/l	0.0400		94.0	85-115	4.90	20	
Silver	**0.0191**	0.010	mg/l	0.0200		95.5	85-115	1.05	20	
Matrix Spike Analyzed: 03/12/01 (P1C0910-MS1)					**Source: PKC0135-01**					
Beryllium	**0.00328**	0.0010	mg/l	0.00200	ND	164	70-130			M1
Cadmium	**0.00213**	0.0010	mg/l	0.00200	ND	106	70-130			
Chromium	**0.0399**	0.0080	mg/l	0.0400	0.012	69.8	70-130			M2
Copper	**0.0450**	0.0080	mg/l	0.0400	ND	113	70-130			
Lead	**0.0403**	0.0040	mg/l	0.0400	ND	101	70-130			
Nickel	**0.0412**	0.0080	mg/l	0.0400	ND	92.0	70-130			
Silver	**0.0191**	0.010	mg/l	0.0200	ND	95.5	70-130			

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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

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: P1C0910 Extracted: 03/09/01										
Matrix Spike Dup Analyzed: 03/12/01 (P1C0910-MSD1)					**Source: PKC0135-01**					
Beryllium	**0.00371**	0.0010	mg/l	0.00200	ND	185	70-130	12.3	20	M1
Cadmium	**0.00208**	0.0010	mg/l	0.00200	ND	104	70-130	2.38	20	
Chromium	**0.0348**	0.0080	mg/l	0.0400	0.012	57.0	70-130	13.7	20	M2
Copper	**0.0411**	0.0080	mg/l	0.0400	ND	103	70-130	9.06	20	
Lead	**0.0389**	0.0040	mg/l	0.0400	ND	97.2	70-130	3.54	20	
Nickel	**0.0389**	0.0080	mg/l	0.0400	ND	86.2	70-130	5.74	20	
Silver	**0.0198**	0.010	mg/l	0.0200	ND	99.0	70-130	3.60	20	
Batch: P1C1405 Extracted: 03/14/01										
Blank Analyzed: 03/14/01 (P1C1405-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							
Zinc	ND	0.050	mg/l							
Blank Analyzed: 03/14/01 (P1C1405-BLK2)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 03/14/01 (P1C1405-BS1)										
Calcium	**9.61**	2.0	mg/l	10.0		96.1	85-115			
Magnesium	**9.44**	0.50	mg/l	10.0		94.4	85-115			
Potassium	**10.3**	1.0	mg/l	10.0		103	85-115			
Sodium	**50.8**	5.0	mg/l	50.0		102	85-115			
Zinc	**0.935**	0.050	mg/l	1.00		93.5	85-115			

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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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

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: P1C1405 Extracted: 03/14/01										
LCS Dup Analyzed: 03/14/01 (P1C1405-BSD1)										
Calcium	**9.67**	2.0	mg/l	10.0		96.7	85-115	0.622	20	
Magnesium	**9.47**	0.50	mg/l	10.0		94.7	85-115	0.317	20	
Potassium	**10.3**	1.0	mg/l	10.0		103	85-115	0	20	
Sodium	**50.2**	5.0	mg/l	50.0		100	85-115	1.19	20	
Zinc	**0.950**	0.050	mg/l	1.00		95.0	85-115	1.59	20	
Matrix Spike Analyzed: 03/14/01 (P1C1405-MS1)					**Source: PKC0135-01**					
Calcium	**139**	2.0	mg/l	10.0	130	90.0	70-130			
Magnesium	**53.3**	0.50	mg/l	10.0	45	83.0	70-130			
Potassium	**17.9**	1.0	mg/l	10.0	7.3	106	85-115			
Sodium	**476**	10	mg/l	50.0	430	92.0	85-115			
Zinc	**0.915**	0.050	mg/l	1.00	ND	91.5	70-130			
Matrix Spike Dup Analyzed: 03/14/01 (P1C1405-MSD1)					**Source: PKC0135-01**					
Calcium	**140**	2.0	mg/l	10.0	130	100	70-130	0.717	20	
Magnesium	**54.8**	0.50	mg/l	10.0	45	98.0	70-130	2.78	20	
Potassium	**18.0**	1.0	mg/l	10.0	7.3	107	85-115	0.557	20	
Sodium	**471**	10	mg/l	50.0	430	82.0	85-115	1.06	20	M3
Zinc	**0.935**	0.050	mg/l	1.00	ND	93.5	70-130	2.16	20	

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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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C1507 Extracted: 03/15/01										
Blank Analyzed: 03/16/01 (P1C1507-BLK1)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Blank Analyzed: 03/16/01 (P1C1507-BLK2)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
LCS Analyzed: 03/16/01 (P1C1507-BS1)										
Cadmium, Dissolved	**0.00212**	0.0010	mg/l	0.00200		106	85-115			
Chromium, Dissolved	**0.0421**	0.0080	mg/l	0.0400		105	85-115			
Lead, Dissolved	**0.0405**	0.0040	mg/l	0.0400		101	85-115			
Matrix Spike Analyzed: 03/16/01 (P1C1507-MS1)					**Source: PKC0178-01**					
Cadmium, Dissolved	**0.00222**	0.0010	mg/l	0.00200	ND	111	70-130			
Chromium, Dissolved	**0.0376**	0.0080	mg/l	0.0400	ND	91.5	70-130			
Lead, Dissolved	**0.0421**	0.0040	mg/l	0.0400	ND	105	70-130			
Matrix Spike Dup Analyzed: 03/16/01 (P1C1507-MSD1)					**Source: PKC0178-01**					
Cadmium, Dissolved	**0.00192**	0.0010	mg/l	0.00200	ND	96.0	70-130	14.5	20	
Chromium, Dissolved	**0.0362**	0.0080	mg/l	0.0400	ND	88.0	70-130	3.79	20	
Lead, Dissolved	**0.0386**	0.0040	mg/l	0.0400	ND	96.5	70-130	8.67	20	
Batch: P1C2323 Extracted: 03/23/01										
Blank Analyzed: 03/26/01 (P1C2323-BLK1)										
Nickel, Dissolved	ND	0.0040	mg/l							

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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: PKC0113		Sampled: 03/07/01 Received: 03/07/01

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C2323 Extracted: 03/23/01										
Blank Analyzed: 03/26/01 (P1C2323-BLK2)										
Nickel, Dissolved	ND	0.0040	mg/l							
LCS Analyzed: 03/26/01 (P1C2323-BS1)										
Nickel, Dissolved	0.0401	0.0080	mg/l	0.0400		100	85-115			
Matrix Spike Analyzed: 03/26/01 (P1C2323-MS1)					Source: PKC0452-01					
Nickel, Dissolved	0.641	0.20	mg/l	0.0400	0.55	227	70-130			M3
Matrix Spike Dup Analyzed: 03/26/01 (P1C2323-MSD1)					Source: PKC0452-01					
Nickel, Dissolved	0.634	0.20	mg/l	0.0400	0.55	210	70-130	1.10	20	M3
Batch: P1D1003 Extracted: 04/10/01										
Blank Analyzed: 04/11/01 (P1D1003-BLK1)										
Zinc, Dissolved	ND	0.050	mg/l							
Blank Analyzed: 04/11/01 (P1D1003-BLK2)										
Zinc, Dissolved	ND	0.050	mg/l							
LCS Analyzed: 04/11/01 (P1D1003-BS1)										
Zinc, Dissolved	0.955	0.050	mg/l	1.00		95.5	85-115			
Matrix Spike Analyzed: 04/11/01 (P1D1003-MS1)					Source: PKD0064-01					
Zinc, Dissolved	1.93	0.050	mg/l	1.00	1.1	83.0	70-130			
Matrix Spike Dup Analyzed: 04/11/01 (P1D1003-MSD1)					Source: PKD0064-01					
Zinc, Dissolved	1.93	0.050	mg/l	1.00	1.1	83.0	70-130	0	20	

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Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0113

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C0813 Extracted: 03/08/01										
Blank Analyzed: 03/08/01 (P1C0813-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: 03/08/01 (P1C0813-BS1)										
Chloride	**4.75**	0.50	mg/l	5.00		95.0	90-110			
Fluoride	**2.53**	0.10	mg/l	2.50		101	90-110			
Nitrate-N	**2.48**	0.10	mg/l	2.50		99.2	90-110			
Nitrite-N	**2.48**	0.10	mg/l	2.50		99.2	90-110			
Orthophosphate	**4.87**	0.50	mg/l	5.00		97.4	90-110			
Sulfate	**4.94**	0.50	mg/l	5.00		98.8	90-110			
Matrix Spike Analyzed: 03/08/01 (P1C0813-MS1)					**Source: PKC0113-01**					
Chloride	**5.55**	0.50	mg/l	5.00	0.91	92.8	80-120			
Fluoride	**2.19**	0.10	mg/l	2.50	ND	86.7	80-120			
Nitrate-N	**2.70**	0.10	mg/l	2.50	0.26	97.6	80-120			
Nitrite-N	**2.45**	0.10	mg/l	2.50	ND	97.2	80-120			
Orthophosphate	**4.98**	0.50	mg/l	5.00	ND	99.6	80-120			
Sulfate	**6.36**	0.50	mg/l	5.00	1.6	95.2	80-120			
Matrix Spike Dup Analyzed: 03/08/01 (P1C0813-MSD1)					**Source: PKC0113-01**					
Chloride	**5.58**	0.50	mg/l	5.00	0.91	93.4	80-120	0.539	20	
Fluoride	**2.20**	0.10	mg/l	2.50	ND	87.1	80-120	0.456	20	
Nitrate-N	**2.72**	0.10	mg/l	2.50	0.26	98.4	80-120	0.738	20	
Nitrite-N	**2.46**	0.10	mg/l	2.50	ND	97.6	80-120	0.407	20	
Orthophosphate	**4.98**	0.50	mg/l	5.00	ND	99.6	80-120	0	20	
Sulfate	**6.46**	0.50	mg/l	5.00	1.6	97.2	80-120	1.56	20	

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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C0816 Extracted: 03/08/01										
Blank Analyzed: 03/13/01 (P1C0816-BLK1)										
Biochemical Oxygen Demand	ND	2.0	mg/l							
LCS Analyzed: 03/13/01 (P1C0816-BS1)										
Biochemical Oxygen Demand	**206**	2.0	mg/l	198		104	85-115			
Duplicate Analyzed: 03/13/01 (P1C0816-DUP1)					**Source: PKC0106-01**					
Biochemical Oxygen Demand	**19.6**	2.0	mg/l		20			2.02	20	
Duplicate Analyzed: 03/13/01 (P1C0816-DUP2)					**Source: PKC0125-02**					
Biochemical Oxygen Demand	**5.17**	2.0	mg/l		9.1			55.1	20	Q11
Batch: P1C0903 Extracted: 03/08/01										
Blank Analyzed: 03/08/01 (P1C0903-BLK1)										
Sulfide	ND	0.10	mg/l							
LCS Analyzed: 03/08/01 (P1C0903-BS1)										
Sulfide	**0.989**	0.20	mg/l	1.00		98.9	80-120			
Matrix Spike Analyzed: 03/08/01 (P1C0903-MS1)					**Source: PKC0045-01**					
Sulfide	**0.492**	0.10	mg/l	0.500	ND	95.6	80-120			
Matrix Spike Dup Analyzed: 03/08/01 (P1C0903-MSD1)					**Source: PKC0045-01**					
Sulfide	**0.512**	0.10	mg/l	0.500	ND	99.6	80-120	3.98	20	
Batch: P1C0907 Extracted: 03/09/01										
Blank Analyzed: 03/09/01 (P1C0907-BLK1)										
Chemical Oxygen Demand	ND	20	mg/l							

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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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C0907 Extracted: 03/09/01										
LCS Analyzed: 03/09/01 (P1C0907-BS1)										
Chemical Oxygen Demand	**213**	20	mg/l	200		107	90-110			
Matrix Spike Analyzed: 03/09/01 (P1C0907-MS1)					**Source: PKC0113-01**					
Chemical Oxygen Demand	**304**	25	mg/l	250	54	100	65-130			
Matrix Spike Dup Analyzed: 03/09/01 (P1C0907-MSD1)					**Source: PKC0113-01**					
Chemical Oxygen Demand	**313**	25	mg/l	250	54	104	65-130	2.92	20	
Batch: P1C0908 Extracted: 03/09/01										
Blank Analyzed: 03/09/01 (P1C0908-BLK1)										
Total Suspended Solids	ND	10	mg/l							
Duplicate Analyzed: 03/09/01 (P1C0908-DUP1)					**Source: PKC0113-01**					
Total Suspended Solids	**28.0**	10	mg/l		27			3.64	5	
Duplicate Analyzed: 03/09/01 (P1C0908-DUP2)					**Source: PKC0140-02**					
Total Suspended Solids	ND	10	mg/l		ND				5	
Batch: P1C1204 Extracted: 03/12/01										
Duplicate Analyzed: 03/12/01 (P1C1204-DUP1)					**Source: PKC0113-01**					
Specific Conductance	**28.2**	2.0	umhos/cm		31			9.46	10	
Duplicate Analyzed: 03/12/01 (P1C1204-DUP2)					**Source: PKC0178-01**					
Specific Conductance	**442**	2.0	umhos/cm		440			0.454	10	

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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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C1204 Extracted: 03/12/01										
Reference Analyzed: 03/12/01 (P1C1204-SRM1)										
Specific Conductance	**1410**	2.0	umhos/cm	1410		100	90-110			
Reference Analyzed: 03/12/01 (P1C1204-SRM2)										
Specific Conductance	**1380**	2.0	umhos/cm	1410		97.9	90-110			
Batch: P1C1206 Extracted: 03/12/01										
Blank Analyzed: 03/12/01 (P1C1206-BLK1)										
Total Dissolved Solids	ND	20	mg/l							
LCS Analyzed: 03/12/01 (P1C1206-BS1)										
Total Dissolved Solids	**396**	20	mg/l	400		99.0	80-115			
Duplicate Analyzed: 03/12/01 (P1C1206-DUP1)					**Source: PKC0113-01**					
Total Dissolved Solids	**40.0**	20	mg/l		40			0	5	
Duplicate Analyzed: 03/12/01 (P1C1206-DUP2)					**Source: PKC0154-03**					
Total Dissolved Solids	**314**	20	mg/l		310			1.28	5	
Batch: P1C1215 Extracted: 03/12/01										
Blank Analyzed: 03/12/01 (P1C1215-BLK1)										
Phosphorus	ND	0.050	mg/l							
LCS Analyzed: 03/12/01 (P1C1215-BS1)										
Phosphorus	**0.568**	0.050	mg/l	0.500		114	80-120			

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Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0113

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C1215 Extracted: 03/12/01										
Matrix Spike Analyzed: 03/12/01 (P1C1215-MS1)					**Source: PKC0180-01**					
Phosphorus	**0.595**	0.050	mg/l	0.500	ND	116	75-125			
Matrix Spike Dup Analyzed: 03/12/01 (P1C1215-MSD1)					**Source: PKC0180-01**					
Phosphorus	**0.583**	0.050	mg/l	0.500	ND	114	75-125	2.04	20	
Batch: P1C1306 Extracted: 03/13/01										
Blank Analyzed: 03/14/01 (P1C1306-BLK1)										
Total Cyanide	ND	0.020	mg/l							
LCS Analyzed: 03/14/01 (P1C1306-BS1)										
Total Cyanide	**0.0933**	0.025	mg/l	0.100		93.3	90-110			
Matrix Spike Analyzed: 03/14/01 (P1C1306-MS1)					**Source: PKC0106-01**					
Total Cyanide	**0.0933**	0.025	mg/l	0.100	ND	93.3	70-130			
Matrix Spike Dup Analyzed: 03/14/01 (P1C1306-MSD1)					**Source: PKC0106-01**					
Total Cyanide	**0.0933**	0.025	mg/l	0.100	ND	93.3	70-130	0	20	
Batch: P1C1922 Extracted: 03/19/01										
Blank Analyzed: 03/19/01 (P1C1922-BLK1)										
Ammonia-N	ND	0.050	mg/l							
LCS Analyzed: 03/19/01 (P1C1922-BS1)										
Ammonia-N	**0.480**	0.050	mg/l	0.500		96.0	90-110			

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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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1C1922 Extracted: 03/19/01										
Matrix Spike Analyzed: 03/19/01 (P1C1922-MS1)					**Source: PKC0113-03**					
Ammonia-N	**1.31**	0.050	mg/l	0.500	0.77	108	80-120			
Matrix Spike Dup Analyzed: 03/19/01 (P1C1922-MSD1)					**Source: PKC0113-03**					
Ammonia-N	**1.32**	0.050	mg/l	0.500	0.77	110	80-120	0.760	20	
Batch: P1C2003 Extracted: 03/20/01										
Duplicate Analyzed: 03/20/01 (P1C2003-DUP1)					**Source: PKC0113-03**					
Alkalinity as CaCO3	**7.00**	5.0	mg/l		6.5			7.41	20	
Reference Analyzed: 03/20/01 (P1C2003-SRM1)										
Alkalinity as CaCO3	**107**	5.0	mg/l	105		102	89-111			

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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: PKC0113

Sampled: 03/07/01
Received: 03/07/01

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: C1C1507 Extracted: 03/15/01										
Blank Analyzed: 03/16/01 (C1C1507-BLK1)										
Total Kjeldahl Nitrogen	ND	0.50	mg/l							
LCS Analyzed: 03/16/01 (C1C1507-BS1)										
Total Kjeldahl Nitrogen	**9.80**	0.50	mg/l	10.0		98.0	85-120			
Matrix Spike Analyzed: 03/16/01 (C1C1507-MS1)					**Source: CKC0065-01**					
Total Kjeldahl Nitrogen	**9.80**	0.50	mg/l	10.0	0.67	91.3	65-125			
Matrix Spike Dup Analyzed: 03/16/01 (C1C1507-MSD1)					**Source: CKC0065-01**					
Total Kjeldahl Nitrogen	**10.4**	0.50	mg/l	10.0	0.67	97.3	65-125	5.94	15	

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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: PKC0113	Sampled: 03/07/01 Received: 03/07/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

K1	The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/L. Any reported result is an estimated value.
K4	The seed depletion was outside the method and laboratory acceptance limits. The reported result is an estimated value.
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 addtion (MSA).
Q11	Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

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SAMPLE PKC0113-01 - ACDC43
DATE 3/20/01
ANALYST Tim

ANION	CONC. mg/L	CONC. meq	CATION	CONC. mg/L	CONC. meq
Alkalinity	6.50	0.13	Sodium	1.4	0.06
Chloride	0.91	0.03	Potassium	0.70	0.02
Nitrate	0.26	0.02	Calcium	2.73	0.14
Sulfate	1.60	0.03	Magnesium	0.58	0.05
Fluoride	0.02	0.00			
SUM	9.29	0.21		5.41	0.26
EC X .01 =		0.31			0.31

Anion-Cation Balance= 11.4%

EC	31.08	TDS	40
		EC X 0.65 =	20.202

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SAMPLE PKC0113-03 - ACDC 43 - DUP
DATE 3/20/01
ANALYST Tim

ANION	CONC. mg/L	CONC. meq	CATION	CONC. mg/L	CONC. meq
Alkalinity	6.50	0.13	Sodium	1.5	0.07
Chloride	0.83	0.02	Potassium	0.70	0.02
Nitrate	0.25	0.02	Calcium	2.73	0.14
Sulfate	1.60	0.03	Magnesium	0.55	0.05
Fluoride	0.04	0.00			
SUM	9.21	0.21		5.49	0.26
EC X .01 =		0.30			0.30

Anion-Cation Balance= 12.5%

EC	30.11	TDS	22
		EC X 0.65 =	19.572

Lab Reports and Quality Control Data
Del Mar Analytical (grab)

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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: PKC0118	Sampled: 03/07/01 Received: 03/07/01 Issued: 03/15/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKC0118-01	43RD + PEORIA-GRAB	Water
PKC0118-02	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: The Fecal Coliform, Fecal Strep, and E-Coli analyses were subcontracted to ES Environmental Services/Severn Trent - 3333 S. Price Road, Chandler, AZ (AZ0021). 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)

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: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: PKC0118-01 (43RD + PEORIA-GRAB - Water)								
Total Recoverable Hydrocarbons	EPA 418.1	P1C0815	1.0	**2.4**	1	3/8/01	3/8/01	

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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: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: PKC0118-01 (43RD + PEORIA-GRAB - Water)								
Oil & Grease	EPA 413.2	P1C0814	1.0	**2.5**	1	3/8/01	3/8/01	

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Linda Eshelman
Project Manager

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2801 West Durango Street
Phoenix, AZ 85009
Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: PKC0118-01 (43RD + PEORIA-GRAB - Water)								
Benzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromodichloromethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromoform	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromomethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
Carbon tetrachloride	EPA 624	P1C0904	2.5	ND	1	3/9/01	3/9/01	
Chlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Dibromochloromethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloroethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
2-Chloroethyl vinyl ether	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloroform	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloromethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
1,2-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,3-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,4-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1-Dichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,2-Dichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1-Dichloroethene	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
trans-1,2-Dichloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,2-Dichloropropane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
cis-1,3-Dichloropropene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
trans-1,3-Dichloropropene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Ethylbenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Methylene chloride	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Tetrachloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Toluene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1,1-Trichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1,2-Trichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Trichloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Trichlorofluoromethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
Vinyl chloride	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Acetone	EPA 624	P1C0904	20	ND	1	3/9/01	3/9/01	
Surrogate: Dibromofluoromethane (80-120%)				*105 %*				
Surrogate: Toluene-d8 (65-125%)				*103 %*				
Surrogate: 4-Bromofluorobenzene (65-130%)				*109 %*				

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: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: PKC0118-02 (TRIP BLANK - Water)								
Benzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromodichloromethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromoform	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Bromomethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
Carbon tetrachloride	EPA 624	P1C0904	2.5	ND	1	3/9/01	3/9/01	
Chlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Dibromochloromethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloroethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
2-Chloroethyl vinyl ether	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloroform	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Chloromethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
1,2-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,3-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,4-Dichlorobenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1-Dichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,2-Dichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1-Dichloroethene	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
trans-1,2-Dichloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,2-Dichloropropane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
cis-1,3-Dichloropropene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
trans-1,3-Dichloropropene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Ethylbenzene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Methylene chloride	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
1,1,2,2-Tetrachloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Tetrachloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Toluene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1,1-Trichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
1,1,2-Trichloroethane	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Trichloroethene	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Trichlorofluoromethane	EPA 624	P1C0904	5.0	ND	1	3/9/01	3/9/01	
Vinyl chloride	EPA 624	P1C0904	2.0	ND	1	3/9/01	3/9/01	
Acetone	EPA 624	P1C0904	20	ND	1	3/9/01	3/9/01	
Surrogate: Dibromofluoromethane (80-120%)				*107 %*				
Surrogate: Toluene-d8 (65-125%)				*98.8 %*				
Surrogate: 4-Bromofluorobenzene (65-130%)				*110 %*				

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: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: PKC0118-01 (43RD + PEORIA-GRAB - Water)								
Chrysene	EPA 625	P1C0722	10	ND	1	3/7/01	3/14/01	
Phenol	EPA 625	P1C0722	10	ND	1	3/7/01	3/14/01	
Benzoic acid	EPA 625	P1C0722	50	ND	1	3/7/01	3/14/01	
Surrogate: 2-Fluorophenol (20-120%)				*59.7 %*				
Surrogate: Phenol-d6 (15-115%)				*62.1 %*				
Surrogate: 2,4,6-Tribromophenol (35-135%)				*97.7 %*				
Surrogate: Nitrobenzene-d5 (25-120%)				*58.8 %*				
Surrogate: 2-Fluorobiphenyl (25-145%)				*83.0 %*				
Surrogate: Terphenyl-d14 (40-130%)				*96.4 %*				

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Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: PKC0118-01 (43RD + PEORIA-GRAB - Water)								
4,4'-DDE	EPA 608	I1C1234	0.10	ND	1	3/12/01	3/13/01	
Surrogate: Tetrachloro-m-xylene (30-120%)				*47.5 %*				
Surrogate: Decachlorobiphenyl (30-120%)				*72.1 %*				

The reporting limit for this sample was adjusted by a factor of 1.05 to account for the applicable preparation factor.

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Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: P1C0815 Extracted: 03/08/01										
Blank Analyzed: 03/08/01 (P1C0815-BLK1)										
Total Recoverable Hydrocarbons	ND	1.0	mg/l							
LCS Analyzed: 03/08/01 (P1C0815-BS1)										
Total Recoverable Hydrocarbons	**12.7**	1.0	mg/l	10.0		127	95-130			
LCS Dup Analyzed: 03/08/01 (P1C0815-BSD1)										
Total Recoverable Hydrocarbons	**12.7**	1.0	mg/l	10.0		127	95-130	0	20	

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Report Number: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: P1C0814 Extracted: 03/08/01										
Blank Analyzed: 03/08/01 (P1C0814-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 03/08/01 (P1C0814-BS1)										
Oil & Grease	**12.6**	1.0	mg/l	10.0		126	100-130			
LCS Dup Analyzed: 03/08/01 (P1C0814-BSD1)										
Oil & Grease	**12.6**	1.0	mg/l	10.0		126	100-130	0	20	

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Report Number: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: P1C0722 Extracted: 03/07/01										
Blank Analyzed: 03/13/01 (P1C0722-BLK1)										
Chrysene	ND	10	ug/l							
Phenol	ND	10	ug/l							
Benzoic acid	ND	50	ug/l							
Surrogate: 2-Fluorophenol	*76.6*		*ug/l*	*100*		*76.6*	*20-120*			
Surrogate: Phenol-d6	*69.1*		*ug/l*	*100*		*69.1*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.3*		*ug/l*	*100*		*90.3*	*35-135*			
Surrogate: Nitrobenzene-d5	*38.2*		*ug/l*	*50.0*		*76.4*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*51.2*		*ug/l*	*50.0*		*102*	*25-145*			
Surrogate: Terphenyl-d14	*49.6*		*ug/l*	*50.0*		*99.2*	*40-130*			
LCS Analyzed: 03/13/01 (P1C0722-BS1)										
Phenol	**39.7**	10	ug/l	50.0		79.4	5-112			
Surrogate: 2-Fluorophenol	*83.0*		*ug/l*	*100*		*83.0*	*20-120*			
Surrogate: Phenol-d6	*75.0*		*ug/l*	*100*		*75.0*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*99.6*		*ug/l*	*100*		*99.6*	*35-135*			
Surrogate: Nitrobenzene-d5	*47.0*		*ug/l*	*50.0*		*94.0*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*51.8*		*ug/l*	*50.0*		*104*	*25-145*			
Surrogate: Terphenyl-d14	*51.5*		*ug/l*	*50.0*		*103*	*40-130*			
Matrix Spike Analyzed: 03/13/01 (P1C0722-MS1)					**Source: PKC0080-01**					
Phenol	**40.2**	10	ug/l	50.0	ND	80.4	5-112			
Surrogate: 2-Fluorophenol	*72.9*		*ug/l*	*100*		*72.9*	*20-120*			
Surrogate: Phenol-d6	*74.0*		*ug/l*	*100*		*74.0*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*90.9*		*ug/l*	*100*		*90.9*	*35-135*			
Surrogate: Nitrobenzene-d5	*41.3*		*ug/l*	*50.0*		*82.6*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*43.7*		*ug/l*	*50.0*		*87.4*	*25-145*			
Surrogate: Terphenyl-d14	*47.9*		*ug/l*	*50.0*		*95.8*	*40-130*			

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Maricopa County -Flood Control District
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Attention: Julie Cox

Client Project ID: PHOENIX NPDES STORMWATER

Report Number: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: P1C0722 Extracted: 03/07/01										
Matrix Spike Dup Analyzed: 03/13/01 (P1C0722-MSD1)					**Source: PKC0080-01**					
Phenol	**42.8**	10	ug/l	50.0	ND	85.6	5-112	6.27	20	
Surrogate: 2-Fluorophenol	*79.9*		*ug/l*	*100*		*79.9*	*20-120*			
Surrogate: Phenol-d6	*80.8*		*ug/l*	*100*		*80.8*	*15-115*			
Surrogate: 2,4,6-Tribromophenol	*92.1*		*ug/l*	*100*		*92.1*	*35-135*			
Surrogate: Nitrobenzene-d5	*46.4*		*ug/l*	*50.0*		*92.8*	*25-120*			
Surrogate: 2-Fluorobiphenyl	*50.0*		*ug/l*	*50.0*		*100*	*25-145*			
Surrogate: Terphenyl-d14	*49.4*		*ug/l*	*50.0*		*98.8*	*40-130*			

Linda Eshelman
Project Manager

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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
Report Number: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: I1C1234 Extracted: 03/12/01										
Blank Analyzed: 03/13/01 (I1C1234-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	*0.329*		*ug/l*	*0.500*		*65.8*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.466*		*ug/l*	*0.500*		*93.2*	*30-120*			
LCS Analyzed: 03/13/01 (I1C1234-BS1)										
Aldrin	**0.264**	0.10	ug/l	0.500		52.8	42-115			
alpha-BHC	**0.270**	0.10	ug/l	0.500		54.0	37-115			
beta-BHC	**0.334**	0.10	ug/l	0.500		66.8	45-115			
delta-BHC	**0.311**	0.20	ug/l	0.500		62.2	45-130			
gamma-BHC (Lindane)	**0.302**	0.10	ug/l	0.500		60.4	40-115			
4,4'-DDD	**0.328**	0.10	ug/l	0.500		65.6	55-120			
4,4'-DDE	**0.300**	0.10	ug/l	0.500		60.0	50-115			

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: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: I1C1234 Extracted: 03/12/01										
LCS Analyzed: 03/13/01 (I1C1234-BS1)										
4,4'-DDT	**0.397**	0.10	ug/l	0.500		79.4	55-115			
Dieldrin	**0.264**	0.10	ug/l	0.500		52.8	50-115			
Endosulfan I	**0.281**	0.10	ug/l	0.500		56.2	45-115			
Endosulfan II	**0.318**	0.10	ug/l	0.500		63.6	50-115			
Endosulfan sulfate	**0.397**	0.20	ug/l	0.500		79.4	65-120			
Endrin	**0.311**	0.10	ug/l	0.500		62.2	45-115			
Endrin aldehyde	**0.329**	0.10	ug/l	0.500		65.8	45-115			
Endrin ketone	**0.386**	0.10	ug/l	0.500		77.2	55-140			
Heptachlor	**0.229**	0.10	ug/l	0.500		45.8	35-115			
Heptachlor epoxide	**0.304**	0.10	ug/l	0.500		60.8	40-115			
Methoxychlor	**0.424**	0.10	ug/l	0.500		84.8	55-120			
Surrogate: Tetrachloro-m-xylene	*0.252*		*ug/l*	*0.500*		*50.4*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.357*		*ug/l*	*0.500*		*71.4*	*30-120*			
LCS Dup Analyzed: 03/13/01 (I1C1234-BSD1)										
Aldrin	**0.272**	0.10	ug/l	0.500		54.4	42-115	2.99	20	
alpha-BHC	**0.280**	0.10	ug/l	0.500		56.0	37-115	3.64	20	
beta-BHC	**0.333**	0.10	ug/l	0.500		66.6	45-115	0.300	20	
delta-BHC	**0.317**	0.20	ug/l	0.500		63.4	45-130	1.91	20	
gamma-BHC (Lindane)	**0.303**	0.10	ug/l	0.500		60.6	40-115	0.331	20	
4,4'-DDD	**0.354**	0.10	ug/l	0.500		70.8	55-120	7.62	20	
4,4'-DDE	**0.327**	0.10	ug/l	0.500		65.4	50-115	8.61	20	
4,4'-DDT	**0.456**	0.10	ug/l	0.500		91.2	55-115	13.8	20	
Dieldrin	**0.285**	0.10	ug/l	0.500		57.0	50-115	7.65	20	
Endosulfan I	**0.305**	0.10	ug/l	0.500		61.0	45-115	8.19	20	
Endosulfan II	**0.337**	0.10	ug/l	0.500		67.4	50-115	5.80	20	
Endosulfan sulfate	**0.417**	0.20	ug/l	0.500		83.4	65-120	4.91	20	
Endrin	**0.320**	0.10	ug/l	0.500		64.0	45-115	2.85	20	
Endrin aldehyde	**0.373**	0.10	ug/l	0.500		74.6	45-115	12.5	20	
Endrin ketone	**0.402**	0.10	ug/l	0.500		80.4	55-140	4.06	20	
Heptachlor	**0.234**	0.10	ug/l	0.500		46.8	35-115	2.16	20	

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: PKC0118

Sampled: 03/07/01
Received: 03/07/01

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: I1C1234 Extracted: 03/12/01										
LCS Dup Analyzed: 03/13/01 (I1C1234-BSD1)										
Heptachlor epoxide	**0.320**	0.10	ug/l	0.500		64.0	40-115	5.13	20	
Methoxychlor	**0.456**	0.10	ug/l	0.500		91.2	55-120	7.27	20	
Surrogate: Tetrachloro-m-xylene	*0.256*		*ug/l*	*0.500*		*51.2*	*30-120*			
Surrogate: Decachlorobiphenyl	*0.385*		*ug/l*	*0.500*		*77.0*	*30-120*			

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: PKC0118	Sampled: 03/07/01 Received: 03/07/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

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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Lab Reports and Quality Control Data
Severn Trent

Sever.. Trent Services

3333 S. Old Price Road Chandler, Arizona 85248 Tel: (480) 899-0191 Fax (480) 899-0349

402 N. Neely Street Gilbert, Arizona 85233 Tel: (480) 926-3761 Fax (480) 926-3868

Del Mar Analytical
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044

Attention: Linda Eshelman

Report Date: March 20, 2001
Date/Time Received: 03/07/01 0845
Project Identification: FCD-Phoenix
Sample Description: Stormwater
Purchase Order Number:

AC DC 43

LAB RESULTS

Analytical Method	Parameter Description	Sample Identification	Sample Date / Time	Analysis Date	Lab Identification	Reporting Limit	Analytical Results	Units
SM9230B	Fecal Streptococcus by MTF	43rd & Peoria	03/07/01 0500	03/07/01	C01-682	2	≥ 1600*	MPN/100ml
SM9221E	Fecal Coliform by MTF	43rd & Peoria	03/07/01 0500	03/07/01	C01-683	2	≥ 1600*	MPN/100ml
SM9221F	E. Coli - MPN			03/07/01		2	500*	MPN/100ml

* Microbiological incubator exceeded temperature control limits during incubation period.
Analytes reported as N.D. were not present above the stated limit of detection.
SEVERN TRENT ENVIRONMENTAL SERVICES, Chandler - ADHS Licensure AZ0613

Stephen J. Rot
Laboratory Director

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Lab Reports and Quality Control Data
NEL Laboratories

NEL LABORATORIES
Reno • Las Vegas • Boise
Phoenix • Sacramento

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

PHOENIX ACDC43
COMPOSITE 3/7/01

PROJECT NAME: PKC0113-MCFC
PROJECT #: NA

NEL ORDER ID: P0103026

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 3/9/01.

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.

Re-issued
4-26-01
Date

Doug McCormack
Lab Manager

CERTIFICATIONS:

	Reno	Las Vegas	S. California
Arizona	AZ0520	AZ0518	AZ0605
California	1707	2002	2264
US Army Corps of Engineers	Certified	Certified	

	Reno	Las Vegas	S. California
Idaho	Certified	Certified	
Montana	Certified	Certified	
Nevada	NV033	NV052	CA084
L.A.C.S.D.			10228

NEL LABORATORIES

CLIENT:	Del Mar Analytical	CLIENT ID:	**PKC0106-01**
PROJECT ID:	PKC0106-MCFC	DATE SAMPLED:	3/7/01
PROJECT #:	NA	NEL SAMPLE ID:	P0103025-01
TEST:	**AZ METALS PKG**		
MATRIX:	Aqueous	ANALYST:	JTY

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	0.0068	0.001 mg/L	1	EPA 200.8	3/14/01	3/15/01

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	CLIENT ID:	**PKC0113-02**
PROJECT ID:	PKC0113-MCFC	DATE SAMPLED:	3/7/01
PROJECT #:	NA	NEL SAMPLE ID:	P0103026-02
TEST:	**Dissolved Metals**		
MATRIX:	Aqueous	ANALYST:	JTY

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	0.0017	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	3/30/01	3/31/01
Copper, Dissolved	0.0069	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT:	Del Mar Analytical	CLIENT ID:	**PKC0113-03**
PROJECT ID:	PKC0113-MCFC	DATE SAMPLED:	3/7/01
PROJECT #:	NA	NEL SAMPLE ID:	P0103026-03
TEST:	**Metals**		
MATRIX:	Aqueous	ANALYST:	JTY

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	0.0016	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKC0113-MCFC
PROJECT #: NA

CLIENT ID: **PKC0113-04**
DATE SAMPLED: 3/7/01
NEL SAMPLE ID: P0103026-04

TEST: **Dissolved Metals**
MATRIX: Aqueous

ANALYST: JTY

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic, Dissolved	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	3/30/01	3/31/01
Copper, Dissolved	0.0067	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKC0113-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: P03024M-BLK

TEST: **AZ METALS PKG**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	ND	0.001 mg/L	1	EPA 200.8	3/14/01	3/15/01

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKC0113-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: P03026M-03-BLK

TEST: **Metals**

PARAMETER	RESULT mg/L	REPORTING LIMIT	D. F.	METHOD	DIGESTED	ANALYZED
Arsenic	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKC0113-MCFC
PROJECT #: NA

CLIENT ID: **Method Blank**
DATE SAMPLED: NA
NEL SAMPLE ID: P03026M-DIS-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	3/30/01	3/31/01
Beryllium, Dissolved	ND	0.0005 mg/L	1	EPA 200.8	3/30/01	3/31/01
Copper, Dissolved	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01
Silver, Dissolved	ND	0.001 mg/L	1	EPA 200.8	3/30/01	3/31/01

D.F. - Dilution Factor

ND - Not Detected

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NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKC0113-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic	P03024M-LCS	0.1	0.0966	97	85 - 115	
Arsenic	P0103024-01-MS	0.1	0.101	99	75 - 125	
Arsenic	P0103024-01-MSD	0.1	0.1	98	75 - 125	1.
Beryllium	P03024M-LCS	0.1	0.107	107	85 - 115	
Beryllium	P0103024-01-MS	0.1	0.116	116	75 - 125	
Beryllium	P0103024-01-MSD	0.1	0.12	120	75 - 125	3.4
Copper	P03024M-LCS	0.05	0.0533	107	85 - 115	
Copper	P0103024-01-MS	0.05	0.0605	107	75 - 125	
Copper	P0103024-01-MSD	0.05	0.0598	106	75 - 125	1.3
Silver	P03024M-LCS	0.1	0.094	94	85 - 115	
Silver	P0103024-01-MS	0.1	0.0954	95	75 - 125	
Silver	P0103024-01-MSD	0.1	0.0956	96	75 - 125	0.2

ND - Not Detected

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CLIENT: Del Mar Analytical
PROJECT ID: PKC0113-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic	P03026M-03-LCS	0.01	0.0104	104	85 - 115	
Arsenic	P0103026-03-MS	0.01	0.0123	107	75 - 125	
Arsenic	P0103026-03-MSD	0.01	0.0131	115	75 - 125	7.2

ND - Not Detected

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NEL LABORATORIES

CLIENT: Del Mar Analytical
PROJECT ID: PKC0113-MCFC
PROJECT #: NA
TEST: **Metals**
MATRIX: Aqueous

PARAMETER	NEL Sample ID	Spike Amount	Spike Result	Percent Recovery	Acceptable Range	RPD
Arsenic, Dissolved	P03026M-DIS-LCS	0.01	0.0104	104	85 - 115	
Arsenic, Dissolved	P0103026-02-MS	0.01	0.0122	105	70 - 130	
Arsenic, Dissolved	P0103026-02-MSD	0.01	0.0122	105	70 - 130	0.
Beryllium, Dissolved	P03026M-DIS-LCS	0.01	0.00969	97	85 - 115	
Beryllium, Dissolved	P0103026-02-MS	0.01	0.0103	103	70 - 130	
Beryllium, Dissolved	P0103026-02-MSD	0.01	0.0107	107	70 - 130	3.8
Copper, Dissolved	P03026M-DIS-LCS	0.01	0.00968	97	85 - 115	
Copper, Dissolved	P0103026-02-MS	0.01	0.0166	97	70 - 130	
Copper, Dissolved	P0103026-02-MSD	0.01	0.0172	103	70 - 130	6.
Silver, Dissolved	P03026M-DIS-LCS	0.1	0.108	108	85 - 115	
Silver, Dissolved	P0103026-02-MS	0.1	0.107	107	70 - 130	
Silver, Dissolved	P0103026-02-MSD	0.1	0.107	107	70 - 130	0.

ND - Not Detected

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Lab Reports and Quality Control Data
Transwest Geochem

TRANSWEST GEOCHEM

March 26, 2001

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

RE: PKC0113-MCFC -ACDC-43
Work Order No.: 0103088

Dear Linda,
Transwest Geochem, Inc. received 2 samples on 3/9/2001 9:48:00 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 E. Barber for

Beth Proffitt
Project Manager

ADHS License No. AZM133/AZ0133

Date Printed: 26-Mar-01

Client: Del Mar Analytical
Work Order: 0103088
Project Name: PKC0113-MCFC
Project Number:

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.

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

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 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name: PKC0113-MCFC
Project Number:
Work Order: 0103088
Date Received: 09-Mar-01

Work Order Sample Summary

Client Sample ID	Lab Sample ID	Test Code	Collection Date
PKC0113-01	0103088-01A	EPA420.1	3/7/2001 6:22:00 AM
PKC0113-03	0103088-02A	EPA420.1	3/7/2001 6:22:00 AM

Date Printed 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name: PKC0113-MCFC
Project Number:
Work Order: 0103088
Date Received: 09-Mar-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 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103088
Lab ID: 0103088-01
Project Name: PKC0113-MCFC
Project Number:

Client Sample ID: PKC0113-01
Collection Date: 3/7/2001 6:22:00 AM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	0.0066	0.0050		mg/L	1	EPA420.1	3/20/01	3/23/01	KMB	420.1-3/23/2001

Confidential and Privileged

TRANSWEST GEOCHEM

Date Printed 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103088
Lab ID: 0103088-02
Project Name: PKC0113-MCFC
Project Number:

Client Sample ID: PKC0113-03
Collection Date: 3/7/2001 6:22:00 AM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	0.0080	0.0050		mg/L	1	EPA420.1	3/20/01	3/23/01	KMB	420.1-3/23/2001

Confidential and Privileged

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103088
Project: PKC0113-MCFC

QC SUMMARY REPORT

Method Blank

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Phenolics, Total Recoverable	<0.0050	0.0050		mg/L	1	EPA420.1	3/20/01	3/23/01	KMB	420.1-3/23/2001

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103088
Project: PKC0113-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: **0103111-01AD** Batch ID: 420.1-3/23/2001											
Client ID:											
Phenolics, Total Recoverable	0.007000	0.0050	mg/L	0.007100	1%	20	EPA420.1	3/20/01	3/23/01	KMB	

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103088
Project: PKC0113-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: **0103111-01AS**	Batch ID: 420.1-3/23/2001			Test Code: EPA420.1				Date Analyzed: 3/23/01			
Client ID:				Units: mg/L				Date Prepared: 3/20/01			
Phenolics, Total Recoverable	0.1022	0.0050	0.1000	0.007100	95%	80	120				

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103088
Project: PKC0113-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: 420.1-3/23/2001			Test Code: EPA420.1				Date Analyzed: 3/23/01			
				Units: mg/L				Date Prepared: 3/20/01			
Phenolics, Total Recoverable	0.1025	0.0050	0.1000	<0.0050	103%	85	115				

Date: 26-Mar-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0103088
Project: PKC0113-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: 420.1-3/23/2001			Test Code: EPA420.1				Date Analyzed: 3/23/01			
				Units: mg/L				Date Prepared: 3/20/01			
Phenolics, Total Recoverable	0.1015	0.0050	0.1000	<0.0050	102%	85	115				

Lab Reports and Quality Control Data
U.S. Geological Survey

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 MARCH 7, 2001

Station 43RD AVE + PEORIA AVE. @ PHOENIX, AZ Sta.No. 09513885

Sampled By FOSSUM + WILSON Mean Time 0622 SMS Cntrl. No.

Record No. 00100131 Sample Purpose (71999) :

SAMPLES COLLECTED

Nutrients ☒ TOC ☐
Major Ions ☐ DOC ☐
SOC ☐ Vol. Filt. ____ mL
BOD ☐ Turbidity ☐
COD ☒ ☐
☐

ORGANICS: Pesticide ☐, VOC ☐, BNA ☐

TR. ELEMENTS: Unfiltered ☒, Filtered ☐, Suspended ☐, Bottom ☐

Sediment Conc. ☐
Sediment Size ☐
Sed. Bot. Material ☐
Sand Split/Break ☐
Radiochemical ☐
Isotope ☐
☐

FIELD MEASUREMENTS

					R	F	
Q. Inst. (00061)	.67	cfs	meas.	Alkalinity (00419/39086)	7.0	4.4	mg/L
Gage Ht (00065)	.26	ft.	rating est.	Bicarbonate (00450/00453)	8.5	5.4	mg/L
Temp. Water (00010)	15.5	°C		Carbonate (00447/00452)	0	0	mg/L
Temp. Air (00020)	/	°C		Hydroxide (—)	—		mg/L
pH (00400)	6.59	units		E. Coli (31633)	—		col./100 mL; Rmk —
Sp. Cond. (00095)	28	µS/cm 25 °C		FC (31625)			col./100 mL; Rmk
Dis. Oxy. (00300)	/	mg/L		FS (31673)			col./100 mL; Rmk
DO Sat. (00301)	/	%		Other:			
Bar. Press. (00025)	/	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) ASPHALT

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

LABORATORY SCHEDULES

Lab Schedules Req. (or copy of lab request form attached ☒)

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) :	____

Sampling		GHT
Start Time	____	____
Mean Time =	____	____
	____	____
End Time	____	____

Other Observations

81395 (MGD) =
82381 (PRECIP) =
00129 (MAXS) =
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	15.0	7.00	7.00	OK
10.01	15.0	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 = 15.0 °C

FIELD pH = 6.59 USE : 6.59

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	15.0	0	0	OK
1413 µS	15.0	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 = 28 µS USE : 28 µS

DISSOLVED OXYGEN W-no. _____ METER Make/Model _____

D.O. measurement location or D.O. subsample from : single point at ____ sta ____ depth vertical avg of ____ points x-sec avg of ____ points BOD bottle

Calibration :

☐ 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 _____ mm Hg; (mm = in. X 25.4)

Salinity Corr. Factor _____ H_2O Temp. _____ °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 =

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 QA sample info attached ☐
Trip Blank	☐	☐	

Other ☐ Indicate Type(s) :

Calibration Notes and Remarks

USED INTERNAL THERMISTOR IN CORNING METER.

DO METER FAILED - NO D.O.

ALKALINITY

pH	△ pH	Vol acid DC or mL	△Vol acid DC or mL	△ pH / △ Vol acid
RAW				
6.08		0		
6.00	.08	10	10	.008
5.72	.28	20	10	.028
5.56	.16	25	5	.032
5.26	.30	30	5	.06
4.83	.43	35	5	.086
4.58	.25	40	5	.05
4.38	.20	45	5	.04
4.20	.18	50	5	.036
4.06	.14	55	5	.028
3.96	.10	60	5	.02
FILTERED				
6.14		0		
5.70	.44	10	10	.044
5.45	.25	14	4	.062
5.24	.21	18	4	.052
5.02	.22	20	2	.11
4.77	.25	22	2	.125
4.60	.17	24	2	.085
4.47	.13	26	2	.065
4.34	.13	28	2	.065
4.21	.13	30	2	.065
4.09	.12	32	2	.06
3.98	.11	34	2	.055

Acid: 1.60 N (0.1600 N) 0.01639N OTHER _____

Acid Lot No. : 0280 Exp. 4-01

Sample Volume : 50 mL

☒ Filtered ☒ Unfiltered

Sample stirred : ☒ magnetically ☐ manually

pH: Start _____ End _____

DC (Digital Counts) or Vol. titrated at End Point near pH 8.3 : R 0 | F 0

Digital Counts or Vol. titrated at End Point near pH 4.5 : 35 | 22

☒ Incremental Equivalence ☐ Fixed End Point ☐ Gran Titration

Date 3-7-01 Time 1200

CALCULATIONS :

$$CO_3^{-2} = A \times \frac{F_1}{\text{mL sample}} \times CF \;*$$

$$HCO_3^{-1} = [B - 2(A)] \times \frac{F_2}{\text{mL sample}} \times CF; \;*$$

$$\text{ALKALINITY as } CaCO_3 = B \times \frac{F_3}{\text{mL sample}} \times CF \;*$$

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 0

B = DC or mLs acid from initial pH to endpoint near 4.5 = 35 | 22

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)	7.0	4.4	mg/L as $CaCO_3$	
BICARBONATE	(00450/00453)	8.5	5.4	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 :

BOTTLE	TIME	SC in µS	Acum Vol	

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
09513885	20010307	0622	9	9

District Contact Phone Number	End Date (YYYYMMDD)	End Time	District Contact Email
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: 43rd Ave and Peoria Ave @ Phoenix, AZ **Field ID:** 09513885

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: _____ 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 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	WCA
CC	CUR	1 FCA	GCC	IRE	PHE	RCB	RURCV	TBY	1 RDE
CHY	DOC	FCC	GCV	IRI	PIC	RCN	RUS	TOC	

NWQL Login Comments

Collected by KEN FOSSUM Phone No 602-379-3089 Ex.230 Date Shipped 3/8/01

FIELD VALUES

Lab P Code	Value	Remark	Lab P Code	Value	Remark	Lab P Code	Value	Remark
	28			6.59				

Field Comments

*MANDATORY FOR NWIS

Revised 04

** APR 16 2001 AT 1250 NWIS PROGRAM QACARDSIN/QWCARDSIN TRANSACTION NO.: 11

United States Department of the Interior
U.S. Geological Survey
Water Resources Division
National Laboratory
Arvada, Colorado

RECORD NO.: 00100131
SITE ID: USGS 09513885 LAB ID NO.: PROJECT: 470416800
STATION NAME: 43RD AND PEORIA STATE: 04
BEGIN DATE: 03-07-2001 AT 0622 END DATE: - - AT COUNTY: 013
GEOLOGIC UNIT: DATA TYPES: CH ME NU
STATUS: H SOURCE: 9 HYD. CONDITION: 9 TYPE: 9 HYD. EVENT: J
MEDIUM: 9 REMARKS TO LAB: Pared NPDES Sample. Send to Ocala Lab.
SAMPLE COST: $161.30 REMARKS FROM LAB: OCALA LABID ID NUMBER: 200104923
SCHEDULES USED:
NO. PARAMETERS: 26 PROCESSING STATUS: R

	CODE	PARAMETER NAME	UNITS	VALUE	REM	QA	MET	PREC CODE
	00010	WATER TEMPERATURE	(DEGREES C)	15.5		I		3
	00027	COLLECTING AGENCY	(CODE NUMBER)	1028.		I		5
UPDATE	00028	ANALYZING AGENCY	(CODE NUMBER)	81213.		I	A	5
	00061	DISCHARGE, INST.	CFS	.67		I		3
	00063	NUMBER OF SAMPLING P	(COUNT)	1.		I		3
	00065	GAGE HEIGHT	(FEET)	.26		I		4
	00095	SPECIFIC CONDUCTANCE	US/CM @ 25C	28.		I		3
NEW-->	00340	COD HIGH LEVEL MG/L	(MG/L)	34.		A	0	2
	00400	PH, WH, FIELD	(STANDARD UNITS)	6.59		I		2
NEW-->	00403	PH, WH, LABORATORY	(STANDARD UNITS)	5.84		A	A	3
	00419	ANC, IT, FIELD	(MG/L AS CACO3)	7.		I		1
	00447	ANC CARB IT FIELD	(MG/L AS CO3)	.0		I		3
	00450	ANC BICARB IT FIELD	(MG/L AS HCO3)	8.5		I		1
	00452	CARBONATE,DIS,IT,F	(MG/L AS CO3)	.0		I	B	2
	00453	BICARBONATE,DIS,IT,F	(MG/L AS HCO3)	5.4		I	B	2
NEW-->	00530	RESIDUE TOTAL	(MG/L)	40.		A	B	2
NEW-->	00666	PHOSPHORUS DISS.	(MG/L AS P)	.07		A	D	2
NEW-->	01027	CADMIUM TOTAL	(UG/L AS CD)	.5	1	A	4	1
NEW-->	01042	COPPER TOTAL	(UG/L AS CU)	4.		A	1	2
NEW-->	01051	LEAD TOTAL	(UG/L AS PB)	3.		A	4	1
NEW-->	01092	ZINC TOTAL	(UG/L AS ZN)	63.		A	1	2
	39086	ALKALINITY,DIS,IT,F	(MG/L AS CACO3)	4.4		I	B	2
NEW-->	70300	RESIDUE DIS 180C	MG/L	24.		A	A	2
	82398	SAMPLING METHOD	METHOD, CODES	30.		I		2
NEW-->	90410	ANC, TIT. 4.5, LAB	MG/L AS CACO3	5.8		A	A	2
NEW-->	99870	IN-BOTTLE DIGESTION	DDD	1.		A	8	2

********** ERROR REPORT AND MESSAGES TO AND FROM LAB FOR TRANSACTION NO. 11 **********
PARAMETER 00028 CHANGED FROM 1028. REM/QA/MET/SIG = (I 5) TO 81213. REM/QA/MET/SIG = (IA5)

MESSAGE FROM LAB OCALA LABID ID NUMBER: 200104923

PARAMETER 01051 VALUE 3 EXCEEDS DW ALERT LIMIT OF 0.000

RESIDUE AT 180 C/SPECIFIC CONDUCTANCE RATIO OUTSIDE LIMITS .55 TO .81

RECORD NUMBER: 00100131
STATION ID: USGS 09513885
STATION NAME: 43RD AND PEORIA
COLLECTION DATE: 03-07-2001 0622 - -

PARTIAL BALANCE

CATIONS	(MG/L)	(MEQ/L)	ANIONS	(MG/L)	(MEQ/L)
			BICARB., DIS, IT, FLD	5	0.089
			CARB., DIS, IT, FLD	0	0.001
TOTAL		0.001	TOTAL		0.089

PERCENT DIFFERENCE =-100.00

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	70	90410(A)	I-2030-85	1 mg/L	RU
RESIDUE TOT NON-FILT AT	169	00530(B)	I-3765-85	1 mg/L	SUSO
PHOSPHORUS AS P	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	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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*****************************************************
*   U.S. Geological Survey, WRD - Q.W. Service Unit   *
*        4500 S.W. 40th Avenue - Ocala, Florida       *
*  Telephone: (352) 237-5514 FLDEP CompQAP # 910161G  *
*            Processing Date: 04/16/2001              *
*****************************************************
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*****************************************************************************************************************
*  Lab Id Number:  200104923  Field Id Number: 09513885      Station Id Number: 09513885        Date: 03/07/2001  Time: 06:22   *
*  NWIS Record Number:                SMS Control Number:                Site Type:                                            *
*  Station Name: 43RD AVE AND PEORIA AVE @ PHOENIX, AZ                 State Code:  4  County Code:  13                        *
*  Sample Medium: 9  Geologic Unit:              Analysis Status: H  Analysis Source: 9  Hydrologic Condition: 9  Sample Type: 9   *
*  Hydrologic Event: J  Project Account: 470416800   Analysis Cost: $  161.30  District/User Code: 04                        *
*****************************************************************************************************************
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Cation Parameter(s)	Value mg/L	Value meq/L

Anion Parameter(s)	Value mg/L	Value meq/L
Alk as CaCO3	5.79	0.116
Anion Total		0.116

Selected Parameter(s)	Reported Value
Alk as CaCO3 LAB	5.789
Sp. Cond. (FLD)	28.000
ph (LAB)	5.840
pH (FLD)	6.590
ROE at 180C	24.000

Lab Code	Watstore Number	Parameter Name	Analysis Method	Reporting Units	Reported Value	Rmk Code	Analysis Date	/ Time
0070	90410(A)	ALKALINITY TOT AS CACO3 (LAB)	I-2030-85	mg/L	5.8		03/27/2001	11:02
0091	00028(A)	ANALYZING AGENCY	- -	Number	81213		Parameter	
3014	01027(4)	CADMIUM TOTAL (ICP/T)	EPA-200.7	ug/L	0.5	<	04/02/2001	19:21
3063	00340(0)	CHEMICAL OXYGEN DEMAND (EPA)	EPA-410.4	mg/L	34		03/19/2001	
3025	01042(1)	COPPER TOTAL (ICP/T)	EPA-200.7	ug/L	4		04/02/2001	19:21
3157	99870(8)	DIGESTION IN BOTTLE	EPA-1638		1		03/12/2001	09:05
3001	99899(0)	JULIAN LOGIN DATE	- -	Number	1		Calculated	
3029	01051(4)	LEAD TOTAL (ICP/T)	EPA-200.7	ug/L	3		04/02/2001	19:21
1986	00625(D)	NITROGEN NH3+ORG-N TOTAL	I-4552-84	mg/L	DELETED		04/11/2001	
3071	00610(F)	NITROGEN NH3-N TOTAL	I-4522-85	mg/L	DELETED		04/03/2001	09:15
3073	00630(E)	NITROGEN NO2+NO3-N TOTAL	I-4545-84	mg/L	DELETED		04/03/2001	09:15
3072	00615(B)	NITROGEN NO2-N TOTAL	I-4540-84	mg/L	DELETED		04/03/2001	09:15
0068	00403(A)	PH (LABORATORY)	I-1586-85	pH Units	5.84		03/27/2001	
0051	00400(A)	PH FIELD	I-1586-77	pH Units	6.59		Field Data	
1983	00666(D)	PHOSPHORUS AS P DISSOLVED	I-2600-84	mg/L	0.07		04/05/2001	09:30
1984	00665(D)	PHOSPHORUS AS P TOTAL	I-4600-84	mg/L	DELETED		04/11/2001	
3077	71888( )	PHOSPHORUS DISS AS PO4		mg/L	0.22		Calculated	
3074	70507(H)	PHOSPHORUS PO4-P TOTAL	I-4601-84	mg/L	DELETED		04/03/2001	09:15
3000	99898(0)	QWSU LAB ID NUMBER	- -	Number	1		Calculated	
0027	70300(A)	RESIDUE DISSOLVED AT 180 C	I-1750-84	mg/L	24		04/10/2001	
0169	00530(B)	RESIDUE TOT NON-FILT AT 105C	I-3765-84	mg/L	40		03/30/2001	
0021	00095(A)	SP. CONDUCTANCE FLD	I-1780-85	uS/cm	28		Field Data	
3056	01092(1)	ZINC TOTAL (ICP/T)	EPA-200.7	ug/L	63		04/02/2001	19:21

Lab Review Comment(s) for Lab Id: 200104923

<COMMENT>	3014	(01027) CADMIUM TOTAL (ICP/T)	Actual value known to be less than value shown
<COMMENT>	1986	(00625) NITROGEN NH3+ORG-N TOTAL	No Bottle received Parameter Deleted
<COMMENT>	3071	(00610) NITROGEN NH3-N TOTAL	No Bottle received Parameter Deleted
<COMMENT>	3073	(00630) NITROGEN NO2+NO3-N TOTAL	No Bottle received Parameter Deleted
<COMMENT>	3072	(00615) NITROGEN NO2-N TOTAL	No Bottle received Parameter Deleted
<COMMENT>	1984	(00665) PHOSPHORUS AS P TOTAL	No Bottle received Parameter Deleted
<COMMENT>	3074	(70507) PHOSPHORUS PO4-P TOTAL	No Bottle received Parameter Deleted

EOF

200104923 ACDC near Peoria Avenue and 43rd Avenue 03-07-2001 0622

200104923 70300 RESIDUE DISSOLVED AT 180 C Cal. Blk. ROE1000105 Value: 0.200 < 2x Detection Limit <PASSED>
200104923 70300 RESIDUE DISSOLVED AT 180 C Cal. Blk. ROE1000105 Value: 0.200 < 2x Detection Limit <PASSED>
200104923 70300 RESIDUE DISSOLVED AT 180 C Duplicate ROE1000105 Value: 487.000 0.1% RSD <PASSED>
200104923 70300 RESIDUE DISSOLVED AT 180 C Duplicate ROE1000105 Value: 267.800 0.5% RSD <PASSED>
200104923 70300 RESIDUE DISSOLVED AT 180 C Duplicate ROE1000105 Value: 208.400 0.2% RSD <PASSED>
200104923 70300 RESIDUE DISSOLVED AT 180 C Duplicate ROE1000105 Value: 173.800 1.8% RSD <PASSED>
200104923 70300 RESIDUE DISSOLVED AT 180 C QA Sample ROE1000105 Value: 753.400 Num. Sdev (0.2) <PASSED>
200104923 70300 RESIDUE DISSOLVED AT 180 C QA Sample ROE1000105 Value: 375.800 Num. Sdev (0.3) <PASSED>
200104923 70300 RESIDUE DISSOLVED AT 180 C Spike ROE1000105 Value: 99.9% Recovery <PASSED>

200104923 00403 PH (LABORATORY) QA Sample PHS20782 Value: 8.280 Num. Sdev (0.4) <PASSED>
200104923 00403 PH (LABORATORY) QA Sample PHS20782 Value: 6.660 Num. Sdev (0.3) <PASSED>

200104923 90410 ALKALINITY TOT AS CACO3 (LAB) Duplicate ALK5010861 Value: 5.825 0.6% RSD <PASSED>
200104923 90410 ALKALINITY TOT AS CACO3 (LAB) Duplicate ALK5010861 Value: 88.833 0.2% RSD <PASSED>
200104923 90410 ALKALINITY TOT AS CACO3 (LAB) Duplicate ALK5010861 Value: 10.840 1.2% RSD <PASSED>
200104923 90410 ALKALINITY TOT AS CACO3 (LAB) Duplicate ALK5010861 Value: 189.018 0.3% RSD <PASSED>
200104923 90410 ALKALINITY TOT AS CACO3 (LAB) QA Sample ALK5010861 Value: 6.073 Num. Sdev (0.0) <PASSED>
200104923 90410 ALKALINITY TOT AS CACO3 (LAB) QA Sample ALK5010861 Value: 111.554 Num. Sdev (0.1) <PASSED>
200104923 90410 ALKALINITY TOT AS CACO3 (LAB) QA Sample ALK5010861 Value: 111.222 Num. Sdev (0.1) <PASSED>

200104923 00530 RESIDUE TOT NON-FILT AT 105C Cal. Blk. RES6000130 Value: -0.500 < 2x Detection Limit <PASSED>
200104923 00530 RESIDUE TOT NON-FILT AT 105C Cal. Blk. RES6000130 Value: 0.900 < 2x Detection Limit <PASSED>
200104923 00530 RESIDUE TOT NON-FILT AT 105C Duplicate RES6000130 Value: 9.700 4.0% RSD <PASSED>
200104923 00530 RESIDUE TOT NON-FILT AT 105C Duplicate RES6000130 Value: 11.700 7.3% RSD <PASSED>

200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Std. NUT1000131 Value: 0.248 0.6% Deviation <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Std. NUT1000131 Value: 0.100 0.0% Deviation <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Std. NUT1000131 Value: 0.051 2.0% Deviation <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Std. NUT1000131 Value: 0.500 0.1% Deviation <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.001 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.001 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Cal. Blk. NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Corr Coef NUT1000131 Value: 1.0000 <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Duplicate NUT1000131 Value: 0.006 8.3% RSD <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Imd Std. NUT1000131 Value: 0.100 0.0% Deviation <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Imd Std. NUT1000131 Value: 0.101 1.0% Deviation <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Imd Std. NUT1000131 Value: 0.100 0.0% Deviation <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Imd Std. NUT1000131 Value: 0.249 0.4% Deviation <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.034 Num. Sdev (0.3) <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.229 Num. Sdev (0.9) <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.234 Num. Sdev (0.7) <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.036 Num. Sdev (0.1) <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED QA Sample NUT1000131 Value: 0.037 Num. Sdev (0.0) <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.002 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.002 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.001 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Blank NUT1000131 Value: 0.004 < 2x Detection Limit <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Spike NUT1000131 Value: 100.0% Recovery <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Spike NUT1000131 Value: 101.5% Recovery <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Spike NUT1000131 Value: 102.0% Recovery <PASSED>
200104923 00613 NITROGEN NO2-N DISSOLVED Spike NUT1000131 Value: 104.0% Recovery <PASSED>

200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Std. NUT3000135 Value: 1.006 0.6% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Std. NUT3000135 Value: 0.490 2.0% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Std. NUT3000135 Value: 0.102 2.0% Deviation <PASSED>

200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.014 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.016 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Cal. Blk. NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Corr Coef NUT3000135 Value: 0.9999 <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Duplicate NUT3000135 Value: 0.097 3.0% RSD <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Duplicate NUT3000135 Value: 0.204 3.8% RSD <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.250 0.0% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 1.007 0.7% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.244 2.4% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.997 0.3% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.099 1.0% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.250 0.0% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.998 0.2% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Imd Std. NUT3000135 Value: 0.492 1.6% Deviation <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.077 Num. Sdev (0.3) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.203 Num. Sdev (1.1) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.075 Num. Sdev (0.1) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.440 Num. Sdev (0.5) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.397 Num. Sdev (0.2) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.041 Num. Sdev (0.4) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.432 Num. Sdev (0.8) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.188 Num. Sdev (1.0) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED QA Sample NUT3000135 Value: 0.075 Num. Sdev (0.2) <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.008 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.009 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.008 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.006 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Blank NUT3000135 Value: 0.007 < 2x Detection Limit <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Spike NUT3000135 Value: 91.5% Recovery <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Spike NUT3000135 Value: 100.5% Recovery <PASSED>
200104923 00671 PHOSPHORUS PO4-P DISSOLVED Spike NUT3000135 Value: 98.5% Recovery <PASSED>

200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Std. NUT2000133 Value: 1.008 0.8% Deviation <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Std. NUT2000133 Value: 0.487 2.7% Deviation <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Std. NUT2000133 Value: 0.244 2.4% Deviation <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Std. NUT2000133 Value: 0.102 2.5% Deviation <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.011 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Cal. Blk. NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Corr Coef NUT2000133 Value: 0.9997 <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Duplicate NUT2000133 Value: 5.231 0.7% RSD <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Duplicate NUT2000133 Value: 0.178 0.3% RSD <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.712 Num. Sdev (0.4) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.052 Num. Sdev (1.0) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.722 Num. Sdev (0.3) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.071 Num. Sdev (0.1) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.219 Num. Sdev (0.1) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.367 Num. Sdev (0.1) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.082 Num. Sdev (0.3) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.217 Num. Sdev (0.1) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED QA Sample NUT2000133 Value: 0.071 Num. Sdev (0.1) <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.019 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.010 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Blank NUT2000133 Value: 0.013 < 2x Detection Limit <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 90.0% Recovery <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 95.0% Recovery <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 101.0% Recovery <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 100.0% Recovery <PASSED>
200104923 00631 NITROGEN NO2+NO3-N DISSOLVED Spike NUT2000133 Value: 104.0% Recovery <PASSED>

200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Std.	NUT0000139	Value:	1.000	0.0% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Std.	NUT0000139	Value:	0.500	0.1% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Std.	NUT0000139	Value:	0.251	0.4% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Std.	NUT0000139	Value:	0.102	1.5% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Blk.	NUT0000139	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Blk.	NUT0000139	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Blk.	NUT0000139	Value:	0.013	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Blk.	NUT0000139	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Blk.	NUT0000139	Value:	0.018	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Cal. Blk.	NUT0000139	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Corr Coef	NUT0000139	Value:	1.0000	<PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Duplicate	NUT0000139	Value:	0.171	6.5% RSD <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Imd Std.	NUT0000139	Value:	0.240	4.0% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Imd Std.	NUT0000139	Value:	0.256	2.4% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Imd Std.	NUT0000139	Value:	0.978	2.2% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Imd Std.	NUT0000139	Value:	0.254	1.6% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Imd Std.	NUT0000139	Value:	0.979	2.1% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Imd Std.	NUT0000139	Value:	0.102	2.0% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Imd Std.	NUT0000139	Value:	0.969	3.1% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Imd Std.	NUT0000139	Value:	0.485	3.0% Deviation <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.342	Num. Sdev (0.6) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.090	Num. Sdev (0.6) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.098	Num. Sdev (1.0) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.212	Num. Sdev (0.1) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.515	Num. Sdev (0.1) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.109	Num. Sdev (1.6) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.063	Num. Sdev (1.5) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.516	Num. Sdev (0.1) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.221	Num. Sdev (0.6) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	QA Sample	NUT0000139	Value:	0.277	Num. Sdev (2.0) <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Blank	NUT0000139	Value:	0.012	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Blank	NUT0000139	Value:	0.014	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Blank	NUT0000139	Value:	0.019	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Blank	NUT0000139	Value:	0.019	< 2x Detection Limit <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Spike	NUT0000139	Value:	100.0%	Recovery <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Spike	NUT0000139	Value:	95.0%	Recovery <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Spike	NUT0000139	Value:	100.5%	Recovery <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Spike	NUT0000139	Value:	95.0%	Recovery <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Spike	NUT0000139	Value:	108.0%	Recovery <PASSED>
200104923 00608 NITROGEN NH3-N DISSOLVED	Spike	NUT0000139	Value:	105.0%	Recovery <PASSED>

200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Std.	NUT4000056	Value:	1.979	1.0% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Std.	NUT4000056	Value:	1.549	3.3% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Std.	NUT4000056	Value:	0.973	2.7% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Std.	NUT4000056	Value:	0.481	3.7% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Std.	NUT4000056	Value:	0.247	1.2% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Std.	NUT4000056	Value:	0.104	4.0% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Blk.	NUT4000056	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Blk.	NUT4000056	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Blk.	NUT4000056	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Blk.	NUT4000056	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Blk.	NUT4000056	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Blk.	NUT4000056	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Blk.	NUT4000056	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Cal. Blk.	NUT4000056	Value:	0.000	< 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Corr Coef	NUT4000056	Value:	0.9996	<PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Duplicate	NUT4000056	Value:	0.009	0.0% RSD <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Duplicate	NUT4000056	Value:	0.012	0.0% RSD <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Imd Std.	NUT4000056	Value:	1.966	1.7% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Imd Std.	NUT4000056	Value:	1.556	3.7% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Imd Std.	NUT4000056	Value:	0.103	3.0% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Imd Std.	NUT4000056	Value:	2.017	0.8% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Imd Std.	NUT4000056	Value:	0.103	3.0% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Imd Std.	NUT4000056	Value:	0.239	4.4% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Imd Std.	NUT4000056	Value:	1.523	1.5% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED	Imd Std.	NUT4000056	Value:	0.978	2.2% Deviation <PASSED>

200104923 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 0.052 4.0% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Imd Std. NUT4000056 Value: 0.953 4.7% Deviation <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.423 Num. Sdev (1.1) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.381 Num. Sdev (1.9) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.419 Num. Sdev (1.2) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.402 Num. Sdev (0.6) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 1.640 Num. Sdev (0.0) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.920 Num. Sdev (0.0) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.949 Num. Sdev (0.9) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 1.706 Num. Sdev (0.6) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.032 Num. Sdev (0.5) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.414 Num. Sdev (0.1) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.420 Num. Sdev (1.2) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.199 Num. Sdev (0.2) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 1.638 Num. Sdev (0.0) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.406 Num. Sdev (1.6) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED QA Sample NUT4000056 Value: 0.918 Num. Sdev (0.1) <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Blank NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Blank NUT4000056 Value: 0.012 < 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Blank NUT4000056 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Blank NUT4000056 Value: 0.005 < 2x Detection Limit <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 105.6% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 100.4% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 105.3% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 97.7% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 103.6% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 104.1% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 108.8% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 98.6% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 93.2% Recovery <PASSED>
200104923 00666 PHOSPHORUS AS P DISSOLVED Spike NUT4000056 Value: 105.2% Recovery <PASSED>

200104923 01027 CADMIUM TOTAL (ICP/T) Cal. Std. CD11010921 Value: 102.900 2.9% Deviation <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Cal. Std. CD11010921 Value: 206.100 3.0% Deviation <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Cal. Std. CD11010921 Value: 516.800 3.4% Deviation <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Cal. Std. CD11010921 Value: 1028.100 2.8% Deviation <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Cal. Blk. CD11010921 Value: 0.117 < 2x Detection Limit <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Corr Coef CD11010921 Value: 1.0000 <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Duplicate CD11010921 Value: 0.580 3.4% RSD <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Duplicate CD11010921 Value: 5.486 2.2% RSD <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Duplicate CD11010921 Value: 14.140 0.1% RSD <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Imd Std. CD11010921 Value: 207.000 3.5% Deviation <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Imd Std. CD11010921 Value: 517.200 3.4% Deviation <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) QA Sample CD11010921 Value: 6.013 Num. Sdev (0.2) <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) QA Sample CD11010921 Value: 22.110 Num. Sdev (0.4) <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Blank CD11010921 Value: 0.088 < 2x Detection Limit <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Spike CD11010921 Value: 106.1% Recovery <PASSED>
200104923 01027 CADMIUM TOTAL (ICP/T) Spike CD11010921 Value: 106.9% Recovery <PASSED>

200104923 01042 COPPER TOTAL (ICP/T) Cal. Std. CU11010921 Value: 96.710 3.3% Deviation <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Cal. Std. CU11010921 Value: 191.500 4.3% Deviation <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Cal. Std. CU11010921 Value: 483.600 3.3% Deviation <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Cal. Std. CU11010921 Value: 971.800 2.8% Deviation <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Cal. Blk. CU11010921 Value: -0.932 < 2x Detection Limit <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Corr Coef CU11010921 Value: 1.0000 <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Duplicate CU11010921 Value: 8.659 1.0% RSD <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Duplicate CU11010921 Value: 36.500 0.3% RSD <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Imd Std. CU11010921 Value: 197.400 1.3% Deviation <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Imd Std. CU11010921 Value: 492.300 1.5% Deviation <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) QA Sample CU11010921 Value: 20.840 Num. Sdev (0.3) <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) QA Sample CU11010921 Value: 85.300 Num. Sdev (0.0) <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Blank CU11010921 Value: -0.462 < 2x Detection Limit <PASSED>
200104923 01042 COPPER TOTAL (ICP/T) Spike CU11010921 Value: 109.8% Recovery <PASSED>

200104923 01051 LEAD TOTAL (ICP/T) Cal. Std. PB11010921 Value: 102.300 2.3% Deviation <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Cal. Std. PB11010921 Value: 206.500 3.3% Deviation <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Cal. Std. PB11010921 Value: 515.000 3.0% Deviation <PASSED>

200104923 01051 LEAD TOTAL (ICP/T) Cal. Std. PB11010921 Value: 1025.700 2.6% Deviation <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Cal. Blk. PB11010921 Value: 0.622 < 2x Detection Limit <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Corr Coef PB11010921 Value: 1.0000 <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Duplicate PB11010921 Value: 2.392 5.3% RSD <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Duplicate PB11010921 Value: 20.590 2.0% RSD <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Duplicate PB11010921 Value: 9.791 0.9% RSD <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Imd Std. PB11010921 Value: 204.700 2.3% Deviation <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Imd Std. PB11010921 Value: 509.100 1.8% Deviation <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) QA Sample PB11010921 Value: 19.410 Num. Sdev (0.5) <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) QA Sample PB11010921 Value: 27.920 Num. Sdev (0.0) <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Blank PB11010921 Value: 0.505 < 2x Detection Limit <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Spike PB11010921 Value: 107.5% Recovery <PASSED>
200104923 01051 LEAD TOTAL (ICP/T) Spike PB11010921 Value: 108.2% Recovery <PASSED>

200104923 01092 ZINC TOTAL (ICP/T) Cal. Std. ZN11010921 Value: 210.000 5.0% Deviation <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Cal. Std. ZN11010921 Value: 524.300 4.9% Deviation <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Cal. Std. ZN11010921 Value: 1038.400 3.8% Deviation <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Cal. Blk. ZN11010921 Value: 0.116 < 2x Detection Limit <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Corr Coef ZN11010921 Value: 1.0000 <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Duplicate ZN11010921 Value: 34.070 0.7% RSD <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Duplicate ZN11010921 Value: 94.810 1.7% RSD <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Imd Std. ZN11010921 Value: 200.800 0.4% Deviation <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Imd Std. ZN11010921 Value: 499.200 0.2% Deviation <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) QA Sample ZN11010921 Value: 73.610 Num. Sdev (0.4) <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) QA Sample ZN11010921 Value: 54.350 Num. Sdev (0.3) <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Blank ZN11010921 Value: -0.550 < 2x Detection Limit <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Spike ZN11010921 Value: 108.2% Recovery <PASSED>
200104923 01092 ZINC TOTAL (ICP/T) Spike ZN11010921 Value: 105.3% Recovery <PASSED>

200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 20.000 0.0% Deviation <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 40.000 0.0% Deviation <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 60.000 0.0% Deviation <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 80.000 0.0% Deviation <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Std. COD10211 Value: 100.000 0.0% Deviation <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Cal. Blk. COD10211 Value: 0.000 < 2x Detection Limit <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Corr Coef COD10211 Value: 0.9993 <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Imd Std. COD10211 Value: 20.900 4.5% Deviation <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Imd Std. COD10211 Value: 41.200 3.0% Deviation <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Imd Std. COD10211 Value: 59.600 0.7% Deviation <PASSED>
200104923 00340 CHEMICAL OXYGEN DEMAND (EPA) Imd Std. COD10211 Value: 79.800 0.3% Deviation <PASSED>

Chain of Custody Forms

Chain of Custody

FCD to Severn Trent to Del Mar Analytical

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 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 & WILSON

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	1 TPH	1 FECAL COLIFORM	1 FECAL STREP	2 OIL + GREASE	1 608	2 624	3 625	1 E. COLI.			CLP		Special Instructions
67TH & SALT - GRAB	S	MISC	12	3/7/01 0845	4	X	X	X	X	X	X	X	X		~~PKC09~~			PKC0119-01
							C01-697	C01-698					C01-697					

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check) SEE CONTRACT
Barbara L. Sullivan	3/7/01 1130			same day ____ 72 hours ____
Relinquished By:	Date /Time:	Received by:	Date /Time:	24 hours ____ 5 days ____
[illegible]	030701 1413	DW Johnson	3/7/01 1413	48 hours ____ normal ✓
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:	Sample Integrity: (Check)
		[illegible]	030701 / 1130	intact ✓ on ice ✓ 0C

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

DW Johnson 3-7-01 1515 Del Mar Lab [illegible] 3/7/01 PLEASE NOTE TEMP

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
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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

Quote #: _____ Page 2 of 2

Total + Diss.

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 + WILSON

Fax Number: 602-506-4601

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	As, Be, Co, 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	PHENOLICS					Special Instructions
67TH + SALT - COMP.	S	MISC	1	3/7/01 0723	N	X	X	X	X	X	X	X	X	PKC006			-01	SEE ATTACHED
																↓	-02	PHX ANALYSIS
																		FORM!

Relinquished By:	Date /Time:	Received by:	Date /Time:	Turnaround Time: (Check) SEE CONTRACT
[signature]	3/7/2001 11:00	LVD	3/7/01	same day ____ 72 hours ____
Relinquished By:	Date /Time:	Received by:	Date /Time:	24 hours ____ 5 days ____
				48 hours ____ normal ✓
Relinquished By: LVD	Date /Time: 3/7/01	Received in Lab by: Monica D. [illegible]	Date /Time: 3/7/01 11:00	Sample Integrity: (Check) intact X 5° on ice X

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.

COC-GB

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
PHX, AZ 85009

Project/PO Number: PHOENIX
NPDES STORMWATER

Project Manager: JULIE COX

Phone Number: 602-506-8401

Sampler: FOSSUM + WILSON

Fax Number: 602-506-4601

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	1 TPH 1L-4C	1 FECAL STREP	1 FECAL COLIFORM	1 E. COLI.	2 OIL & GREASE 1L-4C	1 608 1L-4C	2 624 VOAs	3 625 1L-4C		Special Instructions
43RD + PEORIA - GRAB	S	MISC	12	3/7/01 0500	Y	X	X	X	X	X	X	X	X		PKC0118-01
						~~C01-681~~ TB 030701									
							C01-682	C01-683 TB	C01-684					TB 030701	

Relinquished By: Norbert R. Deifer Date /Time: 03/07/01 0845
Received by: Date /Time:

Relinquished By: [illegible] Date /Time: 3-7-01 1425
Received by: [illegible] Date /Time: 3-7-01 1425 0845 TB

Relinquished By: Date /Time:
Received in Lab by: [illegible] Date /Time: ~~0830~~ 030701

Turnaround Time: (Check) SEE CONTRACT
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓ 0°C

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.

[illegible] 3/7/01 1515

LAB Del MAR
[illegible] 3/7/01 1515

PLEASE NOTE TEMP

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

TOTAL + DISS

CHAIN OF CUSTODY FORM

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 + WILSON

Fax Number: 602-506-4601

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	As, Be, Cd, Cr, Cu, Pb, Ni, Ag, Zn	Total Portho	NH_3, NO_3, NO_2, NO_2+NO_3, TKN	BOD/COD	CN^-	TDS/TSS	HARDNESS	PHENOLICS		Special Instructions
43RD + PEORIA COMP.	S	MISC	1	3/7/01 1215	N	X	X	X	X	X	X	X	X		PKC0113-01/08 SEE ATTACHED PHOENIX
			3/8/01 LE	0622											ANALYSES FORM
43rd + Peoria - Dup				3/7/01 1215		X	X	X	X	X	X	X	X		-03/04
			3/8/01 LE	0622											

Relinquished By:	Date /Time:	Received by:	Date /Time:
Barbara J. Wilson	3/07/01 1350		
Relinquished By:	Date /Time:	Received by:	Date /Time:
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:
	1/7/01		3/7/01 1350

Turnaround Time: (Check) SEE CONTRACT
same day ____ 72 hours ____
24 hours ____ 5 days ____
48 hours ____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓ 4°C

PLEASE NOTE TEMP

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 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 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 + WILSON

Fax Number: 602-506-4601

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	1 TPH	1 FECAL COLIFORM	1 FECAL STREP	2 OIL + GREASE	1 608	2 624	2 625	1 E. COLI					Special Instructions
40TH + IBW - GRAB	S	MISC	12	3/7/01 0400	4	X	X	X	X	X	X	X	X					
						C01-688	C01-689	C01-690	~~C01-691~~ TB 030701				C01-687					

NOT REPRESENTATIVE

Analysis cancelled per client (FCD) 030701 @ 1015. Fecal coliform, E. coli, and strep were already set-up. FCD will be charged for this set-up analysis but analysis will cease as of 1015 030701. TB

Relinquished By:	Date /Time:	Received by:	Date /Time:
Norbert [illegible]	3/7/01 08:45		
Relinquished By:	Date /Time:	Received by:	Date /Time:
Relinquished By:	Date /Time:	Received in Lab by: [illegible]	Date /Time: 030701 ~~0845~~ 0830 TB

Turnaround Time: (Check) SEE CONTRACT
same day _____ 72 hours _____
24 hours _____ 5 days _____
48 hours _____ normal ✓

Sample Integrity: (Check)
intact ✓ on ice ✓ 0°C

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 within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

PLEASE NOTE TEMP.

COC-GB

Chain of Custody

Del Mar Analytical to NEL Laboratories

Del Mar Analytical

2852 Alton Ave., Irvine, CA 9262 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 9212 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 8504 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

67TH AVENUE

TEMP: 6°C
DUE: 3/16/01

RENO LEAD + ONLY

P0103025

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: PKC0106 - 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: ☒ 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
PKC0106-01	Water	03/07/01 08:00	AA Arsenic - MCFC	Standard TAT	09/03/01 08:00	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: **NEL - Needs a reporting limit of 0.001 mg/l**							
PKC0106-02	Water	03/07/01 08:00	AA DIS Arsenic-MCFC	Standard TAT	09/03/01 08:00	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: **NEL - Needs a reporting limit of 0.001 mg/l**							
PKC0106-02	Water	03/07/01 08:00	AA DIS Beryll-MCFC	Standard TAT	09/03/01 08:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: **NEL - Needs a reporting limit of 0.001 mg/l**							
PKC0106-02	Water	03/07/01 08:00	ICPMS DisCopper-MCFC by EPA 200.8	Standard TAT	09/03/01 08:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: **NEL - Needs a reporting limit of 0.002 mg/l**							
PKC0106-02	Water	03/07/01 08:00	ICPMS DisSilver-MCFC by EPA 200.8	Standard TAT	09/03/01 08:00	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

2852 Alton Ave., Irvine, CA 9262 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 9212 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 8504 Ph (480) 785-0043 Fax (480) 785-0851

RCV'D TEMP: 6°C
DUE: 3/16/01

RENO LEAD & ONLY

PO103025

CHAIN OF CUSTODY FORM

SUBCONTRACT ORDER

Relinquished By: [signature] Date/Time: 3/9/01 0824

Received By: [signature] Date/Time: 3-9-01 0824

Relinquished By: [signature] Date/Time: 3/9/01 0932

Received By: NEL PHX / Overton Date/Time: 3-9-01 / 0932

Page 2 of 2

NEL PHX /

FEDEX PHX

Via Fed. Exp. 3-13-01 12:30

L Knox NEL-Reno 3-13-01 12:30

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

RENO LEAD + ONLY

CHAIN OF CUSTODY FORM

ACDC-43

RCVD TEMP: 6°C
DUE: 3/16/01

SUBCONTRACT ORDER

P010326

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: PKC0113 -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: ☒ 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
01 PKC0113-01	Water	03/07/01 06:22	AA Arsenic - MCFC	Standard TAT	09/03/01 06:22	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other _____
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							
02 PKC0113-02	Water	03/07/01 06:22	AA DIS Arsenic-MCFC	Standard TAT	09/03/01 06:22	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other _____
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							
PKC0113-02	Water	03/07/01 06:22	AA DIS Beryll-MCFC	Standard TAT	09/03/01 06:22	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other _____
Special Instructions: NEL - Needs a reporting limit of 0.001 mg/l							
PKC0113-02	Water	03/07/01 06:22	ICPMS DisCopper-MCFC by EPA 200.8	Standard TAT	09/03/01 06:22	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other _____
Special Instructions: NEL - Needs a reporting limit of 0.002 mg/l							
PKC0113-02	Water	03/07/01 06:22	ICPMS DisSilver-MCFC by EPA 200.8	Standard TAT	09/03/01 06:22	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

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

RCV'D TEMP: 6°C
DUE: 3/16/01

P0103026

CHAIN OF CUSTODY FORM
RENO LEAD + ONLY
SUBCONTRACT ORDER

3 PKC0113-03 Water 03/07/01 06:22 AA Arsenic - MCFC Standard TAT 09/03/01 06:22 1 ☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
NEL - Needs a reporting limit of 0.001 mg/l

4 PKC0113-04 Water 03/07/01 06:22 AA DIS Arsenic-MCFC Standard TAT 09/03/01 06:22 1 ☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
NEL - Needs a reporting limit of 0.001 mg/l

PKC0113-04 Water 03/07/01 06:22 AA DIS Beryll-MCFC Standard TAT 09/03/01 06:22 2 ☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
NEL - Needs a reporting limit of 0.001 mg/l

PKC0113-04 Water 03/07/01 06:22 ICPMS DisCopper-MCFC by EPA 200.8 Standard TAT 09/03/01 06:22 2 ☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
NEL - Needs a reporting limit of 0.002 mg/l

PKC0113-04 Water 03/07/01 06:22 ICPMS DisSilver-MCFC by EPA 200.8 Standard TAT 09/03/01 06:22 2 ☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
NEL - Needs a reporting limit of 0.001 mg/l

Relinquished By	Date/Time:	Received By:	Date/Time:
[signature]	3/9/01 0824	[signature]	3-9-01 0824
[signature]	3/9/01 0933	NEL PHX / [signature]	3-9-01 / 0933

NEL PHX / FEDEX PHX

via Fed Exp. 3-13-01 12:30

L. Knox Nel-Reno 3/13/01 12:30

Chain of Custody

Del Mar Analytical to Transwest Geochem

Del Mar Analytical

2852 Alton Ave., Irvine, CA 9262 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 9212 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 8504 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

0103111

67TH AVENUE

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: PKC0106 — MCFC

RECEIVING LABORATORY:

Transwest Geochem (out)
3725 E. Atlanta Ave Ste 1
Phoenix, AZ 85040-2961
Phone: 602-470-0288
Fax: 602-470-0756

SAMPLE INTEGRITY:

Please complete upon receipt

intact: ☑ Y ☐ N — SH Initials
on ice: ☑ Y ☐ N — SH Initials
Temp: °C ☑ Y ☐ N 10.5° — SH Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKC0106-01	Water	03/07/01 08:00	Phenols (420.1)-I	Standard TAT	03/21/01 08:00	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☑ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
Needs a D.L. of 5ppb. Send to Transwest

pH → 1

Carmen [signature] 3/12/01 1255
Relinquished By — Date/Time:

Doug Rehadse 3/12/01 1255
Received By: — Date/Time:

D. Rehadse 3/12/01 1430
Relinquished By — Date/Time:

[signature] 3/12/01 1430
Received By: — Date/Time:

Del Mar Analytical

2852 Alton Ave., Irvine, CA 9262 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 9212 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 8504 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

0103088
ACDC43

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: PKC0113 — MC FC

RECEIVING LABORATORY:
Transwest Geochem (out)
3725 E. Atlanta Ave Ste 1
Phoenix, AZ 85040-2961
Phone: 602-470-0288
Fax: 602-470-0756

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☑ Y ☐ N SH Initials
on ice: ☑ Y ☐ N SH Initials
Temp: °C ☑ Y ☐ N SH Initials 5.3°

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKC0113-01	Water	03/07/01 06:22	Phenols (420.1)-I	Standard TAT	03/21/01 06:22	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☑ Amber ☐ Brass Sleeve ☐ Other
PKC0113-03	Water	03/07/01 06:22	Phenols (420.1)-I	Standard TAT	03/21/01 06:22	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☑ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
Needs a D.L. of 5ppb. Send to Transwest
PHI

Special Instructions:
Needs a D.L. of 5ppb. Send to Transwest
PHI

Relinquished By: Carmie Lewis 3-9-01 0814 Date/Time:
Received By: TW Johnson 3-9-01 0814 Date/Time:
Relinquished By: TW Johnson 3-9-01 0948 Date/Time:
Received By: [illegible] 3/9/01 948 Date/Time:

Chain of Custody

USGS (Tempe AZ) to FEDEX to USGS (Ocala FL)

FedEx USA Airbill FedEx Tracking Number 807059204834 Form I.D. No. 0210 **Sender's Copy**

1 From (please print and press hard)

Date 3/8/01 Sender's FedEx Account Number 1426-9217-1

Sender's Name KEN FOSSUM Phone (602) 379-3086

Company US GEOLOGICAL SURVEY

Address 1545 W UNIVERSITY DR Dept./Floor/Suite/Room

TEMPE State AZ ZIP 85281

2 Your Internal Billing Reference Information (Optional) (First 24 characters will appear on invoice) 4704-1680D

To (please print and press hard)

Recipient's Name OCALA QWSU Phone (352) 237-5514

Company U.S. GEOLOGICAL SURVEY

Address 4500 SW 40TH AVE. ☐ Check here if residence (Extra charge applies for FedEx Express Saver)

To "HOLD" at FedEx location, enter FedEx address here) (We Cannot Deliver to P.O. Boxes or P.O. ZIP Codes) Dept./Floor/Suite/Room

OCALA State FL ZIP 34470-5731

For HOLD at FedEx Location check here

☐ Hold Weekday (Not available with FedEx First Overnight) ☐ Hold Saturday (Not available at all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

For WEEKEND Delivery check here (Extra Charge. Not available to all locations)

☐ Saturday Delivery (Available for FedEx Priority Overnight and FedEx 2Day only) ☐ NEW Sunday Delivery (Available for FedEx Priority Overnight only)

Service Conditions, Declared Value, and Limit of Liability – By using this Airbill, I agree to the service conditions in our current Service Guide or U.S. Government Service Guide. Both are available on request. SEE BACK OF SENDER'S COPY OF THIS AIRBILL FOR INFORMATION AND ADDITIONAL TERMS. We will not be responsible for any claim in excess of $100 per package whether the result of loss, damage, or delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, and document your actual loss in a timely manner. Your right to recover from us for any loss includes intrinsic value of the package, loss of sales, interest, profit, attorney's fees, costs, and other forms of damage, whether direct, incidental, consequential, or special, and is limited to the greater of $100 or the declared value but cannot exceed actual documented loss. The maximum declared value for any FedEx Letter and FedEx Pak is $500. Federal Express may, upon your request, and with some limitations, refund all transportation charges paid. **See the FedEx Service Guide for further details.**

Questions? Call 1·800·Go·FedEx® (800)463-3339

The World On Time®

4a Express Package Service *Packages under 150 lbs.* Delivery commitment may be later in some areas.

☒ FedEx Priority Overnight (Next business morning) ☐ FedEx Standard Overnight (Next business afternoon)

☐ FedEx First Overnight (Earliest next business morning delivery to select locations) (Higher rates apply)

☐ FedEx 2Day (Second business day) ☐ FedEx Express Saver (Third business day)

FedEx Letter 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 Overnight Freight (Next business day) ☐ FedEx 2Day Freight (Second business day) ☐ FedEx Express Saver Freight (Up to 3 business days)

(Call for delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging ☐ FedEx Letter ☐ FedEx Pak (Declared value limit $500.) ☐ FedEx Box ☐ FedEx Tube ☒ Other Pkg.

6 Special Handling (One box must be checked)

Does this shipment contain dangerous goods?* ☒ 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 cannot be shipped in FedEx packaging.

7 Payment

Bill to: ☒ Sender (Account No. in Section 1 will be billed) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check

(Enter FedEx Account No. or Credit Card No. below)

FedEx Account No.

Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value*	Total Charges
1	28	$ .00	$

*When declaring a value higher than $100 per shipment, you pay an additional charge. See **SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY** section for further information.

8 Release Signature *Sign to authorize delivery without obtaining signature.*

Your signature authorizes Federal Express to deliver this shipment without obtaining a signature and agrees to indemnify and hold harmless Federal Express from any resulting claims.

PICK-UP No: 392

006653462 2

321

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CHAIN OF CUSTODY

67th Avenue & Salt River

USGS Tempe → FEDEX → USGS Ocala

- Track Shipments
- Alternate Reference Track
- Email Track
- Multi-Carrier Track

Related Links
- FedEx Wireless Solutions
- FedEx Sidebar Track
- Rate Finder
- Signature Proof
- Handheld Track
- Custom Critical
- FedEx eCommerce Builder
- Print, Bind & Ship

Wireless Solutions

Link

Quick Help

Track Shipments

Detailed Results

Tracking Number	807059204834
Reference Number	
Ship Date	
Delivered To	Ship'g/Receiv'g
Delivery Location	OCALA FL
Delivery Date/Time	03/09/2001 10:11
Signed For By	M.JONES
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	03/09/2001 10:11	
On FedEx vehicle for delivery OCALA FL	03/09/2001 09:08	
Arrived at FedEx Destination Location OCALA FL	03/09/2001 08:23	
Left FedEx Ramp ORLANDO FL	03/09/2001 07:33	
Left FedEx Sort Facility FORT WORTH TX	03/09/2001 02:20	
Arrived at FedEx Ramp ORLANDO FL	03/09/2001 05:05	
Left FedEx Sort Facility FORT WORTH TX	03/09/2001 01:01	
Picked up by FedEx TEMPE AZ	03/08/2001 13:41	

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

3/12/2001

Dear Customer:

Here is the proof of delivery for the shipment with tracking number **807059204834**. Our records reflect the following information.

Delivery Information:

Signed For By: M.JONES

Delivery Location: 4500 SW 40 AVE
Delivery Date: March 9, 2001
Delivery Time: 1011

Shipping Information:

Tracking No: 807059204834

Ship Date: March 8, 2001

Recipient:

34470
US

Shipper:

Shipment Reference Information:

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.: R2001031200026285432

FedEx USA Airbill — FedEx Tracking Number: 807059204834 — Form I.D. No. 0210 — **Sender's Copy**

1 From (please print and press hard)

Date: 3/8/01 — Sender's FedEx Account Number: 1426-9217-1

Sender's Name: KEN FOSSUM — Phone: (602) 379-3086

Company: US GEOLOGICAL SURVEY

Address: 1545 W UNIVERSITY DR — Dept./Floor/Suite/Room

City: TEMPE — State: AZ — ZIP: 85281

2 Your Internal Billing Reference Information (Optional) (First 24 characters will appear on invoice): 4704-1680D

To (please print and press hard)

Recipient's Name: OCALA QWSU — Phone: (352) 237-5514

Company: U.S. GEOLOGICAL SURVEY

Address: 4500 SW 40TH AVE. — Dept./Floor/Suite/Room

(To "HOLD" at FedEx location, enter FedEx address here) (We Cannot Deliver to P.O. Boxes or P.O. ZIP Codes)

☐ Check here if residence (Extra charge applies for FedEx Express Saver)

City: OCALA — State: FL — ZIP: 34470-5731

For HOLD at FedEx Location check here
☐ Hold Weekday (Not available with FedEx First Overnight)
☐ Hold Saturday (Not available at all locations) (Available for FedEx Priority Overnight and FedEx 2Day only)

For WEEKEND Delivery check here (Extra Charge. Not available to all locations)
☐ Saturday Delivery (Available for FedEx Priority Overnight and FedEx 2Day only)
☐ NEW Sunday Delivery (Available for FedEx Priority Overnight only)

Service Conditions, Declared Value, and Limit of Liability – By using this Airbill, you agree to the service conditions in our current Service Guide or U.S. Government Service Guide. Both are available on request. SEE BACK OF SENDER'S COPY OF THIS AIRBILL FOR INFORMATION AND ADDITIONAL TERMS. FedEx will not be responsible for any claim in excess of $100 per package whether the result of loss, damage, or delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, and document your actual loss in a timely manner. Your right to recover from us for any loss includes intrinsic value of the package, loss of sales, interest, profit, attorney's fees, costs, and other forms of damage, whether direct, incidental, consequential, or special, and is limited to the greater of $100 or the declared value but cannot exceed actual documented loss. The maximum declared value for any FedEx Letter and FedEx Pak is $500. Federal Express may, upon your request, and with some limitations, refund all transportation charges paid. **See the FedEx Service Guide for further details.**

Questions? Call 1·800·Go·FedEx® (800)463-3339

The World On Time

4a Express Package Service *Packages under 150 lbs.* — Delivery commitment may be later in some areas.
☒ FedEx Priority Overnight (Next business morning)
☐ FedEx Standard Overnight (Next business afternoon)
☐ FedEx First Overnight (Earliest next business morning delivery to select locations) (Higher rates apply)
☐ FedEx 2Day (Second business day)
☐ FedEx Express Saver (Third business day)
FedEx Letter 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 Overnight Freight (Next business day)
☐ FedEx 2Day Freight (Second business day)
☐ FedEx Express Saver Freight (Up to 3 business days)
(Call for delivery schedule. See back for detailed descriptions of freight services.)

5 Packaging
☐ FedEx Letter ☐ FedEx Pak (Declared value limit $500.) ☐ FedEx Box ☐ FedEx Tube ☒ Other Pkg.

6 Special Handling (One box must be checked)
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☒ 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 cannot be shipped in FedEx packaging.

7 Payment
Bill to: ☒ Sender (Account No. in section 1 will be billed) ☐ Recipient ☐ Third Party ☐ Credit Card ☐ Cash/Check
(Enter FedEx Account No. or Credit Card No. below)
FedEx Account No.
Credit Card No. — Exp. Date

Total Packages	Total Weight	Total Declared Value*	Total Charges
1	28	$ .00	$

*When declaring a value higher than $100 per shipment, you pay an additional charge. See **SERVICE CONDITIONS, DECLARED VALUE, AND LIMIT OF LIABILITY** section for further information.

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321

PICK-UP No: 392
006653462 2

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CHAIN OF CUSTODY
ACDC near Peoria Avenue & 43rd Avenue
USGS Tempe → FEDEX → USGS Ocala

- Track Shipments
- Alternate Reference Track
- Email Track
- Multi-Carrier Track

Related Links
- FedEx Wireless Solutions
- FedEx Sidebar Track
- Rate Finder
- Signature Proof
- Handheld Track
- Custom Critical
- FedEx eCommerce Builder
- Print, Bind & Ship

Now supporting Wireless Solutions

Link

Quick Help

Track Shipments

Detailed Results

Tracking Number	807059204834
Reference Number	
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Left FedEx Sort Facility FORT WORTH TX	03/09/2001 01:01	
Picked up by FedEx TEMPE AZ	03/08/2001 13:41	

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

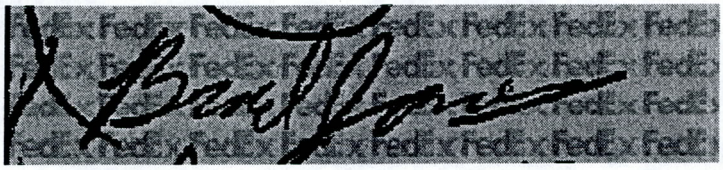
3/12/2001

Dear Customer:

Here is the proof of delivery for the shipment with tracking number **807059204834**. Our records reflect the following information.

Delivery Information:

Signed For By: M.JONES



Delivery Location: 4500 SW 40 AVE
Delivery Date: March 9, 2001
Delivery Time: 1011

Shipping Information:

Tracking No: 807059204834

Ship Date: March 8, 2001

Recipient:

34470
US

Shipper:

Shipment Reference Information:

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.: R2001031200026285432