



Environment, Health and Safety Division
Environmental Services Group

CERTIFIED MAIL

June 8, 2010
ES-10-069

Cecil Felix
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400
Oakland, California 94612

Bill Jennings, Chairman
California Sportfishing Protection Alliance
3536 Rainier Road
Stockton, California 95204

Lesley Emmington
Strawberry Canyon Stewardship Group
195 The Uplands
Berkeley, California 94705

Michael R. Lozeau
Douglas J. Chermak
Lozeau Drury LLP
1516 Oak Street, Suite 216

Subject: Lawrence Berkeley National Laboratory Stormwater Results from May 10, 2010 Sampling Event

A copy of the stormwater sampling results for a stormwater event that occurred on May 10, 2010 at Lawrence Berkeley National Laboratory (the Facility) is attached to this letter. The sampling that was performed is consistent with the most recent *Alternative Stormwater Monitoring Plan* for the Facility, which was submitted to you on October 7, 2009.

The attached results include the Facility's sample collection forms and the laboratory analysis reports from Curtis & Tompkins Laboratories. Based on these results, the stormwater Best Management Practices (BMPs) appear adequate to control industrial discharges with the exception of the following parameters that exceeded benchmark goals at two locations during the recent stormwater event:

- Copper and zinc at the Building 77/79 Metal Fabrication and Scrap Recycling Yard
- Magnesium at the Building 85 Hazardous Waste Handling Facility Lower and Upper Yards.

At these two locations, the following BMPs were implemented, as described in the most recent Stormwater Prevention Pollution Plan (February, 2010):

- Building 77/79 Metal Fabrication and Scrap Recycling Yard: Performed stormwater protection training for site workers, covered exposed metal plates with plastic, and installed additional filter fabric over the trench drain. In addition, replaced dry sweeping of yard area with vacuuming to improve the collection and removal of small metal particles.
- Building 85 Hazardous Waste Handling Facility Lower and Upper Yard: Completed an investigative study which determined the source of the magnesium to be from the soil surrounding the Facility. The results of the investigative study will be included in the next Stormwater Annual Report.

The following additional BMPs are planned for the Building 77/79 Metal Fabrication and Scrap Recycling Yard:

- Perform an investigative study to determine the source of the copper and zinc on the B77-79 yard. If the source is determined in the study, measures will be taken to control it.
- Seal existing asphalt-concrete joints to prevent accumulation of metal particles.
- Install a Flogard Pro Drain Inlet Protector in the stormdrain inlet that is located across the road from the metal yard.

The additional BMPs are subject to Regional Water Quality Control Board approval. If Regional Board approval is provided by June 30, 2010, it is anticipated that these BMPs will be implemented within 90 days or by September 30, 2010. A revised *Stormwater Pollution Prevention Plan* will be submitted to the Regional Water Board within 90 days in accordance with the General Permit requirements.

If you have any questions, please contact Tim Bauters at 510-486-5831 or Ron Pauer at 510-486-7614.

Sincerely,

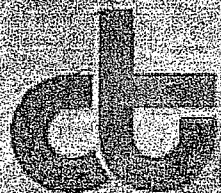


Ron Pauer
Environmental Manager

enc.: Stormwater Sampling Results for May 10, 2010

cc (w/ enc):

K. Abbott, DOE/BSO



Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 220040
ANALYTICAL REPORT

Lawrence Berkeley National Lab	Project : STANDARD
1 Cyclotron Road	Location : Surface Water Monitoring Program
Berkeley, CA 94720	Level : II

<u>Sample ID</u>	<u>Lab ID</u>
59891	220040-001
59892	220040-002
59894	220040-003
59895	220040-004
59897	220040-005
59898	220040-006
59899	220040-007
59900	220040-008
59902	220040-009
59903	220040-010
59904	220040-011
59905	220040-012
59907	220040-013
59908	220040-014
59909	220040-015
59910	220040-016
59917	220040-017
59918	220040-018

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Project Manager

Date: 06/04/2010

NELAP # 01107CA

CASE NARRATIVE

Laboratory number: 220040
Client: Lawrence Berkeley National Lab
Location: Surface Water Monitoring Program
Request Date: 05/10/10
Samples Received: 05/10/10

This data package contains sample and QC results for eighteen water samples, requested for the above referenced project on 05/10/10. The samples were received cold and intact. All holding times and calibration criteria were met.

Metals (EPA 200.8 and EPA 245.1):

No analytical problems were encountered.

Ion Chromatography (EPA 300.0 and EPA 300.0):

No analytical problems were encountered.

Conductivity (SM2510B):

No analytical problems were encountered.

Total Cyanide (SM4500CN-E):

No analytical problems were encountered.

Ammonia Nitrogen (SM4500NH3-D):

No analytical problems were encountered.

Total Oil & Grease (HEM) (EPA 1664A):

Matrix spikes were not performed for this analysis due to insufficient sample volume. No analytical problems were encountered.

Total Suspended Solids (TSS) (SM2540D):

No analytical problems were encountered.

Chemical Oxygen Demand (SM5220D):

No analytical problems were encountered.

U.C. Lawrence Berkeley National Laboratory
1 Cyclotron Road
Berkeley CA 94720

LBNL ENVIRONMENTAL SERVICES GROUP

Chain of Custody

#306507

Send final reports to: Suying Xu, Mailstop 85B0198

For questions contact John Jelinski, e-mail: JAJelinski@lbl.gov

Phone: 510-486-7616

Fax: 510-486-7034

COC No.: 06543

Page 1 of 3

Release Number / Document Control No.: ESG-06543

Collection(s): 6989

Purpose: Surface Water Monitoring Program - ASWMP Sampling

Sample Location	Date & Time Sampled	Reference Date/time*	Collection Method	Sample Type	Container Volume & Code**	#	Preservative	Analysis Code	Field Sample ID***	Notes to Lab
1 59891	5/10/2010 12:30	5/10/2010 12:30	Grab	Aqueous	1 Liter PE	1	None	E120.1		
	5/10/2010 12:30	5/10/2010 12:30	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
2 59892	5/10/2010 12:30	5/10/2010 12:30	Grab	Aqueous	1 Liter AG	1	HCL	E1664		
3 59894	5/10/2010 12:50	5/10/2010 12:50	Grab	Aqueous	1 Liter PE	1	None	E120.1		
	5/10/2010 12:50	5/10/2010 12:50	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
4 59895	5/10/2010 12:50	5/10/2010 12:50	Grab	Aqueous	1 Liter AG	1	HCL	E1664		
5 59897	5/10/2010 12:40	5/10/2010 12:40	Grab	Aqueous	1 Liter PE	1	None	E120.1		
	5/10/2010 12:40	5/10/2010 12:40	Grab	Aqueous	1 Liter PE	1	None	NO3+NO2(asN):MULT		
	5/10/2010 12:40	5/10/2010 12:40	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
6 59898	5/10/2010 12:40	5/10/2010 12:40	Grab	Aqueous	1 Liter AG	1	HCL	E1664		
7 59899	5/10/2010 12:40	5/10/2010 12:40	Grab	Aqueous	500 ml PE	1	H2SO4	E410.4		
8 59900	5/10/2010 12:40	5/10/2010 12:40	Grab	Aqueous	500 ml PE	1	HNO3	STORMMET-ASWMP-77		

Total No. of Containers: 20

Shipping Document ID: hand carry

Turnaround Time****: 20 days

Lab Name: CURTISTOMP

Sampled by:

Tim BAUTERS

Special Instructions/Comments:

Relinquished By (Sampler)

Signature

Time

Printed Name

Date

Company

Received By

Signature

Time

Printed Name

Date

Company

Relinquished By

Signature

Time

Printed Name

Date

Company

Received By

Signature

Time

Printed Name

Date

Company

Relinquished By

Signature

Time

Printed Name

Date

Company

Received By

Signature

Time

Printed Name

Date

Company

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass CG = clear glass PE = polyethylene VV = VOA vial

*** Field Sample ID: If present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files, use Sample Location as the identifier. ****Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

U.C. Lawrence Berkeley National Laboratory
1 Cyclotron Road
Berkeley CA 94720

LBNL ENVIRONMENTAL SERVICES GROUP
Chain of Custody

H306507

Send final reports to: Suying Xu, Mailstop 85B0198

For questions contact John Jelinski, e-mail: JAJelinski@lbl.gov

Phone: 510-486-7616

Fax: 510-486-7034

COC No.: 06543

Page 2 of 3

Release Number / Document Control No.: ESG-06543

Collection(s): 6989

Purpose: Surface Water Monitoring Program - ASWMP Sampling

Sample Location	Date & Time Sampled	Reference Date/time*	Collection Method	Sample Type	Container Volume & Code**	#	Preservative	Analysis Code	Field Sample ID***	Notes to Lab
9	59902	5/10/2010 13:05	5/10/2010 13:05	Grab	Aqueous	1 Liter PE	1	None	E120.1	
		5/10/2010 13:05	5/10/2010 13:05	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D	
10	59903	5/10/2010 13:05	5/10/2010 13:05	Grab	Aqueous	1 Liter AG	1	HCL	E1664	
11	59904	5/10/2010 13:05	5/10/2010 13:05	Grab	Aqueous	500 ml PE	1	H2SO4	Ammonia(asN):MULT	
		5/10/2010 13:05	5/10/2010 13:05	Grab	Aqueous	500 ml PE	1	H2SO4	E410.4	
12	59905	5/10/2010 13:05	5/10/2010 13:05	Grab	Aqueous	500 ml PE	2	None	STORMMET-ASWMP-85	1st-500ml PE w/NaOH for Cyanide; 2nd-500ml PE w/HNO3 for Metals
13	59907	5/10/2010 12:55	5/10/2010 12:55	Grab	Aqueous	1 Liter PE	1	None	E120.1	
		5/10/2010 12:55	5/10/2010 12:55	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D	
14	59908	5/10/2010 12:55	5/10/2010 12:55	Grab	Aqueous	1 Liter AG	1	HCL	E1664	
15	59909	5/10/2010 12:55	5/10/2010 12:55	Grab	Aqueous	500 ml PE	1	H2SO4	Ammonia(asN):MULT	
		5/10/2010 12:55	5/10/2010 12:55	Grab	Aqueous	500 ml PE	1	H2SO4	E410.4	

Total No. of Containers: 20

Shipping Document ID: hand carry

Turnaround Time****: 20 days

Lab Name: CURTISTOMP

Sampled by:

Tim BAUTERS

Special Instructions/Comments:

Relinquished By (Sampler)

Signature

Time

TIM BAUTERS 10 MAY 2010

Printed Name

Date

LBNL
Company

Received By

Signature

Time

Mich Smith

Printed Name

Date

CDT
Company

Relinquished By

Signature

Time

Printed Name

Date

Company

Received By

Signature

Time

Printed Name

Date

Company

Relinquished By

Signature

Time

Printed Name

Date

Company

Received By

Signature

Time

Printed Name

Date

Company

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass CG = clear glass PE = polyethylene VV = VOA vial
*** Field Sample ID: If present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files, use Sample Location as the identifier. ****Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

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COC No.: 06543

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Release Number / Document Control No.: ESG-06543

Collection(s): 6989

Purpose: Surface Water Monitoring Program - ASWMP Sampling

Sample Location	Date & Time Sampled	Reference Date/time*	Collection Method	Sample Type	Container Volume & Code**	#	Preservative	Analysis Code	Field Sample ID***	Notes to Lab
59910	5/10/2010 12:55	5/10/2010 12:55	Grab	Aqueous	500 ml PE	2	None	STORMMET-ASWMP-85		1st-500ml PE w/NaOH for Cyanide; 2nd-500ml PE w/HNO3 for Metals
59917	5/10/2010 12:15	5/10/2010 12:15	Grab	Aqueous	1 Liter PE	1	None	E120.1		
59918	5/10/2010 12:15	5/10/2010 12:15	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
59918	5/10/2010 12:15	5/10/2010 12:15	Grab	Aqueous	1 Liter AG	1	HCL	E1664		

Total No. of Containers: 20

Shipping Document ID: hand carry

Turnaround Time****: 20 days

Lab Name: CURTISTOMP

Sampled by:

TIM BAUTERS

Special Instructions/Comments:

Relinquished By (Sampler)

Signature

Time

Printed Name

Date

Company

Received By

Signature

Time

Printed Name

Date

Company

Relinquished By

Signature

Time

Printed Name

Date

Company

Received By

Signature

Time

Printed Name

Date

Company

Relinquished By

Signature

Time

Printed Name

Date

Company

Received By

Signature

Time

Printed Name

Date

Company

*REFERENCE DATE/TIME: Use this value for decay calculations in radiological analyses when applicable **Container Codes: AG = amber glass CG = clear glass PE = polyethylene VV = VOA vial

*** Field Sample ID: If present, use this information as the sample identifier in hard-copy reports (please include Sample Location information in the notes). If blank, and in electronic deliverable files, use Sample Location as the identifier. ****Listed turnaround time is for reporting and is in work days, as defined in the Joint LBNL/LLNL Analytical Services blanket order.

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 220040 Date Received 5/10/10 Number of coolers 2
 Client D.C. LBNL Project SURFACE WATER
 Date Opened 5/10/10 By (print) M. Villanueva (sign) [Signature]
 Date Logged in ✓ By (print) ✓ (sign) ✓

1. Did cooler come with a shipping slip (airbill, etc) YES ~~NO~~
 Shipping info _____

2A. Were custody seals present? ... ☒ YES (circle) on cooler on samples ☒ NO ✓
 How many 20 Name G. M. P. T. V. R. E. S. Date 5/10/10

2B. Were custody seals intact upon arrival? YES ~~NO~~ ✓

3. Were custody papers dry and intact when received? YES ~~NO~~ ✓

4. Were custody papers filled out properly (ink, signed, etc)? YES ~~NO~~ ✓

5. Is the project identifiable from custody papers? (If so fill out top of form) YES ~~NO~~ ✓

6. Indicate the packing in cooler: (if other, describe) _____

☐ Bubble Wrap ☐ Foam blocks ☐ Bags ☐ None
☒ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☐ Wet ☒ Blue/Gel ☐ None Temp(°C) _____

☒ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES ~~NO~~ ✓
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? YES ~~NO~~ ✓

10. Are samples in the appropriate containers for indicated tests? YES ~~NO~~ ✓

11. Are sample labels present, in good condition and complete? YES ~~NO~~ ✓

12. Do the sample labels agree with custody papers? YES ~~NO~~ ✓

13. Was sufficient amount of sample sent for tests requested? YES ~~NO~~ ✓

14. Are the samples appropriately preserved? YES ~~NO~~ N/A ✓

15. Are bubbles > 6mm absent in VOA samples? YES ~~NO~~ N/A ✓

16. Was the client contacted concerning this sample delivery? YES ~~NO~~ ✓

If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Curtis & Tompkins Sample Preservation for 220040

Sample	pH: <2	>12	Other
-001a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-002a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-003a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-004a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-005a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-006a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-007a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
-008a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
-009a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-010a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-011a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
-012a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-013a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-014a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-015a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
-016a	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____
-017a	<input type="checkbox"/>	<input type="checkbox"/>	_____
-018a	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: MV
 Date: 5/10/10



Curtis & Tompkins, Ltd.

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location:	Surface Water Monitoring Program		
COC #:	06543	Batch#:	162926
Requested:	STORMMET-ASWMP-77	Instrument:	MET26
Field ID:	59900	Chemist:	JYF
Matrix:	Water	Sampled:	05/10/10 12:40
Units:	mg/L	Received:	05/10/10
Diln Fac:	5.000	Prepared:	05/11/10 20:00

Type:	SAMPLE	Analyzed:	05/12/10 21:57
Lab ID:	220040-008		

Analyte	Code	Result	RL
Aluminum	0313	0.52	0.050
Copper	2800	0.10	0.0050
Iron	5350	0.78	0.050
Lead	5450	0.023	0.0050
Zinc	9050	0.40	0.050

Type:	BLANK	Analyzed:	05/12/10 20:29
Lab ID:	QC544170		

Analyte	Code	Result	RL
Aluminum	0313	ND	0.050
Copper	2800	ND	0.0050
Iron	5350	ND	0.050
Lead	5450	ND	0.0050
Zinc	9050	ND	0.050

Metals Analytical Report

Lab #: 220040	Location: Surface Water Monitoring Program
Client: Lawrence Berkeley National Lab	Cert #: 01107CA
Project#: STANDARD	
COC #: 06543	Matrix: Water
Requested: STORMMET-ASWMP-85	Units: mg/L
Field ID: 59905	Sampled: 05/10/10 13:05
Lab ID: 220040-012	Received: 05/10/10

Analyte	Code	Result	RL	Diln	Fac	Batch#	Instrument	Chemist	Prepared	Analyzed	Prep	Analysis
Arsenic	0450	ND	0.050	5.000	162926	MET26	JYF		05/11/10 20:00	05/12/10 22:45	EPA 200.8	EPA 200.8
Cadmium	1650	ND	0.010	5.000	162926	MET26	JYF		05/11/10 20:00	05/12/10 22:45	EPA 200.8	EPA 200.8
Lead	5450	ND	0.050	5.000	162926	MET26	JYF		05/11/10 20:00	05/12/10 22:45	EPA 200.8	EPA 200.8
Magnesium	5500	0.45	0.050	5.000	162926	MET26	JYF		05/11/10 20:00	05/12/10 22:45	EPA 200.8	EPA 200.8
Mercury	5600	ND	0.00020	1.000	162933	MET04	MB2		05/12/10 09:12	05/12/10 13:35	METHOD	EPA 245.1
Selenium	7600	ND	0.050	5.000	162926	MET26	JYF		05/11/10 20:00	05/12/10 22:45	EPA 200.8	EPA 200.8
Silver	7800	ND	0.010	5.000	162926	MET26	JYF		05/11/10 20:00	05/12/10 22:45	EPA 200.8	EPA 200.8



Curtis & Tompkins, Ltd.

Metals Analytical Report

Lab #:	220040	Location:	Surface Water Monitoring Program
Client:	Lawrence Berkeley National Lab	Cert #:	01107CA
Project#:	STANDARD		
COC #:	06543	Matrix:	Water
Requested:	STORMMET-ASWMP-85	Units:	mg/L
Field ID:	59910	Sampled:	05/10/10 12:55
Lab ID:	220040-016	Received:	05/10/10

Analyte	Code	Result	RL	Diln	Fac	Batch#	Instrument	Chemist	Prepared	Analyzed	Prep	Analysis
Arsenic	0450	ND	0.050	5.000		162926	MET26	JYF	05/11/10 20:00	05/12/10 22:55	EPA 200.8	EPA 200.8
Cadmium	1650	ND	0.010	5.000		162926	MET26	JYF	05/11/10 20:00	05/12/10 22:55	EPA 200.8	EPA 200.8
Lead	5450	ND	0.050	5.000		162926	MET26	JYF	05/11/10 20:00	05/12/10 22:55	EPA 200.8	EPA 200.8
Magnesium	5500	0.35	0.050	5.000		162926	MET26	JYF	05/11/10 20:00	05/12/10 22:55	EPA 200.8	EPA 200.8
Mercury	5600	ND	0.00020	1.000		162933	MET04	MB2	05/12/10 09:12	05/12/10 13:42	METHOD	EPA 245.1
Selenium	7600	ND	0.050	5.000		162926	MET26	JYF	05/11/10 20:00	05/12/10 22:55	EPA 200.8	EPA 200.8
Silver	7800	ND	0.010	5.000		162926	MET26	JYF	05/11/10 20:00	05/12/10 22:55	EPA 200.8	EPA 200.8

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: Surface Water Monitoring Program			
Requested:	STORMMET-ASWMP-85	Batch#:	162926
Type:	BLANK	Instrument:	MET26
Lab ID:	QC544170	Chemist:	JYF
Matrix:	Water	Prepared:	05/11/10 20:00
Units:	mg/L	Analyzed:	05/12/10 20:29
Diln Fac:	5.000		

Analyte	Code	Result	RL
Arsenic	0450	ND	0.050
Cadmium	1650	ND	0.010
Lead	5450	ND	0.0050
Magnesium	5500	ND	0.050
Selenium	7600	ND	0.050
Silver	7800	ND	0.010



Batch QC Report

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: Surface Water Monitoring Program			
Requested:	STORMMET-ASWMP-77	Batch#:	162926
Type:	LCS	Instrument:	MET26
Lab ID:	QC544171	Chemist:	JYF
Matrix:	Water	Prepared:	05/11/10 20:00
Units:	mg/L	Analyzed:	05/12/10 20:39
Diln Fac:	5.000		

Analyte	Code	Spiked	Result	%REC	Limits
Aluminum	0313	10.00	9.760	98	68-124
Copper	2800	0.1000	0.09265	93	70-125
Iron	5350	10.00	9.420	94	78-131
Lead	5450	0.1000	0.09520	95	76-121
Zinc	9050	0.1000	0.09375	94	66-124

Batch QC Report

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: Surface Water Monitoring Program			
Requested:	STORMMET-ASWMP-85	Batch#:	162926
Type:	LCS	Instrument:	MET26
Lab ID:	QC544171	Chemist:	JYF
Matrix:	Water	Prepared:	05/11/10 20:00
Units:	mg/L	Analyzed:	05/12/10 20:39
Diln Fac:	5.000		

Analyte	Code	Spiked	Result	%REC	Limits
Arsenic	0450	0.1000	0.09575	96	73-116
Cadmium	1650	0.1000	0.09420	94	77-116
Lead	5450	0.1000	0.09520	95	76-121
Magnesium	5500	10.00	9.770	98	68-124
Selenium	7600	0.1000	0.09325	93	68-127
Silver	7800	0.1000	0.09185	92	64-123



Batch QC Report

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location: Surface Water Monitoring Program			
Requested:	STORMMET-ASWMP-77	Batch#:	162926
Field ID:	ZZZZZZZZZZ	Instrument:	MET26
MSS Lab ID:	219924-001	Chemist:	JYF
Matrix:	Water	Sampled:	05/03/10 14:30
Units:	mg/L	Received:	05/04/10
Diln Fac:	5.000	Prepared:	05/11/10 20:00

Type: MS Analyzed: 05/12/10 21:08
Lab ID: QC544172

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits
Aluminum	0313	0.01366	10.00	9.910	99	62-128
Copper	2800	0.001629	0.1000	0.09430	93	50-136
Iron	5350	0.03521	10.00	9.695	97	62-137
Lead	5450	<0.0001461	0.1000	0.09680	97	58-126
Zinc	9050	0.002119	0.1000	0.09605	94	44-141

Type: MSD Analyzed: 05/12/10 21:18
Lab ID: QC544173

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim
Aluminum	0313	10.00	9.940	99	62-128	0	29
Copper	2800	0.1000	0.09340	92	50-136	1	48
Iron	5350	10.00	9.345	93	62-137	4	31
Lead	5450	0.1000	0.09705	97	58-126	0	25
Zinc	9050	0.1000	0.09705	95	44-141	1	54

Batch QC Report

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.8
Project#:	STANDARD	Analysis:	EPA 200.8
Location:	Surface Water Monitoring Program		
Requested:	STORMMET-ASWMP-85	Batch#:	162926
Field ID:	ZZZZZZZZZZ	Instrument:	MET26
MSS Lab ID:	219924-001	Chemist:	JYF
Matrix:	Water	Sampled:	05/03/10 14:30
Units:	mg/L	Received:	05/04/10
Diln Fac:	5.000	Prepared:	05/11/10 20:00

Type: MS Analyzed: 05/12/10 21:08
 Lab ID: QC544172

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits
Arsenic	0450	<0.0001141	0.1000	0.09910	99	65-126
Cadmium	1650	<0.00008328	0.1000	0.09450	95	69-118
Lead	5450	<0.0001461	0.1000	0.09680	97	58-126
Magnesium	5500	0.01902	10.00	10.00	100	58-133
Selenium	7600	<0.0001544	0.1000	0.09605	96	59-135
Silver	7800	<0.00006798	0.1000	0.09465	95	52-126

Type: MSD Analyzed: 05/12/10 21:18
 Lab ID: QC544173

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim
Arsenic	0450	0.1000	0.09630	96	65-126	3	28
Cadmium	1650	0.1000	0.09555	96	69-118	1	21
Lead	5450	0.1000	0.09705	97	58-126	0	25
Magnesium	5500	10.00	9.965	99	58-133	0	24
Selenium	7600	0.1000	0.09155	92	59-135	5	28
Silver	7800	0.1000	0.09520	95	52-126	1	24

RPD= Relative Percent Difference



Batch QC Report

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 245.1
Location: Surface Water Monitoring Program			
Analyte:	Mercury	Diln Fac:	1.000
Code:	5600	Batch#:	162933
Requested:	STORMMET-ASWMP-85	Instrument:	MET04
Matrix:	TCLP Leachate	Chemist:	MB2
Units:	mg/L	Prepared:	05/12/10 09:12

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
BS	QC544210	0.002500	0.002470	99	77-124			05/12/10 12:20
BSD	QC544211	0.002500	0.002500	100	77-124	1	12	05/12/10 12:22



Batch QC Report

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 245.1
Location:	Surface Water Monitoring Program		
Analyte:	Mercury	Diln Fac:	1.000
Code:	5600	Batch#:	162933
Requested:	STORMMET-ASWMP-85	Instrument:	MET04
Type:	BLANK	Chemist:	MB2
Lab ID:	QC544218	Prepared:	05/12/10 09:12
Matrix:	Water	Analyzed:	05/12/10 12:46
Units:	mg/L		

Result**RL**

ND

0.00020

ND= Not Detected

RL= Reporting Limit



Batch QC Report

Metals Analytical Report

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 245.1
Location:	Surface Water Monitoring Program		
Analyte:	Mercury	Diln Fac:	1.000
Code:	5600	Batch#:	162933
Requested:	STORMMET-ASWMP-85	Instrument:	MET04
Field ID:	ZZZZZZZZZZ	Chemist:	MB2
MSS Lab ID:	220049-006	Sampled:	05/10/10 16:15
Matrix:	Water	Received:	05/11/10
Units:	mg/L	Prepared:	05/12/10 09:12

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
MS	QC544219	<0.00001460	0.002500	0.002600	104	53-149			05/12/10 12:54
MSD	QC544220		0.002500	0.002550	102	53-149	2	19	05/12/10 12:56



Curtis & Tompkins, Ltd.

Nitrate/Nitrite Nitrogen

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 300.0
Location: Surface Water Monitoring Program			
Code:	5950	Diln Fac:	1.000
COC #:	06543	Batch#:	162896
Requested:	NO3+NO2 (asN) :MULT	Instrument:	IC03
Field ID:	59897	Sampled:	05/10/10 12:40
Matrix:	Water	Received:	05/10/10
Units:	mg/L		

Type:	SAMPLE	Chemist:	MJB
Lab ID:	220040-005	Analyzed:	05/11/10 09:25

Analyte	Result	RL
Nitrogen, Nitrate/Nitrite	0.21	0.10

Type:	BLANK	Chemist:	JLM
Lab ID:	QC544045	Analyzed:	05/11/10 08:46

Analyte	Result	RL
Nitrogen, Nitrate/Nitrite	ND	0.10



Curtis & Tompkins, Ltd.

Batch QC Report

Nitrate/Nitrite Nitrogen

Lab #: 220040 Cert #: 01107CA
Client: Lawrence Berkeley National Lab Prep: METHOD
Project#: STANDARD Analysis: EPA 300.0
Location: Surface Water Monitoring Program

Requested: NO3+NO2 (asN):MULT Diln Fac: 1.000
Type: LCS Batch#: 162896
Lab ID: QC544046 Instrument: IC03
Matrix: Water Chemist: JLM
Units: mg/L Analyzed: 05/11/10 09:04

Analyte	Code	Spiked	Result	%REC	Limits
Nitrogen, Nitrite	5960	1.000	0.9948	99	88-110
Nitrogen, Nitrate	5895	1.000	1.013	101	89-110



Curtis & Tompkins, Ltd.

Batch QC Report

Nitrate/Nitrite Nitrogen

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 300.0
Location:	Surface Water Monitoring Program		

Requested:	NO3+NO2(asN):MULT	Batch#:	162896
Field ID:	59897	Instrument:	IC03
MSS Lab ID:	220040-005	Chemist:	JLM
Matrix:	Water	Sampled:	05/10/10 12:40
Units:	mg/L	Received:	05/10/10
Diln Fac:	1.020		

Type: MS
Lab ID: QC544047

Analyzed: 05/11/10 09:54

Analyte	Code	MSS Result	Spiked	Result	%REC	Limits
Nitrogen, Nitrite	5960	<0.01287	0.5100	0.5415	106	74-136
Nitrogen, Nitrate	5895	0.2081	0.5100	0.7256	101	65-137

Type: MSD
Lab ID: QC544048

Analyzed: 05/11/10 10:12

Analyte	Code	Spiked	Result	%REC	Limits	RPD	Lim
Nitrogen, Nitrite	5960	0.5100	0.5586	110	74-136	3	17
Nitrogen, Nitrate	5895	0.5100	0.7291	102	65-137	0	6

RPD= Relative Percent Difference



Curtis & Tompkins, Ltd.

Total Oil & Grease (HEM)

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 1664A
Location: Surface Water Monitoring Program			
Analyte:	Oil & Grease (HEM)	Batch#:	162987
Code:	6325	Instrument:	H3000
COC #:	06543	Chemist:	PAP
Requested:	E1664	Received:	05/10/10
Matrix:	Water	Prepared:	05/13/10 14:30
Units:	mg/L	Analyzed:	05/14/10 12:00

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled
59892	SAMPLE	220040-002	13.7	4.70	0.9400	05/10/10 12:30
59895	SAMPLE	220040-004	12.2	4.75	0.9500	05/10/10 12:50
59898	SAMPLE	220040-006	6.32	4.70	0.9400	05/10/10 12:40
59903	SAMPLE	220040-010	4.91	4.70	0.9400	05/10/10 13:05
59908	SAMPLE	220040-014	7.30	5.00	1.000	05/10/10 12:55
59918	SAMPLE	220040-018	8.77	4.70	0.9400	05/10/10 12:15
	BLANK	QC544423	ND	5.00	1.000	



Curtis & Tompkins, Ltd.

Batch QC Report

Total Oil & Grease (HEM)

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 1664A
Location: Surface Water Monitoring Program			
Analyte:	Oil & Grease (HEM)	Batch#:	162987
Code:	6325	Instrument:	H3000
Requested:	E1664	Chemist:	PAP
Matrix:	Water	Prepared:	05/13/10 14:30
Units:	mg/L	Analyzed:	05/14/10 12:00
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC544424	40.00	43.50	109	78-114		
BSD	QC544425	40.00	42.40	106	78-114	3	18

RPD= Relative Percent Difference



Curtis & Tompkins, Ltd.

Ammonia Nitrogen

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	SM4500NH3-B
Project#:	STANDARD	Analysis:	SM4500NH3-D
Location:	Surface Water Monitoring Program		
Analyte:	Ammonia-N	Diln Fac:	1.000
Code:	0325	Batch#:	162945
COC #:	06543	Instrument:	OR_NH3
Requested:	E350.2	Chemist:	PAP
Matrix:	Water	Received:	05/10/10
Units:	mg/L	Analyzed:	05/12/10 12:00

Field ID	Type	Lab ID	Result	RL	Sampled
59904	SAMPLE	220040-011	0.28	0.10	05/10/10 13:05
59909	SAMPLE	220040-015	0.19	0.10	05/10/10 12:55
	BLANK	QC544264	ND	0.10	

Batch QC Report

Ammonia Nitrogen			
Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	SM4500NH3-B
Project#:	STANDARD	Analysis:	SM4500NH3-D
Location: Surface Water Monitoring Program			
Analyte:	Ammonia-N	Diln Fac:	1.000
Code:	0325	Batch#:	162945
Requested:	E350.2	Instrument:	OR_NH3
Field ID:	ZZZZZZZZZZ	Chemist:	PAP
MSS Lab ID:	219964-002	Sampled:	05/06/10 14:30
Matrix:	Water	Received:	05/06/10
Units:	mg/L	Analyzed:	05/12/10 12:00

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC544265		5.000	4.100	82	53-122		
MS	QC544266	0.1300	5.000	4.400	85	28-140		
MSD	QC544267		5.000	4.600	89	28-140	4	21

RPD= Relative Percent Difference

Chemical Oxygen Demand

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM5220D
Location: Surface Water Monitoring Program			
Analyte:	Chemical Oxygen Demand	Batch#:	163038
Code:	1875	Instrument:	DR2800
COC #:	06543	Chemist:	PAP
Requested:	E410.4	Received:	05/10/10
Matrix:	Water	Prepared:	05/14/10 11:45
Units:	mg/L	Analyzed:	05/14/10 13:45
Diln Fac:	1.000		

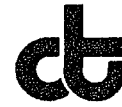
Field ID	Type	Lab ID	Result	RL	Sampled
59899	SAMPLE	220040-007	63	10	05/10/10 12:40
59904	SAMPLE	220040-011	50	10	05/10/10 13:05
59909	SAMPLE	220040-015	30	10	05/10/10 12:55
	BLANK	QC544631	ND	10	

Batch QC Report

Chemical Oxygen Demand			
Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM5220D
Location: Surface Water Monitoring Program			
Analyte:	Chemical Oxygen Demand	Batch#:	163038
Code:	1875	Instrument:	DR2800
Requested:	E410.4	Chemist:	PAP
Field ID:	59909	Sampled:	05/10/10 12:55
MSS Lab ID:	220040-015	Received:	05/10/10
Matrix:	Water	Prepared:	05/14/10 11:45
Units:	mg/L	Analyzed:	05/14/10 13:45
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC544632		75.00	73.90	99	90-110		
MS	QC544633	30.43	150.0	178.2	99	41-150		
MSD	QC544634		150.0	191.3	107	41-150	7	29

RPD= Relative Percent Difference



Curtis & Tompkins, Ltd.

Total Cyanide

Lab #: 220040 Cert #: 01107CA
Client: Lawrence Berkeley National Lab Prep: METHOD
Project#: STANDARD Analysis: SM4500CN-E
Location: Surface Water Monitoring Program

Analyte: Cyanide Batch#: 163034
Code: 2850 Instrument: LAMBDA
COC #: 06543 Chemist: DM
Requested: STORMMET-ASWMP-85 Received: 05/10/10
Matrix: Water Prepared: 05/14/10 08:30
Units: mg/L Analyzed: 05/14/10 12:12
Diln Fac: 1.000

Field ID	Type	Lab ID	Result	RL	Sampled
59905	SAMPLE	220040-012	ND	0.005	05/10/10 13:05
59910	SAMPLE	220040-016	ND	0.005	05/10/10 12:55
	BLANK	QC544614	ND	0.005	

Batch QC Report

Total Cyanide			
Lab #:	220040,	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM4500CN-E
Location: Surface Water Monitoring Program			
Analyte:	Cyanide	Batch#:	163034
Code:	2850	Instrument:	LAMBDA
Requested:	STORMMET-ASWMP-85	Chemist:	DM
Field ID:	ZZZZZZZZZZ	Sampled:	05/03/10 13:40
MSS Lab ID:	219948-003	Received:	05/06/10
Matrix:	Water	Prepared:	05/14/10 08:30
Units:	mg/L	Analyzed:	05/14/10 12:12
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC544615	<0.01000	0.2000	0.2213	111	46-143		
MSD	QC544616		0.2000	0.2144	107	46-143	3	17
LCS	QC544619		0.2000	0.2116	106	79-119		

RPD= Relative Percent Difference

Conductivity

Lab #: 220040	Cert #: 01107CA
Client: Lawrence Berkeley National Lab	Prep: METHOD
Project#: STANDARD	Analysis: SM2510B
Location: Surface Water Monitoring Program	
Analyte: Specific Conductance	Diln Fac: 1.000
Code: 8000	Batch#: 163041
COC #: 06543	Instrument: VWR_EC
Requested: E120.1	Chemist: STL
Matrix: Water	Received: 05/10/10
Units: umhos/cm	Analyzed: 05/14/10 13:00

Field ID	Type	Lab ID	Result	RL	Sampled
59891	SAMPLE	220040-001	63	1.0	05/10/10 12:30
59894	SAMPLE	220040-003	170	1.0	05/10/10 12:50
59897	SAMPLE	220040-005	50	1.0	05/10/10 12:40
59902	SAMPLE	220040-009	29	1.0	05/10/10 13:05
59907	SAMPLE	220040-013	20	1.0	05/10/10 12:55
59917	SAMPLE	220040-017	98	1.0	05/10/10 12:15
	BLANK	QC544643	ND	1.0	

Batch QC Report

Conductivity			
Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2510B
Location: Surface Water Monitoring Program			
Analyte:	Specific Conductance	Diln Fac:	1.000
Code:	8000	Batch#:	163041
Requested:	E120.1	Instrument:	VWR_EC
Field ID:	59891	Chemist:	STL
MSS Lab ID:	220040-001	Sampled:	05/10/10 12:30
Matrix:	Water	Received:	05/10/10
Units:	umhos/cm	Analyzed:	05/14/10 13:00

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC544644		1,000	1,010		101	90-110		
SDUP	QC544645	62.60		62.30	1.000			0	4

RL= Reporting Limit

RPD= Relative Percent Difference



Curtis & Tompkins, Ltd.

Total Suspended Solids (TSS)

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2540D
Location: Surface Water Monitoring Program			
Analyte:	Total Suspended Solids	Batch#:	163035
Code:	7450	Instrument:	SCALE
COC #:	06543	Chemist:	STL
Requested:	TSS:SM2540D	Received:	05/10/10
Matrix:	Water	Prepared:	05/14/10 11:50
Units:	mg/L	Analyzed:	05/14/10 15:40

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled
59891	SAMPLE	220040-001	98	10	2.000	05/10/10 12:30
59894	SAMPLE	220040-003	31	5	1.000	05/10/10 12:50
59897	SAMPLE	220040-005	38	5	1.000	05/10/10 12:40
59902	SAMPLE	220040-009	10	5	1.000	05/10/10 13:05
59907	SAMPLE	220040-013	9	5	1.000	05/10/10 12:55
59917	SAMPLE	220040-017	84	10	2.000	05/10/10 12:15
	BLANK	QC544620	ND	5	1.000	



Curtis & Tompkins, Ltd.

Batch QC Report

Total Suspended Solids (TSS)

Lab #:	220040	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2540D
Location:	Surface Water Monitoring Program		

Analyte:	Total Suspended Solids	Batch#:	163035
Code:	7450	Instrument:	SCALE
Requested:	TSS:SM2540D	Chemist:	STL
Field ID:	ZZZZZZZZZZ	Sampled:	05/10/10 12:40
MSS Lab ID:	220037-001	Received:	05/10/10
Matrix:	Water	Prepared:	05/14/10 11:50
Units:	mg/L	Analyzed:	05/14/10 15:40
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC544621		50.00	53.00	106	87-110		
MS	QC544622	19.00	50.00	68.00	98	34-152		
MSD	QC544623		50.00	69.00	100	34-152	1	5

RPD= Relative Percent Difference

pH Calibration & Measurement Worksheet

Analytical Method: Standard Method 4500H+B
 Instrument ID: EXTECH Serial # 78528
 Analyst: Tim Bauters

Analysis Date: May 10, 2010
 Time of Analysis: 16:00
 Analysis Units: Standard Units

Program Name: ASWMP #2

Collection # 6989

Calibration Standards Results

Standard	Manufacturer	Lot #	Exp. Date	Value (as found)	Calibration Value	Value (as left)	+/- 0.5 pH units	Pass/Fail
4.00 pH	EKI	67088	01/17/11	3.98	4.00	4.02	0.02	PASS
7.00 pH	EKI	66500	11/20/10	6.98	7.00	7.00	0.00	PASS
10.00 pH	EKI	66295	10/30/10	9.71	10.00	10.00	0.00	PASS

Sample Analysis Results

Sample ID	Location	Sample Date	Result (pH)	Comments
59893	MP1	May 10, 2010	8.36	
59896	MP2	May 10, 2010	6.68	Second value measured at 6.28
59901	MP3	May 10, 2010	6.78	
59906	MP4	May 10, 2010	6.60	
59911	MP5	May 10, 2010	6.86	
59916	MP3 Duplicate	May 10, 2010	6.63	
59919	MP6	May 10, 2010	7.17	

Quality Assurance Quality Control Analysis Results

QAQC	Sample Result / ID	Duplicate Result / ID	RPD	Pass/Fail	Comments
Dup QAQC	6.68 59896	6.28 59896	0.06	PASS	
Field Dup QAQC	6.78 59901	6.63 59916	0.02	PASS	

QAQC	Spike Amount	Spike Sample Result	RPD	% Recovery	Pass/Fail	Comments
LCS	7.00	6.75	0.04	103.7%	PASS	

LCS Manufacture: JT Baker LCS Lot # H24518 Exp. Date July 31, 2011

Notes:

RPD = (Sample Result - Dup Result) / (Mean of Result Pair). RPD (intra-laboratory) must be less than 0.3 to pass QAQC criteria
 ± 0.5 pH units = Calibration Value - Value (as left). The "as left" pH value must be within 0.5 pH units of the Calibration Value in order to pass.
 % Recovery = (Spike Result / Result) * 100. % Recovery must be between 90 to 110 % to pass QAQC criteria

5/11/2010

5/11/2010

X

John Jelinski
QAQC Reviewer

X

Tim Bauters
Analyst

ESG Sample Collection Form

U.C. Lawrence Berkeley National Laboratory
1 Cyclotron Road
Berkeley CA 94720

Surface Water Monitoring
ASWMP Sampling
Collection: 6989

Sample Data										
Sample ID	Location	SampleType	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Sample Notes
59891	MP1	Aqueous	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D	5/10/2010 12:30:00 PM	1-1 Liter PE	None	1 L	Slight turbidity noted in the samples
		Sample Collected: Yes								
59892	MP1	Aqueous	Sample	Grab	CURTISTOMP E1664	5/10/2010 12:30:00 PM	1-1 Liter AG	HCL	1 L	turbidity noted in the samples
		Sample Collected: Yes								
59893	MP1	Aqueous	Sample	Grab	pH-aq:SM4500H+B	5/10/2010 12:30:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
		Sample Collected: Yes								
59894	MP2	Aqueous	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D	5/10/2010 12:50:00 PM	1-1 Liter PE	None	1 L	Sampled by Pre-cleaned Bailer, very clear sample
		Sample Collected: Yes								
59895	MP2	Aqueous	Sample	Grab	CURTISTOMP E1664	5/10/2010 12:50:00 PM	1-1 Liter AG	HCL	1 L	Sampled by Pre-cleaned Bailer, very clear sample
		Sample Collected: Yes								
59896	MP2	Aqueous	Sample	Grab	pH-aq:SM4500H+B	5/10/2010 12:50:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
		Sample Collected: Yes								
59897	MP3	Aqueous	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D, NO3+NO2(asN):MULT	5/10/2010 12:40:00 PM	1-1 Liter PE	None	1 L	Sampled by Pre-cleaned Bailer, very clear sample
		Sample Collected: Yes								
59898	MP3	Aqueous	Sample	Grab	CURTISTOMP E1664	5/10/2010 12:40:00 PM	1-1 Liter AG	HCL	1 L	Sampled by Pre-cleaned Bailer, very clear sample
		Sample Collected: Yes								
59899	MP3	Aqueous	Sample	Grab	CURTISTOMP E410.4	5/10/2010 12:40:00 PM	1-500 ml PE	H2SO4	0.5 L	Sampled by Pre-cleaned Bailer, very clear sample
		Sample Collected: Yes								
59900	MP3	Aqueous	Sample	Grab	CURTISTOMP STORMMET-ASWMP-77	5/10/2010 12:40:00 PM	1-500 ml PE	HNO3	0.5 L	Sampled by Pre-cleaned Bailer, very clear sample
		Sample Collected: Yes								

Sample Data

Sample ID	Location	SampleType	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Sample Notes
59901	MP3	Aqueous	Sample	Grab	pH-aq:SM4500H+B	5/10/2010 12:40:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
		Sample Collected:	Yes							
59902	MP4	Aqueous	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D	5/10/2010 1:05:00 PM	1-1 Liter PE	None	1 L	Sampled with pre-cleaned bailer, clean sample
		Sample Collected:	Yes							
59903	MP4	Aqueous	Sample	Grab	CURTISTOMP E1664	5/10/2010 1:05:00 PM	1-1 Liter AG	HCL	1 L	Sampled with pre-cleaned bailer, clean sample
		Sample Collected:	Yes							
59904	MP4	Aqueous	Sample	Grab	CURTISTOMP E410.4, Ammonia(asN):MULT	5/10/2010 1:05:00 PM	1-500 ml PE	H2SO4	0.5 L	Sampled with pre-cleaned bailer, clean sample
		Sample Collected:	Yes							
59905	MP4	Aqueous	Sample	Grab	CURTISTOMP STORMMET-ASWMP-85	5/10/2010 1:05:00 PM	2-500 ml PE	None	1 L	Preserve 1st-500ml PE w/NaOH for Cyanide; 2nd-500ml PE w/HNO3 for Metals
		Sample Collected:	Yes							
59906	MP4	Aqueous	Sample	Grab	pH-aq:SM4500H+B	5/10/2010 1:05:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
		Sample Collected:	Yes							
59907	MP5	Aqueous	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D	5/10/2010 12:55:00 PM	1-1 Liter PE	None	1 L	Sampled with pre-cleaned bailer, clean sample
		Sample Collected:	Yes							
59908	MP5	Aqueous	Sample	Grab	CURTISTOMP E1664	5/10/2010 12:55:00 PM	1-1 Liter AG	HCL	1 L	Sampled with pre-cleaned bailer, clean sample
		Sample Collected:	Yes							
59909	MP5	Aqueous	Sample	Grab	CURTISTOMP E410.4, Ammonia(asN):MULT	5/10/2010 12:55:00 PM	1-500 ml PE	H2SO4	0.5 L	Sampled with pre-cleaned bailer, clean sample
		Sample Collected:	Yes							
59910	MP5	Aqueous	Sample	Grab	CURTISTOMP STORMMET-ASWMP-85	5/10/2010 12:55:00 PM	2-500 ml PE	None	1 L	Preserve 1st-500ml PE w/NaOH for Cyanide; 2nd-500ml PE w/HNO3 for Metals
		Sample Collected:	Yes							
59911	MP5	Aqueous	Sample	Grab	pH-aq:SM4500H+B	5/10/2010 12:55:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
		Sample Collected:	Yes							
59912	MP3	Aqueous	Dup	Grab	BCLABS-BAK E120.1, TSS:SM2540D	5/10/2010 12:40:00 PM	1-1 Liter PE	None	1 L	True split, collected in 5 gallon carboy with pre-cleaned bailer
		Sample Collected:	Yes							

Sample Data										
Sample ID	Location	SampleType	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Sample Notes
59913	MP3	Aqueous	Dup	Grab	BCLABS-BAK E1664	5/10/2010 12:40:00 PM	1-1 Liter AG	HCL	1 L	True split, collected in 5 gallon carboy with pre-cleaned bailer
		Sample Collected: Yes								
59914	MP3	Aqueous	Dup	Grab	BCLABS-BAK E410.4, NO3+NO2(asN):MULT	5/10/2010 12:40:00 PM	1-500 ml PE	H2SO4	0.5 L	True split, collected in 5 gallon carboy with pre-cleaned bailer
		Sample Collected: Yes								
59915	MP3	Aqueous	Dup	Grab	BCLABS-BAK STORMMET-ASWMP-77	5/10/2010 12:40:00 PM	1-500 ml PE	HNO3	0.5 L	True split, collected in 5 gallon carboy with pre-cleaned bailer
		Sample Collected: Yes								
59916	MP3	Aqueous	Dup	Grab	pH-aq:SM4500H+B	5/10/2010 12:40:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
		Sample Collected: Yes								
59917	MP6	Aqueous	Sample	Grab	CURTISTOMP E120.1, TSS:SM2540D	5/10/2010 12:15:00 PM	1-1 Liter PE	None	1 L	Slight turbidity noted, sampled with scoop
		Sample Collected: Yes								
59918	MP6	Aqueous	Sample	Grab	CURTISTOMP E1664	5/10/2010 12:15:00 PM	1-1 Liter AG	HCL	1 L	Slight turbidity noted, sampled with scoop
		Sample Collected: Yes								
59919	MP6	Aqueous	Sample	Grab	pH-aq:SM4500H+B	5/10/2010 12:15:00 PM	1-250 ml PE	None	0.25 L	In house measurement not send to lab
		Sample Collected: Yes								