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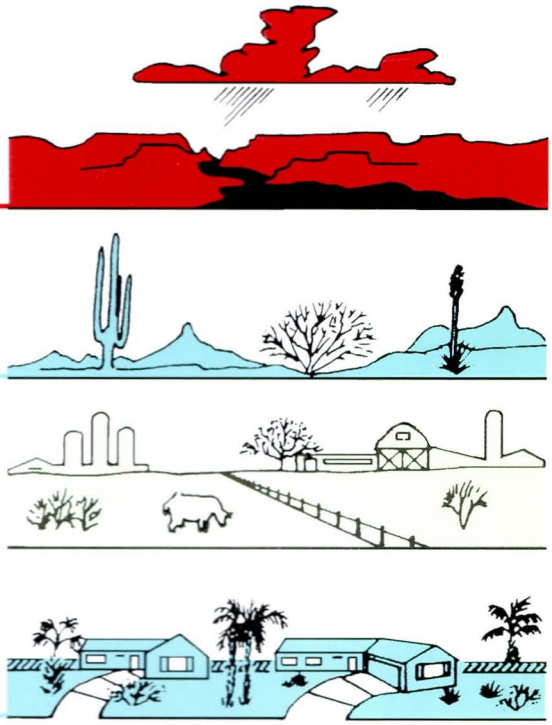

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report
City of Scottsdale, Arizona

July 1, 2001 – March 31, 2002

April 10, 2002

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

Stormwater Quality Report

July 1, 2001 through March 31, 2002

For

City of Scottsdale, Arizona

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April 10, 2002

Prepared by:

Matthew A. Oller
Water Quality Hydrologist

Reviewed by:

Todd G. Williams, M.Sc.
Water Quality Branch Manager

Stormwater Quality Report
City of Scottsdale, Arizona

July 1, 2001 – March 31, 2002

April 10, 2002

Introduction

The Flood Control District of Maricopa County operates and maintains five land based stormwater monitoring stations for the City of Scottsdale for compliance with their National Pollutant Discharge Elimination System (NPDES) stormwater discharge permit.

This report details stormwater sampling and equipment upkeep for the five Scottsdale stations for the period from July 1st, 2001 through March 31st, 2002.

During storm events, only representative storm events are sampled. A representative storm event has occurred when the following criteria have been met **and there has been no rainfall greater than 0.10 inches within the previous 72 hours.**

SCOTTSDALE	RAINFALL	DURATION
WINTER (October – March)	0.22 – 0.65 INCHES	5.1-15.3 HOURS
SUMMER (April – September)	0.27 – 0.81 INCHES	2.2 – 6.5 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.

Representative Storm Event Summaries

This is a summary of representative storm events that occurred during the 1st, 2nd and 3rd quarters of the 2002 sample year, from July 1st, 2001 through March 31st 2002. Three representative storm events occurred during this period and one event sampled at three of the five sites. There were no representative storm events from January 1st through March 31st, 2002. The following is a description of the events

The storm event of July 29th–30th, 2001 produced rainfall valley wide. The storm was a representative storm event at the Camelback and Thunderbird sites. Grab and composite samples were not collected due to equipment problems. Rainfall totals in Scottsdale ranged from 0.45 to 1.57 inches. Site-specific rainfall amounts that met the representative storm event criteria are listed in Table 1 on page 3.

TABLE 1

Storm Event of July 29 - 30, 2001

SITE NAME	RAINFALL INCHES	REPRESENTATIVE EVENT	SAMPLES ANALYZED
Camelback	0.73	YES	NO: Equipment problems
Thunderbird	0.55	YES	NO: Equipment problems

The storm event of August 9, 2001 produced rainfall valley wide. The storm was a representative storm event at Camelback. Grab and composite samples were not collected due to equipment problems. Rainfall totals in Scottsdale averaged 0.45 to 0.47 inches. The specific rainfall amount at the Camelback site that met the representative event criteria is listed in Table 2 below.

TABLE 2

Storm Event of August 9, 2001

SITE NAME	RAINFALL INCHES	REPRESENTATIVE EVENT	SAMPLES ANALYZED
Camelback	0.46	YES	NO: Equipment problems

The storm event of December 4th, 2001 produced rainfall valley wide. The storm was a representative storm event at M^{c}kellips, Pierce, and Camelback. Grab samples were collected and analyzed at M^{c}kellips, Pierce, and Camelback. A composite sample was analyzed for M^{c}kellips, Pierce, Camelback, and Thunderbird. Hayden site did not operate during event. Rainfall totals in Scottsdale averaged 0.58 to 0.73 inches. Specific rainfall amounts at the sites in Scottsdale during the storm event and the criteria are listed in Table 3 below.

TABLE 3

Storm Event of December 4, 2001

SITE NAME	RAINFALL INCHES	REPRESENTATIVE EVENT	SAMPLES ANALYZED
Mckellips	0.61	YES	YES (Grab & Composite)
Pierce	0.60	YES	YES (Grab & Composite)
Camelback	0.61	YES	YES (Grab & Composite)
Hayden	0.58	NO	NO (Station did not operate)
Thunderbird	0.73	NO	YES (Composite Only)

Table 4 on Page 5 of this report lists storm events at sample stations with rainfall greater than 0.27 inches of rain (Scottsdale minimum summer rainfall criteria). Table 4 also specifies reasons why samples were not collected and/or analyzed.

Table 5 on Page 5 of this report lists storm events with rainfall greater than 0.22 inches of rain (Scottsdale minimum winter rainfall criteria). Table 5 also specifies reasons why samples were not collected and/or analyzed.

Operations and Maintenance

Equipment repairs, replacement, and cleaning are detailed in the Maintenance Summary section of this report.

TABLE 4
SUMMARY OF SCOTTSDALE SUMMER STORM EVENTS WITH RAINFALL > 0.27 INCHES BUT NOT SAMPLED
July 1, 2001 – September 30, 2001

SITE	DATE	RAIN (Inches)	REASONS NOT SAMPLED
Mckellips	7/29/2001	0.31	DURATION TOO SHORT.
Mckellips	7/29/2001	1.26	72 HOUR RULE > 0.81 INCHES
Pierce	7/29 –30/2001	1.14	> 0.81 INCHES
Pierce	8/09/2001	0.47	DURATION TOO SHORT.
Hayden	8/09/2001	0.45	DURATION TOO SHORT.
Thunderbird	8/09/2001	0.47	DURATION TOO SHORT.

TABLE 5
SUMMARY OF SCOTTSDALE WINTER STORM EVENTS WITH RAINFALL > 0.22 INCHES BUT NOT SAMPLED
October 1, 2001 - March 31, 2002

SITE	DATE	RAIN (Inches)	REASONS NOT SAMPLED
Hayden	11/05/2001	0.23	DURATION TOO SHORT.
Thunderbird	11/05/2001	0.25	DURATION TOO SHORT.
Hayden	12/04/2001	0.58	DURATION TOO LONG.
Thunderbird	12/04/2001	0.73	> 0.65 INCHES
Mckellips	12/11/2001	0.26	DURATION TOO SHORT. (Grab samples analyzed, Composite canceled)
Pierce	12/11/2001	0.36	DURATION TOO SHORT. (Grab samples analyzed, Composite canceled)

Maintenance Summary

This section details maintenance activities and problems that occurred from July 1st, 2001 through March 31st, 2002. All water quality samplers are SIGMA 900 MAX models.

MCKELLIPS

All sampler tubing was cleaned on August 1st, 9th, November 8th, December 5th, &12th. Inspection of work done on the station and maintenance was performed on July 23rd. A hardbound-log book to record station maintenance and sampler bottles to collect samples was added. August 1st discovered that bottles were misaligned in the sampler based on the storm event of July 29th and 30th. Appropriate corrections were made. August 8th a fusible link connection was making poor contact, and changes were made to the program on August 13th. The distributor arm hose was replaced August 9th. In September Scottsdale Parks and Recreation were contacted to check on sprinkler systems in the immediate area to confirm that the station was recording the irrigation system instead of rain. Appropriate changes were made. The SIGMA sampler was reprogrammed with winter sampling criteria on October 1st. On October 18th cell phone and connections were checked. November 7th the rain gage was serviced and solar panels cleaned in coordination with the City of Scottsdale.

PIERCE

All sampler tubing was cleaned on August 9th, November 8th, December 5th, 12th, and March 11th. On July 27th a hardbound log book and sample bottles were set up at the station. August 2nd program changes were made to the SIGMA sampler. The distributor arm hose was replaced August 9th. The sampler was reprogrammed on August 29th, 30th, September 11th, 12th to get the cell phone to alarm properly. The SIGMA sampler was reprogrammed with winter sampling criteria on October 1st. November 7th the rain gage was serviced and solar panels cleaned in coordination with the City of Scottsdale.

CAMELBACK

All sampler tubing was cleaned on August 1st, 9th, September 6th, November 8th, December 5th, & 12th. On July 27th a hardbound log book and sample bottles were set up at the station. The distributor arm hose was replaced August 9th. Storm data was lost accidentally from August 17th due to reprogramming on the 20th. The SIGMA sampler was reprogrammed with winter sampling criteria on October 1st. November 7th the rain gage was serviced and solar panels cleaned in coordination with the City of Scottsdale.

HAYDEN

All sampler tubing was cleaned on August 9th, September 6th, November 8th, December 5th, & 12th. On July 27th a hardbound log book and sample bottles were set up at the station. On August 8th SIGMA sampler CA1436117006 was replaced with sampler CA1436117005 and sent in for repair because of trouble with programming the unit. Storm data was lost from August 17th due to reprogramming on the 20th. On September 13th Flood Control District staff modified a new fuse for the site cell phone. The SIGMA sampler was reprogrammed with winter sampling criteria on October 1st. October 18th a cell phone test was preformed to confirm all programming works to standard. On November 7th, the rain gage was serviced and solar panels cleaned in coordination with the City of Scottsdale. February 19th replaced a blown fuse for the regulator.

THUNDERBIRD

All sampler tubing was cleaned on August 1st, 9th, & 17th, September 6th, November 8th, and December 5th. On September 13th a blown fuse was replaced. The SIGMA sampler was reprogrammed with winter sampling criteria on October 1st. On November 7th the rain gage was serviced and solar panels cleaned in coordination with the City of Scottsdale. On February 25th, trash was removed from around the sensors. A blown fuse was replaced on March 4th.

APPENDIX: A

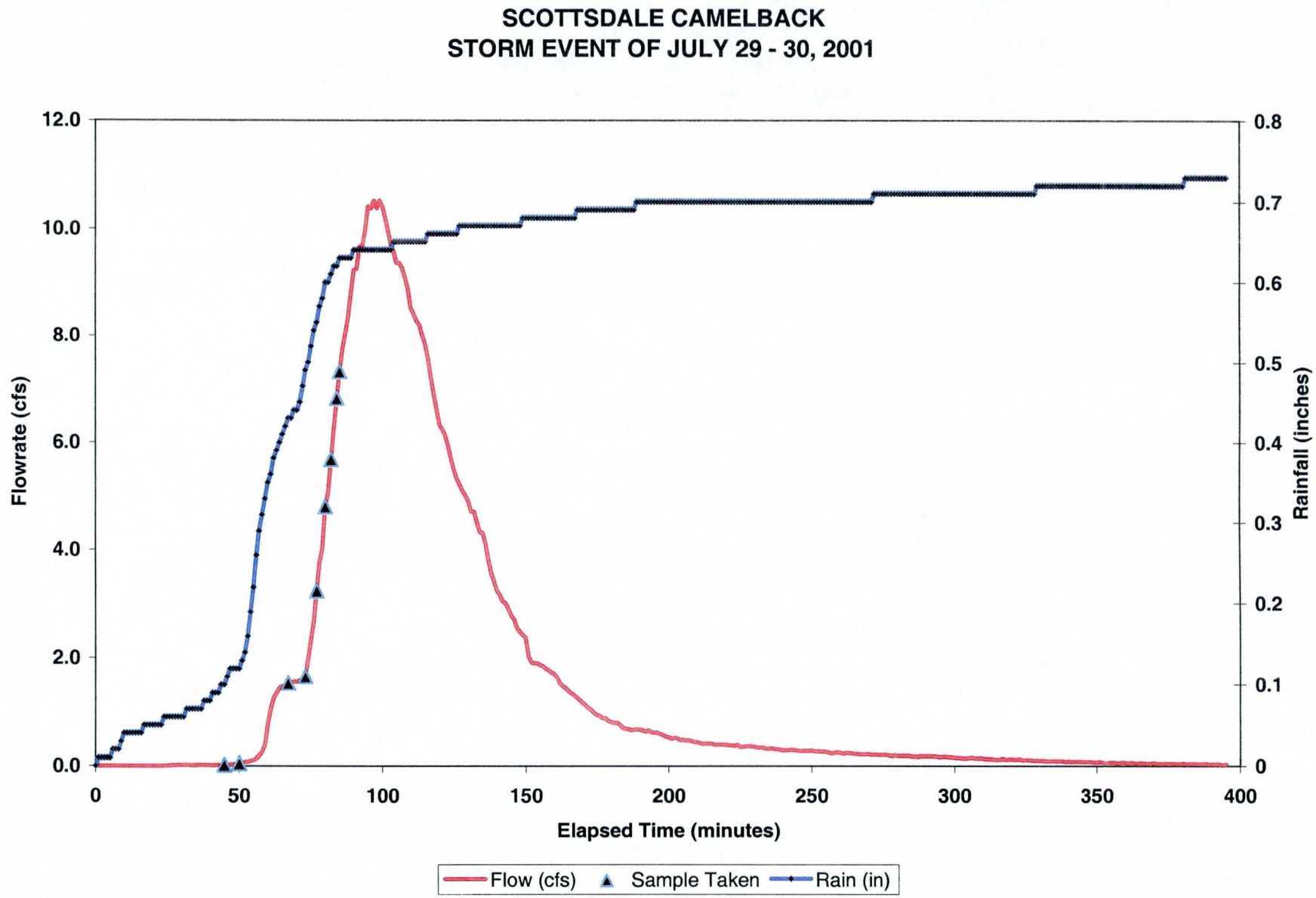
Appendix A of this report contains the laboratory results of a grab sample taken on March 21st 2002. The sample was taken from a discharge from a fire at a Scottsdale hospital before entering the storm drainage system in Scottsdale. The sample was analyzed for Fecal Coliform, Fecal Strep and Polychlorinated Biphenyls (PCB's). The results, Quality Control Data, and the Chain of Custody forms are included.

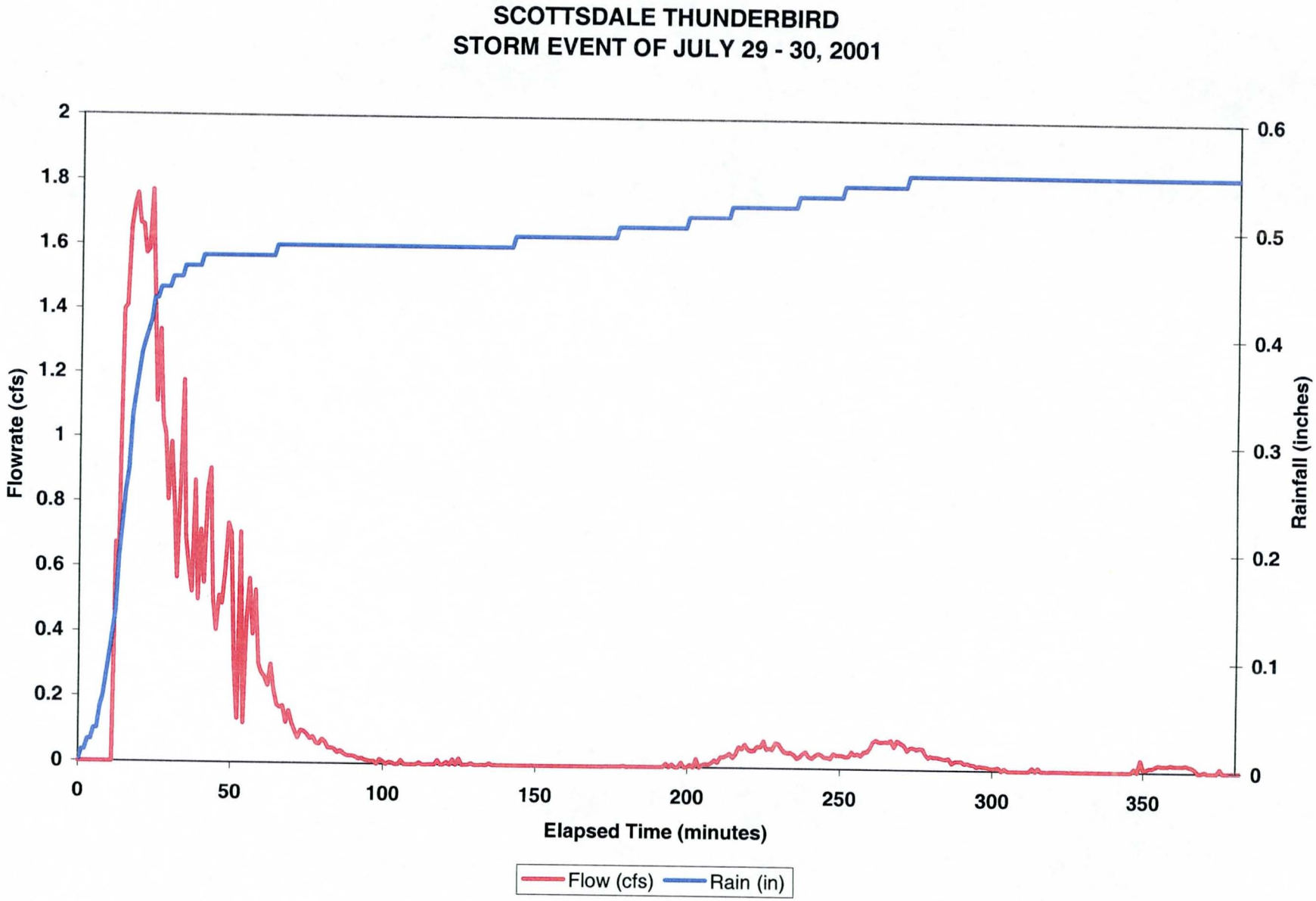
Data compiled for July 1, 2001 through March 31, 2002

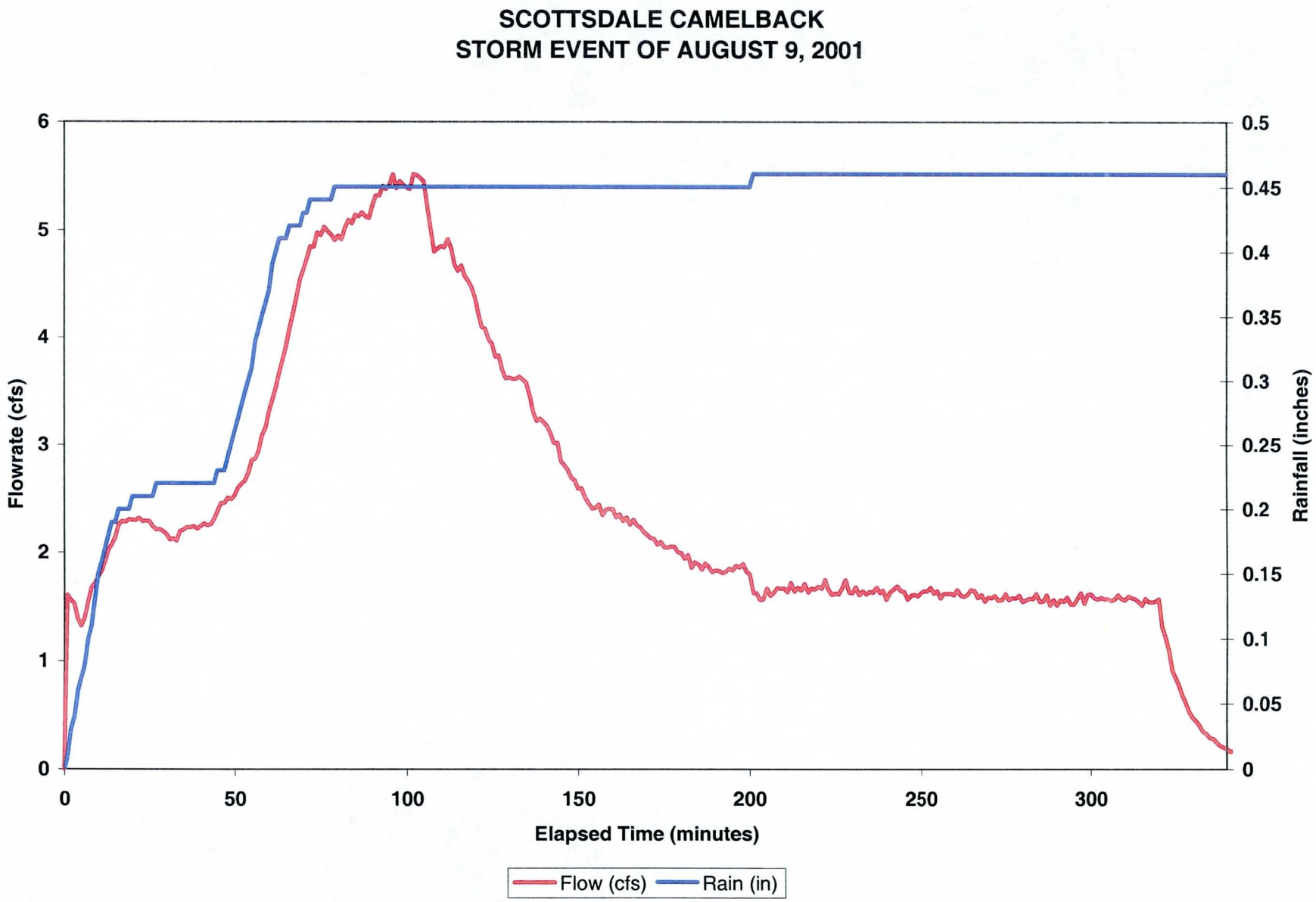
The remainder of this report contains data. The following data are included:

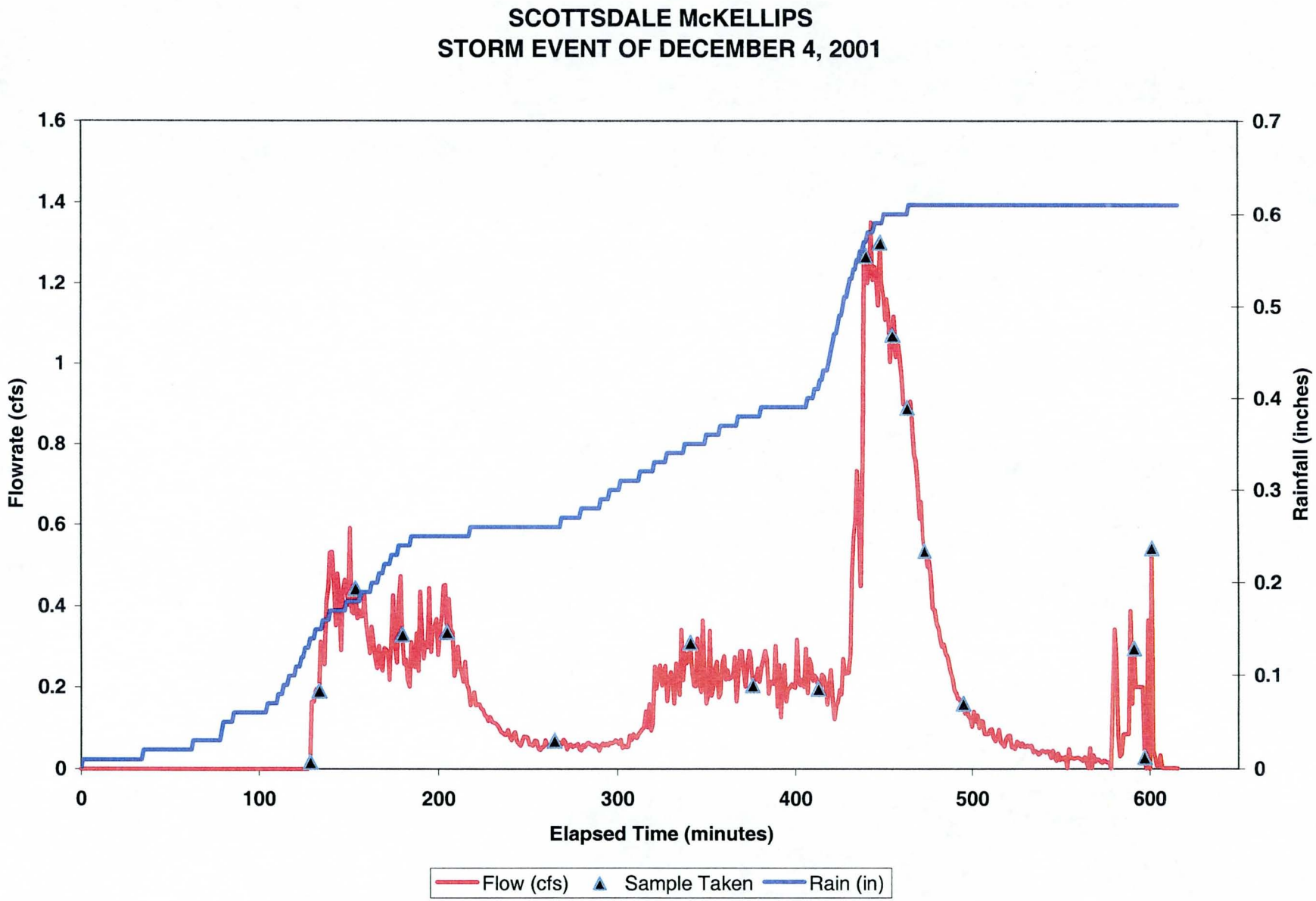
- Storm Hydrographs.
- Rainfall tables for Scottsdale NPDES rain gages.
- Rainfall tables for Scottsdale ALERT rain gages.
- Analytical Data Tables.
- Data Validation Tables.
- Laboratory Reports and quality control data.
- Chain of Custody Forms.
- Operational maintenance and storm event log sheets.
- Appendix A

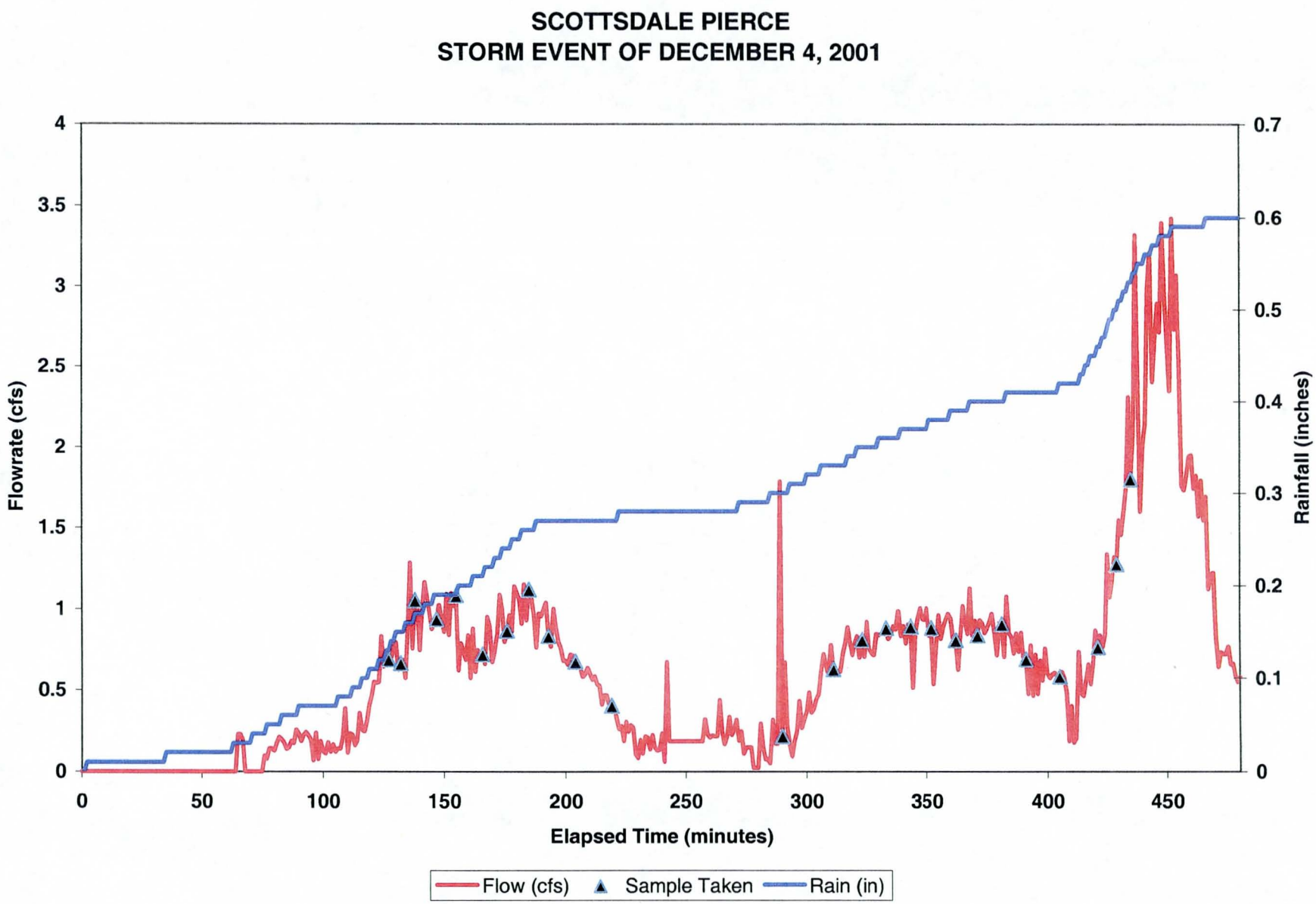
Storm Hydrographs

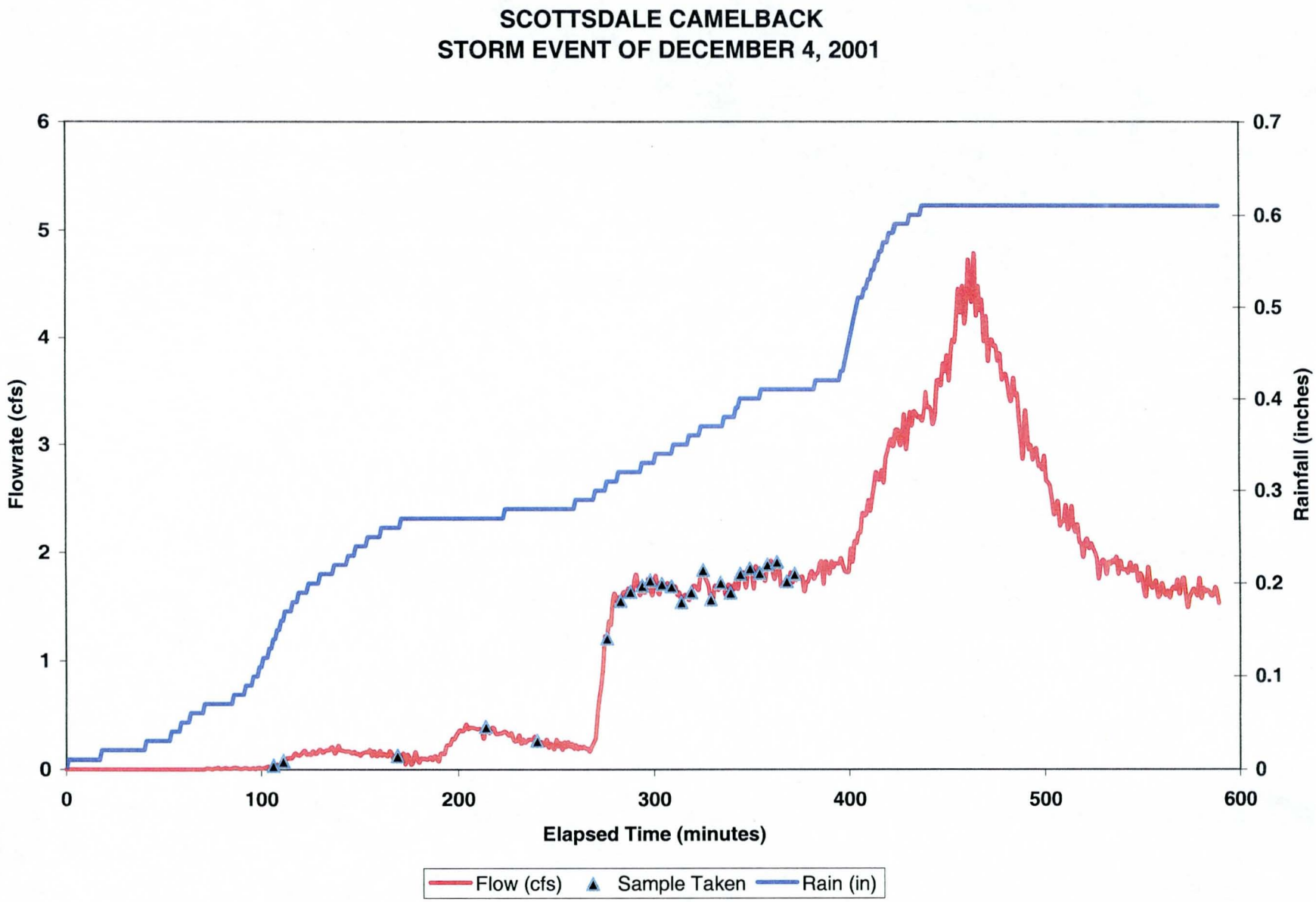

SCOTTSDALE CAMELBACK
STORM EVENT OF JULY 29 - 30, 2001
Flowrate (cfs)
12.0
10.0
8.0
6.0
4.0
2.0
0.0
Rainfall (inches)
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
250
300
350
400
Elapsed Time (minutes)
Flow (cfs)
Sample Taken
Rain (in)


SCOTTSDALE THUNDERBIRD
STORM EVENT OF JULY 29 - 30, 2001
Flowrate (cfs)
Rainfall (inches)
Elapsed Time (minutes)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
0.1
0.3
0.5
0.6
50
100
150
200
250
300
350
Flow (cfs)
Rain (in)


SCOTTSDALE CAMELBACK
STORM EVENT OF AUGUST 9, 2001
Flowrate (cfs)
Rainfall (inches)
Elapsed Time (minutes)
0
1
2
3
4
5
6
0
0.05
0.1
0.15
0.2
0.25
0.3
0.35
0.4
0.45
0.5
0
50
100
150
200
250
300
Flow (cfs)
Rain (in)


SCOTTSDALE McKELLIPS
STORM EVENT OF DECEMBER 4, 2001
Flowrate (cfs)
Rainfall (inches)
Elapsed Time (minutes)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
0.1
0.3
0.5
0.7
100
200
300
400
500
600
Flow (cfs)
Sample Taken
Rain (in)


SCOTTSDALE PIERCE
STORM EVENT OF DECEMBER 4, 2001
Flowrate (cfs)
Rainfall (inches)
Elapsed Time (minutes)
0
0.5
1
1.5
2
2.5
3
3.5
4
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
50
100
150
200
250
300
350
400
450
Flow (cfs)
Sample Taken
Rain (in)


SCOTTSDALE CAMELBACK
STORM EVENT OF DECEMBER 4, 2001
Flowrate (cfs)
Rainfall (inches)
Elapsed Time (minutes)
0
1
2
3
4
5
6
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0
100
200
300
400
500
600
Flow (cfs)
Sample Taken
Rain (in)

Rainfall Data

STORM WATER QUALITY RAINFALL GAGES

City of Scottsdale Gaged Rainfall

Stormwater Station

Location McKellips

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1		0.09	0.01									
2			0.03									
3			0.01									
4		0.01				0.62						
5		0.08			0.23							
6				0.04								
7		0.12							0.13			
8		0.07							0.01			
9												
10												
11						0.26						
12												
13												
14												
15												
16												
17		0.19										
18			0.04									
19			0.06									
20			0.10									
21												
22												
23												
24												
25												
26												
27												
28												
29	1.51											
30	0.06						0.06					
31	0.14	0.01										
Month Total	1.71	0.57	0.25	0.04	0.23	0.88	0.06	0.00	0.14	0.00	0.00	0.00

City of Scottsdale Gaged Rainfall

Stormwater Station Location: Pierce

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.61						
5					0.18							
6				0.05								
7									0.13			
8									0.01			
9		0.47										
10												
11						0.36						
12												
13												
14												
15												
16												
17		0.01										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27							0.02					
28												
29	1.07											
30	0.07						0.05					
31												
Month Total	1.14	0.48	0.00	0.05	0.18	0.97	0.07	0.00	0.14	0.00	0.00	0.00

City of Scottsdale Gaged Rainfall

Stormwater Station

Location: Camelback

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.62						
5					0.25	0.01						
6				0.05								
7									0.06			
8												
9		0.46										
10												
11						0.14						
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27							0.01					
28												
29	0.60											
30	0.13						0.08					
31												
Month Total	0.73	0.46	0.00	0.05	0.25	0.77	0.09	0.00	0.06	0.00	0.00	0.00

City of Scottsdale Gaged Rainfall

Stormwater Station

Location Hayden

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.58						
5					0.25	0.04						
6				0.05								
7									0.04			
8									0.01			
9		0.45										
10												
11						0.11						
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30	NA						0.05					
31	NA											
Month Total	0.00	0.45	0.00	0.05	0.25	0.73	0.05	0.00	0.05	0.00	0.00	0.00

NA = No Data

City of Scottsdale Gaged Rainfall

Stormwater Station Location: Thunderbird

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.73						
5					0.28							
6				0.02								
7									0.06			
8												
9		0.47										
10												
11						0.04						
12												
13												
14												
15												
16												
17		0.17										
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29												
30	0.55						0.05					
31												
Month Total	0.55	0.64	0.00	0.02	0.28	0.77	0.05	0.00	0.06	0.00	0.00	0.00

FLOOD CONTROL DISTRICT
A.L.E.R.T GAGES

City of Scottsdale Gaged Rainfall

Honor the Past - Imagine the Future

Gage Number	4600
Location	Indian Bend Wash at McKellips Road

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

City of Scottsdale Gaged Rainfall

Gage Number 4605

Location Osborn at 64th st.

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

XXX = Gage not working.

City of Scottsdale Gaged Rainfall

Honor the Past · Imagine the Future

Gage Number	4610
Location	Indian Bend Wash at Indaian Bend Road

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

City of Scottsdale Gaged Rainfall

Honor the Past · Imagine the Future

Gage Number	4615
Location	Indian Bend Wash at Indian School

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.55						
5					0.16							
6	0.04			0.04								
7									0.04			
8												
9		0.43										
10							0.08					
11						0.12						
12												
13												
14	0.04											
15												
16												
17	0.59											
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.47											
30	0.04	0.20					0.08					
31												
Month Total	1.18	0.63	0.00	0.04	0.16	0.67	0.16	0.00	0.04	0.00	0.00	0.00

City of Scottsdale Gaged Rainfall

Gage Number: 4620

Location: Indian Bend Wash at Interceptor

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1												
2												
3												
4						0.28						
5					0.31							
6	0.04											
7												
8												
9	0.04	0.16										
10							0.08					
11						0.08						
12												
13												
14	0.12		0.20									
15												
16												
17	0.16											
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.16											
30	0.39						0.04					
31												
Month Total	0.91	0.16	0.20	0.00	0.31	0.36	0.12	0.00	0.00	0.00	0.00	0.00

City of Scottsdale Gaged Rainfall

Gage Number	4625
Location	Highland at 68th

	July 2001	August 2001	September 2001	October 2001	November 2001	December 2001	January 2002	February 2002	March 2002	April 2002	May 2002	June 2002
1	XXX											
2	XXX											
3												
4						0.63						
5					0.20							
6	0.04											
7												
8									0.04			
9	0.08	0.35										
10							0.20					
11	xxx					0.16						
12	xxx											
13	xxx											
14	0.04											
15												
16												
17	0.04											
18												
19												
20												
21												
22												
23												
24												
25												
26												
27												
28												
29	0.35											
30	0.12	0.04					0.04					
31												
Month Total	0.67	0.39	0.00	0.00	0.20	0.79	0.24	0.00	0.04	0.00	0.00	0.00

XXX = Gage not working.

Data Tables

Analytical Data Table

SCOTTSDALE
McKELLIPS

DECEMBER 4, 2001

Date of sampling	12/4/2001
Representative Storm Event	YES
Agency Collecting sample	FCD
Agency Analyzing Sample	DEL MAR
Composite Sampling Duration (minutes) (DRN)	472
Storm Duration (minutes)	724
Instantaneous Discharge (cfs)	0.24
Preceeding Dry Period within 72 hr. rule	29
Total Storm Rainfall (inch)	0.61
Maximum 5-minute rain intensitiy (in/hr)(max5)	0.05
Sample Temperature (deg. C)	4
Effluent Temperature (deg. C)	11
pH, Effluent (standard units)	6
BOD5 (mg/l)	11
COD High Level (mg/l)	130
Fecal Coliform (MPN/100mL)	2200
Fecal Streptococci (MPN/100mL)	16000
Total Dissolved Solids (mg/l)	190
Total Suspended Solids (mg/l)	65
Nitrogen No2 + No3, Total (mg/l as N)	1.6
Nitrogen Ammonia Total (mg/l as N)	1.0
Phosphorous Total (mg/l as P)	0.67
Phosphorous Ortho (mg/l as P)	0.56
Oil and Grease Total Recoverable (mg/l)	1
Calcium (mg/l)	25
Hardness (mg/l)	110
Magnesium Total Recoverable (ug/l)	11000
Cadmium Total Recoverable (ug/l as Cd)	32
Cadmium Dissolved (ug/l as Cd)	1.6
Chromium Total Recoverable (ug/l as Cr)	21
Chromium Dissolved (ug/l as Cr)	<4
Copper, Total Recoverable, (ug/l as Cu)	35
Copper, Dissolved, (ug/l as Cu)	8.9
Lead, Total Recoverable, (ug/l as Pb)	19
Lead, Dissolved, (ug/l as Pb)	<2
Nickel, Total Recoverable, (ug/l as Ni)	17
Nickel, Dissolved, (ug/l as Ni)	<4
Zinc, Total Recoverable, (ug/l as Zn)	290
Zinc, Dissolved, (ug/l as Zn)	<50
TKN Nitrogen (mg/l as N)	4.3

Analytical Data Table

SCOTTSDALE
PIERCE

DECEMBER 4, 2001

Date of sampling	12/4/2001
Representative Storm Event	YES
Agency Collecting sample	FCD
Agency Analyzing Sample	DEL MAR
Composite Sampling Duration (minutes) (DRN)	92
Storm Duration (minutes)	724
Instantaneous Discharge (cfs)	0.75
Preceeding Dry Period within 72 hr. rule	29
Total Storm Rainfall (inch)	0.61
Maximum 5-minute rain intensitiy (in/hr)(max5)	0.05
Sample Temperature (deg. C)	4
Effluent Temperature (deg. C)	10.5
pH, Effluent (standard units)	6
BOD5 (mg/l)	12
COD High Level (mg/l)	110
Fecal Coliform (MPN/100mL)	17000
Fecal Streptococci (MPN/100mL)	90000
Total Dissolved Solids (mg/l)	86
Total Suspended Solids (mg/l)	47
Nitrogen No2 + No3, Total (mg/l as N)	0.77
Nitrogen Ammonia Total (mg/l as N)	2.0
Phosphorous Total (mg/l as P)	0.65
Phosphorous Ortho (mg/l as P)	0.62
Oil and Grease Total Recoverable (mg/l)	2.7
Calcium (mg/l)	11
Hardness (mg/l)	40
Magnesium Total Recoverable (ug/l)	3200
Cadmium Total Recoverable (ug/l as Cd)	<0.5
Cadmium Dissolved (ug/l as Cd)	<0.5
Chromium Total Recoverable (ug/l as Cr)	<4
Chromium Dissolved (ug/l as Cr)	<4
Copper, Total Recoverable, (ug/l as Cu)	45
Copper, Dissolved, (ug/l as Cu)	19
Lead, Total Recoverable, (ug/l as Pb)	31
Lead, Dissolved, (ug/l as Pb)	5.6
Nickel, Total Recoverable, (ug/l as Ni)	5.7
Nickel, Dissolved, (ug/l as Ni)	<4
Zinc, Total Recoverable, (ug/l as Zn)	140
Zinc, Dissolved, (ug/l as Zn)	61
TKN Nitrogen (mg/l as N)	3.4

Analytical Data Table

SCOTTSDALE
CAMELBACK

DECEMBER 4, 2001

Date of sampling	12/4/2001
Representative Storm Event	YES
Agency Collecting sample	FCD
Agency Analyzing Sample	DEL MAR
Composite Sampling Duration (minutes) (DRN)	266
Storm Duration (minutes)	724
Instantaneous Discharge (cfs)	0.19
Preceeding Dry Period within 72 hr. rule	29
Total Storm Rainfall (inch)	0.61
Maximum 5-minute rain intensitiy (in/hr)(max5)	0.05
Sample Temperature (deg. C)	4
Effluent Temperature (deg. C)	12
pH, Effluent (standard units)	5
BOD5 (mg/l)	13
COD High Level (mg/l)	87
Fecal Coliform (MPN/100mL)	900000
Fecal Streptococci (MPN/100mL)	160000
Total Dissolved Solids (mg/l)	170
Total Suspended Solids (mg/l)	19
Nitrogen No2 + No3, Total (mg/l as N)	0.77
Nitrogen Ammonia Total (mg/l as N)	0.94
Phosphorous Total (mg/l as P)	0.39
Phosphorous Ortho (mg/l as P)	0.33
Oil and Grease Total Recoverable (mg/l)	1.7
Calcium (mg/l)	36
Hardness (mg/l)	160
Magnesium Total Recoverable (ug/l)	16000
Cadmium Total Recoverable (ug/l as Cd)	<0.5
Cadmium Dissolved (ug/l as Cd)	<0.5
Chromium Total Recoverable (ug/l as Cr)	16
Chromium Dissolved (ug/l as Cr)	<4
Copper, Total Recoverable, (ug/l as Cu)	46
Copper, Dissolved, (ug/l as Cu)	7.8
Lead, Total Recoverable, (ug/l as Pb)	47
Lead, Dissolved, (ug/l as Pb)	<2
Nickel, Total Recoverable, (ug/l as Ni)	16
Nickel, Dissolved, (ug/l as Ni)	<4
Zinc, Total Recoverable, (ug/l as Zn)	260
Zinc, Dissolved, (ug/l as Zn)	<50
TKN Nitrogen (mg/l as N)	2.1

Analytical Data Table

SCOTTSDALE McKELLIPS DECEMBER 11, 2001	
Date of sampling	12/11/2001
Representative Storm Event	NO
Agency Collecting sample	FCD
Agency Analyzing Sample	DEL MAR
Composite Sampling Duration (minutes) (DRN)	NA
Storm Duration (minutes)	<306
Instantaneous Discharge (cfs)	0.32
Preceeding Dry Period within 72 hr. rule	7
Total Storm Rainfall (inch)	0.26
Maximum 5-minute rain intensitiy (in/hr)(max5)	0.05
Sample Temperature (deg. C)	4
Effluent Temperature (deg. C)	11
pH, Effluent (standard units)	6
Fecal Coliform (MPN/100mL)	16000
Fecal Streptococci (MPN/100mL)	30000
Oil and Grease Total Recoverable (mg/l)	2.7

SCOTTSDALE PIERCE DECEMBER 11, 2001	
Date of sampling	12/11/2001
Representative Storm Event	NO
Agency Collecting sample	FCD
Agency Analyzing Sample	DEL MAR
Composite Sampling Duration (minutes) (DRN)	NA
Storm Duration (minutes)	<306
Instantaneous Discharge (cfs)	1.16
Preceeding Dry Period within 72 hr. rule	7
Total Storm Rainfall (inch)	0.26
Maximum 5-minute rain intensitiy (in/hr)(max5)	0.05
Sample Temperature (deg. C)	4
Effluent Temperature (deg. C)	12
pH, Effluent (standard units)	5
Fecal Coliform (MPN/100mL)	9000
Fecal Streptococci (MPN/100mL)	3000
Oil and Grease Total Recoverable (mg/l)	4

Validation Tables

Data Validation Sheet

SCOTTSDALE
McKELLIPS

DECEMBER 4, 2001

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		4												
Effluent Temperature (deg. C)		11					Immediate							
pH, Effluent (standard units)		6					Immediate							
BOD5 (mg/l)	405.1	11	mg/l	2	K2	12/11/2001	48 hours			<30	n/a			estimated value
COD High Level (mg/l)	410.4	130	mg/l	20		12/12/2001	28 days			<30	n/a			
Fecal Coliform (MPN/100mL)	9221E	2200	MPN/100ml	2		12/4/2001	6 hours			<30	n/a			no grabs
Fecal Streptococci (MPN/100mL)	9230B	16000	MPN/100ml	2		12/4/2001	6 hours			<30	n/a			no grabs
Total Dissolved Solids (mg/l)	2540C	190	mg/l	20		12/7/2001	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	65	mg/l	10		12/7/2001	7 days			<15	n/a			
Nitrogen No2 + No3, Total (mg/l as N)	353.2	1.6	mg/l	0.1		12/6/2001				<15	n/a			
Nitrogen Ammonia Total (mg/l as N)	350.2	1.0	mg/l	0.1		12/11/2001	28 days							
Phosphorous Total (mg/l as P)	365.3	0.67	mg/l	0.05		12/11/2001	28 days			<15	3.5			
Phosphorous Ortho (mg/l as P)	365.3	0.56	mg/l	0.05		12/6/2001	48 hours			<15	0			
Oil and Grease Total Recoverable (mg/l)	413.2	1	mg/l	0.2		12/6/2001	7/40	<30	n/a	<50	n/a			no grabs
Calcium (mg/l)	200.7	25	mg/l	2		12/10/2001	6 months							
Hardness (mg/l)	2340B	110	mg/l	1		12/10/2001	6 months			<15	n/a			
Magnesium Total Recoverable (ug/l)	200.7	11000	ug/l	500		12/10/2001	6 months							
Cadmium Total Recoverable (ug/l as Cd)	200.9	32	ug/l	10		12/10/2001	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	200.9	1.6	ug/l	0.5		12/8/2001	6 months							
Chromium Total Recoverable (ug/l as Cr)	200.9	21	ug/l	4		12/12/2001	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		12/12/2001	6 months							
Copper, Total Recoverable, (ug/l as Cu)	200.9	35	ug/l	4		12/7/2001	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	8.9	ug/l	4		12/7/2001	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	19	ug/l	2		12/7/2001	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<2	ug/l	2		12/7/2001	6 months							
Nickel, Total Recoverable, (ug/l as Ni)	200.9	17	ug/l	4		12/7/2001	6 months	<25		<35				
Nickel, Dissolved, (ug/l as Ni)	200.9	<4	ug/l	4		12/7/2001	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	290	ug/l	1		12/12/2001	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	<50	ug/l	50		1/7/2002	6 months							
TKN Nitrogen (mg/l as N)	351.2	4.3	mg/l	0.5		12/10/2001	28 days							

Data Validation Sheet

SCOTTSDALE
PIERCE

DECEMBER 4, 2001

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		4												
Effluent Temperature (deg. C)		10.5					Immediate							
pH, Effluent (standard units)		6					Immediate							
BOD5 (mg/l)	405.1	12	mg/l	2		12/11/2001	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	110	mg/l	20		12/12/2001	28 days			<30	n/a			
Fecal Coliform (MPN/100mL)	9221E	17000	MPN/100ml	2		12/4/2001	6 hours			<30	n/a			
Fecal Streptococci (MPN/100mL)	9230B	90000	MPN/100ml	2		12/4/2001	6 hours			<30	n/a			
Total Dissolved Solids (mg/l)	2540C	86	mg/l	20		12/7/2001	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	47	mg/l	10		12/7/2001	7 days			<15	n/a			
Nitrogen No2 + No3, Total (mg/l as N)	353.2	0.77	mg/l	0.05		12/6/2001				<15	n/a			
Nitrogen Ammonia Total (mg/l as N)	350.2	2.0	mg/l	0.1		12/11/2001	28 days							
Phosphorous Total (mg/l as P)	365.3	0.65	mg/l	0.05		12/11/2001	28 days			<15	3.5			
Phosphorous Ortho (mg/l as P)	365.3	0.62	mg/l	0.05		12/6/2001	48 hours			<15	0			
Oil and Grease Total Recoverable (mg/l)	413.2	2.7	mg/l	0.2		12/6/2001	7/40	<30	n/a	<50	n/a			
Calcium (mg/l)	200.7	11	mg/l	2		12/10/2001	6 months							
Hardness (mg/l)	2340B	40	mg/l	1		12/10/2001	6 months			<15	n/a			
Magnesium Total Recoverable (ug/l)	200.7	3200	ug/l	500		12/10/2001	6 months							
Cadmium Dissolved (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/8/2001	6 months							
Chromium Total Recoverable (ug/l as Cr)	200.9	<4	ug/l	1		12/12/2001	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		12/12/2001	6 months							
Copper, Total Recoverable, (ug/l as Cu)	200.9	45	ug/l	1		12/7/2001	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	19	ug/l	4		12/7/2001	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	31	ug/l	1		12/7/2001	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	5.6	ug/l	2		12/7/2001	6 months							
Nickel, Total Recoverable, (ug/l as Ni)	200.9	5.7	ug/l	2		12/7/2001	6 months	<25		<35				
Nickel, Dissolved, (ug/l as Ni)	200.9	<4	ug/l	4		12/7/2001	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	140	ug/l	1		12/12/2001	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	61	ug/l			1/7/2002	6 months							
TKN Nitrogen (mg/l as N)	351.2	3.4	mg/l	0.5		12/10/2001	28 days							

Data Validation Sheet

SCOTTSDALE
CAMELBACK

DECEMBER 4, 2001

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		4												
Effluent Temperature (deg. C)		12					Immediate							
pH, Effluent (standard units)		5					Immediate							
BOD5 (mg/l)	405.1	13	mg/l	2		12/11/2001	48 hours			<30	n/a			
COD High Level (mg/l)	410.4	87	mg/l	20		12/12/2001	28 days			<30	n/a			
Fecal Coliform (MPN/100mL)	9221E	900000	MPN/100ml	2		12/4/2001	6 hours			<30	n/a			no grabs
Fecal Streptococci (MPN/100mL)	9230B	160000	MPN/100ml	2		12/4/2001	6 hours			<30	n/a			no grabs
Total Dissolved Solids (mg/l)	2540C	170	mg/l	20		12/7/2001	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	19	mg/l	10		12/7/2001	7 days			<15	n/a			
Nitrogen No2 + No3, Total (mg/l as N)	353.2	0.77	mg/l	0.05		12/6/2001				<15	n/a			
Nitrogen Ammonia Total (mg/l as N)	350.2	0.94	mg/l	0.1		12/11/2001	28 days							
Phosphorous Total (mg/l as P)	365.3	0.39	mg/l	0.05		12/11/2001	28 days			<15	3.5			
Phosphorous Ortho (mg/l as P)	365.3	0.33	mg/l	0.05		12/6/2001	48 hours			<15	0			
Oil and Grease Total Recoverable (mg/l)	413.2	1.7	mg/l	0.2		12/6/2001	7/40	<30	n/a	<50	n/a			no grabs
Calcium (mg/l)	200.7	36	mg/l	2		12/10/2001	6 months							
Hardness (mg/l)	2340B	160	mg/l	1		12/10/2001	6 months			<15	n/a			
Magnesium Total Recoverable (ug/l)	200.7	16000	ug/l	500		12/10/2001	6 months							
Cadmium Total Recoverable (ug/l as Cd)	200.7	<0.5	ug/l	0.5		12/5/2001	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/8/2001	6 months							
Chromium Total Recoverable (ug/l as Cr)	200.9	16	ug/l	1		12/12/2001	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		12/12/2001	6 months							
Copper, Total Recoverable, (ug/l as Cu)	200.9	46	ug/l	1		12/7/2001	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	7.8	ug/l	4		12/7/2001	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	47	ug/l	1		12/7/2001	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<2	ug/l	2		12/7/2001	6 months							
Nickel, Total Recoverable, (ug/l as Ni)	200.9	16	ug/l	2		12/7/2001	6 months	<25		<35				
Nickel, Dissolved, (ug/l as Ni)	200.9	<4	ug/l	4		12/7/2001	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	260	ug/l	1		12/12/2001	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	<50	ug/l	50		1/7/2002	6 months							
TKN Nitrogen (mg/l as N)	351.2	2.1	mg/l	0.5		12/10/2001	28 days							

Data Validation Sheet

SCOTTSDALE
THUNDERBIRD

DECEMBER 4, 2001

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		4												
Effluent Temperature (deg. C)		11					Immediate							
pH, Effluent (standard units)		6					Immediate							
BOD5 (mg/l)	405.1	7.9	mg/l	2	K2	12/11/2001	48 hours			<30	n/a			estimated value
COD High Level (mg/l)	410.4	94	mg/l	20		12/13/2001	28 days			<30	n/a			
Fecal Coliform (MPN/100mL)	9221E	NA	MPN/100ml	2		12/4/2001	6 hours			<30	n/a			no grabs
Fecal Streptococci (MPN/100mL)	9230B	NA	MPN/100ml	2		12/4/2001	6 hours			<30	n/a			no grabs
Total Dissolved Solids (mg/l)	2540C	NA	mg/l	20		12/7/2001	7 days			<15	n/a			
Total Suspended Solids (mg/l)	160.2	120	mg/l	20		12/7/2001	7 days			<15	n/a			
Nitrogen No2 + No3, Total (mg/l as N)	353.2	1.1	mg/l	0.1		12/6/2001				<15	n/a			
Nitrogen Ammonia Total (mg/l as N)	350.2	2.3	mg/l	0.1		12/11/2001	28 days							
Phosphorous Total (mg/l as P)	365.3	0.30	mg/l	0.05		12/11/2001	28 days			<15	3.5			
Phosphorous Ortho (mg/l as P)	365.3	<0.50	mg/l	0.5		12/5/2001	48 hours			<15	0			
Oil and Grease Total Recoverable (mg/l)	413.2	1	mg/l	0.2		12/6/2001	7/40	<30	n/a	<50	n/a			no grabs
Calcium (mg/l)	200.7	11	mg/l	2		12/10/2001	6 months							
Hardness (mg/l)	2340B	44	mg/l	1		12/11/2001	6 months			<15	n/a			
Magnesium Total Recoverable (ug/l)	200.7	4100	ug/l	500		12/11/2001	6 months							
Cadmium Total Recoverable (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/8/2001	6 months	<25		<35				
Cadmium Dissolved (ug/l as Cd)	200.9	<0.5	ug/l	0.5		12/12/2001	6 months							
Chromium Total Recoverable (ug/l as Cr)	200.9	10	ug/l	4		12/12/2001	6 months	<25		<35				
Chromium Dissolved (ug/l as Cr)	200.9	<4	ug/l	4		12/12/2001	6 months							
Copper, Total Recoverable, (ug/l as Cu)	200.9	24	ug/l	4		12/7/2001	6 months	<25		<35				
Copper, Dissolved, (ug/l as Cu)	200.9	19	ug/l	4		12/10/2001	6 months							
Lead, Total Recoverable, (ug/l as Pb)	3113B	13	ug/l	2		12/7/2001	6 months	<25		<35				
Lead, Dissolved, (ug/l as Pb)	200.9	<2	ug/l	2		12/12/2001	6 months							
Nickel, Total Recoverable, (ug/l as Ni)	200.9	11	ug/l	4		12/12/2001	6 months	<25		<35				
Nickel, Dissolved, (ug/l as Ni)	200.9	4	ug/l	4		12/13/2001	6 months							
Zinc, Total Recoverable, (ug/l as Zn)	200.7	110	ug/l	1		12/11/2001	6 months	<25		<35				
Zinc, Dissolved, (ug/l as Zn)	200.7	94	ug/l	50		12/11/2001	6 months							
TKN Nitrogen (mg/l as N)	351.2	3.620	mg/l	0.5		12/10/2001	28 days							

Data Validation Sheet

SCOTTSDALE
McKELLIPS

DECEMBER 11, 2001

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		4												
Effluent Temperature (deg. C)		11					Immediate							
pH, Effluent (standard units)		6					immediate							
Fecal Coliform (MPN/100mL)	9221E	16000	MPN/100ml	2		12/11/2001	6 hours			<30	n/a			
Fecal Streptococci (MPN/100mL)	9230B	30000	MPN/100ml	2		12/11/2001	6 hours			<30	n/a			
Oil and Grease Total Recoverable (mg/l)	413.2	2.7	mg/l	0.2		12/13/2001	7/40	<30	n/a	<50	n/a			

ALL OTHER TESTS CANCLED DUE TO DURATION OF THE STORM EVENT.

Data Validation Sheet

SCOTTSDALE
PIERCE

DECEMBER 11, 2001

	Method	Result	Units	Required Method Detection Limit	Flags	Date Analyzed	Allowable Holding Time	Required MS/MSD Precision (% RPD)	Actual MS/MSD Precision (%RPD)	Required Sample Duplication Precision (% RPD)	Actual Sample Duplication Precision (% RPD)	Other QA/QC Comments (out of spec)	Field Blank Detects	Comments
Sample Temperature (deg. C)		4												
Effluent Temperature (deg. C)		6					Immediate							
pH, Effluent (standard units)		10.5					Immediate							
Fecal Coliform (MPN/100mL)	9221E	9000	MPN/100ml	2		12/11/2001	6 hours			<30	n/a			
Fecal Streptococci (MPN/100mL)	9230B	3000	MPN/100ml	2		12/11/2001	6 hours			<30	n/a			
Oil and Grease Total Recoverable (mg/l)	413.2	4	mg/l	0.2		12/13/2001	7/40	<30	n/a	<50	n/a			

ALL OTHER TESTS CANCLED DUE TO DURATION OF THE STORM EVENT.

Hard Copies of Data

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

Client Project ID: Scottsdale NPDES Stormwater
Report Number: PKL0043

Sampled: 12/04/01
Received: 12/04/01
Issued: 1/7/02

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0043-01	Pierce	Water
PKL0043-02	Pierce	Water
PKL0043-02RE7	Pierce	Water
PKL0043-03	CAMELBACK	Water
PKL0043-04	CAMELBACK	Water
PKL0043-05	Mckelleps	Water
PKL0043-06	Mckelleps	Water
PKL0043-06RE7	Mckelleps	Water

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

OLDING TIMES: Holding times were met.

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

OBSERVATIONS: No significant observations were made.

UBCONTRACTED: Analysis was subcontracted to Transwest Geochem - 3725 E. Atlanta Ave., Suite 2, Phoenix, AZ 85040 (AZ0133). Results are attached.

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

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

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

inda Eshelman
roject Manager

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Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0043-01RE1 (Pierce - Water)								
Cadmium	EPA 200.9	P1L0521	0.00050	ND	1	12/5/01	12/8/01	
Calcium	EPA 200.7	P1L0710	2.0	**11**	1	12/7/01	12/10/01	
Chromium	EPA 200.9	P1L0521	0.0040	ND	1	12/5/01	12/12/01	
Copper	EPA 200.9	P1L0521	0.0080	**0.045**	2	12/5/01	12/7/01	
Lead	EPA 200.9	P1L0521	0.0020	**0.031**	1	12/5/01	12/7/01	
Magnesium	EPA 200.7	P1L0710	0.50	**3.2**	1	12/7/01	12/10/01	
Nickel	EPA 200.9	P1L0521	0.0040	**0.0057**	1	12/5/01	12/7/01	
Sample ID: PKL0043-01RE2 (Pierce - Water)								
Zinc	EPA 200.7	P1L1124	0.050	**0.14**	1	12/11/01	12/12/01	
Sample ID: PKL0043-03RE1 (CAMELBACK - Water)								
Cadmium	EPA 200.9	P1L0521	0.00050	ND	1	12/5/01	12/8/01	
Calcium	EPA 200.7	P1L0710	2.0	**36**	1	12/7/01	12/10/01	
Chromium	EPA 200.9	P1L0521	0.0040	**0.016**	1	12/5/01	12/12/01	
Copper	EPA 200.9	P1L0521	0.0080	**0.046**	2	12/5/01	12/7/01	
Lead	EPA 200.9	P1L0521	0.0040	**0.047**	2	12/5/01	12/7/01	
Magnesium	EPA 200.7	P1L0710	0.50	**16**	1	12/7/01	12/10/01	
Nickel	EPA 200.9	P1L0521	0.0040	**0.016**	1	12/5/01	12/7/01	
Sample ID: PKL0043-03RE2 (CAMELBACK - Water)								
Zinc	EPA 200.7	P1L1124	0.050	**0.26**	1	12/11/01	12/12/01	
Sample ID: PKL0043-05RE1 (Mckelleps - Water)								
Cadmium	EPA 200.9	P1L0521	0.010	**0.032**	20	12/5/01	12/10/01	
Calcium	EPA 200.7	P1L0710	2.0	**25**	1	12/7/01	12/10/01	
Chromium	EPA 200.9	P1L0521	0.0040	**0.021**	1	12/5/01	12/12/01	
Copper	EPA 200.9	P1L0521	0.0040	**0.035**	1	12/5/01	12/7/01	
Lead	EPA 200.9	P1L0521	0.0020	**0.019**	1	12/5/01	12/7/01	
Magnesium	EPA 200.7	P1L0710	0.50	**11**	1	12/7/01	12/10/01	
Nickel	EPA 200.9	P1L0521	0.0040	**0.017**	1	12/5/01	12/7/01	

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0043-05RE2 (Mckelleps - Water)								
Zinc	EPA 200.7	P1L1124	0.050	**0.29**	1	12/11/01	12/12/01	

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Attention: Todd Williams

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0043-02 (Pierce - Water)								
Cadmium, Dissolved	EPA 200.9	P1L0521	0.00050	ND	1	12/5/01	12/8/01	
Chromium, Dissolved	EPA 200.9	P1L0521	0.0040	ND	1	12/5/01	12/12/01	
Copper, Dissolved	EPA 200.9	P1L0521	0.0040	**0.019**	1	12/5/01	12/7/01	
Lead, Dissolved	EPA 200.9	P1L0521	0.0020	**0.0056**	1	12/5/01	12/7/01	
Nickel, Dissolved	EPA 200.9	P1L0521	0.0040	ND	1	12/5/01	12/7/01	
Sample ID: PKL0043-02RE7 (Pierce - Water)								
Zinc, Dissolved	EPA 200.7	P2A0406	0.050	**0.061**	1	1/4/02	1/7/02	
Sample ID: PKL0043-04 (CAMELBACK - Water)								
Cadmium, Dissolved	EPA 200.9	P1L0515	0.00050	ND	1	12/5/01	12/6/01	
Chromium, Dissolved	EPA 200.9	P1L0515	0.0040	ND	1	12/5/01	12/12/01	
Copper, Dissolved	EPA 200.9	P1L0515	0.0040	**0.0078**	1	12/5/01	12/7/01	
Lead, Dissolved	EPA 200.9	P1L0515	0.0020	ND	1	12/5/01	12/10/01	
Nickel, Dissolved	EPA 200.9	P1L0515	0.0040	ND	1	12/5/01	12/7/01	
Sample ID: PKL0043-04RE1 (CAMELBACK - Water)								
Zinc, Dissolved	EPA 200.7	P1L1405	0.050	ND	1	12/14/01	12/17/01	
Sample ID: PKL0043-06 (Mckelleps - Water)								
Cadmium, Dissolved	EPA 200.9	P1L0521	0.00050	**0.0016**	1	12/5/01	12/8/01	
Chromium, Dissolved	EPA 200.9	P1L0521	0.0040	ND	1	12/5/01	12/12/01	
Copper, Dissolved	EPA 200.9	P1L0521	0.0040	**0.0089**	1	12/5/01	12/7/01	
Lead, Dissolved	EPA 200.9	P1L0521	0.0020	ND	1	12/5/01	12/7/01	
Nickel, Dissolved	EPA 200.9	P1L0521	0.0040	ND	1	12/5/01	12/7/01	

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Attention: Todd Williams

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0043-06RE7 (Mckelleps - Water)								
Zinc, Dissolved	EPA 200.7	P2A0406	0.050	ND	1	1/4/02	1/7/02	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0043-01 (Pierce - Water)								
Ammonia-N	EPA 350.3	P1L1202	0.10	**2.0**	2	12/11/01	12/11/01	
Biochemical Oxygen Demand	EPA 405.1	P1L1107	2.0	**12**	1	12/5/01	12/10/01	K2
Chemical Oxygen Demand	EPA 410.4	P1L1307	20	**110**	1	12/12/01	12/12/01	
Nitrate/Nitrite-N	EPA 353.2	P1L0617	0.050	**0.77**	1	12/6/01	12/6/01	
Orthophosphate	EPA 365.3	P1L1017	0.050	**0.62**	1	12/6/01	12/6/01	
Phosphorus	EPA 365.3	P1L1129	0.050	**0.65**	1	12/11/01	12/11/01	
Total Dissolved Solids	SM2540C	P1L1005	20	**86**	1	12/7/01	12/7/01	
Total Suspended Solids	EPA 160.2	P1L1004	10	**47**	1	12/7/01	12/7/01	
Sample ID: PKL0043-01RE1 (Pierce - Water)								
Hardness (CaCO3)	SM2340B	P1L0710	1.0	**40**	1	12/7/01	12/10/01	
Sample ID: PKL0043-03 (CAMELBACK - Water)								
Ammonia-N	EPA 350.3	P1L1202	0.10	**0.94**	2	12/11/01	12/11/01	
Biochemical Oxygen Demand	EPA 405.1	P1L1107	2.0	**13**	1	12/5/01	12/10/01	
Chemical Oxygen Demand	EPA 410.4	P1L1307	20	**87**	1	12/12/01	12/12/01	
Nitrate/Nitrite-N	EPA 353.2	P1L0617	0.050	**0.77**	1	12/6/01	12/6/01	
Orthophosphate	EPA 365.3	P1L1017	0.050	**0.33**	1	12/6/01	12/6/01	
Phosphorus	EPA 365.3	P1L1129	0.050	**0.39**	1	12/11/01	12/11/01	
Total Dissolved Solids	SM2540C	P1L1005	20	**170**	1	12/7/01	12/7/01	
Total Suspended Solids	EPA 160.2	P1L1004	10	**19**	1	12/7/01	12/7/01	
Sample ID: PKL0043-03RE1 (CAMELBACK - Water)								
Hardness (CaCO3)	SM2340B	P1L0710	1.0	**160**	1	12/7/01	12/10/01	

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Report Number: PKL0043

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

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0043-05 (Mckelleps - Water)								
Ammonia-N	EPA 350.3	P1L1202	0.10	**1.0**	2	12/11/01	12/11/01	
Biochemical Oxygen Demand	EPA 405.1	P1L1107	2.0	**11**	1	12/5/01	12/10/01	K2
Chemical Oxygen Demand	EPA 410.4	P1L1307	20	**130**	1	12/12/01	12/12/01	
Nitrate/Nitrite-N	EPA 353.2	P1L0617	0.10	**1.6**	2	12/6/01	12/6/01	
Orthophosphate	EPA 365.3	P1L1017	0.050	**0.56**	1	12/6/01	12/6/01	
Phosphorus	EPA 365.3	P1L1129	0.050	**0.67**	1	12/11/01	12/11/01	
Total Dissolved Solids	SM2540C	P1L1005	20	**190**	1	12/7/01	12/7/01	
Total Suspended Solids	EPA 160.2	P1L1004	10	**65**	1	12/7/01	12/7/01	
Sample ID: PKL0043-05RE1 (Mckelleps - Water)								
Hardness (CaCO3)	SM2340B	P1L0710	1.0	**110**	1	12/7/01	12/10/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Phoenix, AZ 85009
Attention: Todd Williams

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0521 Extracted: 12/05/01										
Blank Analyzed: 12/08/01 (P1L0521-BLK1)										
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							
Blank Analyzed: 12/08/01 (P1L0521-BLK2)										
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							
LCS Analyzed: 12/08/01 (P1L0521-BS1)										
Cadmium	**0.00178**	0.0010	mg/l	0.00200		89	85-115			
Chromium	**0.0391**	0.0080	mg/l	0.0400		98	85-115			
Copper	**0.0399**	0.0080	mg/l	0.0400		100	85-115			
Lead	**0.0413**	0.0040	mg/l	0.0400		103	85-115			
Nickel	**0.0434**	0.0080	mg/l	0.0400		108	85-115			
LCS Dup Analyzed: 12/08/01 (P1L0521-BSD1)										
Cadmium	**0.00183**	0.0010	mg/l	0.00200		91	85-115	3	20	
Chromium	**0.0350**	0.0080	mg/l	0.0400		88	85-115	11	20	
Copper	**0.0408**	0.0080	mg/l	0.0400		102	85-115	2	20	
Lead	**0.0417**	0.0040	mg/l	0.0400		104	85-115	1	20	
Nickel	**0.0405**	0.0080	mg/l	0.0400		101	85-115	7	20	
Matrix Spike Analyzed: 12/08/01 (P1L0521-MS1)					**Source: PKL0060-01**					
Cadmium	**0.00166**	0.0010	mg/l	0.00200	ND	83	70-130			
Chromium	**0.0320**	0.0080	mg/l	0.0400	ND	72	70-130			
Copper	**0.0561**	0.0080	mg/l	0.0400	0.014	105	70-130			
Lead	**0.0452**	0.0040	mg/l	0.0400	0.0044	102	70-130			
Nickel	**0.0480**	0.0080	mg/l	0.0400	ND	104	70-130			

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0521 Extracted: 12/05/01										
Matrix Spike Dup Analyzed: 12/08/01 (P1L0521-MSD1)					**Source: PKL0060-01**					
Cadmium	**0.00165**	0.0010	mg/l	0.00200	ND	82	70-130	0.6	20	
Chromium	**0.0324**	0.0080	mg/l	0.0400	ND	73	70-130	1	20	
Copper	**0.0582**	0.0080	mg/l	0.0400	0.014	110	70-130	4	20	
Lead	**0.0479**	0.0040	mg/l	0.0400	0.0044	109	70-130	6	20	
Nickel	**0.0474**	0.0080	mg/l	0.0400	ND	103	70-130	1	20	
Batch: P1L0710 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L0710-BLK1)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
LCS Analyzed: 12/07/01 (P1L0710-BS1)										
Calcium	**10.7**	2.0	mg/l	10.0		107	85-115			
Magnesium	**10.1**	0.50	mg/l	10.0		101	85-115			
LCS Dup Analyzed: 12/07/01 (P1L0710-BSD1)										
Calcium	**10.6**	2.0	mg/l	10.0		106	85-115	0.9	20	
Magnesium	**10.1**	0.50	mg/l	10.0		101	85-115	0	20	
Matrix Spike Analyzed: 12/07/01 (P1L0710-MS1)					**Source: PKL0061-01**					
Calcium	**55.6**	2.0	mg/l	10.0	46	96	70-130			
Magnesium	**41.7**	0.50	mg/l	10.0	33	87	70-130			
Matrix Spike Dup Analyzed: 12/07/01 (P1L0710-MSD1)					**Source: PKL0061-01**					
Calcium	**55.8**	2.0	mg/l	10.0	46	98	70-130	0.4	20	
Magnesium	**42.2**	0.50	mg/l	10.0	33	92	70-130	1	20	

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METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1124 Extracted: 12/11/01										
Blank Analyzed: 12/12/01 (P1L1124-BLK1)										
Zinc	ND	0.050	mg/l							
LCS Analyzed: 12/12/01 (P1L1124-BS1)										
Zinc	**1.10**	0.050	mg/l	1.00		110	85-115			
LCS Dup Analyzed: 12/12/01 (P1L1124-BSD1)										
Zinc	**1.07**	0.050	mg/l	1.00		107	85-115	3	20	
Matrix Spike Analyzed: 12/12/01 (P1L1124-MS1)					**Source: PKL0168-01**					
Zinc	**1.51**	0.050	mg/l	1.00	0.45	106	70-130			
Matrix Spike Dup Analyzed: 12/12/01 (P1L1124-MSD1)					**Source: PKL0168-01**					
Zinc	**1.49**	0.050	mg/l	1.00	0.45	104	70-130	1	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0515 Extracted: 12/05/01										
Blank Analyzed: 12/06/01 (P1L0515-BLK1)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Copper, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
Blank Analyzed: 12/06/01 (P1L0515-BLK2)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Copper, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
Blank Analyzed: 12/07/01 (P1L0515-BLK3)										
Copper, Dissolved	ND	0.0040	mg/l							
LCS Analyzed: 12/06/01 (P1L0515-BS1)										
Cadmium, Dissolved	**0.00105**	0.00050	mg/l	0.00100		105	85-115			
Chromium, Dissolved	**0.0199**	0.0040	mg/l	0.0200		100	85-115			
Copper, Dissolved	**0.0198**	0.0040	mg/l	0.0200		99	85-115			
Lead, Dissolved	**0.0196**	0.0020	mg/l	0.0200		98	85-115			
Nickel, Dissolved	**0.0207**	0.0040	mg/l	0.0200		104	85-115			
LCS Dup Analyzed: 12/06/01 (P1L0515-BSD1)										
Cadmium, Dissolved	**0.00101**	0.00050	mg/l	0.00100		101	85-115	4	20	
Chromium, Dissolved	**0.0202**	0.0040	mg/l	0.0200		101	85-115	1	20	
Copper, Dissolved	**0.0195**	0.0040	mg/l	0.0200		98	85-115	2	20	
Lead, Dissolved	**0.0183**	0.0020	mg/l	0.0200		92	85-115	7	20	
Nickel, Dissolved	**0.0197**	0.0040	mg/l	0.0200		98	85-115	5	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0515 Extracted: 12/05/01										
Matrix Spike Analyzed: 12/06/01 (P1L0515-MS1)					**Source: PKL0041-01**					
Cadmium, Dissolved	**0.00106**	0.00050	mg/l	0.00100	ND	106	70-130			
Chromium, Dissolved	**0.0263**	0.0040	mg/l	0.0200	ND	121	70-130			
Copper, Dissolved	**0.0292**	0.0040	mg/l	0.0200	0.0079	106	70-130			
Lead, Dissolved	**0.0246**	0.0020	mg/l	0.0200	0.0025	110	70-130			
Nickel, Dissolved	**0.0249**	0.0040	mg/l	0.0200	ND	112	70-130			
Matrix Spike Dup Analyzed: 12/06/01 (P1L0515-MSD1)					**Source: PKL0041-01**					
Cadmium, Dissolved	**0.00102**	0.00050	mg/l	0.00100	ND	102	70-130	4	20	
Chromium, Dissolved	**0.0267**	0.0040	mg/l	0.0200	ND	123	70-130	2	20	
Copper, Dissolved	**0.0290**	0.0040	mg/l	0.0200	0.0079	106	70-130	0.7	20	
Lead, Dissolved	**0.0242**	0.0020	mg/l	0.0200	0.0025	108	70-130	2	20	
Nickel, Dissolved	**0.0234**	0.0040	mg/l	0.0200	ND	104	70-130	6	20	
Batch: P1L0521 Extracted: 12/05/01										
Blank Analyzed: 12/08/01 (P1L0521-BLK1)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Copper, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
Blank Analyzed: 12/08/01 (P1L0521-BLK2)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Copper, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							

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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: P1L0521 Extracted: 12/05/01										
LCS Analyzed: 12/08/01 (P1L0521-BS1)										
Cadmium, Dissolved	0.00178	0.0010	mg/l	0.00200		89	85-115			
Chromium, Dissolved	0.0391	0.0080	mg/l	0.0400		98	85-115			
Copper, Dissolved	0.0399	0.0080	mg/l	0.0400		100	85-115			
Lead, Dissolved	0.0413	0.0040	mg/l	0.0400		103	85-115			
Nickel, Dissolved	0.0434	0.0080	mg/l	0.0400		108	85-115			
LCS Dup Analyzed: 12/08/01 (P1L0521-BSD1)										
Cadmium, Dissolved	0.00183	0.0010	mg/l	0.00200		91	85-115	3	20	
Chromium, Dissolved	0.0350	0.0080	mg/l	0.0400		88	85-115	11	20	
Copper, Dissolved	0.0408	0.0080	mg/l	0.0400		102	85-115	2	20	
Lead, Dissolved	0.0417	0.0040	mg/l	0.0400		104	85-115	1	20	
Nickel, Dissolved	0.0405	0.0080	mg/l	0.0400		101	85-115	7	20	
Matrix Spike Analyzed: 12/08/01 (P1L0521-MS1)					**Source: PKL0060-01**					
Cadmium, Dissolved	0.00166	0.0010	mg/l	0.00200	ND	83	70-130			
Chromium, Dissolved	0.0320	0.0080	mg/l	0.0400	ND	72	70-130			
Copper, Dissolved	0.0561	0.0080	mg/l	0.0400	0.014	105	70-130			
Lead, Dissolved	0.0452	0.0040	mg/l	0.0400	0.0044	102	70-130			
Nickel, Dissolved	0.0480	0.0080	mg/l	0.0400	ND	104	70-130			
Matrix Spike Dup Analyzed: 12/08/01 (P1L0521-MSD1)					**Source: PKL0060-01**					
Cadmium, Dissolved	0.00165	0.0010	mg/l	0.00200	ND	82	70-130	0.6	20	
Chromium, Dissolved	0.0324	0.0080	mg/l	0.0400	ND	73	70-130	1	20	
Copper, Dissolved	0.0582	0.0080	mg/l	0.0400	0.014	110	70-130	4	20	
Lead, Dissolved	0.0479	0.0040	mg/l	0.0400	0.0044	109	70-130	6	20	
Nickel, Dissolved	0.0474	0.0080	mg/l	0.0400	ND	103	70-130	1	20	

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METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1405 Extracted: 12/14/01										
Blank Analyzed: 12/17/01 (P1L1405-BLK1)										
Zinc, Dissolved	ND	0.050	mg/l							
Blank Analyzed: 12/17/01 (P1L1405-BLK2)										
Zinc, Dissolved	**0.0807**	0.050	mg/l							B4
LCS Analyzed: 12/17/01 (P1L1405-BS1)										
Zinc, Dissolved	**1.08**	0.050	mg/l	1.00		108	85-115			
LCS Dup Analyzed: 12/17/01 (P1L1405-BSD1)										
Zinc, Dissolved	**1.15**	0.050	mg/l	1.00		115	85-115	6	20	
Matrix Spike Analyzed: 12/17/01 (P1L1405-MS1)					**Source: PKL0227-02**					
Zinc, Dissolved	**1.23**	0.050	mg/l	1.00	0.098	113	70-130			
Matrix Spike Dup Analyzed: 12/17/01 (P1L1405-MSD1)					**Source: PKL0227-02**					
Zinc, Dissolved	**1.11**	0.050	mg/l	1.00	0.098	101	70-130	10	20	
Batch: P2A0406 Extracted: 01/04/02										
Blank Analyzed: 01/07/02 (P2A0406-BLK1)										
Zinc, Dissolved	ND	0.050	mg/l							
Blank Analyzed: 01/07/02 (P2A0406-BLK2)										
Zinc, Dissolved	ND	0.050	mg/l							
LCS Analyzed: 01/07/02 (P2A0406-BS1)										
Zinc, Dissolved	**1.04**	0.050	mg/l	1.00		104	85-115			

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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: P2A0406 Extracted: 01/04/02										
LCS Dup Analyzed: 01/07/02 (P2A0406-BSD1)										
Zinc, Dissolved	**1.06**	0.050	mg/l	1.00		106	85-115	2	20	
Matrix Spike Analyzed: 01/07/02 (P2A0406-MS1)					**Source: PKL0435-14**					
Zinc, Dissolved	**1.12**	0.050	mg/l	1.00	0.081	104	70-130			
Matrix Spike Dup Analyzed: 01/07/02 (P2A0406-MSD1)					**Source: PKL0435-14**					
Zinc, Dissolved	**1.08**	0.050	mg/l	1.00	0.081	100	70-130	4	20	

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METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0617 Extracted: 12/06/01										
Blank Analyzed: 12/06/01 (P1L0617-BLK1)										
Nitrate/Nitrite-N	ND	0.050	mg/l							
LCS Analyzed: 12/06/01 (P1L0617-BS1)										
Nitrate/Nitrite-N	1.02	0.050	mg/l	1.00		102	90-110			
Matrix Spike Analyzed: 12/06/01 (P1L0617-MS1)					Source: PKL0043-01					
Nitrate/Nitrite-N	2.82	0.10	mg/l	2.00	0.77	102	80-125			
Matrix Spike Dup Analyzed: 12/06/01 (P1L0617-MSD1)					Source: PKL0043-01					
Nitrate/Nitrite-N	2.84	0.10	mg/l	2.00	0.77	104	80-125	0.7	20	
Batch: P1L1004 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1004-BLK1)										
Total Suspended Solids	ND	10	mg/l							
Duplicate Analyzed: 12/07/01 (P1L1004-DUP1)					Source: PKL0028-01					
Total Suspended Solids	ND	1000	mg/l		ND				5	
Duplicate Analyzed: 12/07/01 (P1L1004-DUP2)					Source: PKL0079-01					
Total Suspended Solids	ND	10	mg/l		ND				5	
Reference Analyzed: 12/07/01 (P1L1004-SRM1)										
Total Suspended Solids	60.0	10	mg/l	62.2		96	85-107			
Batch: P1L1005 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1005-BLK1)										
Total Dissolved Solids	ND	20	mg/l							

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1005 Extracted: 12/07/01										
LCS Analyzed: 12/07/01 (P1L1005-BS1)										
Total Dissolved Solids	**388**	20	mg/l	400		97	80-115			
LCS Dup Analyzed: 12/07/01 (P1L1005-BSD1)										
Total Dissolved Solids	**402**	20	mg/l	400		100	80-115	4	200	
Duplicate Analyzed: 12/07/01 (P1L1005-DUP1)					**Source: PKL0126-01**					
Total Dissolved Solids	**646**	20	mg/l		670			4	5	
Duplicate Analyzed: 12/07/01 (P1L1005-DUP2)					**Source: PKL0071-01**					
Total Dissolved Solids	**160**	20	mg/l		160			0	5	
Batch: P1L1017 Extracted: 12/06/01										
Blank Analyzed: 12/06/01 (P1L1017-BLK1)										
Orthophosphate	ND	0.050	mg/l							
LCS Analyzed: 12/06/01 (P1L1017-BS1)										
Orthophosphate	**0.554**	0.050	mg/l	0.500		111	80-120			
Matrix Spike Analyzed: 12/06/01 (P1L1017-MS1)					**Source: PKL0060-01**					
Orthophosphate	**1.74**	0.10	mg/l	0.500	0.62	224	75-125			M3
Matrix Spike Dup Analyzed: 12/06/01 (P1L1017-MSD1)					**Source: PKL0060-01**					
Orthophosphate	**1.72**	0.10	mg/l	0.500	0.62	220	75-125	1	20	M3
Batch: P1L1107 Extracted: 12/05/01										
Blank Analyzed: 12/10/01 (P1L1107-BLK1)										
Biochemical Oxygen Demand	ND	2.0	mg/l							

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1107 Extracted: 12/05/01										
LCS Analyzed: 12/10/01 (P1L1107-BS1)										
Biochemical Oxygen Demand	**205**	2.0	mg/l	198		104	85-115			
LCS Dup Analyzed: 12/10/01 (P1L1107-BSD1)										
Biochemical Oxygen Demand	**237**	2.0	mg/l	198		120	85-115	14	20	L3
Duplicate Analyzed: 12/10/01 (P1L1107-DUP1)					**Source: PKL0028-01**					
Biochemical Oxygen Demand	**3430**	100	mg/l		3400			0.9	20	
Duplicate Analyzed: 12/10/01 (P1L1107-DUP2)					**Source: PKL0079-03**					
Biochemical Oxygen Demand	**550**	20	mg/l		520			6	20	
Batch: P1L1129 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1129-BLK1)										
Phosphorus	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1129-BS1)										
Phosphorus	**0.512**	0.050	mg/l	0.500		102	80-120			
LCS Dup Analyzed: 12/11/01 (P1L1129-BSD1)										
Phosphorus	**0.557**	0.050	mg/l	0.500		111	80-120	8	20	
Matrix Spike Analyzed: 12/11/01 (P1L1129-MS1)					**Source: PKL0115-01**					
Phosphorus	**0.605**	0.050	mg/l	0.500	ND	119	75-125			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1129-MSD1)					**Source: PKL0115-01**					
Phosphorus	**0.599**	0.050	mg/l	0.500	ND	118	75-125	1	15	

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0043

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1202 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1202-BLK1)										
Ammonia-N	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1202-BS1)										
Ammonia-N	0.470	0.050	mg/l	0.500		94	85-115			
Matrix Spike Analyzed: 12/11/01 (P1L1202-MS1)					Source: PKL0121-01					
Ammonia-N	0.515	0.050	mg/l	0.500	ND	95	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1202-MSD1)					Source: PKL0121-01					
Ammonia-N	0.532	0.050	mg/l	0.500	ND	98	70-130	3	20	
Batch: P1L1307 Extracted: 12/12/01										
Blank Analyzed: 12/12/01 (P1L1307-BLK1)										
Chemical Oxygen Demand	ND	20	mg/l							
LCS Analyzed: 12/12/01 (P1L1307-BS1)										
Chemical Oxygen Demand	209	20	mg/l	200		104	90-110			
LCS Dup Analyzed: 12/12/01 (P1L1307-BSD1)										
Chemical Oxygen Demand	209	20	mg/l	200		104	90-110	0	20	
Matrix Spike Analyzed: 12/12/01 (P1L1307-MS1)					Source: PKL0042-05					
Chemical Oxygen Demand	272	20	mg/l	200	77	98	65-130			
Matrix Spike Dup Analyzed: 12/12/01 (P1L1307-MSD1)					Source: PKL0042-05					
Chemical Oxygen Demand	268	20	mg/l	200	77	96	65-130	1	20	

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Maricopa County -Flood Control District 2801 West Durango Street Phoenix, AZ 85009 Attention: Todd Williams	Client Project ID: Scottsdale NPDES Stormwater Report Number: PKL0043	Sampled: 12/04/01 Received: 12/04/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

B4	Target analyte detected in blank at/above method acceptance criteria.
K2	The sample dilutions set-up for the BOD analysis did not meet the criteria of a residual dissolved oxygen of at least 1 mg/L. Any reported result is an estimated value.
L3	The associated blank spike recovery was above method acceptance limits. See case narrative.
M3	The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not reported.
RPD	Relative Percent Difference

Linda Eshelman
Project Manager

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CORRECTIVE ACTION REPORT

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

Identification and Definition of Problem:

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

Determination of the Cause of the Problem:

No definite cause has been determined for the high recovery.

Corrective Action:

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

Elizabeth C. Wueschner: Nina Hunter for Date: 1/7 /2002
Quality Assurance Manager

TRANSWEST GEOCHEM

December 19, 2001

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

RE: PKL0043-MCFC
Work Order No.: 0112031

Dear Linda,
Transwest Geochem, Inc. received 3 samples on 12/5/2001 11:30:00 AM for the analyses presented in the following report.

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

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

Sincerely,

Michael Barker for:

Beth Proffitt
Project Manager

ADHS License No. AZM133/AZ0133

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

Client: Del Mar Analytical
Work Order: 0112031
Project Name:
Project Number: PKL0043-MCFC

Date Printed: 19-Dec-01

CASE NARRATIVE

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

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

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

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

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

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

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

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

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

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

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

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

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

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TRANSWEST GEOCHEM

Date Printed 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0043-MCFC
Work Order: 0112031
Date Received: 05-Dec-01

Work Order Sample Summary

Client Sample ID	Lab Sample ID	Test Code	Collection Date
PKL0043-01	0112031-01A	EPA351.2	12/4/2001 12:45:00 PM
PKL0043-03	0112031-02A	EPA351.2	12/4/2001 12:15:00 PM
PKL0043-05	0112031-03A	EPA351.2	12/4/2001 2:00:00 PM

Date Printed 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0043-MCFC
Work Order: 0112031
Date Received: 05-Dec-01

Definitions

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

TRANSWEST GEOCHEM

Date Printed 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112031
Lab ID: 0112031-01
Project Name:
Project Number: PKL0043-MCFC

Client Sample ID: PKL0043-01
Collection Date: 12/4/2001 12:45:00 PM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Nitrogen, Kjeldahl, Total	3.4	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001

Confidential and Privileged

TRANSWEST GEOCHEM

Date Printed 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112031
Lab ID: 0112031-02
Project Name:
Project Number: PKL0043-MCFC

Client Sample ID: PKL0043-03
Collection Date: 12/4/2001 12:15:00 PM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Nitrogen, Kjeldahl, Total	2.1	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001

Confidential and Privileged

TRANSWEST GEOCHEM

Date Printed 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112031
Lab ID: 0112031-03
Project Name:
Project Number: PKL0043-MCFC

Client Sample ID: PKL0043-05
Collection Date: 12/4/2001 2:00:00 PM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Nitrogen, Kjeldahl, Total	4.3	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001

Confidential and Privileged

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112031
Project: PKL0043-MCFC

QC SUMMARY REPORT

Method Blank

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

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112031
Project: PKL0043-MCFC

QC SUMMARY REPORT

Sample Duplicate

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

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112031
Project: PKL0043-MCFC

QC SUMMARY REPORT

Sample Matrix Spike

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: **0112081-02AS**	Batch ID: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	3.679	0.50	2.500	0.9797	108%	90	110				
Sample ID: **0112079-01AS**	Batch ID: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.368	0.50	2.500	<0.50	95%	90	110				

Date: 19-Dec-01

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CLIENT: Del Mar Analytical
Work Order: 0112031
Project: PKL0043-MCFC

QC SUMMARY REPORT

Blank Spike (primary source)

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: LCS	Batch ID: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.379	0.50	2.500	<0.50	95%	90	110				

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112031
Project: PKL0043-MCFC

QC SUMMARY REPORT

Secondary Source Blank Spike

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: LCSV	Batch ID: TKN_W-12/10/2001			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.454	0.50	2.500	<0.50	98%	90	110				

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

Client Project ID: Scottsdale NPDES Stormwater
Report Number: PKL0031

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/11/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0031-01	MCKELLIPS RD	Water
PKL0031-02	PIERCE ST	Water
PKL0031-03	HAYDEN & CAMELBACK	Water

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

HOLDING TIMES: Holding times were met.

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

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: Analysis was subcontracted to 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 Esheiman
Project Manager

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0031

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

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0031-01 (MCKELLIPS RD - Water)								
Oil & Grease	EPA 413.2	P1L0527	1.0	**1.0**	1	12/5/01	12/6/01	
Sample ID: PKL0031-02 (PIERCE ST - Water)								
Oil & Grease	EPA 413.2	P1L0527	1.0	**2.7**	1	12/5/01	12/6/01	
Sample ID: PKL0031-03 (HAYDEN & CAMELBACK - Water)								
Oil & Grease	EPA 413.2	P1L0527	1.0	**1.7**	1	12/5/01	12/6/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0031

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

METHOD BLANK/QC DATA

TOTAL RECOVERABLE OIL & GREASE (EPA 413.2)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0527 Extracted: 12/05/01										
Blank Analyzed: 12/06/01 (P1L0527-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 12/06/01 (P1L0527-BS1)										
Oil & Grease	**11.0**	1.0	mg/l	10.0		110	90-145			
LCS Dup Analyzed: 12/06/01 (P1L0527-BSD1)										
Oil & Grease	**11.3**	1.0	mg/l	10.0		113	90-145	3	20	

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale NPDES Stormwater

Report Number: PKL0031

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

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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SEVERN TRENT SERVICES

Severn Trent Services

3333 S. Old Price Road Chandler, Arizona 85248 Tel: (480) 899-0191 Fax: (480) 899-0349
3788 HWY 87 Pine, Arizona 85544 Tel: (520) 476-4189 Fax: (520) 476-4230

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

Attention: Linda Eshelman

Report Date: December 12, 2001
Date/Time Received: 12/04/01 1300
Project Identification: PKL0031-MCFC
Sample Description: Storm water
Purchase Order Number: N/A

LAB RESULTS

Analytical Method	Parameter Description	Sample Identification	Sample Date / Time	Analysis Date/Time	Lab Identification	Reporting Limit	DF	Analytical Results	Units
SM9221E	Fecal Coliform by MTF	PKL0031-01	12/04/01 0800	12/04/01 1400	C01-3575	1.1		*2200	MPN/100ml
SM9230B	Fecal Streptococcus by MTF			12/04/01 1400		1.1		*16000	MPN/100ml
SM9221E	Fecal Coliform by MTF	PKL0031-02	12/04/01 0745	12/04/01 1335	C01-3576	1.1		*17000	MPN/100ml
SM9230B	Fecal Streptococcus by MTF			12/04/01 1340		1.1		*90000	MPN/100ml
SM9221E	Fecal Coliform by MTF	PKL0031-03	12/04/01 0700	12/04/01 1350	C01-3577	1.1		*900000**	MPN/100ml
SM9230B	Fecal Streptococcus by MTF			12/04/01 1350		1.1		*160000**	MPN/100ml

** Sample received at hold time. Run per client request.
* Microbiological incubator exceeded temperature control limits during incubation period.
DF = Dilution Factor
Analytes reported as N.D. were not present above the stated limit of detection.
SEVERN TRENT SERVICES, Chandler - ADHS Licensure AZ0613

Tamara M. Bresette
Project Manager

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

Client Project ID: NPDES Scottsdale Stormwater
Report Number: PKL0194

Sampled: 12/11/01
Received: 12/12/01
Issued: 12/14/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0194-01	McKellips	Water
PKL0194-02	Pierce	Water

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

HOLDING TIMES: Holding times were met.

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

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: Analysis was subcontracted to 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: Todd Williams

Client Project ID: NPDES Scottsdale Stormwater

Report Number: PKL0194

Sampled: 12/11/01
Received: 12/12/01

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: PKL0194-01 (McKellips - Water)								
Oil & Grease	EPA 413.2	P1L1322	1.0	**2.7**	1	12/13/01	12/13/01	
Sample ID: PKL0194-02 (Pierce - Water)								
Oil & Grease	EPA 413.2	P1L1322	1.0	**4.0**	1	12/13/01	12/13/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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

Client Project ID: NPDES Scottsdale Stormwater

Report Number: PKL0194

Sampled: 12/11/01
Received: 12/12/01

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: P1L1322 Extracted: 12/13/01										
Blank Analyzed: 12/13/01 (P1L1322-BLK1)										
Oil & Grease	ND	1.0	mg/l							
LCS Analyzed: 12/13/01 (P1L1322-BS1)										
Oil & Grease	**11.0**	1.0	mg/l	10.0		110	90-145			
LCS Dup Analyzed: 12/13/01 (P1L1322-BSD1)										
Oil & Grease	**11.0**	1.0	mg/l	10.0		110	90-145	0	20	

Linda Eshelman
Project Manager

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

Maricopa County -Flood Control District 2801 West Durango Street Phoenix, AZ 85009 Attention: Todd Williams	Client Project ID: NPDES Scottsdale Stormwater Report Number: PKL0194	Sampled: 12/11/01 Received: 12/12/01

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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SEVERN TRENT SERVICES

Severn Trent Services

3333 S. Old Price Road Chandler, Arizona 85248 Tel: (480) 899-0191 Fax: (480) 899-0349
3788 HWY 87 Pine, Arizona 85544 Tel: (520) 476-4189 Fax: (520) 476-4230

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

Attention: Linda Eshelman

Report Date: December 20, 2001
Date/Time Received: 12/11/01 1640
Project Identification: NPDES Scottsdale
Sample Description: Storm water
Purchase Order Number: N/A

LAB RESULTS

Analytical Method	Parameter Description	Sample Identification	Sample Date / Time	Analysis Date/Time	Lab Identification	Reporting Limit	DF	Analytical Results	Units
SM9230B	Fecal Streptococcus by MTF	McKellips	12/11/01 1405	12/11/01 1715	C01-3637	1.1		16000	MPN/100ml
SM9221E	Fecal Coliform by MTF			12/11/01 1705		1.1		30000*	MPN/100ml
SM9230B	Fecal Streptococcus by MTF	Pierce	12/11/01 1420	12/11/01 1730	C01-3638	1.1		9000	MPN/100ml
SM9221E	Fecal Coliform by MTF			12/11/01 1730		1.1		3000*	MPN/100ml

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

Tamara M. Bresette
Project Manager

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

Client Project ID: Scottsdale - NPDES STORMWATER
Report Number: PKL0073

Sampled: 12/04/01
Received: 12/04/01
Issued: 12/13/01

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PKL0073-01	Thunderbird	Water
PKL0073-02	Thunderbird	Water

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

HOLDING TIMES: Holding times were met.

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

OBSERVATIONS: No significant observations were made.

SUBCONTRACTED: Analysis was subcontracted to Transwest Geochem - 3725 E. Atlanta Ave., Suite 2, Phoenix, AZ 85040 (AZ0133). Results are attached.

QA/QC CRITERIA: The L3 flag on the orthophosphate indicates that the Laboratory Control Sample recovery was above the method control limits. Analyte not detected, data not impacted.

EXPLANATION OF DATA QUALIFIERS: The N1 flag on the BOD indicates that the seed depletion was not within method recommended limits. The LCS, which is a means of checking dilution water quality and seed effectiveness, was within acceptance limits. The acceptable LCS demonstrates that the data is valid.

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

TOTAL RECOVERABLE METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0073-01 (Thunderbird - Water)								
Cadmium	EPA 200.9	P1L0521	0.00050	ND	1	12/5/01	12/8/01	
Calcium	EPA 200.7	P1L1012	2.0	**11**	1	12/10/01	12/11/01	
Chromium	EPA 200.9	P1L0521	0.0040	**0.010**	1	12/5/01	12/12/01	
Copper	EPA 200.9	P1L0521	0.0040	**0.024**	1	12/5/01	12/11/01	
Lead	EPA 200.9	P1L0521	0.0020	**0.013**	1	12/5/01	12/7/01	
Magnesium	EPA 200.7	P1L1012	0.50	**4.1**	1	12/10/01	12/11/01	
Nickel	EPA 200.9	P1L0521	0.0080	**0.011**	2	12/5/01	12/12/01	
Zinc	EPA 200.7	P1L1012	0.050	**0.11**	1	12/10/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

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Project Manager

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

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

DISSOLVED METALS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0073-02 (Thunderbird - Water)								
Cadmium, Dissolved	EPA 200.9	P1L1009	0.00050	ND	1	12/10/01	12/12/01	
Chromium, Dissolved	EPA 200.9	P1L1009	0.0040	ND	1	12/10/01	12/12/01	
Copper, Dissolved	EPA 200.9	P1L1009	0.0040	**0.019**	1	12/10/01	12/11/01	
Lead, Dissolved	EPA 200.9	P1L1009	0.0020	ND	1	12/10/01	12/12/01	
Nickel, Dissolved	EPA 200.9	P1L1009	0.0040	**0.0040**	1	12/10/01	12/13/01	
Zinc, Dissolved	EPA 200.7	P1L1012	0.050	**0.094**	1	12/10/01	12/11/01	

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

INORGANICS

Analyte	Method	Batch	Reporting Limit mg/l	Sample Result mg/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PKL0073-01 (Thunderbird - Water)								
Ammonia-N	EPA 350.3	P1L1202	0.10	**2.3**	2	12/11/01	12/11/01	
Biochemical Oxygen Demand	EPA 405.1	P1L1108	2.0	**7.9**	1	12/5/01	12/10/01	N1
Chemical Oxygen Demand	EPA 410.4	P1L1308	20	**94**	1	12/12/01	12/13/01	
Hardness (CaCO3)	SM2340B	P1L1012	1.0	**44**	1	12/10/01	12/11/01	
Nitrate/Nitrite-N	EPA 353.2	P1L0617	0.050	**1.1**	1	12/6/01	12/6/01	
Orthophosphate	EPA 300.0	P1L0609	0.50	ND	1	12/5/01	12/5/01	L3
Phosphorus	EPA 365.3	P1L1129	0.050	**0.30**	1	12/11/01	12/11/01	
Total Suspended Solids	EPA 160.2	P1L1004	20	**120**	1	12/7/01	12/7/01	

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

DEL MAR ANALYTICAL, PHOENIX (AZ0426)

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0521 Extracted: 12/05/01										
Blank Analyzed: 12/08/01 (P1L0521-BLK1)										
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							
Blank Analyzed: 12/08/01 (P1L0521-BLK2)										
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							
LCS Analyzed: 12/08/01 (P1L0521-BS1)										
Cadmium	**0.00178**	0.0010	mg/l	0.00200		89	85-115			
Chromium	**0.0391**	0.0080	mg/l	0.0400		98	85-115			
Copper	**0.0399**	0.0080	mg/l	0.0400		100	85-115			
Lead	**0.0413**	0.0040	mg/l	0.0400		103	85-115			
Nickel	**0.0434**	0.0080	mg/l	0.0400		108	85-115			
LCS Dup Analyzed: 12/08/01 (P1L0521-BSD1)										
Cadmium	**0.00183**	0.0010	mg/l	0.00200		91	85-115	3	20	
Chromium	**0.0350**	0.0080	mg/l	0.0400		88	85-115	11	20	
Copper	**0.0408**	0.0080	mg/l	0.0400		102	85-115	2	20	
Lead	**0.0417**	0.0040	mg/l	0.0400		104	85-115	1	20	
Nickel	**0.0405**	0.0080	mg/l	0.0400		101	85-115	7	20	
Matrix Spike Analyzed: 12/08/01 (P1L0521-MS1)					**Source: PKL0060-01**					
Cadmium	**0.00166**	0.0010	mg/l	0.00200	ND	83	70-130			
Chromium	**0.0320**	0.0080	mg/l	0.0400	ND	72	70-130			
Copper	**0.0561**	0.0080	mg/l	0.0400	0.014	105	70-130			
Lead	**0.0452**	0.0040	mg/l	0.0400	0.0044	102	70-130			
Nickel	**0.0480**	0.0080	mg/l	0.0400	ND	104	70-130			

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0521 Extracted: 12/05/01										
Matrix Spike Dup Analyzed: 12/08/01 (P1L0521-MSD1)					**Source: PKL0060-01**					
Cadmium	**0.00165**	0.0010	mg/l	0.00200	ND	82	70-130	0.6	20	
Chromium	**0.0324**	0.0080	mg/l	0.0400	ND	73	70-130	1	20	
Copper	**0.0582**	0.0080	mg/l	0.0400	0.014	110	70-130	4	20	
Lead	**0.0479**	0.0040	mg/l	0.0400	0.0044	109	70-130	6	20	
Nickel	**0.0474**	0.0080	mg/l	0.0400	ND	103	70-130	1	20	
Batch: P1L1012 Extracted: 12/10/01										
Blank Analyzed: 12/11/01 (P1L1012-BLK1)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Zinc	ND	0.050	mg/l							
Blank Analyzed: 12/11/01 (P1L1012-BLK2)										
Calcium	ND	2.0	mg/l							
Magnesium	ND	0.50	mg/l							
Zinc	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1012-BS1)										
Calcium	**11.2**	2.0	mg/l	10.0		112	85-115			
Magnesium	**10.4**	0.50	mg/l	10.0		104	85-115			
Zinc	**1.11**	0.050	mg/l	1.00		111	85-115			
LCS Dup Analyzed: 12/11/01 (P1L1012-BSD1)										
Calcium	**10.9**	2.0	mg/l	10.0		109	85-115	3	20	
Magnesium	**10.5**	0.50	mg/l	10.0		105	85-115	1	20	
Zinc	**1.09**	0.050	mg/l	1.00		109	85-115	2	20	

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

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

METHOD BLANK/QC DATA

TOTAL RECOVERABLE METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1012 Extracted: 12/10/01										
Matrix Spike Analyzed: 12/11/01 (P1L1012-MS1)					**Source: PKL0115-01**					
Calcium	**71.2**	2.0	mg/l	10.0	58	132	70-130			M1
Magnesium	**23.3**	0.50	mg/l	10.0	12	113	70-130			
Zinc	**1.09**	0.050	mg/l	1.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1012-MSD1)					**Source: PKL0115-01**					
Calcium	**69.6**	2.0	mg/l	10.0	58	116	70-130	2	20	
Magnesium	**22.9**	0.50	mg/l	10.0	12	109	70-130	2	20	
Zinc	**1.07**	0.050	mg/l	1.00	ND	104	70-130	2	20	

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Report Number: PKL0073

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

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1009 Extracted: 12/10/01										
Blank Analyzed: 12/12/01 (P1L1009-BLK1)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Copper, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
Blank Analyzed: 12/12/01 (P1L1009-BLK2)										
Cadmium, Dissolved	ND	0.00050	mg/l							
Chromium, Dissolved	ND	0.0040	mg/l							
Copper, Dissolved	ND	0.0040	mg/l							
Lead, Dissolved	ND	0.0020	mg/l							
Nickel, Dissolved	ND	0.0040	mg/l							
LCS Analyzed: 12/12/01 (P1L1009-BS1)										
Cadmium, Dissolved	**0.00190**	0.0010	mg/l	0.00200		95	85-115			
Chromium, Dissolved	**0.0408**	0.0080	mg/l	0.0400		102	85-115			
Copper, Dissolved	**0.0439**	0.0080	mg/l	0.0400		110	85-115			
Lead, Dissolved	**0.0388**	0.0040	mg/l	0.0400		97	85-115			
Nickel, Dissolved	**0.0405**	0.0080	mg/l	0.0400		101	85-115			
LCS Dup Analyzed: 12/12/01 (P1L1009-BSD1)										
Cadmium, Dissolved	**0.00188**	0.0010	mg/l	0.00200		94	85-115	1	20	
Chromium, Dissolved	**0.0410**	0.0080	mg/l	0.0400		102	85-115	0.5	20	
Copper, Dissolved	**0.0444**	0.0080	mg/l	0.0400		111	85-115	1	20	
Lead, Dissolved	**0.0383**	0.0040	mg/l	0.0400		96	85-115	1	20	
Nickel, Dissolved	**0.0425**	0.0080	mg/l	0.0400		106	85-115	5	20	
Matrix Spike Analyzed: 12/12/01 (P1L1009-MS1)					**Source: PKL0115-01**					
Cadmium, Dissolved	**0.00174**	0.0010	mg/l	0.00200	ND	87	70-130			
Chromium, Dissolved	**0.0424**	0.0080	mg/l	0.0400	ND	106	70-130			
Copper, Dissolved	**0.0426**	0.0080	mg/l	0.0400	ND	106	70-130			
Lead, Dissolved	**0.0386**	0.0040	mg/l	0.0400	ND	97	70-130			
Nickel, Dissolved	**0.0395**	0.0080	mg/l	0.0400	ND	99	70-130			

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

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

METHOD BLANK/QC DATA

DISSOLVED METALS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1009 Extracted: 12/10/01										
Matrix Spike Dup Analyzed: 12/12/01 (P1L1009-MSD1)					**Source: PKL0115-01**					
Cadmium, Dissolved	**0.00190**	0.0010	mg/l	0.00200	ND	95	70-130	9	20	
Chromium, Dissolved	**0.0432**	0.0080	mg/l	0.0400	ND	108	70-130	2	20	
Copper, Dissolved	**0.0466**	0.0080	mg/l	0.0400	ND	116	70-130	9	20	
Lead, Dissolved	**0.0392**	0.0040	mg/l	0.0400	ND	98	70-130	2	20	
Nickel, Dissolved	**0.0401**	0.0080	mg/l	0.0400	ND	100	70-130	2	20	
Batch: P1L1012 Extracted: 12/10/01										
Blank Analyzed: 12/11/01 (P1L1012-BLK1)										
Zinc, Dissolved	ND	0.050	mg/l							
Blank Analyzed: 12/11/01 (P1L1012-BLK2)										
Zinc, Dissolved	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1012-BS1)										
Zinc, Dissolved	**1.11**	0.050	mg/l	1.00		111	85-115			
LCS Dup Analyzed: 12/11/01 (P1L1012-BSD1)										
Zinc, Dissolved	**1.09**	0.050	mg/l	1.00		109	85-115	2	20	
Matrix Spike Analyzed: 12/11/01 (P1L1012-MS1)					**Source: PKL0115-01**					
Zinc, Dissolved	**1.09**	0.050	mg/l	1.00	ND	106	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1012-MSD1)					**Source: PKL0115-01**					
Zinc, Dissolved	**1.07**	0.050	mg/l	1.00	ND	104	70-130	2	20	

Linda Eshelman
Project Manager

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

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L0609 Extracted: 12/05/01										
Blank Analyzed: 12/05/01 (P1L0609-BLK1)										
Orthophosphate	ND	0.50	mg/l							
LCS Analyzed: 12/05/01 (P1L0609-BS1)										
Orthophosphate	5.42	0.50	mg/l	5.00		108	90-110			
LCS Dup Analyzed: 12/05/01 (P1L0609-BSD1)										
Orthophosphate	5.57	0.50	mg/l	5.00		111	90-110	3	20	L3
Matrix Spike Analyzed: 12/05/01 (P1L0609-MS1)					Source: PKL0041-01RE1					
Orthophosphate	9.30	5.0	mg/l	5.00	ND	118	80-120			
Matrix Spike Dup Analyzed: 12/05/01 (P1L0609-MSD1)					Source: PKL0041-01RE1					
Orthophosphate	10.6	5.0	mg/l	5.00	ND	144	80-120	13	20	M1
Batch: P1L0617 Extracted: 12/06/01										
Blank Analyzed: 12/06/01 (P1L0617-BLK1)										
Nitrate/Nitrite-N	ND	0.050	mg/l							
LCS Analyzed: 12/06/01 (P1L0617-BS1)										
Nitrate/Nitrite-N	1.02	0.050	mg/l	1.00		102	90-110			
Matrix Spike Analyzed: 12/06/01 (P1L0617-MS1)					Source: PKL0043-01					
Nitrate/Nitrite-N	2.82	0.10	mg/l	2.00	0.77	102	80-125			
Matrix Spike Dup Analyzed: 12/06/01 (P1L0617-MSD1)					Source: PKL0043-01					
Nitrate/Nitrite-N	2.84	0.10	mg/l	2.00	0.77	104	80-125	0.7	20	

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Project Manager

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

Client Project ID: Scottsdale - NPDES STORMWATER
Report Number: PKL0073

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1004 Extracted: 12/07/01										
Blank Analyzed: 12/07/01 (P1L1004-BLK1)										
Total Suspended Solids	ND	10	mg/l							
Duplicate Analyzed: 12/07/01 (P1L1004-DUP1)					**Source: PKL0028-01**					
Total Suspended Solids	ND	1000	mg/l		ND				5	
Duplicate Analyzed: 12/07/01 (P1L1004-DUP2)					**Source: PKL0079-01**					
Total Suspended Solids	ND	10	mg/l		ND				5	
Reference Analyzed: 12/07/01 (P1L1004-SRM1)										
Total Suspended Solids	**60.0**	10	mg/l	62.2		96	85-107			
Batch: P1L1108 Extracted: 12/05/01										
Blank Analyzed: 12/10/01 (P1L1108-BLK1)										
Biochemical Oxygen Demand	ND	2.0	mg/l							K5
LCS Analyzed: 12/10/01 (P1L1108-BS1)										
Biochemical Oxygen Demand	**192**	2.0	mg/l	198		97	85-115			
LCS Dup Analyzed: 12/10/01 (P1L1108-BSD1)										
Biochemical Oxygen Demand	**177**	2.0	mg/l	198		89	85-115	8	20	
Duplicate Analyzed: 12/10/01 (P1L1108-DUP1)					**Source: PKL0073-01**					
Biochemical Oxygen Demand	**8.34**	2.0	mg/l		7.9			5	20	
Batch: P1L1129 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1129-BLK1)										
Phosphorus	ND	0.050	mg/l							

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Report Number: PKL0073

Sampled: 12/04/01
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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: P1L1129 Extracted: 12/11/01										
LCS Analyzed: 12/11/01 (P1L1129-BS1)										
Phosphorus	0.512	0.050	mg/l	0.500		102	80-120			
LCS Dup Analyzed: 12/11/01 (P1L1129-BSD1)										
Phosphorus	0.557	0.050	mg/l	0.500		111	80-120	8	20	
Matrix Spike Analyzed: 12/11/01 (P1L1129-MS1)					Source: PKL0115-01					
Phosphorus	0.605	0.050	mg/l	0.500	ND	119	75-125			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1129-MSD1)					Source: PKL0115-01					
Phosphorus	0.599	0.050	mg/l	0.500	ND	118	75-125	1	15	
Batch: P1L1202 Extracted: 12/11/01										
Blank Analyzed: 12/11/01 (P1L1202-BLK1)										
Ammonia-N	ND	0.050	mg/l							
LCS Analyzed: 12/11/01 (P1L1202-BS1)										
Ammonia-N	0.470	0.050	mg/l	0.500		94	85-115			
Matrix Spike Analyzed: 12/11/01 (P1L1202-MS1)					Source: PKL0121-01					
Ammonia-N	0.515	0.050	mg/l	0.500	ND	95	70-130			
Matrix Spike Dup Analyzed: 12/11/01 (P1L1202-MSD1)					Source: PKL0121-01					
Ammonia-N	0.532	0.050	mg/l	0.500	ND	98	70-130	3	20	
Batch: P1L1308 Extracted: 12/12/01										
Blank Analyzed: 12/13/01 (P1L1308-BLK1)										
Chemical Oxygen Demand	ND	20	mg/l							

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Attention: Todd Williams

Client Project ID: Scottsdale - NPDES STORMWATER

Report Number: PKL0073

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

METHOD BLANK/QC DATA

INORGANICS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: P1L1308 Extracted: 12/12/01										
LCS Analyzed: 12/13/01 (P1L1308-BS1)										
Chemical Oxygen Demand	202	20	mg/l	200		101	90-110			
LCS Dup Analyzed: 12/13/01 (P1L1308-BSD1)										
Chemical Oxygen Demand	199	20	mg/l	200		100	90-110	1	20	
Matrix Spike Analyzed: 12/13/01 (P1L1308-MS1)					**Source: PKL0089-01**					
Chemical Oxygen Demand	237	20	mg/l	200	35	101	65-130			
Matrix Spike Dup Analyzed: 12/13/01 (P1L1308-MSD1)					**Source: PKL0089-01**					
Chemical Oxygen Demand	244	20	mg/l	200	35	104	65-130	3	20	

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Maricopa County -Flood Control District 2801 West Durango Street Phoenix, AZ 85009 Attention: Todd Williams	Client Project ID: Scottsdale - NPDES STORMWATER Report Number: PKL0073	Sampled: 12/04/01 Received: 12/04/01

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

K5	The dilution water D.O. depletion was > 0.2 mg/L.
L3	The associated blank spike recovery was above method acceptance limits. See case narrative.
M1	Matrix spike recovery was high, the method control sample recovery was acceptable.
N1	The seed depletion was not within method recommended limits. The LCS, which is a means of checking dilution water quality and seed effectiveness, was within acceptance limits. The acceptable LCS demonstrates that the data is valid.
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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TRANSWEST GEOCHEM

December 19, 2001

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

RE: PKL0073-MCFC
Work Order No.: 0112040

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

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

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

Sincerely,

Michael Barber for:

Beth Proffitt
Project Manager

ADHS License No. AZM133/AZ0133

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

Date Printed: 19-Dec-01

Client: Del Mar Analytical
Work Order: 0112040
Project Name:
Project Number: PKL0073-MCFC

CASE NARRATIVE

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

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

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

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

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

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

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

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

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

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

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

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

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

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TRANSWEST GEOCHEM

Date Printed 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0073-MCFC
Work Order: 0112040
Date Received: 05-Dec-01

Work Order Sample Summary

Client Sample ID	Lab Sample ID	Test Code	Collection Date
PKL0073-01	0112040-01A	EPA351.2	12/4/2001 2:55:00 PM

Date Printed 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Project Name:
Project Number: PKL0073-MCFC
Work Order: 0112040
Date Received: 05-Dec-01

Definitions

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

TRANSWEST GEOCHEM

Date Printed 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112040
Lab ID: 0112040-01
Project Name:
Project Number: PKL0073-MCFC

Client Sample ID: PKL0073-01
Collection Date: 12/4/2001 2:55:00 PM
Matrix: WATER

Analyte	Result	PQL	Qual	Units	DF	Test Code	Date Prepared	Date Analyzed	Analyst	Batch ID
Nitrogen, Kjeldahl, Total	3.1	0.50		mg/L	1	EPA351.2	N/A	12/10/01	TL	TKN_W-12/10/2001A

Confidential and Privileged

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112040
Project: PKL0073-MCFC

QC SUMMARY REPORT

Method Blank

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

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112040
Project: PKL0073-MCFC

QC SUMMARY REPORT

Sample Duplicate

Analyte	Result	PQL	Units	RPD Ref Val	% RPD	RPD Limit	Test Code	Date Prepared	Date Analyzed	Analyst	Qual
Sample ID: **0112032-01AD** Batch ID: TKN_W-12/10/2001A											
Client ID:											
Nitrogen, Kjeldahl, Total	1.5	0.50	mg/L	1.557	1%	20	EPA351.2	N/A	12/10/01	TL	

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112040
Project: PKL0073-MCFC

QC SUMMARY REPORT

Sample Matrix Spike

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: **0112032-01AS**	Batch ID: TKN_W-12/10/2001A			Test Code: EPA351.2				Date Analyzed: 12/10/01			
Client ID:				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	3.620	0.50	2.500	1.121	100%	90	110				

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112040
Project: PKL0073-MCFC

QC SUMMARY REPORT

Blank Spike (primary source)

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: LCS	Batch ID: TKN_W-12/10/2001A			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.393	0.50	2.500	<0.50	96%	90	110				

Date: 19-Dec-01

License No. AZM133/AZ0133

CLIENT: Del Mar Analytical
Work Order: 0112040
Project: PKL0073-MCFC

QC SUMMARY REPORT

Secondary Source Blank Spike

Analyte	Result	PQL	SPK value	SPK Ref Val	% Rec	Low Limit	High Limit	RPD Ref Val	% RPD	RPD Limit	Qual
Sample ID: LCSV	Batch ID: TKN_W-12/10/2001A			Test Code: EPA351.2				Date Analyzed: 12/10/01			
				Units: mg/L				Date Prepared: N/A			
Nitrogen, Kjeldahl, Total	2.506	0.50	2.500	<0.50	100%	90	110				

Chain of Custody Forms

Del Mar Analytical
2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
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

Scottsdale Grab

CHAIN OF CUSTODY FORM

Quote #: _____ Page 1 of 1

Client Name/Address: FLOOD CONTROL DISTRICT OF MARICOPA COUNTY 2801 W DURANGO PHOENIX AZ 85009

Project/PO Number: SCOTTSDALE NPDES STORMWATER

Project Manager: JULIE COX

Phone Number: 602 506 8401

Sampler: Tom Siegfried

Fax Number: 602 506 4601

Analysis Required: (1) FECAL COLIFORM (2) FECAL STREPTOCOCCUS (3) OIL & GREASE

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	(1) FECAL COLIFORM	(2) FECAL STREPTOCOCCUS	(3) OIL & GREASE									Special Instructions
MCKELLIPS RD	S	HDPE	4	0800	Y	X	X	X				PKL0031-01					
PIERCE ST	S	HDPE	4	0745	Y	X	X	X								-02	
79TH ST & E COOLIDGE	S	HDPE	4		Y												
HAYDEN & CAMELBACK	S	HDPE	4	0700	Y	X	X	X								-03	
SCOTTSDALE & THUNDERBIRD RD	S	HDPE	4		Y												

Relinquished By:	Date /Time:	Received by:	Date /Time:
Tom Siegfried	12-4-01 10:38		
Relinquished By:	Date /Time:	Received by:	Date /Time: 12/04/01
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time: 12/04/01 10 38

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

Sample Integrity: (Check)
intact _____ on ice ✓ 6°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.

Please note temp

COC-GB

Scottsdale Composite

Del Mar Analytical

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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 1 of 1

Client Name/Address: Flood Control District, 2901 W. Durango St., Phx Az 95009

Project/PO Number: Scottsdale NPDES Stormwater

Project Manager: Todd Williams

Phone Number: 602-506-9113

Sampler: Tom Siegfried

Fax Number: 602-506-4601

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Hardness TSS TDS	BOD COD	Total P, or Phosphate	TKN, NH_3	$(NO_2+NO_3)-N$	Cd - Total + Dissolved	Cr - Total + Dissolved	Cu - Total + Dissolved	Pb - Total + Dissolved	Ni - Total + Dissolved	Zn - Total + Dissolved	Special Instructions
Pierce	S	Misc	3	12-4-01 1245	No									PKL0043-01/02			
Camelback	S	Misc	3	12-4-01 1215	NO												-03/04
McKellips	S	Mis	2	12-4-01 1400	NO												-05/06
																	~~07/08~~
																	CW

Relinquished By: [signature] Date/Time: 12-4-01 2:45

Received by: Date/Time:

Relinquished By: Date/Time:

Received by: Date/Time: 12/04/01

Relinquished By: Date/Time:

Received in Lab by: [signature] Date/Time: 12/04/01 1445

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

Sample Integrity: (Check)
intact ____ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is [redacted] within 30 [redacted] from [redacted] date of [redacted]. Sam[redacted] will b[redacted]posed o[redacted] 30 da[redacted] [redacted] PC-G[redacted]

Del Mar Analytical

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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

SENDING LABORATORY:
Del Mar Analytical - Phoenix
9830 South 51st Street, Suite B-120
Phoenix, AZ 85044
Phone: (480) 785-0043
Fax: (480) 785-0851
Project Manager: Linda Eshelman
Project: PKL0031 – MCFC

RECEIVING LABORATORY:
ES Envirnmental Services/Severn
3333 S. Old Price Rd
Chandler, AZ 85248
Phone: 480-899-0191
Fax: 480-899-0349

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☒ Y ☐ N — KZ Initials
on ice: ☒ Y ☐ N — KZ Initials
Temp: °C ☒ Y ☐ N — KZ Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0031-01	Water	12/04/01 08:00	Fecal Coliform-O	Standard TAT	12/04/01 12:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
Special Instructions: Severn Trent			3575				
PKL0031-01	Water	12/04/01 08:00	Fecal Strep-O	Standard TAT	12/04/01 12:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
Special Instructions: Severn Trent							
PKL0031-02	Water	12/04/01 07:45	Fecal Coliform-O	Standard TAT	12/04/01 12:33	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
Special Instructions: Severn Trent			3576				
PKL0031-02	Water	12/04/01 07:45	Fecal Strep-O	Standard TAT	12/04/01 12:33	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
Special Instructions: Severn Trent							
PKL0031-03	Water	12/04/01 07:00	Fecal Coliform-O	Standard TAT	12/04/01 11:48	1	☐ Voa ☐ Amber Voa ☐ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☑ Other
Special Instructions: Severn Trent			3577 → received @ Lold time				

Del Mar Analytical

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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

PKL0031-03 Water 12/04/01 07:00 Fecal Strep-O

Standard TAT 12/04/01 11:48 1

- [ ] Voa
- [ ] Amber Voa
- [ ] Poly
- [ ] Glass Jar
- [ ] Amber
- [ ] Brass Sleeve
- [x] Other

Special Instructions:
Severn Trent

Relinquished By	Date/Time:	Received By:	Date/Time:
[signature]	12/4/01 1250	[signature]	12/4/01 12:50 ~~1300~~
[signature]	12/4/01 1300	[signature]	120401 13:00

Del Mar Analytical

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9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

0112031

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: PKL0043 – mcfc

RECEIVING LABORATORY:
Transwest Geochem (out)
3725 E. Atlanta Ave Ste 1
Phoenix, AZ 85040-2961
Phone: 602-437-0330
Fax: 602-470-0660

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☑ Y ☐ N SM Initials
wet on ice: ☑ Y ☐ N SM Initials
Temp: °C ☑ Y ☐ N SM Initials
4.6

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0043-01	Water	12/04/01 12:45	TKN-C	Standard TAT	01/01/02 12:45	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: subcontract to Transwest							
PKL0043-03	Water	12/04/01 12:15	TKN-C	Standard TAT	01/01/02 12:15	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: subcontract to Transwest							
PKL0043-05	Water	12/04/01 14:00	TKN-C	Standard TAT	01/01/02 14:00	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other
Special Instructions: subcontract to Transwest							

Relinquished By	Date/Time:	Received By:	Date/Time:
C. [illegible]	12/5/01 1130	Bill Wathell	12/5/01 1130

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92626 Ph (949) 261-1022 Fax (949) 261-1228
1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

0112040

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: PKL0073 - MCFC

RECEIVING LABORATORY:
Transwest Geochem (out)
3725 E. Atlanta Ave Ste 1
Phoenix, AZ 85040-2961
Phone: 602-437-0330
Fax: 602-470-0660

SAMPLE INTEGRITY:
Please complete upon receipt
intact: ☑ Y ☐ N — SH Initials
cooler on ice: ☑ Y ☐ N — SH Initials
Temp: °C ☑ Y ☐ N — SH Initials
4.6

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PKL0073-01	Water	12/04/01 14:55	TKN-C	Standard TAT	01/01/02 14:55	1	☐ Voa ☐ Amber Voa ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sleeve ☐ Other

Special Instructions:
subcontract to Transwest

Relinquished By — Date/Time: 12/5/01 1130
Received By: Billy Westbrook — Date/Time: 12/5/01 1130

Relinquished By — Date/Time:
Received By: — Date/Time:

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

Scottsdale Composite

CHAIN OF CUSTODY FORM

Quote #: _____ Page 1 of 1

Client Name/Address: Flood Control, 2801 W. Durango St., Phoenix, AZ 85009

Project/PO Number: Scottsdale NPDES Stormwater

Project Manager: Todd Williams

Phone Number: 602-506-4113

Sampler: Sutton / Wood

Fax Number: 602-506-4601

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Hardness TSS, TDS	BOD, COD Total P, orthophosphate	TKN, NH_3	(NO_2+NO_3)-N	Cd - Total + Dissolved	Cr - Total + Dissolved	Cu - Total + Dissolved	Pb - Total + Dissolved	Ni - Total + Dissolved	Zn - Total + Dissolved		Special Instructions
Thunderbird	S	Misc	2	1455 12-4-01	No									PKL007			Clean Jars when Complete 3-01/02

Relinquished By: James Sutton Date/Time: 12-4-01 1535

Received by: Date/Time:

Relinquished By: Date/Time:

Received by: Date/Time: 12/4/01

Relinquished By: Date/Time: 12/4/01

Received in Lab by: Date/Time: 12/4/01 1535

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

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

COC-GB

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

Scottsdale Grab

CHAIN OF CUSTODY FORM

Quote #: _____ Page 1 of 1

Client Name/Address: FCD 2801 W. Durango St. Phoenix, AZ 85009

Project/PO Number: NPDES Scottsdale Stormwater

Project Manager: Todd Williams

Phone Number: 602 506-4113

Sampler:

Fax Number: 602 506-4601

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date/Time	Preservatives	Oil & Grease	Fecal Strep	Fecal Coliform									Special Instructions
McKellips	S	HDPE	4	12-11-01 1405	Y	X	X	X	-C01-3637			PKC0194-01					
Pierce				12-11-01 1420	Y	X	X	X	-C01-3638					-02			

Relinquished By:	Date /Time:	Received by:	Date /Time:
James Sutton	12-11-01 1640	[illegible]	12-11-01 1640
[illegible]	121201 0808	[illegible]	12/12/01 0808
[illegible]	12/12/01 0835	[illegible]	12/12/01 0835

Received in Lab by: [illegible]

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

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

COC-08

Operation and maintenance and storm event log sheets

M^c^kellips

FCD/USGS STORMWATER O&M LOG SHEET

SITE	McKellips #1			DATE	July, 12, 01
ARRIVAL TIME	0730	DEPARTURE TIME	0745	SERVICED BY	Ken
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Dust Floor of Sampler with Diatomaceous earth, for pest
2 control.
3

FCD/USGS STORMWATER O&M LOG SHEET

SITE	McKellips # 1			DATE	7/23/01
ARRIVAL TIME	0820	DEPARTURE TIME	0840	SERVICED BY	[illegible]
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	Check Solar Switch, Setup, cell Phone
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Inspect work, put in Station maintenance book, Put in
2 bottles leave Sampler on hold.
3

Date: 3/10/00

STORM EVENT LOG SHEET

1. Site: McKellips / IBW Your Name: Sutton

2. Date: 7-30-01 Time: 2:25A

SAMPLER PARAMETERS

3. Rainfall: 1.54 **in**

4. Flow: Ø **cfs**

5. Level: .094 **in**

6. Velocity: 1.10 **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

Base Full, Jars Empty, No Grabs

8. Battery voltage: 12.5 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	McKellips
Date	8/1/01
Time	0720
Serviced By:	Rum Tlg

Battery at 11.8 Low Stop back 1040 12.2

✓ Data Downloaded to DTU?

Cell #1 Dist arm test Failed correct wire setup — 1 Run 2nd test, passed.

1. Halt program site id 7 - file 08010645.000 - renamed on s drive
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Disconnect Cell Phone, let battery recharge

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

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

STORMWATER O&M LOG SHEET

SITE	McKellips			DATE	08/06/01
ARRIVAL TIME	0830	DEPARTURE TIME	0840	SERVICED BY	Rich
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Check site, Battery leave cell phone connected, push power switch

2 on, need to check

3

Date: 8/11/00

STORM EVENT LOG SHEET

#1

1. Site: McKellips Park Your Name: Siegfried, Michaels

2. Date: 8-9-01 Time: 0255

SAMPLER PARAMETERS

3. Rainfall: .31 in

4. Flow: .28 cfs

5. Level: 1.392 in

6. Velocity: 2.96 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Batter low voltage

8. Battery voltage: 10.6 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs .28 **cfs**

11. pH 5 **su**

12. Temperature 24° **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	McKellips
Date	8-9-01
Time	7:45
Serviced By:	Sutton, Siegfried, Naud III

YES	Data Downloaded to DTU?

Cell #1 Scottsdale #1 DTU
- file 08081948.000

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

No	Pump approximately 1/2 gallon tap water through tubing.
No	Pump approximately 1/2 gallon of Liquinox through tubing.
No	Pump a large quantity of tap water through tubing.
No	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
No	Pump approximately 1/2 - 1 gallon deionized water through tubing.

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

Sampler didn't Sample, No decon performed, Data Copied, Fusable link Connection need to be examined for poor contact, Disconnected Phone, Halt Program

STORMWATER O&M LOG SHEET

SITE	McKellips Rd			DATE	8/9/01
ARRIVAL TIME	0855	DEPARTURE TIME	0910	SERVICED BY	RCW
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	Change distributor arm tube.
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Perform distributor arm test, 1st failed, change Hose 2nd Passed

2

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	McKellips			DATE	8/12/01
ARRIVAL TIME	240	DEPARTURE TIME	245	SERVICED BY	[illegible]
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Start sampler program, check battery, left running

2

3

STORMWATER O&M LOG SHEET

SITE	Mckellips			DATE	8/13/01
ARRIVAL TIME	345	DEPARTURE TIME	400	SERVICED BY	Rem
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Change communications Set up #'s & Pager & Modem

2

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	McKellips			DATE	8/16/01
ARRIVAL TIME	9:50	DEPARTURE TIME	10:00	SERVICED BY	[illegible]
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	Voltage check 12.9 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Review program, restart program.

2

3

EQUIPMENT CLEANING CHECKLIST

Site	McKellips 12.6volts .19" Total Rain		
Date	8-17-01	Time	1420
Serviced By:			

Yes — Data Downloaded to DTU?

Cell #3 Scottsdale #1 DTU, No Composites, Halted program, Left phone Connected

1. Halt program file 08171416.000
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

NO	Pump approximately 1/2 gallon tap water through tubing.
No	Pump approximately 1/2 gallon of Liquinox through tubing.
No	Pump a large quantity of tap water through tubing.
NO	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
No	Pump approximately 1/2 - 1 gallon deionized water through tubing.

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

STORMWATER O&M LOG SHEET

SITE	McKellins			DATE	08/20/01
ARRIVAL TIME	945	DEPARTURE TIME	1000	SERVICED BY	[illegible]
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	13.0 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Restart program, 0:19. 72 hours over

2 Reprogram sampler to Modem & Pager.

3

Date: 8/11/00

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips			DATE	09/03/01
ARRIVAL TIME	0950	DEPARTURE TIME	1000	SERVICED BY	Aero
SAMPLER	SIGMA	900		STATION CONDITION:	cool
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, Rain Recorded on sampler 0.80 will return 09/04/01 and copy data. Did not receive any alarms. 1 Bottle ½ full, Halt sampler for decon.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips			DATE	09/04/01
ARRIVAL TIME	0930	DEPARTURE TIME	0940	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N DTU II # 1

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

NOTES / ACTIONS Copy data to DTU Cell # 1
- file 09040905.000

EQUIPMENT CLEANING CHECKLIST

Site	McKellips
Date	9-6-01
Time	A 0755 / D 0810
Serviced By:	JB Pen

Copied 9/6/01 Restart program 9/6/01

No	Data Downloaded to DTU?

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

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips			DATE	9/10/01
ARRIVAL TIME	0745	DEPARTURE TIME	0800	SERVICED BY	(Rem)
SAMPLER	(SIGMA)	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Perform cell phone test. Use hand set and dial out to confirm cell phone is operational. Phones have not worked during storms, samplers have operated and samplers have sampled.
Cell phone worked, call Todd, left message.
Left switch on o/side, check battery power tomorrow.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips			DATE	9/12/01
ARRIVAL TIME	0850	DEPARTURE TIME	0900	SERVICED BY	Pen
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	14.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Put cell phone back on ½ hr checks. Cancel, Put hand set in on position, Battery dropping. Leave in this position will recheck at a later time.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Rd			DATE	09/13/01
ARRIVAL TIME	0725	DEPARTURE TIME	0730	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Cell phone on, Battery okay.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Mckellips Rd			DATE	9/19/01
ARRIVAL TIME	0845	DEPARTURE TIME	0855	SERVICED BY	Neep
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED Y / N Cell #1

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Cell phone on. Rain recorded on Sampler 0.25
no alarms or calls made or received. Data copied.
No Samples taken. Check date and time
file # 09190848.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Rd			DATE	9/20/01
ARRIVAL TIME	0720	DEPARTURE TIME	0740	SERVICED BY	Pew
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, Rain 0.10. Review program. Area wet from sprinkler system. Copy data, restart program 0734. Check Pierce ST sampler, program same. No rain recorded. Either sprinkler adjusted or pressure? Need Scottsdale to adjust. File # 09200729.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellyn Road			DATE	09/25/01
ARRIVAL TIME	0705	DEPARTURE TIME	0715	SERVICED BY	Pun
SAMPLER	SIGMA	900		STATION CONDITION:	Good / Wet
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS ReStart program 07:12 AM 9/25/01

Station recorded 0.19 rain, water is from ground sprinklers.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellins Road			DATE	9/27/01
ARRIVAL TIME	0845	DEPARTURE TIME	0850	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION	Good,
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED/ SERVICED/ CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Sampler recorded 0.30 inches of Rain. Ground wet Need to contact Scottsdale Parks and check sprinkler system. Cell phone on. Restart program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips			DATE	Oct 1st, 01
ARRIVAL TIME	0747	DEPARTURE TIME	0755	SERVICED BY	(Pun) (SKB)
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	Good

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y / (N)

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

NOTES / ACTIONS Check Station, 0.02 Rain recorded. Review program

Reset to Winter hours, 16 hours.

ReStart Program 0750 Oct 4, 01

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	10/3/01
ARRIVAL TIME	0810	DEPARTURE TIME	0820	SERVICED BY	Ruiz
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Cell phone on, No problem with Sprinklers Sinec restarting program Oct 1, 01. checking Battery Voltage 3 days of clouds 20% chance of rain today

STORM EVENT LOG SHEET

1. Site: MC Kellips + IBW Your Name: Lifford Arnold

2. Date: 10-6-01 Time: 22:38

SAMPLER PARAMETERS

3. Rainfall: ~~[illegible]~~ -04 in

4. Flow: Q cfs

5. Level: Q in

6. Velocity: Q ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

8. Battery voltage: 12-9 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	10/09/01
ARRIVAL TIME	1021	DEPARTURE TIME	1032	SERVICED BY	Ren
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED Y / N Cell #5

	CHECKED/ SERVICED/ CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station Rainfall 0.04. Copy data, Talk with people about gauge and lake. Restart program at 1029, 10/09/01 Cell phone on.
file # 10091025.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	10/15/01
ARRIVAL TIME	0800	DEPARTURE TIME	0815	SERVICED BY	Ren
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK (Y) / N

STATION DATA COPIED: Y (N)

	CHECKED SERVICED CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, 0.00 rain cell phone and radio "on" Check drain, clear. Water from lake in drain, but outside of drain outlet.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Rd			DATE	10/18/01
ARRIVAL TIME	0905	DEPARTURE TIME	0915	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Perform cellphone test. Confirm phone working.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Rd			DATE	10/23/01
ARRIVAL TIME	0805	DEPARTURE TIME	0815	SERVICED BY	Pam
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS check and inspect site. Everything okay
cell phone on, no problems found. Signal on, good

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Mckellips Park			DATE	10/30/07
ARRIVAL TIME	0755	DEPARTURE TIME	0805	SERVICED BY	(Rey)
SAMPLER	SIGMA	900		STATION CONDITION	Good.
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, time on Sampler, Okay. Cell phone and radio on. Drain clear.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Mckellips Rd			DATE	11/05/01
ARRIVAL TIME	0755	DEPARTURE TIME	0805	SERVICED BY	Glen (GLP)
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	(YES) NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, Rainfall 0.03. Station still active
Cell phone and radio on.

STORM EVENT LOG SHEET

1. Site: McKellips & Hayden Your Name: Siegfried - Michaels

2. Date: 11-5-01 Time: 19:00

SAMPLER PARAMETERS

3. Rainfall: .23 **in**

4. Flow: .03 **cfs**

5. Level: .766 **in**

6. Velocity: 1.21 **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
2 + 1/2 Bottles Iced

8. Battery voltage: 12.7 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

file 11060844.000

EQUIPMENT CLEANING CHECKLIST

Site	McKellips Rd
Date	11/06/01
Time	0840
Serviced By:	Ken

Rain 0.23 No Grabs taken

Y	Cell #1	Data Downloaded to DTU?

Shutdown 72hrs turn off cell phone and radio, sampler

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

cleaning to be done at a later date, remove bottles for cleaning

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	mckellips Rd			DATE	11/07/01
ARRIVAL TIME	0700	DEPARTURE TIME	7:30	SERVICED BY	Ram
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS meet with city of Scottsdale, use bucket truck to service Rain gauge and clean Solar panels. meeting set at 07:30, arrive early to check program. Everything worked during Storm.: Drive to thunderbird Site to start rain gauge. Return at 0945, leave 1000

EQUIPMENT CLEANING CHECKLIST

Site	Mckellips Road
Date	11/08/01
Time	0740 Start 0748
Serviced By:	[illegible] (SLS)

Re Start Station, 72 hours between Storms Ends

No done	Data Downloaded to DTU?

check to make sure bottles are lined correctly.

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Turn Phone and radio back on.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Mckellips Park			DATE	11/13/01
ARRIVAL TIME	0825	DEPARTURE TIME	0830	SERVICED BY	Ruen
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check battery, phone and radio. Ready

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Park			DATE	11/19/01
ARRIVAL TIME	0900	DEPARTURE TIME	0905	SERVICED BY	Rum
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Sampler, cell phone and radio on
Check time and date on sampler, correct

11/14/01
Rain Gauge Maintenance
field test by Bob
verify why no field sheet?
File# 1140945-000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Park			DATE	11/28/01
ARRIVAL TIME	1130	DEPARTURE TIME	1138	SERVICED BY	(Rich)
SAMPLER	SIGMA	900		STATION CONDITION:	good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Battery, cellphone and radio on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	12/03/01
ARRIVAL TIME	0825	DEPARTURE TIME	0833	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cell phone and radio ON

STORM EVENT LOG SHEET

1. Site: McKellips + Park Your Name: T. Siegfried

2. Date: 12-4-01 Time: 0815

1200 1 1/4 Bottles Full
1300 1 3/4 Bottles Full

SAMPLER PARAMETERS

3. Rainfall: .25 in

4. Flow: .24 cfs

5. Level: 2.665 in

6. Velocity: 1.08 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
1/2 Bottle Filled
Left Program Running
Iced Composite

8. Battery voltage: 12.6 volts

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs .24 cfs

11. pH 6 su

12. Temperature 11° deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

EQUIPMENT CLEANING CHECKLIST

file # 12050905.000

Site	McKellips Park
Date	12/05/01
Time	0910
Serviced By:	(Mw) (SHS)

- [x] Data Downloaded to DTU?

cell #6

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Replace bottles, clean base & unit. cellphone & radio off for battery recharge

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	12/06/01
ARRIVAL TIME	1009	DEPARTURE TIME	1011	SERVICED BY	(Rew)
SAMPLER	(SIGMA)	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK (Y / N)

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Site, Turn radios cell phone on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	12/10/01
ARRIVAL TIME	1230	DEPARTURE TIME	1234	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

	CHECKED/ SERVICED/ CALIBRATED	CONDITION?	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES/ACTIONS Stop + restart program. cell + radio ON.

STORM EVENT LOG SHEET

1. Site: McKellips Your Name: Sutton / NAD III

2. Date: 12-11-01 Time: 1405

SAMPLER PARAMETERS

3. Rainfall: .16 in

4. Flow: 1.02 cfs

5. Level: 2.93 in

6. Velocity: .32 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
1/3 composit @ 1405

8. Battery voltage: 12.4 volts

9. Power On or Off? If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs .32 cfs

11. pH 6 su

12. Temperature 11 deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

STORM EVENT LOG SHEET

1. Site: McKellips Your Name: Sutton/Naud III

2. Date: 12-1-01 Time: 1730

SAMPLER PARAMETERS

3. Rainfall: .26 in

4. Flow: .01 cfs

5. Level: 1.062 in

6. Velocity: .08 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
1.5 Composites @ 1730

8. Battery voltage: _____ **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

2 bids needed

EQUIPMENT CLEANING CHECKLIST

file # 12120811.000

Site	McKellips Road
Date	12/12/01
Time	Data copied (RW) 0815 / Decon 0838 SHS/BNW
Serviced By:	[illegible]

Restart Program

Yes (except 11)	Data Downloaded to DTU?

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Replace bottles,

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Rd			DATE	12/13/01
ARRIVAL TIME	0830	DEPARTURE TIME	0832	SERVICED BY	RWM
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check rainfall, 0.01 Station active.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellins Road			DATE	12/17/01
ARRIVAL TIME	0858	DEPARTURE TIME	0902	SERVICED BY	Mem
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES/ACTIONS Check Station, Shut off cell phone and radio

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	12/20/01
ARRIVAL TIME	0820	DEPARTURE TIME	0825	SERVICED BY	MW
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, turn cell phone and radio on, Re Start program.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	12/24/01
ARRIVAL TIME	0737	DEPARTURE TIME	0742	SERVICED BY	Ron
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, cell phone & radio on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Mckellips Road			DATE	01/07/02
ARRIVAL TIME	0810	DEPARTURE TIME	0815	SERVICED BY	Ram
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Stationary cell phone and radio "on"

STORM EVENT LOG SHEET

1. Site: McKellips Park Your Name: Siegfried-Michaels

2. Date: 3-8-02 Time: 0100

SAMPLER PARAMETERS

3. Rainfall: .13 in

4. Flow: .07 cfs

5. Level: 1.010 in

6. Velocity: 1.23 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
Partial Bottle 20% full sampler
Left in running mode

8. Battery voltage: 12.8 volts

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ cfs

11. pH _____ su

12. Temperature _____ deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	03-18-02
ARRIVAL TIME	0935	DEPARTURE TIME	0940	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS cell phone & radio on, date and time correct

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	McKellips Road			DATE	March 25, 02
ARRIVAL TIME	0758	DEPARTURE TIME	0805	SERVICED BY	Glen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Drain clear, cell phone & radio "ON"

Date and time correct.

Pierce

FCD/USGS STORMWATER O&M LOG SHEET

SITE	Pierce # 2			DATE	July 12, 01
ARRIVAL TIME	0750	DEPARTURE TIME	0800	SERVICED BY	RLW
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Dust Floor with Diatomaceous earth for pest control

2

3

FCD/USGS STORMWATER O&M LOG SHEET

SITE	Pierce #2			DATE	7/23/01
ARRIVAL TIME	0850	DEPARTURE TIME	0900	SERVICED BY	Pen
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 (900) other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	check, switches, set up
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Put maintenance book at site, install bottles, connect

2 sampler head, left on half

3

STORM EVENT LOG SHEET

1. Site: Pierce / JBW Your Name: Sutton

2. Date: 7-30-01 Time: 2:35A

SAMPLER PARAMETERS

3. Rainfall: 1.12 **in**

4. Flow: Ø **cfs**

5. Level: 1.149 **in**

6. Velocity: Ø **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

3 full Composites, No Grabs

8. Battery voltage: 12.5 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Disconnect cell phone, see if Battery recharging

Site	Pierce		
Date	8/1/01	Time	0755
Serviced By:	Rum SHB		

Battery 10.8 Sampler shut down itself

✓	Data Downloaded to DTU?

Cell #2 Battery needs to be removed charged.

1. Halt program ? Solar panel maybe not enough to keep station operational
2. Connect extension tubing to the distributor tubing on the underside of the sampler. - file 08010745.000
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge. Stop back at 10:35
5. Follow the steps below and check each as it is done. Battery read 11.7

Battery too low Reset Dist arm wire connection

No	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

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

STORMWATER O&M LOG SHEET

SITE	Pierce Rd			DATE	08/06/01
ARRIVAL TIME	0845	DEPARTURE TIME	0855	SERVICED BY	[illegible]
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	11.9 ? volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 check site, Battery, leave cell phone on.

2

3

Date: 8/11/00

STORM EVENT LOG SHEET

#2

1. Site: Pierce at Hayden Your Name: Siegfried & McMahon

2. Date: 8-9-01 Time: 0345

SAMPLER PARAMETERS

3. Rainfall: ~47 in

4. Flow: 0 cfs

5. Level: 1-045 in

6. Velocity: 0 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Sampler filled tub full of water
Distribution arm not working correctly

8. Battery voltage: 11-8 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Pierce		
Date	8-9-01	Time	8:10A
Serviced By:	Sutton, Siegfried, Naud III		

YES	Data Downloaded to DTU?

Cell #2 Scottsdale #1 DTU

1. Halt program - file # 08090809,000
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

Composite filled base not jars, disconnected phone, Halt Program

STORMWATER O&M LOG SHEET

SITE	Pierce			DATE	8/9/01
ARRIVAL TIME	0915	DEPARTURE TIME	925	SERVICED BY	Rem
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	Change Dist Hose
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Run distributor arm test 1st. Failed, tube adjusted Passed. Put in
2 new tube, Passed. Believe tube bowed down as arm moved
3 creating Error.

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Pierce			DATE	8/12/01
ARRIVAL TIME	250	DEPARTURE TIME	255	SERVICED BY	[illegible]
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.4 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Start sampler program, check battery, leave running

2

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Pierce			DATE	8/13/01
ARRIVAL TIME	405	DEPARTURE TIME	410	SERVICED BY	Ken
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.0 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Change communications, #'s to Pager & Modem

2

3

STORMWATER O&M LOG SHEET

SITE	Pierce			DATE	8/16/01
ARRIVAL TIME	9:40	DEPARTURE TIME	9:45	SERVICED BY	[illegible]
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	Voltage check 12.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

EQUIPMENT CLEANING CHECKLIST

Site	Pierce 12.5 volts .01" Total Rain		
Date	8-17-01	Time	1410
Serviced By:	Sutton		

Yes	Data Downloaded to DTU?

Cell #2 Scottsdale #1 DTU, No Composites, Restart Program

1. Halt program Left Phone connected -file 08171409.000
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

No	Pump approximately 1/2 gallon tap water through tubing.
No	Pump approximately 1/2 gallon of Liquinox through tubing.
No	Pump a large quantity of tap water through tubing.
No	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
No	Pump approximately 1/2 - 1 gallon deionized water through tubing.

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

STORMWATER O&M LOG SHEET

SITE	Pierce			DATE	8/20/01
ARRIVAL TIME	1005	DEPARTURE TIME	1015	SERVICED BY	Rem
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Change Program, Modem + pager.

2

3

Date: 8/11/00

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Park			DATE	8/29/01
ARRIVAL TIME	215	DEPARTURE TIME	245	SERVICED BY	Rem DJ
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check and reprogram Sampler to operate cell phone. Dave and I were unable to get Sampler to call out. We Tipped bucket past alarm of 0.10 a couple of times. Cell phone was confirmed ON, Sampler working. Dave recommends we call back installation people and Sigma.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Park			DATE	08/30/01
ARRIVAL TIME	0810	DEPARTURE TIME	0855	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED/ SERVICED/ CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	Pour water in/tipped
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Reprogram Sampler to rain only, turn cell phone on, pour water in bucket. 0118. Sampler tried to sample, No alarm. Reprogram back to Rain+ level. Restart program. Switch cell phone back.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce ST			DATE	09/03/01
ARRIVAL TIME	1005	DEPARTURE TIME	1015	SERVICED BY	Pren
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

	CHECKED/ SERVICED/ CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, rain recorded on sampler 0.24
Return 9/24/01 to copy data. no alarms received.
2 Bottles full others some sample. Halt sampler for decon
bring in bottles

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce			DATE	9/4/01
ARRIVAL TIME	0945	DEPARTURE TIME	0955	SERVICED BY	RW
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N DTUF #1

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

NOTES / ACTIONS Copy data to cell #2

file 09040920.000

EQUIPMENT CLEANING CHECKLIST

Site	Pierce		
Date	9-6-01	Time	A 0815 / D 0830
Serviced By:	[illegible] [illegible]		

No	Data Downloaded to DTU?

Data Copied 9-5-01 Restart program 9-6-01

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

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce			DATE	9/10/01
ARRIVAL TIME	0805	DEPARTURE TIME	0815	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Perform cell phone test. See McKellips maintenance Sheet.

Cell phone worked.

Leave switch on R/side, check Voltage tomorrow.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce			DATE	9/11/01
ARRIVAL TIME	0720	DEPARTURE TIME	0750	SERVICED BY	(RWM)
SAMPLER	(SIGMA)	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Program sampler to rain only. Pour water in tipping bucket. Poured 0.66 into bucket. Sampler tried to sample, no alarm called in. Program sampler back to rain only level. Battery at 12.8

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce			DATE	9/12/01
ARRIVAL TIME	0910	DEPARTURE TIME	0940	SERVICED BY	(Rem)
SAMPLER	(SIGMA)	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Turn hand set on, program sampler to rain only. Put 0.17 Rain in tipping bucket. Sampler tried to sample. Wait for alarm call. ~~Phone received~~. Alarm went off. Check phone messages 2 messages, nothing said. Service came on and said message would be erased. ID 0000007 - in pager. leave cell phone on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Rd			DATE	9/13/01
ARRIVAL TIME	0735	DEPARTURE TIME	0738	SERVICED BY	(RCW)
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Battery holding up, cell phone on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce ST			DATE	9/19/01
ARRIVAL TIME	0859	DEPARTURE TIME	0906	SERVICED BY	Reen
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y / N cell #2

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

NOTES / ACTIONS 0.00 Rain recorded. Copy data cell phone on. leave program running. Check date and time.
file # 09190858.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Rd/ Park			DATE	9/25/01
ARRIVAL TIME	0724	DEPARTURE TIME	0735	SERVICED BY	(Pen)
SAMPLER	SIGMA	900		STATION CONDITION:	Good / area clean
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check station, cell phone on. Leave program running. Talk with Scottsdale park employee. Talked about sampler.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	Oct 1st 01
ARRIVAL TIME	0725	DEPARTURE TIME	0745	SERVICED BY	Rew SLB
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, review program. Change program to Winter hours, 16 hours. Restart program 0737 10/1/01 Cell phone on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Street			DATE	10/3/01
ARRIVAL TIME	0823	DEPARTURE TIME	0825	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Battery Voltage, 3 days of clouds, 20% chance of Rain today

STORM EVENT LOG SHEET

1. Site: Hayden & Pierce Your Name: Siegfried - Arnold

2. Date: 10-6-01 Time: 23:00

SAMPLER PARAMETERS

3. Rainfall: 0.05 **in**

4. Flow: Ø **cfs**

5. Level: 1-358 **in**

6. Velocity: Ø **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

8. Battery voltage: 12-7 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	10/09/01
ARRIVAL TIME	1010	DEPARTURE TIME	1018	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N Cell #4

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

NOTES / ACTIONS Check Station, cell phone on. Rainfall 0.05 no flow. Copy data, restart program at 10:16 10/09/01. check drain, okay.

file #10091011.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	10/15/01
ARRIVAL TIME	0820	DEPARTURE TIME	0825	SERVICED BY	RWM
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, 0.00 Rain. Check cell phone and radio, "on". Drain clear

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Rd			DATE	10/18/01
ARRIVAL TIME	0917	DEPARTURE TIME	0920	SERVICED BY	RWW
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.11 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Perform cell phone test, confirm

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	10/23/01
ARRIVAL TIME	0817	DEPARTURE TIME	0822	SERVICED BY	Pur
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check site, Battery down .2 volts. Cellphone on. Everything else Okay. Signal good

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	10/30/01
ARRIVAL TIME	0808	DEPARTURE TIME	0812	SERVICED BY	Rum
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, Battery time on Sampler, okay
cell phone and radio on. Main clear

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Rd			DATE	11/05/01
ARRIVAL TIME	0810	DEPARTURE TIME	0815	SERVICED BY	(Them) (TLS)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	GOOD (FAIR) POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station and rainfall, 0.03 Station Still active. Some run off in drain, no samples. Cell phone and radio on

STORM EVENT LOG SHEET

1. Site: Pierce Your Name: Siegfried, Michales

2. Date: 11-5-01 Time: 19:17

SAMPLER PARAMETERS

3. Rainfall: .18 in

4. Flow: 0.0 cfs

5. Level: 1.567 in

6. Velocity: 0.0 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
1 of 4 Bottles Iced

8. Battery voltage: 12.7 volts

9. Power On or Off? If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ cfs

11. pH _____ su

12. Temperature _____ deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

EQUIPMENT CLEANING CHECKLIST

file # 11060901.000

Site	Pierce Park

Date	11/06/01	**Time**	0900

Serviced By:	(Rich)

Rain 0.18 No Grabs taken

Y	cdl #2	**Data Downloaded to DTU?**

Shut down 72hrs, turn off phone and radio, sampler

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Sampler to be decon at later date, remove bottles for cleaning.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Rd			DATE	11/07/01
ARRIVAL TIME	0930	DEPARTURE TIME	0940	SERVICED BY	Cum
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Service Raingauge and clean Solar panels.
Bucket good, Level and wipe down Solar panel

EQUIPMENT CLEANING CHECKLIST

Site	Pierce Road
Date	11/08/01
Time	0753 - start 0758?
Serviced By:	Pund (SLS)

ReStart Station, 72 hour between Storms Ends

No	done	**Data Downloaded to DTU?**

Check bottles for correct line up

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Turn Phone and radio back on

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Rd			DATE	11/13/01
ARRIVAL TIME	0833	DEPARTURE TIME	0836	SERVICED BY	Pum
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	129 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Battery, phone and radio, Ready

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Rd			DATE	11/19/01
ARRIVAL TIME	0910	DEPARTURE TIME	0915	SERVICED BY	Mew
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cell phone & radio "on" check time and date! Connect

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	11/28/01
ARRIVAL TIME	1142	DEPARTURE TIME	1148	SERVICED BY	(Rand)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery cellphone radio on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	12/03/01
ARRIVAL TIME	0820	DEPARTURE TIME	0825	SERVICED BY	(Pur)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cell phone & radio on

STORM EVENT LOG SHEET

1. Site: ~~Hanover~~ & Pierce Your Name: T. Siegfried

2. Date: 12-4-01 Time: 0745

1130 2x 3/4 Bottles Full
1245 sampling complete
picked up composits

SAMPLER PARAMETERS

3. Rainfall: -27 in

4. Flow: -75 cfs

5. Level: 3-803 in

6. Velocity: -42 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
1 Bottle
Left Program running
Iced composits

8. Battery voltage: 12-6 volts

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs -75 cfs

11. pH 5 su

12. Temperature 13° deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

EQUIPMENT CLEANING CHECKLIST

file #12050929.000

Site	Pierce Park Road
Date	12/05/01
Time	0930
Serviced By:	Reed SLP

✓	**Data Downloaded to DTU?**

cell #7

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done. Shut off cell phones & radio for battery recharge.

Replace bottles, clean unit lines,

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	12/06/01
ARRIVAL TIME	1003	DEPARTURE TIME	1005	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK (Y) N

STATION DATA COPIED: Y (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	GOOD FAIR POOR	YES NO	YES NO	13.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Turn radio + cell phone on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Rd			DATE	12/10/01
ARRIVAL TIME	1225	DEPARTURE TIME	1228	SERVICED BY	Rum
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Stop and restart program, cell & radio on

STORM EVENT LOG SHEET

1. Site: Pierce Your Name: Sutton/NAud III

2. Date: 12-11-01 Time: 1420

SAMPLER PARAMETERS

3. Rainfall: .29 **in**

4. Flow: 1.16 **cfs**

5. Level: 5.032 **in**

6. Velocity: .40 **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
1 full composite @ 1420

8. Battery voltage: 12.7 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs 1.16 **cfs**

11. pH 6 **su**

12. Temperature 10.5 **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

STORM EVENT LOG SHEET

1. Site: Pierce Your Name: Sutton/Nand III

2. Date: 12-1-01 Time: 1738

SAMPLER PARAMETERS

3. Rainfall: .36 **in**

4. Flow: Ø **cfs**

5. Level: 1.410 **in**

6. Velocity: Ø **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
1.5 composites @ 1738

8. Battery voltage: _____ **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

3 lids needed

EQUIPMENT CLEANING CHECKLIST

file# 12120832.000

Site	Pierce Road		
Date	12/12/01	**Time**	Data copied 0834 / Decon 0852 SHS RNW
Serviced By:	[illegible] [illegible] [illegible]		

Restart program

Yes	cell #12	**Data Downloaded to DTU?**

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	12/13/01
ARRIVAL TIME	0835	DEPARTURE TIME	0837	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Rainfall 0.01 Station active

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	12/17/01
ARRIVAL TIME	0850	DEPARTURE TIME	0855	SERVICED BY	Quen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, Shut off cellphone and radio

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	12/20/01
ARRIVAL TIME	0813	DEPARTURE TIME	0817	SERVICED BY	Pen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED/ SERVICED/ CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Battery, Restart program, turn on cell phone & radio

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	12/24/01
ARRIVAL TIME	0746	DEPARTURE TIME	0750	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, cell phone, radio on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	01/07/02
ARRIVAL TIME	0819	DEPARTURE TIME	0825	SERVICED BY	Pierce
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, cell phone & radio "on"

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	01-14-02
ARRIVAL TIME	0818	DEPARTURE TIME	0823	SERVICED BY	Rey
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, Rain Recorded 0.09 No Samples

Reset program Cell phone & radio on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	01-22-02
ARRIVAL TIME	11AM	DEPARTURE TIME	1105	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

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

NOTES / ACTIONS Check Station, cellphone or radio "on"

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	01-28-02
ARRIVAL TIME	0915	DEPARTURE TIME	0920	SERVICED BY	(Rew)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, Battery bottles and drain. clear cell phone & radio "on"
Time and date correct

EQUIPMENT CLEANING CHECKLIST

Site	Pierce Road
Date	01-31-02
Time	0908 - 0918
Serviced By:	Drew Mac

Yes	cell #1	No samples, not enough Rain 0.06
		Data Downloaded to DTU?

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

EQUIPMENT CLEANING CHECKLIST

Site	Pierce Road		
Date	01-31-02	**Time**	0908
Serviced By:	[illegible]		

Y	**Data Downloaded to DTU?**

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Not needed

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

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

STORM EVENT LOG SHEET

1. Site: Pierce Road Your Name: [illegible]

2. Date: 01-31-02 Time: 0908-0918

SAMPLER PARAMETERS

3. Rainfall: 0.06 **in**

4. Flow: _____ **cfs**

5. Level: _____ **in**

6. Velocity: _____ **ft/sec**

O&M PARAMETERS Data copied to cell #1 DTU unit #1

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
No samples, not enough Rain
Restart program, Shut sampler down

8. Battery voltage: 12.7 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	02-06-02
ARRIVAL TIME	0913	DEPARTURE TIME	0918	SERVICED BY	Sam
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check station, restart sampler, turn radio & cell phone on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road	DATE	02-12-02
ARRIVAL TIME 0822	DEPARTURE TIME	SERVICED BY	Allen
SAMPLER	SIGMA 900	STATION CONDITION:	Good
SAMPLER	ISCO 6712	STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION /	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, date and time correct

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	02-19-02
ARRIVAL TIME	0851	DEPARTURE TIME	0855	SERVICED BY	[illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS check Station, Battery, cell phone and radio on
Date and time correct.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	02-25-02
ARRIVAL TIME	0912	DEPARTURE TIME	0946	SERVICED BY	Glenn
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

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

NOTES / ACTIONS check station, Battery, cell phone and radio on
check Date and time, connect
Sweep and Shovel Sand, dirt and rock out of drain.
Clean from Road entrance to 6 feet past Sensors.
Clean intake tube Sensor, around P.T. clean around drain area.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	03-04-02
ARRIVAL TIME	0803	DEPARTURE TIME	0810	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, Battery, date + time. Cell phone and radio on. Channel clear.

STORM EVENT LOG SHEET

#2

1. Site: HAYDEN & PIERCE Your Name: SIEGFRIED - MICHAELS

2. Date: 3-8-02 Time: 0115

SAMPLER PARAMETERS

3. Rainfall: .13 in

4. Flow: .00 cfs

5. Level: 1.619 in

6. Velocity: Q ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
SAMPLER LEFT RUNNING MODE 1 BOTTLE 5070 FULL

8. Battery voltage: 12.8 volts

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ cfs

11. pH _____ su

12. Temperature _____ deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

EQUIPMENT CLEANING CHECKLIST

Site	Pierce Road
Date	03-11-02
Time	1037
Serviced By:	Jum

✓ Cell #2 Battery Restart program Rain 0.14

Data Downloaded to DTU?

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	03-18-02
ARRIVAL TIME	0945	DEPARTURE TIME	0955	SERVICED BY	[illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, cell phone & radio on
Date and time correct.
Water draining in channel from Building South side of drain. water is coming up out at ground by brick wall.
Its from the watering system.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Pierce Road			DATE	March 25, 02
ARRIVAL TIME	0810	DEPARTURE TIME	0815	SERVICED BY	Glen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, drain clear. Date and time correct. Cell phone and radio on

Camelback

FCD/USGS STORMWATER O&M LOG SHEET

SITE	Camelback #3			DATE	July 12, 01
ARRIVAL TIME	0815	DEPARTURE TIME	0825	SERVICED BY	RMM
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volt
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	m

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO. F SAMPLER OR PT INSTALLED/REMOVED.

- Dust Sampler floor with Diatomaceous earth, pest control

FCD/USGS STORMWATER O&M LOG SHEET

SITE	Camelback #3			DATE	7/23/01
ARRIVAL TIME	0915	DEPARTURE TIME	0925	SERVICED BY	Ruiz
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	check connections, Set up
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Put bottles in sampler, maintenance book, left on halt

2

3

STORM EVENT LOG SHEET

1. Site: Camelback / IBW Your Name: Sutton

2. Date: 7-30-01 Time: 2:50A

SAMPLER PARAMETERS

3. Rainfall: .71 **in**

4. Flow: .15 **cfs**

5. Level: 1.707 **in**

6. Velocity: .94 **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

Jammed Dist, Filled Base, No Grabs

8. Battery voltage: 12.9 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Camelback
Date	8/1/01
Time	0825
Serviced By:	Ron SLS

Battery 12.1 Disconnect cell phone

✓	Data Downloaded to DTU?

Cell #3 Dist Arm Jammed, Base filled, no Bottles

1. Halt program Site id 027 Run DIST test, found tube installed incorrect. file 08010906.000
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Connect tube, run and test, Passed

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

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

STORMWATER O&M LOG SHEET

SITE	Camellback			DATE	08/06/01
ARRIVAL TIME	0910	DEPARTURE TIME	0920	SERVICED BY	Alex
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	~~YES~~ NO	12.9 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	~~YES~~ NO	
CELLULAR ANTENNA	~~YES~~ NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Check site, Battery 12.9 Push power switch for cell phone, power light

2 Came on. Keep check

3

Date: 8/11/00

STORM EVENT LOG SHEET

#3

1. Site: Camel Back Your Name: Siegfried Michaels

2. Date: 8-9-01 Time: 0400

SAMPLER PARAMETERS

3. Rainfall: .47 in

4. Flow: 1.66 cfs

5. Level: 6.367 in

6. Velocity: 1.51 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Sampler filled tub full of water
Distribution arm not working correctly

8. Battery voltage: 12.7 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Camelback		
Date	8-9-01	**Time**	8:40A
Serviced By:	Sutton, Siegfried, Naud III		

YES	**Data Downloaded to DTU?**

Cell #3, Scottsdale #1 DTU
file# 08090930,000

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

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

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

Composites filled base not jars, disconnected cell phone, download data decon sampler, Halt Program

STORMWATER O&M LOG SHEET

SITE	Camelback			DATE	8/9/01
ARRIVAL TIME	935	DEPARTURE TIME		SERVICED BY	(Pete)
SAMPLER		(SIGMA OR) ISCO		MODEL NUMBER	800 (900) other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump (distributor))	~~YES~~ NO	Perform Distributor test, passed
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Replace tube in distributor arm, adjust tube pass test

2

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Camelback			DATE	8/12/01
ARRIVAL TIME	305	DEPARTURE TIME	310	SERVICED BY	RMW
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	13.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Re Start program, check Battery, Leave program running.

2 no flow out of drain at this time

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Camelback			DATE	8/13/01
ARRIVAL TIME	415	DEPARTURE TIME	420	SERVICED BY	Pam
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.8 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 change modem communications pager & modem

2 no flow in drain

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Camelback			DATE	8/16/01
ARRIVAL TIME	1010	DEPARTURE TIME	1015	SERVICED BY	[illegible]
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.9 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1 low flow of 1 inch in drain?
2
3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Camelback			DATE	8/20/01
ARRIVAL TIME	1025	DEPARTURE TIME	1030	SERVICED BY	Rem
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	13.7 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 change Program, to modem Pager.

2 : storm data from 8/17/01 lost due to reprogramming

3

Date: 8/11/00

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback			DATE	9/3/01
ARRIVAL TIME	1025	DEPARTURE TIME	1040	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	14.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Sampler on halt, resume program and sampler started to sample. Put back on halt until data is copied. Rainfall .0 recorded.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback			DATE	9/4/01
ARRIVAL TIME	0950	DEPARTURE TIME	1000	SERVICED BY	Ren
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED (Y) / N Data PTUZ #C3

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

NOTES / ACTIONS Copy data. Restart program.
file 09041043.000

EQUIPMENT CLEANING CHECKLIST

Site	Camelback		
Date	9-6-01	Time	0840 / 0855
Serviced By:	SLB	RMW	

CORRECT Time on Sampler clock

No	Data Downloaded to DTU?

Data copied 9/4/01 Restart program 9/6/01

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

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback			DATE	9/12/01
ARRIVAL TIME	0945	DEPARTURE TIME	0950	SERVICED BY	(RWW)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	14.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Turn hand set on, battery dropped 13.8

Confirm program modem - Pager

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback			DATE	9/13/01
ARRIVAL TIME	0745	DEPARTURE TIME	0750	SERVICED BY	[illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Cell phone, Station looks okay.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Rd			DATE	9/19/01
ARRIVAL TIME	0916	DEPARTURE TIME	0922	SERVICED BY	Rlew
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: (Y) / N cell #3

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS 0.00 Rain recorded. Copy data, check date and time, cell phone on. Leave program running.
file # 09190914.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Rd			DATE	9/25/01
ARRIVAL TIME	0743	DEPARTURE TIME	0750	SERVICED BY	(Rem)
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, cell phone on. Remove beer bottles and trash. leave program running.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camel Buck Road			DATE	Oct 1st 01
ARRIVAL TIME	0808	DEPARTURE TIME	0818	SERVICED BY	Pete Jeff
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Review program. Change to winter hours, restart program 0814 10/1/01 Cell phone on. Program hour 16.00 hours.

Return to Camelback at 0841, Found program change, Program Lock "on" check mckellips, Pierce, program Lock OFF. Make change to camelback Restart program 0848

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	10/3/01
ARRIVAL TIME	0830	DEPARTURE TIME	0835	SERVICED BY	RMW
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station Battery voltage. 3 days of clouds 20% chance of rain today. Station okay. Cell phone on.

STORM EVENT LOG SHEET

1. Site: Camel Back & Hayden Your Name: Siegfried - Arnold

2. Date: 10-6-01 Time: 23:15

SAMPLER PARAMETERS

3. Rainfall: .05 in

4. Flow: Q cfs

5. Level: ~~[illegible]~~ -241 in

6. Velocity: .11 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

8. Battery voltage: 13.0 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Cavelbock			DATE	10/09/01
ARRIVAL TIME	0952	DEPARTURE TIME	1002	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N cell 3

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Station Read 0.05. Check program, alarmed should not have until 0.10. Copy data, cellphone on, lid off. Data copied, program restarted 10/9/01 at 1000, check Drain. Station worked correctly file # 10090953.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	10/15/01
ARRIVAL TIME	0832	DEPARTURE TIME	0840	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, 0.00 Rain Check cell phone and radio, "on". Drain clear, very small flow coming out. Broken beer bottles in drain, remove some of the glass

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Rd			DATE	10/18/01
ARRIVAL TIME	0928	DEPARTURE TIME	0935	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Perform cell phone test. Confirm. Flow in channel no rain.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Rd			DATE	10/23/01
ARRIVAL TIME	0830	DEPARTURE TIME	0835	SERVICED BY	Ryan
SAMPLER	SIGMA	900		STATION CONDITION:	Good.
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check site, No Flow in drain. Cell phone on, Signal good. Everything Okay.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	10/30/01
ARRIVAL TIME	0820	DEPARTURE TIME	0825	SERVICED BY	Allen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, time on Sampler okay. Cell phone and radio on, Drain has no flow at this time.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Rd			DATE	11/05/01
ARRIVAL TIME	0822	DEPARTURE TIME	0828	SERVICED BY	(Rum) (JLB)
SAMPLER	(SIGMA)	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, rainfall 0.03 Station Still active cell phone and radio on. No flow in channel

STORM EVENT LOG SHEET

1. Site: CAMELBACK & HAYDEN Your Name: Siegfried - Michaels

2. Date: 11-5-01 Time: 1948

SAMPLER PARAMETERS

3. Rainfall: .25 in

4. Flow: .28 cfs

5. Level: 2.608 in

6. Velocity: .93 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
24 1/2 Bottles Iced

8. Battery voltage: 13.0 volts

9. Power On or Off? If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ cfs

11. pH _____ su

12. Temperature _____ deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

EQUIPMENT CLEANING CHECKLIST

file # 11060919.000

Site	Camelback Rd

Date	11/06/01	Time	0920

Serviced By:	Glen

Rain: 0.25 No Grabs taken

[Y] cell 3 **Data Downloaded to DTU?**

Shut down 72 hours turn off cell phone and radio, Sampler

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Remove bottles for cleaning, decon sampler at later date.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Rd			DATE	11/07/01
ARRIVAL TIME	0910	DEPARTURE TIME	0920	SERVICED BY	Rich
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Service Raingauge and Solar panels

Equipment in good shape. Bring paint remover next visit.

EQUIPMENT CLEANING CHECKLIST

Site	Camelback Rd
Date	11/08/01
Time	0810 Start 8:18
Serviced By:	Ron TLS

Restart Station, 72 hours between Storms Ends

No done	**Data Downloaded to DTU?**

Turn Radio & phone "on"

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Rd			DATE	11/13/01
ARRIVAL TIME	0845	DEPARTURE TIME	0850	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery cell phone and radio, Ready
Remove bottles from Station. check drain, okay

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	11/19/01
ARRIVAL TIME	0928	DEPARTURE TIME	0932	SERVICED BY	Pam
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cellphone & radio "on"
check date and time, correct.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Rd			DATE	11/28/01
ARRIVAL TIME	1150	DEPARTURE TIME	1155	SERVICED BY	Pem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cellphone + radio on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	12/03/01
ARRIVAL TIME	0842	DEPARTURE TIME	0845	SERVICED BY	Pen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS: Check Station, Battery, cellphone & radio on

STORM EVENT LOG SHEET

1. Site: CAMELBACK & ~~[illegible]~~ Your Name: T. Siegfried

2. Date: 12-4-01 Time: 0700

12:15 Pick up composits

SAMPLER PARAMETERS

3. Rainfall: ~ 21 in

4. Flow: ~ 19 cfs

5. Level: 2-135 in

6. Velocity: ~ 81 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.

1/2 Bottle
Left Program Running
Iced Composits

8. Battery voltage: 13-0 volts

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs ~ 19 cfs

11. pH 5 su

12. Temperature 12 deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

EQUIPMENT CLEANING CHECKLIST

file # 12051205.000

Site	Camelback Road
Date	12/5/01
Time	1205
Serviced By:	RCW SDD

✓	Data Downloaded to DTU?

cell 8

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done. Leave cellphone + radio on

Replace bottles, clean unit & lines. Battery at 13.6

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback			DATE	12/06/01
ARRIVAL TIME	0954	DEPARTURE TIME	0956	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check site, Ready

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback			DATE	12/10/01
ARRIVAL TIME	1214	DEPARTURE TIME	1218	SERVICED BY	Rau
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Stop and restart program cell & radio on

STORM EVENT LOG SHEET

1. Site: Camelback Your Name: Sutton/Naud III

2. Date: 12-1-01 Time: 1440

SAMPLER PARAMETERS

3. Rainfall: .07 in

4. Flow: Ø cfs

5. Level: 1.06 in

6. Velocity: Ø ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Not enough rainfall to operate equipment
No Composites / No grabs

8. Battery voltage: 13 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs Ø **cfs**

11. pH Ø **su**

12. Temperature Ø **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

STORM EVENT LOG SHEET

1. Site: Camelback Your Name: Sutton / Maud III

2. Date: 12-11-01 Time: 1750

SAMPLER PARAMETERS

3. Rainfall: .14 in

4. Flow: Ø cfs

5. Level: .841 in

6. Velocity: .02 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Not enough rainfall to operate equipment
No grabs / No composites

8. Battery voltage: _____ **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

file # 12120850.000

Site	Camelback Road
Date	12/12/01
Time	Data topied 0848
Serviced By:	[illegible]

Restart program.

✓	cell # 13	**Data Downloaded to DTU?**

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	12/13/01
ARRIVAL TIME	0843	DEPARTURE TIME	0846	SERVICED BY	(Pun)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	131 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Rainfall 0.00 Station active

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	12/17/01
ARRIVAL TIME	0910	DEPARTURE TIME	0915	SERVICED BY	(Rich)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Leave cellphone and radio "on"
Correct time on Sampler by 5 minutes

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	12/20/01
ARRIVAL TIME	0832	DEPARTURE TIME	0835	SERVICED BY	Tim
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, everything in good Shape.
Tighten battery connection

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	12/24/01
ARRIVAL TIME	0755	DEPARTURE TIME	0800	SERVICED BY	Yeow
SAMPLER	SIGMA	900		STATION CONDITION:	bad
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station; cell phone; radio on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	01/07/02
ARRIVAL TIME	0828	DEPARTURE TIME	0832	SERVICED BY	Pum
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS check station, cell phones radio "on"

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	01-14-02
ARRIVAL TIME	0828	DEPARTURE TIME	0835	SERVICED BY	Rcw
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Rain Recorded 0.08 No Samples

Cell phone & radio on

Reset program

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	01-22-02
ARRIVAL TIME	1109	DEPARTURE TIME	1112	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, call & radio "on"

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback			DATE	01-28-07
ARRIVAL TIME	0925	DEPARTURE TIME	0930	SERVICED BY	Tuen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, Battery, bottles, drain dry and clear. Cell phone and radio "on"
Time and date correct.

EQUIPMENT CLEANING CHECKLIST

Site	Camelback Road		
Date	01-31-02	**Time**	0935-0940
Serviced By:	(Ruen) (Mac)		

No Samples, Rain 0.09

Yes	eed 3	**Data Downloaded to DTU?**

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

STORM EVENT LOG SHEET

1. Site: Camelback Road Your Name: [illegible]

2. Date: 01-31-02 Time: 0935-0940

SAMPLER PARAMETERS

3. Rainfall: 0.09 **in**

4. Flow: _____ **cfs**

5. Level: _____ **in**

6. Velocity: _____ **ft/sec**

O&M PARAMETERS copy data to cell #3 unit 1

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
copy data, Re Start program

8. Battery voltage: _____ **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Camelback Road		
Date	01-31-02	**Time**	0935
Serviced By:	(Rum) (Mac)		

✓	**Data Downloaded to DTU?**

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Not needed	**Pump approximately 1/2 gallon tap water through tubing.**
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback			DATE	02-06-02
ARRIVAL TIME	0925	DEPARTURE TIME	0930	SERVICED BY	Green
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Turn cell phone/radio on. check and restart program

water Flow in channel, Level 3.820 in

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	02-12-02
ARRIVAL TIME	0832	DEPARTURE TIME	0835	SERVICED BY	Mem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery date and time correct

no flow in channel, area clean

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	02-19-02
ARRIVAL TIME	0906	DEPARTURE TIME	0910	SERVICED BY	[illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, date & time, cell phone & radio on. no flow in channel.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	02-25-02
ARRIVAL TIME	0950	DEPARTURE TIME	1005	SERVICED BY	Pam
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, battery, cell phone and radio on date and time correct. Remove rocks and trash from around sensors. Water in drain, drain clear and clean.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	03-04-02
ARRIVAL TIME	0817	DEPARTURE TIME	0822	SERVICED BY	(Ken)
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cell phone and radio ON
Date and time correct. Drain clear and dry.

STORM EVENT LOG SHEET

1. Site: ~~Phillips & Camelback~~ HAYDEN Your Name: Siegfried MICHALES

2. Date: 3-8-02 Time: 0130

SAMPLER PARAMETERS

3. Rainfall: .07 in

4. Flow: 1.82 cfs

5. Level: 6.543 in

6. Velocity: 1.56 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

8. Battery voltage: 12.9 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Camelback Road
Date	03-11-02
Time	1109
Serviced By:	(Pam)

Cell #3 0.07 Rain Recorded, Battery 14.0

✓	**Data Downloaded to DTU?**

No decontaminating performed.

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	07-18-02
ARRIVAL TIME	0905	DEPARTURE TIME	1010	SERVICED BY	Glen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, no flow in channel. Cell phone and radio on. Date and time correct

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Camelback Road			DATE	March 25, 02
ARRIVAL TIME	0820	DEPARTURE TIME	0825	SERVICED BY	Pen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, Rain not flowing. Date and time correct. Cell phone and radio "on"

Hayden

FCD/USGS STORMWATER O&M LOG SHEET

SITE	Hayden/Golf #4			DATE	July 12, 01
ARRIVAL TIME	0835	DEPARTURE TIME	0850	SERVICED BY	Mew
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Dust station floor with Diatomaceous earth, pest control

2

3

FCD/USGS STORMWATER O&M LOG SHEET

SITE	Hayden #4			DATE	7/23/01
ARRIVAL TIME	0930	DEPARTURE TIME	0940	SERVICED BY	Rem
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	check setup, phone, switch
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Put bottles in sampler, maintenance book, put sampler on halt

2

3

STORM EVENT LOG SHEET

1. Site: 4900 HAYden Your Name: Sutton

2. Date: 7-30-01 Time: 3:00A

SAMPLER PARAMETERS

3. Rainfall: _____ **in**

4. Flow: _____ **cfs**

5. Level: _____ **in**

6. Velocity: _____ **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

Sampler unit on standby status but screen wouldn't illuminate
No composites or Grabs

8. Battery voltage: _____ **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Hayden
Date	8/1/01
Time	900
Serviced By:	Rem TRS

RS485 Timed out Rain loss

NO	Data Downloaded to DTU?

would not copy data to DTU - no file retrieved

1. Halt program — Disconnect cellphone, unit would not come on AM storm on
2. Connect extension tubing to the distributor tubing on the underside of the sampler. 7/31/01 Per JTM
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done. Stop back at 10:30 ReStart

Unable to check Tipping bucket.

NO	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

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

STORMWATER O&M LOG SHEET

SITE	Hayden			DATE	8/6/01
ARRIVAL TIME	0925	DEPARTURE TIME	0935	SERVICED BY	[illegible]
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.4 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Check RS 485 timed out again. push power switch for cell phone

2 check again.

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Hayden			DATE	8/7/01
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	Ron
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.2 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Unable to copy data onto DTU unit. Pour water in tipping bucket, count to .17

2 Sampler came on to try and sample. No water flow! Stop, retry to

3 copy data, not able too! Re Start program and leave running.

Battery power at all other Stations holding. Left alone.

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Hayden@Golf			DATE	8/8/01
ARRIVAL TIME	900	DEPARTURE TIME	920	SERVICED BY	RWW
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

Return: 1020 Leave 1055

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.0 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Check Site, remove Sampler CA1436117006 for repair. Move to Scottsdale yard and

2 pick up Sampler CA1436117005. Program Sampler and install at Hayden.

3 Had trouble with program, but everything is programmed. Send sampler to warehouse to be sent to Sigma. Everything working.

RWW

Date: 8/11/00

STORM EVENT LOG SHEET

#4

1. Site: HAYDEN RD & GOLF COURS Your Name: Siegfried - MICHAELS

2. Date: 8-9-01 Time: 0420

SAMPLER PARAMETERS

3. Rainfall: .45 **in**

4. Flow: .33 **cfs**

5. Level: 9.002 **in**

6. Velocity: .20 **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
SAMPLER FILLED TUB FULL OF WATER DISTRIBUTION ARM NOT WORKING CORRECTLY

8. Battery voltage: _____ **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Hayden / Golf Course		
Date	8-9-01	**Time**	9:10a
Serviced By:	Sutton, Siegfried, Naud III		

Yes	**Data Downloaded to DTU?**

Cell # 4 Scottsdale

1. Halt program file # 09090843.000 – date off
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

Composite filled base not jars, disconnected cell phone, download, Decon, Halt Program

STORMWATER O&M LOG SHEET

SITE	Hayden Golf			DATE	8/9/01
ARRIVAL TIME		DEPARTURE TIME		SERVICED BY	Rene
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	Perform Distributor gram test
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Spoke with guys, Tom says bottles not glazed. they shift when

2 putting bucket in sampler. Need base for future.

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Hayden,			DATE	8/12/01
ARRIVAL TIME	315	DEPARTURE TIME	325	SERVICED BY	Rcw
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Re Start program, Check Battery left program running.

2

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Hayden			DATE	8/12/01
ARRIVAL TIME	420	DEPARTURE TIME	425	SERVICED BY	Ken
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	12.4 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 change #5 and modem to Pager & Modem

2

3

Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Hayden			DATE	8/16/01
ARRIVAL TIME	1020	DEPARTURE TIME	1025	SERVICED BY	(Pam)
SAMPLER	(SIGMA) OR ISCO			MODEL NUMBER	800 (900) other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	12.7 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.
1
2
3

STORMWATER O&M LOG SHEET

SITE	Hayden			DATE	8/20/01
ARRIVAL TIME	1035	DEPARTURE TIME	1040	SERVICED BY	Ream
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	13.0 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Change Program to modem Pagers

2 – storm data from 8/17/01 lost due to reprogramming

3

Date: 8/11/00

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden			DATE	9/3/01
ARRIVAL TIME	1045	DEPARTURE TIME	1100	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, rain 0.46 found 2 1/2 bottles had samples. Halt for data copy, bring in bottles

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden			DATE	9/4/01
ARRIVAL TIME	1005	DEPARTURE TIME	1015	SERVICED BY	(illegible)
SAMPLER	SIGMA	900		STATION CONDITION:	good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N DTU # #1 Cell 4

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

NOTES / ACTIONS Copy data.

file 10050920_000

- date is off

EQUIPMENT CLEANING CHECKLIST

Site	Hayden / Golf Course
Date	9-6-01
Time	A 0900 / P 0915
Serviced By:	(Sh) (Mem)

connect Time on Sampler clock & Date!

No	Data Downloaded to DTU?

Data copied 9/4/01 Re Start program.

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

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden			DATE	9/12/01
ARRIVAL TIME	0955	DEPARTURE TIME	1000	SERVICED BY	Pem
SAMPLER	SIGMA	900		STATION CONDITION:	good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Hook up phone, no power to phone, check wires, can not locate problem.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Golf			DATE	9/13/01
ARRIVAL TIME	0730	DEPARTURE TIME	0810	SERVICED BY	(Rew)
SAMPLER	SIGMA	900		STATION CONDITION:	good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check wire connections, hook and unhook connections unable to find problem. Wires are all connected.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden & Golf			DATE	9/13/01
ARRIVAL TIME	1400	DEPARTURE TIME	1420	SERVICED BY	(Pun)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Replace 750mL fuse, modified new fuse to fit and fit, review program, okay

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden e Golf			DATE	9/19/01
ARRIVAL TIME	0925	DEPARTURE TIME	0931	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK (Y) / N

STATION DATA COPIED (Y) / N cell # 4

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	~~GOOD~~ FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS 0.00 rain recorded. Copy data, check date and time leave program running. cell phone on.

file # 09190925.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Rd / Golf			DATE	9/25/01
ARRIVAL TIME	0755	DEPARTURE TIME	0800	SERVICED BY	[illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, cell phone on, leave program running.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden - Holt			DATE	Oct 1st 01
ARRIVAL TIME	0855	DEPARTURE TIME	0905	SERVICED BY	Rem SHS
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Review program, change program to Winter hours 1600 hours call phone on, restart program at 0901 10/1/01

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Creek			DATE	10/2/01
ARRIVAL TIME	0839	DEPARTURE TIME	0842	SERVICED BY	Mew
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station Battery Voltage. 3 days of clouds. 20% chance of rain.

STORM EVENT LOG SHEET

1. Site: HAYDEN #4 Your Name: Siegfried-Arnold

2. Date: 10-6-01 Time: 2330

SAMPLER PARAMETERS

3. Rainfall: .04 in

4. Flow: .11 cfs

5. Level: 4.342 in

6. Velocity: .20 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

8. Battery voltage: 12.7 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Haydene Golf			DATE	10/9/01
ARRIVAL TIME	0938	DEPARTURE TIME	09 50	SERVICED BY	(Rum)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: (Y) / N cell #2

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

NOTES / ACTIONS check station, Rain 0105. found cell phone off. with no power to hand set? Restart, came up okay, hand set on. Copy data Restart program 0945 10/09/01

possible phone power off due to box lid being put back on? checked, Okay. That is what caused it. will check others. Leave Lid off.!

file# 10090941.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden @ Golf			DATE	10/15/01
ARRIVAL TIME	0845	DEPARTURE TIME	0850	SERVICED BY	Perry
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION?	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, 0.00 Rain check cell phone and radio, "on". Drain clear.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Rd @ Golf			DATE	10/18/01
ARRIVAL TIME	0938	DEPARTURE TIME	0940	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Perform cell phone test. Confirm.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Rodd @ Golf			DATE	10/23/01
ARRIVAL TIME	0839	DEPARTURE TIME	0845	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good.
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check site, cell phone on, Signal good. Everything else okay.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Rd @ Golf			DATE	10/30/01
ARRIVAL TIME	0830	DEPARTURE TIME	0838	SERVICED BY	Rcw
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, Battery, Sampler time, Okay. cell phone on, radio on. Drain clear.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Rd Golf			DATE	11/05/01
ARRIVAL TIME	0830	DEPARTURE TIME	0835	SERVICED BY	RWP SDP
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Rainfall, 0.02 cell phone on, radio on. Station still active

EQUIPMENT CLEANING CHECKLIST

file # 11060924.000

Site	Haydene Golf
Date	11/06/01
Time	940
Serviced By:	Dan

Rain 0.25 No Grabs taken

Y	Cell #4	Data Downloaded to DTU?

Shut down 72 hours turn off phone, radio and sampler.

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Remove bottles for cleaning, decon sampler at later date.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Golf			DATE	11/07/01
ARRIVAL TIME	0850	DEPARTURE TIME	0905	SERVICED BY	RWM
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK (Y) / N

STATION DATA COPIED: Y / (N)

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

NOTES / ACTIONS Service Raingauge and Solar panels, Level bucket. Funnel and screen had heavy blockage. clean and wipe off Solar panel

EQUIPMENT CLEANING CHECKLIST

Site	Hayden @ Golf		
Date	11/08/01	**Time**	0820 Start 0834
Serviced By:	Rum SLD		

Restart Station, 72 hours between Storm Ends

No done	**Data Downloaded to DTU?**

Turn phone and radio "on"

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Golf			DATE	11/13/01
ARRIVAL TIME	0855	DEPARTURE TIME	0900	SERVICED BY	(Rem)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cell phone and radio Ready

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden @ Golf			DATE	11/19/01
ARRIVAL TIME	0935	DEPARTURE TIME	0940	SERVICED BY	Glen
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cell phone and radio, "on"
check date and time: correct

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden & Golf			DATE	11/28/01
ARRIVAL TIME	1200	DEPARTURE TIME	1215	SERVICED BY	RCW
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cell phone & radio on.
Spoke with manager of housing w/ side of Station.
He feels our Station is blocking run off from their streets
Recommend he contact City of Scottsdale.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden @ Wolf			DATE	12/03/01
ARRIVAL TIME	0848	DEPARTURE TIME	0850	SERVICED BY	RWW
SAMPLER	SIGMA	900		STATION CONDITION:	overd
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, Cell phone and radio ON

STORM EVENT LOG SHEET

1. Site: Hamden & golf course Your Name: T. Siegfried

2. Date: 12-4-01 Time: 0840
12:15 No samples

SAMPLER PARAMETERS

3. Rainfall: .08 in

4. Flow: .40 cfs

5. Level: 10.406 in

6. Velocity: .20 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
No samples in bottles
Iced - composits

8. Battery voltage: 12.5 volts

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ cfs

11. pH _____ su

12. Temperature _____ deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

EQUIPMENT CLEANING CHECKLIST

file # 12051158.000

Site	Hayden Creek
Date	12/5/01
Time	1220
Serviced By:	Pen JLS

Found Station Did Sample Composites.

✓ **Data Downloaded to DTU?**

Cell 9 Copy data, Restarted after cleaning unit, lines and replacing bottles

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

✓ **Pump approximately 1/2 gallon tap water through tubing.**

✓ **Pump approximately 1/2 gallon of Liquinox through tubing.**

✓ **Pump a large quantity of tap water through tubing.**

✓ **Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.**

✓ **Pump approximately 1/2 - 1 gallon deionized water through tubing.**

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Golf			DATE	12/06/01
ARRIVAL TIME	0948	DEPARTURE TIME	0952	SERVICED BY	(Allen)
SAMPLER	SIGMA	900		STATION CONDITION:	(Good)
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Turn cell phone & radio on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Golf			DATE	12/10/01
ARRIVAL TIME	1208	DEPARTURE TIME	1211	SERVICED BY	Pam
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Stop & restart program, cell & radio on

STORM EVENT LOG SHEET

1. Site: Hayden / Golf Course Your Name: Sutton / Naud III

2. Date: 12-11-01 Time: 1455

SAMPLER PARAMETERS

3. Rainfall: .06 in

4. Flow: Ø cfs

5. Level: Ø.281 in

6. Velocity: .20 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or (No)?** Describe problems.
Not enough rainfall to operate equipment
No Composites / No grabs

8. Battery voltage: 12.5 **volts**

9. Power **(On) or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs Ø **cfs**

11. pH Ø **su**

12. Temperature Ø **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or (No)?**

14. Preservatives added to bottles? **Yes or (No)?**

EQUIPMENT CLEANING CHECKLIST

file # 12120901.000

Site	Hayden @ Golf		
Date	12/12/01	**Time**	Data copied 0901 /
Serviced By:	[illegible]	[illegible]	[illegible]

1/05	well #14	**Data Downloaded to DTU?**

1. On 900 Sigma Halt program. On Isco Stop program. (Restult program)
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden ~~Pierce Road~~			DATE	12/13/01
ARRIVAL TIME	0850	DEPARTURE TIME	0854	SERVICED BY	[illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Rainfall 0.00 Station active

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden a Golf			DATE	12/17/01
ARRIVAL TIME	0919	DEPARTURE TIME	0925	SERVICED BY	Ran
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION:	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, Shut off cellphone & radio

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden @ Golf			DATE	12/20/01
ARRIVAL TIME	0839	DEPARTURE TIME	0845	SERVICED BY	Reen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station Battery. turn cell phone radio on tighten connections.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden + Cedf			DATE	12/24/01
ARRIVAL TIME	0805	DEPARTURE TIME	0810	SERVICED BY	Sean
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, cell phone + radio on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Gulf			DATE	01/07/02
ARRIVAL TIME	0835	DEPARTURE TIME	0840	SERVICED BY	Reem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, cell phone & radio "on"

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Road @ Golf			DATE	01-14-02
ARRIVAL TIME	0839	DEPARTURE TIME	0845	SERVICED BY	Rand
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, Rain recorded 0.04 No Samples

Reset program, cell phone & radio on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Rd & Golf			DATE	
ARRIVAL TIME	1115	DEPARTURE TIME	1120	SERVICED BY	Pam
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, cell & radio "On"

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden @ Golf			DATE	01-28-02
ARRIVAL TIME	0934	DEPARTURE TIME	09 40	SERVICED BY	Rum
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

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

NOTES / ACTIONS check Station, Battery, bottles, drain clear.
Cell phone and radio "on"
Time and date correct.

EQUIPMENT CLEANING CHECKLIST

Site	Hayden @ Golf		
Date	01-31-02	**Time**	0945 - 0950
Serviced By:	(Rwn) (MAo)		

No Samples, Rain 0.05

Yes	ccl 4/	**Data Downloaded to DTU?**

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

STORM EVENT LOG SHEET

1. Site: Hayden Golf Your Name: [illegible]

2. Date: 01-31-02 Time: 0945 - 0950

SAMPLER PARAMETERS

3. Rainfall: 0.05 **in**

4. Flow: _____ **cfs**

5. Level: _____ **in**

6. Velocity: _____ **ft/sec**

Copy data to cell by unit 1

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
No Samples, not enough Rain

8. Battery voltage: 12.4 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Hayden Road Golf
Date	01-31-02
Time	0945
Serviced By:	(MW) (MW)

Y	Data Downloaded to DTU?

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Not needed

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden @ 9 & F			DATE	02-06-02
ARRIVAL TIME	0933	DEPARTURE TIME	0940	SERVICED BY	Glen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check station, restart program, turn radio & cell phone on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Golf			DATE	02-12-02
ARRIVAL TIME	0839	DEPARTURE TIME	0844	SERVICED BY	(Pum)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, date and time correct.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Golf			DATE	02-19-02
ARRIVAL TIME	0915	DEPARTURE TIME	0937	SERVICED BY	Tuen
SAMPLER	SIGMA	900		STATION CONDITION:	Covered
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	14.5 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Battery at 14.5, no cell phone, radio. perform BIST test to lower power. check regulator, fuse blown. Replace fuse, cell phone & radio back on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden c Golf			DATE	02-25-02
ARRIVAL TIME	1008	DEPARTURE TIME	1016	SERVICED BY	Reen
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	14.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, Battery, cell phone and radio turned back on. Working. check date and time correct. Run pump to lower voltage to 13.2. Grass and trash being cut and removed by golf club people. I need help to lift trash rack to inspect sensors. looks clear at this time. Leaves too much being blown around. Return on trip back and operate pump at 1058

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden @ Golf			DATE	03-04-02
ARRIVAL TIME	0826	DEPARTURE TIME	0831	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, cell phone and radio on
Date and time correct. Drain open

STORM EVENT LOG SHEET

#4

1. Site: HAYDEN & golf course Your Name: SIEGFRIED - MICHAELS

2. Date: 3-8-02 Time: 01.45

SAMPLER PARAMETERS

3. Rainfall: .05 in

4. Flow: .19 cfs

5. Level: 6.177 in

6. Velocity: .20 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

8. Battery voltage: 12.8 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Hayden @ Dolf
Date	03-11-02
Time	11:20
Serviced By:	(Pam)

Y	dell #4	**Data Downloaded to DTU?**

no samples taken. 0.05 rain recorded

ReStart program

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hugeler Golf			DATE	03-18-02
ARRIVAL TIME	1013	DEPARTURE TIME	1017	SERVICED BY	Pan
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, cell phone & radio on

Date and time correct

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Hayden Road			DATE	March 25, 02
ARRIVAL TIME	0825	DEPARTURE TIME	0830	SERVICED BY	PWW
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER:	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Date and time correct
cell phone and radio "on"

Thunderbird

FCD/USGS STORMWATER O&M LOG SHEET

SITE	Thunderbird #5			DATE	July 12, 01
ARRIVAL TIME	0910	DEPARTURE TIME	0920	SERVICED BY	Reen
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Dust Floor of Sampler with Diatomaceous earth for pest control.

2

3

FCD/USGS STORMWATER O&M LOG SHEET

SITE	Thunderbird #5			DATE	7/23/01
ARRIVAL TIME	1005	DEPARTURE TIME	1015	SERVICED BY	[illegible]
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	check setup, switch, phone
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Put bottles in sampler, maintenance book, leave on halt

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STORM EVENT LOG SHEET

1. Site: Thunderbird Your Name: Sutton

2. Date: 7-30-01 Time: 3:25A

SAMPLER PARAMETERS

3. Rainfall: .55 **in**

4. Flow: Ø **cfs**

5. Level: Ø **in**

6. Velocity: .92 **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

Water in bottom of Base, Partial Composites, No Grabs

8. Battery voltage: 13.0 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Thunderbird
Date	8/1/01
Time	920
Serviced By:	RCW TJS

Disconnect cell phone

yes	Data Downloaded to DTU?

cell #4 Site 050 Rain 155 Run Dist arm test, Passed. water in base, none in bottles. file# 08011008.000

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

Disconnect cell phone

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

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

STORMWATER O&M LOG SHEET

SITE	Thunderbird		DATE	8/6/01	
ARRIVAL TIME	0955	DEPARTURE TIME	1005	SERVICED BY	Rey
SAMPLER	SIGMA OR ISCO		MODEL NUMBER	800	900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	13.2 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Check site, Battery, power switch for cell phone.

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Date: 8/11/00

STORM EVENT LOG SHEET

#5

1. Site: T-Bird + Scottsdale Your Name: Siegfried + Michael C

2. Date: 8-9-01 Time: 0445

SAMPLER PARAMETERS

3. Rainfall: .47 in

4. Flow: ~~0~~ cfs

5. Level: .508 in

6. Velocity: .15 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Sampler filled tub full of water
Distribution arm not working correctly

8. Battery voltage: 11.8 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Site	Thunderbird		
Date	8-9-01	**Time**	10:30A
Serviced By:	Sutton, Siegfried, Naud III		

YES	**Data Downloaded to DTU?**

Cell #5 Scottsdale #1 DTU

1. Halt program file#08091111.000
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Press the Purge Key on 800 models or the Manual key on 900 models.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

Composites filled base not jars, Decon, Download Data, disconnect cell phone, Halt Program

STORMWATER O&M LOG SHEET

SITE	Thunderbird			DATE	8/12/01
ARRIVAL TIME	340	DEPARTURE TIME	345	SERVICED BY	Allen
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	13.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Re Start program. check battery and leave program running.

2

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STORMWATER O&M LOG SHEET

SITE	Thunderbird			DATE	8/13/01
ARRIVAL TIME	440	DEPARTURE TIME	445	SERVICED BY	Alex
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 change #'s remove one and change to Pager & Modem

2

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Date: 8/11/00

STORMWATER O&M LOG SHEET

SITE	Thunderbird			DATE	8/16/01
ARRIVAL TIME	1040	DEPARTURE TIME	1055	SERVICED BY	[illegible]
SAMPLER	SIGMA OR ISCO			MODEL NUMBER	800 900 other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	YES NO	13.8 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	YES NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	Unable to get signal light.
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 check body, phone and power, unable to locate problem with signal light

2 coming out will have Dave check it next week. # Note: Todd reminded

3 me about the phone lines, okay

Date: 8/11/00

EQUIPMENT CLEANING CHECKLIST

.17" TOTAL Rain

Site	Thunderbird 13.1 volts		
Date	8-17-01	Time	1320
Serviced By:	Sutton		

YES **Data Downloaded to DTU?**

Cell #1 Scottsdale #1 DTU

1. **Halt program** file 08171223.000
2. **Connect extension** tubing to the distributor tubing on the underside of the sampler.
3. **Press the Purge** Key on 800 models or the Manual key on 900 models.
4. **On 900 models**, press the Pump Operation key and then the select Purge.
5. **Follow the steps** below and check each as it is done.

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

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

1/4 jar composited, Sampler deconed, data downloaded, Sampler halted for 72 HRS, cell phone not disconnected. Need to restart early Monday Morning a.m.

STORMWATER O&M LOG SHEET

SITE	Thunderbird			DATE	8/20/01
ARRIVAL TIME	1055	DEPARTURE TIME	1105	SERVICED BY	Alex
SAMPLER		SIGMA OR ISCO		MODEL NUMBER	800 (900) other

EQUIPMENT CHECKED		COMMENTS
BATTERY VOLTAGE OK	(YES) NO	13.5 volts
SOLAR PANEL CLEAN	YES NO	
CABLES AND CONNECTIONS GOOD	(YES) NO	
CELLULAR ANTENNA	YES NO	
PHONE TONE	YES NO	
RAINGAGE (screen, funnel, tipping bucket)	YES NO	
SAMPLE TUBING (intake, pump, distributor)	YES NO	
CLEANED SAMPLE TUBING (tap, liquinox, tap, nitric, DI)	YES NO	
CALIBRATED DEPTH SENSOR	YES NO	depth (in)
CALIBRATED SAMPLE VOLUME	YES NO	ml

SPECIFY ITEMS REMOVED/REPLACED/REPAIRED/INSTALLED. INCLUDE SERIAL NO IF SAMPLER OR PT INSTALLED/REMOVED.

1 Change Program to modem + Pagers.

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WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird			DATE	9/3/01
ARRIVAL TIME	1115	DEPARTURE TIME	1125	SERVICED BY	Glen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	14.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS 0.01 Rain recorded, Left running

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird			DATE	9/4/01
ARRIVAL TIME	1035	DEPARTURE TIME	1045	SERVICED BY	[illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: (Y) / N DTU II # 1 call 5

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

NOTES / ACTIONS Copy data, Re Start program.
file 09041119.000

EQUIPMENT CLEANING CHECKLIST

Site	Thunderbird		
Date	9-6-01	Time	A 0925 / D 0930
Serviced By:	SLP Rem		

check and connect time!

No	Data Downloaded to DTU?

Data copied 9/4/01 Re Start program

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

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird			DATE	9/12/01
ARRIVAL TIME	1015	DEPARTURE TIME	1025	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	14.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS No power to phone.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird			DATE	9/13/01
ARRIVAL TIME	0822	DEPARTURE TIME	8 35	SERVICED BY	Ram
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check wires, found fuse, test, fuse blowing

most likely same problem at Hayden

Fuse 750 mA

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird			DATE	9/13/01
ARRIVAL TIME	1430	DEPARTURE TIME	1445	SERVICED BY	RCW
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Install new modified 750mL fuse. Halt program change Rain trigger from 0.05 to 0.10. Restart program

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Rd			DATE	9/19/01
ARRIVAL TIME	0947	DEPARTURE TIME	0955	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: (Y) / N Cell #5

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS 0.00 Rain in Sampler. check date and time. Cell phone on, copy data leave program running. file # 09190948.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Rd			DATE	09/25/01
ARRIVAL TIME	0815	DEPARTURE TIME	0820	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check site, cell phone on, leave program running.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	10/01/01
ARRIVAL TIME	0920	DEPARTURE TIME	0930	SERVICED BY	[illegible] [illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.00 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Review program change to winter hours, 1600
Cell phone on, Restart program at 0924.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	10/3/01
ARRIVAL TIME	0900	DEPARTURE TIME	0905	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check station Battery Voltage. Cell phone on 3 days of clouds, Storm chance tonight 20%
Station okay.

STORM EVENT LOG SHEET

1. Site: THUNDER BIRD #5 Your Name: Siegfried-Arnold

2. Date: 10-6-01 Time: 2347

SAMPLER PARAMETERS

3. Rainfall: .01 in

4. Flow: Q cfs

5. Level: 0.947 in

6. Velocity: Q ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

8. Battery voltage: 13.0 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	10/09/01
ARRIVAL TIME	0905	DEPARTURE TIME	0920	SERVICED BY	(RWM)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: (Y) / N Cell #1

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Rain Recorded 0.02. Cell phone on. Copy data, check drain, okay Restart program. To restart, Sampler asked for password! 1st time. Enter and restart. 09:17 OCT 9, 01 Station work correctly

file # 10090913.000

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	10/15/01
ARRIVAL TIME	0905	DEPARTURE TIME	0915	SERVICED BY	RLM
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Rain 0.00 cell phone and radio "on". Drain clear, some water in main channel.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	10/18/01
ARRIVAL TIME	0958	DEPARTURE TIME	1005	SERVICED BY	Reen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION?	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Confirm cell phone working. Okay. Drain clean, channel has some water.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	10/23/01
ARRIVAL TIME	0859	DEPARTURE TIME	0905	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check site, water in channel, not drain.
cell phone on, Signal good. Everything okay.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird [redacted]			DATE	10/30/01
ARRIVAL TIME	0855	DEPARTURE TIME	0900	SERVICED BY	Reen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, Sampler time okay. Cell phone and radio on. Drain clear.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Rd			DATE	11/05/01
ARRIVAL TIME	0845	DEPARTURE TIME	0855	SERVICED BY	(Rus) (SDB)
SAMPLER	(SIGMA)	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / (N)

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

NOTES / ACTIONS check station Rainfall 0.03 Station Still active
Cell phone and radio on.

EQUIPMENT CLEANING CHECKLIST

file# 11061005.000

Site	Thunderbird Rd

Date	11/06/01	Time	1008

Serviced By:	Ren Need to check program!

Rain 0.28 No crabs taken

Yes	cell #5	Data Downloaded to DTU?

Shut down 72 hours turn off radio, phone and sampler

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Remove bottles for cleaning, decon sampler at later date.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Rd			DATE	11/07/01
ARRIVAL TIME	0800	DEPARTURE TIME	0825	SERVICED BY	Pete
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Service Raingauge and Solar panels.
Found tipping bucket off level, correct. clean Solar panel
Check program, matches others

EQUIPMENT CLEANING CHECKLIST

Site	Thunderbird Rd
Date	11/08/01
Time	0855 Start 0901
Serviced By:	Pum (SA)

Re Start Station, 72 hours between Storms Ends

No done	Data Downloaded to DTU?

1. On 900 Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Rd			DATE	11/13/01
ARRIVAL TIME	09/6	DEPARTURE TIME	0920	SERVICED BY	Ren
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Battery, cell phone and radio on. Ready

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	11/19/01
ARRIVAL TIME	0955	DEPARTURE TIME	1000	SERVICED BY	Reen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

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

NOTES / ACTIONS check station, Battery radio & cell phone "on"
check station date and time; connect

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Rd			DATE	10/28/01
ARRIVAL TIME	1235	DEPARTURE TIME	1245	SERVICED BY	(Pam)
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Rain Recorded 0.01 Battery good cell phone and radio on. Left running.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	12/03/01
ARRIVAL TIME	0905	DEPARTURE TIME	0910	SERVICED BY	Perry
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, Battery, cell phone & radio On
ReStart program, Sampler read 0.01.

STORM EVENT LOG SHEET

1. Site: THUNDERBIRD Your Name: T. Siegfried

2. Date: 12-4-01 Time: 0905

SAMPLER PARAMETERS

3. Rainfall: .27 in

4. Flow: Q cfs

5. Level: 1.093 in

6. Velocity: .07 ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? Yes or No? Describe problems.
½ Bottle filled
Program left running
Iced composite

8. Battery voltage: 12.6 volts

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ cfs

11. pH _____ su

12. Temperature _____ deg. C

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? Yes or No?

14. Preservatives added to bottles? Yes or No?

STORM EVENT LOG SHEET

1. Site: Thunderbird Your Name: [illegible]

2. Date: 12/04/01 Time: 255 pm

SAMPLER PARAMETERS

3. Rainfall: .60 **in**

4. Flow: _____ **cfs**

5. Level: _____ **in**

6. Velocity: _____ **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Remove 1 ½ bottles for composite

8. Battery voltage: _____ **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

file # 12051306.000

Site	Thunderbird		
Date	12/5/01	**Time**	120 pm
Serviced By:	Ben		

Clean lines, unit, Replace 2 bottles Shut off cell/phone & radio

☑ **Data Downloaded to DTU?**

cell #10 * Break down pump, remove pebbles/sand and cut line to fit, remove bend in pump hose.

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

☑ **Pump approximately 1/2 gallon tap water through tubing.**

☑ **Pump approximately 1/2 gallon of Liquinox through tubing.**

☑ **Pump a large quantity of tap water through tubing.**

☑ **Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.**

☑ **Pump approximately 1/2 - 1 gallon deionized water through tubing.**

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird			DATE	12/06/01
ARRIVAL TIME	0933	DEPARTURE TIME	0940	SERVICED BY	Alex
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION?	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Turn cell phone and radio on

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	12/10/01
ARRIVAL TIME	1150	DEPARTURE TIME	1155	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION:	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Stop and restart program, cell & radio on

STORM EVENT LOG SHEET

1. Site: Thunderbird Your Name: Sutton/Naud III

2. Date: 12-11-01 Time: 1520

SAMPLER PARAMETERS

3. Rainfall: .03 in

4. Flow: Ø cfs

5. Level: 1.174 in

6. Velocity: Ø ft/sec

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
Not enough rainfall to operate equipment
No grabs/No Composites

8. Battery voltage: 12.5 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs Ø **cfs**

11. pH Ø **su**

12. Temperature Ø **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

file # 12120923.000

Site	Thunderbird Road
Date	12/12/01
Time	
Serviced By:	(Rich) (S.L.) (Rich III)

Restart program

Yes	#15	**Data Downloaded to DTU?**

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	12/13/01
ARRIVAL TIME	0914	DEPARTURE TIME	0916	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION	Good
SAMPLER	ISCO	6712		STATION CONDITION	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Rainfall 0.00 Station active

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunder bird Road			DATE	12/17/01
ARRIVAL TIME	0942	DEPARTURE TIME	0949	SERVICED BY	RCM
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, check cell phone and radio. I find at last few visits, cell phone and radio off. I have confirmed turn on of equipment. I will do test later in the week, leave off for now.

RCM

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird			DATE	12/18/01
ARRIVAL TIME	1:05	DEPARTURE TIME	1:35	SERVICED BY	[illegible]
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.2 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Turn cellphone & radio "on", will continue to monitor. Cell phone & radio shutting down. Unknown reason at this time. Inspect wiring, check 9 volt battery in regulator box. Everything appear okay. View for ½ hour; no problem. Will recheck later or tomorrow.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	12/20/01
ARRIVAL TIME	0903	DEPARTURE TIME	0910	SERVICED BY	RCW
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check station, battery, cell phone and radio on, has not shut down, looking good at this time

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	12/24/01
ARRIVAL TIME	0825	DEPARTURE TIME	0830	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, cell phone and radio remain on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	01/07/02
ARRIVAL TIME	0912	DEPARTURE TIME	0920	SERVICED BY	RAW
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, cell phones, radio off? turn back on

will monitor this week.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	01-14-02
ARRIVAL TIME	0924	DEPARTURE TIME	0930	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.8 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Rain Recorded Still Sampling Started, but bottles had only small amount of run off. Empty bottles, 2, Return to clean Sampler Cell phone & radio on. Reset program when I return.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET file #01151258.000

SITE	Thunderbird Road			DATE	01-15-02
ARRIVAL TIME	1.00	DEPARTURE TIME	1:20	SERVICED BY	Ryan mac
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Decon Sampler and restart program.
Cell phone / radio "On"

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	01-16-02
ARRIVAL TIME	0830	DEPARTURE TIME	0850	SERVICED BY	Ren
SAMPLER	SIGMA	900		STATION CONDITION:	
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y N

STATION DATA COPIED: Y N

	CHECKED / SERVICED / CALIBRATED	CONDITION:	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Review program, found that Program Locked, was on, but off at other stations. changed program to "Program Locked off". Reset sampler, will monitor. cell phone and radio "on".

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	01-17-02
ARRIVAL TIME	1055	DEPARTURE TIME		SERVICED BY	Pen Mac
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.6 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS 1106 Shut off sampler, Disconnect all sensors. Reconnect all sensors, turn sampler on. Test Distributor arm, Passed. check program, all is complete as in other samplers. cell phone & radio on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	01-22-02
ARRIVAL TIME	1136	DEPARTURE TIME	1140	SERVICED BY	Pam
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	12.7 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS check Station, dell & radio "on"

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	01-28-02
ARRIVAL TIME	0956	DEPARTURE TIME	1005	SERVICED BY	(Ram)
SAMPLER	SIGMA	900		STATION CONDITION:	good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: (Y) N

STATION DATA COPIED: Y (N)

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

NOTES / ACTIONS check Station, bottles, drain clear
cell phone & radio was off, turn back on
Time and date correct.
Turn controller off, Shut off Phone & radio, switch
back on, cell phone and radio back on.

EQUIPMENT CLEANING CHECKLIST

Site	Thunderbird Road		
Date	01-31-02	**Time**	1010 - 1020
Serviced By:	Yuen Mao		

No Samples, Rain 0.07

Yes	cell 5	**Data Downloaded to DTU?**

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

EQUIPMENT CLEANING CHECKLIST

Site	Thunderbird Road
Date	01-31-02
Time	1010
Serviced By:	Ryan Mac

Y	Data Downloaded to DTU?

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

Not Needed	Pump approximately 1/2 gallon tap water through tubing.
	Pump approximately 1/2 gallon of Liquinox through tubing.
	Pump a large quantity of tap water through tubing.
	Pump a small amount of Nitric Acid (pH 3 - 4) through tubing.
	Pump approximately 1/2 - 1 gallon deionized water through tubing.

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

STORM EVENT LOG SHEET

1. Site: Thunderbird Road Your Name: Ron Mac

2. Date: 01-31-02 Time: 1010 = 1020

SAMPLER PARAMETERS

3. Rainfall: 0.07 **in**

4. Flow: _____ **cfs**

5. Level: _____ **in**

6. Velocity: _____ **ft/sec**

O&M PARAMETERS Copy data to cell #5 on 1

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.
No samples, not enough Rain

8. Battery voltage: 12.6 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	02-06-02
ARRIVAL TIME	0955	DEPARTURE TIME		SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.3 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Re Start sampler program. turn cell phone and radio on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	02-12-02
ARRIVAL TIME	0903	DEPARTURE TIME	0907	SERVICED BY	Pem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery date and time, connect Low flow in Channel, not in our pipe. Cell phone and radio on.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	02-19-02
ARRIVAL TIME	0950	DEPARTURE TIME	0955	SERVICED BY	Fleen
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

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

NOTES / ACTIONS Check Station, Battery, Cellphone & radio, date and time correct.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbirds Road			DATE	02-25-02
ARRIVAL TIME	1028	DEPARTURE TIME	1045	SERVICED BY	Ken
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check station, battery. Radio and cell phone on Date and time correct. Clean and remove trash and rocks from sensors and inside of drain. Clean around top of drain openings. Main channel has sediment, trash build up Does not affect our equipment

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	03-04-02
ARRIVAL TIME	0850	DEPARTURE TIME		SERVICED BY	Green
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	14.0 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Battery, date and time connect. Cell phone & radio NOT working. Perform test. Found fuse blown again. Need to pick up additional fuse for site. change out fuse, cell phone and radio back up. Unable to locate reason for fuses blowing out!

3/4 A. 125V C276

STORM EVENT LOG SHEET

#5

1. Site: Scotts. THUNDERBIRD Your Name: Siegfried - Michaels

2. Date: 3-8-02 Time: 0200

SAMPLER PARAMETERS

3. Rainfall: .06 **in**

4. Flow: Q **cfs**

5. Level: .834 **in**

6. Velocity: Q **ft/sec**

O&M PARAMETERS

7. Did sampling equipment operate during event? **Yes or No?** Describe problems.

8. Battery voltage: 13.0 **volts**

9. Power **On or Off?** If power off (Mesa), reset circuit breaker and check/replace fuse if necessary.

FIELD PARAMETERS

10. Discharge (flow) at time of grabs _____ **cfs**

11. pH _____ **su**

12. Temperature _____ **deg. C**

GRAB SAMPLES Take grabs from discharge only!

13. Grab samples taken? **Yes or No?**

14. Preservatives added to bottles? **Yes or No?**

EQUIPMENT CLEANING CHECKLIST

Thunderbird mo 3/13/02

Site	~~Comeback~~ Road
Date	03-01-02
Time	1146
Serviced By:	Ren

cell # 5 No Samples, 0.06 rain recorded Restart program

Y	**Data Downloaded to DTU?**

1. On 900 : Sigma Halt program. On Isco Stop program.
2. Connect extension tubing to the distributor tubing on the underside of the sampler.
3. Isco 6712 models, hit stop key and follow program.
4. On 900 models, press the Pump Operation key and then the select Purge.
5. Follow the steps below and check each as it is done.

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

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

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	03-18-02
ARRIVAL TIME	1025	DEPARTURE TIME	1030	SERVICED BY	Rem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK: Y / N

STATION DATA COPIED: Y / N

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	13.4 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	YES NO	GOOD FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, cellphone & radio on

Date and time correct

Drain dry.

WATER QUALITY SAMPLER MAINTENANCE LOG SHEET

SITE	Thunderbird Road			DATE	March 25, 02
ARRIVAL TIME	0851	DEPARTURE TIME	0900	SERVICED BY	Jeem
SAMPLER	SIGMA	900		STATION CONDITION:	Good
SAMPLER	ISCO	6712		STATION CONDITION:	

ENTRY MADE STATION LOG BOOK (Y) / N

STATION DATA COPIED: Y / (N)

	CHECKED / SERVICED / CALIBRATED	CONDITION	REPLACED?	NEEDS REPLACING?	NOTES
BATTERY VOLTAGE	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	13.1 volts
SOLAR PANEL	YES NO N/A	GOOD FAIR POOR	YES NO	YES NO	
CONNECTION CABLES	(YES) NO	(GOOD) FAIR POOR	YES NO	YES NO	
RAINGAUGE	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	length (feet)
SAMPLER PUMP TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
SAMPLER DISTRIBUTOR TUBING	YES NO	GOOD FAIR POOR	YES NO	YES NO	
DEPTH SENSOR	YES NO	GOOD FAIR POOR	YES NO	YES NO	depth (inch)
CALIBRATE DEPTH SENSOR	YES NO	GOOD FAIR POOR	N/A	N/A	
CALIBRATE SAMPLE VOLUME	YES NO	GOOD FAIR POOR	N/A	N/A	mL
CLEANED SAMPLE INTAKE TUBING	YES NO	GOOD FAIR POOR	N/A	N/A	

NOTES / ACTIONS Check Station, Drain has flow, is not going into our drain and sensors cell phone and radio on Date and time connect.

Appendix A

Del Mar Analytical

2852 Alton Ave., Irvine, CA 92606 (949) 261-1022 FAX (949) 261-1228
1014 E. Coldby Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

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

Client Project ID: None Specified

Report Number: PLB0355

Sampled: 02/21/02
Received: 02/21/02
Issued: 2/28/02

CASE NARRATIVE

LABORATORY NUMBER	SAMPLE DESCRIPTION	SAMPLE MATRIX
PLB0355-01	Grab	Water

SAMPLE RECEIPT:	Samples were received intact, on ice, and with chain of custody documentation. Sample was received at 16°C.
HOLDING TIMES:	Holding times were met.
PRESERVATION:	Samples requiring preservation were verified prior to sample analysis.
OBSERVATIONS:	No significant observations were made.
SUBCONTRACTED:	Analyses was subcontracted to Del Mar Analytical - 2852 Alton Avenue, Irvine, CA 92606 (AZ0428) and ES Environmental Services/Severn Trent - 333 S. Old Price Road, Chandler, AZ 85248. 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.

Del Mar Analytical

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

Client Project ID: None Specified

Report Number: PLB0355

Sampled: 02/21/02
Received: 02/21/02

POLYCHLORINATED BIPHENYLS (EPA 3510C/8082)

Analyte	Method	Batch	Reporting Limit ug/l	Sample Result ug/l	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: PLB0355-01 (Grab - Water)								
Aroclor 1016	EPA 3510/8082	I2B2255	1.0	ND	1.02	2/22/02	2/23/02	
Aroclor 1221	EPA 3510/8082	I2B2255	1.0	ND	1.02	2/22/02	2/23/02	
Aroclor 1232	EPA 3510/8082	I2B2255	1.0	ND	1.02	2/22/02	2/23/02	
Aroclor 1242	EPA 3510/8082	I2B2255	1.0	ND	1.02	2/22/02	2/23/02	
Aroclor 1248	EPA 3510/8082	I2B2255	1.0	ND	1.02	2/22/02	2/23/02	
Aroclor 1254	EPA 3510/8082	I2B2255	1.0	ND	1.02	2/22/02	2/23/02	
Aroclor 1260	EPA 3510/8082	I2B2255	1.0	ND	1.02	2/22/02	2/23/02	
Surrogate: Decachlorobiphenyl (30-120%)				*99 %*				

DEL MAR ANALYTICAL, IRVINE (AZ0428)

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: Todd Williams

Client Project ID: None Specified

Report Number: PLB0355

Sampled: 02/21/02
Received: 02/21/02

METHOD BLANK/QC DATA

POLYCHLORINATED BIPHENYLS (EPA 3510C/8082)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: I2B2255 Extracted: 02/22/02										
Blank Analyzed: 02/23/02 (I2B2255-BLK1)										
Aroclor 1016	ND	1.0	ug/l							
Aroclor 1221	ND	1.0	ug/l							
Aroclor 1232	ND	1.0	ug/l							
Aroclor 1242	ND	1.0	ug/l							
Aroclor 1248	ND	1.0	ug/l							
Aroclor 1254	ND	1.0	ug/l							
Aroclor 1260	ND	1.0	ug/l							
Surrogate: Decachlorobiphenyl	*0.459*		*ug/l*	*0.500*		*92*	*30-120*			
LCS Analyzed: 02/23/02 (I2B2255-BS1)										
Aroclor 1016	**2.89**	1.0	ug/l	4.00		72	45-115			
Aroclor 1260	**3.36**	1.0	ug/l	4.00		84	55-115			
Surrogate: Decachlorobiphenyl	*0.454*		*ug/l*	*0.500*		*91*	*30-120*			
LCS Dup Analyzed: 02/23/02 (I2B2255-BSD1)										
Aroclor 1016	**3.07**	1.0	ug/l	4.00		77	45-115	6	25	Q8
Aroclor 1260	**3.57**	1.0	ug/l	4.00		89	55-115	6	20	Q8
Surrogate: Decachlorobiphenyl	*0.471*		*ug/l*	*0.500*		*94*	*30-120*			*Q8*

Linda Eshelman
Project Manager

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Del Mar Analytical

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9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851

Maricopa County -Flood Control District 2801 West Durango Street Phoenix, AZ 85009 Attention: Todd Williams	Client Project ID: None Specified Report Number: PLB0355	Sampled: 02/21/02 Received: 02/21/02

METHOD BLANK/QC DATA

DATA QUALIFIERS AND DEFINITIONS

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

ND Analyte NOT DETECTED at or above the reporting limit

NR Not reported.

RPD Relative Percent Difference

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.

SEVERN TRENT SERVICES

Severn Trent Services, Inc.

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

REC'D MAR 18 2002

March 2, 2002

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

Project Identification: PLB0355-MCFC

Attention: Linda Eshelman

Dear Linda Eshelman:

Severn Trent Services received 3 samples on 02/21/02 for the analysis represented in the following report; the analysis was subcontracted to Precision Analytical Laboratories.

Their report includes the following information:

- Case Narrative.
- Analytical Report: includes test results, report limit, any applicable data qualifier, units, dilution factor (DF), sample date and time, and date analyzed.
- QC Summary Report.
- Communication letter

This communication may contain information that is privileged, confidential, or otherwise exempt from disclosure under applicable law and is intended only for the individual or entity to whom it is directed. Dissemination, distribution, or copying of this communication by anyone other than the intended recipient, is prohibited. If you have received this communication in error, please notify us immediately and destroy this message and all attachments thereto. If you have any questions regarding these test results, please do not hesitate to call.

Sincerely,

Steve Rot
Lab Director

This report shall not be reproduced, except in its entirety, without the written approval of Severn Trent Environmental Services, Inc.

AEROTECH LABORATORIES, INC.

February 25, 2001

Severn Trent Services
3333 S. Old Price Road
Chandler, AZ 85248
Attn: Steve Rot

Re: MCFC
Lab Order #0-202-0781

Dear Mr. Rot:

This letter is in regard to the fecal streptococcus analysis you requested on February 21, 2002, for sample "C02-614" of the MCFC project.

At the time of your request, we did not have the required media in stock, so we were unable to perform the fecal streptococcus analysis. In order to meet the 30-hour holding time, we analyzed the sample for enterococcus, which includes the same organisms found in the fecal streptococcus group except for *S. boyis* and *S. equinus*. In addition, we performed the dilutions requested on your chain-of-custody form. We have since ordered the media and will analyze the sample for fecal streptococcus outside of hold time per your request.

Please contact me if I can provide any further assistance to you in this matter.

Sincerely,

Angela Hetherington

Angela Hetherington
Project Manager

2020 West Lone Cactus Drive • Phoenix, Arizona 85027 • 623 780-4800 • 1-800-651-4802 • Fax 623 780-7695 • www.aerotechlabs.com

Precision Analytical Laboratories, Inc.
A Division of Aerotech Laboratories, Inc.

March 01, 2002

Steve Rot
Severn Trent Environmental Services
3333 S. Old Price Road
Chandler, AZ 85248

RE: MCFC

Dear Steve Rot: Order No.: 02020781

Precision Analytical Laboratories, Inc. received 1 sample on 2/21/2002 for the analyses presented in the following report.

This report includes the following information:
- Case Narrative.
- Analytical Report: includes test results, report limit (Limit), any applicable data qualifier (Qual), units, dilution factor (DF), and date analyzed.
- QC Summary Report.

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Sincerely,

Lee Ann Heathcote

Lee Ann Heathcote
Project Manager

1725 W. 17th St. • Tempe, AZ 85281 • Toll Free 866 772-5227 • 480 967-1310 • Fax 480 967-1019
4455 S. Park Ave., Ste. 110 • Tucson, AZ 85714 • 520 807-3801 • Fax 520 807-3803 • www.palabs.com

Precision Analytical Laboratories, Inc. **Date:** *01-Mar-02*

CLIENT: Severn Trent Environmental Services
Project: MCFC
Lab Order: 02020781

CASE NARRATIVE

Data Qualifiers:

Listed below are data qualifiers which may be used in your analytical report to explain any analytical or quality control issues. If one or more of the following data qualifiers is associated with your analytical or quality control data it will be noted in your report under the column header "QUAL". Any quality control deficiencies that cannot be adequately described by these qualifiers will be addressed in the analytical comments section of this case narrative.

B1 Target analyte detected in method blank at or above the method reporting limit.
D1 Sample required dilution due to matrix interference.
D2 Sample required dilution due to high concentration of target analyte.
D3 Sample dilution required due to insufficient sample.
D4 Minimum reporting level (MRL) adjusted to reflect sample amount received and analyzed.
E1 Concentration estimated. Analyte exceeded calibration range. Reanalysis not possible due to insufficient sample.
E2 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to sample matrix.
E3 Concentration estimated. Analyte exceeded calibration range. Reanalysis not performed due to holding time requirements.
E4 Concentration estimated. Analyte was detected below laboratory minimum reporting level (MRL).
E6 Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.
E7 Concentration estimated. Internal standard recoveries did not meet laboratory acceptance criteria.
H1 Sample analysis performed past holding time. See case narrative.
H2 Initial analysis within holding time. Reanalysis for the required dilution was past holding time.
H3 Sample was received and analyzed past holding time.
H4 Sample was extracted past required extraction holding time, but analyzed within analysis holding time. See case narrative.
K1 The sample dilutions set-up for the BOD analysis did not meet the oxygen depletion criteria of at least 2 mg/L. The reported result is an estimated value.
K2 The sample dilutions set up for the BOD analysis failed to meet the criteria of a residual dissolved oxygen of at least 1 mg/L. The reported result is estimated.
L1 The associated blank spike recovery was above laboratory acceptance limits. See case narrative.
L2 The associated blank spike recovery was below laboratory acceptance limits. See case narrative.

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CLIENT: Severn Trent Environmental Services
Project: MCFC
Lab Order: 02020781

CASE NARRATIVE

M1 Matrix spike recovery was high, the method control sample recovery was acceptable.
M2 Matrix spike recovery was low, the method control sample recovery was acceptable.
M3 The accuracy of the spike recovery value is reduced since the analyte concentration in the sample is disproportionate to spike level. The method control sample recovery was acceptable.
M4 The analysis of the spiked sample required a dilution such that the spike concentration was diluted below the reporting limit. The method control sample recovery was acceptable.
M5 Analyte concentration was determined by the method of standard addition (MSA).
N1 See case narrative.
Q1 Sample integrity was not maintained. See case narrative.
Q2 Sample received with head space.
Q3 Sample received with improper chemical preservation.
Q5 Sample received without chemical preservation, but preserved by the laboratory.
Q6 Sample was received above recommended temperature.
Q7 Sample inadequately dechlorinated.
Q8 Insufficient sample received to meet method QC requirements. QC requirements satisfy ADEQ policies 0154 and 0155.
Q10 Sample received in inappropriate sample container.
Q11 Sample is heterogeneous. Sample homogeneity could not be readily achieved using routine laboratory practices.
R2 RPD exceeded the laboratory control limit. See case narrative.
R3 Sample RPD between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000B, the higher value was reported.
R4 RPD exceeded the method control limit. Recovery met acceptance criteria.
R5 MS/MSD RPD exceeded the laboratory control limit. Recovery met acceptance criteria.
S2 Surrogate recovery was above laboratory and method acceptance limits.
S4 Surrogate recovery was above laboratory and method acceptance limits. No target analytes were detected in the sample.
S6 Surrogate recovery was below laboratory and method acceptance limits. Reextraction and/or reanalysis confirms low recovery caused by matrix effect.
S7 Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.
S9 The analysis of the sample required a dilution such that the surrogate concentration was diluted below the laboratory acceptance criteria. The method control sample recovery was acceptable.
S10 Surrogate recovery was above laboratory and method acceptance limits. See case narrative (N1).
T2 Cited ADHS licensed method does not contain this analyte as part of method compound list.

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CASE NARRATIVE

T4 Tentatively identified compound. Concentration is estimated and based on the closest internal standard.

V1 CCV recovery was above method acceptance limits. This target analyte was not detected in the sample.

V2 CCV recovery was above method acceptance limits. This target analyte was detected in the sample. The sample could not be reanalyzed due to insufficient sample.

V5 CCV recovery after a group of samples was above acceptance limits. This target analyte was not detected in the sample. Acceptable per EPA Method 8000B.

Samples were analyzed using methods outlined in references such as:

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.

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

40 CFR, Part 136, Revised 1995. Appendix A to Part 136 - Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater.

NIOSH Manual of Analytical Methods, Fourth Edition, 1994.

Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition, 1999.

Precision Analytical Laboratories, Inc (PAL) holds the following certifications:
Arizona (certification no. AZ0610).
PAL - Tucson laboratory, Arizona certification number: AZ0609.

PAL participates in the AIHA Proficiency Analytical Testing (PAT) program for metals, solvents, and formaldehyde.

Analytical Comments:

All method blanks and laboratory control spikes met EPA method and/or laboratory quality control objectives for the analyses included in this report.

The sample was analyzed by Aerotech Laboratories, Inc. in Phoenix, Arizona.

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Precision Analytical Laboratories, Inc.

A Division of Aerotech Laboratories, Inc.

Precision Analytical Laboratories, Inc.

Date: *01-Mar-02*

CLIENT:	Severn Trent Environmental Services	**Client Sample ID:**	C02-614
Lab Order:	02020781	**Tag Number:**	
Project:	MCFC	**Collection Date:**	2/21/2002 11:40:00 AM
Lab ID:	02020781-01A	**Matrix:**	WATER

Analyses	Result	Limit	Qual	Units	DF	Date Analyzed
MPN FOR FECAL COLIFORMS		**M9221 E**				Analyst: **JM**
Fecal Coliform - MPN	30	2		MPN/100mL	1	2/21/2002 4:50:00 PM
ENTEROCOCCUS BY ENTEROLERT		**ENTEROLERT**				Analyst: **JT**
Enterococcus	ND	1		CFU/ mL	1	2/22/2002 2:45:00 PM

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
B - Analyte detected in the associated Method Blank
* - Value exceeds Maximum Contaminant Level
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

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Del Mar Analytical

1014 E. Cooley Dr., Suite A, Colton, CA 92324 (909) 370-4667 FAX (909) 370-1046
7277 Hayvenhurst, Suite B-12, Van Nuys, CA 91406 (818) 779-1844 FAX (818) 779-1843
9484 Chesapeake Dr., Suite 805, San Diego, CA 92123 (858) 505-8596 FAX (858) 505-9589
9830 South 51st St., Suite B-120, Phoenix, AZ 85044 (480) 785-0043 FAX (480) 785-0851
2520 E. Sunset Rd., Suite 3, Las Vegas, NV 89120 (702) 798-3620 FAX (702) 798-3621

CHAIN OF CUSTODY FORM

Client Name/Address: Flood control Dist 2801 W Durango Rd Phx, AZ 85006

Project/PO Number:

Project Manager: Todd Williams

Phone Number: 602-506-4113

Sampler: Robert NAUD

Fax Number:

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	Fecal Col. form	Fecal strep	PCB's							Special Instructions
Grab		m	5	02-21-02	1140	N	X	X	X		PLR0355-01					

Analysis Required

Relinquished By:	Date /Time:	Received by:	Date /Time:
Robert Naud	1205 - 02-21-02		
Relinquished By:	Date /Time:	Received by:	Date /Time:
			02/21/02 E-S
Relinquished By:	Date /Time:	Received in Lab by:	Date /Time:
	02/21/02	Ernesto Salgado	1205 02/21/02

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

Sample Integrity: (Check)
intact ✓ on ice ✓

Note: By relinquishing samples to Del Mar Analytical, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TEMP 16 °C

Precision Analytical Laboratories, Inc.

[ ] Main Lab- 1725 West 17th Street, Tempe, AZ 85281 (480) 967-1310 FAX (480) 967-1019
[ ] North Phoenix- 2020 West Lone Cactus Drive, Phoenix, AZ 85027 (623) 780-4800 FAX (623) 780-7695
[ ] Tucson- 4455 South Park Avenue, Ste.110, Tucson, AZ 85714 (520) 807-3801 FAX (520) 807-3803
www.palabs.com or call toll-free 1-866-7PALABS (1-866-772-5227)

LAB ID NUMBER: 0-202-0781

Page 1 of 1

Client: SEVERN TRENT SERVICES	E-Mail Address:
Address: 3333 S. ALMA SCHOOL RD	Fax Results: (Y) N
City, State, Zip: CHN, AZ 85248	E-Mail Results: Y N
Contact: STEVE ROT	**TAT Request**
Phone: 480-899-0191	24 Hours 48 Hours
Fax: 480-899-0849	72 Hours 5 Day
Sampler:	Laboratory Approval Required for RUSH Analyses Surcharges May Apply
P.O. Number:	(Standard 10 Day)

Sample Information

Lab #	Sample Type	Sample Identification	Date	Time	Qty	Fecal Coliform MPN	Fecal Strep - MPN
	coming	C02-614	02-21-02	1140	2	X	X

Project Name: MCFC

Project Number:

Instructions/Special Requirements: Please make dilutions to the -5 i.e. .00001 of sample. for both analysis.

Date	Time	Relinquished By:	Company	Received By:	Company
2/21/02	16:45	[signature]	STS	Angela Hetherington	

Del Mar Analytical

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1014 E. Cooley Dr., Suite A, Colton, CA 92324 Ph (909) 370-4667 Fax (909) 370-1046
9484 Chesapeake Drive, Suite 805, San Diego, CA 92123 Ph (619) 505-9596 Fax (619) 505-9689
9830 South 51st Street, Suite B-120, Phoenix, AZ 85044 Ph (480) 785-0043 Fax (480) 785-0851

CHAIN OF CUSTODY FORM
SUBCONTRACT ORDER

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: PLB0355-MCFC

RECEIVING LABORATORY:

ES Envirnmental Services/Severn
3333 S. Old Price Rd
Chandler, AZ 85248
Phone: 480-899-0191
Fax: 480-899-0349

SAMPLE INTEGRITY:

Please complete upon receipt

intact: ☒ Y ☐ N — Initials
on ice: ☒ Y ☐ N — Initials
Temp: °C ☒ Y ☐ N — Initials

Sample Description	Sample Matrix	Sampling Date/Time	Analysis Required	Date Due	Expires	# of Cont.	Sample Bottle Type
PLB0355-01	Water	02/21/02 11:40	Fecal Coliform-O	Standard TAT	02/21/02 16:28	1	☐ Voa ☐ Amber V ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sle ☐ Other
Special Instructions: 6 HR!!							
PLB0355-01	Water	02/21/02 11:40	Fecal Strep-O	Standard TAT	02/21/02 16:28	2	☐ Voa ☐ Amber V ☑ Poly ☐ Glass Jar ☐ Amber ☐ Brass Sle ☐ Other
Special Instructions: 6 HR!!							

C02-614

Relinquished By: 2/21/2 Date/Time: 1435
Received By: Doug Richards 2/21/02 Date/Time: 1435

Relinquished By: Doug Richards 2/21/02 Date/Time: 1455
Received By: [illegible] 022102/ 14:55 Date/Time: