

APPENDIX A

Stormwater Monitoring Report

SBA WATERSHED PROTECTION PROGRAM

Stormwater Monitoring Report

Prepared for:
Alameda County Water District

July 2006

SBA WATERSHED PROTECTION PROGRAM

Stormwater Monitoring Report

Prepared for:
Alameda County Water District

July 2006

225 Bush Street
Suite 1700
San Francisco, CA 94104
415.896.5900
www.esassoc.com

Los Angeles

Oakland

Orlando

Petaluma

Sacramento

Seattle

Tampa

205076



TABLE OF CONTENTS

SBA Watershed Protection Program Stormwater Monitoring Report

I. Introduction and Purpose	1
II. Methodology.....	2
III. Results.....	8
IV. Discussion.....	44
V. Conclusions	47

Appendices

Appendix A	Zone 7 Lab Data and QA/QC Results	A-1
Appendix B	Field Data	B-1
Appendix C	Biovir Lab Pathogen Data & QA/QC Information	C-1

List of Maps

Map 1	SBA Watershed Areas	3
Map 2	Sampling Stations at Bethany Reservoir	4
Map 3	Location of Sampling Station 3.....	5
Map 4	Location of Bethany Reservoir and Aqueduct Sampling Stations	6
Map 5	Location of Sampling Stations around Lake Del Valle.....	7

List of Figures

Figure A	Livermore 24-hour Rainfall Total and Arroyo Valle Mean Daily Flow, 12/21/2005–3/30/2006.....	10
Figure B	Giardia and Cryptosporidium	15
Figure B-1	Cryptosporidium	16
Figure B-2	Giardia	17
Figure C	Bromide.....	18
Figure D	Total Organic Carbon.....	19
Figure E	Turbidity	20
Figure F	Total Dissolved Solids (TDS)	21
Figure G	Nitrate: 3-D View	22
Figure H-1	Nitrite.....	23
Figure H-2	Phosphate	24
Figure H-3	Ammonia	25
Figure H-4	Sulfate	26
Figure I	Sodium.....	27
Figure J	Potassium	28

List of Figures (continued)

Figure K	Fluoride	29
Figure L	Total Alkalinity	30
Figure M	Total Hardness.....	31
Figure N-1	Water Temperature	32
Figure N-2	Dissolved Oxygen	33
Figure N-3	Specific Conductance	34
Figure N-4	pH35	
Figure N-5	Salinity	36
Figure O-1	Total Coliform Results.....	37
Figure O-2	E. coli	38
Figure P	Turbidity and Specific Conductance versus Stream Discharge.....	39
Figure Q	Total Coliform versus Stream Discharge.....	40
Figure R	Giardia and Cryptosporidium versus Stream Discharge	41
Figure S	Relative Contribution of Water Volume to the SBA from Monitored Sources	42
Figure T	Calculated TDS Loading at Lake Del Valle	43

List of Tables

Table A	Sample Dates and Conditions.....	9
Table B	Average Parameter Values	14

SBA WATERSHED PROTECTION PROGRAM

Stormwater Monitoring Report

I. Introduction and Purpose

This report details the findings of stormwater monitoring performed for the South Bay Aqueduct (SBA) Watershed Protection Plan project. The project is funded with a Proposition 13 Watershed Protection Grant from the California State Water Resources Control Board (SWRCB) to the Alameda County Water District (ACWD). Stormwater monitoring was conducted during the winter of 2005-2006. Background, purpose, methods, and quality assurance standards for the stormwater monitoring effort are detailed in two reports, a Stormwater Monitoring Plan and a Quality Assurance Project Plan (QAPP), prepared by ESA and their subcontractor, EOA (ESA and EOA, 2005a; 2005b). Drafts of the two reports were reviewed first by the SBA Contractors (ACWD; the Zone 7 Water Agency of the Alameda County Water Conservation and Flood Control District – Zone 7 Water Agency; and the Santa Clara Valley Water District – SCVWD), and then by the SWRCB. Both documents were approved by the SWRCB prior to the commencement of sampling.

The goals of the project and the specific objectives of the stormwater monitoring program are stated in the QAPP:

The purpose of the project is to support the SBA Contractors and the DWR in protecting and improving water quality for the SBA. The goal is to provide the SBA Contractors and DWR with recommendations and guidance pertaining to actions and management strategies for water quality protection and improvement.

The specific objectives of this water quality study are to 1) assess the significance of contaminant sources of concern by sampling selected water quality parameters, and 2) use this information within the context of the broader study to assess the effectiveness of management practices currently implemented in the drainages contributing to the SBA.

(ESA and EOA, 2005a)

Because of the limited funding and time available, this stormwater monitoring effort was designed simply to provide a few snapshots of stormwater runoff and its impacts in the SBA watershed. The purpose of the stormwater monitoring was not to pinpoint particular pollution sources, nor to develop a statistically robust data set, but rather to gather data from the major input sources to the SBA in a manner that would allow for comparison and also provide a cross-check for other data sources. In particular, the results may be used in comparison with a

sanitary survey conducted by the California Department of Water Resources (2001) and subsequent drinking water source assessments (Archibald and Wallberg 2002, 2005).

II. Methodology

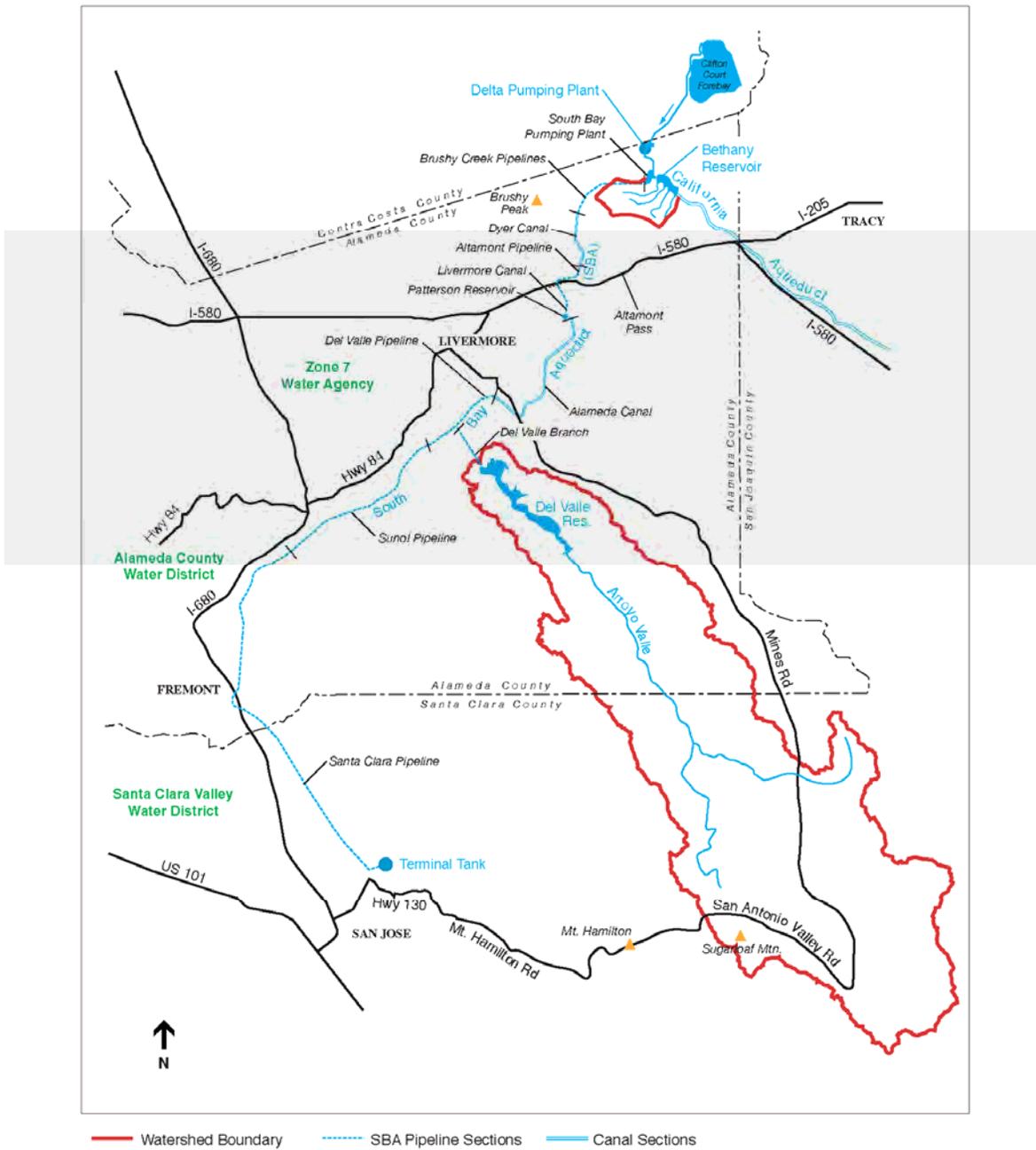
The methods and quality assurance measures used for the stormwater monitoring program, including sampling design, sampling locations, sampling methods, sample handling, laboratory and field analysis, and data management are detailed in the Stormwater Monitoring Plan and the QAPP (ESA and EOA, 2005a, 2005b). The methodology included the following:

- Establishment of 7 sampling stations representing major inputs to the SBA system (Map 1). Four stations were established on the California Aqueduct, at Bethany Reservoir, and in the South Bay Aqueduct itself (Maps 2, 3, and 4). These were:
 - CA-1, is on the California Aqueduct upstream of Bethany.
 - BR-1 is on a small stream that is tributary to Bethany Reservoir, the mouth of which is very near the South Bay Pumping Plant.
 - BR-2 is on the same tributary downstream of a small wetland and upstream of the Reservoir.
 - BR-3 is at the head of the Dyer Canal, at the outlet of the pipelines from the SBA Pumping Plant at Bethany Reservoir. An alternate site for BR-3 (designated BR-3a) was established in Bethany Reservoir at the SBA Pumping Plant, to be used in the event that the pumps were not operating at the time of sampling.
- Three additional sampling stations were established at and around Lake Del Valle Reservoir (Figure 5):
 - LDV-1 is on Arroyo Valle downstream of a large cattle ranch. The original location of LDV-1 was at the location of the U.S. Geological Survey (USGS) gaging station 11176400 (Arroyo Valle Below Lang Canyon, Near Livermore, CA); however, due to private property access issues, LDV-1 was moved downstream approximately ½ mile, to a location within the park boundary. The original (marked “old”) and revised (marked “new”) locations of LDV-1 are shown in Figure 4.
 - LDV-2 is on a small stream that drains into Lake Del Valle known as Cedar Creek.
 - LDV-3 is near the Del Valle Pumping Plant intake from Lake Del Valle. LDV-3a was established as an alternate site (the Conservation Outlet Works) that was to be used in the event DWR was withdrawing water from Lake Del Valle into the SBA system at the time of sampling.

Grab samples were to be collected at all 7 stations during 5 stormwater runoff events, intended to capture a range of runoff conditions, including season and intensity/duration.

- Field analysis and laboratory analysis were to be performed for 19 physical, chemical, and pathogenic water quality parameters from grab samples. Laboratory analysis was performed by the Zone 7 Water Agency Laboratory and by Biovir Laboratory.
- Quality assurance protocols for sampling, sample handling, field and laboratory analysis, and data management per the QAPP (ESA and EOA, 2005a).

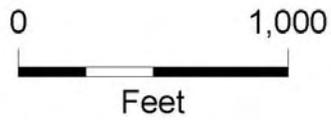
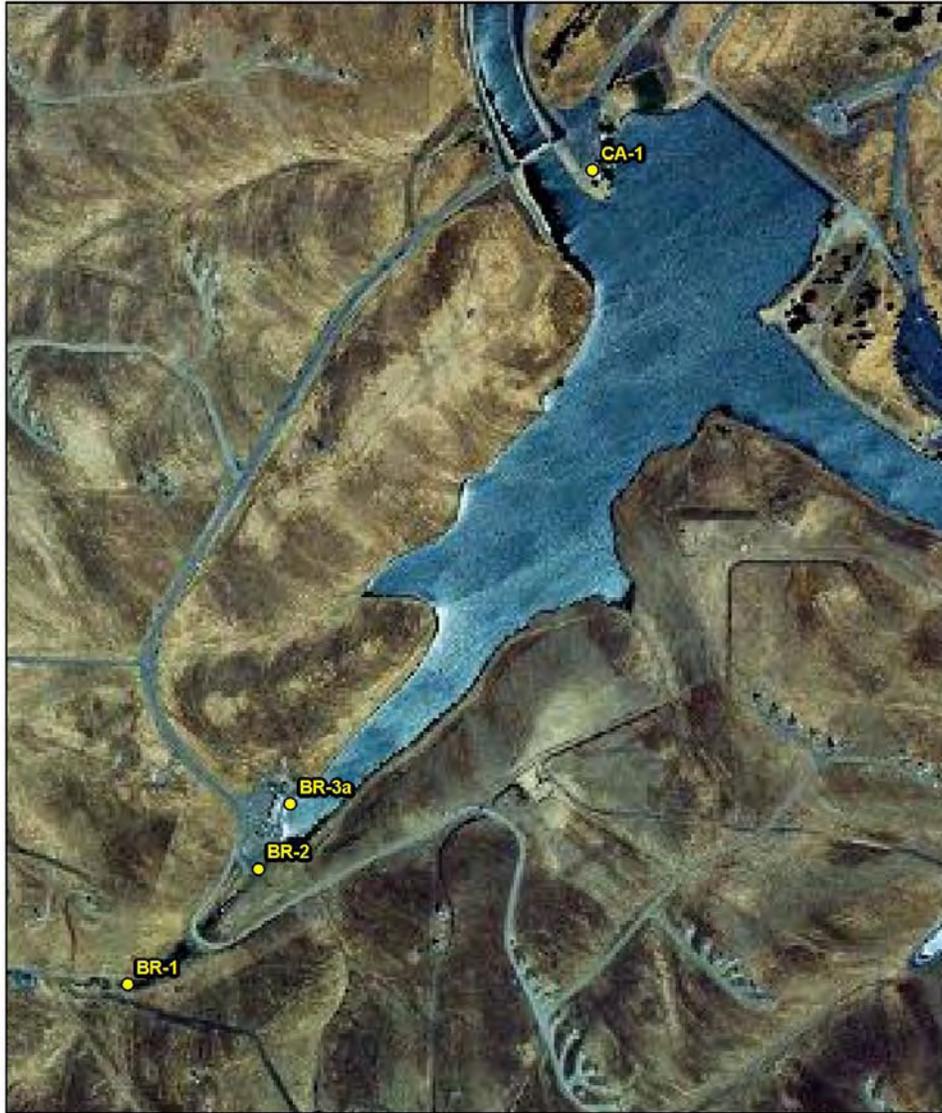
SBA Watershed Lands



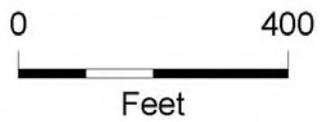
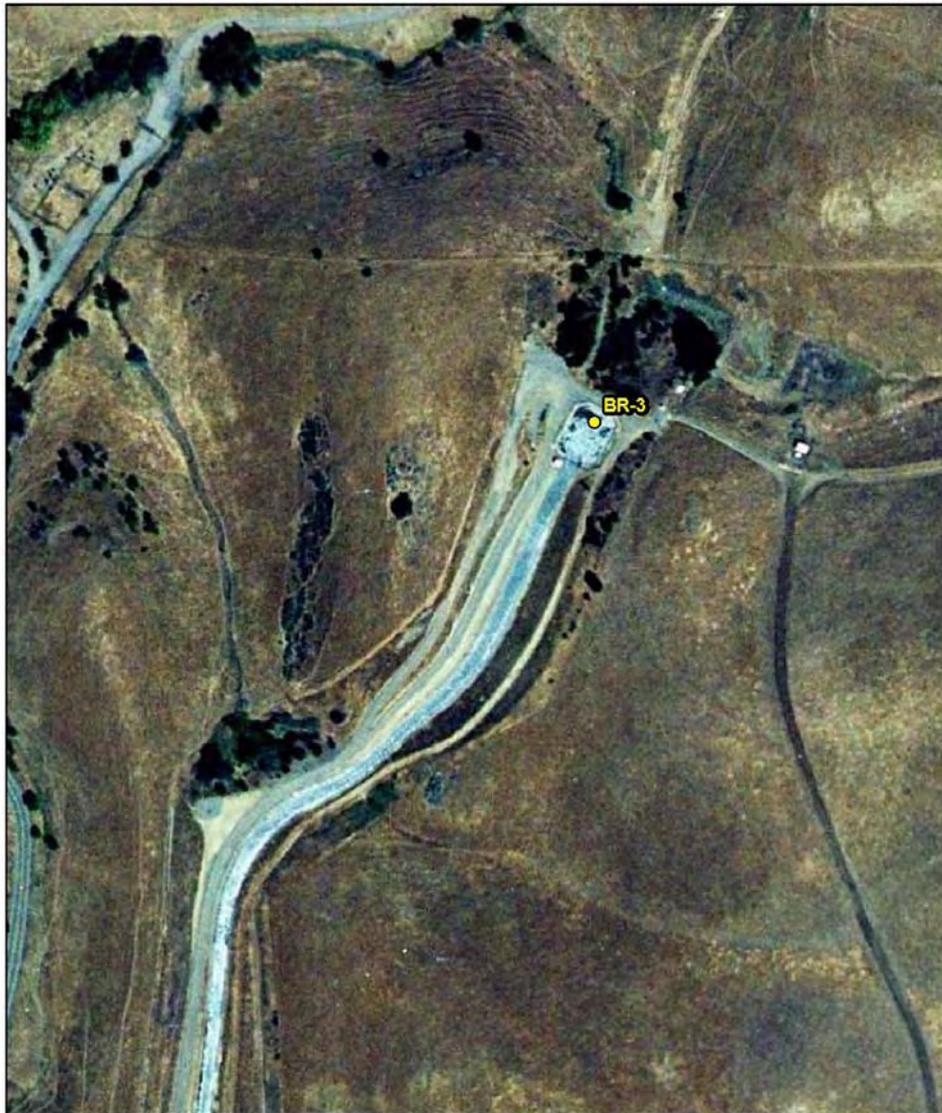
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Map 1

SBA Watershed Areas



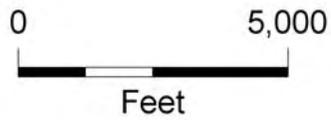
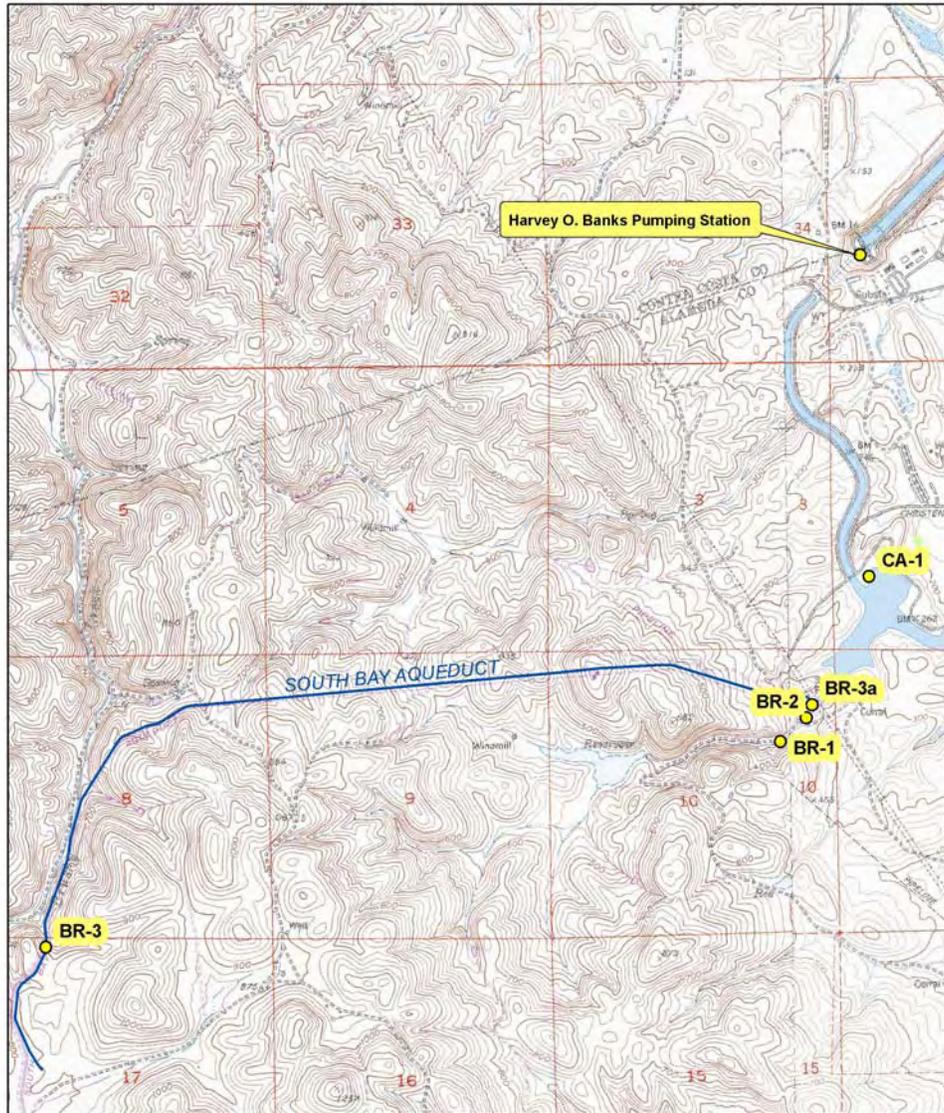
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076
Map 2
Sampling Stations at Bethany Reservoir



SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Map 3

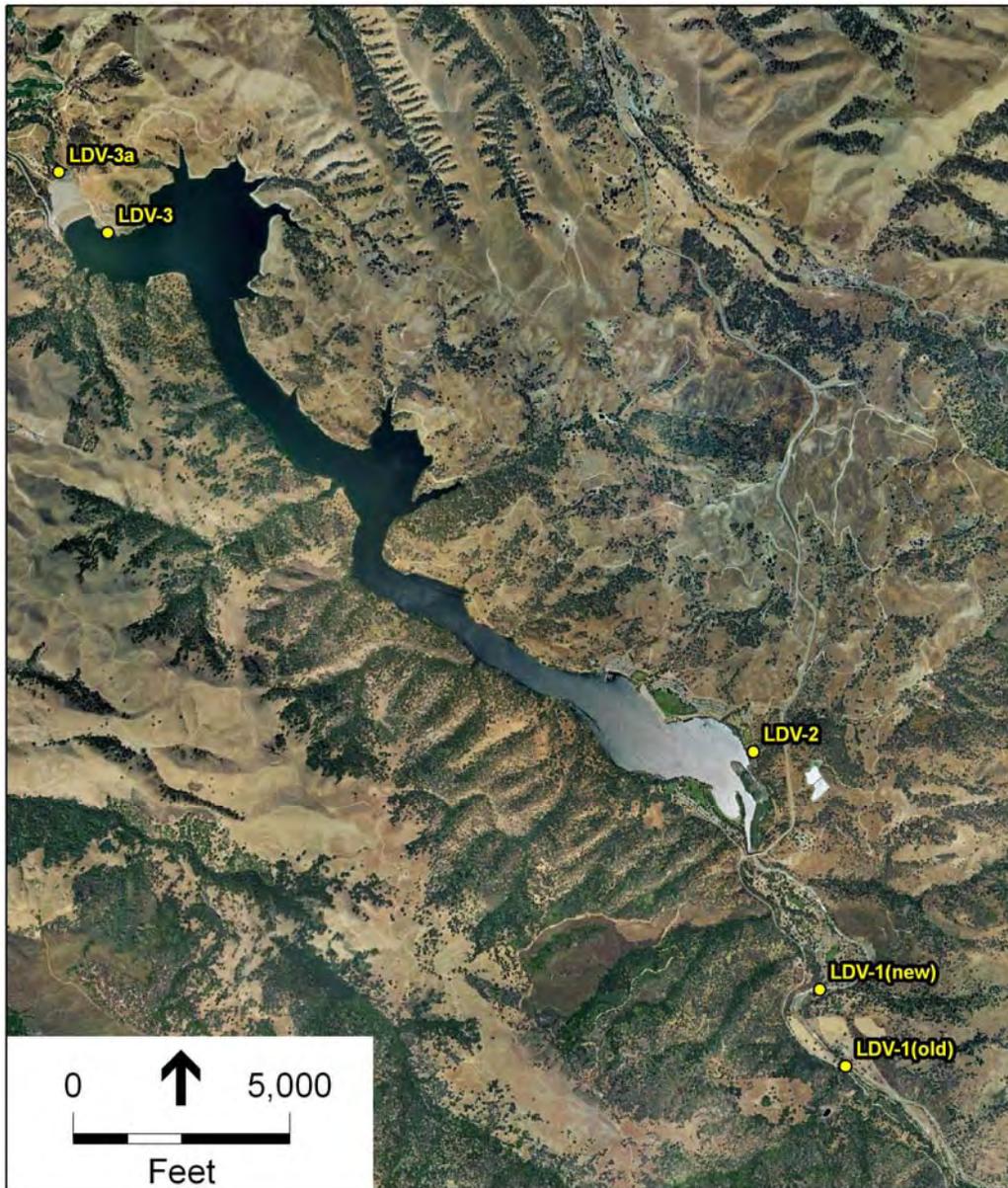
Location of Sampling Station 3



SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Map 4

Location of Bethany Reservoir and Aqueduct Sampling Stations



SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Map 5

Location of Sampling Stations around Lake Del Valle

Divergence from Methodology

In addition to the above-noted change in the location of sampling station LDV-1, there were two other significant deviations from the methods described in the Stormwater Monitoring Plan (ESA and EOA, 2005b) and QAPP (ESA and EOA, 2005a): 1) due to malfunction of field equipment, two parameters, conductivity (also referred to as electrical conductance) and pH were analyzed by the Zone 7 laboratory, instead of in the field, for several of the sampling events; and 2) when high solids content of samples for *Giardia* and *Cryptosporidium* samples resulted in the laboratory filtering out a large volume of “pellets,” ESA instructed Biovir Laboratory to prepare only two slides per sample, due to budget constraints. After the first instance of this, the sample collection method was improved to reduce the collection of floating solids.

III. Results

Sampling occurred on five dates during the winter of 2005-2006, with the first event sampled on December 21, 2005, and the last on March 6, 2006 (Table A). Table A shows the sampling dates and the hydrologic conditions prevalent on the sampling dates, including the rainfall recorded at the Livermore Airport and Mount Hamilton stations up to 6:00 p.m. of the day of sampling, and the instantaneous discharge at the time of sampling at the USGS gage on Arroyo Valle and the Zone 7 Water Agency gage on Cedar Creek at station LDV-2.

The December 21, 2005 sampling event occurred early in the rainy season (Figure A), prior to the onset of winter base flows in Arroyo Valle, and prior to any recorded flows in Cedar Creek. All of the other events occurred later in the season, after the very large storm event of December 30, 2005–January 2, 2006, when base flows were already established. Figure A indicates the much more rapid response of elevated flows to storm events later in the season. For the February 28, 2006 sample date, the mean daily flow value recorded at the USGS Arroyo Valle gage was the fourth largest over the time period of October 1, 2005 through March 31, 2006 (Figure A).

As shown in Table A-1 in Appendix A, samples were collected at all stations during all 5 events with the following exceptions:

- No samples were collected at station LDV-2 on December 21, 2005, as the station was dry;
- No *Giardia/Cryptosporidium* samples were collected at station BR-2 on December 21, 2005 or on February 28, 2005, due to low flow conditions at the station (a 10-liter sample is required).
- pH testing was not conducted at station LDV-1 on December 21, 2005, due to equipment malfunction.
- TOC analysis was not conducted for the LDV-1 sample on February 27, 2006 as the sample was lost (broken) in the laboratory.

**TABLE A
SAMPLE DATES AND CONDITIONS**

Sample Date	24 Hour Rainfall Total: Livermore^A (inches)	24 Hour Rainfall Total: Mt. Hamilton^a (inches)	LDV-1: Arroyo Valle Flow at Time of Sample^b (cfs)	LDV-2: Cedar Creek Flow at Time of Sample^c (cfs)
12/21/2005	0.27	0.54	3.1	NA
2/27/2006	0.21	1.3	12.0	0.7
2/28/2006	0.44	1.3 ^d	543.0	1.3
3/2/2006	0.19	0.31 ^d	148.0	0.8
3/6/2006	0.54	0.48	161.0	0.9

- ^a Precipitation values are the accumulated totals for the NOAA Livermore, CA station (COOP ID 04-4997) and Mt. Hamilton Station (COOP ID 04-5933-04) over the previous 24 hours ending at 18:00 PST on the given date.
- ^b Value represents the instantaneous discharge reported for USGS Gage No. 111764000 for the time closest to the reported sample time (station samples every 15 minutes).
- ^c Value represents the instantaneous discharge reported for the Zone 7 Cedar Creek Gage for the time closest to the reported sample time (station samples every 15 minutes).
- ^d In addition to the rainfall totals shown, this station reported .5 inches of snow on February 28 and 1.3 inches of snow on March 2.

Pollutants and Characteristics

The average parameter value for each sampling location is presented in Table B. For total coliform and *E. coli*, detected values reported as greater than 2000 were assumed to be 2,000 for purposes of averaging.

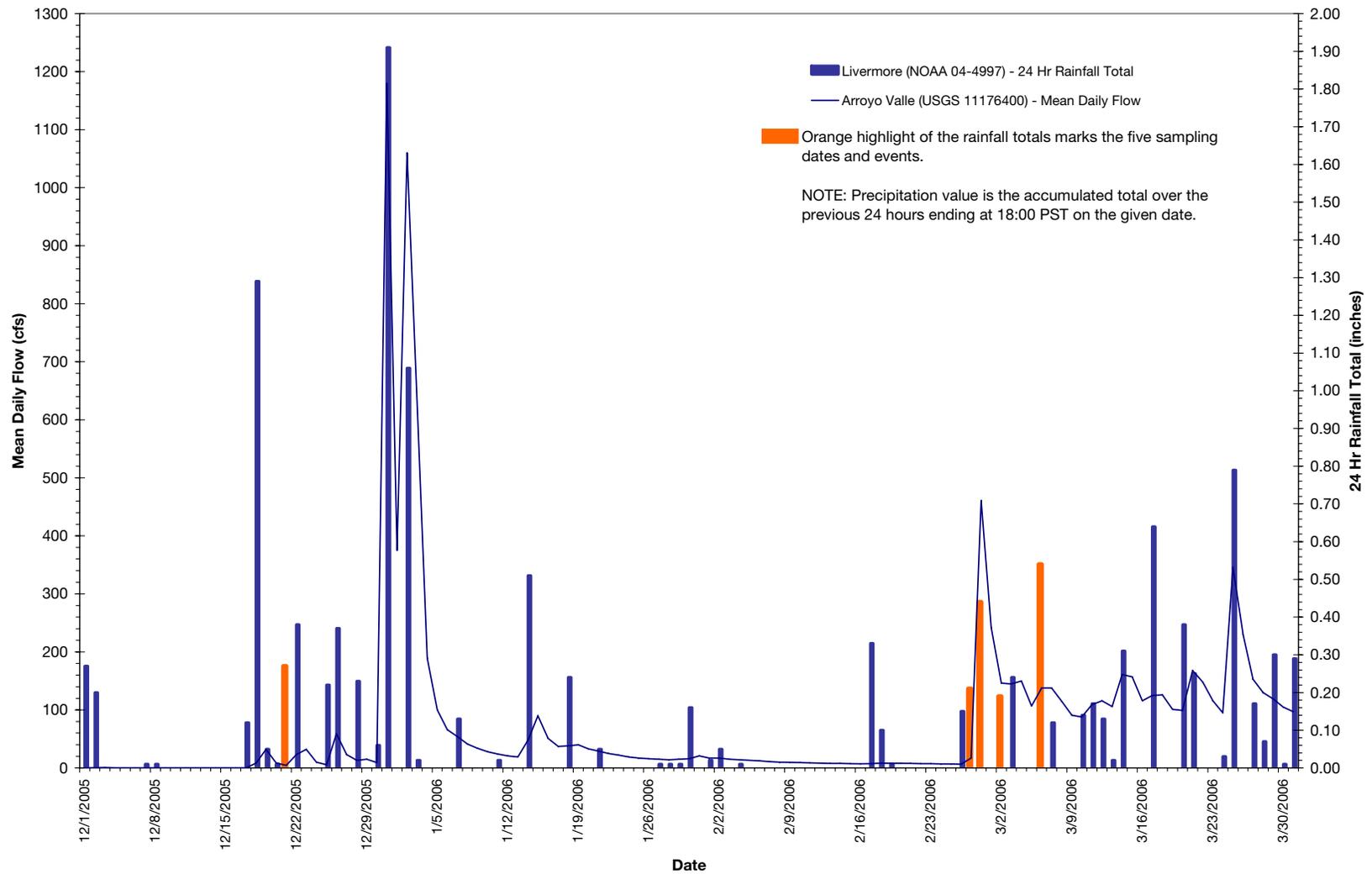
Water Quality Physio-chemical Parameters

Physio-chemical measurements were made in the field. Water temperatures at Bethany Reservoir locations ranged between 9 and 19 °C. The dissolved oxygen concentrations at all sites were greater than 10 mg/l. Specific conductance ranged between 169 and 2,950 uS/cm and pH concentrations were between 6.8 and 8.7 units. The estimated average water velocity measured at Bethany site BR-1 was 0.1 ft/sec during the March 2nd storm event.

Water temperatures at Lake Del Valle locations ranged between 10.2 to 15.2 C. The dissolved oxygen concentrations at all sites were greater than 9.4 mg/l; LDV-1 had the greatest average dissolved oxygen level of 12.98 mg/l of all sample locations. Specific conductance ranged between 223 and 1,296 uS/cm and pH concentrations were between 7.9 and 8.8 units. The average water velocity measured at LDV-1 and LDV-2 sites was 173.4 and 0.9 ft/sec respectively.

Giardia and *Cryptosporidium*

The *Giardia* and *Cryptosporidium* results for each sample location are shown in Figure B. *Cryptosporidium* was present in samples from the 3 Bethany Reservoir locations (BR-1, BR-2, and BR3), and 2 Del Valle locations (LDV-1 and LDV-2). The greatest number of



SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure A

Livermore 24-hour Rainfall Total and Arroyo Valle Mean Daily Flow, 12/21/2005–3/30/2006

Cryptosporidium was observed at BR-1, and oocysts were observed in samples from all 5 monitoring events. No *Cryptosporidium* was found in samples from the aqueduct (CA-1) or LDV-3 from any of the 5 storm events. *Cryptosporidium* values for each location per storm sampling event are shown in Figure B-1.

Giardia was present in samples from the aqueduct (CA-1), and Bethany Reservoir (BR-1, BR-2, and BR3), and Del Valle (LDV-1). The greatest number of *Giardia* was observed at BR-1, with oocysts observed in samples from all 5 monitoring events. *Giardia* values for each location per storm sampling event are shown in Figure B-2.

Chemical Parameters

Water quality samples were collected at 7 sites during 5 sampling events. Samples were analyzed for nutrients and anions, suspended sediment concentrations, bromide, total organic carbon, turbidity and total dissolved solids.

Bromide

Bromide concentrations ranged from 0.08 to 1.98 mg/l. Bromide was above the CALFED bromide target of 0.050 mg/l at the aqueduct location (CA-1), all Bethany locations (BR-1, BR-2, BR-3), and LDV-2. A majority of the samples were over the bromide target. BR-1 and BR-2 presented the greatest bromide concentrations for all 5 storm events. Measured bromide results for the stormwater events are shown in Figure C.

Total Organic Carbon

TOC concentrations ranged from 3.2 to 11.2 mg/l. All samples collected were above the CALFED TOC target of 3 mg/l at all locations. There was no TOC data for LDV-2 for the 12/21/05 sampling event, as the station was dry; or -1 on for LDV-1 for the February 27 sampling event due to a broken sample in the laboratory. The two Lake Del Valle tributary locations (LDV-1 and LDV-2) exhibited the highest TOC concentrations, with averages of 6.10 and 9.94, respectively. Measured total organic carbon concentrations for the stormwater sampling events are shown in Figure D.

Turbidity

Turbidity concentrations ranged from 1.2 to 273 ntu. Turbidity was elevated during the February sampling events at BR-2 and LDV-1. Measured turbidity results for the 5 stormwater sampling events are shown in Figure E.

Total Dissolved Solids

TDS levels ranged from 138 to 1,720 mg/l. BR-1 and BR-2 had consistently high TDS levels for all storm events. LDV-2 had the highest TDS levels for the Lake Del Valle locations. TDS results for the 5 stormwater sampling events are shown in Figure F.

Nutrients

Nitrate-nitrogen levels ranged from <0.10 to 2.11 mg/l. The Bethany locations (BR-1 BR-2 and BR-3) had consistently higher nitrate, nitrite, and ammonia levels than Lake Del Valle locations. Nitrite-nitrogen ranged from <0.01 to 0.31 mg/l, and phosphate-P levels ranged from <0.05 to 0.06 mg/l. Ammonia-nitrogen concentrations ranged from <0.05 to 0.18 mg/l. Sulfate concentrations ranged from 22 to 280 mg/l. Figures G and H-1 through H-4 show the concentrations of the nutrient parameters for each location and storm event.

Sodium

Sodium concentrations ranged from 12 mg/l to 445 mg/l. BR-1 and BR-2 presented the greatest sodium concentrations for all 5 storm events. Measured sodium results for the stormwater events are shown in Figure I.

Potassium

Potassium concentrations ranged from 1.4 mg/l to 4.5 mg/l. BR-1, BR-2, and LDV-2 had elevated potassium concentrations for all 5 storm events. Measured potassium results for the stormwater events are shown in Figure J.

Fluoride

Fluoride concentrations ranged from 0.07 mg/l to 1.13 mg/l. BR-1 and BR-2 presented the greatest fluoride concentrations for all 5 storm events. Measured fluoride results for the stormwater events are shown in Figure K.

Total Alkalinity

Total alkalinity levels ranged from 52 mg/l to 476 mg/l. BR-1 and BR-2 presented the greatest alkalinity concentrations during all 5 storm events. LDV-2 showed the greatest alkalinity levels for the Lake Del Valle sites. Measured alkalinity results for the stormwater events are shown in Figure L.

Total Hardness

Total hardness ranged from 78 mg/l to 612 mg/l. BR-1 and BR-2 presented the greatest water hardness values for all 5 storm events. LDV-2 showed the highest hardness for the Lake Del Valle sites. Measured hardness results for the stormwater events are shown in Figure M.

Water Quality Generals

Water temperature ranged from 10 to 15 °C. Dissolved oxygen ranged from 6 to 13 mg/l, and specific conductance levels ranged from 169 to 2,950 uS/cm. The specific conductance levels at BR-1, BR-2, and LDV-2 were above the WQO and SMCL of 900 uS/cm. Salinity ranged from 0.0 to 1.5 ppt. The Bethany locations (BR-1 BR-2 and BR-3) had consistently higher salinity and specific conductance levels than Lake Del Valle locations. The water pH ranged from 6.8 to 8.8 pH units, and all values were above the water quality objective of 6.5 units for minimum pH.

Figures N-1 through N-5 show the concentrations of the water quality general parameters for each location and storm event.

Bacteriological Parameters

Surface water samples were collected during the 5 sampling events from the 7 monitoring locations. Samples were analyzed for total coliform and *E.coli*. Total coliform concentrations ranged from 16 to >2,000 MPN/100 ml. All BR-1 samples exhibited coliform > 2,000 MPN/100 ml. The highest coliform levels (>2,000 MPN/100 mL at four locations) were observed during the early part of the storm season (December 21, 2005 sampling event). Total coliform and *E. coli* concentrations were highest at Lake Del Valle during the February 28, 2006 sampling event. Total coliform results are presented in Figure O-1.

E. coli concentrations ranged from 1 to > 2,000 MPN/100 ml. The highest *E. coli* levels (>2,000 MPN/100 mL at three locations) were observed during the early part of the storm season (December 21, 2005 sampling event). The February 28, 2006 sampling event was notable for the highest *E. coli* concentrations found in the Lake Del Valle tributary locations (LDV-1 and LDV-2). *E. coli* results are presented in Figure O-2.

Correlations

Turbidity and Conductance vs. Discharge

Turbidity and specific conductance at LDV-1 were plotted and analyzed to show the relationship with stream flow for Arroyo Valle (Figure P). A direct correlation between turbidity and stream discharge, and inverse correlation with conductance were determined. As observed, high turbidity and low conductance occurred with increasing flows.

Total Coliform vs. Discharge

A direct correlation between total coliform and stream discharge at LDV-1 was evident as shown in Figure Q.

***Giardia* and *Cryptosporidium* vs. Discharge**

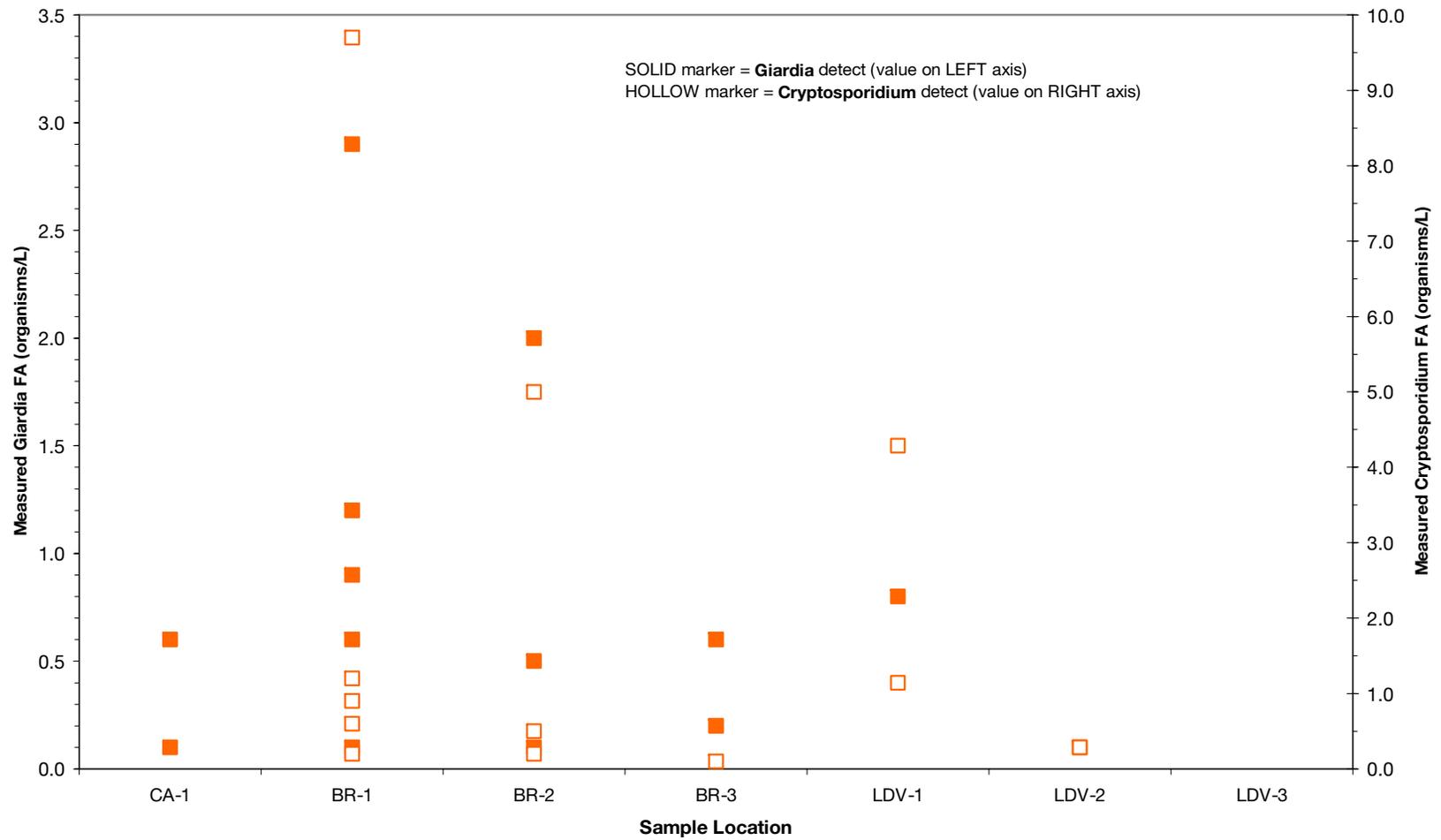
The relationship of *Giardia* and *Cryptosporidium* levels at BR-1 compared to the magnitude of flow discharges for the various storm events in the nearby Arroyo Valle drainage are shown in Figure R.

TABLE B
AVERAGE PARAMETER VALUES

Parameter	Units	Field/Lab Analysis (F/L)	Average Parameter Value per Sample Location ^a						
			CA-1	BR-1	BR-2	BR-3	LDV-1	LDV-2	LDV-3
Air Temperature	°C	F	13.5	13.4	14.7	17.0	19.5	18.0	17.2
Water Temperature	°C	F	12.0	12.1	11.7	11.8	11.6	13.1	12.0
pH	pH units	F/L	7.9	8.2	8.5	8.1	8.5	8.5	8.4
Dissolved Oxygen (DO)	mg/L	F	9.15	9.24	10.02	10.40	11.37	10.34	10.41
Specific Conductance	uS/cm	F/L	332	2,135	2,662	408	397	1,078	336
Salinity	ppt	F	0.1	0.8	0.7	0.1	0.2	0.5	0.1
Turbidity	NTU	F	22.5	16.2	81.1	10.5	75.2	13.9	24.0
Total Alkalinity	mg/L	L	64	387	431	67	171	308	152
Total Hardness	mg/L	L	91	569	569	92	206	329	175
Total Dissolved Solids (TDS)	mg/L	L	204	1,625	1,608	219	249	716	214
Total Organic Carbon (TOC)	mg/L	L	3.67	4.82	5.16	3.77	6.10	9.94	4.94
Ammonia (NH ₃)	mg/L	L	0.09	0.13	0.08	0.08	ND	ND	ND
Bromide (Br)	mg/L	L	0.17	1.84	1.79	0.18	ND	0.23	ND
Fluoride (F)	mg/L	L	0.07	0.80	0.90	ND	0.09	0.21	0.12
Nitrite (NO ₂)	mg/L	L	0.01	0.31	ND	0.01	ND	ND	ND
Nitrate (NO ₃)	mg/L	L	0.80	0.91	0.72	0.83	0.20	0.11	0.18
Potassium (K)	mg/L	L	2.20	3.50	3.40	2.20	1.70	3.90	1.80
Phosphate (PO ₄), Total	mg/L	L	0.05	ND	ND	ND	ND	0.05	ND
Sodium (Na)	mg/L	L	39	394	401	39	19	141	35
Sulfate (SO ₄)	mg/L	L	34	239	228	35	47	206	32
Total Coliform ^b	MPN/100mL	L	1,012	2,000	1,602	732	906	1,825	61
<i>Escherichia coli</i> ^b	MPN/100mL	L	560	998	623	117	327	615	10

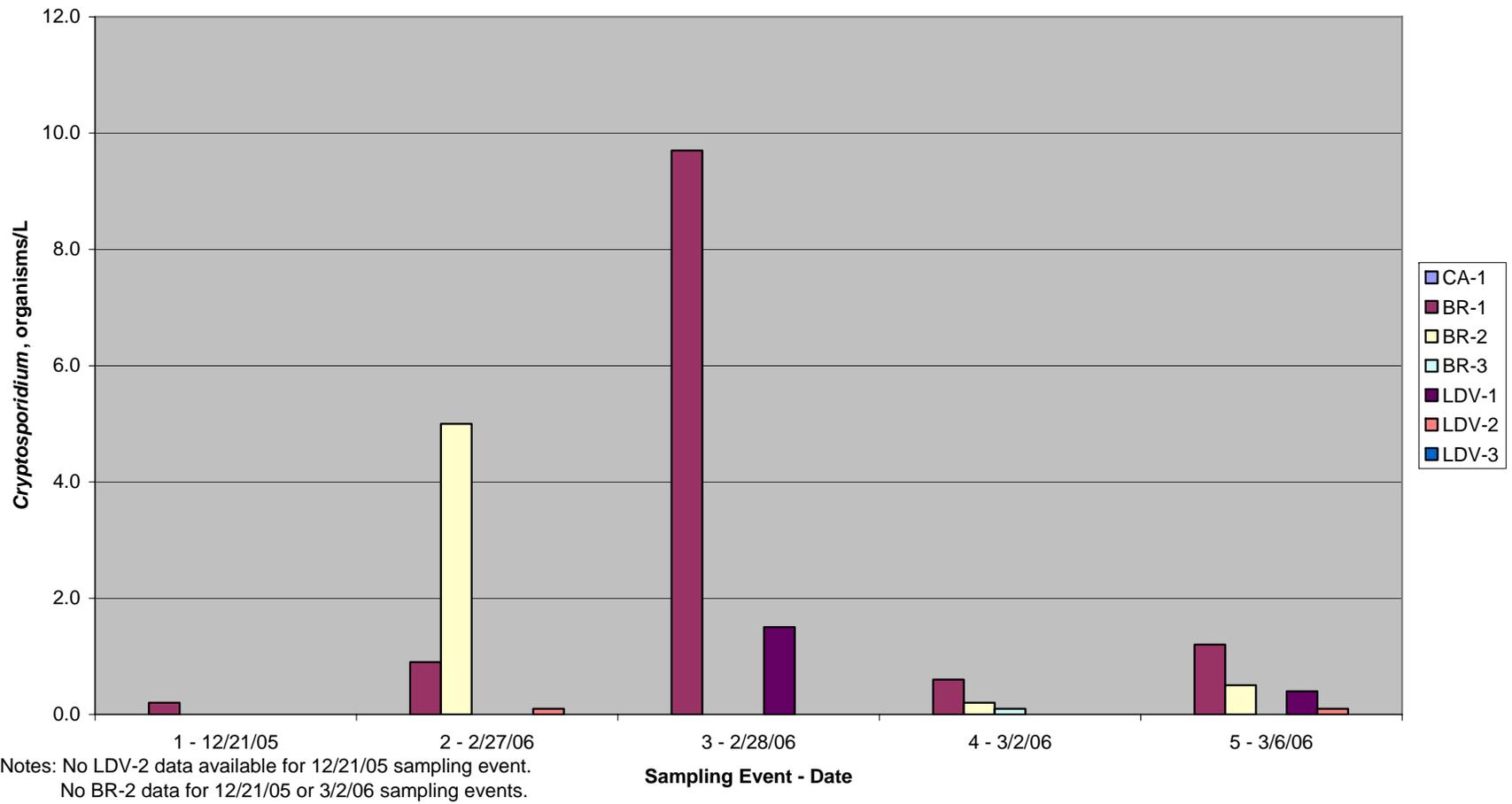
^a Values in bold type indicate highest average value among all sample locations for the given parameter.

^b Detected values reported as ">2,000" were assumed to be 2,000 for purposes of averaging.



SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

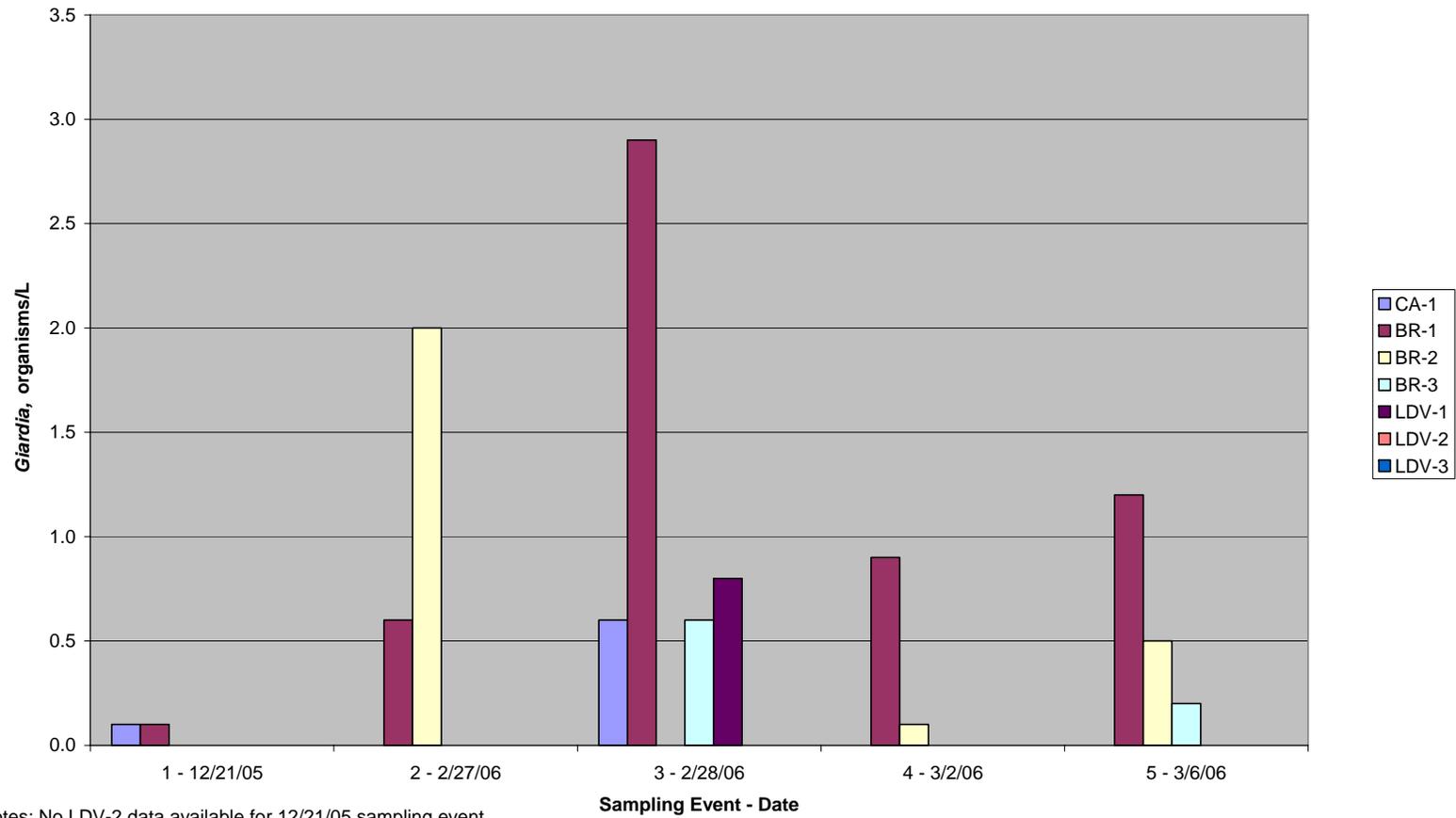
Figure B
Giardia and Cryptosporidium



SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

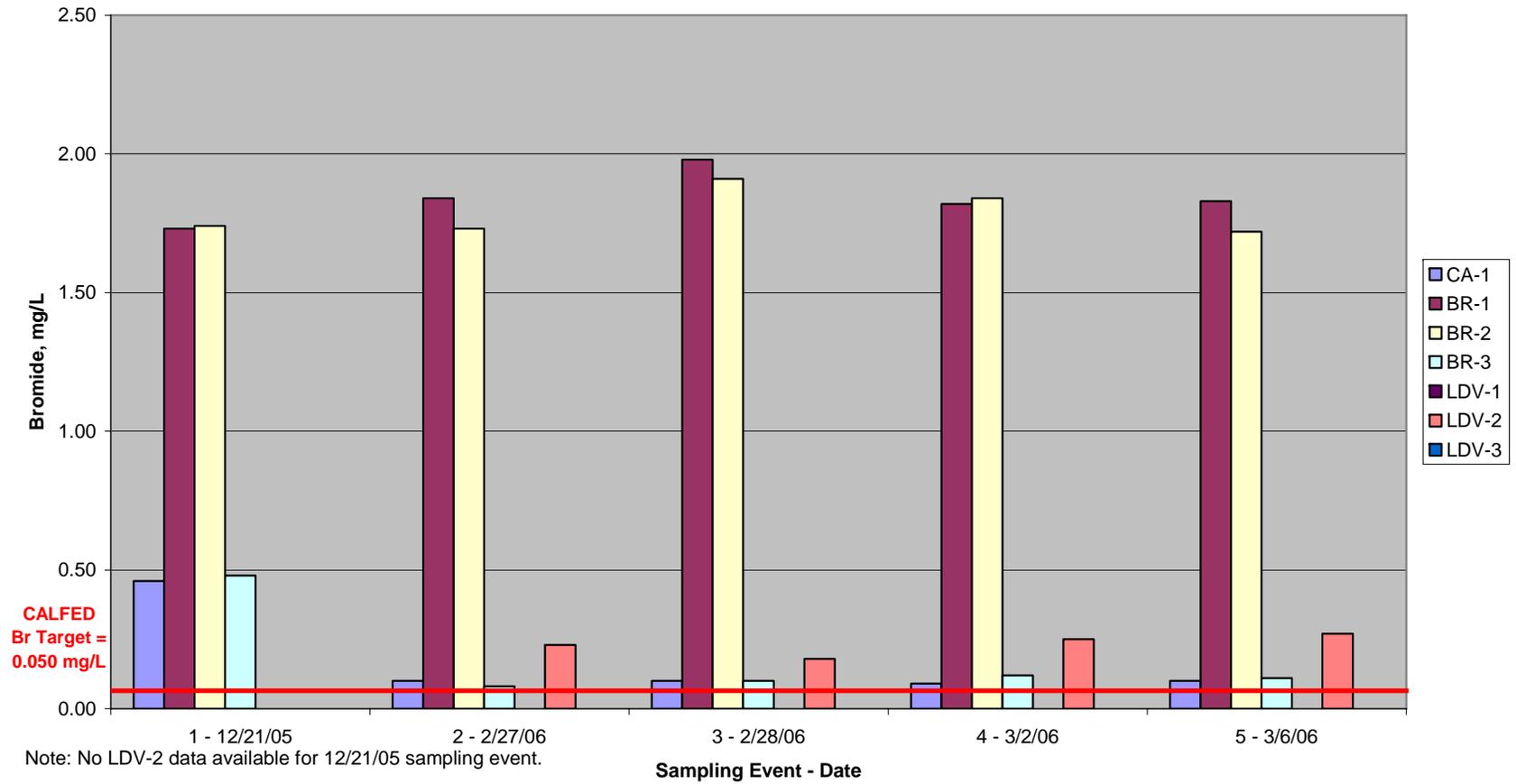
Figure B-1

Cryptosporidium



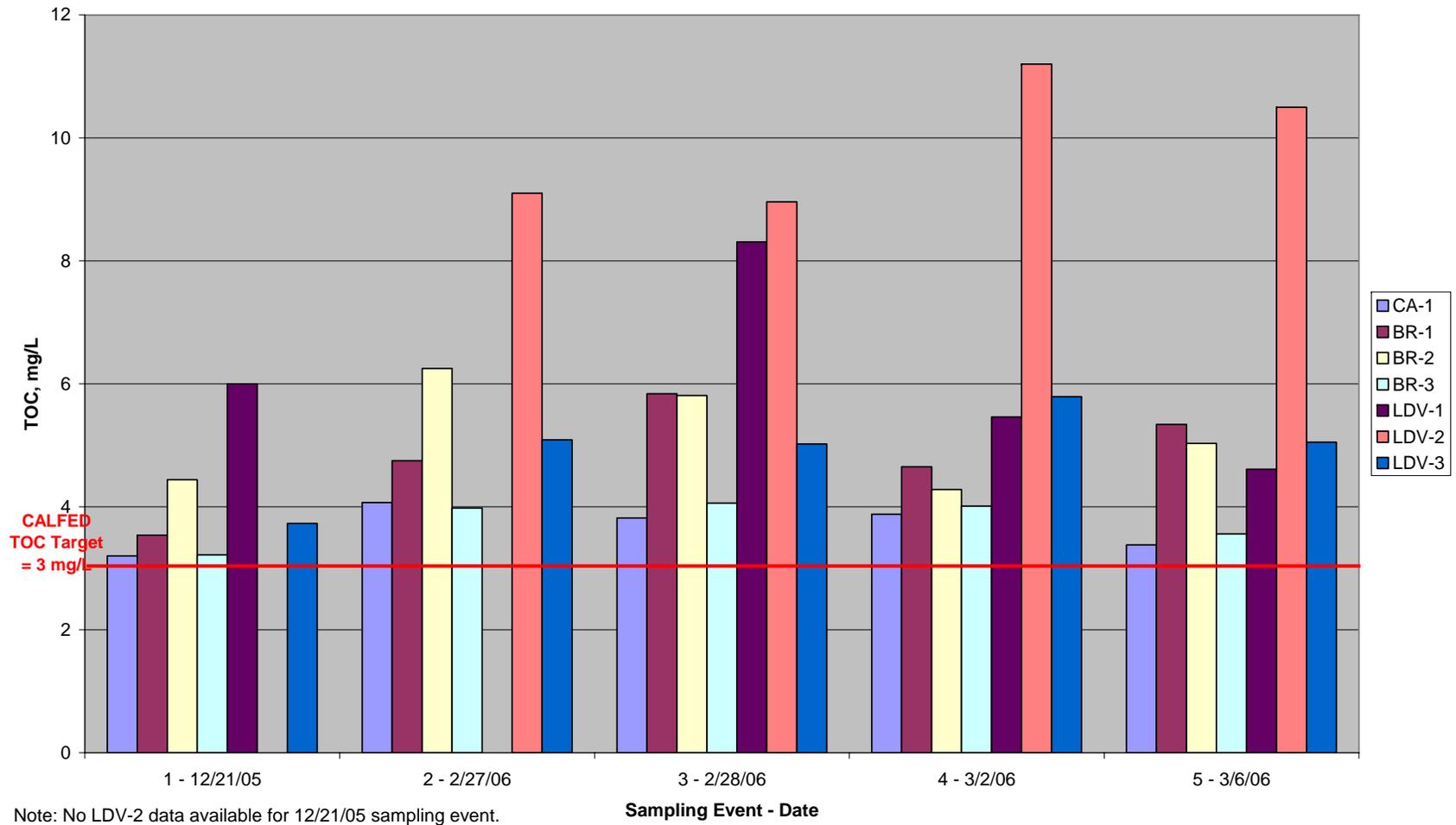
Notes: No LDV-2 data available for 12/21/05 sampling event.
 No BR-2 data for 12/21/05 or 3/2/06 sampling events.

Figure B-2
Giardia



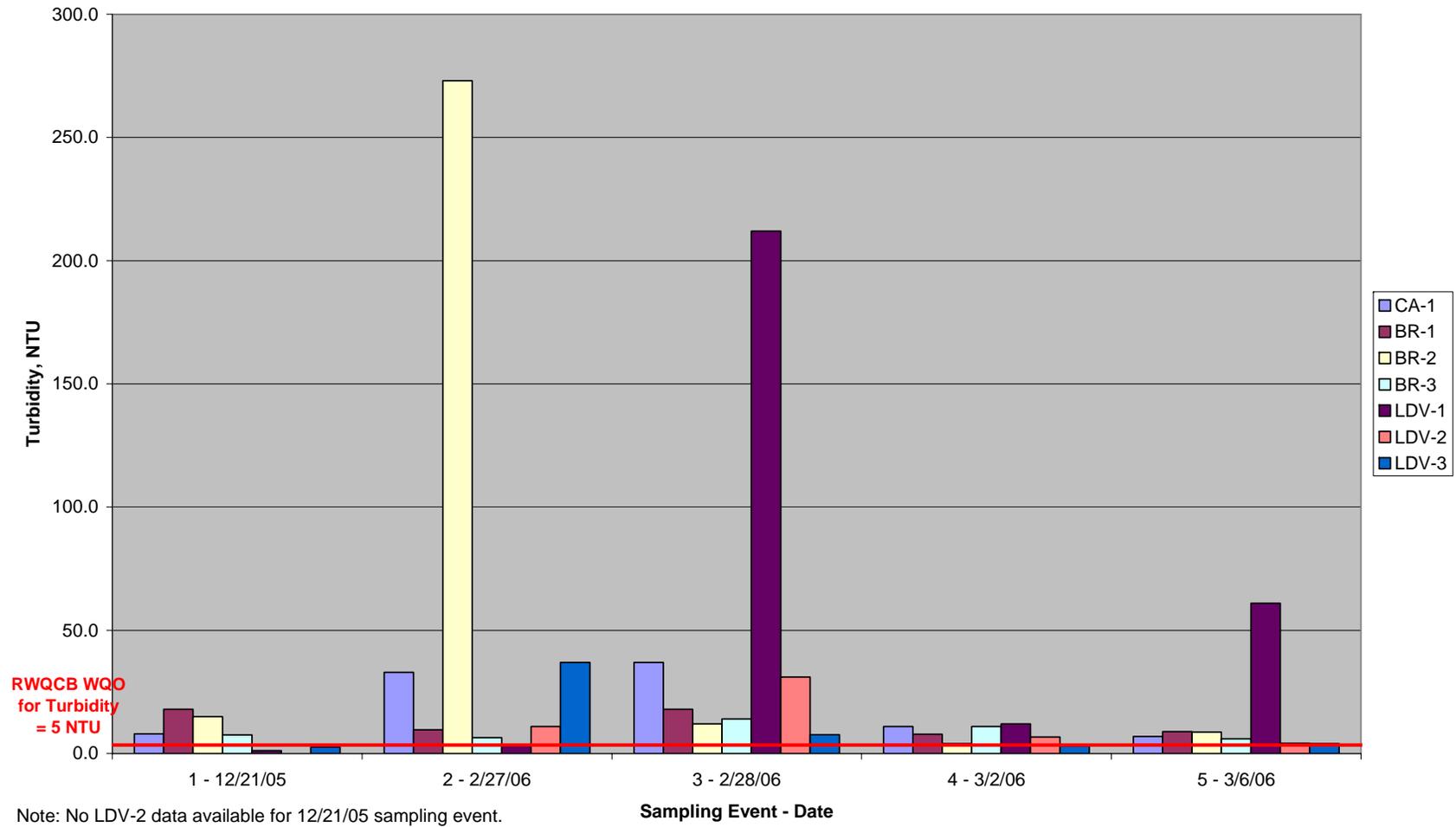
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure C
Bromide



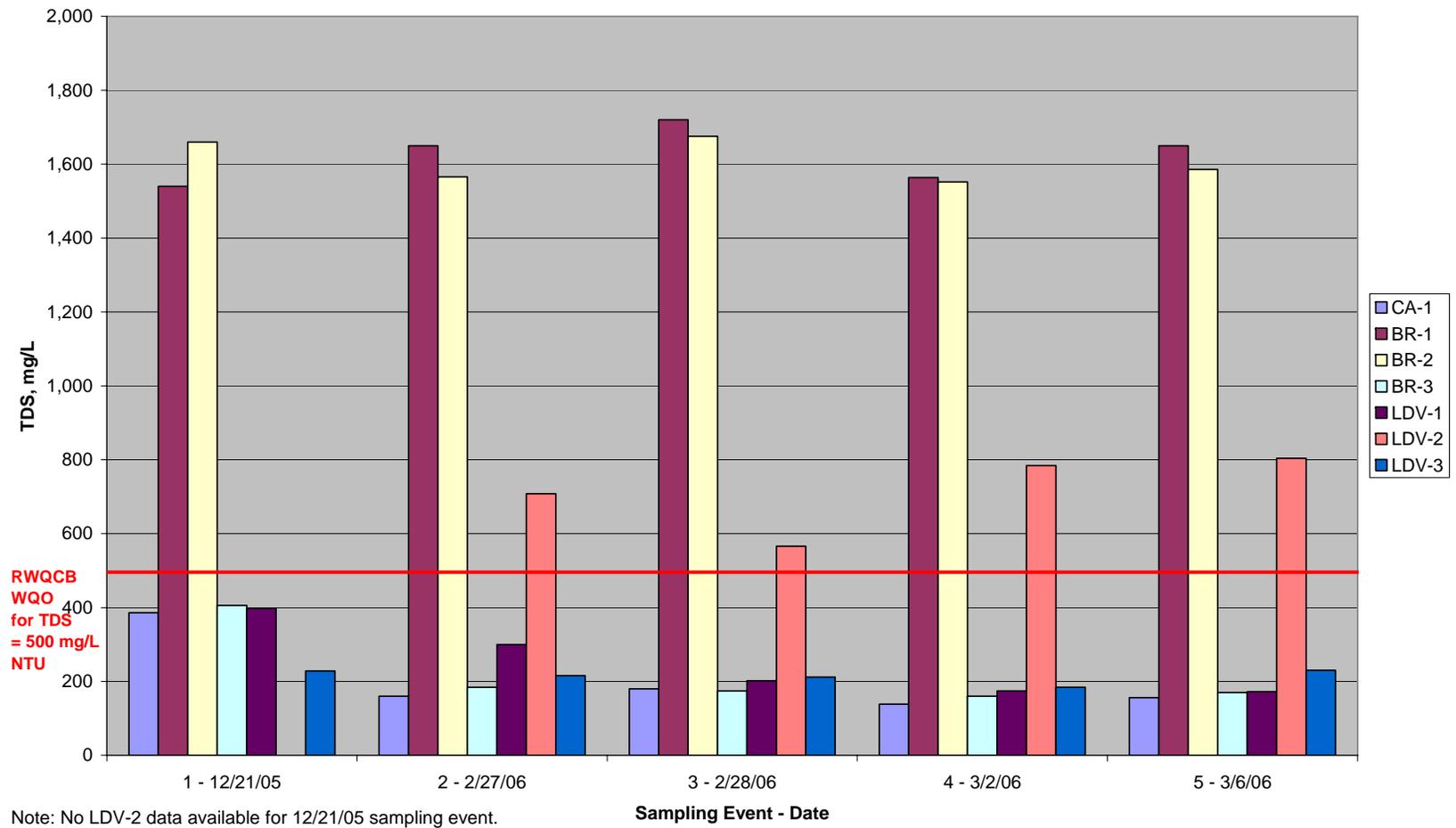
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure D
Total Organic Carbon



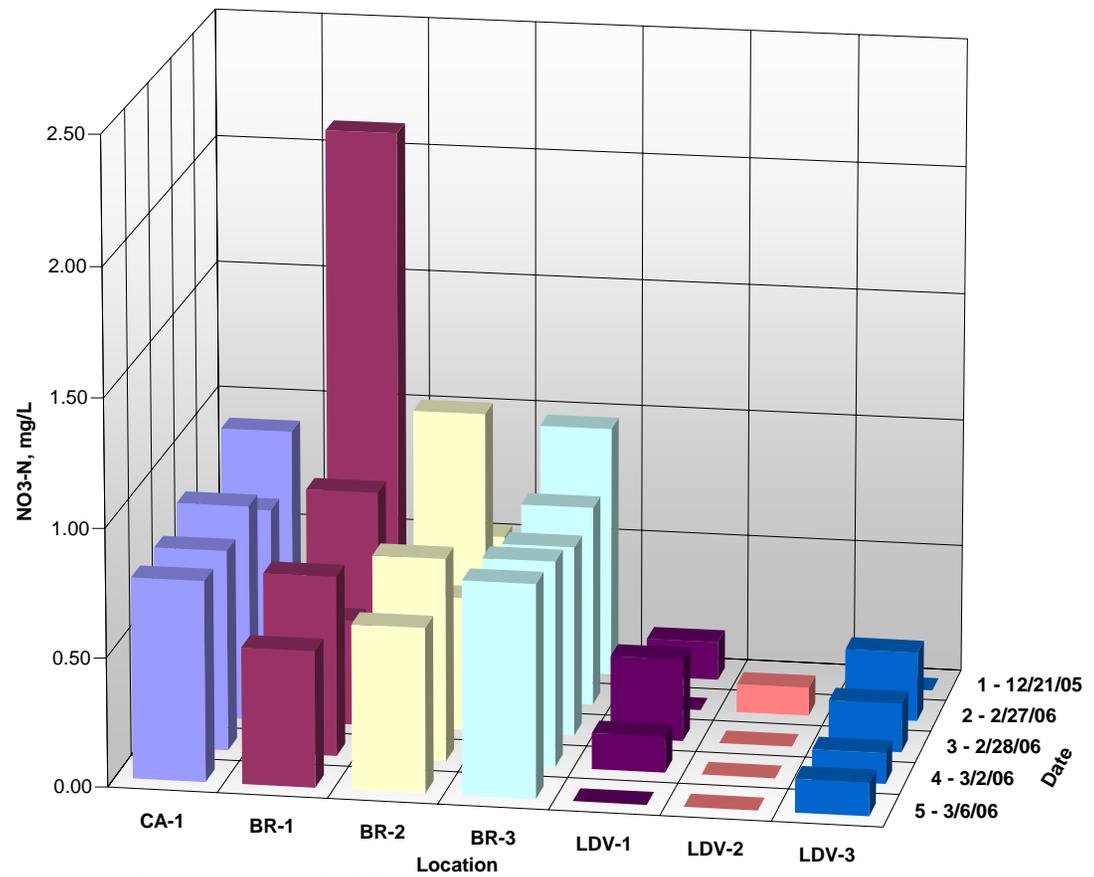
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure E
Turbidity



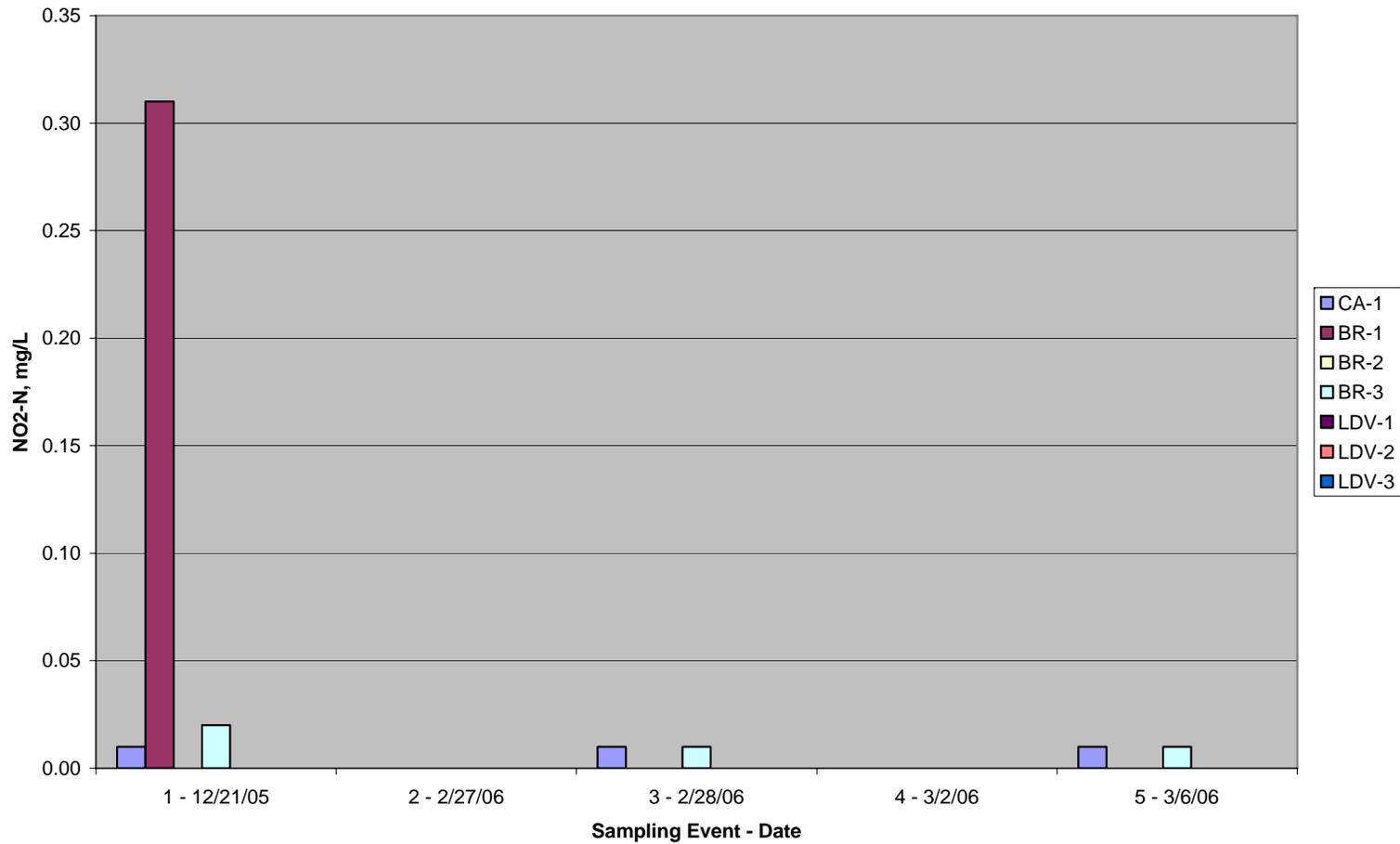
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure F
Total Dissolved Solids (TDS)



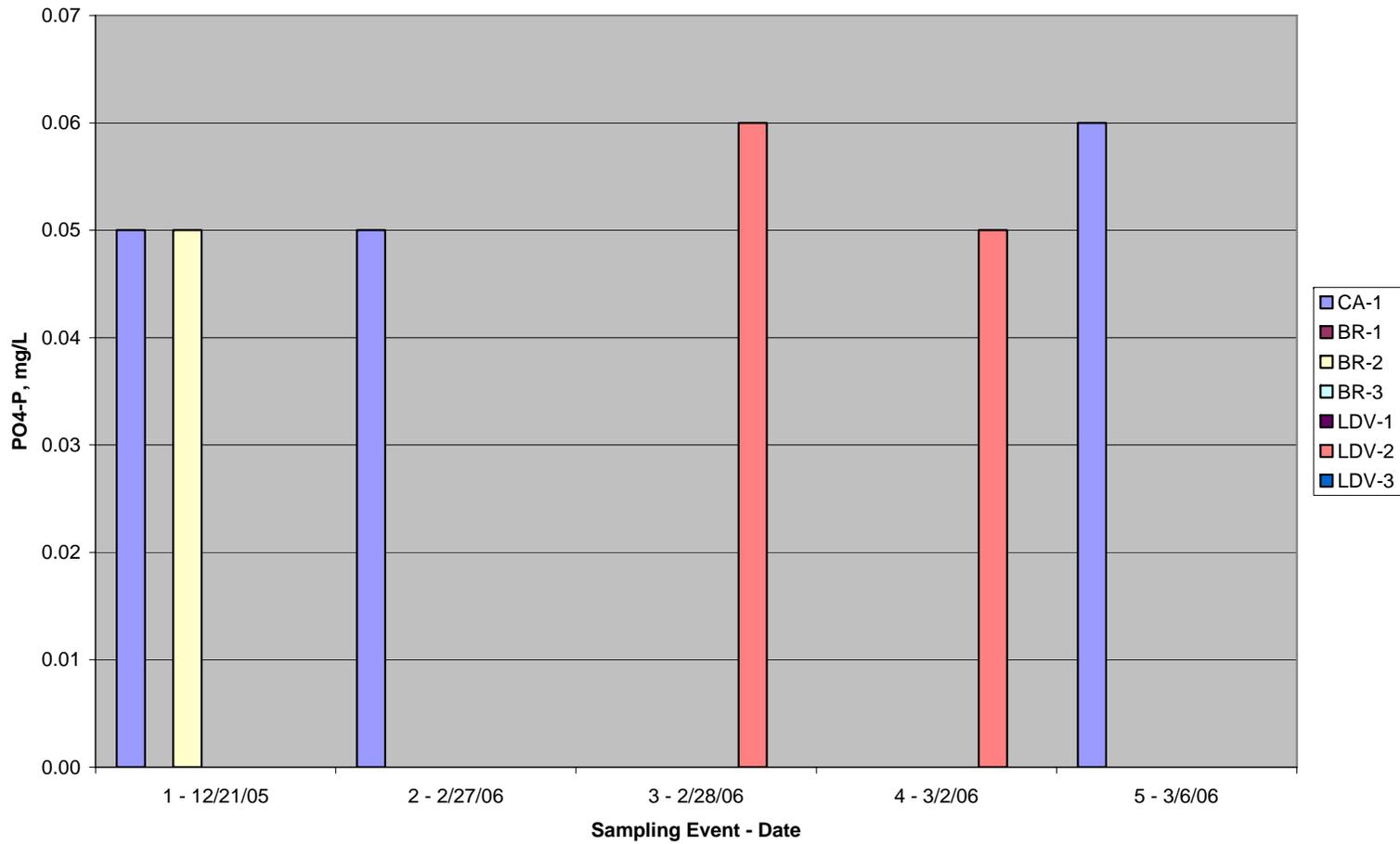
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure G
Nitrate: 3-D View



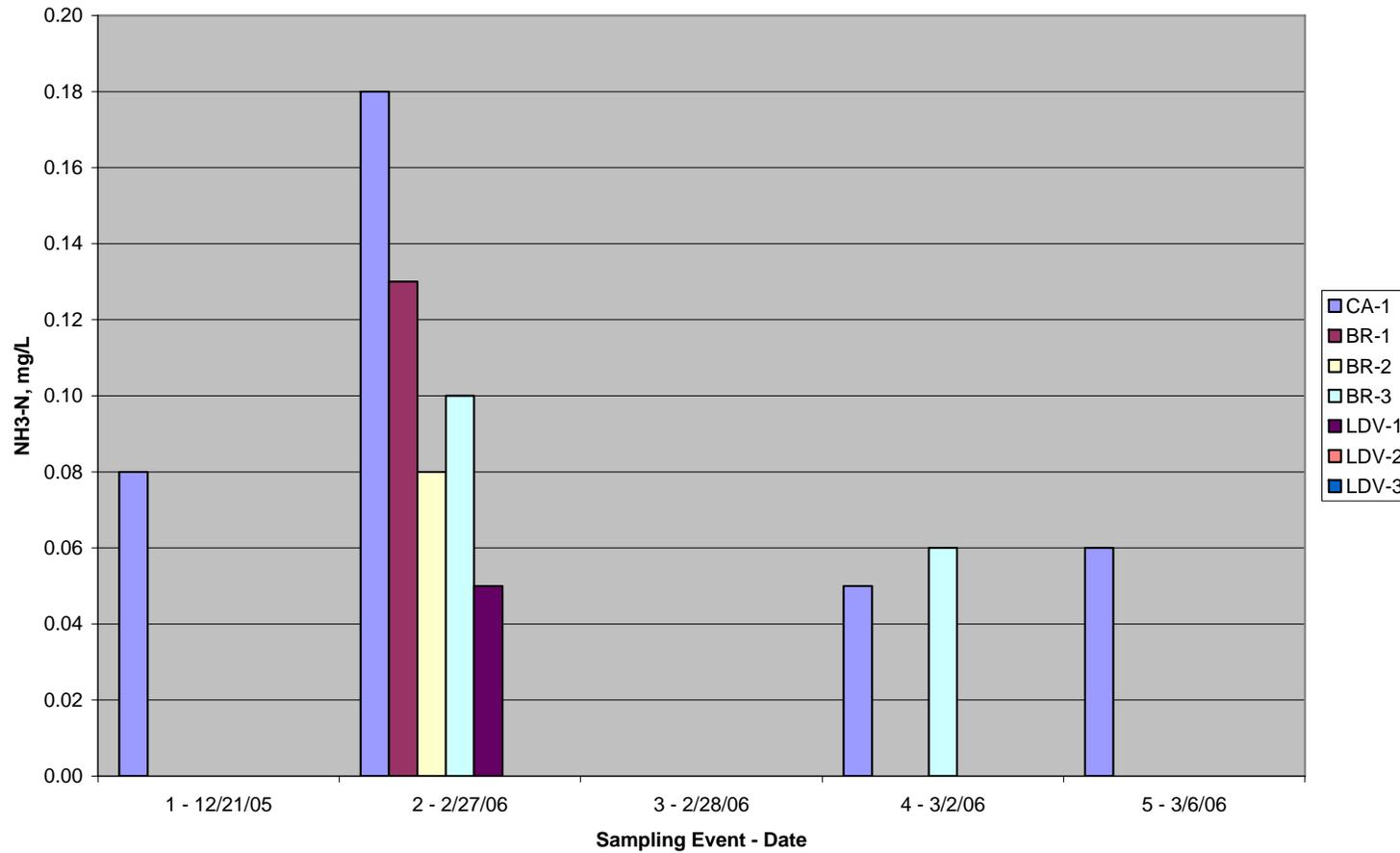
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure H-1
Nitrite



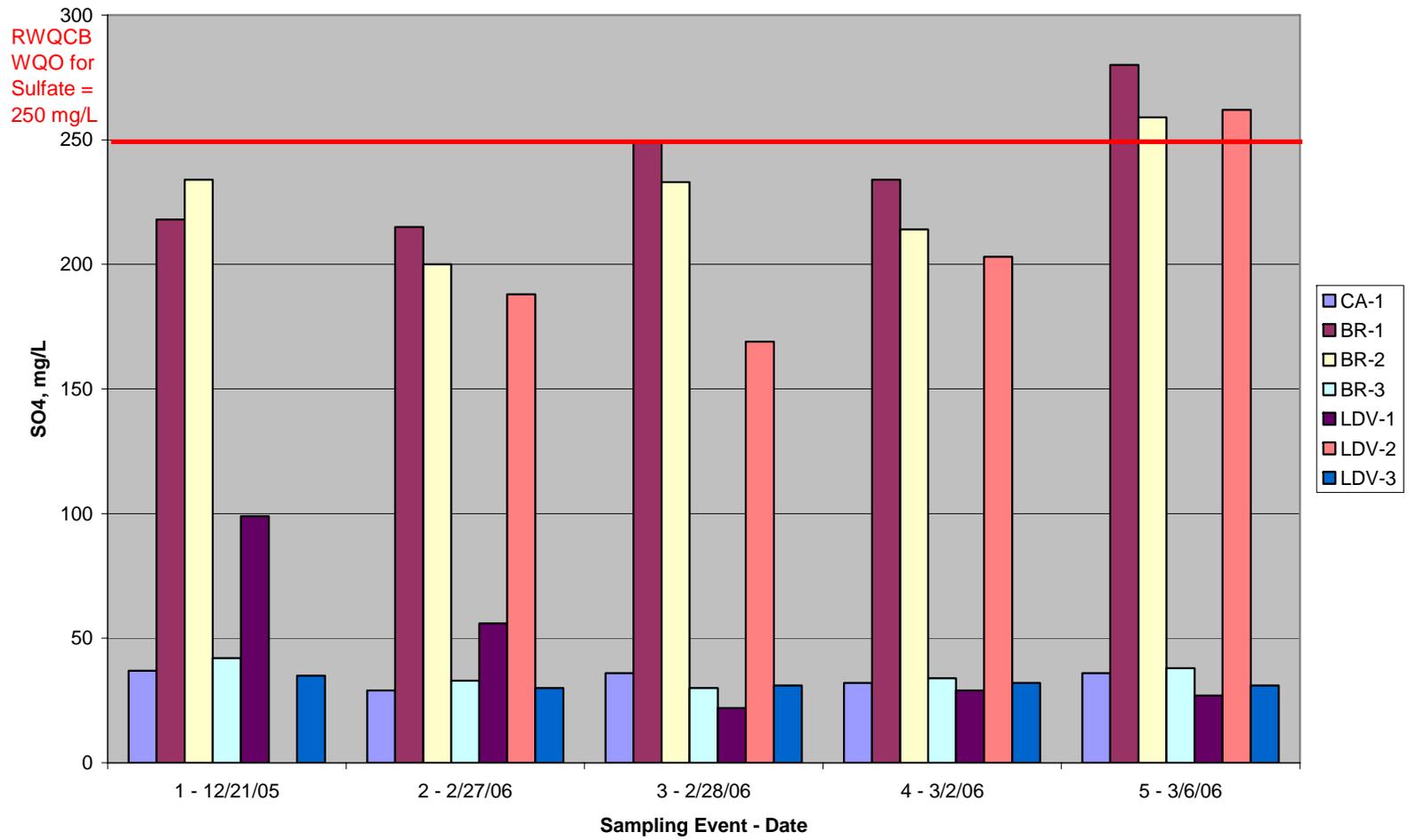
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure H-2
Phosphate



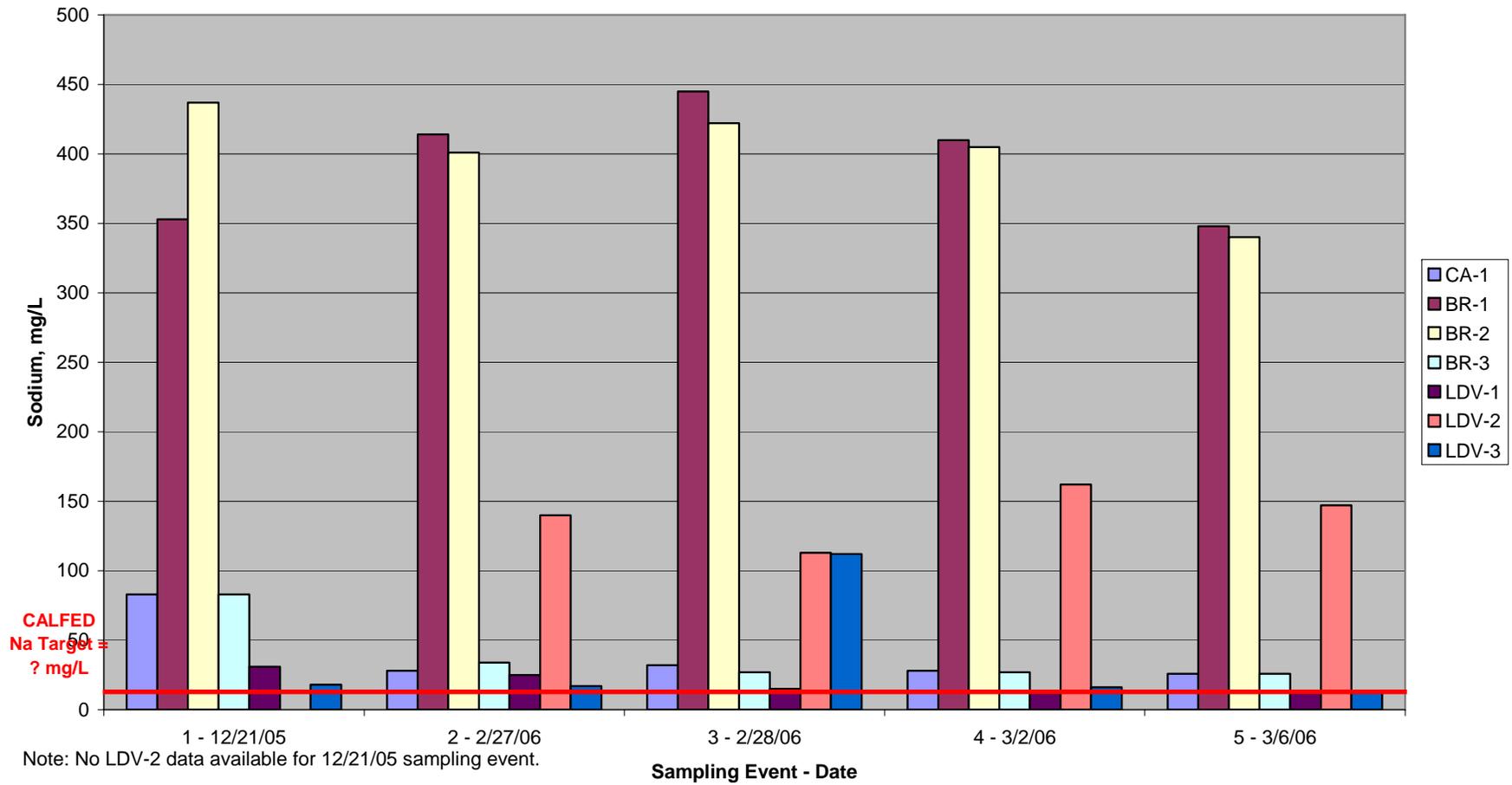
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure H-3
Ammonia



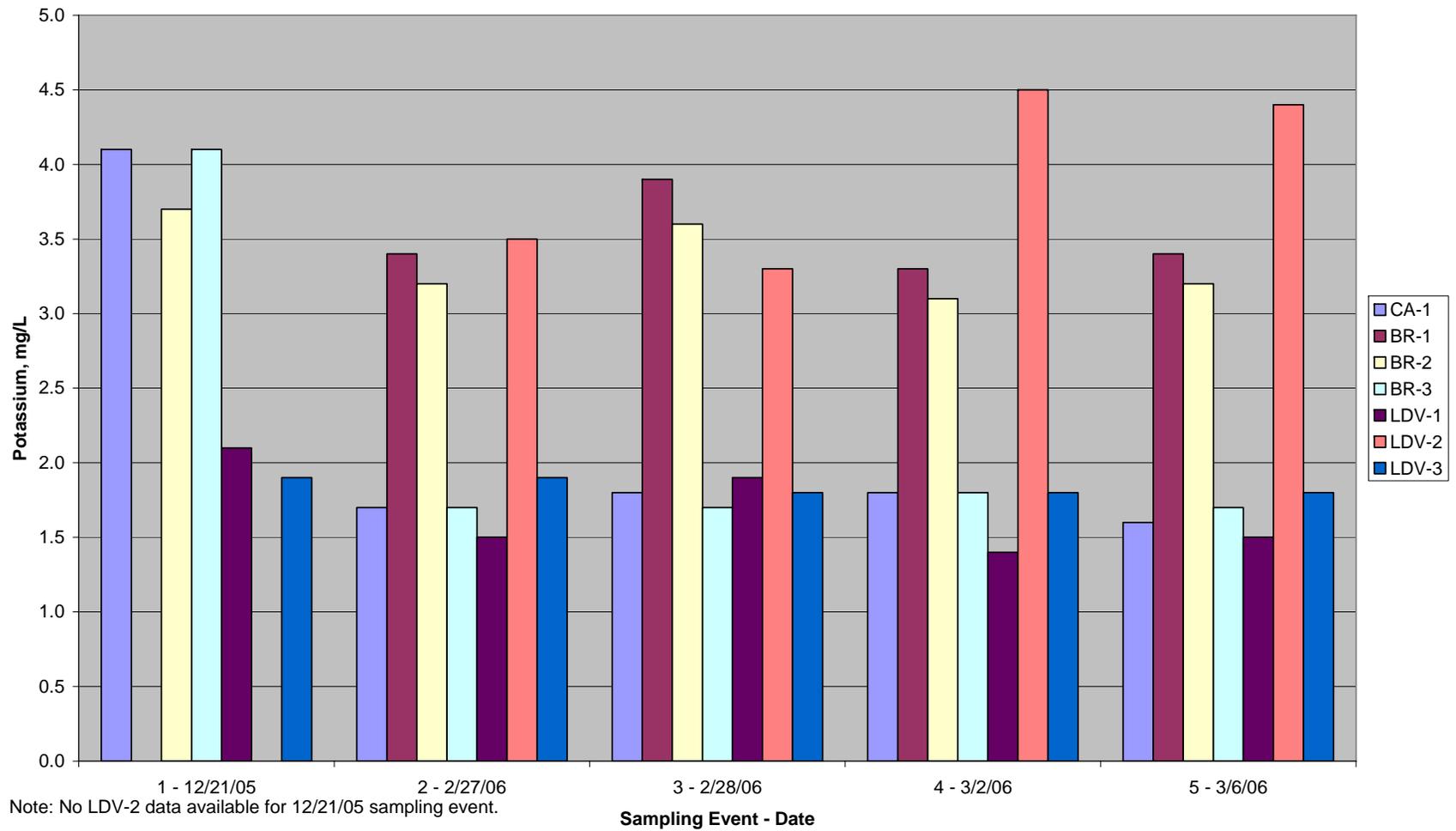
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure H-4
Sulfate



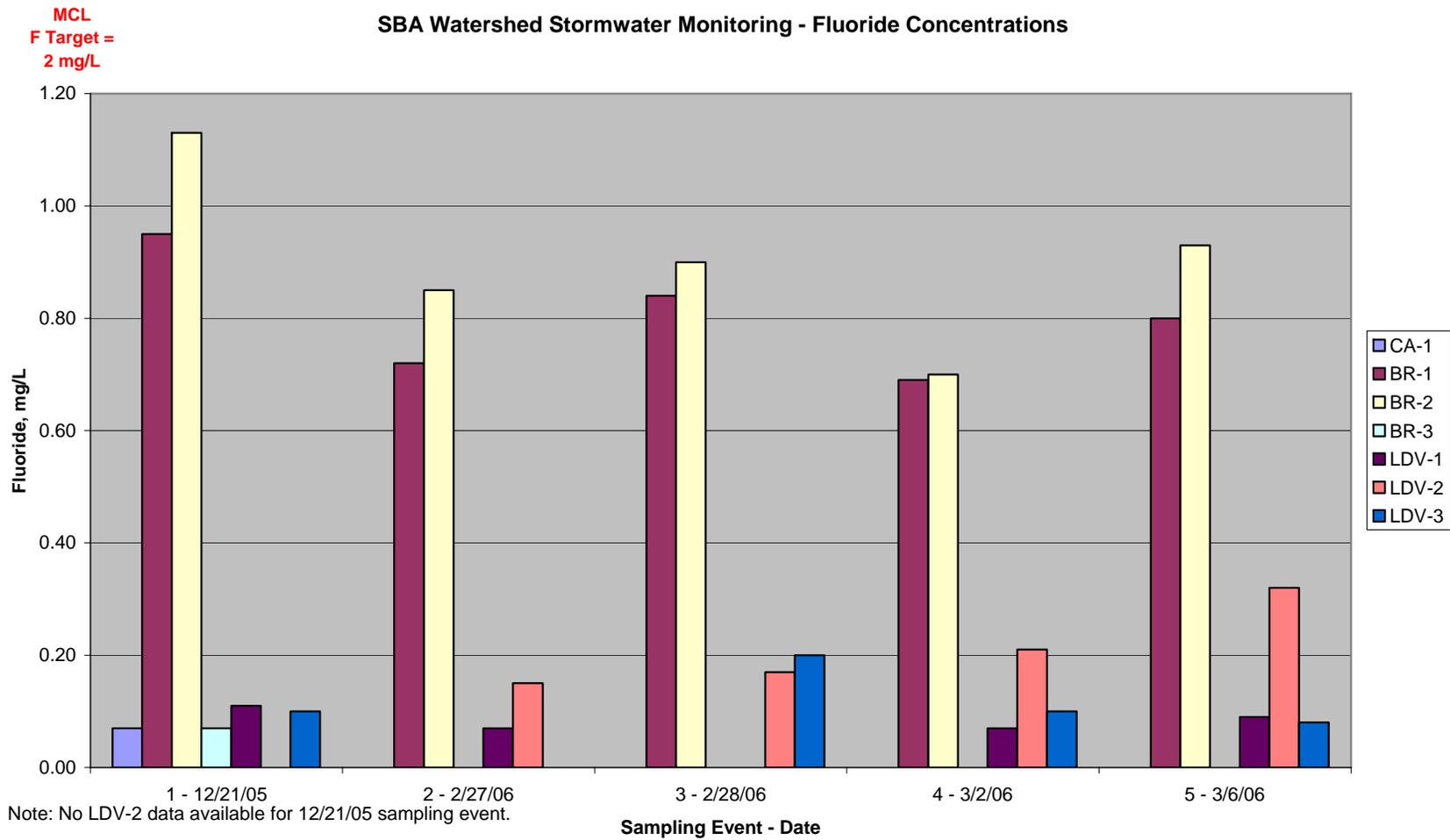
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure I
Sodium



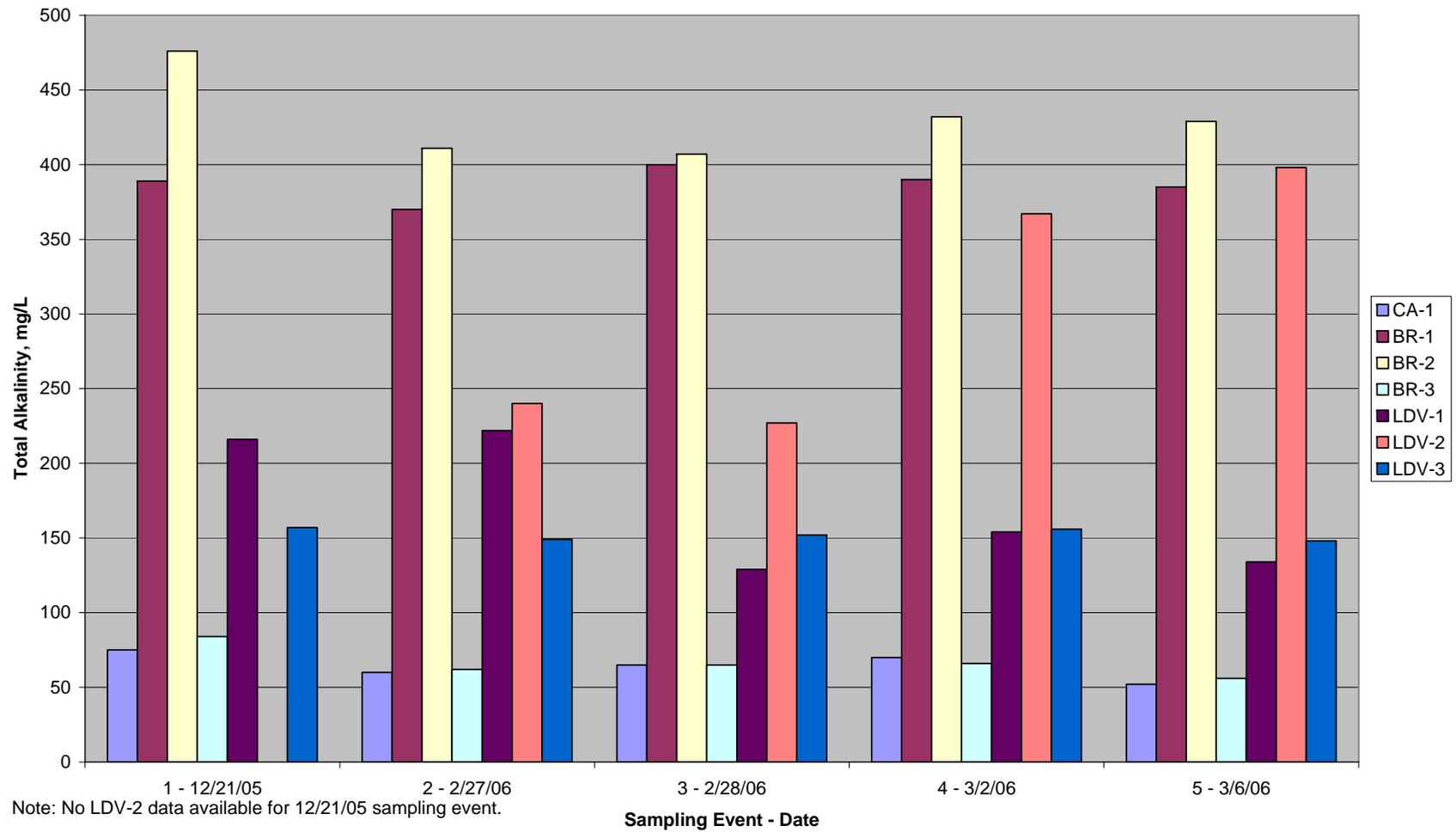
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure J
Potassium



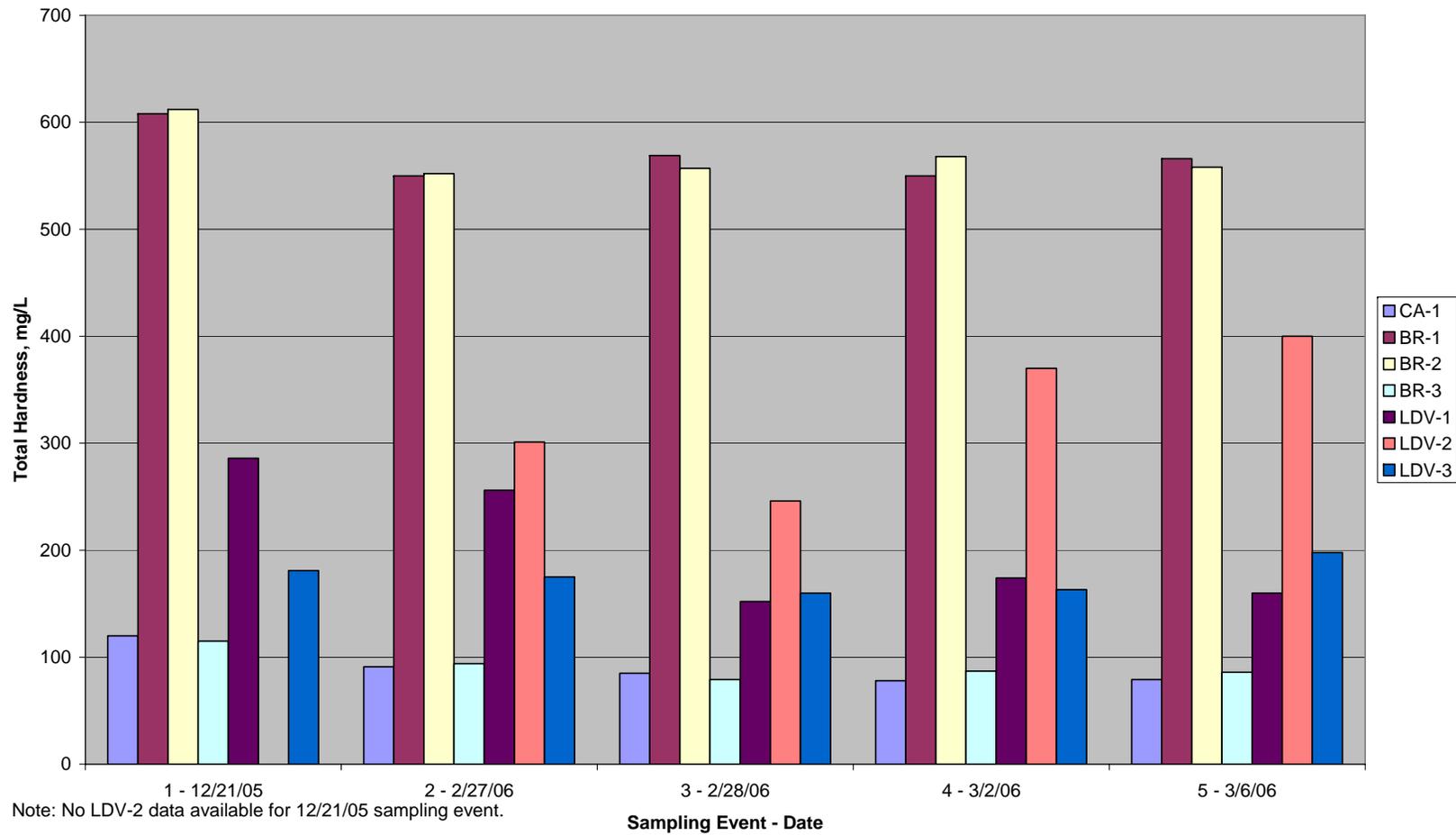
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure K
Fluoride



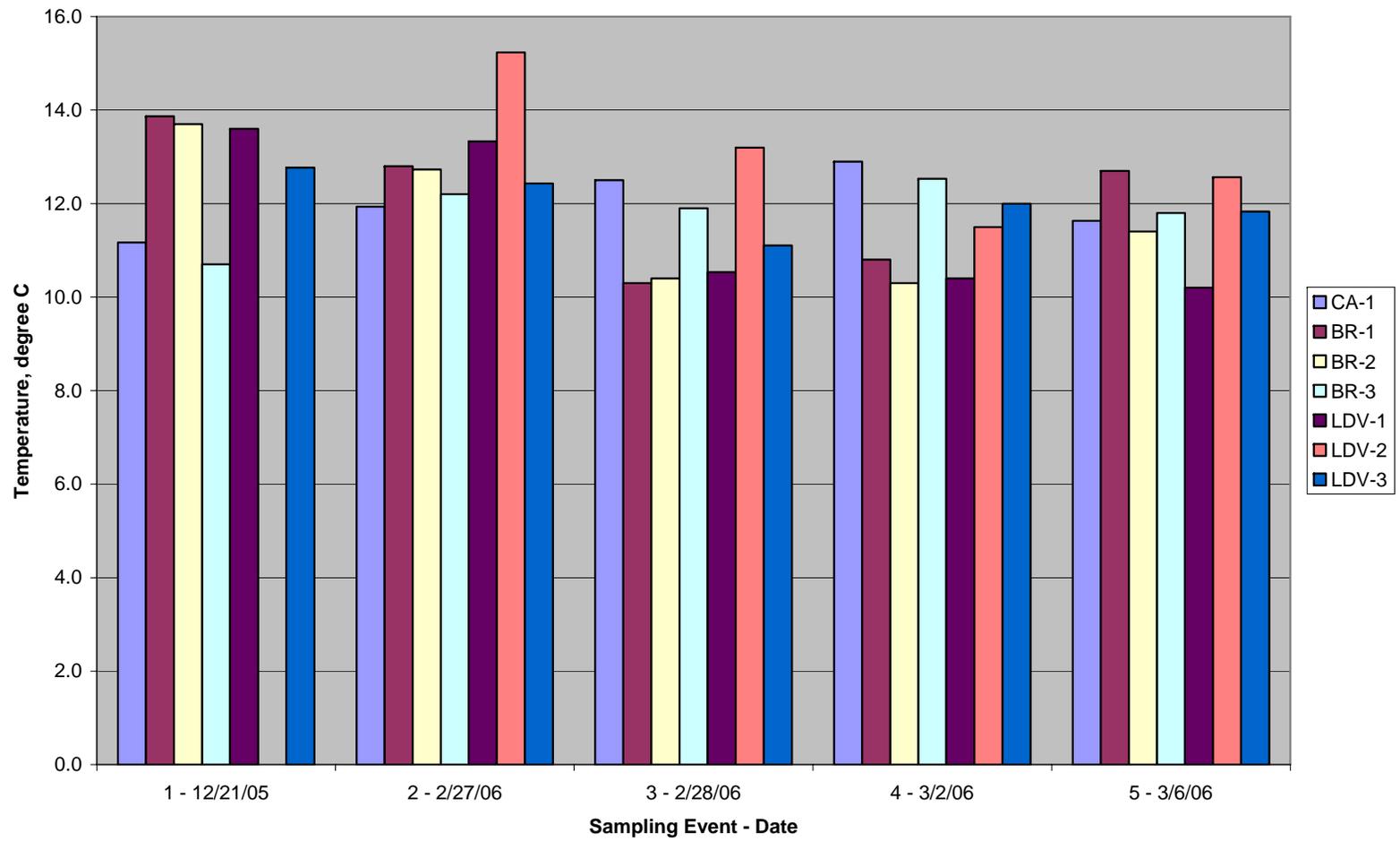
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure L
Total Alkalinity



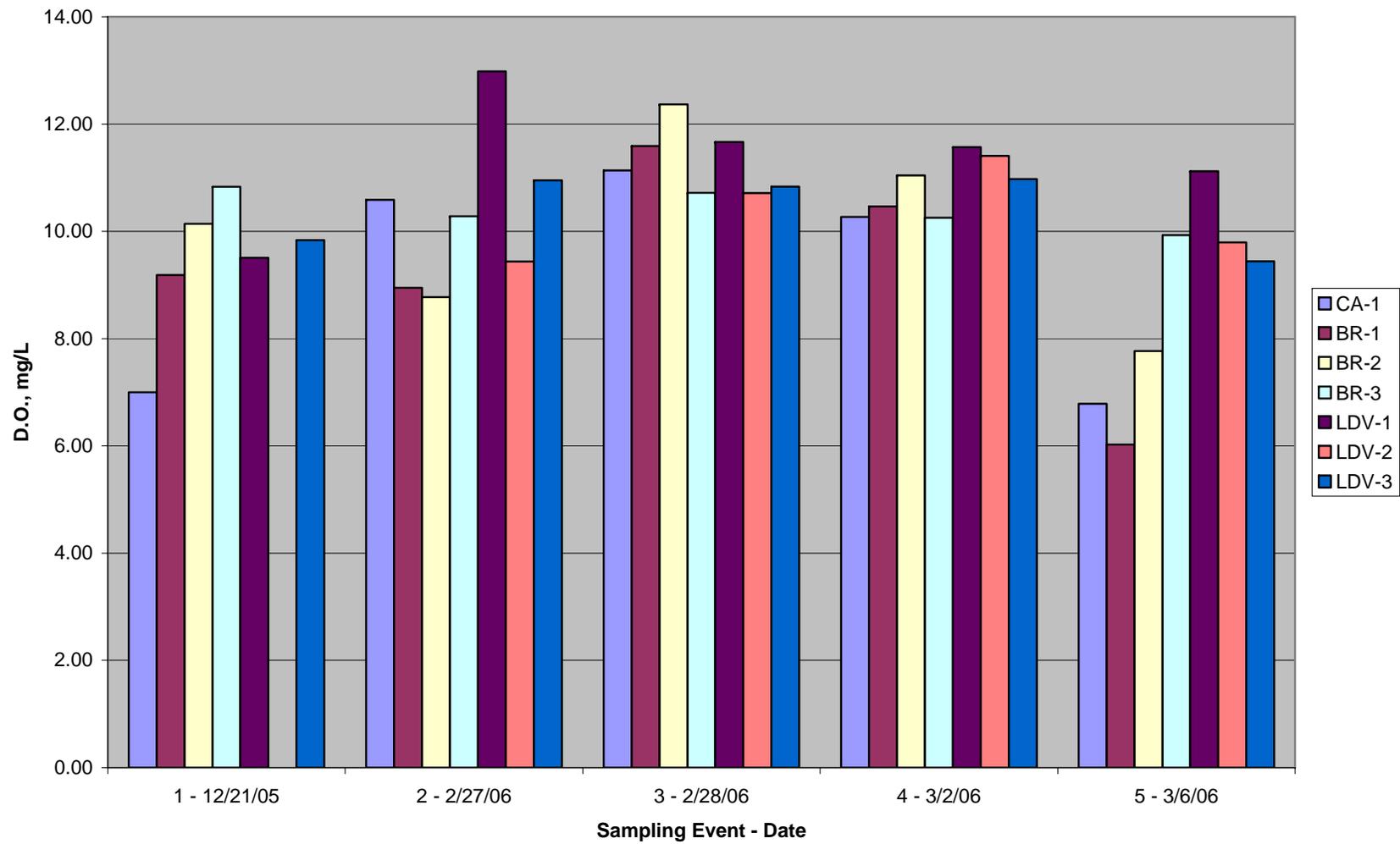
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure M
Total Hardness



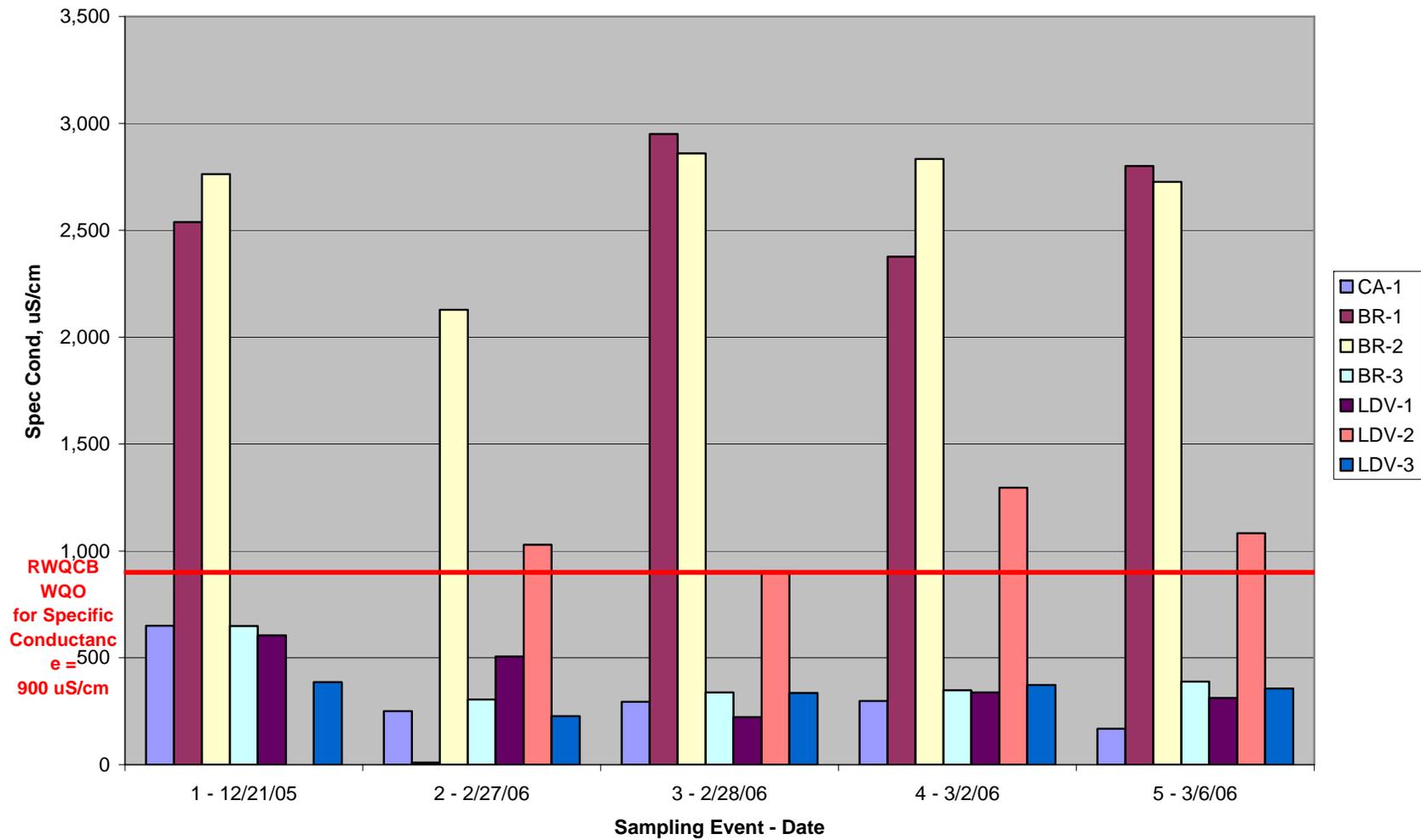
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure N-1
Water Temperature



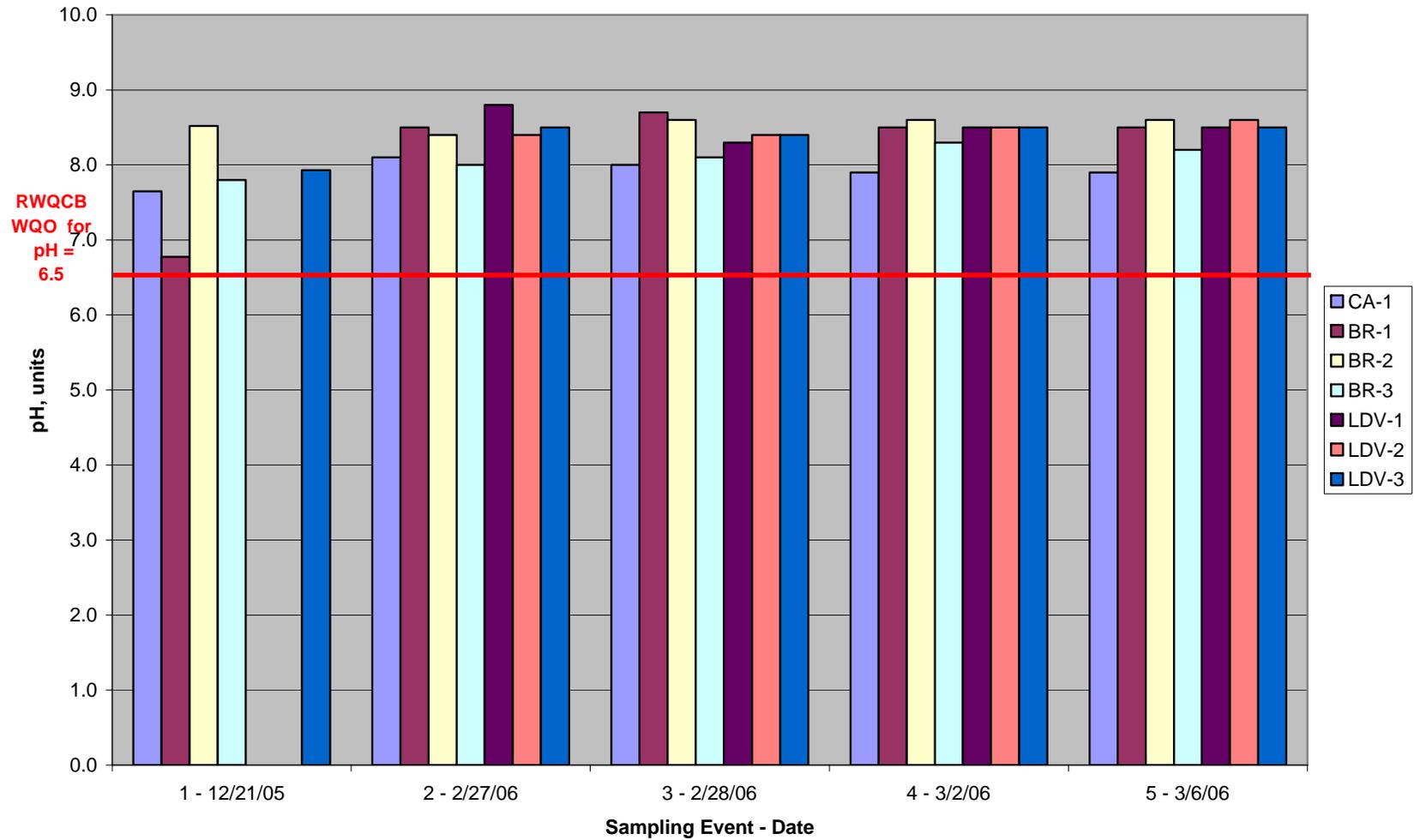
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure N-2
Dissolved Oxygen



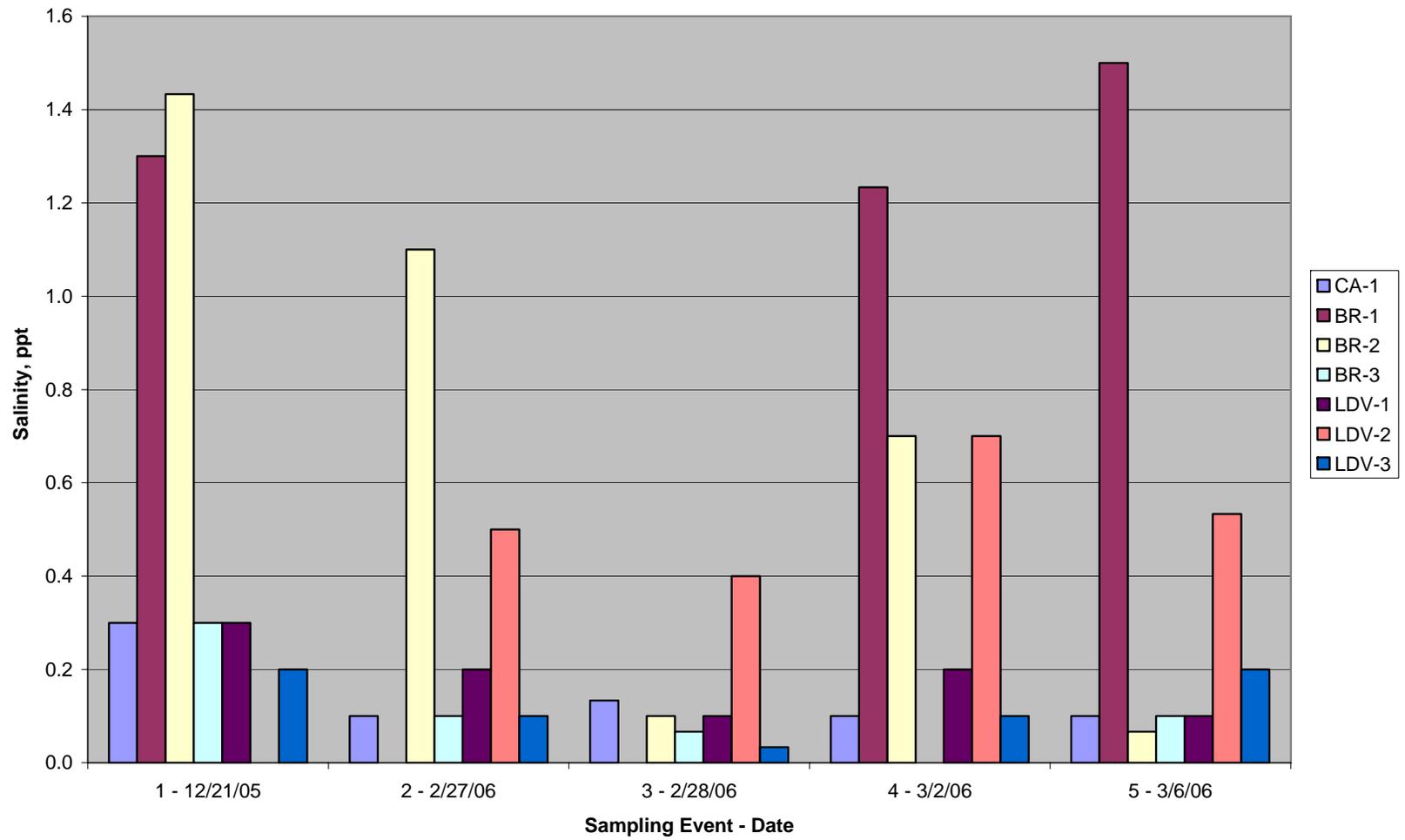
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure N-3
Specific Conductance



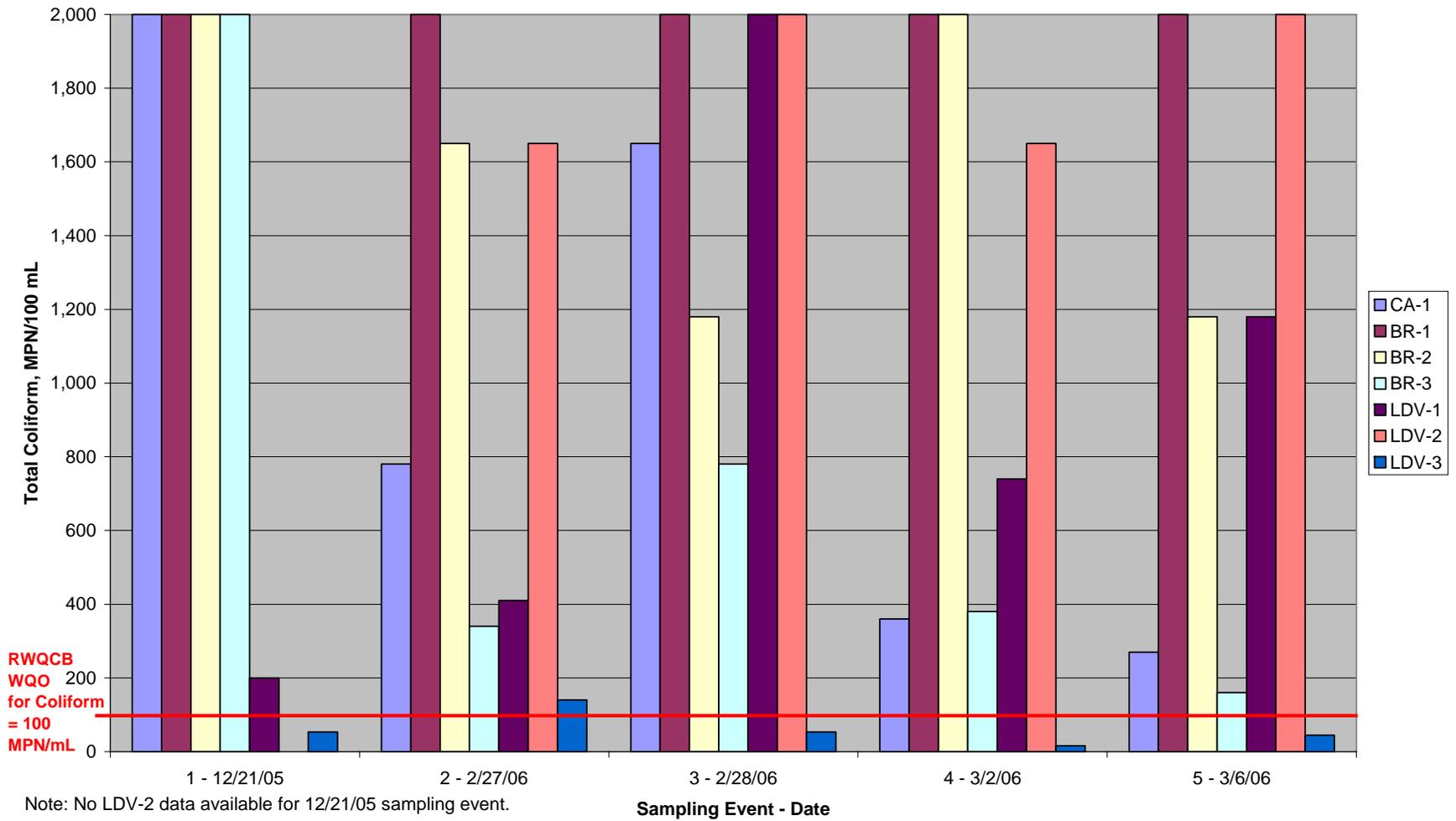
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure N-4
pH



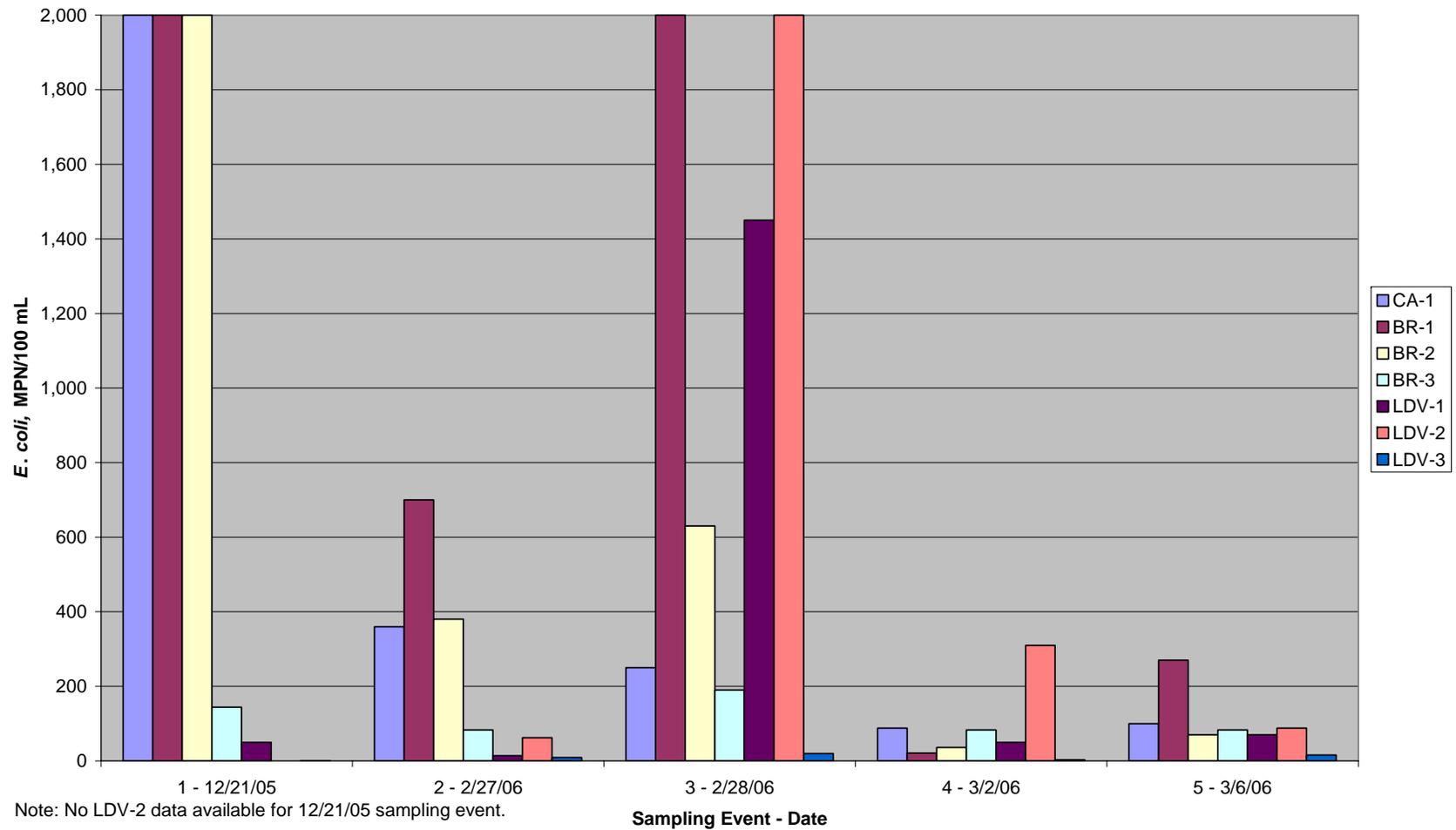
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure N-5
Salinity



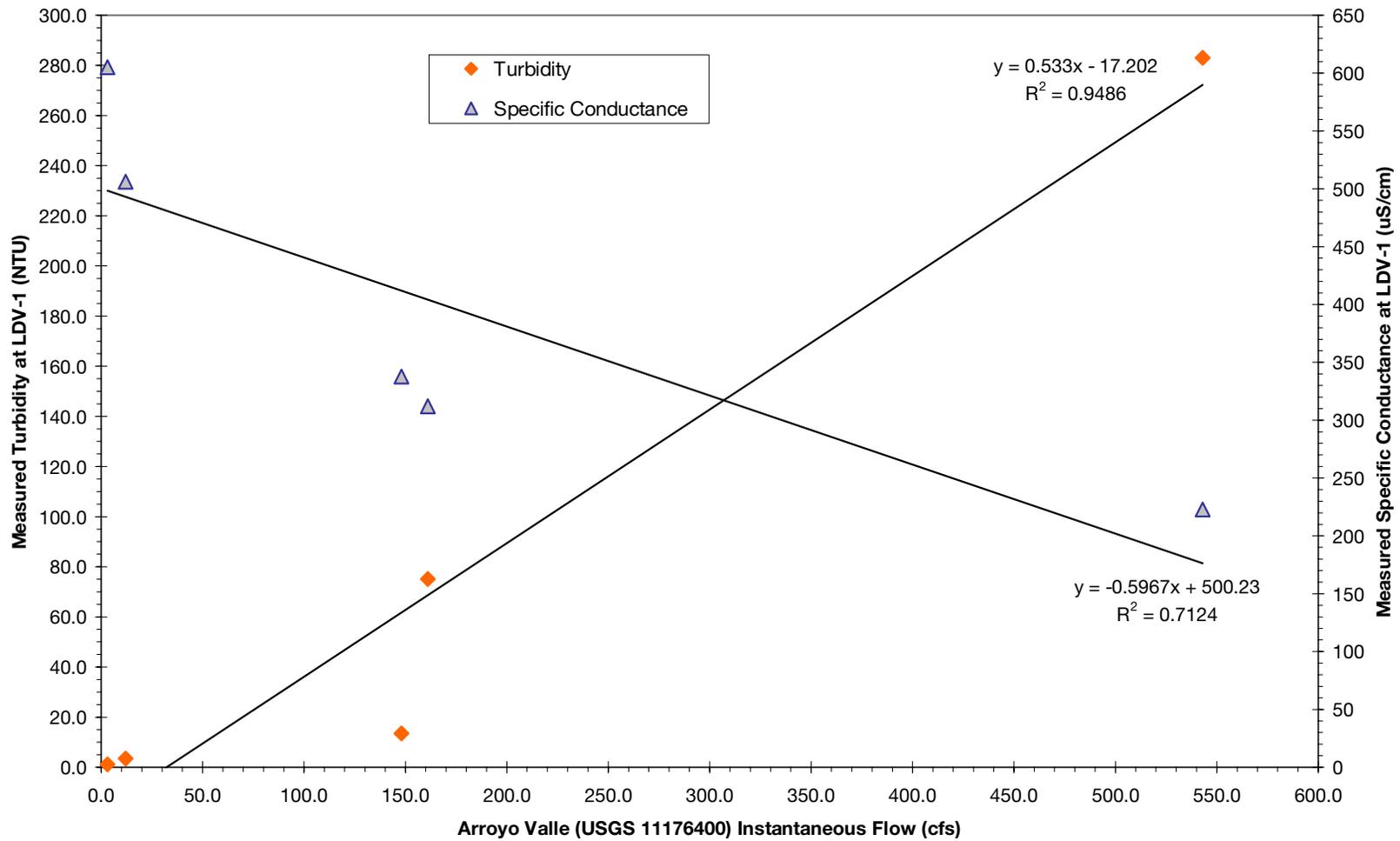
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure O-1
Total Coliform Results



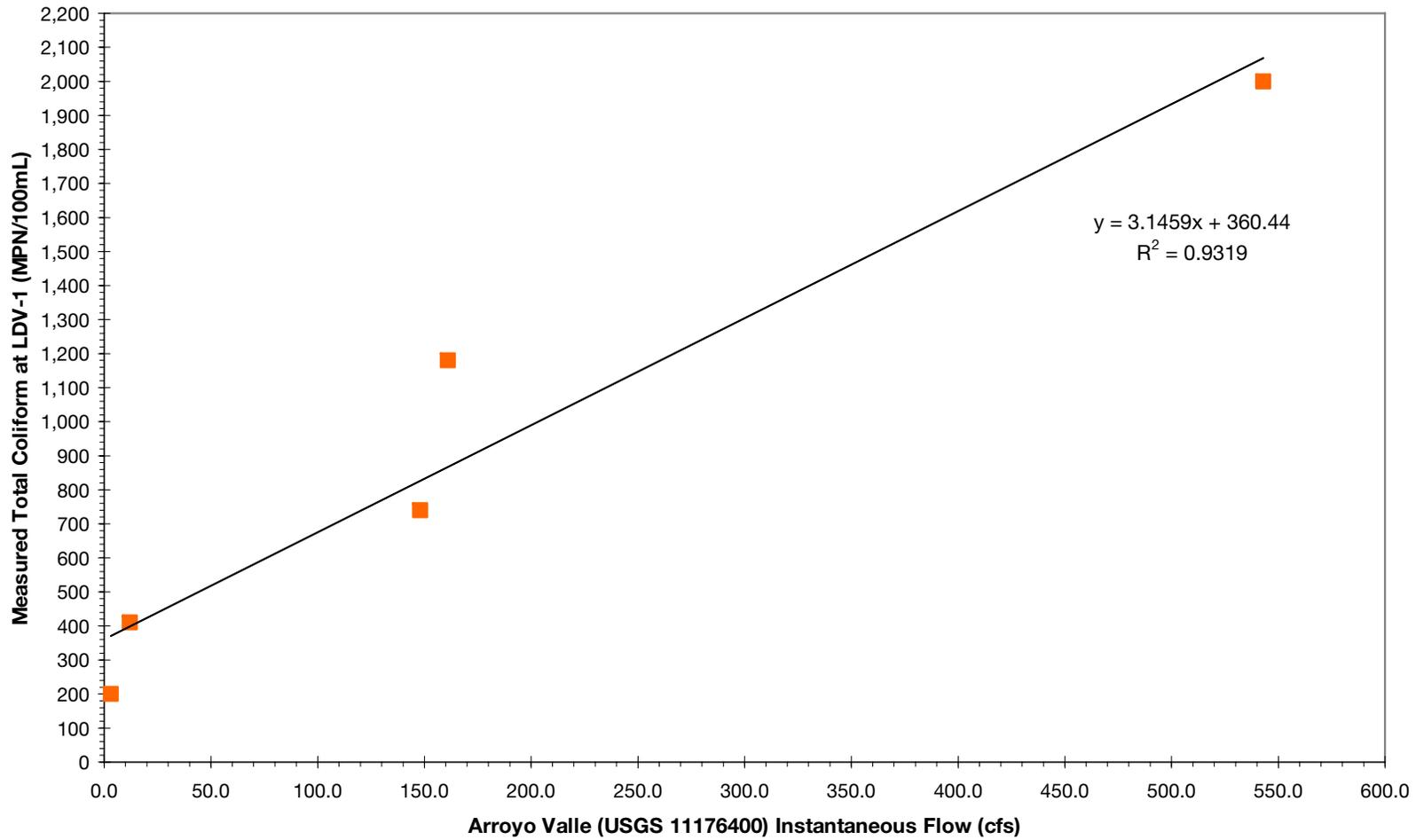
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure O-2
E. coli



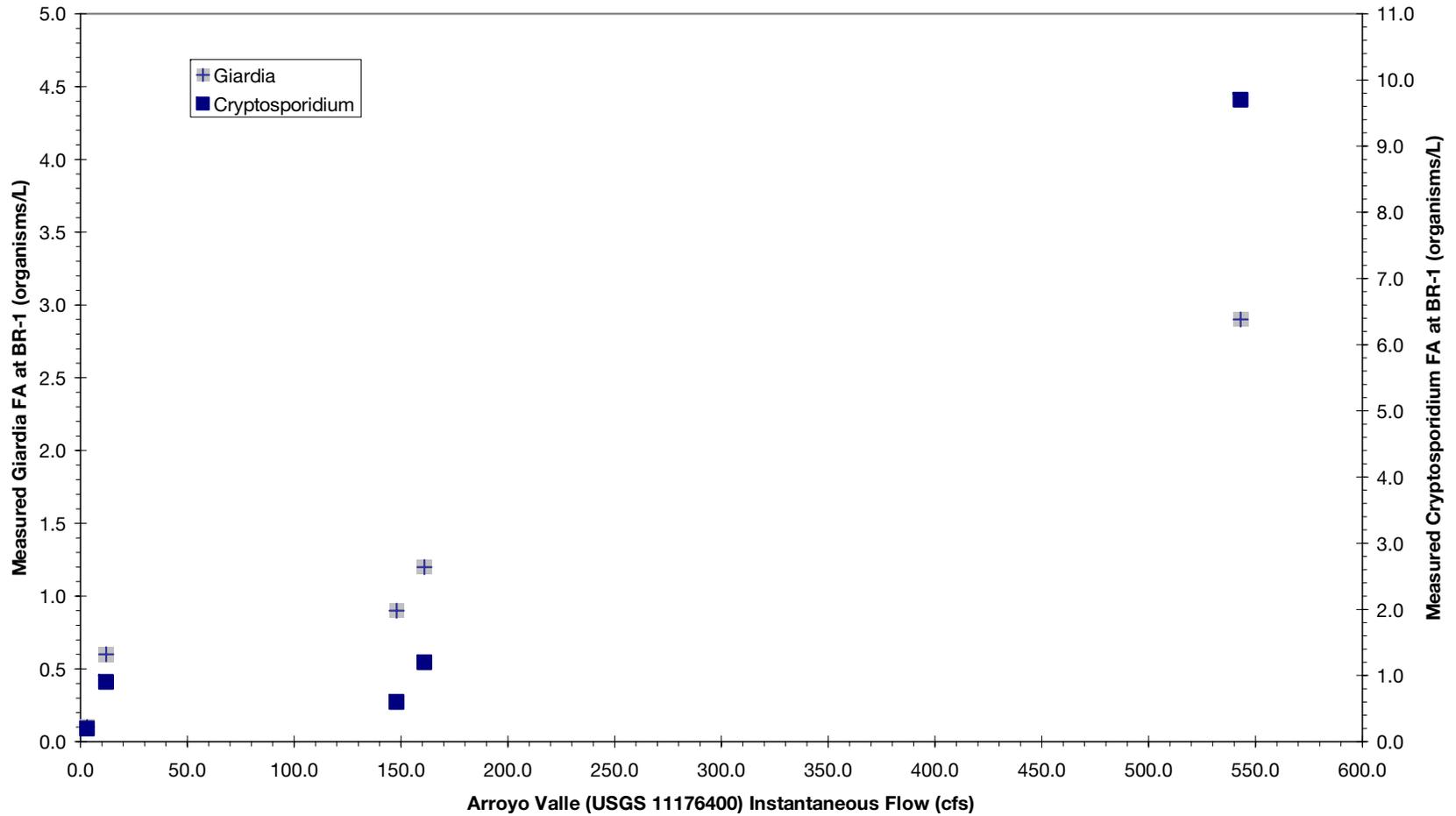
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure P
Turbidity and Specific Conductance versus Stream Discharge



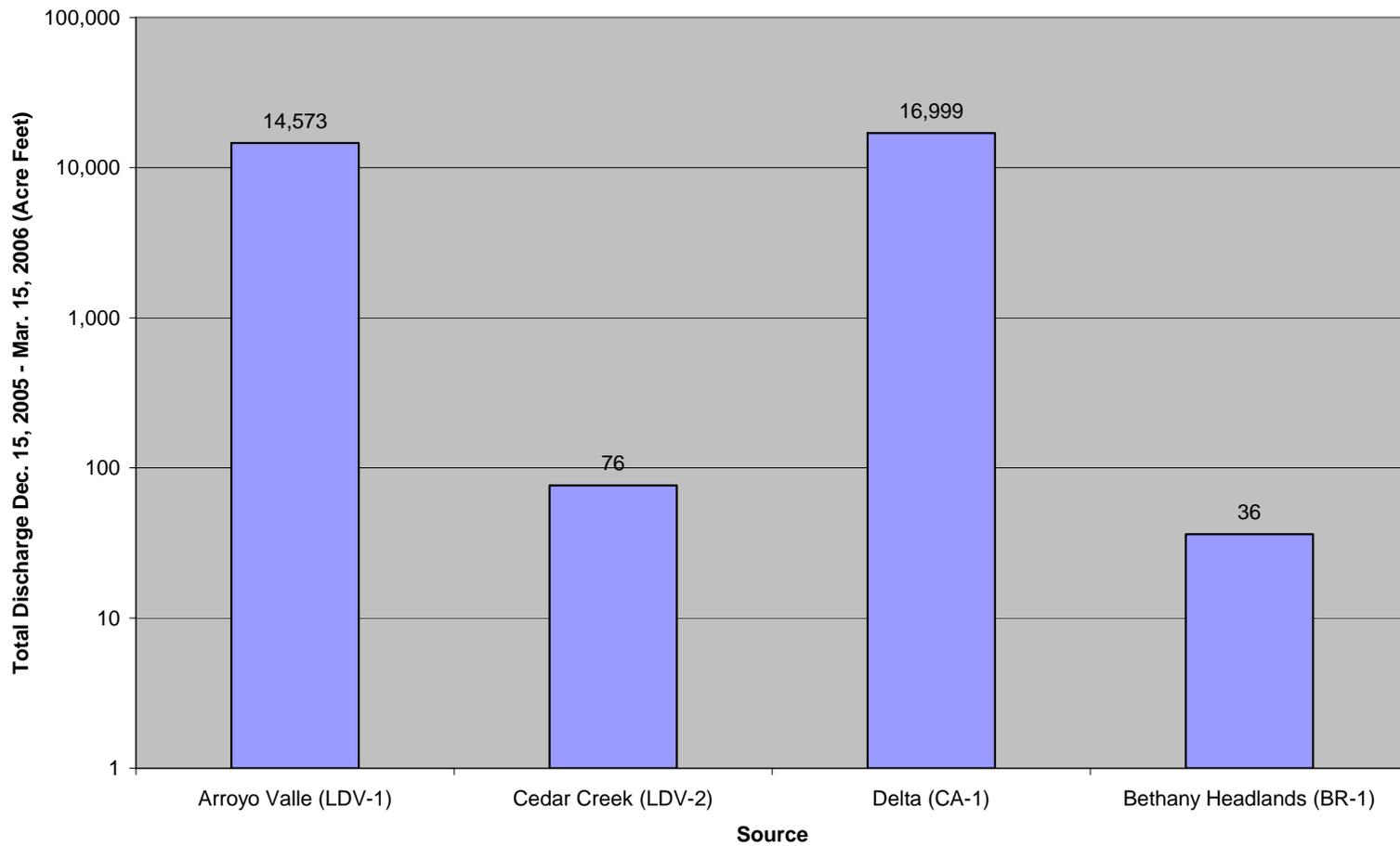
SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure Q
Total Coliform versus Stream Discharge



SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure R
Giardia and *Cryptosporidium* versus Stream Discharge

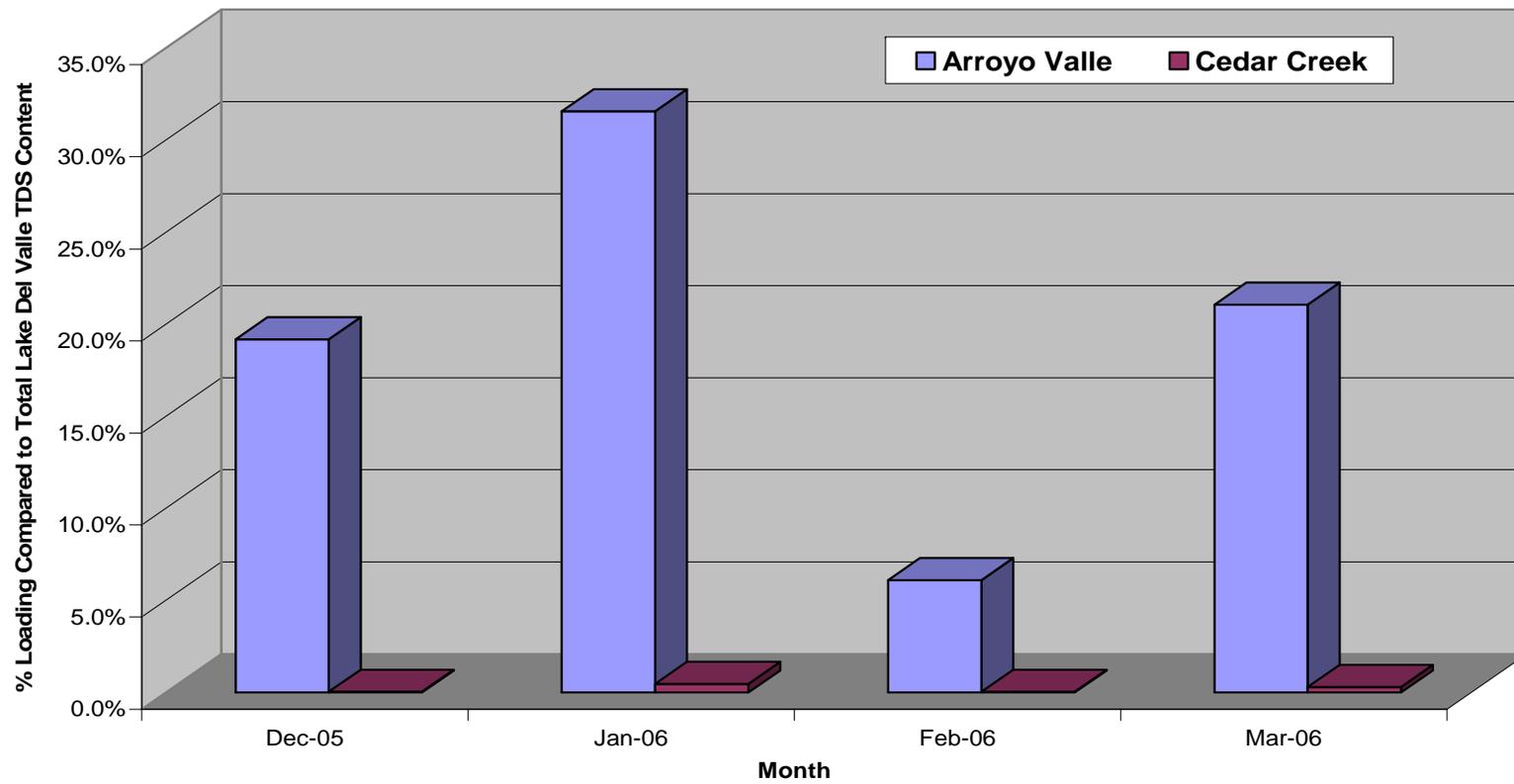


SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure S

Relative Contribution of Water Volume to the SBA from Monitored Sources

NOTE: Assumes that all water in Lake Del Valle is considered "in the SBA system" even though not all of the water in the lake ends up in the SBA as drinking water supply.



SBA Watershed Management Program Development Stormwater Monitoring Program . 205076

Figure T
Calculated TDS Loading at Lake Del Valle

IV. Discussion

Based on the results of the stormwater monitoring, the following observations can be made:

- Sample locations BR-1 and BR-2 had markedly poorer water quality compared to the other five stations. One or both of these stations had the highest average value for the following parameters: specific conductance, salinity, turbidity, total alkalinity, total hardness, total dissolved solids, ammonia, nitrate, nitrite, sodium, sulfate, total coliform, *Escherichia coli*, and *Giardia* and *Cryptosporidium* organisms.
- All but one location (LDV-3) recorded hits for *Giardia* or *Cryptosporidium*.
- At LDV-1, instantaneous flow values for the USGS (11176400) Arroyo Valle gage showed strong positive correlations with measured turbidity and total coliform values, while measured specific conductance values showed a fairly strong negative correlation with instantaneous flow.
- The sample events of March 2, 2006 and March 6, 2006 illustrate that the value of water quality parameters are often a function of sampling time relative to the storm cycle. For example, at LDV-1, the flow values at the time of sampling were similar, 148 cfs and 161 cfs, respectively, yet the turbidity value on the latter date was almost six times greater. In reviewing the daily flow hydrograph for Arroyo Valle, the March 2 event was sampling the falling limb of the storm hydrograph while the March 6 event was sampling the rising limb of the storm hydrograph, when more sediment is typically transported for a given flow.
- Flow was not directly measured at station BR-1. However, the *Giardia* and *Cryptosporidium* values show a fairly strong positive correlation with the instantaneous flow values for the Arroyo Valle gage, which is used as a surrogate for local flow measurements.
- The first sampling event (on December 21, 2005) for locations CA-1, BR-1, BR-2, and BR-3 all resulted in relatively high total coliform and *Escherichia coli* values (i.e., most > 2,000 MPN/100 mL). One possible explanation for this is that there was an accumulation of these constituents during the dry season, they remained immobilized in the early fall, and the first sampling event occurred prior to the local system being flushed (or diluted) with storm runoff.
- The Bethany Headlands drainage, as sampled at BR-1 and BR-2, exhibited high levels of alkalinity, TDS (especially SO_4^{2-} and Na^+), hardness, coliform, TOC, and pathogens, but not high levels of nutrients. It was observed that this stream did not respond markedly to moderate rainfall, but maintained a steady, low flow, suggesting that springs may contribute much of the flow. Some of the elevated parameters may be due to local geology, rather than stormwater runoff. Cattle have access to the entire drainage, including the stream channel, without restriction, which may explain the elevated levels of pathogens and the presence of parasitic oocysts.
- Placing sampling stations above and below the small wetland in the Bethany Headlands drainage (stations BR-1 and BR-2) was intended to reveal any effect of the wetland on water quality. Results are inconclusive. This may be partly due to difficulties in obtaining samples at BR-2, due to the very shallow depth of flow in the concrete flume at the sampling station, and the presence of large amounts of floating matter and algae in the water at this location.
- There was little difference between water quality sampled from the California Aqueduct (CA-1) and the SBA (BR-3), indicating that there was minimal impact from Bethany Reservoir and its associated runoff during the stormwater monitoring events. Nevertheless,

the presence of *Cryptosporidium* and *Giardia* oocysts at BR-1 and BR-2 are cause for concern, and should be addressed.

- Cedar Creek (station LDV-2) appears to contribute water with high EC/TDS (especially SO_4^{2-} and Na^+), alkalinity, TOC, hardness, and coliform. Water quality in this small stream is generally worse than in the much larger Arroyo Valle. The Cedar Creek watershed is small and contains several land uses that might affect water quality negatively, including roads, campgrounds, on-stream ponds, cattle grazing, and rural residential developments.
- With the exception of the small amount of water coming into the SBA from the Bethany Headlands drainage, SBA source water generally is very low in *Giardia* and *Cryptosporidium* levels.

Pollutant Loading

With a maximum of five data points from each of seven stations over the course of one rainy season, the data gleaned from the stormwater monitoring effort, and particularly the statistical relationships between constituent levels and water volume, are not sufficiently robust to enable calculation of seasonal pollutant loading rates with an acceptable degree of accuracy. However, monitoring results and the available information on the relative rates of flow of the several monitored inputs to the SBA do enable a qualitative discussion of pollutant loading.

Figure S shows the relative discharges or water volumes from the monitored sources to the SBA system. Note that the Y-axis uses a logarithmic scale. The calculated discharges for each of the four monitored sources shown in the chart – Arroyo Valle (LDV-1), Cedar Creek (LDV-2), the California Aqueduct (CA-1), and Bethany Headlands (BR-1) are the total in acre feet for the period December 15, 2005 – March 15, 2006. The Arroyo Valle and Cedar Creek discharges are calculated from the daily mean flow for each station reported by the USGS for gage 11176400, just upstream of station LDV-1 and by Zone 7 for LDV-2. For Bethany Headlands, a constant discharge of 0.2 cubic feet per second (cfs) was assumed based on estimates of flow at the time of sample collection. For CA-1, the average monthly pumping rate at the SBA Pumping Plant for each month (December –March), as reported by the Department of Water Resources (Thompson, 2006),¹ was used as a basis for calculating the total amount of water pumped into the SBA from Bethany Reservoir; the amount shown in Figure S for this source reflects the calculated total minus the contribution from Bethany Headlands, reflecting an assumption that the SBA pumps intake all of the discharge from Bethany Headlands, and the remainder from the California Aqueduct. In other words:, for the Delta/CA 1 figure:

$$\text{eqn.1) } V_{\text{SBA}(i)} = (Q_{\text{AVE}(i)} \times \text{days/month}_i \times \text{acre-feet/ft}^3 \times \text{sec/day}) - Q_{\text{BH}(i)}$$

where, $V_{\text{SBA}(i)}$ = Contribution of California Aqueduct to SBA for month i, (acre-ft)

¹ The reported monthly average pumping rates for the SBA Pumping Plant were:

December, 2005:	122 cfs
January, 2006:	94 cfs
February, 2006:	97 cfs
March, 2006:	59 cfs

Q_{AVE} = SBA Monthly Average Flow Rate for month i , (ft³/sec)

$Q_{BH,(i)}$ = Bethany Headlands Discharge for month i , (acre-ft/month _{i})

i = month, Dec 2005 – March 2006

Figure S demonstrates that, during the period of monitoring, the California Aqueduct contributed about the same volume of water to the SBA system as Arroyo Valle. Note that this assumes that all water in Lake Del Valle is considered “in the SBA system,” though not all of the water in the lake ends up in the SBA as drinking water supply. At Lake Del Valle, Arroyo Valle contributed about three orders of magnitude more volume than Cedar Creek; and at Bethany Reservoir, the California Aqueduct contributed about three orders of magnitude greater volume than the Bethany Headlands drainage. In a general sense, pollutant levels in Cedar Creek would have to be 1,000 times as high as pollutant levels in Arroyo Valle for Cedar Creek to contribute about the same load of pollutants. Assuming that there are about six other small drainages that flow directly into Lake Del Valle, and that each of these produces about the same discharge as Cedar Creek, the combined discharge of these streams would still be about two orders of magnitude less than Arroyo Valle, and pollutant levels would have to be on the order of 100 times greater than Arroyo Valle’s to contribute a roughly equal pollutant load.

At Bethany Reservoir, the discrepancies in scale are similar, but the Bethany Headlands drainage is the only notable contributor to the SBA other than the California Aqueduct. Pollutant levels in the Bethany Headlands Drainage would have to be on the order of 1,000 times greater than those in the California Aqueduct to contribute a similar pollutant load.

In fact, while most of the monitored pollutants in Cedar Creek are somewhat higher than those in Arroyo Valle, the average difference between them does not approach one order of magnitude, with the exception of sodium and sulfate (see Table B). At Bethany Reservoir, most of the monitored pollutant levels are about one order of magnitude higher at BR-1 than at CA-1 (Table B). Generally, then, it may be stated that Cedar Creek and other small streams draining directly into Lake Del Valle contribute about 1/100th of the pollutant load that Arroyo Valle contributes; and the Bethany Headlands drainage contributes about 1/100 of the pollutant load to the SBA at its point of origin. *Giardia* and *Cryptosporidium* organisms were detected in greater concentration at BR-1 and BR-2 than in the California Aqueduct. Because of inconsistencies in both concentrations and detects, these data do not lend themselves to similar comparisons.

As a quantitative illustration, Figure T shows calculated loading rates of total dissolved solids (TDS) into Lake Del Valle from Arroyo Valle (LDV-1) and Cedar Creek (LDV-2), expressed as a percentage of the total calculated amount of TDS present in lake water (based on monitoring results at LDV-3) for each month during the monitoring period. Table B and Figure F indicate that the average level of TDS at LDV-2 was about three times that at LDV-1; nevertheless, Figure T shows the TDS contribution from Arroyo Valle was much greater than that from Cedar Creek.

V. Conclusions

Samples taken from Lake Del Valle near the SBA intake confirm that the lake water is a much higher quality source than the Delta, and also demonstrate the benefits of dilution, distance from inputs to the intake, and retention time in the lake in reducing pollutant loads. This is perhaps best demonstrated by the substantially lower levels of bacteriological parameters in lake samples, several no-detects for chemical and nutrient parameters, and the non-detection of parasites. It would appear that current management of Lake Del Valle and its immediate watershed are effective in protecting water quality. However, the results of the SBA 2005-2006 stormwater monitoring also consistently show that all monitored sources and stations regularly exceeded at least some water quality standards or objectives for municipal drinking water supply. While the monitoring locations represent raw or untreated water supplies, the finding indicates the continuing need not just to protect but also to improve water quality from the watershed areas that contribute to the SBA, including the Lake Del Valle watershed, the Bethany Headlands watershed, and the Sacramento-San Joaquin Delta.

The monitoring results show that water quality is much poorer from the Bethany Headlands drainage than from any other monitored source. Of particular concern is the consistent finding of *Giardia* and *Cryptosporidium* organisms in samples taken from the Bethany Headlands stations, and the proximity of the mouth of this drainage to the SBA Pumping Plant. While the volume of water contributed by this small drainage is dwarfed by that of the California Aqueduct, the issue of parasitic organisms consistently present in source water should be addressed, particularly since the Bethany Headlands drainage area is relatively small and therefore manageable.

At Lake Del Valle, the generally poorer quality of the water found in Cedar Creek compared to Arroyo Valle may be reflective of the relatively intensive, mixed land uses found in the small Cedar Creek watershed, the lack of dilution, and perhaps also the natural geology of the area. As with the Bethany Headlands drainage, however, the contribution of Cedar Creek – and the several similar small drainages flowing directly into Lake Del Valle – is much less than Arroyo Valle.

Some pollutant levels in Arroyo Valle itself correlate well with discharge, suggesting that stormwater runoff is a major source of pollutants carried by this stream. While overall the quality of water from Arroyo Valle is the highest among the monitored flowing sources, the monitoring results point to the need for conservation of the existing low-density and low-intensity land uses in the Arroyo Valle watershed that have contributed to the protection of water quality in this area. Working with landowners and resource conservation agencies to support land management practices that protect the water quality in the area is perhaps the best approach for protecting this watershed from any future degradation. .

References

- Archibald and Wallberg. 2005. *Assessment of Watershed Contaminant Sources for South Bay Aqueduct, Bethany Reservoir, and Lake Del Valle, Final Report*. Prepared for Alameda County Water Agency, Santa Clara Valley Water District, Zone 7 Water Agency of the Alameda County Flood Control and Water Conservation District.
- Archibald and Wallberg. 2002. *Drinking Water Source Assessment Mission San Jose Water Treatment Plant and Water Treatment Plant No. 2 Intakes on South Bay Aqueduct*. Prepared for the Alameda County Water District.
- California Department of Water Resources. 2003. *South Bay Aqueduct Improvement and Enlargement Study*. Prepared by Environmental Science Associates.
- California Department of Water Resources. 2001. *Sanitary Survey Update Report 2001*. Volume 1. Prepared under the direction of the State Water Contractors.
- Environmental Science Associates (ESA) and Eisenberg, Olivieri, and Associates (EOA), *Quality Assurance Project Plan for the South Bay Aqueduct System Watershed Stormwater Monitoring Plan*. Prepared for Alameda County Water District, November, 2005 (2005a).
- Environmental Science Associates (ESA) and Eisenberg, Olivieri, and Associates (EOA), *South Bay Aqueduct System Watershed Stormwater Monitoring Plan*. Prepared for Alameda County Water District, November, 2005 (2005b).
- Schaff & Wheeler, Consulting Civil Engineers, 2004. *Sediment Yield Estimates from Local Drainage Areas at the South Bay Pumping Plant*. Prepared for the Zone 7 Water Agency, June 30, 2004.
- Thompson, Doug, California Department of Water Resources, Personal Communication (telephone) with Dan Sicular, ESA, July 19, 2006.
- US Geological Survey, Station 11176400 ARROYO VALLE BL LANG CN NR LIVERMORE CA. http://nwis.waterdata.usgs.gov/ca/nwis/nwisman/?site_no=11176400&agency_cd=USGS

APPENDIX A

Zone 7 Lab Data and QA/QC Results

SBA Watershed Stormwater Monitoring 2006

Zone 7 Lab Data

QA / QC
MAY 25 2006
REVIEWED

Sally

SBA Watershed Project Data

Sample Name	LABNO	Sample Date	Sample Time	Sampler	Received Date	Received Time	EC	pH	NTU	Alk.	TDS	CO ₂	NO ₃ -N	Total Hard	Fe	Mn	NO ₂ -N	NO ₃ -N	PO ₄ -P	PO ₄ -P	Na	K	COMMENT	Lab Analysis Finished
								units	NTU	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
CA-1	051715	12/21/05	8:30	PH/DS	12/21/05	15:45			8.0	75	386	3.20	0.08	120	0.07	0.46	0.91	37	0.01	0.05	83	4.1	Total coliform =>200 , E. coli =>200	01/12/06
BR-1	051716	12/21/05	9:45	PH/DS	12/21/05	15:45			18	389	1540	3.54	<0.05	608	0.95	1.73	2.11	218	0.31	<0.05	353	3.3	Total coliform =>200 , E. coli =>200	01/12/06
BR-2	051717	12/21/05	10:30	PH/DS	12/21/05	15:45			15	476	1660	4.44	<0.05	612	1.13	1.74	0.53	234	<0.01	0.05	437	3.7	Total coliform =>200 , E. coli =>200	01/12/06
BR-3	051718	12/21/05	11:45	PH/DS	12/21/05	15:45			7.5	84	406	3.22	<0.05	115	0.07	0.48	0.98	42	0.02	<0.05	83	4.1	Total coliform =>200 , E. coli = 144	01/12/06
LDV-1	051719	12/21/05	14:40	PH/DS	12/21/05	15:45			1.2	216	398	6.00	<0.05	286	0.11	<0.05	0.15	99	<0.01	<0.05	31	2.1	Total coliform = 200 , E. coli = 50	01/12/06
LDV-3	051720	12/21/05	13:15	PH/DS	12/21/05	15:45			2.6	157	228	3.73	<0.05	181	0.10	<0.05	<0.10	35	<0.01	<0.05	18	1.9	Total coliform = 53 , E. coli = 1.0	01/12/06
CA-1	060178	02/27/06	8:00	DS	2/27/06	14:15		8.1	33	60	160	4.07	0.18	91	<0.05	0.10	0.71	29	<0.01	0.05	28	1.7	Total Coliform = 780 E. coli = 360	04/05/06
BR-1	060179	02/27/06	8:30	DS	2/27/06	14:15		8.5	9.6	370	1650	4.75	0.13	550	0.72	1.84	0.80	215	<0.01	<0.05	414	3.4	Total Coliform = 2000 E. coli = 700	04/05/06
BR-2	060180	02/27/06	9:30	DS	2/27/06	14:15		8.4	273	411	1566	6.25	0.08	552	0.85	1.73	1.13	200	<0.01	<0.05	401	3.2	Total Coliform = 1650 E. coli = 380	04/05/06
BR-3	060181	02/27/06	10:30	DS	2/27/06	14:15		8.0	6.4	62	184	3.98	0.10	94	<0.05	0.08	0.78	33	<0.01	<0.05	34	1.7	Total Coliform = 340 E. coli = 83	04/05/06
LDV-1	060182	02/27/06	13:00	DS	2/27/06	14:15		8.8	3.0	222	300	L	0.05	256	0.07	<0.05	<0.10	56	<0.01	<0.05	25	1.5	Total Coliform = 410 E. coli = 14	04/05/06
LDV-2	060183	02/27/06	12:30	DS	2/27/06	14:15		8.4	11	240	708	9.10	<0.05	301	0.15	0.23	0.11	188	<0.01	<0.05	140	3.5	Total Coliform = 1650 E. coli = 62	04/05/06
LDV-3	060184	02/27/06	11:30	DS	2/27/06	14:15		8.5	37	149	216	5.09	<0.05	175	<0.05	<0.05	0.27	30	<0.01	<0.05	17	1.9	Total Coliform = 140 E. coli = 8.7	04/05/06
CA-1	060187	02/28/06	8:00	DS	2/28/06	13:24	318	8.0	37	65	180	3.82	<0.05	85	<0.05	0.10	0.84	36	0.01	<0.05	32	1.8	Total Coliform = 1650 E. coli = 250	04/05/06
BR-1	060188	02/28/06	8:30	DS	2/28/06	13:24	2950	8.7	18	400	1720	5.84	<0.05	569	0.84	1.98	0.41	249	<0.01	<0.05	445	3.9	Total Coliform =>2000 E. coli = 2000	04/05/06
BR-2	060189	02/28/06	8:50	DS	2/28/06	13:24	2860	8.6	12	407	1676	5.81	<0.05	557	0.90	1.91	0.52	233	<0.01	<0.05	422	3.6	Total Coliform = 1180 E. coli = 630	04/05/06
BR-3	060190	02/28/06	10:00	DS	2/28/06	13:24	338	8.1	14	65	174	4.06	<0.05	79	<0.05	0.10	0.74	30	0.01	<0.05	27	1.7	Total Coliform = 780 E. coli = 190	04/05/06
LDV-1	060191	02/28/06	12:15	DS	2/28/06	13:24	291	8.3	212	129	202	8.31	<0.05	152	<0.05	<0.05	0.32	22	<0.01	<0.05	15	1.9	Total Coliform => 2000 E. coli = 1450	04/05/06
LDV2	060192	02/28/06	11:45	DS	2/28/06	13:24	874	8.4	31	227	566	8.96	<0.05	246	0.17	0.18	<0.10	169	<0.01	0.06	113	3.3	Total Coliform = >2000 E. coli = >2000	04/05/06
LDV-3	060193	02/28/06	11:00	DS	2/28/06	13:24	335	8.4	7.7	152	212	5.02	<0.05	160	0.20	<0.05	0.19	31	<0.01	<0.05	112	1.8	Total Coliform = 53 E. coli = 20	04/05/06
CA-1	060194	03/02/06	7:30	DS	3/2/06	12:50	292	7.9	11	70	138	3.88	0.05	78	<0.05	0.09	0.78	32	<0.01	<0.05	28	1.8	Total Coliform = 360 E. coli = 88	04/05/06
BR-1	060195	03/02/06	7:45	DS	3/2/06	12:50	2771	8.5	7.8	390	1564	4.65	<0.05	550	0.69	1.82	0.70	234	<0.01	<0.05	410	3.3	Total Coliform =>2000 E. coli = 21	04/05/06
BR-2	060196	03/02/06	8:20	DS	3/2/06	12:50	2834	8.6	4.0	432	1552	4.28	<0.05	568	0.70	1.84	0.79	214	<0.01	<0.05	405	3.1	Total Coliform = 2000 E. coli = 36	04/05/06
BR-3	060197	03/02/06	9:25	DS	3/2/06	12:50	349	8.3	11	66	160	4.01	0.06	87	<0.05	0.12	0.80	34	<0.01	<0.05	27	1.8	Total Coliform = 380 E. coli = 83	04/05/06
LDV-1	060198	03/02/06	11:35	DS	3/2/06	12:50	343	8.5	12	154	174	5.46	<0.05	174	0.07	<0.05	0.14	29	<0.01	<0.05	12	1.4	Total Coliform = 740 E. coli = 50	04/05/06
LDV-2	060199	03/02/06	11:10	DS	3/2/06	12:50	1265	8.5	6.7	367	784	11.2	<0.05	370	0.21	0.25	<0.10	203	<0.01	0.05	162	4.5	Total Coliform = 1650 E. coli = 310	04/05/06
LDV-3	060200	03/02/06	10:25	DS	3/2/06	12:50	373	8.5	3.0	156	184	5.79	<0.05	163	0.10	<0.05	0.12	32	<0.01	<0.05	16	1.8	Total Coliform = 16 E. coli = 3.1	04/05/06
CA-1	060233	03/06/06	8:30	DS	3/6/06	13:55	293	7.9	6.9	52	156	3.38	0.06	79	<0.05	0.10	0.78	36	0.01	0.06	26	1.6	Total Coliform = 270 E. coli = 100	04/05/06
BR-1	060234	03/06/06	9:00	DS	3/6/06	13:55	2616	8.5	8.9	385	1650	5.34	<0.05	566	0.80	1.83	0.53	280	<0.01	<0.05	348	3.4	Total Coliform =>2000 E. coli = 270	04/05/06
BR-2	060235	03/06/06	9:30	DS	3/6/06	13:55	2726	8.6	8.7	429	1586	5.03	<0.05	558	0.93	1.72	0.64	259	<0.01	<0.05	340	3.2	Total Coliform = 1180 E. coli = 70	04/05/06
BR-3	060236	03/06/06	10:30	DS	3/6/06	13:55	388	8.2	6.0	56	170	3.56	<0.05	86	<0.05	0.11	0.83	38	0.01	<0.05	26	1.7	Total Coliform = 160 E. coli = 83	04/05/06
LDV-1	060237	03/06/06	12:45	DS	3/6/06	13:55	281	8.5	6.1	134	172	4.61	<0.05	160	0.09	<0.05	<0.10	27	<0.01	<0.05	12	1.5	Total Coliform = 1180 E. coli = 70	04/05/06
LDV-2	060238	03/06/06	12:25	DS	3/6/06	13:55	1385	8.6	4.2	398	804	10.5	<0.05	400	0.32	0.27	<0.10	262	<0.01	<0.05	147	4.4	Total Coliform =>2000 E. coli = 88	04/05/06
LDV-3	060239	03/06/06	11:30	DS	3/6/06	13:55	389	8.5	4.0	148	230	5.05	<0.05	198	0.08	<0.05	0.13	31	<0.01	<0.05	13	1.8	Total Coliform = 45 E. coli = 16	04/05/06

L = Sample lost (broken) in the laboratory

SBA Watershed Stormwater Monitoring 2006

Zone 7 Lab QA/QC Information



"Deol, Gurpal"
<GDeol@zone7water.com>
04/24/2006 11:43 AM

To <Laura.Hidas@acwd.com>
cc
bcc
Subject RE: LDV/Bethany Stormwater Data QA/QC info needed

Hi Laura,

- a) All TOC samples were analyzed in 2006. Ammonia 2005 QC summary is attached.
- b) For total coliforms we don't run any duplicates. One plant inlet sample is analyzed by two analysts to compare and document analyst to analyst variation. I am under the impression that no duplicates are needed for total coliforms unless that is only applicable to drinking water samples.

Sincerely,

From: Laura.Hidas@acwd.com [mailto:Laura.Hidas@acwd.com]
Sent: Monday, April 24, 2006 9:52 AM
To: Deol, Gurpal
Subject: RE: LDV/Bethany Stormwater Data QA/QC info needed

Hi Gurpal,

Thanks for sending all of this -- it looks great! Just a couple things I wanted to ask about. It looks like the charts were included for TOC & Ammonia for 2006, but the 2005 charts were not included -- would it be possible to get those to cover the December samples? Also, on the coliform samples, Safy was interested in seeing the duplicates for each batch. Please let me know if it's possible to get that information. Thanks so much for your help!

Laura

Laura Hidas
Alameda County Water District
43885 S. Grimmer Blvd., Fremont, CA 94538
Phone #: (510) 668-6516
Fax #: (510) 656-3426
laura.hidas@acwd.com

"Deol, Gurpal" <GDeol@zone7water.com>

04/21/2006 03:57 PM

To <Laura.Hidas@acwd.com>
cc "Flores, Amparo" <aflores@zone7water.com>, <Safy.Khalifa@acwd.com>

Subject RE: LDV/Bethany Stormwater Data QA/QC info needed

Laura,

It may be more than what Safy wanted but here it is. I also included data summary again so all info is together. Fluoride is included in our IC calibration for other anions.

Zone 7 Water Quality Laboratory

SBA Watershed - Stormwater Monitoring

Parameter	Lab Numbers	Sample Date	Analysis Date	Chk Std % Rec.	RPD
Turbidity	051715 - 051720	12/21/2005	12/22/2005	97	2.7
	060178 - 060184	2/27/2006	2/27/2006	100	6.4
	060187 - 060193	2/28/2006	3/2/2006	99	1.4
	060194 - 060200	3/2/2006	3/2/2006	100	4.2
	060233 - 060239	3/6/2006	3/9/2006	99	1.2
Alkalinity	051715 - 051720	12/21/2005	12/22/2005	101	0.4
	060178 - 060184	2/27/2006	2/28/2006	102	0.2
	060187 - 060193	2/28/2006	3/7/2006	102	0.2
	060194 - 060200	3/2/2006	3/7/2006		0.2
	060233 - 060239	3/6/2006	3/7/2006		0.5
Total Hardness	051715 - 051720	12/21/2005	12/28/2005	102	0.8
	060178 - 060184	2/27/2006	3/1/2006	101	0.5
	060187 - 060193	2/28/2006	3/1/2006		
	060194 - 060200	3/2/2006	3/31/2006	103	0.2
	060233 - 060239	3/6/2006	3/31/2006		0.3
Total Ammonia	051715 - 051720	12/21/2005	12/23/2005	See applicable highlighted lines in QC data summary and charts file.	
	060178 - 060184	2/27/2006	3/24/2006		
	060187 - 060193	2/28/2006	3/24/2006		
	060194 - 060200	3/2/2006	3/24/2006		
	060233 - 060239	3/6/2006	3/24/2006		
TOC	051715 - 051720	12/21/2005	1/10/2006	See applicable highlighted lines in QC data summary and charts file.	
	060178 - 060184	2/27/2006	2/28/2006		
	060187 - 060193	2/28/2006	2/28/2006		
	060194 - 060200	3/2/2006	3/2/2006		
	060233 - 060239	3/6/2006	3/7/2006		
F, Br, NO ₃ , PO ₄ , & SO ₄	051715 - 051720	12/21/2005	12/29/2005	See applicable highlighted lines in QC data summary and charts file.	
	060178 - 060184	2/27/2006	3/15 & 3/17/06		
	060187 - 060193	2/28/2006	3/15 & 3/17/06		
	060194 - 060200	3/2/2006	3/15 & 3/17/06		
	060233 - 060239	3/6/2006	3/22/2006		

Notes:

- a) For wet chemistry titrations titrant accuracy is verified by analyzing a check standard before analysis.
- b) 1-10 samples or one sample per batch (whichever is more frequent) is analyzed in duplicate to determine RPD.
- c) Control charts are used for parameters involving MS/MSDs.
- d) QC is prepared independently from calibration standards.

ZONE 7 WATER QUALITY LABORATORY

TOC QUALITY CONTROL SUMMARY

Method: SM 5310B

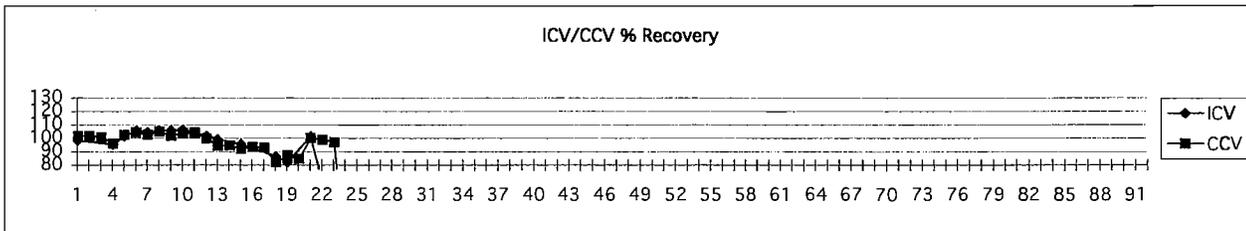
Conc. units: mg/L

MDL = 0.0046 mg/L (2/15/06)

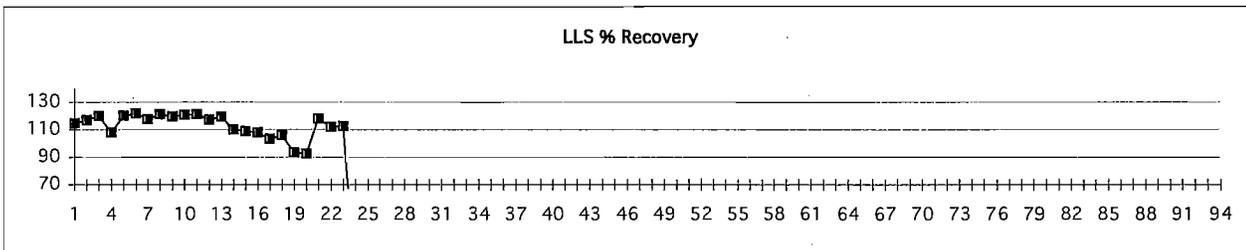
Year: 2006

Date Analyzed	ICV			CCV			L-ICV			QCS			Matrix Spike			Accuracy				Precision	
	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Sample Name	Sample Conc.	Spike Conc.	MS Conc. FOUND	MS % R	MSD Conc. FOUND	MSD % R	RPD	Conc Factor
10-Jan-06	2.50	2.458	98	2.50	2.543	102	0.30	0.344	115	2.50	2.477	99	051742	3.354	2.50	5.500	89	5.761	100	4.6	0.975
			#N/A	2.50	2.543	102	0.30	0.351	117	2.50		#N/A	060002	1.761	2.50	4.221	100	4.220	100	0.0	0.975
			#N/A	2.50	2.520	101	0.30	0.360	120	2.50	2.558	102	060011	1.742	2.50	4.235	101	4.207	100	0.7	0.975
11-Jan-06	2.50	2.389	96	2.50	2.405	96	0.30	0.324	108	2.50	2.327	93	060020	1.502	2.50	4.213	110	3.958	100	6.2	0.975
18-Jan-06	2.50	2.538	102	2.50	2.561	102	0.30	0.361	120	2.50	2.562	102	060033	1.396	2.50	3.952	104	3.865	100	2.2	0.975
24-Jan-06	2.50	2.640	106	2.50	2.608	104	0.30	0.366	122	2.50	2.673	107	060046	1.418	2.50	4.002	105	4.002	105	0.0	0.975
31-Jan-06	2.50	2.613	105	2.50	2.566	103	0.30	0.353	118	2.50	2.674	107	060088	1.818	2.50	4.375	104	4.371	104	0.1	0.975
9-Feb-06	2.50	2.644	106	2.50	2.625	105	0.30	0.364	121	2.50	2.707	108	060099	3.007	2.50	5.576	106	5.604	107	0.5	0.975
15-Feb-06	2.50	2.646	106	2.50	2.541	102	0.30	0.359	120	2.50	2.736	109	060145	2.214	2.50	4.774	105	4.741	103	0.7	0.975
22-Feb-06	2.50	2.654	106	2.50	2.595	104	0.30	0.362	121	2.50	2.732	109	060160	2.057	2.50	4.639	105	4.640	105	0.0	0.975
28-Feb-06	2.50	2.613	105	2.50	2.603	104	0.30	0.364	121	2.50	2.614	105	060170	2.048	2.50	4.607	104	4.553	102	1.2	0.975
15-Mar-06	2.50	2.544	102	2.50	2.492	100	0.30	0.352	117	2.50	2.619	105	060279	0.345	2.50	2.706	95	2.773	97	2.4	0.975
24-Mar-06	2.50	2.480	99	2.50	2.358	94	0.30	0.358	119	2.50	2.534	101	060273	1.440	2.50	3.871	99	4.060	106	4.8	0.975
			#N/A	2.50	2.362	94	0.30	0.330	110	2.50	2.452	98	060294	1.462	2.50	3.886	98	3.861	97	0.6	0.975
28-Mar-06	2.50	2.391	96	2.50	2.297	92	0.30	0.327	109	2.50	2.430	97	060316	1.592	2.50	3.934	95	3.953	96	0.5	0.975
			#N/A	2.50	2.334	93	0.30	0.324	108			#N/A	060321	1.499	2.50	3.731	91	3.728	91	0.1	0.975
			#N/A	2.50	2.323	93	0.30	0.310	103	2.50	2.360	94	060328	1.582	2.50	3.877	93	3.857	93	0.5	0.975
30-Mar-06	2.50	2.161	86	2.50	2.050	82	0.30	0.318	106	2.50	2.226	89	060335	1.554	2.50	3.615	84	3.601	83	0.4	0.975
4-Apr-06	2.50	2.054	82	2.50	2.181	87	0.30	0.280	93	2.50	2.107	84	060342	3.102	2.50	5.187	87	5.164	86	0.4	0.975
			#N/A	2.50	2.115	85	0.30	0.278	93			#N/A	060359	1.690	2.50	3.679	81	3.706	82	0.7	0.975
12-Apr-06	2.50	2.534	101	2.50	2.499	100	0.30	0.354	118	2.50	2.610	104	060393	3.399	2.50	5.933	105	5.929	105	0.1	0.975
			#N/A	2.50	2.471	99	0.30	0.336	112			#N/A	060402	3.319	2.50	5.818	103	5.816	103	0.0	0.975
			#N/A	2.50	2.423	97	0.30	0.338	113	2.50	2.521	101	060411	1.655	2.50	4.060	98	4.162	102	2.5	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0			#N/A			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
	2.50		0	2.50		0	0.30		0	2.50		0			2.50		0		0	#DIV/0!	0.975
			#N/A	2.50		0	0.3														

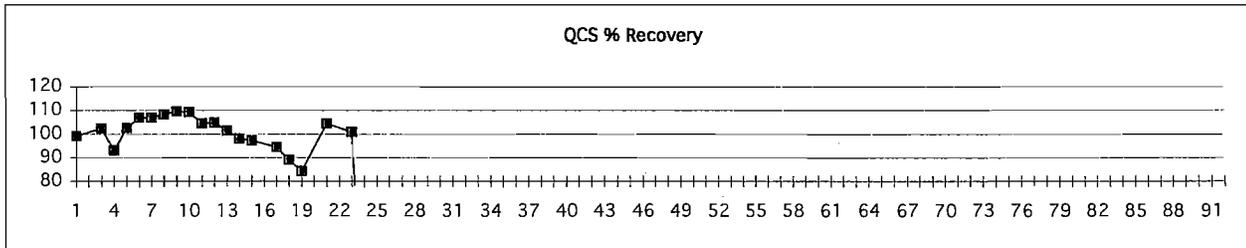
ZONE 7 WATER QUALITY LABORATORY



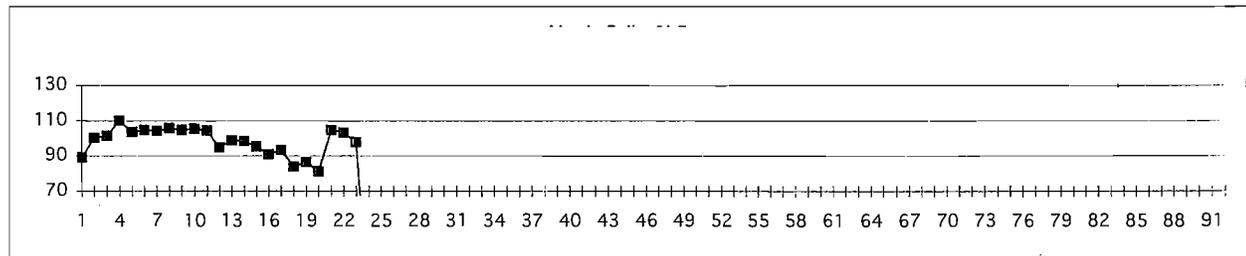
No = 145
 Mean = 26
 Std Dev =
 UCL = #####
 LCL = #####
 UCWL = #####
 LCWL = #####
 Range = 84 - 115



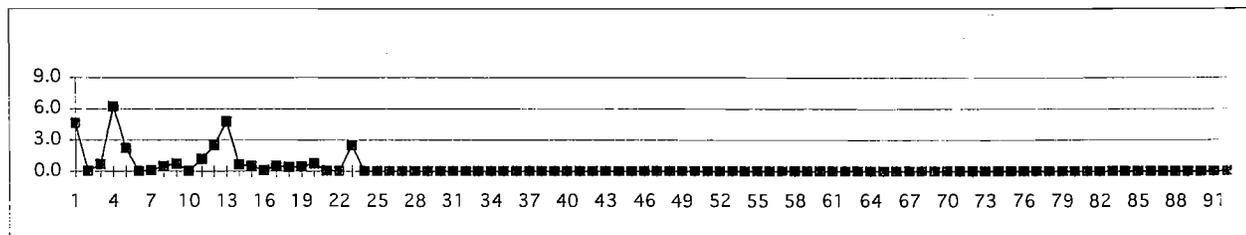
No = 92
 Mean = 28
 Std Dev = #REF!
 UCL = #REF!
 LCL = #REF!
 UCWL = #REF!
 LCWL = #REF!
 Range = 76 - 140



No = 68
 Mean = 28
 Std Dev = #REF!
 UCL = #REF!
 LCL = #REF!
 UCWL = #REF!
 LCWL = #REF!
 Range = 93 - 118



No = 91
 Mean = 25
 Std Dev = #N/A
 UCL = #N/A
 LCL = #N/A
 UCWL = #N/A
 LCWL = #N/A
 Range = 79 - 126



No = 23
 Mean = 1.3
 Std Dev = #DIV/0!
 UCL = #DIV/0!
 LCL = #DIV/0!
 UCWL = #DIV/0!
 LCWL = #DIV/0!
 Range = 0.3 - 8.5

When applicable, statistics are successively recalculated after excluding values at and outside UCL and LCL.

- * = Combined 1/2 PC/C IPC data for Control Limits
- UCL = Upper Control Limit (Mean + 3* Std Dev)
- LCL = Lower Control Limit (Mean - 3* Std Dev)
- UCWL = Upper Control Warning Limit (Mean + 2* Std Dev)
- LCWL = Lower Control Warning Limit (Mean - 2* Std Dev)

ZONE 7 WATER QUALITY LABORATORY

AMMONIA QUALITY CONTROL SUMMARY

Analyte: Ammonia as N, mg/L

MDL = 0.0036 mg/L (4/5/06)

Method: SM4500-NH3 D

Year: 2006

Date Analyzed	ICV			CCV			LLS			QCS			Matrix Spike			Accuracy				Precision	Conc Factor
	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Sample Name	Sample Conc.	Spike Conc.	MS Conc. FOUND	MS % R	MSD Conc. FOUND	MSD % R	RPD	
10-Jan-06	0.50	0.571	114	0.50	0.544	109	0.05	0.063	126	0.10	0.106	106	M060035	0.459	0.30	0.765	102	0.771	104	0.8	0.997
"			#N/A	0.50	0.568	114	0.05	0.062	124			#N/A	060020	0.476	0.30	0.787	104	0.785	103	0.3	0.997
14-Feb-06	0.50	0.525	105	0.50	0.517	103	0.05	0.060	120	0.10	0.107	107	M060139	0.359	0.30	0.644	95	0.648	97	0.6	0.997
"			#N/A	0.50	0.531	106	0.05	0.062	124			#N/A	M060146	0.382	0.30	0.691	103	0.698	106	1.0	0.997
24-Mar-06	0.50	0.531	106	0.50	0.523	105	0.05	0.063	126	0.10	0.104	104	M060243	0.339	0.30	0.642	101	0.647	103	0.8	0.997
"			#N/A	0.50	0.534	107	0.05	0.062	124			#N/A	060273	0.351	0.30	0.670	107	0.668	106	0.3	0.997
"			#N/A	0.50	0.502	100	0.05	0.063	126			#N/A	060279	0.416	0.30	0.703	96	0.716	100	1.8	0.997
5-Apr-06	0.50	0.531	106	0.50	0.517	103	0.05	0.061	122	0.10	0.107	107	M060349	0.370	0.30	0.645	92	0.639	90	0.9	0.997
"			#N/A	0.50	0.540	108	0.05	0.063	126			#N/A	M060355	0.351	0.30	0.661	104	0.668	106	1.1	0.997
			#N/A	0.50		0	0.05		0	0.10		#N/A		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
			#N/A	0.50		0	0.05		0	0.10		#N/A		0.30		0		0		#DIV/0!	0.997
			#N/A	0.50		0	0.05		0			#N/A		0.30		0		0		#DIV/0!	0.997
			#N/A	0.50		0	0.05		0			#N/A		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
			#N/A	0.50		0	0.05		0			#N/A		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50		0	0.50		0	0.05		0	0.10		0		0.30		0		0		#DIV/0!	0.997
	0.50</																				

ZONE 7 WATER QUALITY LABORATORY

AMMONIA QUALITY CONTROL SUMMARY

Analyte: Ammonia as N, mg/L

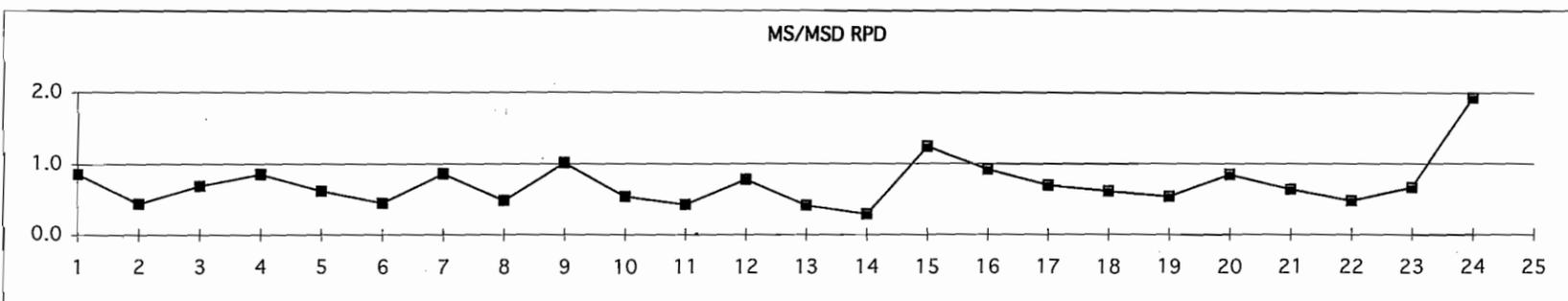
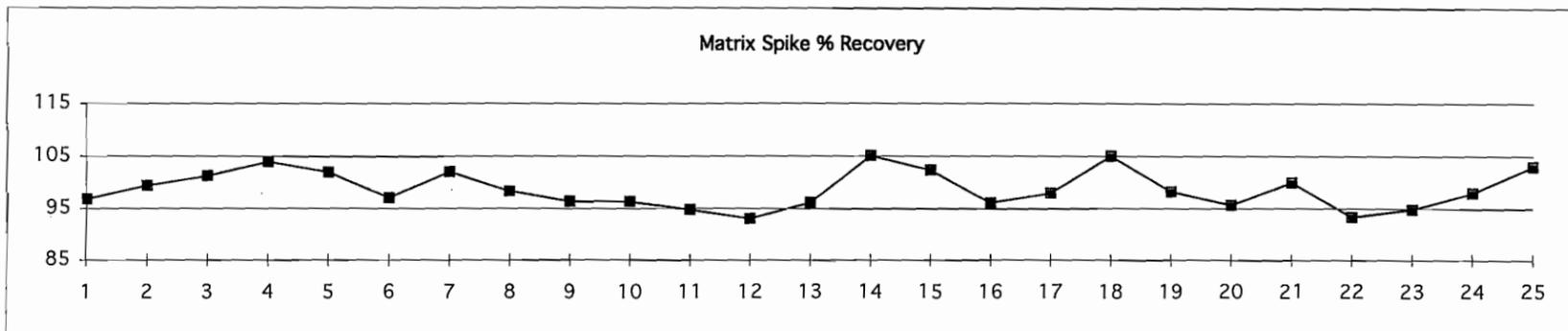
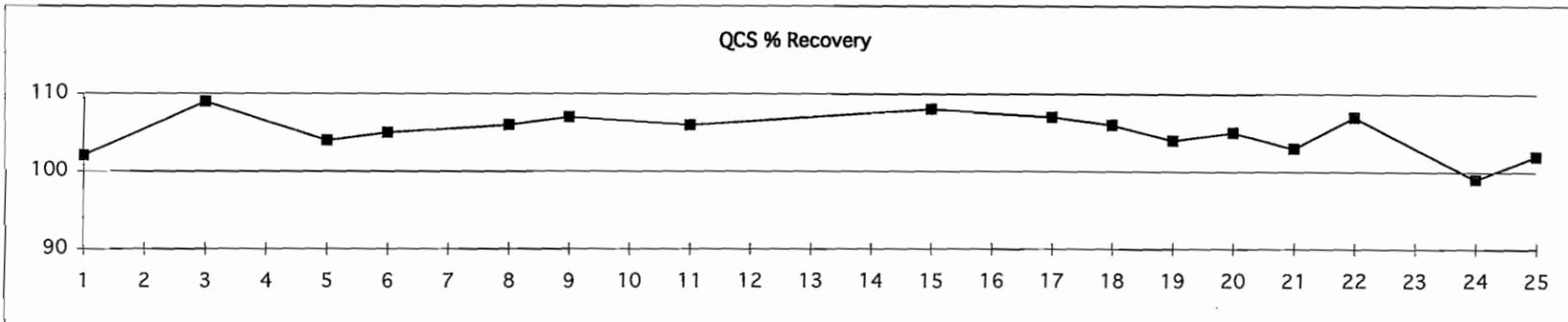
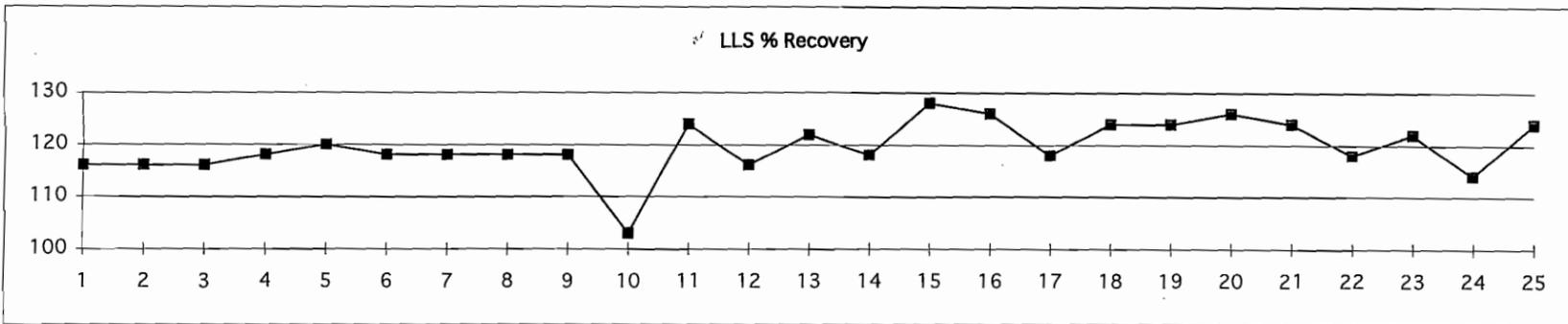
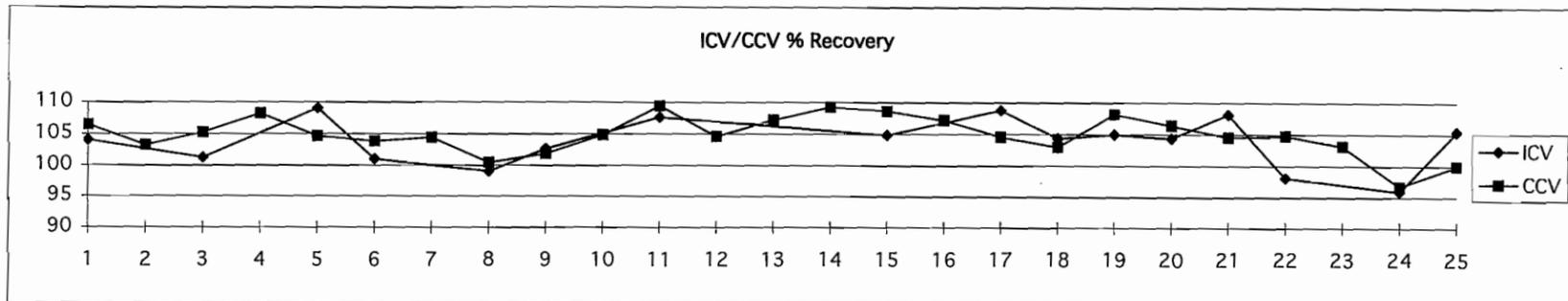
MDL = 0.0024 mg/L (3/08/05)

Method: SM4500-NH3 D

Year: 2005

Date Analyzed	ICV			CCV			LLS			QCS			Matrix Spike			Accuracy				Precision	
	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Conc. TRUE	Conc. FOUND	% R	Sample Name	Sample Conc.	Spike Conc.	MS Conc. FOUND	MS % R	MSD Conc. FOUND	MSD % R	RPD	Conc Factor
20-Jan-05	0.50	0.520	104	0.50	0.532	106	0.05	0.058	116	0.10	0.102	102	050035	0.414	0.30	0.703	97	0.697	95	0.9	0.997
"			#N/A	0.50	0.516	103	0.05	0.058	116			#N/A	M050008	0.391	0.30	0.688	99	0.691	100	0.4	0.997
10-Feb-05	0.50	0.506	101	0.50	0.526	105	0.05	0.058	116	0.10	0.109	109	M050137	0.276	0.30	0.579	101	0.583	103	0.7	0.997
"			#N/A	0.50	0.541	108	0.05	0.059	118			#N/A	M050145	0.272	0.30	0.583	104	0.588	106	0.9	0.997
24-Feb-05	0.50	0.545	109	0.50	0.523	105	0.05	0.060	120	0.10	0.104	104	050116	0.339	0.30	0.644	102	0.648	103	0.6	0.997
8-Mar-05	0.50	0.505	101	0.50	0.519	104	0.05	0.059	118	0.10	0.105	105	M050242	0.380	0.30	0.670	97	0.673	98	0.4	0.997
"			#N/A	0.50	0.522	104	0.05	0.059	118	0.10		#N/A	M050250	0.387	0.30	0.692	102	0.698	104	0.9	0.997
23-Mar-05	0.50	0.495	99	0.50	0.502	100	0.05	0.059	118	0.10	0.106	106	050243	0.331	0.30	0.625	98	0.622	97	0.5	0.997
15-Apr-05	0.50	0.513	103	0.50	0.509	102	0.05	0.059	118	0.10	0.107	107	M050374	0.301	0.30	0.589	96	0.595	98	1.0	0.997
"			#N/A	0.50	0.524	105	0.10	0.103	103	0.10		#N/A	050347	0.268	0.30	0.556	96	0.553	95	0.5	0.997
3-Jun-05	0.50	0.538	108	0.50	0.547	109	0.05	0.062	124	0.10	0.106	106	050477	0.425	0.30	0.708	95	0.711	96	0.4	0.997
"			#N/A	0.50	0.523	105	0.05	0.058	116	0.10		#N/A	050468	0.359	0.30	0.637	93	0.642	95	0.8	0.997
"			#N/A	0.50	0.536	107	0.05	0.061	122			#N/A	M050478	0.443	0.30	0.730	96	0.733	97	0.4	0.997
"			#N/A	0.50	0.546	109	0.05	0.059	118			#N/A	M050486	0.382	0.30	0.696	105	0.694	104	0.3	0.997
13-Jun-05	0.50	0.524	105	0.50	0.543	109	0.05	0.064	128	0.10	0.108	108	M050582	0.336	0.30	0.642	102	0.650	105	1.2	0.997
"			#N/A	0.50	0.536	107	0.05	0.063	126			#N/A	M050590	0.361	0.30	0.648	96	0.654	98	0.9	0.997
28-Jun-05	0.50	0.544	109	0.50	0.523	105	0.05	0.059	118	0.10	0.107	107	050641	0.280	0.30	0.573	98	0.577	99	0.7	0.997
26-Jul-05	0.50	0.522	104	0.50	0.515	103	0.05	0.062	124	0.10	0.106	106	050763	0.340	0.30	0.654	105	0.650	104	0.6	0.997
17-Aug-05	0.50	0.525	105	0.50	0.541	108	0.05	0.062	124	0.10	0.104	104	050942	0.265	0.30	0.559	98	0.556	97	0.5	0.997
22-Sep-05	0.50	0.522	104	0.50	0.532	106	0.05	0.063	126	0.10	0.105	105	051115	0.302	0.30	0.588	96	0.593	97	0.8	0.997
14-Oct-05	0.50	0.541	108	0.50	0.523	105	0.05	0.062	124	0.10	0.103	103	051285	0.330	0.30	0.629	100	0.625	99	0.6	0.997
30-Nov-05	0.50	0.491	98	0.50	0.524	105	0.05	0.059	118	0.10	0.107	107	051486	0.346	0.30	0.625	93	0.628	94	0.5	0.997
"			#N/A	0.50	0.516	103	0.05	0.061	122			#N/A	051495	0.467	0.30	0.750	95	0.755	96	0.7	0.997
16-Dec-05	0.50	0.480	96	0.50	0.484	97	0.05	0.057	114	0.10	0.099	99	051659	0.335	0.30	0.628	98	0.616	94	1.9	0.997
23-Dec-05	0.50	0.527	105	0.50	0.500	100	0.05	0.062	124	0.10	0.102	102	051720	0.007	0.30	0.316	103	#N/A	#N/A	#N/A	0.997

AMMONIA QUALITY CONTROL CHARTS



When applicable, statistics are successively recalculated after excluding values at and outside UCL and LCL.

- * = Combined I IPC/C IPC data for Control Limits
- UCL = Upper Control Limit (Mean + 3* Std Dev)
- LCL = Lower Control Limit (Mean - 3* Std Dev)
- UCWL = Upper Control Warning Limit (Mean + 2* Std Dev)
- LCWL = Lower Control Warning Limit (Mean - 2* Std Dev)

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: Fluoride, mg/L
EPA 300

MDL = 0.007 mg/L (3/22/06)

Year: 2006

Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision	Conc. Factor	
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc.	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R	RPD		
6-Jan-06	1.00	1.017	102	1.00	1.059	106	0.05	0.051	102	0.50	0.521	104	051739	0.067	0.50	0.569	101	0.563	100	1.1	0.949	
11-Jan-06	1.00	1.023	102	1.00	1.055	106	0.05	0.055	110	0.50	0.559	112	060020	0.033	0.50	0.500	94	0.505	95	1.0	0.949	
30-Jan-06	1.00	0.996	100	1.00	1.012	101	0.05	0.050	100	0.50	0.523	105	060085	0.179	0.50	0.668	100	0.669	100	0.1	0.949	
15-Feb-06	1.00	0.949	95	1.00	0.980	98	0.05	0.050	100	0.50	0.494	99	060138	0.037	0.50	0.531	99	0.534	100	0.6	0.949	
15-Mar-06	1.00	1.100	110	1.00	1.164	116	0.05	0.048	96	0.50	0.484	97	060184	0.028	0.50	0.497	94	0.499	94	0.4	0.949	
"			#N/A	1.00	1.080	108	0.05	0.049	98				#N/A	060194	0.022	0.50	0.535	103	0.534	103	0.2	0.949
22-Mar-06	1.00	1.050	105	1.00	1.017	102	0.05	0.049	98	0.50	0.525	105	060216	0.086	0.50	0.611	106	0.610	106	0.2	0.949	
"			#N/A	1.00	0.995	100	0.05	0.050	100				#N/A	060237	0.089	0.50	0.568	97	0.580	99	2.1	0.949
"			#N/A	1.00	1.077	108	0.05	0.049	98	0.50	0.549	110	060250	0.087	0.50	0.593	102	0.592	102	0.2	0.949	
24-Mar-06	1.00	1.023	102	1.00	1.013	101	0.05	0.051	102	0.50	0.485	97	060273	0.027	0.50	0.539	103	0.596	114	10.0	0.949	
"			#N/A	1.00	1.004	100	0.05	0.055	110				#N/A	060279	0.088	0.50	0.590	101	0.595	102	0.8	0.949
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0				#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50		0		0	#DIV/0!	0.949	
"			#N/A	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	
"	1.00		0	1.00		0	0.05		0	0.50					0.50		0		0	#DIV/0!	0.949	

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: Fluoride, mg/L
EPA 300

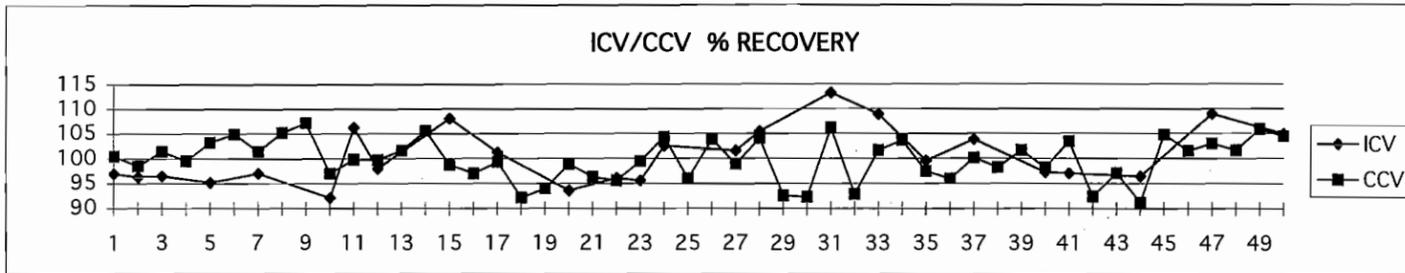
MDL = 0.009 mg/L (3/22/05)

Year: 2005

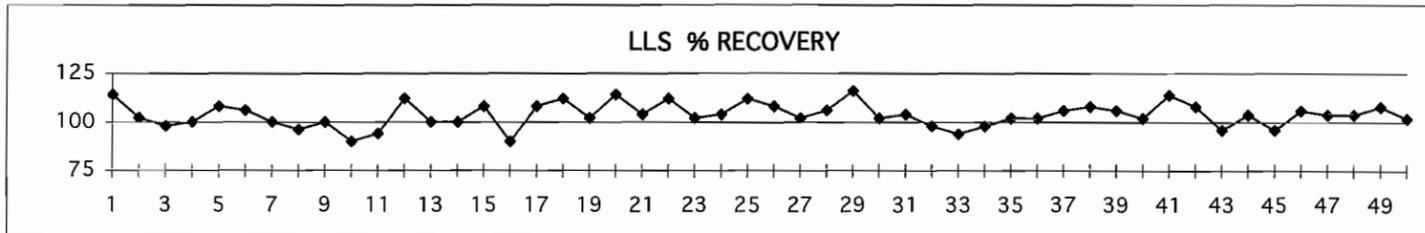
Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision	Conc. Factor
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc.	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R	RPD	
6-Jan-05	1.00	0.969	97	1.00	1.005	101	0.05	0.057	114	0.50	0.430	86	041060	0.069	0.50	0.591	105	0.594	106	0.5	0.949
18-Jan-05	1.00	0.963	96	1.00	0.985	99	0.05	0.051	102	0.50	0.453	91	050035	0.097	0.50	0.556	93	0.562	94	1.1	0.949
24-Feb-05	1.00	0.965	97	1.00	1.014	101	0.05	0.049	98	0.50	0.437	87	050070	0.105	0.50	0.607	101	0.609	102	0.3	0.949
"			#N/A	1.00	0.995	100	0.05	0.050	100	0.50	0.446	89	050116	0.110	0.50	0.596	98	0.557	91	6.8	0.949
1-Mar-05	1.00	0.952	95	1.00	1.032	103	0.05	0.054	108	0.50	0.439	88	050147	0.205	0.50	0.740	109	0.736	108	0.5	0.949
"			#N/A	1.00	1.049	105	0.05	0.053	106	0.50	0.471	94	050155	0.284	0.50	0.822	110	0.799	106	2.8	0.949
22-Mar-05	1.00	0.970	97	1.00	1.014	101	0.05	0.050	100	0.50	0.437	87	502101	0.314	0.50	0.770	94	0.764	93	0.8	0.949
"			#N/A	1.00	1.052	105	0.05	0.048	96			#N/A	050211	0.092	0.50	0.593	101	0.588	100	0.8	0.949
"			#N/A	1.00	1.072	107	0.05	0.050	100	0.50	0.461	92	050248	0.123	0.50	0.625	102	0.625	102	0.0	0.949
15-Apr-05	1.00	0.921	92	1.00	0.970	97	0.05	0.045	90	0.50	0.499	100	050347	0.048	0.50	0.594	110	0.594	110	0.0	0.949
19-Apr-05	1.00	1.063	106	1.00	0.998	100	0.05	0.047	94	0.50	0.526	105	050374	0.140	0.50	0.605	94	0.601	94	0.7	0.949
16-May-05	1.00	0.980	98	1.00	0.997	100	0.05	0.056	112	0.50	0.506	101	050468	0.038	0.50	0.541	101	0.547	102	1.1	0.949
"			#N/A	1.00	1.016	102	0.05	0.050	100			#N/A	050477	0.036	0.50	0.546	102	0.544	102	0.4	0.949
"			#N/A	1.00	1.056	106	0.05	0.050	100	0.50	0.454	91	050485	0.111	0.50	0.631	105	0.629	105	0.3	0.949
31-May-05	1.00	1.081	108	1.00	0.987	99	0.05	0.054	108	0.50	0.473	95	050559	0.116	0.50	0.558	90	0.546	87	2.2	0.949
"			#N/A	1.00	0.970	97	0.05	0.045	90	0.50		#N/A	050569	0.138	0.50	0.581	90	0.569	88	2.1	0.949
14-Jul-05	1.00	1.012	101	1.00	0.993	99	0.05	0.054	108	0.50	0.539	108	050643	0.038	0.50	0.555	104	0.540	101	2.7	0.949
"			#N/A	1.00	0.922	92	0.05	0.056	112	0.50		#N/A	050670	0.073	0.50	0.530	92	0.533	93	0.6	0.949
"			#N/A	1.00	0.940	94	0.05	0.051	102	0.50	0.502	100	050688	0.078	0.50	0.472	80	0.536	92	12.7	0.949
19-Jul-05	1.00	0.936	94	1.00	0.989	99	0.05	0.057	114	0.50	0.485	97	050695	0.057	0.50	0.525	94	0.528	95	0.6	0.949
"			#N/A	1.00	0.963	96	0.05	0.052	104	0.50	0.521	104	050763	0.039	0.50	0.554	103	0.558	104	0.7	0.949
21-Jul-05	1.00	0.961	96	1.00	0.956	96	0.05	0.056	112	0.50	0.500	100	050828	0.143	0.50	0.574	88	0.559	85	2.6	0.949
28-Jul-05	1.00	0.956	96	1.00	0.995	100	0.05	0.051	102	0.50	0.471	94	050848	0.099	0.50	0.563	94	0.561	93	0.4	0.949
24-Aug-05	1.00	1.026	103	1.00	1.044	104	0.05	0.052	104	0.50	0.469	94	050942	0.023	0.50	0.509	97	0.465	89	9.0	0.949
"			#N/A	1.00	0.960	96	0.05	0.056	112			#N/A	050955	0.097	0.50	0.594	100	0.596	101	0.3	0.949
"			#N/A	1.00	1.039	104	0.05	0.054	108	0.50	0.503	101	051014	0.033	0.50	0.470	88	0.484	90	2.9	0.949
31-Aug-05	1.00	1.016	102	1.00	0.989	99	0.05	0.051	102	0.50	0.538	108	050942	0.045	0.50	0.551	102	0.551	102	0.0	0.949
1-Sep-05	1.00	1.055	106	1.00	1.041	104	0.05	0.053	106	0.50	0.556	111	051062	0.079	0.50	0.561	97	0.563	98	0.4	0.949
"			#N/A	1.00	0.926	93	0.05	0.058	116			#N/A	051071	0.066	0.50	0.542	96	0.526	93	3.0	0.949
"			#N/A	1.00	0.924	92	0.05	0.051	102			#N/A	051074	0.063	0.50	0.543	97	0.543	97	0.0	0.949
16-Sep-05	1.00	1.133	113	1.00	1.063	106	0.05	0.052	104	0.50	0.520	104	051115	0.000	0.50	0.578	116	0.586	117	1.4	0.949
"			#N/A	1.00	0.929	93	0.05	0.049	98			#N/A	051127	0.067	0.50	0.530	93	0.535	94	0.9	0.949
12-Oct-05	1.00	1.090	109	1.00	1.017	102	0.05	0.047	94	0.50	0.508	102	051242	0.239	0.50	0.701	95	0.702	95	0.1	0.949
"			#N/A	1.00	1.037	104	0.05	0.049	98			#N/A	051285	0.054	0.50	0.520	94	0.507	91	2.5	0.949
28-Oct-05	1.00	0.996	100	1.00	0.975	98	0.05	0.051	102	0.50	0.534	107	051372	0.108	0.50	0.570	94	0.569	93	0.2	0.949
"			#N/A	1.00	0.960	96	0.05	0.051	102	0.50	0.525	105	051413	0.103	0.50	0.565	93	0.564	93	0.2	0.949
26-Oct-05	1.00	1.039	104	1.00	1.002	100	0.05	0.053	106	0.50	0.526	105	051355	0.024	0.50	0.493	94	0.492	94	0.2	0.949
"			#N/A	1.00	0.983	98	0.05	0.054	108			#N/A	051331	0.075	0.50	0.569	100	0.563	98	1.1	0.949
"			#N/A	1.00	1.017	102	0.05	0.053	106	0.50	0.465	93	051337	0.052	0.50	0.521	94	0.516	93	1.0	0.949
3-Nov-05	1.00	0.973	97	1.00	0.982	98	0.05	0.051	102	0.50	0.519	104	051383	0.139	0.50	0.659	105	0.684	110	3.7	0.949
30-Nov-05	1.00	0.971	97	1.00	1.035	104	0.05	0.057	114	0.50	0.499	100	051486	0.030	0.50	0.494	93	0.494	93	0.0	0.949
"			#N/A	1.00	0.925	93	0.05	0.054	108			#N/A	051495	0.032	0.50	0.467	87	0.462	86	1.1	0.949
"			#N/A	1.00	0.972	97	0.05	0.048	96	0.50	0.500	100	051529	0.000	0.50	0.561	112	0.567	113	1.1	0.949
1-Dec-05	1.00	0.965	97	1.00	0.913	91	0.05	0.052	104	0.50	0.521	104	051537	0.178	0.50	0.700	106	0.700	106	0.0	0.949
"			#N/A	1.00	1.049	105	0.05	0.048	96			#N/A	051598	0.158	0.50	0.685	107	0.658	102	4.0	0.949
"			#N/A	1.00	1.016	102	0.05	0.053	106	0.50	0.487	97	051602	0.060	0.50	0.556	100	0.553	99	0.5	0.949
28-Dec-05	1.00	1.091	109	1.00	1.031	103	0.05	0.052	104	0.50	0.500	100	051617	0.026	0.50	0.555	106	0.555	106	0.0	0.949
"			#N/A	1.00	1.017	102	0.05	0.052	104			#N/A	051653	0.114	0.50	0.617	102	0.624	103	1.1	0.949
"			#N/A	1.00	1.060	106	0.05	0.054	108	0.50	0.531	106	051659	0.045	0.50	0.571	106	0.568	105	0.5	0.949
29-Dec-05	1.00	1.050	105	1.00	1.046	105	0.05	0.051	102	0.50	0.501	100	051723	0.029	0.50	0.539	102	0.539	102	0.0	0.949

* Sample concentration less than MDL is entered as zero for matrix spike recovery calculations.

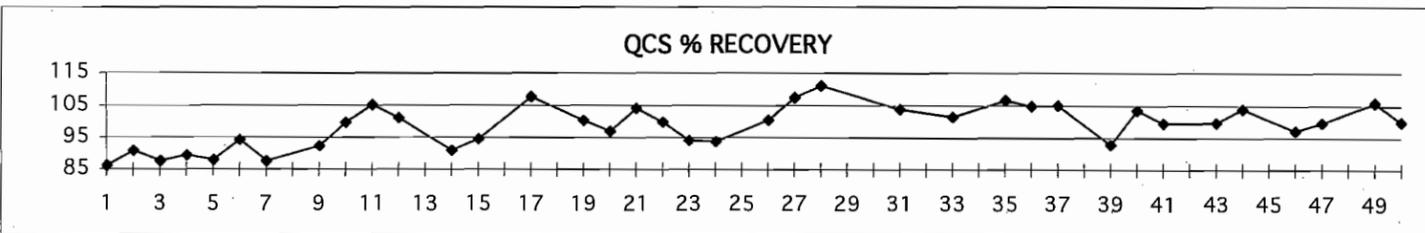
ION CHROMATOGRAPHY - FLUORIDE QUALITY CONTROL CHARTS - 2005



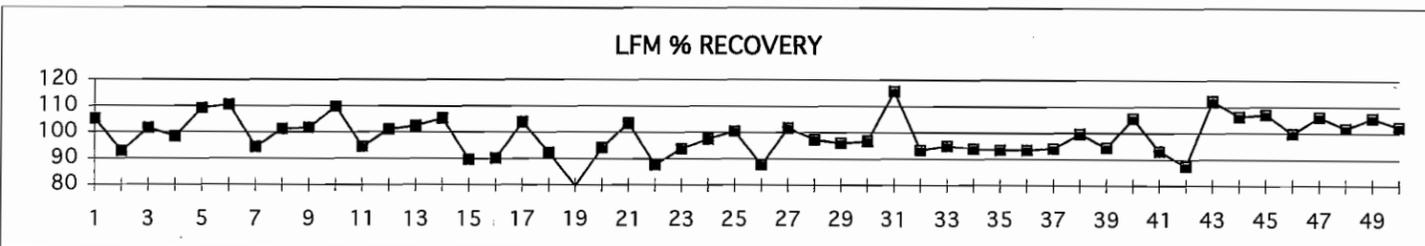
No* = 75
Mean = 100
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 91 - 103



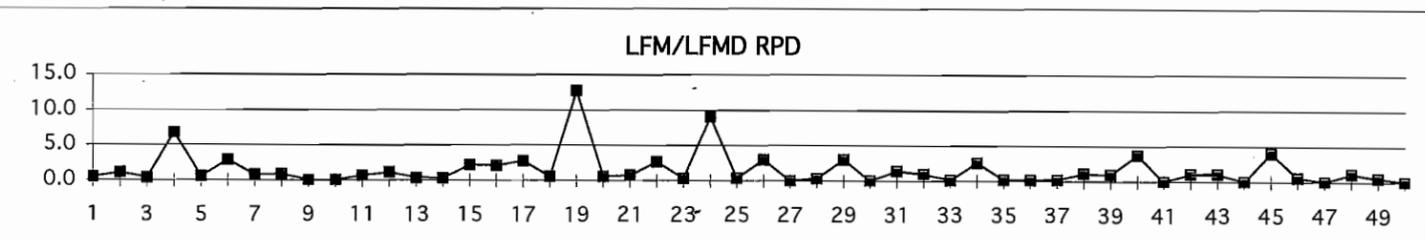
No = 50
Mean = 104
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 80 - 125



No = 37
Mean = 99
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 86 - 102



No = 50
Mean = 99
Std Dev = 7.26
UCL = 121
LCL = 113
UCWL = 113
LCWL = 84
Range = 85 - 110



No = 50
Mean = 1.5
Std Dev = 2.37
UCL = 9
UCWL = 5
LCWL = 0 - 8.3

When applicable, statistics are successively recalculated after excluding values at and outside UCL and LCL.
* = Combined I IPC/C IPC data for Control Limits
UCL = Upper Control Limit (Mean + 3* Std Dev)
LCL = Lower Control Limit (Mean - 3* Std Dev)
UCWL = Upper Control Warning Limit (Mean + 2* Std Dev)
LCWL = Lower Control Warning Limit (Mean - 2* Std Dev)

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: **BROMIDE, mg/L**
EPA 300

MDL = 0.014 mg/L (3/22/06)

Year: 2006

Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision	Conc. Factor
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc.	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R	RPD	
6-Jan-06	1.00	1.039	104	1.00	1.068	107	0.05	0.046	92	1.00	1.065	107	051739	0.455	0.50	0.992	112	0.981	110	1.1	0.949
11-Jan-06	1.00	1.033	103	1.00	1.055	106	0.05	0.056	112	1.00	1.045	105	060020	0.032	0.50	0.524	99	0.530	100	1.1	0.949
30-Jan-06	1.00	1.064	106	1.00	1.014	101	0.05	0.053	106	1.00	1.000	100	060085	0.100	0.50	0.593	100	0.577	96	2.7	0.949
15-Feb-06	1.00	1.001	100	1.00	1.087	109	0.05	0.053	106	1.00	0.996	100	060138	0.064	0.50	0.562	100	0.569	102	1.2	0.949
15-Mar-06	1.00	1.016	102	1.00	1.058	106	0.05	0.055	110	1.00	1.034	103	060184	0.026	0.50	0.516	98	0.521	99	1.0	0.949
"			#N/A	1.00	1.126	113	0.05	0.047	94			#N/A	060194	0.087	0.50	0.600	103	0.581	100	3.2	0.949
22-Mar-06	1.00	0.987	99	1.00	1.019	102	0.05	0.057	114	1.00	1.068	107	060216	0.162	0.50	0.677	105	0.657	101	3.0	0.949
"			#N/A	1.00	1.053	105	0.05	0.052	104			#N/A	060237	0.000	0.50	0.528	106	0.527	105	0.2	0.949
"			#N/A	1.00	1.078	108	0.05	0.054	108	1.00	1.066	107	060250	0.181	0.50	0.676	101	0.693	104	2.5	0.949
24-Mar-06	1.00	0.964	96	1.00	1.001	100	0.05	0.053	106	1.00	1.006	101	060273	0.044	0.50	0.527	97	0.528	97	0.2	0.949
"			#N/A	1.00	1.014	101	0.05	0.049	98			#N/A	060279	0.251	0.50	0.736	100	0.737	100	0.1	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0			#N/A			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0			#N/A			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	1.00		0			0.50		0		0	#DIV/0!	0.949
"	1.00		0	1.00																	

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: BROMIDE, mg/L
EPA 300

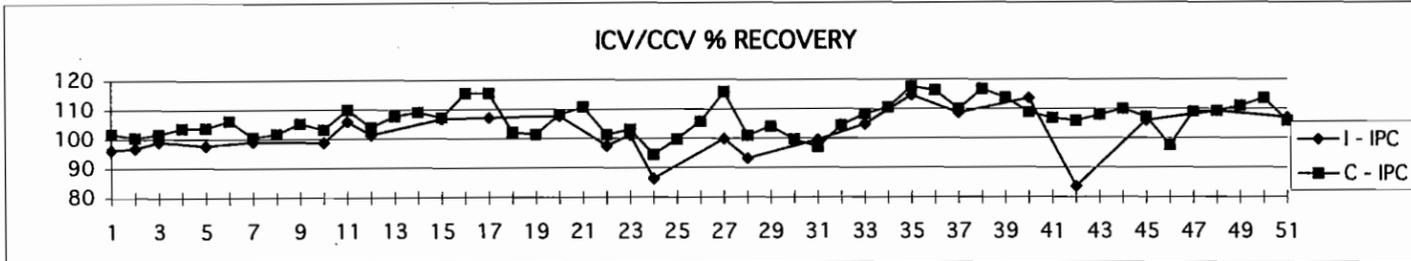
MDL = 0.009 mg/L (3/22/05)

Year: 2005

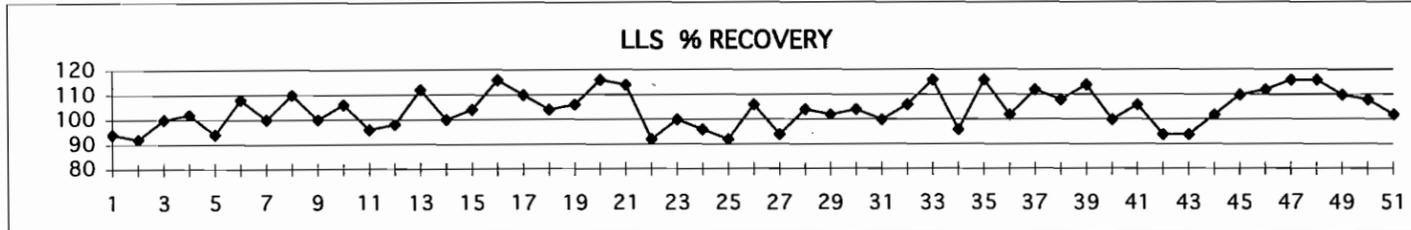
Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision	Conc. Factor	
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc. *	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R	RPD		
6-Jan-05	1.00	0.962	96	1.00	1.017	102	0.05	0.047	94	1.00	0.971	97	041060	0.185	0.50	0.677	100	0.67	99	1.0	0.949	
18-Jan-05	1.00	0.968	97	1.00	1.004	100	0.05	0.046	92	1.00	0.972	97	050035	0.136	0.50	0.566	87	0.556	85	1.8	0.949	
24-Feb-05	1.00	0.989	99	1.00	1.015	102	0.05	0.050	100	1.00	0.975	98	050070	0.110	0.50	0.589	97	0.589	97	0.0	0.949	
"			#N/A	1.00	1.035	104	0.05	0.051	102	1.00	1.006	101	050116	0.039	0.50	0.510	95	0.510	95	0.0	0.949	
1-Mar-05	1.00	0.976	98	1.00	1.036	104	0.05	0.047	94	1.00	0.983	98	050147	0.191	0.50	0.671	98	0.659	96	1.8	0.949	
"			#N/A	1.00	1.061	106	0.05	0.054	108	1.00	1.051	105	050155	0.140	0.50	0.638	101	0.642	102	0.6	0.949	
22-Mar-05	1.00	0.989	99	1.00	1.004	100	0.05	0.050	100	1.00	0.985	99	502101	0.274	0.50	0.751	98	0.754	99	0.4	0.949	
"			#N/A	1.00	1.016	102	0.05	0.055	110				#N/A	050211	0.039	0.50	0.524	97	0.517	96	1.3	0.949
"			#N/A	1.00	1.051	105	0.05	0.050	100	1.00	1.007	101	050248	0.020	0.50	0.511	98	0.509	98	0.4	0.949	
15-Apr-05	1.00	0.987	99	1.00	1.031	103	0.05	0.053	106	1.00	1.019	102	050347	0.046	0.50	0.601	111	0.637	119	5.8	0.949	
19-Apr-05	1.00	1.059	106	1.00	1.099	110	0.05	0.048	96	1.00	1.050	105	050374	0.101	0.50	0.622	105	0.611	103	1.8	0.949	
16-May-05	1.00	1.013	101	1.00	1.039	104	0.05	0.049	98	1.00	1.002	100	050468	0.065	0.50	0.574	102	0.569	101	0.9	0.949	
"			#N/A	1.00	1.077	108	0.05	0.056	112				#N/A	050477	0.073	0.50	0.602	107	0.570	100	5.5	0.949
"			#N/A	1.00	1.091	109	0.05	0.050	100	1.00	1.081	108	050485	0.113	0.50	0.661	111	0.648	108	2.0	0.949	
31-May-05	1.00	1.067	107	1.00	1.072	107	0.05	0.052	104	1.00	1.044	104	050559	0.201	0.50	0.713	104	0.722	106	1.3	0.949	
"			#N/A	1.00	1.155	116	0.05	0.058	116				#N/A	050569	0.162	0.50	0.590	87	0.692	108	15.9	0.949
14-Jul-05	1.00	1.072	107	1.00	1.155	116	0.05	0.055	110	1.00	1.072	107	050643	0.026	0.50	0.567	108	0.562	107	0.9	0.949	
"			#N/A	1.00	1.021	102	0.05	0.052	104				#N/A	050670	0.094	0.50	0.629	108	0.614	105	2.4	0.949
"			#N/A	1.00	1.014	101	0.05	0.053	106	1.00	1.014	101	050688	0.076	0.50	0.623	110	0.564	98	9.9	0.949	
19-Jul-05	1.00	1.077	108	1.00	1.082	108	0.05	0.058	116	1.00	1.049	105	050695	0.092	0.50	0.593	101	0.607	104	2.3	0.949	
"			#N/A	1.00	1.108	111	0.05	0.057	114	1.00	1.118	112	050763	0.025	0.50	0.548	105	0.549	105	0.2	0.949	
21-Jul-05	1.00	0.975	98	1.00	1.013	101	0.05	0.046	92	1.00	1.003	100	050828	0.187	0.50	0.676	100	0.671	99	0.7	0.949	
28-Jul-05	1.00	1.012	101	1.00	1.030	103	0.05	0.050	100	1.00	1.033	103	050848	0.172	0.50	0.681	104	0.689	105	1.2	0.949	
24-Aug-05	1.00	0.864	86	1.00	0.946	95	0.05	0.048	96	1.00	0.913	91	050942	0.046	0.50	0.488	89	0.476	86	2.5	0.949	
"			#N/A	1.00	0.997	100	0.05	0.046	92				#N/A	050955	0.165	0.50	0.609	90	0.603	89	1.0	0.949
"			#N/A	1.00	1.058	106	0.05	0.053	106	1.00	1.153	115	051014	0.122	0.50	0.622	101	0.614	100	1.3	0.949	
31-Aug-05	1.00	0.998	100	1.00	1.159	116	0.05	0.047	94	1.00	0.966	97	050942	0.052	0.50	0.515	93	0.526	95	2.1	0.949	
1-Sep-05	1.00	0.932	93	1.00	1.010	101	0.05	0.052	104	1.00	0.931	93	051062	0.271	0.50	0.744	97	0.743	97	0.1	0.949	
"			#N/A	1.00	1.040	104	0.05	0.051	102				#N/A	051071	0.129	0.50	0.608	97	0.595	95	2.2	0.949
"			#N/A	1.00	0.996	100	0.05	0.052	104				#N/A	051074	0.283	0.50	0.766	99	0.756	97	1.3	0.949
16-Sep-05	1.00	0.995	100	1.00	0.971	97	0.05	0.050	100	1.00	0.963	96	051115	0.101	0.50	0.564	94	0.578	96	2.5	0.949	
"			#N/A	1.00	1.045	105	0.05	0.053	106				#N/A	051127	0.148	0.50	0.629	98	0.628	98	0.2	0.949
12-Oct-05	1.00	1.048	105	1.00	1.084	108	0.05	0.058	116	1.00	0.959	96	051242	0.585	0.50	1.001	89	1.018	93	1.7	0.949	
"			#N/A	1.00	1.106	111	0.05	0.048	96				#N/A	051285	0.079	0.50	0.589	103	0.576	100	2.2	0.949
28-Oct-05	1.00	1.148	115	1.00	1.177	118	0.05	0.058	116	1.00	1.094	109	051372	0.248	0.50	0.755	104	0.769	107	1.8	0.949	
"			#N/A	1.00	1.164	116	0.05	0.051	102	1.00	1.144	114	051413	0.217	0.50	0.775	114	0.774	114	0.1	0.949	
26-Oct-05	1.00	1.087	109	1.00	1.101	110	0.05	0.056	112	1.00	1.043	104	051355	0.152	0.50	0.714	114	0.702	112	1.7	0.949	
"			#N/A	1.00	1.168	117	0.05	0.054	108	1.00			#N/A	051331	0.192	0.50	0.711	106	0.729	109	2.5	0.949
"			#N/A	1.00	1.140	114	0.05	0.057	114	1.00	1.139	114	051337	0.285	0.50	0.817	109	0.807	107	1.2	0.949	
3-Nov-05	1.00	1.138	114	1.00	1.089	109	0.05	0.050	100	1.00	1.106	111	051383	0.105	0.50	0.614	103	0.638	108	3.8	0.949	
"			#N/A	1.00	1.069	107	0.05	0.053	106				#N/A	051460	0.128	0.50	0.616	98	0.611	97	0.8	0.994
30-Nov-05	1.00	0.838	84	1.00	1.060	106	0.05	0.047	94	1.00	0.937	94	051486	0.149	0.50	0.621	96	0.628	97	1.1	0.949	
"			#N/A	1.00	1.080	108	0.05	0.047	94				#N/A	051495	0.179	0.50	0.647	95	0.646	95	0.2	0.949
"			#N/A	1.00	1.101	110	0.05	0.051	102	1.00	1.114	111	051529	0.000	0.50	0.504	101	0.530	106	5.0	0.949	
1-Dec-05	1.00	1.061	106	1.00	1.073	107	0.05	0.055	110	1.00	1.076	108	051537	0.145	0.50	0.646	102	0.684	109	5.7	0.949	
"			#N/A	1.00	0.977	98	0.05	0.056	112				#N/A	051598	0.276	0.50	0.755	99	0.754	98	0.1	0.949
"			#N/A	1.00	1.091	109	0.05	0.058	116	1.00	1.084	108	051602	0.375	0.50	0.880	105	0.872	103	0.9	0.949	
28-Dec-05	1.00	1.093	109	1.00	1.093	109	0.05	0.058	116	1.00	1.069	107	051617	0.278	0.50	0.727	93	0.718	91	1.2	0.949	
"			#N/A	1.00	1.111	111	0.05	0.055	110				#N/A	051653	0.221	0.50	0.778	114	0.746	107	4.2	0.949
"			#N/A	1.00	1.138	114	0.05	0.054	108	1.00	1.114	111	051659	0.285	0.50	0.829	116	0.827	115	0.2	0.949	
29-Dec-05	1.00	1.071	107	1.00	1.060	106	0.05	0.051	102	1.00	1.071	107	051723	0.000	0.50	0.526	105	0.529	106	0.6	0.949	

* Sample concentration less than MDL is entered as zero for matrix spike recovery calculations.

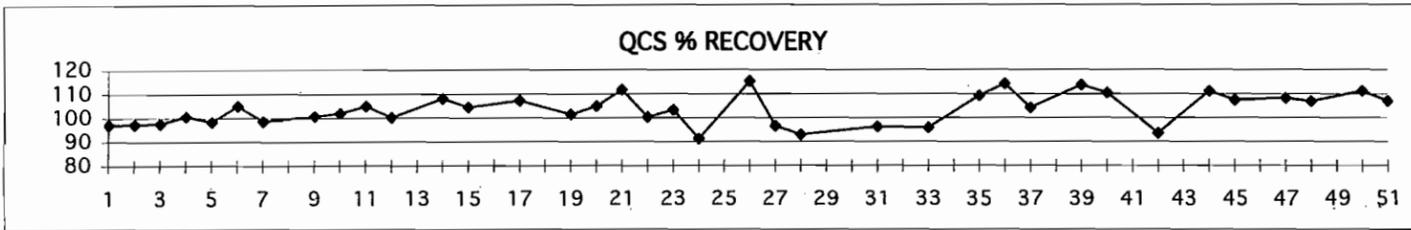
ION CHROMATOGRAPHY - BROMIDE QUALITY CONTROL CHARTS - 2005



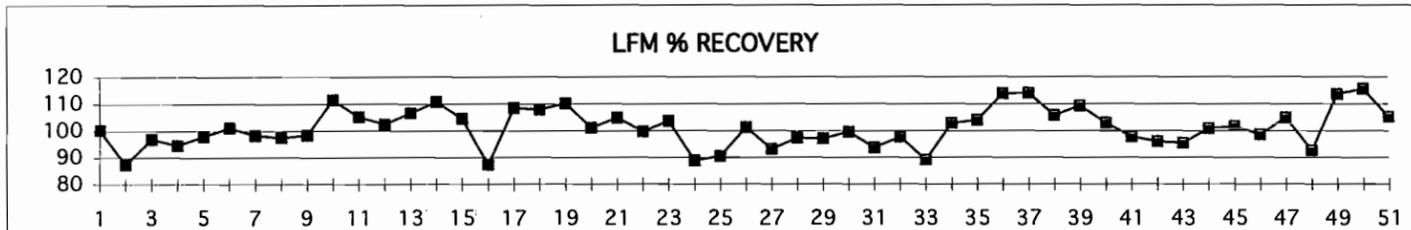
No* = 76
Mean = #REF!
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 90 - 110



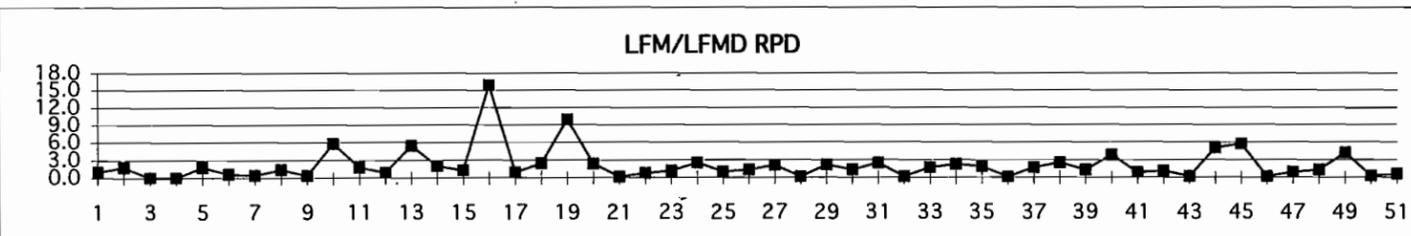
No = 51
Mean = #REF!
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 72 - 120



No = 37
Mean = #REF!
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 88 - 117



No = 51
Mean = 101
Std Dev = 7.05
UCL = 122
LCL = 80
UCWL = 115
LCWL = 87
Range = 89 - 108



No = 51
Mean = 2.1
Std Dev = 2.72
UCL = 10.2
UCWL = 6.3
Range = 0.2 - 7.3

When applicable, statistics are successively recalculated after excluding values at and outside UCL and LCL.

* = Combined I IPC/C IPC data for Control Limits
UCL = Upper Control Limit (Mean + 3* Std Dev)
LCL = Lower Control Limit (Mean - 3* Std Dev)
UCWL = Upper Control Warning Limit (Mean + 2* Std Dev)
LCWL = Lower Control Warning Limit (Mean - 2* Std Dev)

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: NITRATE as N, mg/L
EPA 300

MDL = 0.022 mg/L (3/22/06)

Year: 2006

Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision	Conc. Factor	
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc. *	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R	RPD		
6-Jan-06	2.00	1.975	99	2.00	2.052	103	0.10	0.105	105	2.00	2.181	109	051739	1.016	2.00	3.274	115	3.273	115	0.0	0.949	
11-Jan-06	2.00	2.000	100	2.00	2.057	103	0.10	0.098	98	2.00	2.004	100	060020	0.859	2.00	2.941	106	2.903	104	1.3	0.949	
30-Jan-06	2.00	2.021	101	2.00	2.077	104	0.10	0.102	102	2.00	1.999	100	060085	0.000	2.00	1.985	99	1.957	98	1.4	0.949	
15-Feb-06	2.00	1.938	97	2.00	2.042	102	0.10	0.102	102	2.00	1.966	98	060138	0.717	2.00	2.735	103	2.733	103	0.1	0.949	
15-Mar-06	2.00	1.963	98	2.00	2.104	105	0.10	0.111	111	2.00	2.013	101	060184	0.265	2.00	2.344	105	2.342	105	0.1	0.949	
"			#N/A	2.00	2.137	107	0.10	0.117	117				#N/A	060194	0.779	2.00	2.909	108	2.920	109	0.4	0.949
22-Mar-06	2.00	1.880	94	2.00	1.943	97	0.10	0.098	98	2.00	2.037	102	060216	1.419	2.00	3.593	112	3.598	113	0.1	0.949	
"			#N/A	2.00	1.991	100	0.10	0.101	101				#N/A	060237	0.040	2.00	2.196	108	2.171	107	1.1	0.949
"			#N/A	2.00	2.037	102	0.10	0.100	100	2.00	2.136	107	060250	3.789	2.00	5.969	119	5.980	119	0.2	0.949	
24-Mar-06	2.00	1.820	91	2.00	1.865	93	0.10	0.100	100	2.00	1.964	98	060273	0.569	2.00	2.622	104	2.654	106	1.2	0.949	
"			#N/A	2.00	1.898	95	0.10	0.105	105				#N/A	060279	7.02	2.00	8.938	114	8.931	113	0.1	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		#N/A		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949
"	2.00		0	2.00		0	0.10		0	2.00		0			2.00		0		0		#DIV/0!	0.949
"			#N/A	2.00		0	0.10		0	2.00		#N/A			2.00		0		0		#DIV/0!	0.949</

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: NITRATE as N, mg/L
EPA 300

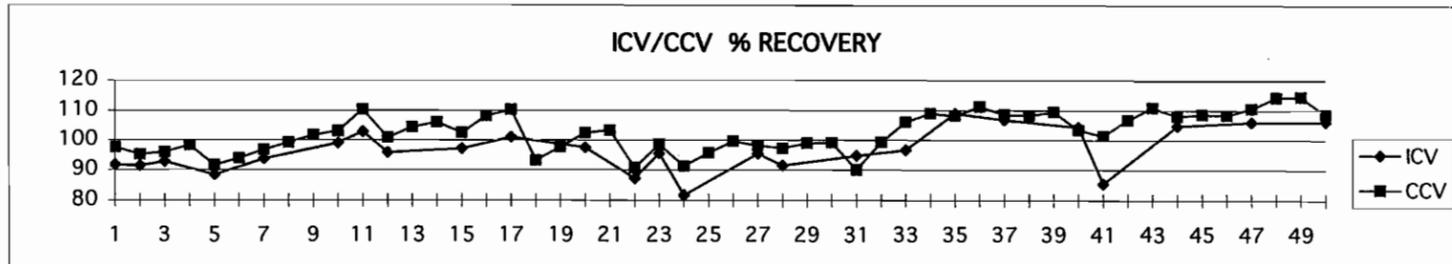
MDL = 0.022 mg/L (3/22/05)

Year: 2005

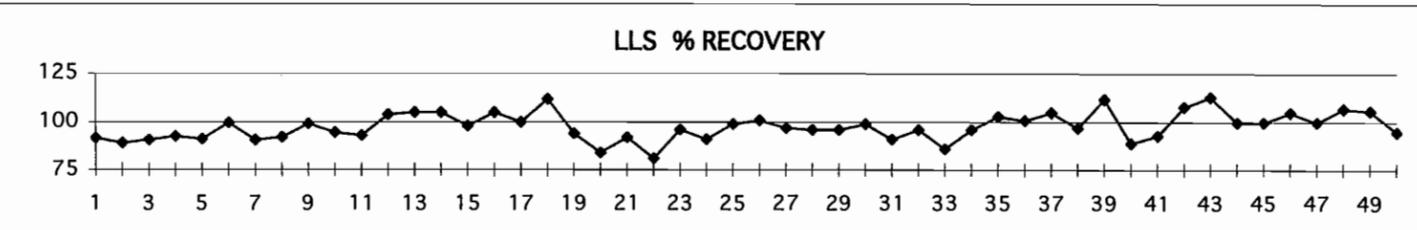
Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision RPD	Conc. Factor
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc.	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R		
6-Jan-05	2.00	1.833	92	2.00	1.949	97	0.20	0.183	92	2.00	1.870	94	041060	2.843	2.00	4.902	110	4.981	114	1.6	0.949
18-Jan-05	2.00	1.826	91	2.00	1.902	95	0.20	0.178	89	2.00	1.848	92	050035	1.519	2.00	3.477	102	3.499	103	0.6	0.949
24-Feb-05	2.00	1.855	93	2.00	1.918	96	0.20	0.181	91	2.00	1.871	94	050070	1.222	2.00	3.229	103	3.200	102	0.9	0.949
"			#N/A	2.00	1.965	98	0.20	0.185	93	2.00	1.969	98	050116	1.011	2.00	3.001	102	2.990	102	0.4	0.949
1-Mar-05	2.00	1.767	88	2.00	1.830	92	0.20	0.182	91	2.00	1.883	94	050147	4.838	2.00	6.888	115	6.874	114	0.2	0.949
"			#N/A	2.00	1.876	94	0.20	0.199	100	2.00	2.049	102	050155	10.420	2.00	12.580	#N/A	12.620	#N/A	0.3	0.949
22-Mar-05	2.00	1.872	94	2.00	1.935	97	0.20	0.181	91	2.00	1.865	93	502101	8.579	2.00	10.630	#N/A	10.790	#N/A	1.5	0.949
"			#N/A	2.00	1.982	99	0.20	0.184	92				050211	1.093	2.00	3.124	104	3.095	103	0.9	0.949
"			#N/A	2.00	2.033	102	0.20	0.198	99	2.00	1.957	98	050248	0.716	2.00	2.801	106	2.780	105	0.8	0.949
15-Apr-05	2.00	1.980	99	2.00	2.060	103	0.20	0.189	95	2.00	1.974	99	050347	0.375	2.00	2.571	111	2.627	114	2.2	0.949
19-Apr-05	2.00	2.055	103	2.00	2.204	110	0.10	0.093	93	2.00	2.070	104	050374	0.00	2.00	2.171	109	2.169	108	0.1	0.949
16-May-05	2.00	1.916	96	2.00	2.016	101	0.10	0.104	104	2.00	1.937	97	050468	0.386	2.00	2.423	103	2.426	103	0.1	0.949
"			#N/A	2.00	2.086	104	0.10	0.105	105	2.00	2.140	107	050477	0.415	2.00	2.547	108	2.464	104	3.3	0.949
"			#N/A	2.00	2.119	106	0.10	0.105	105	2.00	2.140	107	050485	0.000	2.00	2.182	109	2.168	108	0.6	0.949
31-May-05	2.00	1.942	97	2.00	2.047	102	0.10	0.098	98	2.00	1.941	97	050559	1.979	2.00	4.122	112	4.150	114	0.7	0.949
"			#N/A	2.00	2.163	108	0.10	0.105	105				050569	6.733	2.00	9.039	#N/A	9.174	139	1.5	0.949
14-Jul-05	2.00	2.021	101	2.00	2.205	110	0.10	0.100	100	2.00	1.977	99	050643	0.411	2.00	2.536	107	2.487	105	2.0	0.949
"			#N/A	2.00	1.863	93	0.10	0.112	112				050670	0.011	2.00	2.113	105	2.100	104	0.6	0.949
"			#N/A	2.00	1.953	98	0.10	0.094	94	2.00	1.910	96	050688	0.024	2.00	2.114	105	1.975	98	6.8	0.949
19-Jul-05	2.00	1.950	98	2.00	2.047	102	0.10	0.084	84	2.00	1.975	99	050695	0.723	2.00	2.674	99	2.691	100	0.6	0.949
"			#N/A	2.00	2.066	103	0.10	0.092	92	2.00	2.079	104	050763	0.308	2.00	2.418	106	2.415	106	0.1	0.949
21-Jul-05	2.00	1.744	87	2.00	1.814	91	0.10	0.081	81	2.00	1.877	94	050828	0.946	2.00	2.848	98	2.813	96	1.2	0.949
28-Jul-05	2.00	1.909	95	2.00	1.969	98	0.10	0.096	96	2.00	1.914	96	050848	0.040	2.00	1.976	97	1.980	97	0.2	0.949
24-Aug-05	2.00	1.633	82	2.00	1.826	91	0.10	0.091	91	2.00	1.679	84	050942	0.213	2.00	2.022	91	2.027	91	0.2	0.949
"			#N/A	2.00	1.913	96	0.10	0.099	99				050955	0.548	2.00	2.469	97	2.454	96	0.6	0.980
"			#N/A	2.00	1.991	100	0.10	0.101	101	2.00	1.920	96	051014	0.225	2.00	2.258	102	2.196	99	2.8	0.949
31-Aug-05	2.00	1.908	95	2.00	1.963	98	0.10	0.097	97	2.00	1.936	97	050942	0.240	2.00	2.185	98	2.189	98	0.2	0.949
1-Sep-05	2.00	1.830	92	2.00	1.946	97	0.10	0.096	96	2.00	1.814	91	051062	7.312	2.00	9.304	118	9.319	119	0.2	0.949
"			#N/A	2.00	1.979	99	0.10	0.096	96				051071	2.204	2.00	4.256	108	4.320	111	1.5	0.949
"			#N/A	2.00	1.985	99	0.10	0.099	99				051074	0.000	2.00	1.980	99	1.973	99	0.4	0.949
16-Sep-05	2.00	1.896	95	2.00	1.802	90	0.10	0.091	91	2.00	1.870	94	051115	0.166	2.00	2.123	98	2.140	99	0.8	0.949
"			#N/A	2.00	1.987	99	0.10	0.096	96				051127	4.092	2.00	6.236	118	6.262	119	0.4	0.949
12-Oct-05	2.00	1.933	97	2.00	2.122	106	0.10	0.086	86	2.00	1.922	96	051242	12.870	2.00	14.020	90	14.120	95	0.7	0.949
"			#N/A	2.00	2.181	109	0.10	0.096	96				051285	0.282	2.00	2.475	110	2.459	110	0.6	0.949
28-Oct-05	2.00	2.180	109	2.00	2.165	108	0.10	0.103	103	2.00	2.184	109	051372	0.033	2.00	2.235	110	2.230	110	0.2	0.949
"			#N/A	2.00	2.227	111	0.10	0.101	101	2.00	2.248	112	051413	0.000	2.00	2.309	115	2.304	115	0.2	0.949
26-Oct-05	2.00	2.136	107	2.00	2.173	109	0.10	0.105	105	2.00	2.085	104	051355	0.439	2.00	2.775	118	2.644	111	4.8	0.949
"			#N/A	2.00	2.167	108	0.10	0.097	97				051331	2.827	2.00	5.029	117	5.159	124	2.6	0.949
"			#N/A	2.00	2.192	110	0.10	0.112	112	2.00	2.286	114	051337	2.392	2.00	4.659	119	4.658	119	0.0	0.949
3-Nov-05	2.00	2.087	104	2.00	2.070	104	0.10	0.089	89	2.00	2.196	110	051383	0.000	2.00	2.224	111	2.272	114	2.1	0.949
30-Nov-05	2.00	1.709	85	2.00	2.030	102	0.10	0.093	93	2.00	1.741	87	051486	0.578	2.00	2.526	99	2.511	98	0.6	0.949
"			#N/A	2.00	2.136	107	0.10	0.108	108				051495	0.616	2.00	2.658	104	2.710	106	1.9	0.949
"			#N/A	2.00	2.220	111	0.10	0.113	113	2.00	2.176	109	051529	0.053	2.00	2.209	108	2.228	109	0.9	0.949
1-Dec-05	2.00	2.095	105	2.00	2.162	108	0.10	0.100	100	2.00	2.087	104	051537	0.000	2.00	2.100	105	2.151	108	2.4	0.949
"			#N/A	2.00	2.174	109	0.10	0.100	100				051598	0.000	2.00	2.184	109	2.207	110	1.0	0.949
"			#N/A	2.00	2.170	109	0.10	0.105	105	2.00	2.175	109	051602	0.711	2.00	2.945	114	2.986	116	1.4	0.949
28-Dec-05	2.00	2.122	106	2.00	2.215	111	0.10	0.100	100	2.00	2.115	106	051617	0.511	2.00	2.775	115	2.803	116	1.0	0.949
"			#N/A	2.00	2.288	114	0.10	0.107	107				051653	2.082	2.00	4.279	115	4.354	119	1.7	0.949
"			#N/A	2.00	2.292	115	0.10	0.106	106	2.00	2.268	113	051659	0.621	2.00	2.938	117	2.959	118	0.7	0.949
29-Dec-05	2.00	2.125	106	2.00	2.175	109	0.10	0.095	95	2.00	2.107	105	051723	0.000	2.00	2.127	106	2.132	107	0.2	0.949

* Sample concentration less than MDL is entered as zero for matrix spike recovery calculations.

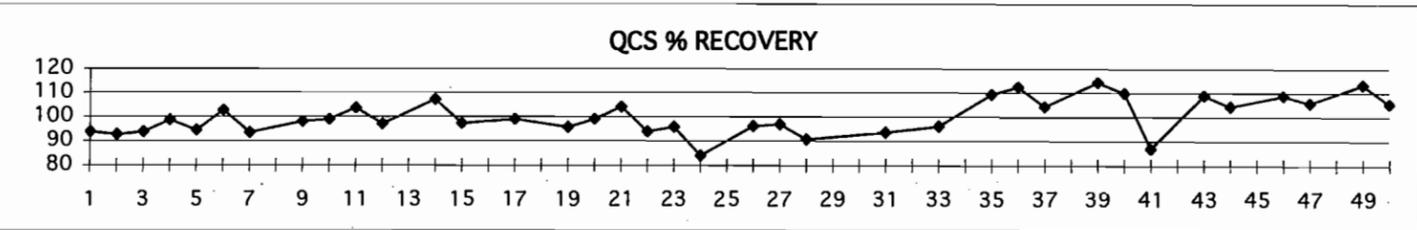
ION CHROMATOGRAPHY - NITRATE-N QUALITY CONTROL CHARTS - 2005



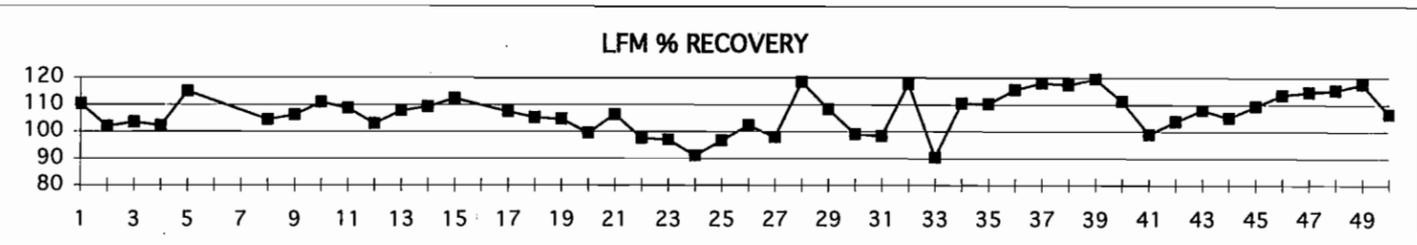
No* = 75
Mean = #REF!
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 90 - 109



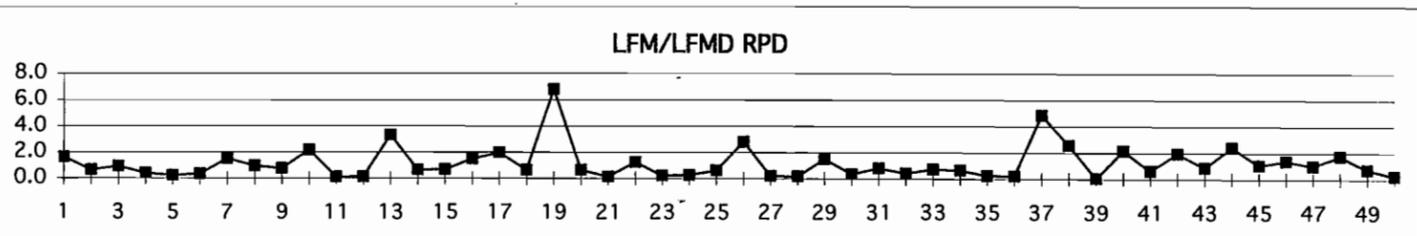
No = 50
Mean = 98
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 72 - 122



No = 37
Mean = 100
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 79 - 111



No = 47
Mean = 107
Std Dev = #N/A
UCL = #N/A
LCL = #N/A
UCWL = #N/A
LCWL = #N/A
Range = 83 - 119



No = 50
Mean = 1.2
Std Dev = 1.26
UCL = 4.9
UCWL = 3.5
Range = 0.1 - 4.0

When applicable, statistics are successively recalculated after excluding values at and outside UCL and LCL.

- * = Combined I IPC/C IPC data for Control Limits
- UCL = Upper Control Limit (Mean + 3* Std Dev)
- LCL = Lower Control Limit (Mean - 3* Std Dev)
- UCWL = Upper Control Warning Limit (Mean + 2* Std Dev)
- LCWL = Lower Control Warning Limit (Mean - 2* Std Dev)

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: Phosphate, mg/L
EPA 300

MDL = 0.011 mg/L (3/22/06)

Year: 2006

Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision	Conc. Factor	
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc.	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R	RPD		
6-Jan-06	1.00	0.993	99	1.00	1.030	103	0.05	0.053	106	0.50	0.531	106	051739	0.043	0.50	0.549	102	0.546	101	0.5	0.949	
11-Jan-06	1.00	1.004	100	1.00	1.061	106	0.05	0.049	98	0.50	0.500	100	060020	0.00	0.50	0.473	95	0.445	89	6.1	0.949	
30-Jan-06	1.00	1.109	111	1.00	1.127	113	0.05	0.045	90	0.50	0.511	102	060085	0.022	0.50	0.497	95	0.499	96	0.4	0.949	
15-Feb-06	1.00	1.008	101	1.00	1.086	109	0.05	0.054	108	0.50	0.511	102	060138	0.00	0.50	0.497	99	0.467	93	6.2	0.949	
15-Mar-06	1.00	0.990	99	1.00	1.108	111	0.05	0.050	100	0.50	0.485	97	060184	0.010	0.50	0.471	92	0.477	93	1.3	0.949	
"			#N/A	1.00	1.046	105	0.05	0.055	110				#N/A	060194	0.03	0.50	0.513	97	0.516	98	0.6	0.995
22-Mar-06	1.00	0.939	94	1.00	1.026	103	0.05	0.051	102	0.50	0.467	93	060216	0.008	0.50	0.479	94	0.476	94	0.6	0.949	
"			#N/A	1.00	1.002	100	0.05	0.052	104				#N/A	060237	0.00	0.50	0.463	93	0.439	88	5.3	0.949
"			#N/A	1.00	1.010	101	0.05	0.048	96	0.50	0.478	96	060250	0.054	0.50	0.535	97	0.536	97	0.2	0.949	
24-Mar-06	1.00	0.910	91	1.00	0.980	98	0.05	0.050	100	0.50	0.455	91	060273	0.007	0.50	0.464	91	0.476	94	2.6	0.949	
"			#N/A	1.00	0.987	99	0.05	0.047	94				#N/A	060279	0.030	0.50	0.441	83	0.458	86	3.8	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.994
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.994
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"	1.00		0	1.00		0	0.05		0	0.50			#N/A		0.50				0		#DIV/0!	0.949
"			#N/A																			

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: Phosphate, mg/L
EPA 300

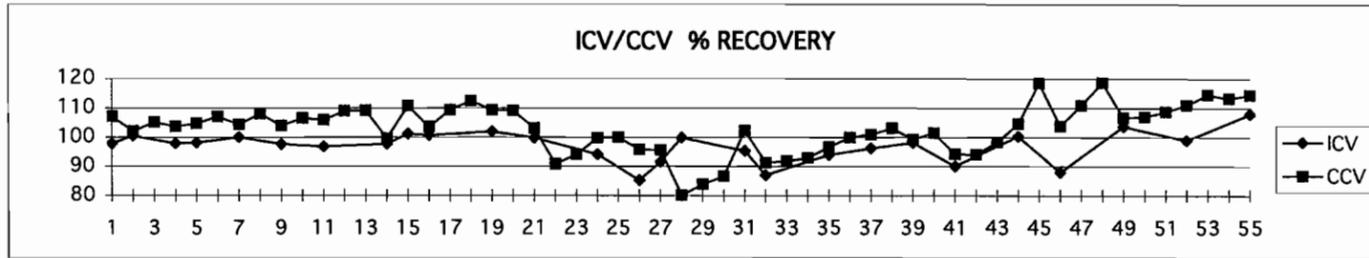
MDL = 0.006 mg/L (2/24/05)

Year: 2005

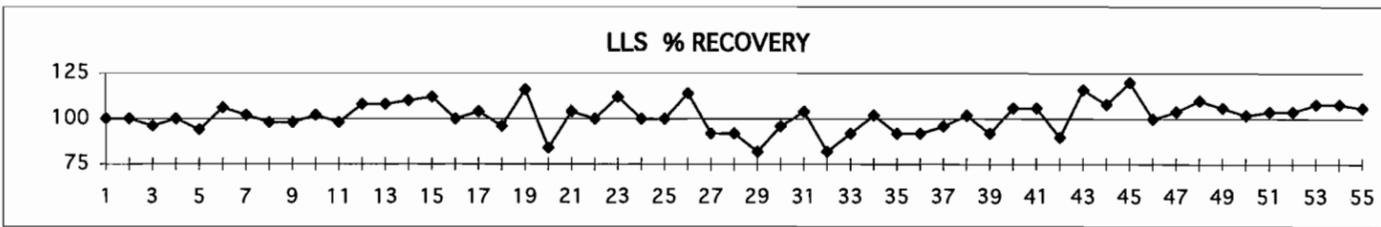
Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision	Conc. Factor
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc.	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R	RPD	
6-Jan-05	1.00	0.977	98	1.00	1.070	107	0.05	0.050	100	0.50	0.513	103	041060	0.055	0.50	0.519	93	0.519	93	0.0	0.949
4-Jan-05	1.00	1.004	100	1.00	1.019	102	0.05	0.050	100	0.50	0.487	97	M050008	0.00	0.50	0.452	90	0.459	92	1.5	0.994
"			#N/A	1.00	1.049	105	0.05	0.048	96	0.50	0.546	109	M050016	0.00	0.50	0.493	99	0.498	100	1.0	0.994
18-Jan-05	1.00	0.977	98	1.00	1.035	104	0.05	0.050	100	0.50	0.499	100	050035	0.00	0.50	0.461	92	0.463	93	0.4	0.949
8-Feb-05	1.00	0.980	98	1.00	1.045	105	0.05	0.047	94	0.50	0.512	102	M050137	0.045	0.50	0.509	93	0.522	95	2.5	0.994
"			#N/A	1.00	1.069	107	0.05	0.053	106	0.50	0.544	109	M050145	0.00	0.50	0.485	97	0.488	98	0.6	0.995
24-Feb-05	1.00	0.998	100	1.00	1.042	104	0.05	0.051	102	0.50	0.491	98	050070	0.054	0.50	0.523	94	0.524	95	0.2	0.949
"			#N/A	1.00	1.078	108	0.05	0.049	98	0.50	0.488	98	050116	0.00	0.50	0.468	94	0.473	95	1.1	0.949
1-Mar-05	1.00	0.975	98	1.00	1.038	104	0.05	0.049	98	0.50	0.515	103	050147	0.205	0.50	0.677	96	0.671	95	0.9	0.949
"			#N/A	1.00	1.064	106	0.05	0.051	102	0.50	0.546	109	050155	0.170	0.50	0.655	99	0.673	102	2.7	0.949
22-Mar-05	1.00	0.966	97	1.00	1.057	106	0.05	0.049	98	0.50	0.486	97	502101	0.041	0.50	0.470	86	0.484	89	2.9	0.949
"			#N/A	1.00	1.088	109	0.05	0.054	108	0.50		#N/A	050211	0.00	0.50	0.456	91	0.467	93	2.4	0.949
"			#N/A	1.00	1.090	109	0.05	0.054	108	0.50	0.522	104	050248	0.00	0.50	0.467	93	0.474	95	1.5	0.949
15-Apr-05	1.00	0.976	98	1.00	0.994	99	0.05	0.055	110	0.50	0.470	94	050347	0.078	0.50	0.621	109	0.644	113	3.6	0.994
19-Apr-05	1.00	1.011	101	1.00	1.106	111	0.05	0.056	112	0.50	0.514	103	050374	0.00	0.50	0.476	95	0.477	95	0.2	0.994
16-May-05	1.00	1.006	101	1.00	1.035	104	0.05	0.050	100	0.50	0.511	102	050468	0.00	0.50	0.450	90	0.453	91	0.7	0.949
"			#N/A	1.00	1.093	109	0.05	0.052	104			#N/A	050477	0.000	0.50	0.440	88	0.442	88	0.5	0.949
"			#N/A	1.00	1.124	112	0.05	0.048	96	0.50	0.546	109	050485	0.023	0.50	0.510	98	0.516	99	1.2	0.949
31-May-05	1.00	1.019	102	1.00	1.092	109	0.05	0.058	116	0.50	0.505	101	050559	0.041	0.50	0.493	91	0.496	91	0.6	0.949
"			#N/A	1.00	1.090	109	0.05	0.042	84			#N/A	050569	0.059	0.50	0.520	93	0.520	93	0.0	0.949
14-Jul-05	1.00	0.997	100	1.00	1.030	103	0.05	0.052	104	0.50	0.510	102	050643	0.00	0.50	0.435	87	0.441	88	1.4	0.949
"			#N/A	1.00	0.908	91	0.05	0.050	100			#N/A	050670	0.00	0.50	0.446	89	0.446	89	0.0	0.949
"			#N/A	1.00	0.940	94	0.05	0.056	112	0.50	0.464	93	050688	0.026	0.50	0.443	84	0.418	79	5.8	0.949
19-Jul-05	1.00	0.941	94	1.00	0.997	100	0.05	0.050	100	0.50	0.467	93	050695	0.089	0.50	0.506	84	0.503	84	0.6	0.949
"			#N/A	1.00	1.000	100	0.05	0.050	100	0.50	0.497	99	050763	0.000	0.50	0.446	89	0.436	87	2.3	0.949
21-Jul-05	1.00	0.853	85	1.00	0.957	96	0.05	0.057	114	0.50	0.483	97	050828	0.000	0.50	0.398	80	0.395	79	0.8	0.949
28-Jul-05	1.00	0.916	92	1.00	0.956	96	0.05	0.046	92	0.50	0.470	94	050848	0.000	0.50	0.432	86	0.434	87	0.5	0.949
24-Aug-05	0.50	0.499	100	1.00	0.801	80	0.05	0.046	92	0.50	0.383	77	050942	0.000	0.50	0.486	97	0.455	91	6.6	0.949
"			#N/A	1.00	0.838	84	0.05	0.041	82	0.50		#N/A	050955	0.00	0.50	0.404	81	0.401	80	0.7	0.949
"			#N/A	1.00	0.866	87	0.05	0.048	96	0.50	0.491	98	051014	0.04	0.50	0.481	88	0.504	93	4.7	0.949
31-Aug-05	1.00	0.953	95	1.00	1.022	102	0.05	0.052	104	0.50	0.462	92	050942	0.00	0.50	0.434	87	0.436	87	0.5	0.949
1-Sep-05	1.00	0.870	87	1.00	0.913	91	0.05	0.041	82	0.50	0.401	80	051062	0.029	0.50	0.428	80	0.437	82	2.1	0.949
"			#N/A	1.00	0.918	92	0.05	0.046	92			#N/A	051071	0.048	0.50	0.451	81	0.452	81	0.2	0.949
"			#N/A	1.00	0.929	93	0.05	0.051	102			#N/A	051074	0.000	0.50	0.409	82	0.405	81	1.0	0.949
16-Sep-05	1.00	0.940	94	1.00	0.966	97	0.05	0.046	92	0.50	0.459	92	051115	0.000	0.50	0.551	110	0.553	111	0.4	0.949
"			#N/A	1.00	0.999	100	0.05	0.046	92			#N/A	051127	0.00	0.50	0.588	118	0.585	117	0.5	0.949
12-Oct-05	1.00	0.962	96	1.00	1.010	101	0.05	0.048	96	0.50	0.467	93	051242	0.038	0.50	0.494	92	0.505	94	2.2	0.949
"			#N/A	1.00	1.032	103	0.05	0.051	102	0.50		#N/A	051285	0.00	0.50	0.446	89	0.473	95	5.9	0.949
28-Oct-05	1.00	0.982	98	1.00	0.993	99	0.05	0.046	92	0.50	0.478	96	051372	0.034	0.50	0.479	89	0.474	88	1.0	0.949
"			#N/A	1.00	1.015	102	0.05	0.053	106	0.50	0.462	92	051413	0.00	0.50	0.466	93	0.413	83	12.1	0.949
26-Oct-05	1.00	0.901	90	1.00	0.943	94	0.05	0.053	106	0.50	0.441	88	051355	0.027	0.50	0.477	90	0.482	91	1.0	0.949
"			#N/A	1.00	0.942	94	0.05	0.045	90	0.50		#N/A	051331	0.040	0.50	0.458	84	0.478	88	4.3	0.949
"			#N/A	1.00	0.983	98	0.05	0.058	116	0.50	0.469	94	051337	0.019	0.50	0.468	90	0.461	89	1.5	0.949
3-Nov-05	1.00	1.004	100	1.00	1.047	105	0.05	0.054	108	0.50	0.481	96	051383	0.013	0.50	0.505	99	0.515	101	2.0	0.949
"			#N/A	1.00	1.186	119	0.05	0.060	120	0.50		#N/A	051460	0.578	0.50	1.002	85	1.005	86	0.3	0.994
30-Nov-05	1.00	0.881	88	1.00	1.039	104	0.05	0.050	100	0.50	0.455	91	051486	0.000	0.50	0.496	99	0.505	101	1.8	0.949
"			#N/A	1.00	1.110	111	0.05	0.052	104			#N/A	051495	0.00	0.50	0.432	86	0.473	95	9.1	0.994
"			#N/A	1.00	1.188	119	0.05	0.055	110	0.50	0.524	105	051529	0.00	0.50	0.477	95	0.487	97	2.1	0.994
1-Dec-05	1.00	1.038	104	1.00	1.068	107	0.05	0.053	106	0.50	0.493	99	051537	0.102	0.50	0.588	98	0.594	99	1.0	0.949
"			#N/A	1.00	1.071	107	0.05	0.051	102			#N/A	051598	0.00	0.50	0.503	101	0.507	101	0.8	0.994
"			#N/A	1.00	1.088	109	0.05	0.052	104	0.50	0.549	110	051602	0.045	0.50	0.569	105	0.570	105	0.2	0.994
28-Dec-05	1.00	0.990	99	1.00	1.111	111	0.05	0.052	104	0.50	0.502	100	051617	0.000	0.50	0.485	97	0.512	102	5.4	0.949
"			#N/A	1.00	1.146	115	0.05	0.054	108			#N/A	051653	0.024	0.50	0.518	99	0.519	99	0.2	0.949
"			#N/A	1.00	1.134	113	0.05	0.054	108	0.50	0.554	111	051659	0.00	0.50	0.506	101	0.503	101	0.6	0.949
29-Dec-05	1.00	1.080	108	1.00	1.145	115	0.05	0.053	106	0.50	0.518	104	051723	0.036	0.50	0.548	103	0.561	105	2.3	0.949

* Sample concentration less than MDL is entered as zero for matrix spike recovery calculations.

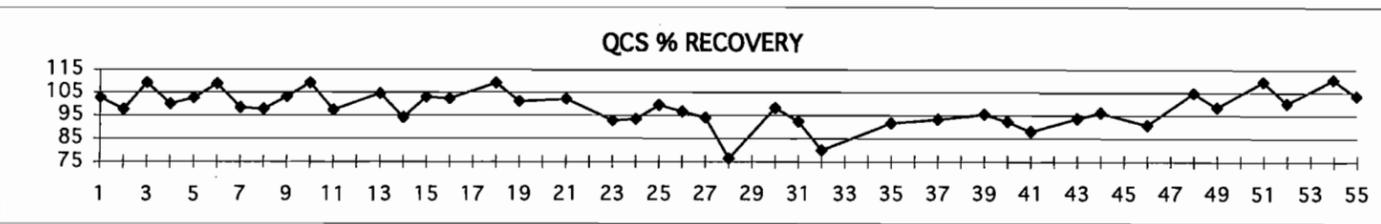
ION CHROMATOGRAPHY - PHOSPHATE QUALITY CONTROL CHARTS - 2005



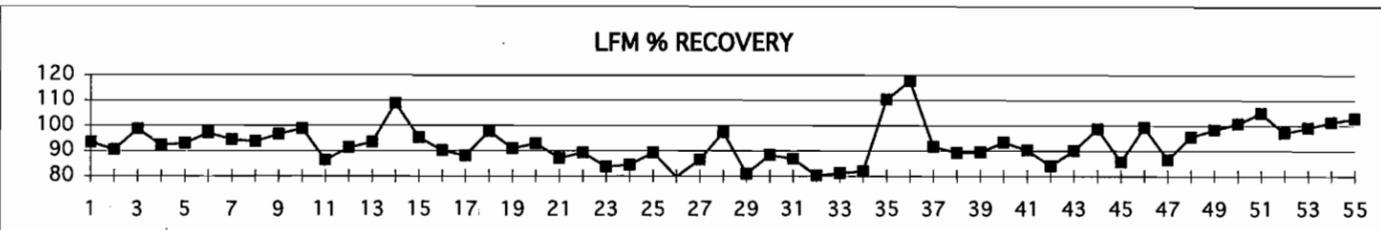
No* = 82
Mean = 101
Std Dev = #N/A
UCL = #N/A
LCL = #N/A
UCWL = #N/A
LCWL = #N/A
Range = 91 - 103



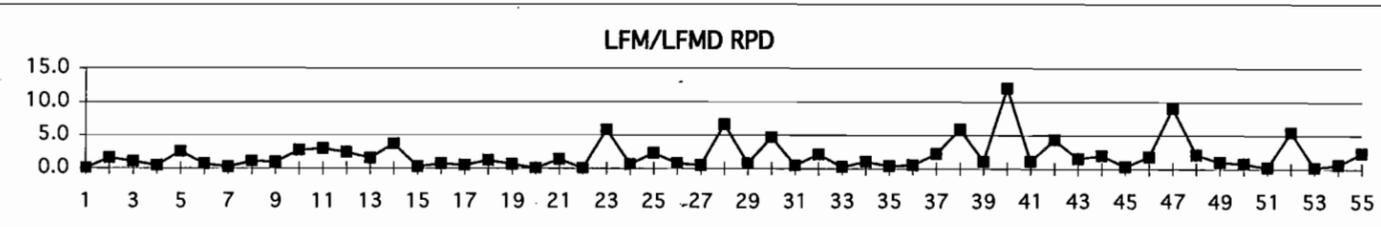
No = 55
Mean = 101
Std Dev = 5.2
UCL = 117
LCL = 86
UCWL = 112
LCWL = 91
Range = 80 - 125



No = 41
Mean = 98
Std Dev = #N/A
UCL = #N/A
LCL = #N/A
UCWL = #N/A
LCWL = #N/A
Range = 86 - 102



No = 55
Mean = 93
Std Dev = 7.72
UCL = 116
LCL = 108
UCWL = 108
LCWL = 77
Range = 85 - 110



No = 55
Mean = 1.9
Std Dev = 2.35
UCL = 9
UCWL = 6
LCWL = 0 - 8.3

When applicable, statistics are successively recalculated after excluding values at and outside UCL and LCL.

* = Combined I IPC/C IPC data for Control Limits
UCL = Upper Control Limit (Mean + 3* Std Dev)
LCL = Lower Control Limit (Mean - 3* Std Dev)

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: SULFATE, mg/L
EPA 300

MDL = 0.78 mg/L (3/22/06)

Year: 2006

Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision	Conc. Factor
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc.	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R	RPD	
6-Jan-06	50.0	48.3	97	50.0	50.6	101	5.0	4.15	83	50.0	55.0	110	051739	38.3	20.0	60.0	118	59.7	117	0.5	0.949
11-Jan-06	50.0	49.0	98	50.0	50.3	101	5.0	4.29	86	50.0	50.3	101	060020	19.0	20.0	38.9	104	38.5	102	1.0	0.949
30-Jan-06	50.0	50.0	100	50.0	51.8	104	5.0	4.39	88	50.0	49.6	99	060085	27.9	20.0	47.7	106	47.1	103	1.3	0.949
15-Feb-06	50.0	47.8	96	50.0	50.4	101	5.0	4.21	84	50.0	48.3	97	060138	38.6	20.0	57.7	105	57.5	104	0.3	0.949
15-Mar-06	50.0	48.9	98	50.0	51.7	103	5.0	4.41	88	50.0	49.3	99	060184	30.3	20.0	51.1	112	51.5	114	0.8	0.949
"			#N/A	50.0	53.2	106	5.0	4.91	98				060194	31.9	20.0	53.6	117	53.8	118	0.4	0.949
22-Mar-06	50.0	50.5	101	50.0	53.1	106	5.0	4.38	88	50.0	50.0	100	060216	78.1	20.0	98.2	120	98.2	120	0.0	0.949
"			#N/A	50.0	54.3	109	5.0	4.77	95				060237	27.3	20.0	49.4	117	49.2	116	0.4	0.949
"			#N/A	50.0	55.1	110	5.0	4.83	97	50.0	54.0	108	060250	45.8	20.0	66.7	116	67.1	118	0.6	0.949
24-Mar-06	50.0	49.8	100	50.0	51.1	102	5.0	4.42	88	50.0	48.8	98	060273	29.7	20.0	50.8	113	50.8	113	0.0	0.949
"			#N/A	50.0	52.4	105	5.0	4.66	93				060279	61.1	20.0	81.4	117	81.7	119	0.4	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
	50.0		0	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0			#N/A			20.0		0		0	#DIV/0!	0.949
			#N/A	50.0		0	5.0		0	50.0		0			20.0		0		0	#DIV/0!	0.949

ZONE 7 WATER QUALITY LABORATORY

ION CHROMATOGRAPHY QUALITY CONTROL SUMMARY

Analyte: SULFATE, mg/L
EPA 300

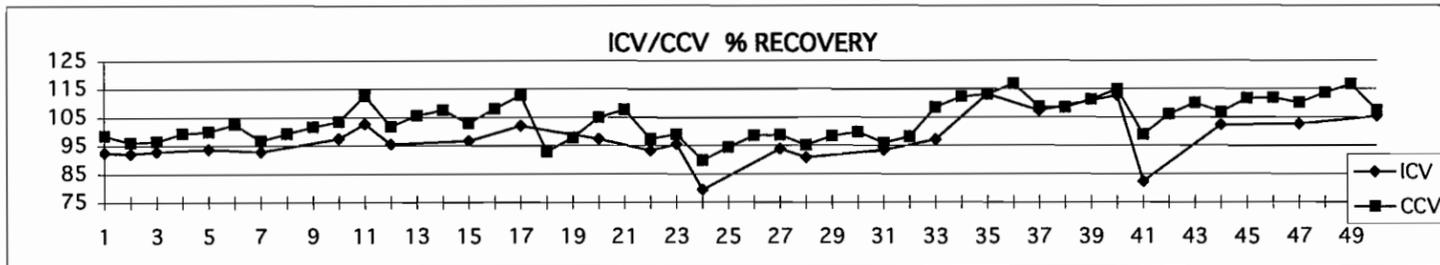
MDL = 0.64 mg/L (3/22/05)

Year: 2005

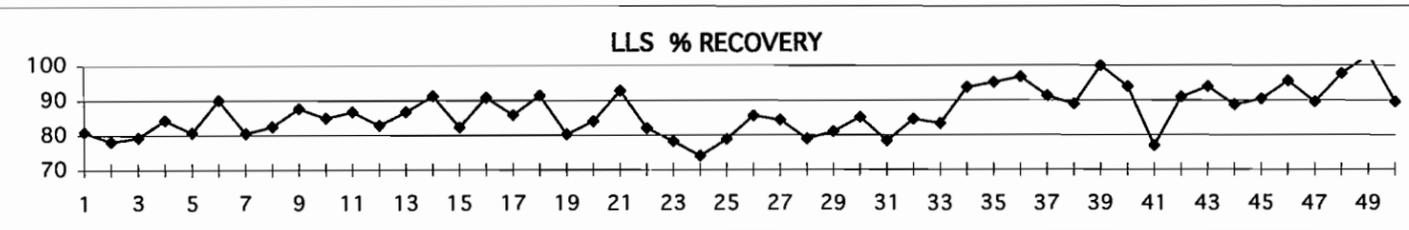
Date Analyzed	ICV			CCV			LLS			QCS			Lab Fortified Matrix			Accuracy				Precision RPD	Conc. Factor	
	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Conc. True	Conc. Found	% R	Sample Name	Sample Conc.	Spike Conc.	LFM Conc. Found	LFM % R	LFMD Conc. Found	LFMD % R			
6-Jan-05	50.0	46.2	92	50.0	49.2	98	5.0	4.04	81	50.0	46.3	93	041060	57.2	20.0	76.9	113	77.6	117	0.9	0.949	
18-Jan-05	50.0	46.0	92	50.0	48.0	96	5.0	3.90	78	50.0	45.5	91	050035	41.4	20.0	59.9	103	60.4	106	0.8	0.949	
24-Feb-05	50.0	46.4	93	50.0	48.2	96	5.0	3.96	79	50.0	46.0	92	050070	37.4	20.0	57.7	111	56.9	107	1.4	0.949	
"			#N/A	50.0	49.6	99	5.0	4.21	84	50.0	50.2	100	050116	36.4	20.0	56.4	109	56.4	109	0.0	0.949	
1-Mar-05	50.0	46.8	94	50.0	49.9	100	5.0	4.03	81	50.0	46.5	93	050147	100.8	20.0	118.0	112	118.4	114	0.3	0.949	
"			#N/A	50.0	51.2	102	5.0	4.50	90	50.0	50.7	101	050155	29.9	20.0	50.5	111	50.7	112	0.4	0.949	
22-Mar-05	50.0	46.4	93	50.0	48.3	97	5.0	4.02	80	50.0	46.0	92	050210	41.7	20.0	61.4	109	61.8	111	0.6	0.949	
"			#N/A	50.0	49.6	99	5.0	4.12	82				#N/A	050211	38.8	20.0	58.8	110	58.2	107	1.0	0.949
"			#N/A	50.0	50.8	102	5.0	4.38	88	50.0	48.4	97	050248	55.0	20.0	75.5	117	75.7	118	0.3	0.949	
15-Apr-05	50.0	48.7	97	50.0	51.7	103	5.0	4.24	85	50.0	48.2	96	050347	48.6	20.0	69.9	119	69.9	119	0.0	0.949	
19-Apr-05	50.0	51.3	103	50.0	56.3	113	5.0	4.33	87	50.0	51.0	102	050374	36.8	20.0	58.9	120	58.8	119	0.2	0.949	
16-May-05	50.0	47.7	95	50.0	50.9	102	5.0	4.14	83	50.0	47.3	95	050468	38.2	20.0	58.6	112	58.8	113	0.3	0.949	
"			#N/A	50.0	52.8	106	5.0	4.33	87				#N/A	050477	41.3	20.0	62.3	116	62.2	115	0.2	0.949
"			#N/A	50.0	53.8	108	5.0	4.56	91	50.0	50.8	102	050485	38.7	20.0	60.7	120	60.6	119	0.2	0.949	
31-May-05	50.0	48.3	97	50.0	51.4	103	5.0	4.11	82	50.0	47.8	96	050559	39.2	20.0	59.9	113	60.3	115	0.7	0.949	
"			#N/A	50.0	54.0	108	5.0	4.54	91				#N/A	050569	39.6	20.0	61.4	119	62.8	126	2.3	0.949
14-Jul-05	50.0	51.0	102	50.0	56.4	113	5.0	4.29	86	50.0	48.2	96	050643	19.3	20.0	40.5	111	39.8	107	1.7	0.949	
"			#N/A	50.0	46.4	93	5.0	4.57	91				#N/A	050670	7.67	20.0	27.2	100	27.0	99	0.7	0.949
"			#N/A	50.0	48.9	98	5.0	4.01	80	50.0	46.6	93	050688	33.3	20.0	55.2	118	52.5	104	5.0	0.949	
19-Jul-05	50.0	48.7	97	50.0	52.5	105	5.0	4.20	84	50.0	48.4	97	050695	28.8	20.0	49.3	110	49.8	112	1.0	0.949	
"			#N/A	50.0	53.9	108	5.0	4.64	93	50.0	51.7	103	050763	17.4	20.0	37.9	107	38.0	107	0.3	0.949	
21-Jul-05	50.0	46.6	93	50.0	48.7	97	5.0	4.10	82	50.0	46.6	93	050828	36.5	20.0	55.7	105	54.1	97	2.9	0.949	
28-Jul-05	50.0	47.7	95	50.0	49.5	99	5.0	3.91	78	50.0	47.6	95	050848	63.5	20.0	82.7	112	83.3	115	0.7	0.949	
24-Aug-05	50.0	39.7	79	50.0	44.9	90	5.0	3.70	74	50.0	41.0	82	050942	12.4	20.0	29.9	91	30.0	91	0.3	0.949	
"			#N/A	50.0	47.2	94	5.0	3.94	79	50.0			#N/A	050955	39.6	20.0	58.9	107	58.9	107	0.0	0.949
"			#N/A	50.0	49.3	99	5.0	4.28	86	50.0	48.6	97	051014	15.3	20.0	34.3	99	33.6	95	2.1	0.949	
31-Aug-05	50.0	46.9	94	50.0	49.4	99	5.0	4.22	84	50.0	46.8	94	050942	13.8	20.0	32.2	96	32.3	96	0.3	0.949	
1-Sep-05	50.0	45.4	91	50.0	47.6	95	5.0	3.95	79	50.0	45.1	90	051062	47.8	20.0	67.6	111	67.3	110	0.4	0.949	
"			#N/A	50.0	49.2	98	5.0	4.05	81				#N/A	051071	44.4	20.0	64.2	110	65.2	115	1.5	0.949
"			#N/A	50.0	49.9	100	5.0	4.26	85				#N/A	051074	0.0	20.0	17.9	90	17.9	90	0.0	0.949
16-Sep-05	50.0	46.7	93	50.0	48.0	96	5.0	3.92	78	50.0	46.6	93	051115	22.0	20.0	41.4	103	41.5	103	0.2	0.949	
"			#N/A	50.0	49.1	98	5.0	4.23	85				#N/A	051127	37.5	20.0	58.2	113	58.3	114	0.2	0.949
12-Oct-05	50.0	48.6	97	50.0	54.3	109	5.0	4.17	83	50.0	48.2	96	051242	147.3	20.0	156.0	#N/A	156.0	81	0.0	0.949	
"			#N/A	50.0	56.2	112	5.0	4.69	94				#N/A	051285	27.3	20.0	46.6	103	46.2	101	0.9	0.949
28-Oct-05	50.0	56.6	113	50.0	56.6	113	5.0	4.76	95	50.0	55.1	110	051372	44.7	20.0	64.9	112	65.7	116	1.2	0.949	
"			#N/A	50.0	58.5	117	5.0	4.84	97	50.0	57.6	115	051413	44.0	20.0	65.1	117	65.5	119	0.6	0.949	
26-Oct-05	50.0	53.7	107	50.0	54.4	109	5.0	4.57	91	50.0	51.4	103	051355	20.4	20.0	43.1	119	42.0	113	2.6	0.949	
"			#N/A	50.0	54.3	109	5.0	4.45	89				#N/A	051331	50.4	20.0	71.5	118	72.1	121	0.8	0.949
"			#N/A	50.0	55.7	111	5.0	5.00	100	50.0	57.3	#N/A	051337	66.7	20.0	86.7	117	86.6	117	0.1	0.949	
3-Nov-05	50.0	56.4	113	50.0	57.5	115	5.0	4.70	94	50.0	54.4	109	051383	37.8	20.0	59.7	119	59.4	118	0.5	0.949	
30-Nov-05	50.0	41.2	82	50.0	49.5	99	5.0	3.85	77	50.0	42.4	85	051486	22.7	20.0	42.1	103	41.9	102	0.5	0.949	
"			#N/A	50.0	53.1	106	5.0	4.55	91				#N/A	051495	22.9	20.0	42.7	105	43.5	109	1.9	0.949
"			#N/A	50.0	55.1	110	5.0	4.70	94	50.0	53.7	107	051529	10.5	20.0	30.9	105	31.4	107	1.6	0.949	
1-Dec-05	50.0	51.2	102	50.0	53.5	107	5.0	4.44	89	50.0	51.8	104	051537	15.7	20.0	35.5	103	35.7	104	0.6	0.949	
"			#N/A	50.0	55.9	112	5.0	4.52	90				#N/A	051598	46.2	20.0	67.5	118	67.6	119	0.1	0.949
"			#N/A	50.0	56.0	112	5.0	4.78	96	50.0	55.0	110	051602	34.1	20.0	56.1	119	56.1	119	0.0	0.949	
28-Dec-05	50.0	51.3	103	50.0	55.1	110	5.0	4.48	90	50.0	52.1	104	051617	23.0	20.0	45.2	117	45.5	118	0.7	0.949	
"			#N/A	50.0	56.9	114	5.0	4.89	98				#N/A	051653	48.9	20.0	70.5	120	70.3	119	0.3	0.949
"			#N/A	50.0	58.4	117	5.0	5.15	103	50.0	58.2	116	051659	29.9	20.0	51.8	117	51.7	117	0.2	0.949	
29-Dec-05	50.0	52.7	105	50.0	53.8	108	5.0	4.48	90	50.0	52.0	104	051723	1.23	20.0	20.4	96	20.4	96	0.0	0.949	

* Sample concentration less than MDL is entered as zero for matrix spike recovery calculations.

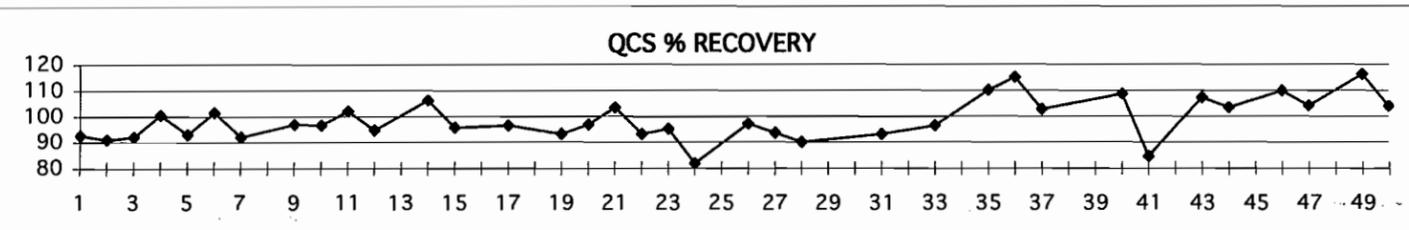
ION CHROMATOGRAPHY - SULFATE QUALITY CONTROL CHARTS - 2005



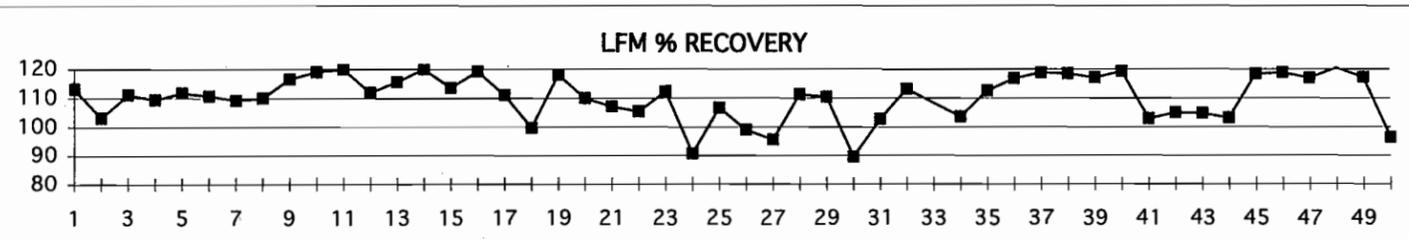
No* = 75
Mean = 102
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 94 - 110



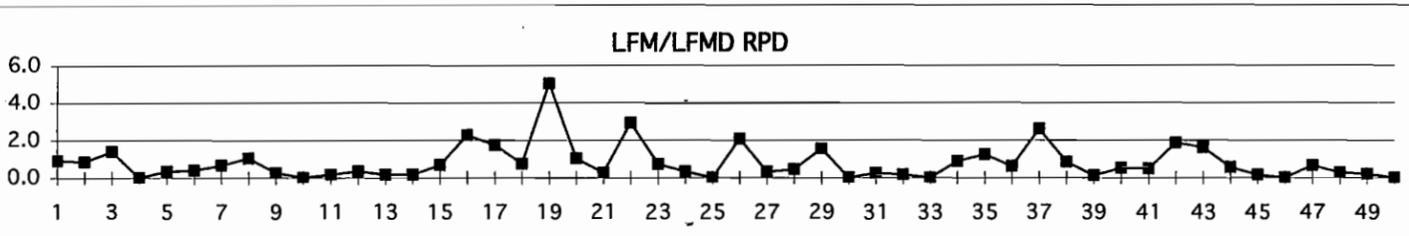
No = 50
Mean = 87
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 75 - 92



No = 36
Mean = 99
Std Dev = #REF!
UCL = #REF!
LCL = #REF!
UCWL = #REF!
LCWL = #REF!
Range = 87 - 111



No = 49
Mean = 110
Std Dev = 8.26
UCL = 135
LCL = 85
UCWL = 127
LCWL = 94
Range = 102 - 116



No = 50
Mean = 0.8
Std Dev = 0.94
UCL = 3.6
UCWL = 2.4
Range = 0 - 1.4

When applicable, statistics are successively recalculated after excluding values at and outside UCL and LCL.

* = Combined I IPC/C IPC data for Control Limits
UCL = Upper Control Limit (Mean + 3* Std Dev)
LCL = Lower Control Limit (Mean - 3* Std Dev)
UCWL = Upper Control Warning Limit (Mean + 2* Std Dev)
LCWL = Lower Control Warning Limit (Mean - 2* Std Dev)

ZONE 7 WATER QUALITY LABORATORY

601 E. VALLECITOS ROAD, LIVERMORE, CA 94550

Ph: 925-447-0533 Fax: 925-447-0552

CHAIN OF CUSTODY RECORD

Sampler(s) : Printed Name and Signature Dan Sicular <i>[Signature]</i>						Project Name: SBA Watershed - Stormwater Monitoring					
						Analyses Required					
Lab. No.	Sample I.D.	Date	Time	Matrix	No./Size	Gen. Min.	NH ₃	TOC	NO ₂	Coliform	REMARKS
051715	CA-1	12-21-05	8:30	W	See Notes	X	X	X	X	X	
051716	BR-1	12-21-05	9:45	W		X	X	X	X	X	
051717	BR-2	12-21-05	10:30	W		X	X	X	X	X	
051718	BR-3, BR-3	12-21-05	11:45	W		X	X	X	X	X	
051719	LDV-1	12-21-05	2:40	W		X	X	X	X	X	
051720	LDV-2			W							No Flow
051720	LDV-3, LDV-3	12-21-05	1:15	W		X	X	X	X	X	

Notes:

- | | |
|---|---|
| <p>a) Gen. Min. = General minerals include turbidity, alkalinity, total hardness, bromide, nitrate, phosphate, sulfate, and TDS.</p> <p>b) Coliform sample will be analyzed for total coliform and E. Coli by Colilert Quantitray for enumeration.</p> <p>c) TOC</p> <p>d) Total Ammonia</p> <p>e) Nitrite</p> <p>e) An aliquot from general mineral sample will be acid preserved for total hardness in lab.</p> | <p>1L Plastic, no preservative</p> <p>2 - 125 mL Sealed sterile plastic</p> <p>40 mL amber VOA, 0.4 mL Phosphoric Acid</p> <p>250 mL amber glass, 0.5 mL Sulfuric Acid</p> <p>4 oz Plastic, no preservative</p> |
|---|---|

Signature	Print Name	Date	Time
<i>[Signature]</i>	Dan Sicular	12-21-05	3:36
<i>[Signature]</i>	PONY YIM	12-21-05	15:45

ZONE 7 WATER QUALITY LABORATORY

601 E. VALLECITOS ROAD, LIVERMORE, CA 94550

Ph: 925-447-0533 Fax: 925-447-0552

CHAIN OF CUSTODY RECORD

Sampler(s) : Printed Name and Signature						Project Name: SBA Watershed - Stormwater Monitoring						
Lab. No.	Sample I.D.	Date	Time	Matrix	No./Size	Analyses Required					REMARKS	
						Gen. Min.	NH ₃	TOC	NO ₂	Coliform		<u>PH</u>
060178	CA-1	2-27-06	8:00	W	See Notes	✓	✓	✓	✓	✓	✓	
060179	BR-1	2-27	8:30	W		✓	✓	✓	✓	✓	✓	
060180	BR-2	2-27	9:30	W		✓	✓	✓	✓	✓	✓	
060181	BR-3, BB-3a	2-27	10:30	W		✓	✓	✓	✓	✓	✓	PH
060182	LDV-1	2-27	1:00	W		✓	✓	✓	✓	✓	✓	PH
060183	LDV-2	2-27	12:30	W		✓	✓	✓	✓	✓	✓	needed
060184	LDV-3, BB-3a	2-27	11:30	W		✓	✓	✓	✓	✓	✓	

Notes:

- a) Gen. Min. = General minerals include turbidity, alkalinity, total hardness, bromide, nitrate, phosphate, sulfate, and TDS.
- b) Coliform sample will be analyzed for total coliform and E. Coli by Colilert Quantitray for enumeration.
- c) TOC
- d) Total Ammonia
- e) Nitrite
- e) An aliquot from general mineral sample will be acid preserved for total hardness in lab.

in lab.

Sample broken during recording

- 1L Plastic, no preservative
- 2 - 125 mL Sealed sterile plastic
- 40 mL amber VOA, 0.4 mL Phosphoric Acid
- 250 mL amber glass, 0.5 mL Sulfuric Acid
- 4 oz Plastic, no preservative

2/27/06

	Signature	Print Name	Date	Time
Delivered By:	<i>[Signature]</i>	Daniel Sicalet	2-27-06	2:15
Received By:	<i>[Signature]</i>	PONY YIM	11	4

ZONE 7 WATER QUALITY LABORATORY

601 E. VALLECITOS ROAD, LIVERMORE, CA 94550

Ph: 925-447-0533 Fax: 925-447-0552

CHAIN OF CUSTODY RECORD

Analyst(s): Printed Name and Signature <i>Daniel S. Smith</i>						Project Name: SBA Watershed - Stormwater Monitoring					
Lab. No.	Sample I.D.	Date	Time	Matrix	No./Size	Analyses Required					REMARKS
						Gen. Min.	NH ₃	TOC	NO ₂	Coliform	
060187	CA-1	2-28-06	8:00	W	See Notes	/	/	/	/	/	
060188	BR-1	2-28-06	8:30	W		/	/	/	/	/	
060189	BR-2	2-28-06	9:00	W		/	/	/	/	/	PH needed
060190	BR-3, BR-3a	2-28-06	10:00	W		/	/	/	/	/	
060191	LDV-1	2-28-06	12:15	W		/	/	/	/	/	
060192	LDV-2	2-28-06	11:00	W		/	/	/	/	/	
060193	LDV-3, LDV3a	2-28-06	11:00	W		/	/	/	/	/	

Notes:

- a) Gen. Min. = General minerals include turbidity, alkalinity, total hardness, bromide, nitrate, phosphate, sulfate, and TDS.
- b) Coliform sample will be analyzed for total coliform and E. Coli by Colilert Quantitray for enumeration.
- c) TOC
- d) Total Ammonia
- e) Nitrite
- f) An aliquot from general mineral sample will be acid preserved for total hardness in lab.

- 1L Plastic, no preservative
- 2 - 125 mL Sealed sterile plastic
- 40 mL amber VOA, 0.4 mL Phosphoric Acid
- 250 mL amber glass, 0.5 mL Sulfuric Acid
- 4 oz Plastic, no preservative

Signature	Print Name	Date	Time
<i>[Signature]</i>	Daniel S. Smith	2-28-06	1:20 pm
<i>[Signature]</i>		2/28/06	13:24

ZONE 7 WATER QUALITY LABORATORY

601 E. VALLECITOS ROAD, LIVERMORE, CA 94550

Ph: 925-447-0533 Fax: 925-447-0552

CHAIN OF CUSTODY RECORD

Sampler(s) : Printed Name and Signature <i>Don S. Sicalar</i>						Project Name: SBA Watershed - Stormwater Monitoring						
						<i>Can you run Electrical Conductivity?</i>						
Lab. No.	Sample I.D.	Date	Time	Matrix	No./Size	Analyses Required					REMARKS	
						Gen. Min.	NH ₃	TOC	NO ₂	Coliform		
060196	CA-1	3-2-06	7:30	W	See Notes							
060195	BR-1	3-2-06	7:45	W								
060196	BR-2	3-2-06	8:20	W								
060197	BR-3, BR-3	3-2-06	9:25	W								
060198	LDV-1	3-2-06	11:35	W								
060199	LDV-2	3-2-06	11:10	W								
060200	LDV-3, LDV-3	3-2-06	10:25	W								

- Notes:
- a) Gen. Min. = General minerals include turbidity, alkalinity, total hardness, bromide, nitrate, phosphate, sulfate, and TDS. *+CC* 1L Plastic, no preservative
 - b) Coliform sample will be analyzed for total coliform and E. Coli by Colilert Quantitray for enumeration. 2 - 125 mL Sealed sterile plastic
 - c) TOC 40 mL amber VOA, 0.4 mL Phosphoric Acid
 - d) Total Ammonia 250 mL amber glass, 0.5 mL Sulfuric Acid
 - e) Nitrite 4 oz Plastic, no preservative
 - e) An aliquot from general mineral sample will be acid preserved for total hardness in lab.

	Signature	Print Name	Date	Time
Delivered By:	<i>Don S. Sicalar</i>	Don S. Sicalar	3-2-06	12:45
Received By:	<i>Kenwood Howard</i>	Kenwood Howard	3/2/06	12:50

ZONE 7 WATER QUALITY LABORATORY

601 E. VALLECITOS ROAD, LIVERMORE, CA 94550

Ph: 925-447-0533 Fax: 925-447-0552

Don S. Sealer CHAIN OF CUSTODY RECORD

Sampler(s) - Printed Name and Signature						Project Name: SBA Watershed - Stormwater Monitoring						
Lab. No.	Sample I.D.	Date	Time	Matrix	No./Size	Analyses Required						REMARKS
						Gen. Min.	NH ₃	TOC	NO ₂	Coliform	PH/E	
060233	CA-1	3-6-06	8:30	W	See Notes	-	-	-	-	✓		
060234	BR-1	3-6-06	9:01	W		✓	✓	✓	✓	✓	✓	
060235	BR-2	3-6-06	9:30	W		✓	✓	✓	✓	✓	✓	
060236	BR-3, BR-3	3-6-06	10:30	W		✓	-	-	-	-	-	
060237	LDV-1	3-6-06	12:15	W		✓	✓	✓	✓	✓	✓	
060238	LDV-2	3-6-06	12:25	W		✓	✓	✓	✓	✓	✓	
060239	LDV-3, LDV-3	3-6-06	11:30	W		✓	✓	✓	✓	✓	✓	

- Notes:
- a) Gen. Min. = General minerals include turbidity, alkalinity, total hardness, bromide, nitrate, phosphate, sulfate, and TDS, **PH, EC** 1L Plastic, no preservative
 - b) Coliform sample will be analyzed for total coliform and E. Coli by Colilert Quantitray for enumeration. 2 - 125 mL Sealed sterile plastic
 - c) TOC 40 mL amber VOA, 0.4 mL Phosphoric Acid
 - d) Total Ammonia 250 mL amber glass, 0.5 mL Sulfuric Acid
 - e) Nitrite 4 oz Plastic, no preservative
 - e) An aliquot from general mineral sample will be acid preserved for total hardness in lab.

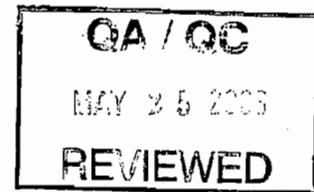
Delivered By:	Signature	Print Name	Date	Time
	<i>[Signature]</i>	Doniel T. Sealer	3-6-06	1:50 pm
Received By:	<i>[Signature]</i>	PONY	3-6-06	1:55

APPENDIX B

Field Data

SBA Watershed Stormwater Monitoring 2006

ESA Field Data



Say

Date	Time	Personnel	Equipment	Station ID	RCI - Instrument Storage Number	Depth (feet)	Temperature - Air (°C)	Temperature - Water (°C)	DO: Saturation (%)	DO: Concentration (mg/L)	Conductivity (µS or mS)	Conductivity - Specific (µS or mS)	Salinity (ppt)	pH	Turbidity	Discharge (flow)	Notes
12/21/2005	8:30	DS/PBH	YSI 85	CA1			14.5	11.2	65.4	7.16	479 µS	649 µS	0.3	7.8	10.2		
12/21/2005	8:30	DS/PBH	YSI 85	CA1			14.5	11.2	63.7	6.97	479 µS	650 µS	0.3	7.61	8.53		
12/21/2005	8:30	DS/PBH	YSI 85	CA1			14.5	11.1	62.6	6.87	478 µS	651 µS	0.3	7.54	7.76		
12/21/2005	9:45	DS/PBH	YSI 85	BR-1			15	13.9	89.6	9.19	1998 µS	2538 µS	1.3	6.8	28.4	<.1 cfs	
12/21/2005	9:45	DS/PBH	YSI 85	BR-1			15	13.8	89.7	9.2	1998 µS	2539 µS	1.3	6.69	27.3	<.1 cfs	
12/21/2005	9:45	DS/PBH	YSI 85	BR-1			15	13.9	89.3	9.16	1999 µS	2539 µS	1.3	6.83	27.6	<.1 cfs	
12/21/2005	10:30	DS/PBH	YSI 85	BR-2			15	13.7	100.3	10.31	2178 µS	2777 µS	1.4	8.57	7.02	<.2 cfs	
12/21/2005	10:30	DS/PBH	YSI 85	BR-2			15	13.7	97.1	9.98	2183 µS	2738 µS	1.5	8.51	6.71	<.2 cfs	
12/21/2005	10:30	DS/PBH	YSI 85	BR-2			15	13.7	98.6	10.13	2178 µS	2775 µS	1.4	8.48	6.07	<.2 cfs	
12/21/2005	11:45	DS/PBH	YSI 85	BR-3			19	10.7	97.8	10.83	472 µS	649 µS	0.3	7.8	12.3		Used Mike's pH meter
12/21/2005	11:45	DS/PBH	YSI 85	BR-3			19	10.7	97.7	10.83	472 µS	649 µS	0.3	7.8	9.86		Used Mike's pH meter
12/21/2005	11:45	DS/PBH	YSI 85	BR-3			19	10.7	97.6	10.83	472 µS	649 µS	0.3	7.8	8.92		Used Mike's pH meter
12/21/2005	13:15	DS/PBH	YSI 85	LDV-3			21.5	12.8	93.5	9.89	296.2 µS	386.3 µS	0.2	7.93	4.67		
12/21/2005	13:15	DS/PBH	YSI 85	LDV-3			21.5	12.8	93	9.84	296.1 µS	386.3 µS	0.2	7.93	3.66		
12/21/2005	13:15	DS/PBH	YSI 85	LDV-3			21.5	12.7	92.5	9.78	296.2 µS	386.5 µS	0.2	7.93	3.25		
12/21/2005		DS/PBH	YSI 85	LDV-2													No flow
12/21/2005		DS/PBH	YSI 85	LDV-2													No flow
12/21/2005		DS/PBH	YSI 85	LDV-2													No flow
12/21/2005	14:45	DS/PBH	YSI 85	LDV-1			19	13.6	91.5	9.5	473 µS	605 µS	0.3 M	1.2	4.4		Discharge is mean for
12/21/2005	14:45	DS/PBH	YSI 85	LDV-1			19	13.6	91.7	9.52	473 µS	605 µS	0.3 M	1.09	4.4		this date.
12/21/2005	14:45	DS/PBH	YSI 85	LDV-1			19	13.6	91.6	9.51	473 µS	605 µS	0.3 M	1.1	4.4		
2/27/2006	7:50	DS/ES	YSI 85	CA1	1	m	12	98.2	10.58	165.4 µS	220.2 µS	0.1		43.2			
2/27/2006	7:50	DS/ES	YSI 85	CA1	2	m	11.9	98.4	10.6	187.2 µS	249.4 µS	0.1		41.7			
2/27/2006	7:50	DS/ES	YSI 85	CA1	3	m	11.9	98.1	10.58	212.2 µS	282.8 µS	0.1		41.6			
2/27/2006	8:25	DS/ES	YSI 85	BR-1	4		14	12.7	87.4	9.27	16.8 µS	21.9 µS	0		9.3	<.1 cfs	
2/27/2006	8:25	DS/ES	YSI 85	BR-1	5		14	12.8	83.7	8.86	1.9 µS	2.5 µS	0		9		
2/27/2006	8:25	DS/ES	YSI 85	BR-1	6		14	12.9	82.4	8.71	1.6 µS	2.1 µS	0		9.15		
2/27/2006	8:55	DS/ES	YSI 85	BR-2	7		14.5	12.8	81.5	8.56	1688 µS	2202 µS	1.1		282	<.2 cfs	
2/27/2006	8:55	DS/ES	YSI 85	BR-2	8		14.5	12.7	82	8.62	1736 µS	2266 µS	1.2		372		
2/27/2006	8:55	DS/ES	YSI 85	BR-2	9		14.5	12.7	86.7	9.14	1467 µS	1918 µS	1		476		
2/27/2006	10:30	DS/ES	YSI 85	BR-3	10		17	12.2	96	10.29	230.7 µS	305.2 µS	0.1		8.91		
2/27/2006	10:30	DS/ES	YSI 85	BR-3	11		17	12.2	95.7	10.25	230.8 µS	305.3 µS	0.1		7.41		
2/27/2006	10:30	DS/ES	YSI 85	BR-3	12		17	12.2	96.1	10.3	230.9 µS	305.5 µS	0.1		7.24		
2/27/2006	11:40	DS/ES	YSI 85	LDV-3	13		19.5	12.5	103.4	11.03	38.8 µS	51 µS	0		67.6		
2/27/2006	11:40	DS/ES	YSI 85	LDV-3	14		19.5	12.4	102.9	10.97	244.3 µS	321.5 µS	0.2		109		
2/27/2006	11:40	DS/ES	YSI 85	LDV-3	15		19.5	12.4	101.8	10.86	234.4 µS	308.7 µS	0.1		119		
2/27/2006	12:30	DS	YSI 85	LDV-2	16	m	15.3	94.8	9.47	839 µS	1029 µS	0.5		11.4	0.2	estimated discharge; did not observe staff gauge	
2/27/2006	12:30	DS	YSI 85	LDV-2	17	m	15.2	94.1	9.39	837 µS	1027 µS	0.5		11.3			
2/27/2006	12:30	DS	YSI 85	LDV-2	18	m	15.2	94.5	9.46	837 µS	1030 µS	0.5		11.5			
2/27/2006	1:00	DS	YSI 85	LDV-1	19	m	13.4	122.9	12.8	395.1 µS	507 µS	0.2		3.79	10		
2/27/2006	1:00	DS	YSI 85	LDV-1	20	m	13.3	124.8	13.03	392.8 µS	506 µS	0.2		2.96	10		
2/27/2006	1:00	DS	YSI 85	LDV-1	21	m	13.3	125.4	13.12	392 µS	505 µS	0.2		3.52	10		
2/28/2006	8:00	DS/ES	YSI 85	CA1	22	m	12.5	104.6	11.14	240.3 µS	315.7 µS	0.2		41.3			
2/28/2006	8:00	DS/ES	YSI 85	CA1	23	m	12.5	104.5	11.13	214.8 µS	282.3 µS	0.1		42.5			
2/28/2006	8:00	DS/ES	YSI 85	CA1	24	m	12.5	104.5	11.13	215.8 µS	283.7 µS	0.1		43			
2/28/2006	8:15	DS/ES	YSI 85	BR-1	25		13	10.4	105.1	11.74	0 µS	0.1 µS	0		15.6		
2/28/2006	8:15	DS/ES	YSI 85	BR-1	26		13	10.3	103	11.53	0 µS	0.1 µS	0		14.6		
2/28/2006	8:15	DS/ES	YSI 85	BR-1	27		13	10.2	102.5	11.5	0.1 µS	0.1 µS	0		14.6		
2/28/2006	8:50	DS/ES	YSI 85	BR-2	28		15	10.4	110.3	12.34	90.1 µS	125.1 µS	0.1		12.4		
2/28/2006	8:50	DS/ES	YSI 85	BR-2	29		15	10.4	110.5	12.36	91.5 µS	126.9 µS	0.1		13.8		
2/28/2006	8:50	DS/ES	YSI 85	BR-2	30		15	10.4	110.9	12.4	92.8 µS	128.8 µS	0.1		12.9		
2/28/2006	9:50	DS/ES	YSI 85	BR-3	31		14	11.9	99.8	10.76	67.1 µS	89.4 µS	0		15.4		
2/28/2006	9:50	DS/ES	YSI 85	BR-3	32		14	11.9	99.1	10.69	123.9 µS	165.1 µS	0.1		14.7		
2/28/2006	9:50	DS/ES	YSI 85	BR-3	33		14	11.9	99.2	10.7	136.6 µS	182 µS	0.1		14.8		
2/28/2006	10:45	DS/ES	YSI 85	LDV-3	34		13	11.1	99.1	10.91	146.6 µS	199.7 µS	0.1		9.47		
2/28/2006	10:45	DS/ES	YSI 85	LDV-3	35		13	11.1	97.8	10.76	61.7 µS	84 µS	0		9.28		
2/28/2006	10:45	DS/ES	YSI 85	LDV-3	36		13	11.1	98.5	10.84	73 µS	99.5 µS	0		9.46		
2/28/2006	11:40	DS	YSI 85	LDV-2	37		15	13.2	101.9	10.85	699 µS	902 µS	0.4		32.3		Staff gauge = 6.15

Date	Time	Personnel	Equipment	Station ID	RCL - Instrument Storage Number	Depth (feet)	Temperature - Air (°C)	Temperature - Water (°C)	DO: Saturation (%)	DO: Concentration (mg/L)	Conductivity (µS or mS)	Conductivity - Specific (µS or mS)	Salinity (ppt)	pH	Turbidity	Discharge (flow)	Notes
2/28/2006	11:40	DS	YSI 85	LDV-2	38		15	13.2	102.5	10.73	701 µS	906 µS	0.4		32.5		
2/28/2006	11:40	DS	YSI 85	LDV-2	39		15	13.2	102.8	10.76	701 µS	905 µS	0.4		32.3		
2/28/2006	12:10	DS	YSI 85	LDV-1	40	m		10.6	104.6	11.63	198.8 µS	274.2 µS	0.1		277	543	
2/28/2006	12:10	DS	YSI 85	LDV-1	41	m		10.5	104.9	11.69	137 µS	189.3 µS	0.1		288	543	
2/28/2006	12:10	DS	YSI 85	LDV-1	42	m		10.5	104.7	11.68	148.2 µS	205 µS	0.1		284	543	
3/2/2006	7:25	DS	YSI 85	CA1	1		12	12.9	97.6	10.28	229.2 µS	297.8 µS	0.1		12.4		
3/2/2006	7:25	DS	YSI 85	CA1	2		12	12.9	97.4	10.27	229.2 µS	297.9 µS	0.1		12.2		
3/2/2006	7:25	DS	YSI 85	CA1	3		12	12.9	97.2	10.25	228.9 µS	297.6 µS	0.1		12.2		
3/2/2006	7:45	DS	YSI 85	BR-1	4		10	10.8	95.9	10.57	1395 µS	1916 µS	1		6.39	0.1	estimated discharge
3/2/2006	7:45	DS	YSI 85	BR-1	5		10	10.8	94.9	10.43	1871 µS	2569 µS	1.3		6.63	0.1	
3/2/2006	7:45	DS	YSI 85	BR-1	6		10	10.8	94.6	10.4	1926 µS	2645 µS	1.4		6.53	0.1	
3/2/2006	8:15	DS	YSI 85	BR-2	7		9	10.3	102.6	11.46	945 µS	1315 µS	0.7		4.7		
3/2/2006	8:15	DS	YSI 85	BR-2	8		9	10.3	97.5	10.89	944 µS	1313 µS	0.7		4.41		
3/2/2006	8:15	DS	YSI 85	BR-2	9		9	10.3	96.5	10.78	945 µS	1316 µS	0.7		4.58		
3/2/2006	9:20	DS	YSI 85	BR-3	10		19	12.6	96.5	10.27	11.6 µS	15.3 µS	0		12.9		weird ec and salinity
3/2/2006	9:20	DS	YSI 85	BR-3	11		19	12.5	96.3	10.25	32.4 µS	42.5 µS	0		13.2		weird ec and salinity
3/2/2006	9:20	DS	YSI 85	BR-3	12		19	12.5	96.3	10.24	74.3 µS	97.5 µS	0		13.2		weird ec and salinity
3/2/2006	10:20	DS	YSI 85	LDV-3	13		17	12	102.5	11.04	166.5 µS	221.6 µS	0.1		3.45		
3/2/2006	10:20	DS	YSI 85	LDV-3	14		17	12	101.3	10.92	89.3 µS	118.9 µS	0.1		3.38		
3/2/2006	10:20	DS	YSI 85	LDV-3	15		17	12	101.7	10.97	148.5 µS	197.7 µS	0.1		3.49		
3/2/2006	11:00	DS	YSI 85	LDV-2	16		20	11.5	105.2	11.41	962 µS	1296 µS	0.7		7.13		Gauge height = 6.04
3/2/2006	11:00	DS	YSI 85	LDV-2	17		20	11.5	105.2	11.42	962 µS	1296 µS	0.7		7.36		est. discharge = 0.3 cfs
3/2/2006	11:00	DS	YSI 85	LDV-2	18		20	11.5	104.9	11.39	962 µS	1297 µS	0.7		7.3		
3/2/2006	11:25	DS	YSI 85	LDV-1	19		19	10.4	103.8	11.58	243.9 µS	337.8 µS	0.2		13.2	143	est. discharge = 100 cfs
3/2/2006	11:25	DS	YSI 85	LDV-1	20		19	10.4	103.6	11.57	243.9 µS	337.9 µS	0.2		13.7	143	
3/2/2006	11:25	DS	YSI 85	LDV-1	21		19	10.4	103.5	11.56	243.8 µS	337.8 µS	0.2		13.6	143	
3/6/2006	8:30	DS	YSI 85	CA1	22		14	11.7	62.6	6.79	141.2 µS	189.4 µS	0.1		7.21		
3/6/2006	8:30	DS	YSI 85	CA1	23		14	11.6	62.5	6.78	124.4 µS	166.9 µS	0.1		7.08		
3/6/2006	8:30	DS	YSI 85	CA1	24		14	11.6	62.5	6.78	112.1 µS	150.5 µS	0.1		7.17		
3/6/2006	8:50	DS	YSI 85	BR-1	25		15	12.7	57.3	6.02	2129 µS	2780 µS	1.5		23.6		
3/6/2006	8:50	DS	YSI 85	BR-1	26		15	12.7	57.8	6.07	2149 µS	2808 µS	1.5		22.4		
3/6/2006	8:50	DS	YSI 85	BR-1	27		15	12.7	57	5.99	2152 µS	2813 µS	1.5		22		
3/6/2006	9:20	DS	YSI 85	BR-2	28		20	11.4	70.7	7.71	101.7 µS	137.2 µS	0.1		5.7		
3/6/2006	9:20	DS	YSI 85	BR-2	29		20	11.4	71.3	7.78	84.4 µS	114 µS	0.1		4.6		
3/6/2006	9:20	DS	YSI 85	BR-2	30		20	11.4	71.5	7.81	74 µS	100 µS	0		4.2		
3/6/2006	10:25	DS	YSI 85	BR-3	31		16	11.8	91.2	9.87	209.5 µS	280.1 µS	0.1		6.45		
3/6/2006	10:25	DS	YSI 85	BR-3	32		16	11.8	91.9	9.95	182.4 µS	244 µS	0.1		6.4		
3/6/2006	10:25	DS	YSI 85	BR-3	33		16	11.8	92	9.97	145.5 µS	194.8 µS	0.1		6.33		
3/6/2006	11:25	DS	YSI 85	LDV-3	34		15	11.9	78.3	8.43	267.6 µS	356.1 µS	0.2		4.84		
3/6/2006	11:25	DS	YSI 85	LDV-3	35		15	11.8	90.9	9.82	267.6 µS	357.5 µS	0.2		4.83		
3/6/2006	11:25	DS	YSI 85	LDV-3	36		15	11.8	93.2	10.08	267.6 µS	357.8 µS	0.2		4.83		
3/6/2006	12:10	DS	YSI 85	LDV-2	37		19	12.6	90.7	9.62	793 µS	1040 µS	0.5		4.57		Gauge height = 6.05
3/6/2006	12:10	DS	YSI 85	LDV-2	38		19	12.6	93.1	9.88	796 µS	1045 µS	0.5		4.46		
3/6/2006	12:10	DS	YSI 85	LDV-2	39		19	12.5	93.2	9.88	886 µS	1163 µS	0.6		4.41		
3/6/2006	12:35	DS	YSI 85	LDV-1	40		20.5	10.2	99.1	11.11	224 µS	311.8 µS	0.1		76.5	156	
3/6/2006	12:35	DS	YSI 85	LDV-1	41		20.5	10.2	99	11.11	224 µS	312.1 µS	0.1		74.7	156	
3/6/2006	12:35	DS	YSI 85	LDV-1	42		20.5	10.2	99.2	11.15	223.9 µS	312.5 µS	0.1		74	156	

SBA Watershed Stormwater Monitoring 2006

ESA Field QA/QC Information

Project: <u>SBA Watershed</u>		Project Number: <u>205076</u>		Date: <u>12-21-05</u>
Station ID: <u>CA-1</u>	Time - Start: <u>8:30 AM</u>	Time - End: <u>9:06 AM</u>		
Instrument: <u>YSI-85</u>	Calib by: <u>Daily cal</u>	Date: <u>12-21-05</u>		
<u>Hach 2100 P</u>	Calib by: <u>weekly cal</u>	Date:		
<u>pH Meter</u>	Calib by: <u>monthly</u>	Date: <u>12-21-05</u>		
Reagents:	Expiration Date:			
Calibration:	auto <input type="checkbox"/>	manual <input type="checkbox"/>	zero <input type="checkbox"/>	factory <input type="checkbox"/>

FIELD STAFF	
Name: <u>DS</u>	Duties:
Name: <u>P3H</u>	Duties:

FIELD MONITORING SITE	
Watershed: <u>Delta</u>	Waterbody: <u>Ca Aqueduct</u>

FLOW							
Measured?:	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/>	High <input type="checkbox"/>	Low <input type="checkbox"/>	Flood <input type="checkbox"/>	Normal <input type="checkbox"/>
Flow Width:	ft.		Flow Depth:	ft.		Velocity:	ft/s

SAMPLE DESCRIPTION							
Matrix:	<u>water</u>		Sample Depth:				
Type:	In situ <input checked="" type="checkbox"/>	Grab <input checked="" type="checkbox"/>	Continuous <input type="checkbox"/>				
Samples Collected:	<u>Zone 7 Lab Suite</u>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Giardia/Crypto	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

WEATHER					
Weather:	Clear <input type="checkbox"/>	pt cloudy <input type="checkbox"/>	cloudy <input checked="" type="checkbox"/>	fog <input type="checkbox"/>	rain <input type="checkbox"/>
Air Temp:	<u>14.5 C</u>				
Precip:	24 Hr Rain:	in:		48 Hr Rain:	in:
Storm Duration:					

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH	<u>7.8</u>	<u>7.61</u>	<u>7.54</u>	pH units	0.01
Turbidity	<u>10.2</u>	<u>8.53</u>	<u>7.76</u>	ntu	1
Conductivity	<u>479/649</u>	<u>479/650</u>	<u>478/651</u>	uS/cm	0.001
Dissolved Oxygen	<u>7.16</u>	<u>6.97</u>	<u>6.87</u>	mg/l	0.01
Dissolved Oxygen	<u>65.4</u>	<u>63.7</u>	<u>62.6</u>	%	.01
Temperature	<u>11.2</u>	<u>11.2</u>	<u>11.1</u>	C	0.1
Salinity	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>	%	0.01

OBSERVATIONS			
Water Color: <u>yellowish</u>	Algal Growth: <u>NO</u>		
Susp Matr/Turb: <u>NO</u>	Float Matr/Foam: <u>NO</u>		
Odors: <u>NO</u>	Trash: <u>NO</u>		
Sludges/Oil Sheen: <u>NO</u>			
Fish and Wildlife Seen?: <u>NO</u>			
Number Fish:	Size:	Behavior:	

COMMENTS			
Equipment Problems?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Description of Problems:			

Project: SBA Watershed		Project Number: 205076		Date:	12-21-05
Station ID	BR-1	Time - Start:	9:45	Time - End:	11:13
Instrument:	YSI-85	Calib by:		Date:	
	Hach 2100 P	Calib by:		Date:	
	pH Meter	Calib by:		Date:	
Reagents:		Expiration Date:			
Calibration:	auto <input type="checkbox"/>	manual <input type="checkbox"/>	zero <input type="checkbox"/>	factory <input type="checkbox"/>	

FIELD STAFF			
Name:	DS	Duties:	
Name:	PBH	Duties:	

FIELD MONITORING SITE			
Watershed:	B14-1	Waterbody:	Bethay Headwaters Creek

FLOW			
Measured?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/>
			High <input type="checkbox"/>
			Low <input checked="" type="checkbox"/>
			Flood <input type="checkbox"/>
			Normal <input checked="" type="checkbox"/>
Flow Width:	.5 ft.	Flow Depth:	.1 ft.
Velocity:	.5 ft/s		

SAMPLE DESCRIPTION			
Matrix:	water	Sample Depth:	Sampled from Sump
Type:	In situ <input checked="" type="checkbox"/>	Grab <input checked="" type="checkbox"/>	Continuous <input type="checkbox"/>
Samples Collected:	Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
		Giardia/Crypto	Yes <input checked="" type="checkbox"/>
			No <input type="checkbox"/>

WEATHER			
Weather	Clear <input type="checkbox"/>	pt cloudy <input type="checkbox"/>	cloudy <input checked="" type="checkbox"/>
			fog <input type="checkbox"/>
			rain <input type="checkbox"/>
Air Temp:	15 C		
Precip:	24 Hr Rain:	in	48 Hr Rain:
			in
Storm Duration:			

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH	6.8	2.7	6.69 / 6.83	pH units	0.01
Turbidity	28.4	27.5	27.6	ntu	1
Conductivity	1998 / 2538	1998 / 2539	1999 / 2539	uS/cm	0.001
Dissolved Oxygen	9.19	9.20	9.16	mg/l	0.01
Dissolved Oxygen	89.6	89.7	89.3	%	.01
Temperature	13.9	13.8	13.9	C	0.1
Salinity	1.3	1.3	1.3	%	0.01

OBSERVATIONS			
Water Color	yellowish	Algal Growth	NO
Susp Matr/Turb:	NO	Float Matr/Foam	NO
Odors	NO	Trash	NO
Sludges/Oil Sheen	NO		
Fish and Wildlife Seen?	yes	Pacific tree frog	
Number Fish:		Size:	Behavior:
COMMENTS	Left kayak pump and tubing in Sump - Next time clean slots. Then		
Equipment Problems?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Purge
Description of Problems:	pH meter is jumpy - re calibrated and then stabilized		

Project: <u>SBA Watershed</u>		Project Number: <u>205076</u>		Date: <u>12-21-05</u>	
Station ID: <u>522</u>	Time - Start: <u>10:30 AM</u>	Time - End: <u>11:00 AM</u>			
Instrument: <u>YSI-85</u>	Calib by:	Date:			
<u>Hach 2100 P</u>	Calib by:	Date:			
<u>pH Meter</u>	Calib by:	Date:			
Reagents:	Expiration Date:				
Calibration:	auto <input type="checkbox"/>	manual <input type="checkbox"/>	zero <input type="checkbox"/>	factory <input type="checkbox"/>	
FIELD STAFF					
Name: <u>DS</u>	Duties:				
Name: <u>PBH</u>	Duties:				
FIELD MONITORING SITE					
Watershed: <u>BH</u>	Waterbody: <u>Berkey Headlands Creek - Flow</u>				
FLOW					
Measured? Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/>	High <input type="checkbox"/>	Low <input checked="" type="checkbox"/>	
Flood <input type="checkbox"/>	Normal <input type="checkbox"/>				
Flow Width: <u>5</u> ft.	Flow Depth: <u><.1</u> ft.	Velocity: <u>5</u> ft/s			
SAMPLE DESCRIPTION					
Matrix: <u>water</u>	Sample Depth:				
Type: <u>Insitu</u> <input checked="" type="checkbox"/>	<u>Grab</u> <input checked="" type="checkbox"/>	Continuous <input type="checkbox"/>			
Samples Collected: <u>Zone 7 Lab Suite</u>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Giardia/Crypto	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
WEATHER					
Weather: <u>cloudy</u> <input checked="" type="checkbox"/>	Clear <input type="checkbox"/>	pt. cloudy <input type="checkbox"/>	fog <input type="checkbox"/>	rain <input type="checkbox"/>	
Air Temp: <u>15°C</u>					
Precip:	24 Hr Rain:	in:	48 Hr Rain:	in:	
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH	<u>8.57/8.33*</u>	<u>8.51</u>	<u>8.48</u>	pH units	0.01
Turbidity	<u>7.02</u>	<u>6.71</u>	<u>6.07</u>	ntu	1
Conductivity	<u>2178/2777</u>	<u>2183/2738</u>	<u>2178/2775</u>	uS/cm	0.001
Dissolved Oxygen	<u>103.1</u>	<u>9.98</u>	<u>10.13</u>	mg/l	0.01
Dissolved Oxygen	<u>100.3</u>	<u>97.1</u>	<u>98.6</u>	%	.01
Temperature	<u>13.7</u>	<u>13.7</u>	<u>13.7</u>	C	0.1
Salinity	<u>1.4</u>	<u>1.5</u>	<u>1.4</u>	%	0.01
OBSERVATIONS					
Water Color: <u>clear</u>	Algal Growth: <u>yes</u>				
Susp Matrl/Turb: <u>no</u>	Float Matrl/Foam: <u>no</u>				
Odors: <u>no</u>	Trash: <u>no</u>				
Sludges/Oil Sheen: <u>no</u>					
Fish and Wildlife Seen?: <u>no</u>					
Number Fish:	Size:	Behavior:			
COMMENTS					
Equipment Problems? Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>				
Description of Problems: <u>* Mike's meter + readings are all water</u>					

Project: <u>SBA Watershed</u>		Project Number: <u>205076</u>		Date: <u>12-21-05</u>
Station ID: <u>BR-3</u>	Time - Start: <u>11:45 AM</u>	Time - End: <u>12:28 PM</u>		
Instrument: <u>YSI-85</u>	Calib by:	Date:		
<u>Hach 2100 P</u>	Calib by:	Date:		
<u>pH Meter</u>	Calib by:	Date:		
Reagents:	Expiration Date:			
Calibration:	<input type="checkbox"/> auto	<input type="checkbox"/> manual	<input type="checkbox"/> zero	<input checked="" type="checkbox"/> factory

FIELD STAFF

Name: <u>PS</u>	Duties:
Name: <u>PB 4</u>	Duties:

FIELD MONITORING SITE

Watershed: <u>SBA</u>	Waterbody: <u>Dyer Backstage pool</u>
-----------------------	---------------------------------------

FLOW

Measured? <input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> No flow	<input type="checkbox"/> High	<input type="checkbox"/> Low	<input type="checkbox"/> Flood	<input type="checkbox"/> Normal
Flow Width: _____ ft.	Flow Depth: _____ ft.	Velocity: _____ ft/s				

SAMPLE DESCRIPTION

Matrix: <u>water</u>	Sample Depth:				
Type: <input checked="" type="checkbox"/> Insitu	<input checked="" type="checkbox"/> Grab	<input type="checkbox"/> Continuous			
Samples Collected: <u>Zone 7 Lab Suite</u>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	Giardia/Crypto	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

WEATHER

Weather: <input type="checkbox"/> Clear	<input checked="" type="checkbox"/> pt cloudy	<input type="checkbox"/> cloudy	<input type="checkbox"/> fog	<input type="checkbox"/> rain
Air Temp: <u>19 C</u>				
Precip:	24 Hr Rain: _____ in	48 Hr Rain: _____ in		
Storm Duration:				

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH	<u>10.01</u>	<u>10.04</u>	<u>10.02</u>	pH units	0.01
Turbidity	<u>12.3</u>	<u>9.86</u>	<u>8.92</u>	ntu	1
Conductivity	<u>472/649</u>	<u>472/649</u>	<u>472/649</u>	uS/cm	0.001
Dissolved Oxygen	<u>10.83</u>	<u>10.83</u>	<u>10.83</u>	mg/l	0.01
Dissolved Oxygen	<u>97.8</u>	<u>97.7</u>	<u>97.6</u>	%	.01
Temperature	<u>10.7</u>	<u>10.7</u>	<u>10.7</u>	C	0.1
Salinity	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>	%	0.01

OBSERVATIONS

Water Color: <u>yellowish</u>	Algal Growth: <u>NO</u>
Susp Matrl/Turb: <u>NO</u>	Float Matrl/Foam: <u>NO</u>
Odors: <u>NO</u>	Trash: <u>NO</u>
Sludges/Oil Sheen: <u>NO</u>	
Fish and Wildlife Seen? <u>NO</u>	
Number Fish:	Size: Behavior:

COMMENTS: Pump out of order - used bucket for probes + Giardia; long sampler for zone 7

Equipment Problems? <input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Description of Problems: <u>pH meter - LM Reading = 9.72 after recalibration, Mike's meter = 7.8</u>	

Project: SBA Watershed		Project Number: 205076		Date:	12-21-05
Station ID	LDV3	Time - Start:	1:15	Time - End:	1:46
Instrument:	YSI-85	Calib by:	DO-414	Date:	DS
	Hach 2100 P	Calib by:		Date:	
	pH Meter	Calib by:		Date:	
Reagents:		Expiration Date:			
Calibration:	auto <input type="checkbox"/>	manual <input type="checkbox"/>	zero <input type="checkbox"/>	factory <input type="checkbox"/>	

FIELD STAFF	
Name:	DS
Duties:	
Name:	PBIT
Duties:	

FIELD MONITORING SITE	
Watershed:	Del Valle
Waterbody:	Lake Del Valle

FLOW	
Measured?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
No flow	<input checked="" type="checkbox"/> High <input type="checkbox"/> Low <input type="checkbox"/>
Flood	<input type="checkbox"/> Normal <input type="checkbox"/>
Flow Width:	ft.
Flow Depth:	ft.
Velocity:	ft/s

SAMPLE DESCRIPTION	
Matrix:	water
Sample Depth:	3
Type:	In situ <input checked="" type="checkbox"/> Grab <input checked="" type="checkbox"/> Continuous <input type="checkbox"/>
Samples Collected:	Zone 7 Lab Suite
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

WEATHER	
Weather	Clear <input type="checkbox"/> pt cloudy <input checked="" type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/>
Air Temp:	21.5
Precip:	24 Hr Rain: in. 48 Hr Rain: in.
Storm Duration:	

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH	4.67	3.66	7.93*	pH units	0.01
Turbidity	4.67	3.66	3.25	ntu	1
Conductivity	296.2/386.3	296.1/386.3	296.2/386.5	uS/cm	0.001
Dissolved Oxygen	9.89	9.84	9.78	mg/l	0.01
Dissolved Oxygen	93.5	93	92.5	%	.01
Temperature	12.8	12.8	12.7	C	0.1
Salinity	0.2	0.2	0.2	%	0.01

OBSERVATIONS	
Water Color	clear
Algal Growth	no
Susp Matr/Turb:	no
Float Matr/Foam	no
Odors	no
Trash	no
Sludges/Oil Sheen	no
Fish and Wildlife Seen?	no
Number Fish:	Size: Behavior:

COMMENTS: Sampled from pt. near bottom of road past second shed

Equipment Problems?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Description of Problems:	pH meter
	Millic molar MVA-1 ultrameter

Project: <u>SBA Watershed</u>		Project Number: <u>205076</u>		Date: <u>12.21.05</u>	
Station ID	<u>LDV-1</u>	Time - Start:	<u>14:45</u>	Time - End: <u>15:02</u>	
Instrument:	YSI-85	Calib by:	<u>B</u>	Date:	
	Hach 2100 P	Calib by:		Date:	
	pH Meter	Calib by:		Date:	
Reagents:		Expiration Date:			
Calibration:	auto <input type="checkbox"/>	manual <input type="checkbox"/>	zero <input type="checkbox"/>	factory <input type="checkbox"/>	
FIELD STAFF					
Name:	<u>BSH</u>	Duties:			
Name:	<u>BSH</u>	Duties:			
FIELD MONITORING SITE					
Watershed:	<u>Del Valle</u>	Waterbody:	<u>Arroyo Valle</u>		
FLOW					
Measured?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/>	High <input type="checkbox"/>	
			Low <input checked="" type="checkbox"/>	Flood <input type="checkbox"/>	
				Normal <input checked="" type="checkbox"/>	
Flow Width:		ft.	Flow Depth:		
				ft.	
Velocity:				ft/s	
SAMPLE DESCRIPTION					
Matrix:	<u>water</u>	Sample Depth:			
Type:	In situ <input checked="" type="checkbox"/>	Grab <input checked="" type="checkbox"/>	Continuous <input type="checkbox"/>		
Samples Collected:	Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Giardia/Crypto	
				Yes <input checked="" type="checkbox"/>	
				No <input type="checkbox"/>	
WEATHER					
Weather	Clear <input type="checkbox"/>	pt cloudy <input type="checkbox"/>	cloudy <input checked="" type="checkbox"/>	fog <input type="checkbox"/>	
				rain <input type="checkbox"/>	
Air Temp:	<u>19°C</u>				
Precip:	24 Hr Rain:		in	48 Hr Rain:	
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	<u>1.2</u>	<u>1.09</u>	<u>1.10</u>	ntu	1
Conductivity	<u>473/605</u>	<u>473/605</u>	<u>473/605</u>	uS/cm	0.001
Dissolved Oxygen	<u>9.5</u>	<u>9.52</u>	<u>9.51</u>	mg/l	0.01
Dissolved Oxygen	<u>91.5</u>	<u>91.7</u>	<u>91.6</u>	%	.01
Temperature	<u>13.6</u>	<u>13.6</u>	<u>13.6</u>	C	0.1
Salinity	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>	%	0.01
OBSERVATIONS					
Water Color	<u>yellowish</u>	Algal Growth	<u>no</u>		
Susp Matrl/Turb:	<u>some</u>	Float Matrl/Foam	<u>yes - light foam</u>		
Odors	<u>no</u>	Trash	<u>no</u>		
Sludges/Oil Sheen	<u>no</u>				
Fish and Wildlife Seen?	<u>no</u>				
Number Fish:		Size:		Behavior:	
COMMENTS					
Equipment Problems?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Description of Problems:	<u>pH meter = toast</u>				

Project: SBA Watershed		Date: 2-27-06	
Project Number: 205076			
Station ID: CA1	Time - Start: 7:50	Time - End: 8:05	
Instrument: YSI-85	Altitude Entered: 200		
pH Meter	Calib by:	Date:	
FIELD STAFF			
Name: DS	Duties:		
Name: Eric Severino	Duties:		
FIELD MONITORING SITE			
Watershed: Delta	Waterbody:		
FLOW			
Measured? Yes <input checked="" type="radio"/> No <input type="radio"/>	No flow	High	Low
Flood	Normal		
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	Yes <input type="radio"/> No <input type="radio"/>	Giardia/Crypto	Yes <input type="radio"/> No <input type="radio"/>
WEATHER			
Weather: Clear <input type="radio"/> pt. cloudy <input type="radio"/> cloudy <input checked="" type="radio"/> fog <input type="radio"/> rain <input type="radio"/> other <input type="radio"/>			
Air Temp:			
Precip: 24 Hr Rain: in	48 Hr Rain: in		
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
pH	Lab		
Turbidity	43.2	41.7	41.6
YSI 85 Recall Number	R1	R2	R3
Dissolved Oxygen			
Dissolved Oxygen			
Conductivity			
Salinity			
Temperature			
OBSERVATIONS			
Water Color: yellow	Algal Growth: no		
Susp Matrl/Turb: no	Float Matrl/Foam: no		
Odors: no	Trash: no		
Sludges/Oil Sheen: no			
Fish and Wildlife Seen?: no			
Number Fish:	Size:	Behavior:	
COMMENTS			
Equipment Problems? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Description of Problems:			

Project: SBA Watershed		Date: 2-27-06			
Project Number: 205076					
Station ID: BR-1	Time - Start: 8:25	Time - End: 8:45			
Instrument: YSI-85	Altitude Entered: 200				
pH Meter	Calib by:		Date:		
FIELD STAFF					
Name: DS	Duties:				
Name: ES	Duties:				
FIELD MONITORING SITE					
Watershed: Bering Headwaters	Waterbody: BH creek				
FLOW					
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/> High <input type="checkbox"/> Low <input checked="" type="checkbox"/>	Flood <input type="checkbox"/> Normal <input type="checkbox"/>			
Flow Width: 1 ft.	Flow Depth: 0.1 ft.	Velocity: 0.5 ft/s			
SAMPLE DESCRIPTION					
Matrix: water	Sample Depth: 4"				
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
WEATHER					
Weather: Clear <input type="checkbox"/> pt cloudy <input type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input checked="" type="checkbox"/> other <input type="checkbox"/>					
Air Temp: 64					
Precip: 24 Hr Rain: in		48 Hr Rain: in			
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	9.3	9.0	9.15	ntu	1
YSI 85 Recall Number	4	5	6		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color: Clear	Algal Growth: NO				
Susp Matr/Turb: NO	Float Matr/Foam: NO				
Odors: NO	Trash: NO				
Sludges/Oil Sheen: NO					
Fish and Wildlife Seen? PTF					
Number Fish:	Size:	Behavior:			
COMMENTS					
Equipment Problems? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Description of Problems:					

Project: SBA Watershed		Date: 2-27-06	
Project Number: 205076			
Station ID: BR-2	Time - Start: 8:55	Time - End: 9:45	
Instrument: YSI-85	Altitude Entered: 200		
pH Meter	Calib by:		Date:

FIELD STAFF			
Name:	DS	Duties:	
Name:	ES	Duties:	

FIELD MONITORING SITE			
Watershed: BH	Waterbody: Blt - Flume		

FLOW			
Measured? Yes <input checked="" type="radio"/> No <input type="radio"/>	No flow	High	Low <input checked="" type="radio"/>
Flood	Normal		
Flow Width: 10 ft.	Flow Depth: 2.1 ft.	Velocity:	ft/s

SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="radio"/> No <input type="radio"/>	Giardia/Crypto	Yes <input checked="" type="radio"/> No <input type="radio"/>

WEATHER			
Weather: Clear <input type="radio"/> pt. cloudy <input type="radio"/> cloudy <input type="radio"/> fog <input type="radio"/> rain <input checked="" type="radio"/> other <input type="radio"/>			
Air Temp: 14.5			
Precip: 24 Hr Rain: in		48 Hr Rain: in	
Storm Duration:			

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	282	372	476	ntu	1
YSI 85 Recall Number	7	8	9		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1

OBSERVATIONS			
Water Color: Cloudy	Algal Growth: Yes		
Susp Matrl/Turb: Some	Float Matrl/Foam: Some		
Odors: Some	Trash: No		
Sludges/Oil Sheen: Some			
Fish and Wildlife Seen? P.T.F.			
Number Fish:	Size:	Behavior:	

COMMENTS			
Equipment Problems? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Description of Problems:			

Project: SBA Watershed		Date: 2-27-00	
Project Number: 205076			
Station ID: BR3	Time - Start: 10:30	Time - End: 10:45	
Instrument: YSI-85	Altitude Entered: 800		
pH Meter	Calib by:		Date:

FIELD STAFF	
Name: DS	Duties:
Name: ES	Duties:

FIELD MONITORING SITE	
Watershed: Delta	Waterbody: Delta Sump Pool

FLOW		
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/> High <input type="checkbox"/> Low <input type="checkbox"/>	Flood <input type="checkbox"/> Normal <input checked="" type="checkbox"/>
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s

SAMPLE DESCRIPTION		
Matrix: water	Sample Depth:	
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

WEATHER	
Weather: Clear <input type="checkbox"/> pt cloudy <input type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>	
Air Temp: 17°	
Precip: 24 Hr Rain: in	48 Hr Rain: in
Storm Duration:	

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	8.91	7.41	7.24	ntu	1
YSI 85 Recall Number	10	11	12		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1

OBSERVATIONS	
Water Color: yellowish	Algal Growth: Yes
Susp Matr/Turb: NO	Float Matr/Foam: NO
Odors: NO	Trash: NO
Sludges/Oil Sheen: little	
Fish and Wildlife Seen? NO	
Number Fish:	Size: Behavior:

COMMENTS	
Equipment Problems? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Description of Problems:	

Project: SBA Watershed		Date: 2-27-06	
Project Number: 205076			
Station ID: LDV-3	Time - Start: 11:40	Time - End: 11:53	
Instrument: YSI-85	Altitude Entered: 900		
pH Meter	Calib by:		Date:
FIELD STAFF			
Name: PS	Duties:		
Name: PS	Duties:		
FIELD MONITORING SITE			
Watershed: Lake LDV-04	Waterbody: Lake Ald V-04		
FLOW			
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow <input checked="" type="checkbox"/> High <input type="checkbox"/> Low <input type="checkbox"/>	Flood <input type="checkbox"/> Normal <input type="checkbox"/>	
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth: ~3'		
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
WEATHER			
Weather: Clear <input type="checkbox"/> pt. cloudy <input type="checkbox"/> cloudy <input checked="" type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>			
Air Temp: 19.5			
Precip: 24 Hr Rain: in.		48 Hr Rain: in.	
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
pH	7.3		
Turbidity	67.6	109	119
YSI 85 Recall Number	13	14	15
Dissolved Oxygen			
Dissolved Oxygen			
Conductivity			
Salinity			
Temperature			
OBSERVATIONS			
Water Color: cloudy	Algal Growth: NO		
Susp Matr/Turb: YES	Float Matr/Foam: YES		
Odors: NO	Trash: NO		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? NO			
Number Fish:	Size:	Behavior:	
COMMENTS			
Equipment Problems? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Description of Problems:			

Project: SBA Watershed		Date: 2-27-06			
Project Number: 205076					
Station ID: LDU-2	Time - Start: 12:30	Time - End:			
Instrument: YSI-85	Altitude Entered: 700				
pH Meter	Calib by:		Date:		
FIELD STAFF					
Name: DS	Duties:				
Name:	Duties:				
FIELD MONITORING SITE					
Watershed: LDU	Waterbody: Cedar Creek				
FLOW					
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow	High	Low		
Flood	Normal				
Flow Width: 1 ft.	Flow Depth: .2 ft.	Velocity: 1.5 ft/s			
SAMPLE DESCRIPTION					
Matrix: water	Sample Depth: 2.1'				
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
WEATHER					
Weather: Clear <input type="checkbox"/> pt. cloudy <input checked="" type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>					
Air Temp:					
Precip:	24 Hr Rain: in	48 Hr Rain: in			
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	11.4	11.3	11.5	ntu	1
YSI 85 Recall Number	16	17	18		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color: Clear	Algal Growth: NO				
Susp Matrl/Turb: NO	Float Matrl/Foam: NO				
Odors: NO	Trash: NO				
Sludges/Oil Sheen: NO					
Fish and Wildlife Seen? NO					
Number Fish:	Size:	Behavior:			
COMMENTS					
Equipment Problems? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Description of Problems:					

Project: SBA Watershed		Date: 2-27-06			
Project Number: 205076					
Station ID	LDV-1	Time - Start:	1:00		
			Time - End: 1:20		
Instrument:	YSI-85	Altitude Entered:	700		
	pH Meter	Calib by:	Date:		
FIELD STAFF					
Name:	DS	Duties:			
Name:		Duties:			
FIELD MONITORING SITE					
Watershed:	LDV	Waterbody:	Arroyo Yalle		
FLOW					
Measured?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/> High <input type="checkbox"/> Low <input checked="" type="checkbox"/>	Flood <input type="checkbox"/> Normal <input checked="" type="checkbox"/>		
Flow Width:	30 ft.	Flow Depth:	.2 ft.		
		Velocity:	1 ft/s		
SAMPLE DESCRIPTION					
Matrix:	water	Sample Depth:	12"		
Samples Collected:	Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
WEATHER					
Weather	Clear <input type="checkbox"/> pt cloudy <input checked="" type="checkbox"/>	cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>			
Air Temp:					
Precip:	24 Hr Rain:	in	48 Hr Rain: in		
Storm Duration:					
PARAMETER	1st Reading	2 nd Reading	3rd Reading	UNITS	MIN DET
pH	2			pH units	0.01
Turbidity	3.79	2.96	3.52	.ntu	1
YSI 85 Recall Number	19	20	21		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color	clear	Algal Growth	yes		
Susp Matr/Turb:	no	Float Matr/Foam	some		
Odors	no	Trash	no		
Sludges/Oil Sheen	no				
Fish and Wildlife Seen?	BS-65				
Number Fish:		Size:		Behavior:	
COMMENTS					
Equipment Problems?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Description of Problems:					

Project: SBA Watershed
 Project Number: 205076
 Date: 2-28-06

Station ID: CA-1
 Time - Start: 8:00
 Time - End: 8:10

Instrument: YSI-85
 pH Meter
 Altitude Entered:
 Calib by:
 Date:

FIELD STAFF

Name: DS
 Name: ES
 Duties:
 Duties:

FIELD MONITORING SITE

Watershed: Delta
 Waterbody: CA aqueduct

FLOW

Measured? Yes No
 No flow High Low Flood Normal
 Flow Width: ft. Flow Depth: ft. Velocity: ft/s

SAMPLE DESCRIPTION

Matrix: water
 Sample Depth:
 Samples Collected: Zone 7 Lab Suite Yes No
 Giardia/Crypto Yes No

WEATHER

Weather: Clear pt. cloudy cloudy fog rain other
 Air Temp:
 Precip: 24 Hr Rain: in 48 Hr Rain: in
 Storm Duration:

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH	Lab			pH units	0.01
Turbidity	41.3	42.5	43	ntu	1
YSI 85 Recall Number	22	23	24		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1

OBSERVATIONS

Water Color
 Algal Growth
 Susp Matrl/Turb:
 Float Matrl/Foam
 Odors
 Trash
 Sludges/Oil Sheen
 Fish and Wildlife Seen?
 Number Fish: Size: Behavior:

COMMENTS

Equipment Problems? Yes No
 Description of Problems:

Project: SBA Watershed		Date: 2-28-06	
Project Number: 205076			
Station ID: BR-1	Time - Start: 8:05	Time - End: 8:40	
Instrument: YSI-85	Altitude Entered: 200		
pH Meter	Calib by:		Date:
FIELD STAFF			
Name: DS	Duties:		
Name: ESS	Duties:		
FIELD MONITORING SITE			
Watershed: BHT	Waterbody: BHT Creek		
FLOW			
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow	High	Low
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	Flood Normal
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	Yes	No	Giardia/Crypto Yes No
WEATHER			
Weather: Clear	pt cloudy	cloudy	fog rain other
Air Temp: 13°			
Precip: 24 Hr Rain: in			48 Hr Rain: in
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
			UNITS MIN DET
pH			pH units 0.01
Turbidity	15.6	14.6	14.6 ntu 1
YSI 85 Recall Number	25	26	27
Dissolved Oxygen			% .01
Dissolved Oxygen			mg/l 0.01
Conductivity			uS/cm 0.001
Salinity			% 0.01
Temperature			C 0.1
OBSERVATIONS			
Water Color: Clear	Algal Growth: NO		
Susp Matr/Turb: NO	Float Matr/Foam: NO		
Odors: NO	Trash: NO		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? PTF			
Number Fish:	Size:	Behavior:	
COMMENTS			
Equipment Problems? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Description of Problems:			

Project: SBA Watershed		Date: 2-28-00			
Project Number: 205076					
Station ID: BR-2	Time - Start: 8:50	Time - End: 9:15			
Instrument: YSI-85	Altitude Entered: 200				
pH Meter	Calib by:		Date:		
FIELD STAFF					
Name: DS	Duties:				
Name: ES	Duties:				
FIELD MONITORING SITE					
Watershed: BH	Waterbody: Flume				
FLOW					
Measured? Yes: No	No flow	High	Low		
Flow Width: 10 ft.	Flow Depth: 2-1 ft.	Velocity: 1	ft/s		
SAMPLE DESCRIPTION					
Matrix: water	Sample Depth:				
Samples Collected: Zone 7 Lab Suite	Yes: No	Giardia/Crypto	Yes: No		
WEATHER					
Weather: Clear	pt cloudy	cloudy	fog rain other		
Air Temp: 15.0					
Precip: 24 Hr Rain:	in	48 Hr Rain:	in		
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	12.4	13.8	12.9	ntu	1
YSI 85 Recall Number	28	29	30		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color: clear	Algal Growth: YES				
Susp Matrl/Turb: NO	Float Matrl/Foam: NO				
Odors: NO	Trash: NO				
Sludges/Oil Sheen: NO					
Fish and Wildlife Seen? NO					
Number Fish:	Size:	Behavior:			
COMMENTS					
Equipment Problems? Yes: No					
Description of Problems:					

Project: SBA Watershed		Date: 2-28-06	
Project Number: 205076			
Station ID	BR-3	Time - Start:	9:50
		Time - End:	10:50
Instrument:	YSI-85	Altitude Entered:	
	pH Meter	Calib by:	
		Date:	
FIELD STAFF			
Name:	DS	Duties:	
Name:	ES	Duties:	
FIELD MONITORING SITE			
Watershed:	Delta	Waterbody:	Dyer Suite Pool
FLOW			
Measured?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow	High Low
Flow Width:	ft.	Flow Depth:	ft. Velocity: ft/s
SAMPLE DESCRIPTION			
Matrix:	water	Sample Depth:	
Samples Collected:	Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
WEATHER			
Weather	Clear <input type="checkbox"/> pt. cloudy <input type="checkbox"/> cloudy <input checked="" type="checkbox"/> fog <input type="checkbox"/> rain <input checked="" type="checkbox"/> other <input type="checkbox"/>		
Air Temp:	14.0		
Precip:	24 Hr Rain:	in	48 Hr Rain: in
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
pH	15.4	14.7	14.8
Turbidity	15.4	14.7	14.8
YSI 85 Recall Number	31	32	33
Dissolved Oxygen			% .01
Dissolved Oxygen			mg/l 0.01
Conductivity			uS/cm 0.001
Salinity			% 0.01
Temperature			C 0.1
OBSERVATIONS			
Water Color	yellow	Algal Growth	yes
Susp Matrl/Turb:	yes	Float Matrl/Foam	no
Odors	no	Trash	no
Sludges/Oil Sheen	no		
Fish and Wildlife Seen?	no		
Number Fish:		Size:	Behavior:
COMMENTS			
Equipment Problems?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Description of Problems:			

Project: SBA Watershed		Date: 2-29-06	
Project Number: 205076			
Station ID: LDU-3	Time - Start: 10:45	Time - End: 11:05	
Instrument: YSI-85	Altitude Entered: 700		
pH Meter	Calib by:		Date:
FIELD STAFF			
Name:		Duties:	
Name:		Duties:	
FIELD MONITORING SITE			
Watershed: LDU	Waterbody: LDU		
FLOW			
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow	High	Low
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
WEATHER			
Weather: Clear <input type="checkbox"/> pt cloudy <input type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input checked="" type="checkbox"/> other <input type="checkbox"/>			
Air Temp: 13°			
Precip: 24 Hr Rain: in		48 Hr Rain: in	
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
pH			
Turbidity	9.47	9.28	9.46
YSI 85 Recall Number	34	35	36
Dissolved Oxygen			
Dissolved Oxygen			
Conductivity			
Salinity			
Temperature			
OBSERVATIONS			
Water Color: yellow	Algal Growth: NO		
Susp Matrl/Turb: YES	Float Matrl/Foam: YES		
Odors: NO	Trash: YES		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? Birds			
Number Fish:	Size:	Behavior:	
COMMENTS			
Equipment Problems? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Description of Problems:			

Project: SBA Watershed		Date: 2-28-06	
Project Number: 205076			
Station ID: LDV2	Time - Start: 11:40	Time - End: 12:00	
Instrument: YSI-85	Altitude Entered: 700		
pH Meter	Calib by:		Date:

FIELD STAFF			
Name:	DS	Duties:	
Name:		Duties:	

FIELD MONITORING SITE			
Watershed: LDV	Waterbody: Cedar Cr		

FLOW			
Measured? Yes <input checked="" type="radio"/> No <input type="radio"/>	No flow	High	Low
Flood	Normal		
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	

SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="radio"/> No <input type="radio"/>	Giardia/Crypto	Yes <input checked="" type="radio"/> No <input type="radio"/>

WEATHER			
Weather: Clear <input checked="" type="radio"/>	pt cloudy	cloudy	fog
Air Temp: 75	rain	other	
Precip:	24 Hr Rain: in	48 Hr Rain: in	
Storm Duration:			

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	323	325	323	ntu	1
YSI 85 Recall Number	37	38	39		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1

OBSERVATIONS			
Water Color: 13.0001	Algal Growth: NO		
Susp Matrl/Turb: 12.462	Float Matrl/Foam: NO		
Odors: NO	Trash: NO		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? NO			
Number Fish:	Size:	Behavior:	

COMMENTS: Still going 6-15	
Equipment Problems? Yes <input type="radio"/> No <input checked="" type="radio"/>	Description of Problems:

Project: SBA Watershed		Date: 2/20/06	
Project Number: 205076		Time - End: 12:30 PM	
Station ID: LDU-1	Time - Start: 12:10 PM	Altitude Entered: 700	
Instrument: YSI-85	pH Meter	Calib by:	Date:

FIELD STAFF			
Name:		Duties:	
Name:		Duties:	

FIELD MONITORING SITE			
Watershed: LDU	Waterbody: Arroyo Valley		

FLOW			
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/> High <input checked="" type="checkbox"/> Low <input type="checkbox"/> Flood <input type="checkbox"/> Normal <input checked="" type="checkbox"/>		
Flow Width: 60 ft.	Flow Depth: varies ~2 ft.	Velocity: 5 ft/s	

SAMPLE DESCRIPTION			
Matrix: water	Sample Depth: 1'		
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

WEATHER			
Weather: Clear <input type="checkbox"/> pt cloudy <input type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input checked="" type="checkbox"/> other <input type="checkbox"/>			
Air Temp:			
Precip:	24 Hr Rain: in	48 Hr Rain: in	
Storm Duration:			

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	277	288	284	ntu	
YSI 85 Recall Number	40	41	42		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1

because of low feet for what?

OBSERVATIONS			
Water Color: BROWN	Algal Growth: NO		
Susp Matrl/Turb: SOME	Float Matrl/Foam: YES		
Odors: NO	Trash: NO		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? NO			
Number Fish:	Size:	Behavior:	

COMMENTS	
Equipment Problems? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Description of Problems:	

Project: SBA Watershed		Date: 3.2.06	
Project Number: 205076			
Station ID: CA1	Time - Start: 7:25 AM	Time - End: 7:40 AM	
Instrument: YSI-85	Altitude Entered: 200		
pH Meter	Calib by:		Date:

FIELD STAFF			
Name:	Dan Sicard - DS	Duties:	
Name:	Edna Severino - ES	Duties:	

FIELD MONITORING SITE			
Watershed: Delta	Waterbody: CA Aqueduct		

FLOW			
Measured?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow	High Low
Flow Width:	ft.	Flow Depth:	ft. Velocity: ft/s
			Flood Normal

SAMPLE DESCRIPTION			
Matrix:	water	Sample Depth:	
Samples Collected:	Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

WEATHER			
Weather:	Clear <input type="checkbox"/> pt cloudy <input type="checkbox"/> cloudy <input checked="" type="checkbox"/> fog <input checked="" type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>		
Air Temp:	12°		
Precip:	24 Hr Rain:	in	48 Hr Rain: in
Storm Duration:			

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	12.4	12.2	12.2	ntu	1
YSI 85 Recall Number	1	2	3		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1

OBSERVATIONS			
Water Color		Algal Growth	
Susp Matr/Turb:		Float Matr/Foam	
Odors		Trash	
Sludges/Oil Sheen			
Fish and Wildlife Seen?			
Number Fish:		Size:	Behavior:

COMMENTS			
Equipment Problems?	Yes <input type="checkbox"/> No <input type="checkbox"/>		
Description of Problems:			

Project: SBA Watershed		Date: 3-2-06			
Project Number: 205076		Station ID: BR-1			
Time - Start: 7:45 AM		Time - End: 8:10 AM			
Instrument: YSI-85	Altitude Entered: 200	Date:			
pH Meter		Calib by:			
FIELD STAFF					
Name:	DS	Duties:			
Name:	ES	Duties:			
FIELD MONITORING SITE					
Watershed: Bethany	Waterbody: BH Creek				
FLOW					
Measured?	Yes	No			
Flow Width:	1 ft.	Flow Depth:	1.2 ft.		
Velocity:	.5 ft/s				
SAMPLE DESCRIPTION					
Matrix:	water				
Sample Depth:					
Samples Collected:	Zone 7 Lab Suite	Yes	No		
Giardia/Crypto	Yes	No			
WEATHER					
Weather:	Clear	pt cloudy	cloudy		
Air Temp:	100	fog	rain		
Precip:	24 Hr Rain:	in	48 Hr Rain:		
Storm Duration:	in				
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	6.39	6.63	6.53	ntu	1
YSI 85 Recall Number	4	5	6		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color		Algal Growth			
Susp Matr/Turb:		Float Matr/Foam			
Odors		Trash			
Sludges/Oil Sheen					
Fish and Wildlife Seen?					
Number Fish:		Size:		Behavior:	
COMMENTS					
Equipment Problems?	Yes	No	YSI 85 - conductivity		
Description of Problems:	Readings whacky - Perhaps not showing range change				

Project: SBA Watershed
 Project Number: 205076
 Date: 3-2-06

Station ID: BR-2
 Time - Start: 8:15
 Time - End: 8:40

Instrument: YSI-85
 Altitude Entered: 200
 pH Meter
 Calib by:
 Date:

FIELD STAFF

Name: DS
 Duties:
 Name: ES
 Duties:

FIELD MONITORING SITE

Watershed: Berkeley
 Waterbody: flume

FLOW

Measured? Yes No
 No flow High Low
 Flood Normal
 Flow Width: ft. Flow Depth: ft. Velocity: ft/s

SAMPLE DESCRIPTION

Matrix: water Sample Depth:
 Samples Collected: Zone 7 Lab Suite Yes No Giardia/Crypto Yes No

WEATHER

Weather: Clear pt. cloudy cloudy fog rain other
 Air Temp: 90
 Precip: 24 Hr Rain: in 48 Hr Rain: in
 Storm Duration:

PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	4.7	4.41	4.58	ntu	1
YSI 85 Recall Number	7	8	9		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1

OBSERVATIONS

Water Color: Clear Algal Growth: YES
 Susp Matr/Turb: NO Float Matr/Foam: NO
 Odors: NO Trash: NO
 Sludges/Oil Sheen: NO
 Fish and Wildlife Seen?: NO
 Number Fish: Size: Behavior:

COMMENTS

Equipment Problems? Yes No
 Description of Problems: TO YSI conductivity not ranging MS - US
 Francis needs needs

Project: SBA Watershed		Date: 3.2.06	
Project Number: 205076			
Station ID: BR3	Time - Start: 9:20	Time - End: 9:35	
Instrument: YSI-85	Altitude Entered: 200		
pH Meter	Calib by:		Date:
FIELD STAFF			
Name: DS		Duties:	
Name: ES		Duties:	
FIELD MONITORING SITE			
Watershed: Bohay	Waterbody: Dryer Surge Pool		
FLOW			
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow	High	Low
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
WEATHER			
Weather: Clear <input type="checkbox"/> cloudy <input checked="" type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>			
Air Temp: 19°			
Precip: 24 Hr Rain: in		48 Hr Rain: in	
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
pH			
Turbidity	12.9	13.2	13.2
YSI 85 Recall Number	10	11	12
Dissolved Oxygen			
Dissolved Oxygen			
Conductivity			
Salinity			
Temperature			
OBSERVATIONS			
Water Color: yellow	Algal Growth: yes		
Susp Matr/Turb: NO	Float Matr/Foam: NO		
Odors: NO	Trash: NO		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? NO			
Number Fish:	Size:	Behavior:	
COMMENTS			
Equipment Problems? Yes <input type="checkbox"/> No <input type="checkbox"/>	see previous		
Description of Problems:			

Project: SBA Watershed		Date: 3-20-06	
Project Number: 205076			
Station ID: LDV-3	Time - Start: 10:20	Time - End: 10:25	
Instrument: YSI-85	Altitude Entered: 700		
pH Meter	Calib by:		Date:
FIELD STAFF			
Name:	DS	Duties:	
Name:	ES	Duties:	
FIELD MONITORING SITE			
Watershed: LDV	Waterbody: LDV		
FLOW			
Measured? <input checked="" type="radio"/> Yes <input type="radio"/> No	No flow	High	Low
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	<input checked="" type="radio"/> Yes <input type="radio"/> No	Giardia/Crypto	<input checked="" type="radio"/> Yes <input type="radio"/> No
WEATHER			
Weather: Clear	<input checked="" type="radio"/> pt. cloudy	<input type="radio"/> cloudy	<input type="radio"/> fog <input type="radio"/> rain <input type="radio"/> other
Air Temp: 17°			
Precip:	24 Hr Rain: in	48 Hr Rain: in	
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
pH			UNITS: pH units MIN DET: 0.01
Turbidity	3.45	3.38	3.49 ntu MIN DET: 1
YSI 85 Recall Number	13	14	15
Dissolved Oxygen			% .01
Dissolved Oxygen			mg/l 0.01
Conductivity			uS/cm 0.001
Salinity			% 0.01
Temperature			C 0.1
OBSERVATIONS			
Water Color: Clear	Algal Growth: NO		
Susp Matrl/Turb: SOM	Float Matrl/Foam: SOME		
Odors: NO	Trash: NO		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? Birds			
Number Fish:	Size:	Behavior:	
COMMENTS			
Equipment Problems? Yes	No	See previous	
Description of Problems:			

Project: SBA Watershed		Date: 3-2-06			
Project Number: 205076					
Station ID: LDU 2	Time - Start: 11:00	Time - End: 11:30			
Instrument: YSI-85	Altitude Entered: 700				
pH Meter	Calib by:		Date:		
FIELD STAFF					
Name: DS		Duties:			
Name:		Duties:			
FIELD MONITORING SITE					
Watershed: LDU	Waterbody: Cedar CK				
FLOW					
Measured? Yes <input type="radio"/> No <input checked="" type="radio"/>	No flow <input type="radio"/> High <input checked="" type="radio"/> Low <input type="radio"/>	Flood <input type="radio"/> Normal <input checked="" type="radio"/>			
Flow Width: 2 ft.	Flow Depth: .2 ft.	Velocity: 7 ft/s			
SAMPLE DESCRIPTION					
Matrix: water	Sample Depth:		gauge = 6.04		
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="radio"/> No <input type="radio"/>	Giardia/Crypto	Yes <input checked="" type="radio"/> No <input type="radio"/>		
WEATHER					
Weather: Clear <input type="radio"/> pt. cloudy <input checked="" type="radio"/> cloudy <input type="radio"/> fog <input type="radio"/> rain <input type="radio"/> other <input type="radio"/>					
Air Temp: 20°					
Precip: 24 Hr Rain:	in:	48 Hr Rain:	in:		
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH	L 7.13	A 7.36	B 7.30	pH units	0.01
Turbidity	7.13	7.36	7.30	ntu	1
YSI 85 Recall Number	16	17	18		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color: CL		Algal Growth: NO			
Susp Matrl/Turb: NO		Float Matrl/Foam: NO			
Odors: NO		Trash: NO			
Sludges/Oil Sheen: NO					
Fish and Wildlife Seen? B-1					
Number Fish:		Size:		Behavior:	
COMMENTS					
Equipment Problems? Yes <input type="radio"/> No <input checked="" type="radio"/>					
Description of Problems:					

Project: SBA Watershed		Date: 3-2-06			
Project Number: 205076					
Station ID: LDV-1	Time - Start: 11:25	Time - End: 10:40			
Instrument: YSI-85	Altitude Entered: 700				
pH Meter	Calib by:		Date:		
FIELD STAFF					
Name: DS	Duties:				
Name:	Duties:				
FIELD MONITORING SITE					
Watershed: LDV	Waterbody: Arroyo Valle				
FLOW					
Measured? Yes <input type="radio"/> No <input checked="" type="radio"/>	No flow <input type="radio"/> High <input checked="" type="radio"/> Low <input type="radio"/>	Flood <input type="radio"/> Normal <input checked="" type="radio"/>			
Flow Width: 50 ft.	Flow Depth: .5 ft.	Velocity: 4 ft/s			
SAMPLE DESCRIPTION est. 100 cfs					
Matrix: water	Sample Depth: 6"				
Samples Collected: Zone 7 Lab Suite	Yes <input checked="" type="radio"/> No <input type="radio"/>	Giardia/Crypto	Yes <input checked="" type="radio"/> No <input type="radio"/>		
WEATHER					
Weather: Clear <input type="radio"/> pt. cloudy <input checked="" type="radio"/> cloudy <input type="radio"/> fog <input type="radio"/> rain <input type="radio"/> other <input type="radio"/>					
Air Temp: 19°					
Precip:	24 Hr Rain: in		48 Hr Rain: in		
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	13.2	13.7	13.6	ntu	1
YSI 85 Recall Number	19	20	21		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color: Clear	Algal Growth: Some on rocks	after			
Susp Matrl/Turb: little	Float Matrl/Foam: little				
Odors: NO	Trash: NO				
Sludges/Oil Sheen: NO					
Fish and Wildlife Seen? NO					
Number Fish:	Size:	Behavior:			
COMMENTS					
Equipment Problems? Yes <input type="checkbox"/> No <input type="checkbox"/>					
Description of Problems:					

Project: SBA Watershed		Date: 3-6-06	
Project Number: 205076			
Station ID: CA-1	Time - Start: 8:30	Time - End: 22	
Instrument: YSI-85	Altitude Entered: 200		
pH Meter	Calib by:		Date:
FIELD STAFF			
Name: DS	Duties:		
Name: Mike	Duties:		
FIELD MONITORING SITE			
Watershed:	Waterbody:		
FLOW			
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow	High	Low
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	Yes <input type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto	Yes <input type="checkbox"/> No <input type="checkbox"/>
WEATHER			
Weather: Clear <input type="checkbox"/> pt. cloudy <input checked="" type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>			
Air Temp: 14°			
Precip: 24 Hr Rain: in		48 Hr Rain: in	
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
pH			
Turbidity	7.21	7.08	7.17
YSI 85 Recall Number	22	23	24
Dissolved Oxygen			
Dissolved Oxygen			
Conductivity			
Salinity			
Temperature			
OBSERVATIONS			
Water Color: yellow	Algal Growth: no		
Susp Matr/Turb: no	Float Matr/Foam: no		
Odors: no	Trash:		
Sludges/Oil Sheen: no			
Fish and Wildlife Seen? no			
Number Fish:	Size:	Behavior:	
COMMENTS Boats present			
Equipment Problems? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Description of Problems:			

Project: SBA Watershed		Date: 3-6-06	
Project Number: 205076			
Station ID: BR-1	Time - Start: 8:50	Time - End: 9:05	
Instrument: YSI-85	Altitude Entered: 200		
pH Meter	Calib by:		Date:
FIELD STAFF			
Name: DS		Duties:	
Name:		Duties:	
FIELD MONITORING SITE			
Watershed: BHD	Waterbody: BHD Creek		
FLOW			
Measured? Yes <input checked="" type="radio"/> No <input checked="" type="radio"/>	No flow	High	Low <input checked="" type="radio"/>
Flood	Normal		
Flow Width: 1 ft.	Flow Depth: 2 ft.	Velocity: 5 ft/s	
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	Yes	No	Giardia/Crypto
	Yes	No	
WEATHER			
Weather: Clear <input type="radio"/> pt cloudy <input checked="" type="radio"/> cloudy <input type="radio"/> fog <input type="radio"/> rain <input type="radio"/> other <input type="radio"/>			
Air Temp: 75			
Precip:	24 Hr Rain:	in	48 Hr Rain: in
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
			UNITS
pH			pH units
			MIN DET
Turbidity	23.6	22.4	22.0
			ntu
			1
YSI 85 Recall Number	25	26	27
Dissolved Oxygen			%
			.01
Dissolved Oxygen			mg/l
			0.01
Conductivity			uS/cm
			0.001
Salinity			%
			0.01
Temperature			C
			0.1
OBSERVATIONS			
Water Color: clear	Algal Growth: NO		
Susp Matrl/Turb: some	Float Matrl/Foam: NO		
Odors: NO	Trash: NO		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? some			
Number Fish: 1	Size:	Behavior:	
COMMENTS			
Equipment Problems? Yes <input type="radio"/> No <input checked="" type="radio"/>			
Description of Problems:			

Project: SBA Watershed		Date: 3/6/06			
Project Number: 205076					
Station ID: BR-2	Time - Start: 9:20	Time - End: 2:2			
Instrument: YSI-85	Altitude Entered: 700				
pH Meter	Calib by:		Date:		
FIELD STAFF					
Name: IDS	Duties:				
Name:	Duties:				
FIELD MONITORING SITE					
Watershed: RHD	Waterbody: flume				
FLOW					
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/> High <input type="checkbox"/> Low <input checked="" type="checkbox"/>	Flood <input type="checkbox"/> Normal <input checked="" type="checkbox"/>			
Flow Width: 5 ft.	Flow Depth: 1 ft.	Velocity: 3 ft/s			
SAMPLE DESCRIPTION					
Matrix: water	Sample Depth:				
Samples Collected: Zone 7 Lab Suite	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Giardia/Crypto	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
WEATHER					
Weather: Clear <input type="checkbox"/> pl cloudy <input checked="" type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>					
Air Temp: 40°					
Precip: 24 Hr Rain: in		48 Hr Rain: in			
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	5.7	4.6	4.2	ntu	1
YSI 85 Recall Number	28	29	30		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color: clear	Algal Growth: YES				
Susp Matr/Turb: some	Float Matr/Foam: some				
Odors: no	Trash: no				
Sludges/Oil Sheen: no					
Fish and Wildlife Seen? RWBB					
Number Fish: no	Size:	Behavior:			
COMMENTS					
Equipment Problems? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
Description of Problems:					

Project: SBA Watershed		Date: 3-6-06	
Project Number: 205076			
Station ID: BR-3	Time - Start: 10:25	Time - End: 12:22	
Instrument: YSI-85	Altitude Entered: 800		
pH Meter	Calib by:		Date:
FIELD STAFF			
Name:	<i>DS</i>	Duties:	
Name:	<i>Mike</i>	Duties:	
FIELD MONITORING SITE			
Watershed: Delta	Waterbody: SRA - Delta - 2000/1000		
FLOW			
Measured? <input checked="" type="radio"/> Yes <input type="radio"/> No	No flow	High	Low
	Flood	Normal	
Flow Width: ft.	Flow Depth: ft.	Velocity: ft/s	
SAMPLE DESCRIPTION			
Matrix: water	Sample Depth:		
Samples Collected: Zone 7 Lab Suite	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Giardia/Crypto	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
WEATHER			
Weather: <input checked="" type="radio"/> Clear <input checked="" type="radio"/> pt. cloudy <input type="radio"/> cloudy <input type="radio"/> fog <input type="radio"/> rain <input type="radio"/> other			
Air Temp: 16°			
Precip: 24 Hr Rain: in.		48 Hr Rain: in.	
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
			UNITS
			MIN DET
pH			pH units
			0.01
Turbidity	6.45	6.40	6.33
			ntu
			1
YSI 85 Recall Number	31	32	33
Dissolved Oxygen			%
			.01
Dissolved Oxygen			mg/l
			0.01
Conductivity			uS/cm
			0.001
Salinity			%
			0.01
Temperature			C
			0.1
OBSERVATIONS			
Water Color: Clear	Algal Growth: YES		
Susp Matr/Turb: Little	Float Matr/Foam: NO		
Odors: NO	Trash: NO		
Sludges/Oil Sheen: NO			
Fish and Wildlife Seen? NO			
Number Fish:	Size:	Behavior:	
COMMENTS			
Equipment Problems? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Description of Problems:			

Project: SBA Watershed		Date: 3-6-00			
Project Number: 205076					
Station ID: LDV-3	Time - Start: 11:25	Time - End: 1:35			
Instrument: YSI-85	Altitude Entered: 700				
pH Meter	Calib by:		Date:		
FIELD STAFF					
Name:		Duties:			
Name:		Duties:			
FIELD MONITORING SITE					
Watershed: LDV	Waterbody: LDV				
FLOW					
Measured?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow <input checked="" type="checkbox"/> High <input type="checkbox"/> Low <input type="checkbox"/> Flood <input type="checkbox"/> Normal <input type="checkbox"/>			
Flow Width:	ft.	Flow Depth:	ft. Velocity: ft/s		
SAMPLE DESCRIPTION					
Matrix: water	Sample Depth:				
Samples Collected:	Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
WEATHER					
Weather:	Clear <input type="checkbox"/> pt cloudy <input checked="" type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>				
Air Temp:	15.0				
Precip:	24 Hr Rain:	in	48 Hr Rain: in		
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	4.84	4.83	4.83	ntu	1
YSI 85 Recall Number	34	35	36		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color	Brown	Algal Growth	NO		
Susp Matr/Turb:	Some	Float Matr/Foam	Some		
Odors	NO	Trash	Some		
Sludges/Oil Sheen	NO				
Fish and Wildlife Seen?	Birds				
Number Fish:		Size:		Behavior:	
COMMENTS					
Equipment Problems?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Description of Problems:					

Project: SBA Watershed		Date: 3-6-06			
Project Number: 205076					
Station ID: LDV-2	Time - Start: 12:10	Time - End: 2.2			
Instrument: YSI-85	Altitude Entered: 700				
pH Meter	Calib by:		Date:		
FIELD STAFF					
Name: DS		Duties:			
Name:		Duties:			
FIELD MONITORING SITE					
Watershed: LDV	Waterbody: Cedar Creek				
FLOW					
Measured? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow <input type="checkbox"/> High <input type="checkbox"/> Low <input checked="" type="checkbox"/>	Flood <input type="checkbox"/> Normal <input checked="" type="checkbox"/>			
Flow Width: 2 ft.	Flow Depth: 2 ft.	Velocity: 5 ft/s			
SAMPLE DESCRIPTION					
Matrix: water	Sample Depth: 3'				
Samples Collected: Zone 7 Lab Suite	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Giardia/Crypto	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
WEATHER					
Weather: Clear <input type="checkbox"/> pt cloudy <input checked="" type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>					
Air Temp: 19°					
Precip: 24 Hr Rain: in		48 Hr Rain: in			
Storm Duration:					
PARAMETER	1st Reading	2nd Reading	3rd Reading	UNITS	MIN DET
pH				pH units	0.01
Turbidity	4.57	4.46	4.41	ntu	1
YSI 85 Recall Number	87	38	39		
Dissolved Oxygen				%	.01
Dissolved Oxygen				mg/l	0.01
Conductivity				uS/cm	0.001
Salinity				%	0.01
Temperature				C	0.1
OBSERVATIONS					
Water Color: Clear	Algal Growth: NO				
Susp Matr/Turb: NO	Float Matr/Foam: NO				
Odors: NO	Trash: NO				
Sludges/Oil Sheen: NO					
Fish and Wildlife Seen? Birds					
Number Fish:	Size:	Behavior:			
COMMENTS: Stream gauge = 6.0"					
Equipment Problems? Yes <input type="checkbox"/> No <input type="checkbox"/>					
Description of Problems:					

Project: SBA Watershed		Date: 3-6-06	
Project Number: 205076			
Station ID	LDV-1	Time - Start:	12:35
		Time - End:	12:58
Instrument:	YSI-85	Altitude Entered:	700
	pH Meter	Calib by:	
FIELD STAFF			
Name:	DS	Duties:	
Name:		Duties:	
FIELD MONITORING SITE			
Watershed:	LDV	Waterbody:	Arroyo Valle
FLOW			
Measured?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	No flow	High Low
Flow Width:	60 ft.	Flow Depth:	.75 ft.
		Velocity:	4 ft/s
SAMPLE DESCRIPTION			
Matrix:	water	Sample Depth:	
Samples Collected:	Zone 7 Lab Suite	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Giardia/Crypto <input checked="" type="checkbox"/> No <input type="checkbox"/>
WEATHER			
Weather	Clear <input type="checkbox"/> pt cloudy <input checked="" type="checkbox"/> cloudy <input type="checkbox"/> fog <input type="checkbox"/> rain <input type="checkbox"/> other <input type="checkbox"/>		
Air Temp:	70.5		
Precip:	24 Hr Rain:	in	48 Hr Rain: in
Storm Duration:			
PARAMETER	1st Reading	2nd Reading	3rd Reading
			UNITS MIN DET
pH			pH units 0.01
Turbidity	76.5	74.7	74.0 ntu 1
YSI 85 Recall Number	40	41	42
Dissolved Oxygen			% .01
Dissolved Oxygen			mg/l 0.01
Conductivity			uS/cm 0.001
Salinity			% 0.01
Temperature			C 0.1
OBSERVATIONS			
Water Color	Milky	Algal Growth	no
Susp Matr/Turb:	some	Float Matr/Foam	no
Odors	no	Trash	no
Sludges/Oil Sheen	no		
Fish and Wildlife Seen?	birds		
Number Fish:		Size:	Behavior:
COMMENTS			
Equipment Problems?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Description of Problems:			

Subject: RE: Discharge Records

Thanks, Gerry. Our contract only calls for sampling this year.

Are there any records available for the Bethany flume at the SBA Pumping Plant for this year?

Thanks,

Dan

Dan Sicular
Senior Project Manager
Environmental Science Associates
436 14th Street, Suite 600
Oakland, CA 94612
510-839-5066 fax 510-839-5825
Direct: 510-740-1724
dsicular@esassoc.com

From: Gates, Gerry [mailto:Gerry@zone7water.com]

Sent: Thursday, May 11, 2006 3:10 PM

To: Flores, Amparo

Cc: Sicular, Dan

Subject: RE: Discharge Records

Yes,

I am working up the record for April at Cedar Creek now.

I'll forward the entire record early next week. Looks like the station is starting to dry up. Flow is just a trickle.

I want to visit the site one last time before I finalize the record.

I also collected 2 sets of water samples that I sent to Gurpal for a complete mineral scan.

Are there plans to continue monitoring this site beyond this year?

Gerald Gates

Water Resources Engineering

Office: (925) 454-5062

Mobile: (925) 997-0054

From: Flores, Amparo

Sent: Thursday, May 11, 2006 12:21

To: Gates, Gerry

Cc: 'DSicular@esassoc.com'

Subject: FW: Discharge Records

Gerry – Could you pass on the Cedar Creek data to both me and Dan? Do you have anything more than what you sent me on 2/8/2006?



"Sicular, Dan"
<DSicular@esassoc.com>
05/11/2006 03:19 PM

To "Gates, Gerry" <Gerry@zone7water.com>
cc "Flores, Amparo" <aflores@zone7water.com>, <Laura.Hidas@acwd.com>
bcc
Subject RE: Discharge Records

Gerry--

Too bad about the Bethany gage.. Every time I went out (sampled 5 events) there was flow both at the fence line upstream of the flume and in the flume itself, though estimated only at about .1-.2 cfs. The only big flow I saw in the flume was downstream of the gaging station, during a downpour, when one of the side channels that discharges into the flume was going. From the dirty look of the water, I think it was from road ditches.

-Dan

Dan Sicular
Senior Project Manager
Environmental Science Associates
436 14th Street, Suite 600
Oakland, CA 94612
510-839-5066 fax 510-839-5825
Direct: 510-740-1724
dsicular@esassoc.com

From: Gates, Gerry [mailto:Gerry@zone7water.com]
Sent: Thursday, May 11, 2006 3:20 PM
To: Sicular, Dan
Subject: RE: Discharge Records

Dan,
The equipment at Bethany had problems. I retrieved the circuit board and had it repaired, but it was just recently returned from the vendor.
From my site visits to Bethany, it appears there was no significant flow from the watershed above the pumping plant, but I don't have any record to provide you with. Sorry.

Gerald Gates
Water Resources Engineering
Office: (925) 454-5062
Mobile: (925) 997-0054

From: Sicular, Dan [mailto:DSicular@esassoc.com]
Sent: Thursday, May 11, 2006 15:12
To: Gates, Gerry; Flores, Amparo
Cc: Laura.Hidas@acwd.com

052018-1
052018-2
052018-3
052018-4
052018-5
052018-6
052018-7
052018-8
052018-9
052018-10

That's it from the QA/QC end. Zone 7's data was "excellent" so we don't need any additional information.

We'll talk at 2 pm today for our conference call -- items I am hoping to discuss include an agenda for the education meeting, a plan for follow-up to the education meeting, and an update on recent activities leading up to our June meeting.

Thanks!

Laura

Laura Hidas
Alameda County Water District
43885 S. Grimmer Blvd., Fremont, CA 94538
Phone #: (510) 668-6516
Fax #: (510) 656-3426
laura.hidas@acwd.com



"Sicular, Dan"
<DSicular@esassoc.com>
05/09/2006 05:21 PM

To <Laura.Hidas@acwd.com>
cc
bcc
Subject RE: Stormwater Data Update / Ed program

Hi Laura--

The YSI was factory calibrated prior to the beginning of sampling (by Equipco -- I can pass on to you the calibration sheet if you need it). After that, prior to each day in the field the instrument was started up and allowed to go through its self-check procedure. At each sampling station we calibrated DO for the altitude of the station (to the nearest 100 feet). No other calibration was performed. While the QAPP calls for calibration of conductivity/salinity prior to each sampling event, this was not performed, as long as the instrument appeared to be functioning properly in the field. The YSI 85 manual states that "system calibration [for conductivity] is rarely required because of the factory calibration of the YSI Model 85". When the instrument gave some odd conductivity readings, I asked the Zone 7 lab to include conductivity in their readings, which they did for the last three sampling events. The YSI-85 does not have a filter.

I'll ask Biovir to re-issue those reports.

Talk to you in a bit,

-Dan

Dan Sicular
Senior Project Manager
Environmental Science Associates
436 14th Street, Suite 600
Oakland, CA 94612
510-839-5066 fax 510-839-5825
Direct: 510-740-1724
dsicular@esassoc.com

From: Laura.Hidas@acwd.com [mailto:Laura.Hidas@acwd.com]
Sent: Tuesday, May 09, 2006 1:27 PM
To: Sicular, Dan; aflores@zone7water.com; lyoung@valleywater.org; Silver, Judith
Subject: Stormwater Data Update / Ed program

Hi Dan,

The QA/QC on the stormwater data is more or less complete. The data is OK to use, but there are a couple additional things that we'll need for the records.

- 1) How often was the YSI-85 calibrated? How often was the filter changed?
- 2) We need to get Biovir to re-issue several of the "Report of Sample Evaluation" forms. They were sampled on 12-23-05 and the signature date was 01-04-05 (should be 01-04-06), which does not pass QA/QC, so we'll need them to correct this even though the data is fine. The reports that need to be re-issued (fax is OK) are:

because of the factory calibration of the YSI Model 85". When the instrument gave some odd conductivity readings, I asked the Zone 7 lab to include conductivity in their readings, which they did for the last three sampling events. The YSI-85 does not have a filter.

I'll ask Biovir to re-issue those reports.

Talk to you in a bit,

-Dan

Dan Sicular
Senior Project Manager
Environmental Science Associates
436 14th Street, Suite 600
Oakland, CA 94612
510-839-5066 fax 510-839-5825
Direct: 510-740-1724
dsicular@esassoc.com

From: Laura.Hidas@acwd.com [mailto:Laura.Hidas@acwd.com]
Sent: Tuesday, May 09, 2006 1:27 PM
To: Sicular, Dan; aflores@zone7water.com; lyoung@valleywater.org; Silver, Judith
Subject: Stormwater Data Update / Ed program

Hi Dan,

The QA/QC on the stormwater data is more or less complete. The data is OK to use, but there are a couple additional things that we'll need for the records.

1) How often was the YSI-85 calibrated? How often was the filter changed?
2) We need to get Biovir to re-issue several of the "Report of Sample Evaluation" forms. They were sampled on 12-23-05 and the signature date was 01-04-05 (should be 01-04-06), which does not pass QA/QC, so we'll need them to correct this even though the data is fine. The reports that need to be re-issued (fax is OK) are:

052018-1
052018-2
052018-3
052018-4
052018-5
052018-6
052018-7
052018-8
052018-9
052018-10

That's it from the QA/QC end. Zone 7's data was "excellent" so we don't need any additional information.

We'll talk at 2 pm today for our conference call -- items I am hoping to discuss include an agenda for the education meeting, a plan for follow-up to the education meeting, and an update on recent activities leading up to our June meeting.

Safy Khalifa/OPS/ACWD
05/10/2006 07:31 AM

To Laura Hidas/OPS/ACWD@ACWD
cc
bcc
Subject Re: SBA project Stormwater Data 

Laura
That is good enough for me, thanks

Safy Khalifa,
Quality Control/Quality Assurance Officer
Alameda County Water District
43885 South Grimmer Blvd
Fremont, CA 94538
Phone 510-668-6517 Fax 510-656-3426
safy.khalifa@acwd.com

Laura Hidas/OPS/ACWD



Laura Hidas/OPS/ACWD
05/09/2006 05:26 PM

To Safy Khalifa/OPS/ACWD@ACWD
cc
Subject SBA project Stormwater Data

Hi Safy,
Here is the info from our consultant on the YSI-85 calibration. Let me know what you think.
Thanks!
Laura

Laura Hidas
Alameda County Water District
43885 S. Grimmer Blvd., Fremont, CA 94538
Phone #: (510) 668-6516
Fax #: (510) 656-3426
laura.hidas@acwd.com

----- Forwarded by Laura Hidas/OPS/ACWD on 05/09/2006 05:26 PM -----



"Sicular, Dan"
<DSicular@esassoc.com>
05/09/2006 05:21 PM

To <Laura.Hidas@acwd.com>
cc
Subject RE: Stormwater Data Update / Ed program

Hi Laura--

The YSI was factory calibrated prior to the beginning of sampling (by Equipco -- I can pass on to you the calibration sheet if you need it). After that, prior to each day in the field the instrument was started up and allowed to go through its self-check procedure. At each sampling station we calibrated DO for the altitude of the station (to the nearest 100 feet). No other calibration was performed. While the QAPP calls for calibration of conductivity/salinity prior to each sampling event, this was not performed, as long as the instrument appeared to be functioning properly in the field. The YSI 85 manual states that "system calibration [for conductivity] is rarely required

APPENDIX C

Biovir Lab Pathogen Data & QA/QC Information

SBA Watershed Stormwater Monitoring 2006

Biovir Lab Pathogen Data & QA/QC Information

QA / QC
MAY 25 2006
REVIEWED

Safy

REPORT OF SAMPLE EVALUATION

REPORT NO.: 052018-1 through 052018-10

PAGE NO.: 1 of 3

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street
San Francisco

CLIENT NO.: ESA002

GIARDIA AND CRYPTOSPORIDIUM SAMPLE INFORMATION:

BioVir ID	Client ID#	Sampler	Sample Date	Sample Time	Sample Volume	Turbidity	Liters Assayed	Elution Date
052018-1	BR-1	Dan Sicular	12/21/05	9:45	10 Liters	27.6	10.0	12/22/05
052018-2	BR-1 MS	Dan Sicular	12/21/05	9:45	10 Liters	27.6	10.0	12/22/05
052018-3	BR-3	Dan Sicular	12/21/05	11:45	10 Liters	9.92	10.0	12/22/05
052018-4	BR-3 MS	Dan Sicular	12/21/05	11:45	10 Liters	9.92	10.0	12/22/05
052018-5	LDV-3	Dan Sicular	12/21/05	13:15	10 Liters	3.66	10.0	12/22/05
052018-6	LDV-3 MS	Dan Sicular	12/21/05	13:15	10 Liters	3.66	10.0	12/22/05
052018-7	LDV-1	Dan Sicular	12/21/05	14:45	10 Liters	1.1	10.0	12/22/05
052018-8	LDV-1 MS	Dan Sicular	12/21/05	14:45	10 Liters	1.1	10.0	12/22/05
052018-9	CA-1	Dan Sicular	12/21/05	8:30	10 Liters	8.5	10.0	12/22/05
052018-10	CA-1 MS	Dan Sicular	12/21/05	8:30	10 Liters	8.5	10.0	12/22/05

 = Not Applicable or Not Available.

FOR RESULTS SEE SHEET TWO OF THIS REPORT

REPORT NO.: 052018-1 through 052018-10
 CLIENT NO.: ESA002
 PAGE NO.: 2 of 3

ASSAY PERFORMED:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Giardia Organisms / Liter										
BioVir ID	Client ID#	Giardia Species Cysts		DAPI		Empty	DIC			DAPI & DIC POSITIVE
		Organisms / Liter		Positive	Positive		Amorphous Structure	Internal Structure	>1 Internal Structure	
		FA	Negative							
052018-1	BR-1	0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
052018-3	BR-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
052018-5	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
052018-7	LDV-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
052018-9	CA-1	0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1

"Less than" results represent the lowest detection limit for this assay.

Cryptosporidium Organisms / Liter										
BioVir ID	Client ID#	Giardia Species Cysts		DAPI		Empty	DIC			DAPI & DIC POSITIVE
		Organisms / Liter		Positive	Positive		Amorphous Structure	Internal Structure	>1 Internal Structure	
		FA	Negative							
052018-1	BR-1	0.2	0.2	<0.1	<0.1	0.2	<0.1	<0.1		<0.1
052018-3	BR-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
052018-5	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
052018-7	LDV-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
052018-9	CA-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1

"Less than" results represent the lowest detection limit for this assay.

Fluorescence Antibody

FA Positive Organisms - Giardia Species Cysts								
BioVir ID	Client ID#	Giardia Species Cysts			Total Number of Spike Added	(B/C) x 100 = % Recovery	OPR	
		Total FA Count	Number Observed from Field Sample	Difference Between MS and FS			Average % Recovery	Standard Deviation
052018-2	BR-1 MS	68	1	67	98	68.4	38	16
052018-4	BR-3 MS	81	0	81	98	82.7	38	16
052018-6	LDV-3 MS	71	0	71	98	72.4	38	16
052018-8	LDV-1 MS	65	0	65	98	66.3	38	16
052018-10	CA-1 MS	58	1	57	98	58.2	38	16

Note: On-going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run.

FA Positive Organisms - Cryptosporidium Oocysts								
BioVir ID	Client ID#	Crypto Oocysts			Total Number of Spike Added	(B/C) x 100 = % Recovery	OPR	
		Total FA Count	Number Observed from Field Sample	Difference Between MS and FS			Average % Recovery	Standard Deviation
052018-2	BR-1 MS	4	2	2	99	2.0	49	16
052018-4	BR-3 MS	65	0	65	99	65.7	49	16
052018-6	LDV-3 MS	68	0	68	99	68.7	49	16
052018-8	LDV-1 MS	84	0	84	99	84.8	49	16
052018-10	CA-1 MS	72	0	72	99	72.7	49	16

Note: On-going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run.



685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

AMENDED

REPORT NO.: 052018-2

PAGE NO.: 1 of 1

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104

CLIENT NO.: ESA002

SAMPLE INFORMATION:

Name of Sampler:	Dan Sicular	Sample Date:	12/21/05
Sample Source:	Dan Sicular	Sample Time:	09:45
Sample Location:	BR-1	Turbidity (NTU):	27.6
Sample Volume:	10 Liter, Grab	Temperature / pH:	N/A
Filter Type / Lot #:	Envirochek / A10534058 / 257752	Comments:	Raw Drinking Water, Matrix Spike Sample

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Amount Assayed: 10.0 Liters Check-in Temp: 4.5 C Date/Time Received: 12/21/05 17:20 Elution Date: 12/22/05

RESULTS - NUMBER OF SLIDES EXAMINED: TWO		
Report Parameter	FA Positive Organisms	
	Giardia Species Cysts	Cryptosporidium Oocysts
Total FA Count	68	4
Number Observed from Field Sample	1	2
Difference between MS and FS	67	2
Total Number of Spike Added	98	99
(B/C) x 100 = (%) Recovery	68.4	2.0

OPR	Giardia Species Cysts	Cryptosporidium Oocysts
Average (%) Recovery	38	49
Standard Deviation	16	16

Note: On-Going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run. Okay to examine extra slide per Dan Sicular.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

12-23-2005
COMPLETION DATE

SIGNATURE/DATE: 05.10.2006
YB



BioVir Laboratories, Inc.



NELAC #05234CA
EPA ID #01401, CA-ELAP # 1795

685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.blovir.com

REPORT OF SAMPLE EVALUATION

AMENDED

REPORT NO.: 052018-4

PAGE NO.: 1 of 1

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104

CLIENT NO.: ESA002

SAMPLE INFORMATION:

Name of Sampler:	Dan Sicular	Sample Date:	12/21/05
Sample Source:	Dan Sicular	Sample Time:	11:45
Sample Location:	BR-3	Sample Volume:	10 Liters, grab
Sample Volume:	10 Liter, Grab	Turbidity (NTU):	9.92
Filter Type / Lot #:	Envirochek / A10534058 / 257683	Comments:	Raw Drinking Water, Matrix Spike Sample

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Amount Assayed: 10.0 Liters Check-in Temp: 6.9 C Date/Time Received: 12/21/05 17:20 Elution Date: 12/22/05

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	FA Positive Organisms	
	Giardia Species Cysts	Cryptosporidium Oocysts
Total FA Count	81	65
Number Observed from Field Sample	0	0
Difference between MS and FS	81	65
Total Number of Spike Added	98	99
(B/C) x 100 = (%) Recovery	82.7	65.7

OPR	Giardia Species Cysts	Cryptosporidium Oocysts
Average (%) Recovery	38	49
Standard Deviation	16	15

Note: On-Going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

12-23-2005
COMPLETION DATE

SIGNATURE/DATE 05-10-2006
RB



685 Stone Road, Unit 6 - Benicia, CA 94510 - (707) 747-5906 - 1-800-GIARDIA - FAX (707) 747-1751 - WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION
AMENDED

REPORT NO.: 052018-5
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: LDV-3
Filter Type / Lot #: Envirochek / A10534055 / 257682
Comments: Raw Drinking Water
Sample Date: 12/21/05
Sample Time: 13:15
Sample Volume: 10 Liters, grab
Turbidity (NTU): 3.66

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 10.0 Liters Check-in Temp: 8.5 C Date/Time Received: 12/21/05 17:20 Elution Date: 12/22/05

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	Organisms / Liter	
	Giardia Species Cysts	Cryptosporidium Oocysts
Fluorescence Antibody	<0.1	<0.1

ADDITIONAL INFORMATION		
DAPI		
Negative	<0.1	<0.1
Positive (Internal Staining)	<0.1	<0.1
Positive (Stained Nuclei)	<0.1	<0.1
DIC		
Empty	<0.1	<0.1
Amorphous Structure	<0.1	<0.1
Internal Structure (One)	<0.1	<0.1
Internal Structure (>One)	<0.1	
DAPI & DIC Positive	<0.1	<0.1

"Less than" results represent the lower detection limit for this assay.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.
COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.
MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

12-23-2005
COMPLETION DATE

Richard E. Daniel
SIGNATURE/DATE 05-10-2006
YB



685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

AMENDED

REPORT NO.: 052018-6

PAGE NO.: 1 of 1

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104

CLIENT NO.: ESA002

SAMPLE INFORMATION:

Name of Sampler:	Dan Sicular	Sample Date:	12/21/05
Sample Source:	Dan Sicular	Sample Time:	13:15
Sample Location:	LDV-3	Sample Volume:	10 Liters, grab
Sample Volume:	10 Liter, Grab	Turbidity (NTU):	3.66
Filter Type / Lot #:	Envirochek / A10534055 / 257756	Comments:	Raw Drinking Water, Matrix Spike Sample

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Amount Assayed: 10.0 Liters Check-in Temp: 8.5 C Date/Time Received: 12/21/05 17:20 Elution Date: 12/22/05

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	FA Positive Organisms	
	Giardia Species Cysts	Cryptosporidium Oocysts
Total FA Count	71	68
Number Observed from Field Sample	0	0
Difference between MS and FS	71	68
Total Number of Spike Added	98	99
(B/C) x 100 = (%) Recovery	72.4	68.7

OPR	Giardia Species Cysts	Cryptosporidium Oocysts
Average (%) Recovery	38	49
Standard Deviation	16	16

Note: On-Going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

12-23-2005
COMPLETION DATE

Richard E. Daniel
SIGNATURE/DATE 05.10.2006
TB



BioVir Laboratories, Inc.



NELAC #05234CA
EPA ID #01401, CA-ELAP # 1795

685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION
AMENDED

REPORT NO.: 052018-9
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: CA-1
Filter Type / Lot #: Envirochek / A10534058 / 257759
Comments: Raw Drinking Water
Sample Date: 12/21/05
Sample Time: 08:30
Sample Volume: 10 Liters, grab
Turbidity (NTU): 8.5

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 10.0 Liters Check-in Temp: 3.1 C Date/Time Received: 12/21/05 17:20 Elution Date: 12/22/05

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	Organisms / Liter	
	Giardia Species Cysts	Cryptosporidium Oocysts
Fluorescence Antibody	0.1	<0.1

ADDITIONAL INFORMATION		
DAPI		
Negative	0.1	<0.1
Positive (Internal Staining)	<0.1	<0.1
Positive (Stained Nuclei)	<0.1	<0.1
DIC		
Empty	0.1	<0.1
Amorphous Structure	<0.1	<0.1
Internal Structure (One)	<0.1	<0.1
Internal Structure (>One)	<0.1	
DAPI & DIC Positive	<0.1	<0.1

"Less than" results represent the lower detection limit for this assay.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.
COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.
MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

12-23-2005
COMPLETION DATE

Richard E. Donohue
SIGNATURE DATE 05-10-2006
4B



BioVir Laboratories, Inc.



NELAC #05234CA
EPA ID #01401, CA-ELAP # 1795

685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

AMENDED

REPORT NO.: 052018-10
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Name of Sampler: Dan Sicular
Sample Source: Dan Sicular
Sample Location: CA-1
Sample Volume: 10 Liter, Grab
Filter Type / Lot #: Envirochek / A10534058 / 257770
Sample Date: 12/21/05
Sample Time: 08:30
Sample Volume: 10 Liters, grab
Turbidity (NTU): 8.5
Comments: Raw Drinking Water, Matrix Spike Sample

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Amount Assayed: 10.0 Liters Check-in Temp: 3.1 C Date/Time Received: 12/21/05 17:20 Elution Date: 12/22/05

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	FA Positive Organisms	
	Giardia Species Cysts	Cryptosporidium Oocysts
Total FA Count	58	72
Number Observed from Field Sample	1	0
Difference between MS and FS	57	72
Total Number of Spike Added	98	99
(B/C) x 100 = (%) Recovery	58.2	72.7

OPR	Giardia Species Cysts	Cryptosporidium Oocysts
Average (%) Recovery	38	49
Standard Deviation	16	16

Note: On-Going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

12.23.2005
COMPLETION DATE

Richard E. Daniel
SIGNATURE/DATE 05.10.2006
YB

BIOVIR LABORATORIES INC.
 SAMPLE TRANSFER RECEIPT

COPY

CLIENT: ESA	CONTACT: Dan Sicular
TELEPHONE: on file	DELIVERED BY: same

SAMPLES DELIVERED

SAMPLE ID / DESCRIPTION	SAMPLE TAKEN DATE / TIME	NUMBER OF CONTAINERS	ICE? Y/N	ANALYSIS(ES) REQUESTED
BR-1	12-21-05 9:45	1	Y	1623
BR-1	12-21-05 - spike	1	Y	
BR-3	1145	1	Y	
BR-3	spike 1145	1	Y	
LDR-3	1:15 PM	1	Y	
LDR-3	spike 1:15 PM	1	Y	
LDR-1	14:45	1	Y	
LDR-1	spike 1445	1	Y	
CA-1	8:30	1	Y	
CA-1	spike 830	1	Y	

SPECIAL INSTRUCTIONS:

BILL TO ADDRESS: on file	SEND REPORT TO: on file

RELINQUISHED BY (SIGNED)	RECEIVED BY (SIGNED)	DATE	TIME
<i>[Signature]</i>	<i>[Signature]</i>	12-21-05	17:20

PHONE: 707-747-5906 FAX: 707-747-1751
 BIOVIR LABORATORIES, INC. 685 STONE ROAD, UNIT 6 BENICIA CALIFORNIA 94510



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY

875002

SAMPLE DATA SHEET

COPY

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

001

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA		SAMPLE DATE: 12-21-05	
		SAMPLE TIME: 9:45	
NAME OF SAMPLER: Dan Sicular		pH:	Water Temp (C):
SAMPLE SOURCE: BR-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter # 10L) Meter Start: _____ Meter Stop: _____		TURBIDITY (NTU): Begin: 27.6 End: _____ Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED (Please check one of the following)	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

REQUINISHED BY: <i>[Signature]</i>	DATE / TIME: 12-21-05 17:20
RECEIVED BY: <i>[Signature]</i>	DATE / TIME: 12-21-05 17:20

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY

SAMPLE DATA SHEET

(Please fill out applicable areas, sign and turn in to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-734-7300 WEB: www.biovir.com

EX-5002
002

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA		SAMPLE DATE: 12-21-05	
		SAMPLE TIME: 9:45	
NAME OF SAMPLER: Dan Sicular		pH:	Water Temp (C):
SAMPLE SOURCE: BR-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #) Meter Start: Meter Stop:		TURBIDITY (NTU): Begin: 27.6 End: Total Volume: Gallons 106 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

<input type="checkbox"/>	REGULAR SAMPLE
<input checked="" type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: <i>[Signature]</i>	DATE / TIME: 12-21-05 17:00
RECEIVED BY: <i>[Signature]</i>	DATE / TIME: 12-21-05 17:20

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY
SAMPLE DATA SHEET

243002

COPY

(Please fill out applicable areas, sign and return to BioVir with the sample.)
 Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

003

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA	SAMPLE DATE: 12-21-05	
	SAMPLE TIME: 11:45	
NAME OF SAMPLER: Dariusicalat	pH:	Water Temp (C):
SAMPLE SOURCE: BR-3	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter #)	TURBIDITY (NTU): Begin: 9.92 End:	
Meter Start: Meter Stop:	Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: <i>[Signature]</i>	DATE / TIME: 12-21-05 17:00
RECEIVED BY: <i>[Signature]</i>	DATE / TIME: 12-21-05 17:00

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
 WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY
SAMPLE DATA SHEET

EASCO2

(Please fill out applicable areas, sign and return to BioVir with the sample.)
 Phone: 1-800-GIARDIA Fax: 707-747-1751 Website: www.biovir.com

COPY

004

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA		SAMPLE DATE: 12-21-05	
		SAMPLE TIME: 11:45	
NAME OF SAMPLER: Dan Siccelar		pH:	Water Temp (C):
SAMPLE SOURCE: BR-3		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter # _____)		TURBIDITY (NTU): Begin: 9.92 End: _____	
Meter Start: _____	Meter Stop: _____	Total Volume: _____ Gallons 10 _____ Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
<p>LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.</p>	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input type="checkbox"/>	REGULAR SAMPLE
<input checked="" type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: W. A. [Signature]	DATE / TIME: 12-21-05 17:20
RECEIVED BY: [Signature]	DATE / TIME: 12-21-05 17:20

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
 WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

275002

(Please fill out applicable areas, sign and return to BioVir with the sample)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA		SAMPLE DATE: 12-21-05	
		SAMPLE TIME: 1:15 PM	
NAME OF SAMPLER: Don Siscaler		pH:	Water Temp (C):
SAMPLE SOURCE: LDV-3		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION: Lake Del Valle		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 3.66 End:	
Meter Start:	Meter Stop:	Total Volume: _____ Gallons	10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: A J W	DATE / TIME: 12-21-05 17:00
RECEIVED BY: Mario Ruelas	DATE / TIME: 12-21-05 17:20

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY 245002

SAMPLE DATA SHEET

COPY

(Please fill out applicable areas, sign and return to BioVir with the sample)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA
SAMPLE DATE: 12.21.05
SAMPLE TIME: 1:15 PM
NAME OF SAMPLER: Dan Sicular
pH:
Water Temp (C):
SAMPLE SOURCE: LDU-3
TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water [X] Treated Drinking Water [] Wastewater [] Filtered Wastewater []
SAMPLE LOCATION: Lake Del Valle
DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No
SAMPLE VOLUME: (Meter #) TURBIDITY (NTU): Begin: 3.66 End:
Meter Start: Meter Stop: Total Volume: Gallons 10 Liters

Client Sample ID #:
P.O. #:

ASSAY REQUESTED: Please check one of the following
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule.
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)
REGULAR SAMPLE
[X] MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)
REGULAR SAMPLE
MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)
Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: [Signature] DATE / TIME: 12.21.05 17:20
RECEIVED BY: [Signature] DATE / TIME: 12.21.05 17:20

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY 873003

SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY 7

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA		SAMPLE DATE: 12.21.05	
		SAMPLE TIME: 14:45	
NAME OF SAMPLER: Dan S. Carter		pH:	Water Temp (C):
SAMPLE SOURCE: L DV.1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 1.1 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 12.21.05 17:20
RECEIVED BY: [Signature]	DATE / TIME: 12.21.05 17:20

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

215002

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA		SAMPLE DATE: 12.21.05	
		SAMPLE TIME: 14:45	
NAME OF SAMPLER: Dan S. Calar		pH:	Water Temp (C):
SAMPLE SOURCE: LDV-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 1.1 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input type="checkbox"/>	REGULAR SAMPLE
<input checked="" type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 12.21.05 17:00
RECEIVED BY: [Signature]	DATE / TIME: 12.21.05 17:20

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY
SAMPLE DATA SHEET

245002

(Please fill out applicable areas, sign and return to BioVir with the sample.)
 Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA	SAMPLE DATE: 12-21-05	
	SAMPLE TIME: 8:30	
NAME OF SAMPLER: Dan Sicular	pH:	Water Temp (C):
SAMPLE SOURCE: CA-1	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes _____ No _____	
SAMPLE VOLUME: (Meter # 10L) Meter Start: _____ Meter Stop: _____	TURBIDITY (NTU): Begin: 2.5 End: _____ Total Volume: _____ Gallons _____ Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: _____	DATE / TIME: 12-21-05 17:30
RECEIVED BY: Mark K... [Signature]	DATE / TIME: 12-21-05 17:30

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
 WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

245002

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA	SAMPLE DATE: 12-21-05	
	SAMPLE TIME: 8:30	
NAME OF SAMPLER: Don Sicalar	pH:	Water Temp (C):
SAMPLE SOURCE: CA-1	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter # 10L) Meter Start: _____ Meter Stop: _____	TURBIDITY (NTU): Begin: 8.5 End: _____ Total Volume: _____ Gallons _____ Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input type="checkbox"/>	REGULAR SAMPLE
<input checked="" type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 12-21-05 17:00
RECEIVED BY: [Signature]	DATE / TIME: 12-21-05 17:20

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 695 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



"Sicular, Dan"
<DSicular@esassoc.com>
05/09/2006 05:25 PM

To "Nancy Boyd" <nbb@biovir.com>
cc <Laura.Hidas@acwd.com>
bcc
Subject Giardia and Crypto Sample Results: Need Corrected Reports
of Sample Evaluation

Hi Nancy--

Can you please correct the "Report of Sample Evaluation" forms for the samples for the SBA Watershed project taken and submitted by ESA on 12-23-05 -- the signature date is 01-04-05 (should be 01-04-06). If you could e-mail or send corrected reports, with signature, it would be much appreciated.

Reports in questions are:

052018-1
052018-2
052018-3
052018-4
052018-5
052018-6
052018-7
052018-8
052018-9
052018-10

Thanks,

Dan

Dan Sicular
Senior Project Manager
Environmental Science Associates
436 14th Street, Suite 600
Oakland, CA 94612
510-839-5066 fax 510-839-5825
Direct: 510-740-1724
dsicular@esassoc.com



685 Stone Road, Unit 6 · Benicia, CA 94510 · (707) 747-5906 · 1-800-GIARDIA · FAX (707) 747-1751 · WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 052018-6
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
 225 Bush Street, Suite 1700
 San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Name of Sampler:	Dan Sicular	Sample Date:	12/21/05
Sample Source:	Dan Sicular	Sample Time:	13:15
Sample Location:	LDV-3	Sample Volume:	10 Liters, grab
Sample Volume:	10 Liter, Grab	Turbidity (NTU):	3.66
Filter Type / Lot #:	Envirochek / A10534055 / 257756	Comments:	Raw Drinking Water, Matrix Spike Sample

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
 Amount Assayed: 10.0 Liters Check-in Temp: 8.5 C Date/Time Received: 12/21/05 17:20 Elution Date: 12/22/05

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	FA Positive Organisms	
	Giardia Species Cysts	Cryptosporidium Oocysts
Total FA Count	71	68
Number Observed from Field Sample	0	0
Difference between MS and FS	71	68
Total Number of Spike Added	98	99
(B/C) x 100 = (%) Recovery	72.4	68.7

OPR	Giardia Species Cysts	Cryptosporidium Oocysts
Average (%) Recovery	38	49
Standard Deviation	16	16

Note: On-Going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

12-23-2005
 COMPLETION DATE

Richard E. Daniel
 SIGNATURE/DATE 01.04.2005



685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 052018-9
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: CA-1
Filter Type / Lot #: Envirochek / A10534058 / 257759
Comments: Raw Drinking Water
Sample Date: 12/21/05
Sample Time: 08:30
Sample Volume: 10 Liters, grab
Turbidity (NTU): 8.5

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 10.0 Liters Check-in Temp: 3.1 C Date/Time Received: 12/21/05 17:20 Elution Date: 12/22/05

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	Organisms / Liter	
	Giardia Species Cysts	Cryptosporidium Oocysts
Fluorescence Antibody	0.1	<0.1

ADDITIONAL INFORMATION		
DAPI		
Negative	0.1	<0.1
Positive (Internal Staining)	<0.1	<0.1
Positive (Stained Nuclei)	<0.1	<0.1
DIC		
Empty	0.1	<0.1
Amorphous Structure	<0.1	<0.1
Internal Structure (One)	<0.1	<0.1
Internal Structure (>One)	<0.1	<0.1
DAPI & DIC Positive	<0.1	<0.1

"Less than" results represent the lower detection limit for this assay.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

12-23-2005
COMPLETION DATE

Richard E. Daniel
SIGNATURE/DATE
01-04-2005

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060334-1 through 060344-7

PAGE NO.: 1 of 2

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104

CLIENT NO.: ESA002

GIARDIA AND CRYPTOSPORIDIUM SAMPLE INFORMATION:

BioVir ID	Client ID#	Sampler	Sample Date	Sample Time	Sample Volume	Turbidity	Liters Assayed	Elution Date
060334-1	CA1	Dan Sicular	02/27/06	8:00	10 Liters	41.7	10.0	02/28/06
060334-2	BR-1	Dan Sicular	02/27/06	8:25	10 Liters	55.0	10.0	02/28/06
060334-3	BR-2	Dan Sicular	02/27/06	9:00	10 Liters	155.0	10.0	02/28/06
060334-4	BR-3	Dan Sicular	02/27/06	10:30	10 Liters	7.5	10.0	02/28/06
060334-5	LDV-3	Dan Sicular	02/27/06	11:30	10 Liters	16.6	10.0	02/28/06
060334-6	LDV-2	Dan Sicular	02/27/06	12:30	10 Liters	7.3	10.0	02/28/06
060334-7	LDV-1	Dan Sicular	02/27/06	13:00	10 Liters	3.5	10.0	02/28/06

 = Not Applicable or Not Available.

FOR RESULTS SEE SHEET TWO OF THIS REPORT

REPORT NO.: 060334-1 through 060334-10
 CLENT NO.: ESA002
 PAGE NO.: Page 2 of 2

ASSAY PERFORMED:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Giardia Organisms / Liter										
BioVir ID	Client ID#	Giardia Species Cysts		DAPI		DIC				DAPI & DIC POSITIVE
		Organisms / Liter		Positive	Positive	Empty	Amorphous Structure	Internal Structure	>1 Internal Structure	
		FA	Negative							
060334-1	CA1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
060334-2	BR-1	0.6	0.6	<0.3	<0.3	0.3	0.3	<0.3	<0.3	<0.3
060334-3	BR-2	2.0	<1.0	<1.0	2.0	<1.0	<1.0	2.0	<1.0	2.0
060334-4	BR-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060334-5	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060334-6	LDV-2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060334-7	LDV-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

"Less than" results represent the lowest detection limit for this assay.

Cryptosporidium Organisms / Liter										
BioVir ID	Client ID#	Crypto Oocysts		DAPI		DIC				DAPI & DIC POSITIVE
		Organisms / Liter		Positive	Positive	Empty	Amorphous Structure	Internal Structure		
		FA	Negative							
060334-1	CA1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2
060334-2	BR-1	0.9	<0.3	0.6	0.3	<0.3	0.9	<0.3		<0.3
060334-3	BR-2	5.0	<1.0	2.0	3.0	<1.0	5.0	<1.0		3.0
060334-4	BR-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
060334-5	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
060334-6	LDV-2	0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1		<0.1
060334-7	LDV-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1

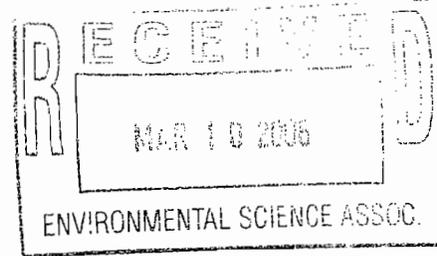
"Less than" results represent the lowest detection limit for this assay.



685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060334-1
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002



SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: CA1
Filter Type / Lot #: Envirochek HV / A10534058 / 257585
Sample Date: 02/27/06
Sample Time: 08:00
Sample Volume: 10 Liters, grab
Turbidity (NTU): 41.7

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 5.0 Liters Check-in Temp: 7.1 C Date/Time Received: 02/27/06 15:15 Elution Date: 02/28/06

RESULTS - NUMBER OF SLIDES EXAMINED: TWO		
Report Parameter	Organisms / Liter	
	Giardia Species Cysts	Cryptosporidium Oocysts
Fluorescence Antibody	<0.2	<0.2

ADDITIONAL INFORMATION		
DAPI		
Negative	<0.2	<0.2
Positive (Internal Staining)	<0.2	<0.2
Positive (Stained Nuclei)	<0.2	<0.2
DIC		
Empty	<0.2	<0.2
Amorphous Structure	<0.2	<0.2
Internal Structure (One)	<0.2	<0.2
Internal Structure (>One)	<0.2	<0.2
DAPI & DIC Positive	<0.2	<0.2

"Less than" results represent the lower detection limit for this assay.
Okay to run one extra slide per Dan Sicular.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.
COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.
MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

03-02-2006
COMPLETION DATE

Richard E. Daniel
SIGNATURE/DATE 03-06-2006
RB



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

334-1

(Please fill out applicable areas, sign and return to BioVir with sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA	SAMPLE DATE: 2-27-06	
	SAMPLE TIME: 8:00	
NAME OF SAMPLER: Dan Siccar	pH:	Water Temp (C): 11.5
SAMPLE SOURCE: CAI	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter #)	TURBIDITY (NTU): Begin: 41.7 End:	
Meter Start: Meter Stop:	Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 2-27-06 3:15 PM
RECEIVED BY: [Signature]	DATE / TIME: 2/27/06 1:31 PM

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM **COPY**

SAMPLE DATA SHEET

334-2

(Please fill out applicable areas, sign and return to BioVir with the sample.)
 Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 2-27-06	
		SAMPLE TIME: 8:25	
NAME OF SAMPLER: Dansicator		pH:	Water Temp (C): 12.8
SAMPLE SOURCE: BR-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE - Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE - Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 2-27-06 3:15
RECEIVED BY:	DATE / TIME: 2/27/06 1:15

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
 WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 2-27-06	
		SAMPLE TIME: 9:00 AM	
NAME OF SAMPLER: Sicular San Sicular		pH:	Water Temp (C): 12.7
SAMPLE SOURCE: BR-2		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: ~300 End:	
Meter Start:	Meter Stop:	Total Volume: _____ Gallons	LO Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

Extra slides if needed - All 7 samples

RELINQUISHED BY: Daniel Sicular	DATE / TIME: 2-27-06 3:15
RECEIVED BY: K. Buldy	DATE / TIME: 2/27/06 1:35

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

334-4



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY

SAMPLE DATA SHEET COPY

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA-SBA		SAMPLE DATE: 2-27-06	
		SAMPLE TIME: 10:30	
NAME OF SAMPLER: Don Sicular		pH:	Water Temp (C): 12.2°
SAMPLE SOURCE: BR-3		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes _____ No _____	
SAMPLE VOLUME: (Meter # _____)		TURBIDITY (NTU): Begin: _____ End: ~ 7.4	
Meter Start: _____	Meter Stop: _____	Total Volume: _____ Gallons	10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
--------------------------	---

OTHER ANALYTES (Please indicate Analyte & Method)

<input type="checkbox"/>	
--------------------------	--

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 2-27-06 3:15
RECEIVED BY: [Signature]	DATE / TIME: 2/27/06 1515

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

2.4

334-5



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

COPY

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA-SBA		SAMPLE DATE: 2-27-06	
		SAMPLE TIME: 11:30	
NAME OF SAMPLER: Dan S. Calver		pH:	Water Temp (C): 12.5°
SAMPLE SOURCE: LDV-3		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 109 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 2-27-06
RECEIVED BY: [Signature]	DATE / TIME: 2/27/06 1515

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

334-6

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 2-27-06	
		SAMPLE TIME: 12:30	
NAME OF SAMPLER: Dan S. S. calar		pH:	Water Temp (C): 15.2°
SAMPLE SOURCE: LDV-2		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 11.4 End:	
Meter Start:	Meter Stop:	Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 2-27-06
RECEIVED BY: [Signature]	DATE / TIME: 2/27/06 1575

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

9.1



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

COPY 334.7

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 2-27-06	
		SAMPLE TIME: 1:00 PM	
NAME OF SAMPLER: Lee S. Carr		pH:	Water Temp (C): 13.3
SAMPLE SOURCE: LDV-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 3.5 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 2-27-06
RECEIVED BY:	DATE / TIME: 2/27/06 1515

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060050-1 through 060050-6

PAGE NO.: 1 of 2

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104

CLIENT NO.: ESA002

GIARDIA AND CRYPTOSPORIDIUM SAMPLE INFORMATION:

BioVir ID	Client ID#	Sampler	Sample Date	Sample Time	Sample Volume	Turbidity	Liters Assayed	Elution Date
060050-1	CA-1	Dan Sicular	02/28/06	8:00	10 Liters	34.1	10.0	03/01/06
060050-2	BR-1	Dan Sicular	02/28/06	8:30	10 Liters	19.7	10.0	03/01/06
060050-3	BR-3	Dan Sicular	02/28/06	10:00	10 Liters	8.4	10.0	03/01/06
060050-4	LDV-3	Dan Sicular	02/28/06	11:00	10 Liters	4.4	10.0	03/01/06
060050-5	LDV-2	Dan Sicular	02/28/06	11:45	10 Liters	30.1	10.0	03/01/06
060050-6	LDV-1	Dan Sicular	02/28/06	12:15	10 Liters	142.1	10.0	03/01/06

 = Not Applicable or Not Available.

FOR RESULTS SEE SHEET TWO OF THIS REPORT

REPORT NO.:

CLIENT NO.: ESA002

PAGE NO.: 2 OF 2

ASSAY PERFORMED:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Giardia Organisms / Liter										
BioVir ID	Client ID#	Giardia Species Cysts		DAPI		DIC				DAPI & DIC POSITIVE
		Organisms / Liter		Positive	Positive	Empty	Amorphous Structure	Internal Structure	>1 Internal Structure	
		FA	Negative							
060050-1	CA-1	0.6	0.6	<0.2	<0.2	0.6	<0.2	<0.2	<0.2	<0.2
060050-2	BR-1	2.9	2.1	<0.3	0.9	1.2	1.2	0.6	0.6	1.2
060050-3	BR-3	0.6	0.6	<0.1	<0.1	0.6	<0.1	<0.1	<0.1	<0.1
060050-4	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060050-5	LDV-2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060050-6	LDV-1	0.8	0.4	<0.4	0.4	<0.4	0.8	<0.4	<0.4	<0.4

"Less than" results represent the lowest detection limit for this assay.

Cryptosporidium Organisms / Liter										
BioVir ID	Client ID#	Crypto Oocysts		DAPI		DIC			DAPI & DIC POSITIVE	
		Organisms / Liter		Positive	Positive	Empty	Amorphous Structure	Internal Structure		
		FA	Negative							
060050-1	CA-1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
060050-2	BR-1	9.7	0.5	2.0	7.2	0.5	4.4	4.9	4.9	
060050-3	BR-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
060050-4	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
060050-5	LDV-2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
060050-6	LDV-1	1.5	0.4	<0.4	0.8	<0.4	1.5	<0.4	<0.4	

"Less than" results represent the lowest detection limit for this assay.



BioVir Laboratories, Inc.



NELAC #05234CA
EPA ID #01401, CA-ELAP # 1795

685 Stone Road, Unit 6 · Benicia, CA 94510 · (707) 747-5906 · 1-800-GIARDIA · FAX (707) 747-1751 · WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060050-3
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: BR-3
Filter Type / Lot #: Envirochek HV / A10534581
Sample Date: 02/28/06
Sample Time: 10:00
Sample Volume: 10 Liters, grab
Turbidity (NTU): 8.4

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 10.0 Liters Check-in Temp: 4.4 C Date/Time Received: 02/28/06 14:45 Elution Date: 03/01/06

RESULTS - NUMBER OF SLIDES EXAMINED: TWO		
Report Parameter	Organisms / Liter	
	Giardia Species Cysts	Cryptosporidium Oocysts
Fluorescence Antibody	0.6	<0.1

ADDITIONAL INFORMATION		
DAPI		
Negative	0.6	<0.1
Positive (Internal Staining)	<0.1	<0.1
Positive (Stained Nuclei)	<0.1	<0.1
DIC		
Empty	0.6	<0.1
Amorphous Structure	<0.1	<0.1
Internal Structure (One)	<0.1	<0.1
Internal Structure (>One)	<0.1	
DAPI & DIC Positive	<0.1	<0.1

"Less than" results represent the lower detection limit for this assay.
Okay to run one extra slide per Dan Sicular.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

03-03-2006
COMPLETION DATE

Richard E. Daniel
SIGNATURE/DATE 03-10-2006
RB

4-4

Giardia / cryptosporidium

0050-1
COPY



TOTAL CULTURABLE VIRUS / ENTERIC VIRUS ASSAY - SAMPLE DATA SHEET

(Please fill out completely and return white copy to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751

Note: Please use waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA	SAMPLE DATE: 2-28-06	
	SAMPLE TIME: 8:00	
NAME OF SAMPLER: Dan Sicalar	pH: pH (adjusted):	Water Temp (C): 12.1
SAMPLE SOURCE:	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION: CA-1	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes _____ No _____	
SAMPLE VOLUME: (Meter # _____) TURBIDITY (NTU): Meter Start: _____ Meter Stop: _____ Turbidity Begin: _____ Turbidity End: _____	Total Volume: _____ Gallons _____ Liters	

Client ID #:	P.O. #:
--------------	---------

ASSAY REQUESTED: Please check one of the following	
<input checked="" type="checkbox"/>	Total Culturable Virus Assay, MPN - (EPA, ICB 600/B-95/1-78) METHOD 1623
<input type="checkbox"/>	Pre Filter Cartridge - M19R10A
<input type="checkbox"/>	Enteric Virus Assay, PFU - (SM 18th; 9510 - BioVir Modification)

COMMENTS:

RELINQUISHED BY: <i>[Signature]</i>	DATE / TIME: 2-28-06 14:45
RECEIVED BY: <i>[Signature]</i>	DATE / TIME: 2-28-06 14:45

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

0050-2
COPY

Giardia/cryptosporidium



**TOTAL CULTURABLE VIRUS / ENTERIC VIRUS ASSAY
SAMPLE DATA SHEET**

*(Please fill out completely and return white copy to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751*

Note: Please use waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: <i>ESA</i>	SAMPLE DATE: <i>7-28-06</i>	
	SAMPLE TIME: <i>8:30</i>	
NAME OF SAMPLER: <i>Dan Sieder</i>	pH: pH (adjusted):	Water Temp (C): <i>10.5</i>
SAMPLE SOURCE: <i>BR-1</i>	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter # _____) TURBIDITY (NTU): Meter Start: _____ Meter Stop: _____ Turbidity Begin: _____ Turbidity End: _____	Total Volume: _____ Gallons <i>10</i> Liters	

Client ID #:	P.O. #:
--------------	---------

ASSAY REQUESTED: Please check one of the following	
<input checked="" type="checkbox"/>	Total Culturable Virus Assay, MPN (EPA, ICR 600/R-95/178) <i>Method 1623</i>
<input type="checkbox"/>	Pre Filter Cartridge - M19R10A
<input type="checkbox"/>	Enteric Virus Assay, PFU - (SM 18th; 9510 - BioVir Modification)

COMMENTS:

RELINQUISHED BY: <i>[Signature]</i>	DATE / TIME: <i>7-28-06 2:45 PM</i>
RECEIVED BY: <i>Manuel Basler</i>	DATE / TIME: <i>7-28-06 14:45</i>

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

0050-2

Giardia / Cryptosporidium

COPY



**TOTAL CULTURABLE VIRUS / ENTERIC VIRUS ASSAY
SAMPLE DATA SHEET**

(Please fill out completely and return white copy to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751

Note: Please use waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA	SAMPLE DATE: 2-28-06	
	SAMPLE TIME: 10:00	
NAME OF SAMPLER: Dan Sicular	pH:	Water Temp (C): 17.9
	pH (adjusted):	
SAMPLE SOURCE: BR-3	TREATMENT CHARACTERISTICS (Check One):	
	Raw Drinking Water	<input checked="" type="checkbox"/>
	Treated Drinking Water	<input type="checkbox"/>
	Wastewater	<input type="checkbox"/>
	Filtered Wastewater	<input type="checkbox"/>
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water):	
	Yes	No
SAMPLE VOLUME: (Meter #)	Total Volume: _____ Gallons 10 Liters	
TURBIDITY (NTU):		
Meter Start: _____ Meter Stop: _____		
Turbidity Begin: _____ Turbidity End: _____		

Client ID #:	P.O. #:
--------------	---------

ASSAY REQUESTED: Please check one of the following	
<input checked="" type="checkbox"/>	Total Culturable Virus Assay, MPN - (EPA, ICR-600/R-95/178) Method 1623
<input type="checkbox"/>	Pre Filter Cartridge - M19R10A
<input type="checkbox"/>	Enteric Virus Assay, PFU - (SM 18th; 9510 - BioVir Modification)

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 2-28-06 14:45
RECEIVED BY: [Signature]	DATE / TIME: 2-28-06 14:45

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

0030-4



Giardia / crypt. & paratub.

TOTAL CULTURABLE VIRUS / ENTERIC VIRUS ASSAY COPY

SAMPLE DATA SHEET
(Please fill out completely and return white copy to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751

Note: Please use waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA	SAMPLE DATE: 2-28-06	
	SAMPLE TIME: 11:00	
NAME OF SAMPLER: Dan Secular	pH:	Water Temp (C): 11.1°
	pH (adjusted):	
SAMPLE SOURCE: LDV-3	TREATMENT CHARACTERISTICS (Check One):	
	Raw Drinking Water	<input checked="" type="checkbox"/>
	Treated Drinking Water	<input type="checkbox"/>
	Wastewater	<input type="checkbox"/>
	Filtered Wastewater	<input type="checkbox"/>
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #) TURBIDITY (NTU):	Total Volume: _____ Gallons 10 Liters	
Meter Start: _____ Meter Stop: _____		
Turbidity Begin: _____ Turbidity End: _____		

Client ID #:	P.O. #:
--------------	---------

ASSAY REQUESTED: Please check one of the following	
<input checked="" type="checkbox"/>	Total Culturable Virus Assay, MPN - (EPA, ICR 600/R-95/178) Method 1623
<input type="checkbox"/>	Pre Filter Cartridge - M19R10A
<input type="checkbox"/>	Enteric Virus Assay, PFU - (SM 18th; 9510 - BioVir Modification)

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 14:45
RECEIVED BY:	DATE / TIME: 2-28-06 1445

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

007-5

Giardia Cryptosporidium



TOTAL CULTURABLE VIRUS / ENTERIC VIRUS ASSAY SAMPLE DATA SHEET

COPY

(Please fill out completely and return white copy to BioVir with the sample)
Phone: 1-800-GIARDIA Fax: 707-747-1751

Note: Please use waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 2-28-06	
		SAMPLE TIME: 11:45	
NAME OF SAMPLER: Dan Sicular		pH:	Water Temp (C): 13.3°
		pH (adjusted):	
SAMPLE SOURCE: LDV-2		TREATMENT CHARACTERISTICS (Check One):	
		Raw Drinking Water	<input checked="" type="checkbox"/>
		Treated Drinking Water	<input type="checkbox"/>
		Wastewater	<input type="checkbox"/>
		Filtered Wastewater	<input type="checkbox"/>
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter #) TURBIDITY (NTU):		Total Volume: _____ Gallons 10 Liters	
Meter Start:	Meter Stop:		
Turbidity Begin:	Turbidity End:		

Client ID #:	P.O. #:
--------------	---------

ASSAY REQUESTED: Please check one of the following	
<input checked="" type="checkbox"/>	Total Culturable Virus Assay, MPN - (EPA, ICR 600/R-95/178) METHOD 1023
<input type="checkbox"/>	Pre Filter Cartridge - M19R10A
<input type="checkbox"/>	Enteric Virus Assay, PFU - (SM 18th; 9510 - BioVir Modification)

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 11:45 2-28-06
RECEIVED BY: [Signature]	DATE / TIME: 2-28-06 1445

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

0050-6

Giardia/cryptosporidium



TOTAL CULTURABLE VIRUS / ENTERIC VIRUS ASSAY SAMPLE DATA SHEET

COPY

(Please fill out completely and return white copy to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751

Note: Please use waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA	SAMPLE DATE: 2-28-06	
	SAMPLE TIME: 12:15	
NAME OF SAMPLER: Dan S. Calver	pH: pH (adjusted):	Water Temp (C): 10.5
SAMPLE SOURCE: LDV-1	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes _____ No _____	
SAMPLE VOLUME: (Meter # _____) TURBIDITY (NTU): Meter Start: _____ Meter Stop: _____ Turbidity Begin: _____ Turbidity End: _____	Total Volume: _____ Gallons _____ Liters	

Client ID #:	P.O. #:
--------------	---------

ASSAY REQUESTED: Please check one of the following	
<input checked="" type="checkbox"/>	Total Culturable Virus Assay, MPN - (EPA, ICR 600/R-95/178) Method 1623
<input type="checkbox"/>	Pre Filter Cartridge - M19R10A
<input type="checkbox"/>	Enteric Virus Assay, PFU - (SM 18th; 9510 - BioVir Modification)

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 2-28-06 14:45
RECEIVED BY:	DATE / TIME: 2-28-06 14:45

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060335-1 through 060335-7

PAGE NO.: 1 of 2

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104

CLIENT NO.: ESA002

GIARDIA AND CRYPTOSPORIDIUM SAMPLE INFORMATION:

BioVir ID	Client ID#	Sampler	Sample Date	Sample Time	Sample Volume	Turbidity	Liters Assayed	Elution Date
060335-1	CA-1	Dan Sicular	03/02/06	7:30	10 Liters	12.2	10.0	03/03/06
060335-2	BR-1	Dan Sicular	03/02/06	8:00	10 Liters	6.53	10.0	03/03/06
060335-3	BR-2	Dan Sicular	03/02/06	8:30	10 Liters	4.70	10.0	03/03/06
060335-4	BR-3	Dan Sicular	03/02/06	9:25	10 Liters	13.0	10.0	03/03/06
060335-5	LDV-3	Dan Sicular	03/02/06	10:25	10 Liters	3.50	10.0	03/03/06
060335-6	LDV-2	Dan Sicular	03/02/06	11:10	10 Liters	7.13	10.0	03/03/06
060335-7	LDV-1	Dan Sicular	03/02/06	11:35	10 Liters	13.2	10.0	03/03/06

 = Not Applicable or Not Available.

FOR RESULTS SEE SHEET TWO OF THIS REPORT

REPORT NO. 060335-1 through 060335-7

CLIENT NO.: ESA002

PAGE NO.: 2 OF 2

ASSAY PERFORMED:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Giardia Organisms / Liter										
BioVir ID	Client ID#	Giardia Species Cysts				DIC				DAPI & DIC POSITIVE
		Organisms / Liter		DAPI		Empty	Amorphous Structure	Internal Structure	>1 Internal Structure	
		FA	Negative	Positive	Positive					
060335-1	CA-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060335-2	BR-1	0.9	0.7	<0.1	0.1	0.4	0.3	0.1	<0.1	0.1
060335-3	BR-2	0.1	0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
060335-4	BR-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060335-5	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060335-6	LDV-2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
060335-7	LDV-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

"Less than" results represent the lowest detection limit for this assay.

Cryptosporidium Organisms / Liter										
BioVir ID	Client ID#	Crypto Oocysts				DIC				DAPI & DIC POSITIVE
		Organisms / Liter		DAPI		Empty	Amorphous Structure	Internal Structure	>1 Internal Structure	
		FA	Negative	Positive	Positive					
060335-1	CA-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
060335-2	BR-1	0.6	0.1	<0.1	0.4	0.1	0.4	<0.1		<0.1
060335-3	BR-2	0.2	<0.1	0.1	0.1	<0.1	0.2	<0.1		<0.1
060335-4	BR-3	0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1		<0.1
060335-5	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
060335-6	LDV-2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
060335-7	LDV-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1

"Less than" results represent the lowest detection limit for this assay.



685 Stone Road, Unit 6 · Benicia, CA 94510 · (707) 747-5906 · 1-800-GIARDIA · FAX (707) 747-1751 · WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060335-1
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: CA-1
Filter Type / Lot #: Envirochek HV / A10534581
Sample Date: 03/02/06
Sample Time: 07:30
Sample Volume: 10 Liters, grab
Turbidity (NTU): 12.2

ASSAY RESULTS:

- 1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 10.0 Liters Check-in Temp: 0.2 C Date/Time Received: 03/02/06 13:45 Elution Date: 03/03/06

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	Organisms / Liter	
	Giardia Species Cysts	Cryptosporidium Oocysts
Fluorescence Antibody	<0.1	<0.1

ADDITIONAL INFORMATION		
DAPI		
Negative	<0.1	<0.1
Positive (Internal Staining)	<0.1	<0.1
Positive (Stained Nuclei)	<0.1	<0.1
DIC		
Empty	<0.1	<0.1
Amorphous Structure	<0.1	<0.1
Internal Structure (One)	<0.1	<0.1
Internal Structure (>One)	<0.1	
DAPI & DIC Positive	<0.1	<0.1

"Less than" results represent the lower detection limit for this assay.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

03-06-2006
COMPLETION DATE

Richard E. Donohue
SIGNATURE/DATE 03.10.2006
713



BioVir Laboratories, Inc.



NELAC #05234CA

EPA ID #01401, CA-ELAP # 1795

685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060335-2
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: BR-1
Filter Type / Lot #: Envirochek HV / A10534581
Sample Date: 03/02/06
Sample Time: 08:00
Sample Volume: 10 Liters, grab
Turbidity (NTU): 6.53

ASSAY RESULTS:

- 1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 10.0 Liters Check-in Temp: 0.2 C Date/Time Received: 03/02/06 13:45 Elution Date: 03/03/06

Table with 3 columns: Report Parameter, Giardia Species Cysts, Cryptosporidium Oocysts. Row: Fluorescence Antibody, 0.9, 0.6

Table with 3 columns: DAPI, Giardia Species Cysts, Cryptosporidium Oocysts. Rows: Negative, Positive (Internal Staining), Positive (Stained Nuclei), Empty, Amorphous Structure, Internal Structure (One), Internal Structure (>One), DAPI & DIC Positive

"Less than" results represent the lower detection limit for this assay. Okay to run one extra slide per Dan Sicular.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report.

03.06.2006
COMPLETION DATE

Richard E. Donnell
SIGNATURE/DATE
03.10.2006
VB



BioVir Laboratories, Inc.



NELAC #05234CA
EPA ID #01401, CA-ELAP # 1795

685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060335-3
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: BR-2
Filter Type / Lot #: Envirochek HV / A10534581
Sample Date: 03/02/06
Sample Time: 08:30
Sample Volume: 10 Liters, grab
Turbidity (NTU): 4.7

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 10.0 Liters Check-in Temp: 0.2 C Date/Time Received: 03/02/06 13:45 Elution Date: 03/03/06

RESULTS - NUMBER OF SLIDES EXAMINED: TWO		
Report Parameter	Organisms / Liter	
	Giardia Species Cysts	Cryptosporidium Oocysts
Fluorescence Antibody	0.1	0.2

ADDITIONAL INFORMATION		
DAPI		
Negative	0.1	<0.1
Positive (Internal Staining)	<0.1	0.1
Positive (Stained Nuclei)	<0.1	0.1
DIC		
Empty	0.1	<0.1
Amorphous Structure	<0.1	0.2
Internal Structure (One)	<0.1	<0.1
Internal Structure (>One)	<0.1	
DAPI & DIC Positive	<0.1	<0.1

"Less than" results represent the lower detection limit for this assay.
Okay to run one extra slide per Dan Sicular.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

03.06.2006
COMPLETION DATE

Richard E. Donil
SIGNATURE/DATE

03.10.2006
VA



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-744-7355 WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA-SBA		SAMPLE DATE: 3-2-06	
		SAMPLE TIME: 7:30	
NAME OF SAMPLER: Dan Sicular		pH:	Water Temp (C): 12.90
SAMPLE SOURCE: CA-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes _____ No _____	
SAMPLE VOLUME: (Meter # _____)		TURBIDITY (NTU): Begin: 12.2 End: _____	
Meter Start: _____	Meter Stop: _____	Total Volume: _____ Gallons _____ Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: <i>[Signature]</i>	DATE / TIME: 3.2.06 13:45
RECEIVED BY: <i>[Signature]</i>	DATE / TIME: 3-2-06 13:45

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

ESA-002

2

(Please fill out applicable areas, sign, and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA-SBA		SAMPLE DATE: 3-2-06	
		SAMPLE TIME: 8:00	
NAME OF SAMPLER: Dan Sicalar		pH:	Water Temp (C): 10.4
SAMPLE SOURCE: BR-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes _____ No _____	
SAMPLE VOLUME: (Meter # _____)		TURBIDITY (NTU): Begin: 6:53 End: _____	
Meter Start: _____	Meter Stop: _____	Total Volume: _____ Gallons	10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 3-2-06 13:45
RECEIVED BY:	DATE / TIME: 3-2-06 13:45

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

3

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: (707-747-1751) WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: <i>B.A. SEA</i>	SAMPLE DATE: <i>3-2-06</i>	
	SAMPLE TIME: <i>8:30</i>	
NAME OF SAMPLER: <i>Van Staver</i>	pH:	Water Temp (C): <i>10.3</i>
SAMPLE SOURCE: <i>BRZ</i>	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes _____ No _____	
SAMPLE VOLUME: (Meter # _____)	TURBIDITY (NTU): Begin: <i>4.7</i> End: _____	Total Volume: _____ Gallons <i>10</i> Liters
Meter Start: _____ Meter Stop: _____		

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: <i>[Signature]</i>	DATE / TIME: <i>3.2-06 13:45</i>
RECEIVED BY: <i>Mary Heasler</i>	DATE / TIME: <i>3206 1345</i>

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

4

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 3-2-06	
		SAMPLE TIME: 9:25	
NAME OF SAMPLER: Don Siculer		pH:	Water Temp (C): 12.5
SAMPLE SOURCE: BR-3		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 13 End:	
Meter Start:	Meter Stop:	Total Volume: 12.5 Gallons 60 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 3.2.06 13:45
RECEIVED BY:	DATE / TIME: 3.2.06 1345

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1757 WEB: www.biovir.com

127

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 3.2.06	
		SAMPLE TIME: 10:25	
NAME OF SAMPLER: Dan Sicular		pH:	Water Temp (C): 12.0
SAMPLE SOURCE: LDV-3		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 3.5 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 3.2.06 13:45
RECEIVED BY:	DATE / TIME: 3.2.06 13:45

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA	SAMPLE DATE: 3.2.06	
	SAMPLE TIME: 11:10	
NAME OF SAMPLER: Dan Sicely	pH:	Water Temp (C): 11.5
SAMPLE SOURCE: LDV-2	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter # _____)	TURBIDITY (NTU): Begin: 7.13 End: _____	
Meter Start: _____ Meter Stop: _____	Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-026)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 3.2.06 13:45
RECEIVED BY:	DATE / TIME: 3.2.06 13:45

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 3-2-06	
		SAMPLE TIME: 11:35	
NAME OF SAMPLER: Dan Sicular		pH:	Water Temp (C): 10.4
SAMPLE SOURCE: LDU-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 13.2 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 3-2-06 13:45
RECEIVED BY:	DATE / TIME: 3-2-06 1345

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060371-1 through 060371-4

PAGE NO.: 1 of 2

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco, CA 94104

CLIENT NO.: ESA002

GIARDIA AND CRYPTOSPORIDIUM SAMPLE INFORMATION:

BioVir ID	Client ID#	Sampler	Sample Date	Sample Time	Sample Volume	Turbidity	Liters Assayed	Elution Date
060371-1	CA-1	Dan Sicular	03/06/06	8:30	10 Liters	7.20	10.0	03/07/06
060371-2	BR-1	Dan Sicular	03/06/06	9:00	10 Liters	22.0	10.0	03/07/06
060371-3	BR-2	Dan Sicular	03/06/06	9:30	10 Liters	5.70	10.0	03/07/06
060371-4	BR-2 MS	Dan Sicular	03/06/06	9:40	10 Liters	4.20	10.0	03/07/06
060371-5	BR-3	Dan Sicular	03/06/06	10:30	10 Liters	6.45	10.0	03/07/06
060371-6	LDV-3	Dan Sicular	03/06/06	11:30	10 Liters	4.84	10.0	03/07/06
060371-7	LDV-2	Dan Sicular	03/06/06	12:25	10 Liters	4.57	10.0	03/07/06
060371-8	LDV-1	Dan Sicular	03/06/06	12:45	10 Liters	76.5	10.0	03/07/06

 = Not Applicable or Not Available.

FOR RESULTS SEE SHEET TWO OF THIS REPORT

ASSAY PERFORMED:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Giardia Organisms / Liter											
BioVir ID	Client ID#	Giardia Species Cysts Organisms / Liter			DAPI			DIC			DAPI & DIC POSITIVE
		FA	Negative	Positive	Positive	Empty	Amorphous Structure	Internal Structure	>1 Internal Structure		
060371-1	CA-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
060371-2	BR-1	1.2	1.2	<0.4	<0.4	1.2	<0.4	<0.4	<0.4	<0.4	
060371-3	BR-2	0.5	0.3	0.2	<0.09	0.3	0.2	<0.09	<0.09	<0.09	
060371-5	BR-3	0.2	0.2	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	
060371-6	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
060371-7	LDV-2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
060371-8	LDV-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	

"Less than" results represent the lowest detection limit for this assay.

Cryptosporidium Organisms / Liter											
BioVir ID	Client ID#	Crypto Oocysts Organisms / Liter			DAPI			DIC			DAPI & DIC POSITIVE
		FA	Negative	Positive	Positive	Empty	Amorphous Structure	Internal Structure			
060371-1	CA-1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	
060371-2	BR-1	1.2	0.8	<0.4	0.4	0.8	0.4	<0.4		<0.4	
060371-3	BR-2	0.5	<0.09	<0.09	0.5	<0.09	0.4	0.2		0.2	
060371-5	BR-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	
060371-6	LDV-3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1	
060371-7	LDV-2	0.1	<0.1	<0.1	0.1	<0.1	0.1	<0.1		<0.1	
060371-8	LDV-1	0.4	<0.1	<0.1	0.4	<0.1	0.2	0.2		0.2	

"Less than" results represent the lowest detection limit for this assay.

MATRIX SPIKE:

QC:

FA Positive Organisms - Giardia Species Cysts								
BioVir ID	Giardia Species Cysts				Total Number of Spike Added	(B/C) x 100 = % Recovery	OPR	
	Client ID#	Total FA Count	Number Observed from Field Sample	Difference Between MS and FS			Average % Recovery	Standard Deviation
060371-4	BR-2	67	5	62	100	62.0	45	22

Note: On-going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run.

FA Positive Organisms - Cryptosporidium Oocysts								
BioVir ID	Crypto Oocysts				Total Number of Spike Added	(B/C) x 100 = % Recovery	OPR	
	Client ID#	Total FA Count	Number Observed from Field Sample	Difference Between MS and FS			Average % Recovery	Standard Deviation
060371-4	BR-2	75	6	69	99	69.7	66	16

Note: On-going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run.



685 Stone Road, Unit 6 • Benicia, CA 94510 • (707) 747-5906 • 1-800-GIARDIA • FAX (707) 747-1751 • WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060371-1
PAGE NO.: 1 of 1
CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104
CLIENT NO.: ESA002

SAMPLE INFORMATION:

Project Manager: Dan Sicular
Sampler: Dan Sicular
Sample Location: CA-1
Comments: Raw Drinking Water
Sample Date / Time: 03/06/06 / 08:30
Sample Volume: 10 Liters, grab
Turbidity (NTU): 7.2
Water Temperature: 11.7 C

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623
Amount Assayed: 10.0 Liters Check-in Temp: 8.6 C Date/Time Received: 03/06/06 14:50 Elution Date: 03/07/06

RESULTS - NUMBER OF SLIDES EXAMINED: ONE		
Report Parameter	Organisms / Liter	
	Giardia Species Cysts	Cryptosporidium Oocysts
Fluorescence Antibody	<0.1	<0.1

ADDITIONAL INFORMATION		
DAPI		
Negative	<0.1	<0.1
Positive (Internal Staining)	<0.1	<0.1
Positive (Stained Nuclei)	<0.1	<0.1
DIC		
Empty	<0.1	<0.1
Amorphous Structure	<0.1	<0.1
Internal Structure (One)	<0.1	<0.1
Internal Structure (>One)	<0.1	<0.1
DAPI & DIC Positive	<0.1	<0.1

"Less than" results represent the lower detection limit for this assay.

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.
COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.
MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

03.08.2006
COMPLETION DATE

Richard E. Dowell
SIGNATURE/DATE 03.14.2006
RB



685 Stone Road, Unit 6 · Benicia, CA 94510 · (707) 747-5906 · 1-800-GIARDIA · FAX (707) 747-1751 · WEB: www.biovir.com

REPORT OF SAMPLE EVALUATION

REPORT NO.: 060371-4

PAGE NO.: 1 of 1

CLIENT ADDRESS: Environmental Science Associates
225 Bush Street, Suite 1700
San Francisco CA 94104

CLIENT NO.: ESA002

SAMPLE INFORMATION:

Name of Sampler:	Dan Sicular	Sample Date:	03/06/06
Sample Source:	Dan Sicular	Sample Time:	09:40
Sample Location:	BR-2	Turbidity (NTU):	4.2
Sample Volume:	11 Liter, Grab	Sample Temperature:	11.4 C
Comments:	Raw Drinking Water, Matrix Spike Sample	pH:	n/a

ASSAY RESULTS:

1. Giardia and Cryptosporidium; June 2003 Version of EPA Method 1623

Amount Assayed: 11.0 Liters Check-in Temp: 8.6 C Date/Time Received: 03/06/06 14:50 Elution Date: 03/07/06

RESULTS - NUMBER OF SLIDES EXAMINED: TWO		
Report Parameter	FA Positive Organisms	
	Giardia Species Cysts	Cryptosporidium Oocysts
Total FA Count	67	75
Number Observed from Field Sample	5	6
Difference between MS and FS	62	69
Total Number of Spike Added	100	99
(B/C) x 100 = (%) Recovery	62.0	69.7

OPR	Giardia Species Cysts	Cryptosporidium Oocysts
Average (%) Recovery	45	66
Standard Deviation	22	16

Note: On-Going Precision and Recovery. "OPR" is an average recovery based upon the five previous weekly QC positive and negative control samples run. Okay to run one extra slide per Dan Sicular

SAMPLE EVALUATION PERFORMANCE CRITERIA: The precise rates of recovery of organisms from environmental samples cannot be determined. BioVir Laboratories has analyzed your sample(s) in accordance with the method described with each analyte above, however, due to inherent limitations of these methods organisms may avoid detection. For additional information regarding the limitations of the method(s) referred to above please call us at 1-800-GIARDIA.

COMPANY IS NOT AN INSURER: BioVir Laboratories is not an insurer or guarantor of the quality and/or purity of water, wastewater, biosolid or other material from which the sample was taken. BioVir offers no express or implied warranties whatsoever concerning the quality or purity of any water, wastewater, biosolid or other material which is ultimately consumed, distributed, applied or otherwise disposed.

MAINTENANCE OF RECORDS: BioVir Laboratories, Inc. shall maintain records pertaining to the historical reconstruction of client's data for a minimum of five years from the date of issuance of the final report. Records may be destroyed after that date unless a written client's request for records transfer is received by BioVir which requests otherwise. Records transfer or storage charges may apply after the 5 year period.

03.08.2006
COMPLETION DATE

Richard E. Dowell
SIGNATURE/DATE 03.14.2006
YB



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

060571-1

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: WWW.BIOVIR.COM

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SRA	SAMPLE DATE: 3-6-06	
	SAMPLE TIME: 8:30	
NAME OF SAMPLER: San S. caler	pH:	Water Temp (C): 11.7
SAMPLE SOURCE: CA-1	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter #) Meter Start: Meter Stop:	TURBIDITY (NTU): Begin: 7.2 End: 10 Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY:	DATE / TIME: 3.6.06 14:50
RECEIVED BY:	DATE / TIME: 3/6/06 4:30

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

060371-2

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

COPY

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SZA	SAMPLE DATE: 3-6-06	
	SAMPLE TIME: 9:00	
NAME OF SAMPLER: Dan S. Caler	pH:	Water Temp (C): 12.7
SAMPLE SOURCE: BR-1	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes <input type="checkbox"/> No <input type="checkbox"/>	
SAMPLE VOLUME: (Meter # _____)	TURBIDITY (NTU): Begin: 22.0 End: _____	
Meter Start: _____ Meter Stop: _____	Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES: (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 3-6-06 14:50
RECEIVED BY: [Signature]	DATE / TIME: 3/6/06 14:50

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

060371-3
E45002

COPY

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - S3A		SAMPLE DATE: 3-6-06	
		SAMPLE TIME: 9:30	
NAME OF SAMPLE: Dan Sicular		pH:	Water Temp (C): 11.4
SAMPLE SOURCE: BR-2		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 5.7 End:	
Meter Start:	Meter Stop:	Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: W. Sicular	DATE / TIME: 3-6-06 14:30
RECEIVED BY: Joe Smith	DATE / TIME: 3/6/06 14:30

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

COPY

060571-4

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 3-6-06	
		SAMPLE TIME: 9:10	
NAME OF SAMPLER: Don Siculer		pH:	Water Temp (C): 11.4
SAMPLE SOURCE: 32-2		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes _____ No _____	
SAMPLE VOLUME: (Meter # _____)		TURBIDITY (NTU): Begin: 4-2 End: _____	
Meter Start: _____	Meter Stop: _____	Total Volume: _____ Gallons _____ Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input type="checkbox"/>	REGULAR SAMPLE
<input checked="" type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 3-6-06 14:50
RECEIVED BY: [Signature]	DATE / TIME: 3/6/06 14:50

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

260371-5

(Please fill out applicable areas, sign and return to BioVir with the sample)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 3-6-06	
		SAMPLE TIME: 10:30	
NAME OF SAMPLER: Don Sicular		pH:	Water Temp (C): 11.8
SAMPLE SOURCE: BR-3		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 6-15 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES (Please indicate Analyte & Method)

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 3.6.06 14:50
RECEIVED BY: [Signature]	DATE / TIME: 3/6/06 14:50

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

060371-6



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

COPY

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 3-6-06	
		SAMPLE TIME: 11:30	
NAME OF SAMPLER: Dan Sealor		pH:	Water Temp (C): 12
SAMPLE SOURCE: LDV-3		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 489 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21 st , 41 st , etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 3/6/06 14:50
RECEIVED BY: [Signature]	DATE / TIME: 3/6/06 14:50

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

060371-1



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA	SAMPLE DATE: 3-6-06	
	SAMPLE TIME: 12:25	
NAME OF SAMPLER: Dan S. Calver	pH:	Water Temp (C): 12.6
SAMPLE SOURCE: LDU-2	TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:	DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)	TURBIDITY (NTU): Begin: 4.57 End:	
Meter Start: Meter Stop:	Total Volume: _____ Gallons 10 Liters	

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following	
LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.	
METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)	
<input checked="" type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)
METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)	
<input type="checkbox"/>	REGULAR SAMPLE
<input type="checkbox"/>	MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21", 41", etc.)
MICROSCOPIC PARTICULATE ANALYSIS (MPA)	
<input type="checkbox"/>	Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)
OTHER ANALYTES (Please indicate Analyte & Method)	
<input type="checkbox"/>	

COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 3.6.06 14:50
RECEIVED BY: [Signature]	DATE / TIME: 3/6/06 14:50

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

060371-8



GIARDIA / CRYPTOSPORIDIUM / MPA ASSAY SAMPLE DATA SHEET

(Please fill out applicable areas, sign and return to BioVir with the sample.)
Phone: 1-800-GIARDIA Fax: 707-747-1751 WEB: www.biovir.com

COPY

86
WSP 200
WSP/K
ATB

Note: Please print using waterproof ink

NAME AND ADDRESS OF WATER COMPANY OR UTILITY: ESA - SBA		SAMPLE DATE: 3-6-06	
		SAMPLE TIME: 12:45	
NAME OF SAMPLER: Dan Seacor		pH:	Water Temp (C): 10.2
SAMPLE SOURCE: LDV-1		TREATMENT CHARACTERISTICS (Check One): Raw Drinking Water <input checked="" type="checkbox"/> Treated Drinking Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Filtered Wastewater <input type="checkbox"/>	
SAMPLE LOCATION:		DECHLORINATION/ DISINFECTANT NEUTRALIZATION (If Treated Water): Yes No	
SAMPLE VOLUME: (Meter #)		TURBIDITY (NTU): Begin: 76.5 End:	
Meter Start:	Meter Stop:	Total Volume:	Gallons 10 Liters

Client Sample ID #:	P.O. #:
---------------------	---------

ASSAY REQUESTED: Please check one of the following

LT2 Samples: Special care should be taken for samples intended to satisfy the requirements of the Long Term 2 Enhanced Surface Water Treatment Rule. Samples must be at least 10 Liters in volume (at least 22lbs. plus vessel for grab samples). Samples must arrive at BioVir between 0 to 8 degrees C (not frozen). Pre-chill samples during sampling or before shipment to adhere to this requirement.

METHOD 1623: Cryptosporidium and Giardia (EPA 821-R-01-025)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

METHOD 1622: Cryptosporidium Only (EPA 821-R-01-026)

REGULAR SAMPLE

MATRIX SPIKE SAMPLE -Required in addition to the first sample from a source and every 20 samples thereafter (e.g. 21st, 41st, etc.)

MICROSCOPIC PARTICULATE ANALYSIS (MPA)

Microscopic Particulate Analysis (MPA) - (EPA 910/9-92-029)

OTHER ANALYTES: (Please indicate Analyte & Method)

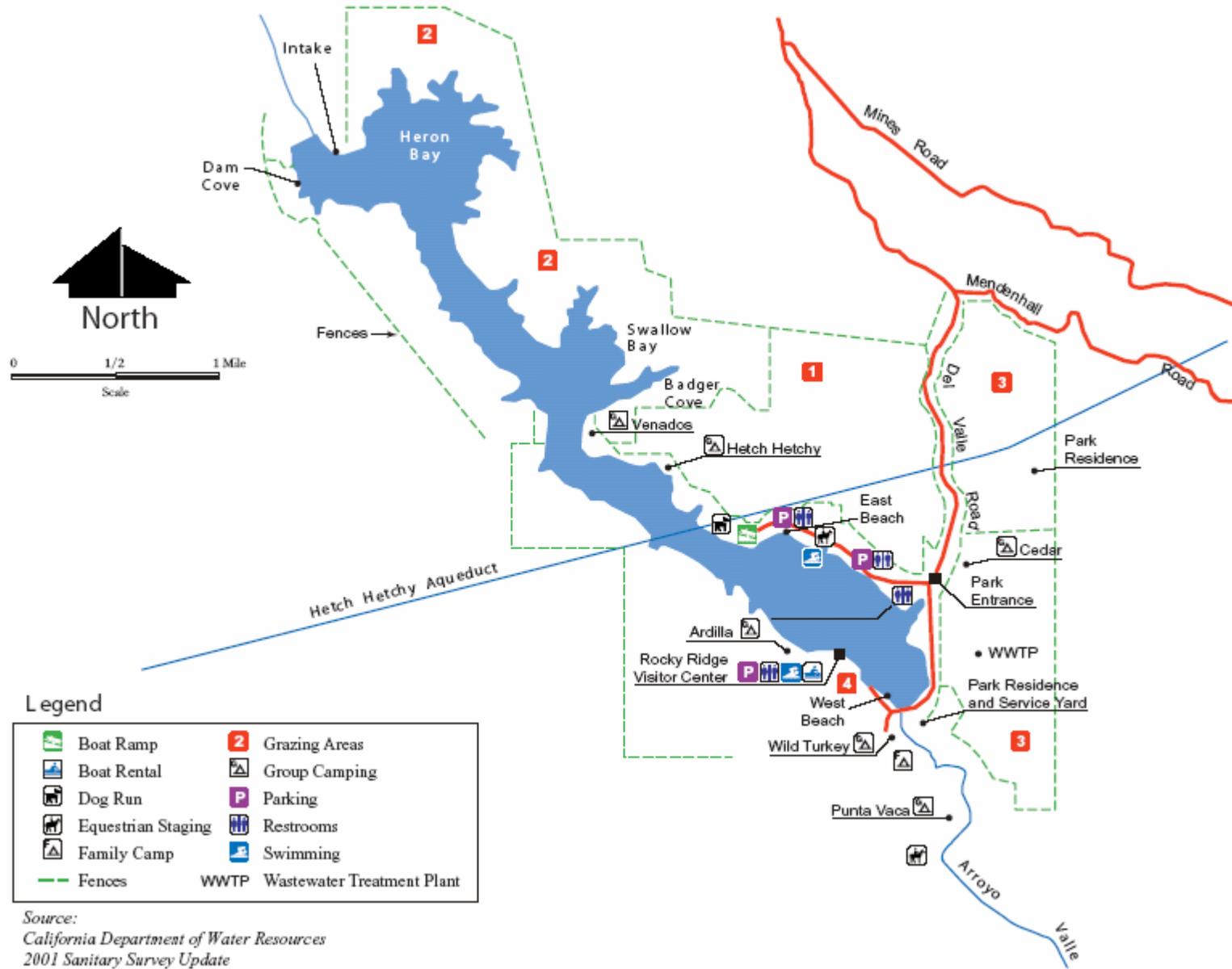
COMMENTS:

RELINQUISHED BY: [Signature]	DATE / TIME: 3-6-06 14:50
RECEIVED BY: [Signature]	DATE / TIME: 3/6/06 1450

SHIPPING ADDRESS: BIOVIR LABORATORIES, INC., 685 STONE ROAD, UNIT 6, BENICIA, CALIFORNIA 94510
WHITE = BIOVIR COPY YELLOW = CUSTOMER COPY

APPENDIX B

Additional Maps

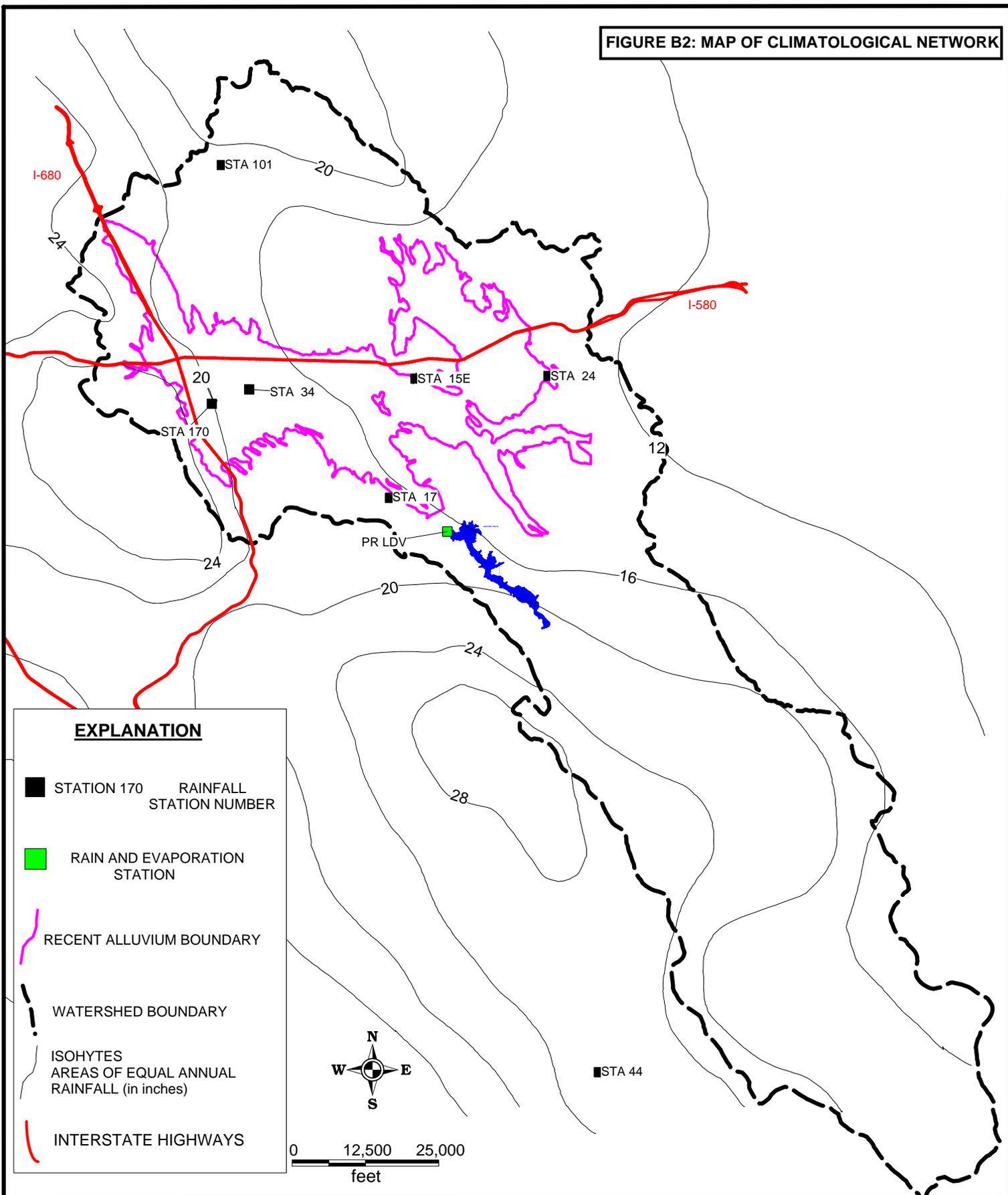


SOURCE: ESA

SBA Watershed Management Program Development Watershed Protection Program Plan . 205076

Figure B-1
 Del Valle Regional Park

FIGURE B2: MAP OF CLIMATOLOGICAL NETWORK



 <p>ZONE 7 WATER AGENCY 100 N. Canyons Pkwy, Livermore, CA 94551</p>	DRAWN BY: MIKE GARGUILO DESIGNED BY: MIKE GARGUILO CHECKED BY: GERALD GATES APPROVED BY:	<p>WATER RESOURCES CLIMATOLOGICAL MONITORING NETWORK</p> <p>2006 WATER YEAR</p>	DATE: 28 FEBRUARY 2006 FILE NO.: E:\MONITOR\PRINETWORK06.WOR