



Environment, Health & Safety Division

March 23, 2009
DIR-09-026

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
Alameda, California 94501

SUBJECT: Lawrence Berkeley National Laboratory Storm Water Results from February 6, 2009
Sampling Event

The University of California is providing a copy of the storm water sampling results for the February 6, 2009 sampling event at Lawrence Berkeley National Laboratory (the Facility).

The sampling that was performed is consistent with the *Alternative Storm Water Monitoring Plan* for the Facility, which was submitted to you on January 2, 2009. Please note that the outdoor paint storage area (Building 76) is no longer a sampling location because all outdoor paint-related activities were permanently moved indoors before submission of the *Alternative Storm Water Monitoring Plan* in January.

The results include the Facility's sample collection forms and the laboratory analysis reports from BC Laboratories and Curtis & Tompkins.

Based on these results, the University has determined that additional storm water pollution prevent control measures are warranted in addition to those the University has recently implemented. Additional measures that are being examined include improving housekeeping and storm water filtration and reducing the amount of materials exposed to rainwater.

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

Sincerely,



Howard Hatayama, Director
Environment, Health & Safety Division

Enc: Storm Water Sampling Results

cc (w/enclosure):

K. Abbott, DOE/BSO

C. Felix, San Francisco Regional Water Quality Control Board

R. Pauer

bcc (w/out enclosure):

M. Chekal-Bain

L. Dutton

D. Franklin

J. Jelinski

J. Krupnick

J. Miller

D. Medley

J. Ridgeway

M. Rosegay, Pillsbury Withrop Shaw Pittman, LLP

N. Ware

ESG Sample Collection Form

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

Surface Water Monitoring
ASWMP Sampling
Collection: 6755

Sample Data										
Sample ID	Location	SampleType	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Sample Notes
55425	MP1	Aqueous	Sample	Grab	BCLABS-BAK E120.1, TSS:SM2540D, pH-aq:SM4500H+B	2/6/2009 9:05:00 AM	1-1 Liter PE	None	1 L	field pH = 7.34. Used for reporting purposes
		Sample Collected: Yes								
55426	MP1	Aqueous	Sample	Grab	BCLABS-BAK E1664	2/6/2009 9:05:00 AM	1-1 Liter AG	HCL	1 L	
		Sample Collected: Yes								
55427	MP2	Aqueous	Sample	Grab	BCLABS-BAK E120.1, TSS:SM2540D, pH-aq:SM4500H+B	2/6/2009 8:55:00 AM	1-1 Liter PE	None	1 L	field pH = 7.89. Used for reporting purposes
		Sample Collected: Yes								
55428	MP2	Aqueous	Sample	Grab	BCLABS-BAK E1664	2/6/2009 8:55:00 AM	1-1 Liter AG	HCL	1 L	
		Sample Collected: Yes								
55429	MP3	Aqueous	Sample	Grab	BCLABS-BAK E120.1, TSS:SM2540D, pH-aq:SM4500H+B	2/6/2009 8:45:00 AM	1-1 Liter PE	None	1 L	field pH = 7.49. Used for reporting purposes
		Sample Collected: Yes								
55430	MP3	Aqueous	Sample	Grab	BCLABS-BAK E1664	2/6/2009 8:45:00 AM	1-1 Liter AG	HCL	1 L	
		Sample Collected: Yes								
55431	MP3	Aqueous	Sample	Grab	BCLABS-BAK NO3+NO2(asN):MULT	2/6/2009 8:45:00 AM	1-500 ml PE	H2SO4	0.5 L	
		Sample Collected: Yes								
55432	MP3	Aqueous	Sample	Grab	BCLABS-BAK E200.7:AL, E200.7:FE, E200.7:ZN	2/6/2009 8:45:00 AM	1-500 ml PE	None	0.5 L	
		Sample Collected: Yes								
55433	MP4	Aqueous	Sample	Grab	BCLABS-BAK E120.1, TSS:SM2540D, pH-aq:SM4500H+B	2/6/2009 9:20:00 AM	1-1 Liter PE	None	1 L	field pH = 7.75. Used for reporting purposes
		Sample Collected: Yes								

Sample Data										
Sample ID	Location	Sample Type	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Sample Notes
55434	MP4	Aqueous	Sample	Grab	BCLABS-BAK E1664	2/6/2009 9:20:00 AM	1-1 Liter AG	HCL	1 L	
		Sample Collected:	Yes							
55435	MP4	Aqueous	Sample	Grab	BCLABS-BAK Ammonia(asN):MULT, E410.4	2/6/2009 9:20:00 AM	1-500 ml PE	H2SO4	0.5 L	
		Sample Collected:	Yes							
55436	MP4	Aqueous	Sample	Grab	BCLABS-BAK E200.7:CD, E200.7:MG, E200.7:AG, E200.7:AS, E200.7:PB, E200.7:SE, MET-aq:MULT-Hg	2/6/2009 9:20:00 AM	1-500 ml PE	None	0.5 L	
		Sample Collected:	Yes							
55437	MP4	Aqueous	Sample	Grab	BCLABS-BAK E335.2	2/6/2009 9:20:00 AM	1-500 ml PE	None	0.5 L	
		Sample Collected:	Yes							
55438	MP5	Aqueous	Sample	Grab	BCLABS-BAK E120.1, TSS:SM2540D, pH-aq:SM4500H+B	2/6/2009 9:30:00 AM	1-1 Liter PE	None	1 L	field pH = 7.63. Used for reporting purposes
		Sample Collected:	Yes							
55439	MP5	Aqueous	Sample	Grab	BCLABS-BAK E1664	2/6/2009 9:30:00 AM	1-1 Liter AG	HCL	1 L	
		Sample Collected:	Yes							
55440	MP5	Aqueous	Sample	Grab	BCLABS-BAK Ammonia(asN):MULT, E410.4	2/6/2009 9:30:00 AM	1-500 ml PE	H2SO4	0.5 L	
		Sample Collected:	Yes							
55441	MP5	Aqueous	Sample	Grab	BCLABS-BAK E200.7:CD, E200.7:MG, E200.7:AG, E200.7:AS, E200.7:PB, E200.7:SE, MET-aq:MULT-Hg	2/6/2009 9:30:00 AM	1-500 ml PE	None	0.5 L	
		Sample Collected:	Yes							
55442	MP5	Aqueous	Sample	Grab	BCLABS-BAK E335.2	2/6/2009 9:30:00 AM	1-500 ml PE	None	0.5 L	
		Sample Collected:	Yes							
55443	MP3	Aqueous	Split	Grab	CURTISTOMP E120.1, TSS:SM2540D, pH-aq:SM4500H+B	2/6/2009 8:45:00 AM	1-1 Liter PE	None	1 L	field pH = 7.49. Used for reporting purposes
		Sample Collected:	Yes							

Sample Data

Sample ID	Location	SampleType	QC Type	Coll Type	Lab/Analysis	Date/time	Container(s)	Presv	Amount	Sample Notes
55444	MP3	Aqueous	Split	Grab	CURTISTOMP E1664	2/6/2009 8:45:00 AM	1-1 Liter AG	HCL	1 L	
		Sample Collected:	Yes							
55445	MP3	Aqueous	Split	Grab	CURTISTOMP NO3+NO2(asN):MULT	2/6/2009 8:45:00 AM	1-500 ml PE	H2SO4	0.5 L	
		Sample Collected:	Yes							
55446	MP3	Aqueous	Split	Grab	CURTISTOMP E200.7:AL, E200.7:FE, E200.7:ZN	2/6/2009 8:45:00 AM	1-500 ml PE	None	0.5 L	
		Sample Collected:	Yes							
55447	FIELD BLANK	Aqueous	Blank	Grab	BCLABS-BAK E200.7:AL, E200.7:CD, E200.7:MG, E200.7:AG, E200.7:AS, E200.7:PB, E200.7:SE, MET- aq:MULT-Hg, E200.7:FE, E200.7:ZN	2/6/2009 11:00:00 AM	1-500 ml PE	HNO3	0.5	BC DI Water dated 11/14/07
		Sample Collected:	Yes							
55448	FIELD BLANK	Aqueous	Blank	Grab	CURTISTOMP E200.7:AL, E200.7:CD, E200.7:MG, E200.7:AG, E200.7:AS, E200.7:PB, E200.7:SE, MET- aq:MULT-Hg, E200.7:FE, E200.7:ZN	2/6/2009 11:00:00 AM	1-500 ml PE	None	0.5	Curtis Tompkins DI Water dated 11/14/07
		Sample Collected:	Yes							



Case Narrative

March 2, 2009

COC# 05979

Samplers: John Jelinski

Laboratory ID	Field ID	Sample Time	Analysis
09-01768-01	55425	02/06/2009@09:05	E120.1 pH-aq:SM4500H+B TSS:SM2540D
09-01768-02	55426	02/06/2009@09:05	E1664
09-01768-03	55427	02/06/2009@08:55	E120.1 pH-aq:SM4500H+B TSS:SM2540D
09-01768-04	55428	02/06/2009@08:55	E1664
09-01768-05	55429	02/06/2009@08:45	E120.1 pH-aq:SM4500H+B TSS:SM2540D
09-01768-06	55430	02/06/2009@08:45	E1664
09-01768-07	55431	02/06/2009@08:45	NO3+N02(asN):MULT
09-01768-08	55432	02/06/2009@08:45	E200.7:AL E200.7:FE E200.7:ZN
09-01768-09	55433	02/06/2009@09:20	E120.1 pH-aq:SM4500H+B TSS:SM2540D
09-01768-10	55434	02/06/2009@09:20	E1664
09-01768-11	55435	02/06/2009@09:20	Ammonia(asN):MULT E410.4
09-01768-12	55436	02/06/2009@09:20	E200.7:AG E200.7:AS E200.7:CD E200.7:MG E200.7:PB E200.7:SE MET-aq:MULT-Hg
09-01768-13	55437	02/06/2009@09:20	E335.2
09-01768-14	55438	02/06/2009@09:30	E120.1 pH-aq:SM4500H+B TSS:SM2540D
09-01768-15	55439	02/06/2009@09:30	E1664
09-01768-16	55440	02/06/2009@09:30	Ammonia(asN):MULT E410.4
09-01768-17	55441	02/06/2009@09:30	E200.7:AG E200.7:AS E200.7:CD E200.7:MG E200.7:PB E200.7:SE MET-aq:MULT-Hg
09-01768-18	55442	02/06/2009@09:30	E335.2
09-01768-19	55447	02/06/2009@11:00	E200.7:AG

			E200.7:AK E200.7:AS E200.7:CD E200.7:FE E200.7:MG E200.7:PB E200.7:SE E200.7:ZN Met-aq:MULT-Hg
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Samples were received refrigerated to 1.7 °C upon receipt at the BCL Bakersfield facility.

Holding Time: All samples were analyzed within holding time restrictions except for the pH analysis. The sample reports have been flagged accordingly.

Calibration: All calibration frequency and requirements were met.


Blanks: No detection of analytes of interest were found in calibration or method blanks. All frequency requirements were met.

Laboratory Control Samples: All frequency and accuracy requirements were met.

Duplicates and/or Matrix spikes: The matrix spike recoveries were not within the control limits for Total Cyanide, Total Aluminum, and the matrix spike precision was not within the control limits for Total Aluminum. The difference between duplicate readings is less than the PQL for Ammonia as N (Distilled), Nitrate/Nitrite as N, Total Selenium, and the sample concentration is more than 4 times the spike level for Total Iron. The QC - Precision & Accuracy report has been flagged accordingly.

Discussion:

Sincerely,



Christina Herndon
Project Manager

Date of Report: 02/25/2009

John Jelinski

Lawrence Berkeley National Laboratory
Environmental Services Group
1 Cyclotron Road, Mail Stop 85B0198
Berkeley, CA 94720

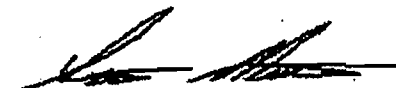
RE: Surface Water Monitoring Program -
BC Work Order: 0901768
Invoice ID: B057874

Enclosed are the results of analyses for samples received by the laboratory on 2/6/2009. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Contact Person: Christina Herndon
Client Service Rep



Authorized Signature

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

LBNL ENVIRONMENTAL SERVICES GROUP
Chain of Custody

09-017108

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.: 05979

Page 1 of 5

Release Number / Document Control No.: ESG-05979

Collection(s): 6755

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 55425	2/6/2009 9:05	2/6/2009 9:05	Grab	Aqueous	1 Liter PE	1	None	E120.1		
	2/6/2009 9:05	2/6/2009 9:05	Grab	Aqueous	1 Liter PE	1	None	pH-aq:SM4500H+B		
	2/6/2009 9:05	2/6/2009 9:05	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
-2 55426	2/6/2009 9:05	2/6/2009 9:05	Grab	Aqueous	1 Liter AG	1	HCL	E1664		
-3 55427	2/6/2009 8:55	2/6/2009 8:55	Grab	Aqueous	1 Liter PE	1	None	E120.1		
	2/6/2009 8:55	2/6/2009 8:55	Grab	Aqueous	1 Liter PE	1	None	pH-aq:SM4500H+B		
	2/6/2009 8:55	2/6/2009 8:55	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
-4 55428	2/6/2009 8:55	2/6/2009 8:55	Grab	Aqueous	1 Liter AG	1	HCL	E1664		
-5 55429	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	1 Liter PE	1	None	E120.1		
	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	1 Liter PE	1	None	pH-aq:SM4500H+B		
	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
-6 55430	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	1 Liter AG	1	HCL	E1664		

Total No. of Containers: 19

Shipping Document ID: BC pick-up

Turnaround Time****: 20 days

Lab Name: BCLABS-BAK

Sampled by:

Special Instructions/Comments:

Relinquished By (Sampler)

Signature: *Jelinski* Time: 1450
Printed Name: Jelinski Date: 2/6/09

Company: LBNL

Received By

Signature: *Ross Dickey* Time: 1450
Printed Name: Ross Dickey Date: 2/6/09
Company: BCLAB

Relinquished By

Signature: *Ross Dickey* Time: 1755
Printed Name: Ross Dickey Date: 2/6/09

Company: BCLAB

Received By

Signature: *R. Kuyumcu* Time: 1755
Printed Name: R. Kuyumcu Date: 2/6/09
Company: BCL

Relinquished By

Signature: *R. Kuyumcu* Time: 2100
Printed Name: R. Kuyumcu Date: 2/6/09

Company: BCL

Received By

Signature: *Anthony* Time: 2100
Printed Name: Anthony Date: 2/6/09
Company: BCLab

*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

09-617108

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.: 05979

Page 2 of 5

Release Number / Document Control No.: ESG-05979

Collection(s): 6755

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
-7 55431	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	500 ml PE 1	H2SO4	NO3+NO2(asN):MULT		
-8 55432	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	500 ml PE 1	None	E200.7:AL		preserve upon receipt
	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	500 ml PE 1	None	E200.7:FE		preserve upon receipt
	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	500 ml PE 1	None	E200.7:ZN		preserve upon receipt
-9 55433	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	1 Liter PE 1	None	E120.1		
	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	1 Liter PE 1	None	pH-aq:SM4500H+8		
	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	1 Liter PE 1	None	TSS:SM2540D		
-10 55434	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	1 Liter AG 1	HCL	E1664		
-11 55435	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE 1	H2SO4	Ammonia(asN):MULT		
	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE 1	H2SO4	E410.4		
-12 55436	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE 1	None	E200.7:AG		preserve upon receipt

Total No. of Containers: 19
Shipping Document ID: BC pick-up
Turnaround Time****: 20 days
Lab Name: BCLABS-BAK
Sampled by:
Special Instructions/Comments:

Relinquished By (Sampler)	1450
Signature	Time
Jelinski	2/6/09
Printed Name	Date
LBAL	
Company	
Received By	1450
Signature	Time
Ross Dickay	2/6/09
Printed Name	Date
BCLAB	
Company	

Relinquished By	1755
Signature	Time
Ross Dickay	2/6/09
Printed Name	Date
BCLAB	
Company	
Received By	1755
Signature	Time
R Ross Dickay	2/6/09
Printed Name	Date
BCL	
Company	

Relinquished By	2100
Signature	Time
R Ross Dickay	2/6/09
Printed Name	Date
BCL	
Company	
Received By	2100
Signature	Time
Arthur	2/6/09
Printed Name	Date
BCLab	
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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1 Cyclotron Road
Berkeley CA 94720

LBNL ENVIRONMENTAL SERVICES GROUP
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09-01728

Send final reports to: Suying Xu, Mailstop 85B0198

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

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COC No.: 05979

Page 3 of 5

Release Number / Document Control No.: ESG-05979

Collection(s): 6755

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
1243 55436	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE	1	None	E200.7:AS		preserve upon receipt
JWJW* 55437	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE	1	None	E200.7:CD		preserve upon receipt
2/6/09 55438	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE	1	None	E200.7:MG		preserve upon receipt
	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE	1	None	E200.7:PB		preserve upon receipt
	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE	1	None	E200.7:SE		preserve upon receipt
	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE	1	None	MET-aq:MULT-Hg		preserve upon receipt
55437	2/6/2009 9:20	2/6/2009 9:20	Grab	Aqueous	500 ml PE	1	None	E335.2		preserve upon receipt
55438	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	1 Liter PE	1	None	E120.1		
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	1 Liter PE	1	None	pH-aq:SM4500H+B		
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
55439	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	1 Liter AG	1	HCL	E1664		

Total No. of Containers: 19
Shipping Document ID: BC pick-up
Turnaround Time****: 20 days
Lab Name: BCLABS-BAK
Sampled by:
Special Instructions/Comments:

Relinquished By (Sampler)
Signature: [Signature] Time: 1450
Printed Name: Jelinski Date: 2/6/09
Company: BCL
Received By
Signature: [Signature] Time: 1450
Printed Name: Ross Dickey Date: 2/6/09
Company: BCLAB

Relinquished By
Signature: [Signature] Time: 1755
Printed Name: Ross Dickey Date: 2/6/09
Company: BCLAB
Received By
Signature: [Signature] Time: 1755
Printed Name: Ross Dickey Date: 2/6/09
Company: BCL

Relinquished By
Signature: [Signature] Time: 2100
Printed Name: [Signature] Date: 2-6-09
Company: BCL
Received By
Signature: [Signature] Time: 2100
Printed Name: [Signature] Date: 2-6-09
Company: BCL

*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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1 Cyclotron Road
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LBNL ENVIRONMENTAL SERVICES GROUP
Chain of Custody

09-017108

Send final reports to: Suiying Xu, Mailstop 85B0198

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

Phone: 510-486-7616

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COC No.: 05979

Page 4 of 5

Release Number / Document Control No.: ESG-05979

Collection(s): 6755

Purpose: Surface Water Monitoring Program - ASWMP Sampling

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55440	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	H2SO4	Ammonia(asN):MULT		
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	H2SO4	E410.4		
55441	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	None	E200.7:AG		preserve upon receipt
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	None	E200.7:AS		preserve upon receipt
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	None	E200.7:CD		preserve upon receipt
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	None	E200.7:MG		preserve upon receipt
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	None	E200.7:PB		preserve upon receipt
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	None	E200.7:SE		preserve upon receipt
	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	None	MET-aq:MULT:Hg		preserve upon receipt
55442	2/6/2009 9:30	2/6/2009 9:30	Grab	Aqueous	500 ml PE	1	None	E335.2		preserve upon receipt
55447	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	HNO3	E200.7:AG		preserve upon receipt

Total No. of Containers: 19

Shipping Document ID: BC pick-up

Turnaround Time****: 20 days

Lab Name: BCLABS-BAK

Sampled by:

Special Instructions/Comments:

Relinquished By (Sampler)

Signature

1450

Time

Jelinski

2/6/09

Printed Name

Date

CBCL

Company

Received By

Signature

1450

Time

Ross Dickey

2/6/09

Printed Name

Date

BC LAB

Company

Relinquished By

Signature

1755

Time

Ross Dickey

2/6/09

Printed Name

Date

BCLAB

Company

Received By

Signature

1755

Time

Ross Dickey

2/6/09

Printed Name

Date

BCL

Company

Relinquished By

Signature

2100

Time

R. Edwards

2-6-09

Printed Name

Date

BCL

Company

Received By

Signature

2100

Time

Anthony

2-6-09

Printed Name

Date

BCLab

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 VW = 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

09-01708

Send final reports to: Suying Xu, Mailstop 85B0198

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

Phone: 510-486-7616

Fax: 510-486-7034

COC No.: 05979

Page 5 of 5

Release Number / Document Control No.: ESG-05979

Collection(s): 6755

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
55447	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	E200.7:AL		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	E200.7:AS		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	E200.7:CD		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	E200.7:FE		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	E200.7:MG		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	E200.7:PB		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	E200.7:SE		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	E200.7:ZN		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE 1	HNO3	MET-aq:MULT-Hg		preserve upon receipt

Total No. of Containers: 19
Shipping Document ID: BC pick-up
Turnaround Time****: 20 days
Lab Name: BCLABS-BAK
Sampled by:
Special Instructions/Comments:

Relinquished By (Sampler)
Signature: [Signature] Time: 1450
Printed Name: Jelinski Date: 2/6/09
Company: LBNL
Received By
Signature: [Signature] Time: 1450
Printed Name: Ross Dickey Date: 2/6/09
Company: BCLAB

Relinquished By
Signature: [Signature] Time: 1755
Printed Name: Ross Dickey Date: 2/6/09
Company: BCLAB
Received By
Signature: [Signature] Time: 1755
Printed Name: R. Retzows Date: 2-6-09
Company: BCL

Relinquished By
Signature: [Signature] Time: 2100
Printed Name: R. Retzows Date: 2-6-09
Company: BCL
Received By
Signature: [Signature] Time: 2100
Printed Name: Anthony Date: 2-6-09
Company: BCLab

*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.

Submission #: 09-01786

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify) _____Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:Custody Seals: Ice Chest ☒ Container ☒ None ☒ Comments:All samples received? Yes ☒ No ☐All samples containers intact? Yes ☒ No ☐Description(s) match COC? Yes ☐ No ☐

COC Received

☒ YES ☐ NO

Emissivity: 0.98 Container: 0476 Thermometer ID: 111623

Temperature: A 1.7 °C / C 1.7 °C

Date/Time 2:00 2-10-09

Analyst Init JNW

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/GENERAL PHYSICAL	A		A		A			A	A	
PT PE UNPRESERVED								A		
OT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS							A			
PT TOTAL SULFIDE										
20% NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PCA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1		A		A		A				A
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

CHK BY

DISTRIBUTION

A

SUB-OUT

Comments:

Sample Numbering Completed By: JNW Date/Time: 2-10-09 2200

A = Actual / C = Corrected

Submission #: 09-017108

SHIPPING INFORMATION

Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify) _____

SHIPPING CONTAINER

Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify) _____Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments: _____Custody Seals Ice Chest ☒ Containers ☒ None ☒ Comments: _____All samples received? Yes ☐ No ☐ All samples containers intact? Yes ☐ No ☐ Description(s) match COC? Yes ☐ No ☐COC Received
☐ YES ☐ NOEmissivity: 0.98 Container: QTR Thermometer ID: JN103
Temperature: A 1.7 °C / C 1.7 °CDate/Time 2-10-09
Analyst Init JNW

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	11	12	13	14	15	16	17	18	19	20
QT GENERAL MINERAL/ GENERAL PHYSICAL				A						
PT PE UNPRESERVED		A	A				A	A		
QT INORGANIC CHEMICAL METALS			A							
PT INORGANIC CHEMICAL METALS									A	
PT CYANIDE										
PT NITROGEN FORMS	A					A				
PT TOTAL SULFIDE										
2oz. NITRATE /NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PTA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1					A					
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: _____

Sample Numbering Completed By: JNW Date/Time: 2-10-09 2200

A = Actual / C = Corrected

[H:\DOCS\WP80LAB_DOCS\FORMS\SAMREC2.WPD]

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Environmental Testing Laboratory Since 1949

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Environmental Services Group
1 Cyclotron Road, Mail Stop 85B0198
Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
0901768-01	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:05
	Sampling Location:	55425	Sample Depth:	—
	Sampling Point:	55425	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL	Document Control Number:	ESG-05979
0901768-02	COC Number:	05979	Sampling Date:	02/06/2009 09:05
	Project Number:	Surface Water Monitoring Program - ASWMP	Sample Depth:	—
	Sampling Location:	55426	Sample Matrix:	Water
	Sampling Point:	55426	Requestor:	J. Jelinski
	Sampled By:	John Jelinski of LBL	Sample Filtered in Field:	N
0901768-03	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 08:55
	Sampling Location:	55427	Sample Depth:	—
	Sampling Point:	55427	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL	Document Control Number:	ESG-05979
0901768-04	COC Number:	05979	Sampling Date:	02/06/2009 08:55
	Project Number:	Surface Water Monitoring Program - ASWMP	Sample Depth:	—
	Sampling Location:	55428	Sample Matrix:	Water
	Sampling Point:	55428	Requestor:	J. Jelinski
	Sampled By:	John Jelinski of LBL	Sample Filtered in Field:	N
0901768-05	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 08:45
	Sampling Location:	55429	Sample Depth:	—
	Sampling Point:	55429	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL	Document Control Number:	ESG-05979

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Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information					
0901768-06	COC Number:	05979	Receive Date:	02/06/2009 21:00	Document Control Number: ESG-05979	
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 08:45	Sample Matrix: AQ	
	Sampling Location:	55430	Sample Depth:	—	Requestor: J. Jelinski	
	Sampling Point:	55430	Sample Matrix:	Water	Sample Filtered in Field: N	
	Sampled By:	John Jelinski of LBL				
0901768-07	COC Number:	05979	Receive Date:	02/06/2009 21:00	Document Control Number: ESG-05979	
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 08:45	Sample Matrix: AQ	
	Sampling Location:	55431	Sample Depth:	—	Requestor: J. Jelinski	
	Sampling Point:	55431	Sample Matrix:	Water	Sample Filtered in Field: N	
	Sampled By:	John Jelinski of LBL				
0901768-08	COC Number:	05979	Receive Date:	02/06/2009 21:00	Document Control Number: ESG-05979	
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 08:45	Sample Matrix: AQ	
	Sampling Location:	55432	Sample Depth:	—	Requestor: J. Jelinski	
	Sampling Point:	55432	Sample Matrix:	Water	Sample Filtered in Field: N	
	Sampled By:	John Jelinski of LBL				
0901768-09	COC Number:	05979	Receive Date:	02/06/2009 21:00	Document Control Number: ESG-05979	
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:20	Sample Matrix: AQ	
	Sampling Location:	55433	Sample Depth:	—	Requestor: J. Jelinski	
	Sampling Point:	55433	Sample Matrix:	Water	Sample Filtered in Field: N	
	Sampled By:	John Jelinski of LBL				
0901768-10	COC Number:	05979	Receive Date:	02/06/2009 21:00	Document Control Number: ESG-05979	
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:20	Sample Matrix: AQ	
	Sampling Location:	55434	Sample Depth:	—	Requestor: J. Jelinski	
	Sampling Point:	55434	Sample Matrix:	Water	Sample Filtered in Field: N	
	Sampled By:	John Jelinski of LBL				

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A

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Environmental Services Group
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Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28
COC Number: 05979

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
0901768-11	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:20
	Sampling Location:	55435	Sample Depth:	—
	Sampling Point:	55435	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL		
0901768-12	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:20
	Sampling Location:	55436	Sample Depth:	—
	Sampling Point:	55436	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL		
0901768-13	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:20
	Sampling Location:	55437	Sample Depth:	—
	Sampling Point:	55437	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL		
0901768-14	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:30
	Sampling Location:	55438	Sample Depth:	—
	Sampling Point:	55438	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL		
0901768-15	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:30
	Sampling Location:	55439	Sample Depth:	—
	Sampling Point:	55439	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL		

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Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			
0901768-16	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:30
	Sampling Location:	55440	Sample Depth:	—
	Sampling Point:	55440	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL	Document Control Number:	ESG-05979
0901768-17	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:30
	Sampling Location:	55441	Sample Depth:	—
	Sampling Point:	55441	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL	Document Control Number:	ESG-05979
0901768-18	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 09:30
	Sampling Location:	55442	Sample Depth:	—
	Sampling Point:	55442	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL	Document Control Number:	ESG-05979
0901768-19	COC Number:	05979	Receive Date:	02/06/2009 21:00
	Project Number:	Surface Water Monitoring Program - ASWMP	Sampling Date:	02/06/2009 11:00
	Sampling Location:	55447	Sample Depth:	—
	Sampling Point:	55447	Sample Matrix:	Water
	Sampled By:	John Jelinski of LBL	Document Control Number:	ESG-05979

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Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-01		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55425, 55425, 2/6/2009 9:05:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
pH	7.07	pH Units	0.05	No Prep	SM-4500HB	02/10/09	02/10/09 11:54	RLP	MET-1	1	BSB0812		pH-aq:SM 4500H+B	7000	S05
Electrical Conductivity @ 25 C	54.1	umhos/cm	1.00	No Prep	EPA-120.1	02/10/09	02/10/09 11:54	RLP	MET-1	1	BSB0812	0901718-1	E120.1	8000	
Total Suspended Solids (Glass Fiber)	240	mg/L	11	No Prep	SM-2540D	02/09/09	02/09/09 00:30	MRM	MANUAL	22.222	BSB0526		TSS:SM25 40D	7450	

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1 Cyclotron Road, Mail Stop 85B0198
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Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28
COC Number: 05979

EPA Method 1664

BCL Sample ID: 0901768-02			Client Sample Name: Surface Water Monitoring Program - ASWMP, 55426, 55426, 2/6/2009 9:05:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Prep Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Oil and Grease	ND	mg/L	5.0	PA 1664/HEEPA-1664H		02/18/09	02/18/09 09:00	JAK	MAN-SV	1	BSB1304		E1664	6325	

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Environmental Services Group
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Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-03			Client Sample Name: Surface Water Monitoring Program - ASWMP, 55427, 55427, 2/6/2009 8:55:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
pH	7.37	pH Units	0.05	No Prep	SM-4500HB	02/10/09	02/10/09 11:58	RLP	MET-1	1	BSB0812		pH-aq:SM 4500H+B	7000	S05
Electrical Conductivity @ 25 C	176	umhos/cm	1.00	No Prep	EPA-120.1	02/10/09	02/10/09 11:58	RLP	MET-1	1	BSB0812	0901718-1	E120.1	8000	
Total Suspended Solids (Glass Fiber)	68	mg/L	5.0	No Prep	SM-2540D	02/09/09	02/09/09 00:30	MRM	MANUAL	10	BSB0526		TSS:SM25 40D	7450	

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Environmental Services Group
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Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

EPA Method 1664

BCL Sample ID: 0901768-04			Client Sample Name: Surface Water Monitoring Program - ASWMP, 55428, 55428, 2/6/2009 8:55:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Oil and Grease	7.3	mg/L	5.0	PA 1664/HEEPA-1664H		02/18/09	02/18/09 09:00	JAK	MAN-SV	1	BSB1304		E1664	6325	

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Environmental Services Group
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Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-05			Client Sample Name: Surface Water Monitoring Program - ASWMP, 55429, 55429, 2/6/2009 8:45:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
pH	6.80	pH Units	0.05	No Prep	SM-4500HB	02/10/09	02/10/09 12:02	RLP	MET-1	1	BSB0812		pH-aq:SM 4500H+B	7000	S05
Electrical Conductivity @ 25 C	67.4	umhos/cm	1.00	No Prep	EPA-120.1	02/10/09	02/10/09 12:02	RLP	MET-1	1	BSB0812	0901718-1	E120.1	8000	
Total Suspended Solids (Glass Fiber)	99	mg/L	4.2	No Prep	SM-2540D	02/09/09	02/09/09 00:30	MRM	MANUAL	8.333	BSB0526		TSS:SM25 40D	7450	



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Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

EPA Method 1664

BCL Sample ID: 0901768-06		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55430, 55430, 2/6/2009 8:45:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Oil and Grease	18	mg/L	5.0	PA 1664/HEEPA-1664HI	02/18/09	02/18/09 09:00	JAK	MAN-SV	1.020	BSB1304		E1664	6325	

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Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-07		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55431, 55431, 2/6/2009 8:45:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Nitrate/Nitrite as N	0.37	mg/L	0.10	No Prep	EPA-353.2	02/13/09	02/13/09 15:44	JSM	SC-1	1	BSB1107	0901868-2	NO3+NO2(asN):MUL	5950	T

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Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (Metals)

BCL Sample ID: 0901768-08		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55432, 55432, 2/6/2009 8:45:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Total Aluminum	2.2	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:16	ARD	PE-OP1	1	BSB0873	0901797-1	E200.7:AL	0313	
Total Iron	4.5	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:16	ARD	PE-OP1	1	BSB0873	0901797-2	E200.7:FE	5350	
Total Zinc	0.73	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:16	ARD	PE-OP1	1	BSB0873	0901797-2	E200.7:ZN	9050	

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COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-09		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55433, 55433, 2/6/2009 9:20:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
pH	6.37	pH Units	0.05	No Prep	SM-4500HB	02/10/09	02/10/09 12:06	RLP	MET-1	1	BSB0812		pH-aq:SM 4500H+B	7000	S05
Electrical Conductivity @ 25 C	23.3	umhos/cm	1.00	No Prep	EPA-120.1	02/10/09	02/10/09 12:06	RLP	MET-1	1	BSB0812	0901718-1	E120.1	8000	
Total Suspended Solids (Glass Fiber)	3.0	mg/L	1.7	No Prep	SM-2540D	02/09/09	02/09/09 00:30	MRM	MANUAL	3.333	BSB0526		TSS:SM25 40D	7450	

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COC Number: 05979

EPA Method 1664

BCL Sample ID: 0901768-10		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55434, 55434, 2/6/2009 9:20:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quais
Oil and Grease	ND	mg/L	5.0	PA 1664/HEEPA-1664HI	02/18/09	02/18/09 09:00	JAK	MAN-SV	1	BSB1304		E1664	6325	

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Project Manager: John Jelinski

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COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-11		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55435, 55435, 2/6/2009 9:20:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Ammonia as N (Distilled)	0.13	mg/L	0.10	EPA 350.1	EPA-350.1	02/13/09	02/13/09 13:49	JSM	SC-1	1	BSB1015	0901865-2	Ammonia(asN):MUL	0325	
Chemical Oxygen Demand	ND	mg O/L	25	EPA 410.4	EPA-410.4	02/11/09	02/11/09 09:10	HPR	SPEC05	1	BSB0869	0901697-2	E410.4	1875	

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Project Manager: John Jelinski

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COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-12		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55436, 55436, 2/6/2009 9:20:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Total Magnesium	0.084	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:35	ARD	PE-OP1	1	BSB0873	0901797-2	E200.7:MG	5500	

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Project Manager: John Jelinski

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COC Number: 05979

Water Analysis (Metals)

BCL Sample ID: 0901768-12		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55436, 55436, 2/6/2009 9:20:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Run Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Total Arsenic	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:35	ARD	PE-OP1	1	BSB0873	0901797-1	E200.7:AS	0450	
Total Cadmium	ND	mg/L	0.010	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:35	ARD	PE-OP1	1	BSB0873	0901797-1	E200.7:CD	1650	
Total Lead	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:35	ARD	PE-OP1	1	BSB0873	0901797-1	E200.7:PB	5450	
Total Mercury	ND	mg/L	0.00020	EPA 245.1	EPA-245.1	02/12/09	02/17/09 14:46	MEV	CETAC1	1	BSB1056	0901871-1	MET-aq:M ULT-Hg	5600	
Total Selenium	ND	mg/L	0.10	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:35	ARD	PE-OP1	1	BSB0873	0901797-1	E200.7:SE	7600	
Total Silver	ND	mg/L	0.010	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:35	ARD	PE-OP1	1	BSB0873	0901797-2	E200.7:AG	7800	

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COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-13			Client Sample Name: Surface Water Monitoring Program - ASWMP, 55437, 55437, 2/6/2009 9:20:00AM, John Jelinski																		
				Prep		Prep		Run		Instru-		QC		CCV		LLNL		LLNL		Lab	
Constituent	Result	Units	PQL	Method	Method	Date	Date/Time	Analyst	ment ID	Dilution	Batch ID	Ref ID	Method	Code							
Total Cyanide	ND	mg/L	0.0050	A 335.4	To EPA-335.4	02/17/09	02/19/09 11:53	TDC	KONE-1	1	BSB0687	0902073-1	E335.2	2850							

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Project Manager: John Jelinski

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COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-14		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55438, 55438, 2/6/2009 9:30:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
pH	6.57	pH Units	0.05	No Prep	SM-4500HB	02/10/09	02/10/09 12:10	RLP	MET-1	1	BSB0812		pH-aq:SM 4500H+B	7000	S05
Electrical Conductivity @ 25 C	31.2	umhos/cm	1.00	No Prep	EPA-120.1	02/10/09	02/10/09 12:10	RLP	MET-1	1	BSB0812	0901718-1	E120.1	8000	
Total Suspended Solids (Glass Fiber)	30	mg/L	1.7	No Prep	SM-2540D	02/09/09	02/09/09 00:30	MRM	MANUAL	3.333	BSB0526		TSS:SM25 40D	7450	

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Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

EPA Method 1664

BCL Sample ID: 0901768-15		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55439, 55439, 2/6/2009 9:30:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Oil and Grease	ND	mg/L	5.0	PA 1664/HEEPA-1664HI	02/18/09	02/18/09 09:00	JAK	MAN-SV	0.962	BSB1304		E1664	6325	



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Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-16		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55440, 55440, 2/6/2009 9:30:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instrument ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Ammonia as N (Distilled)	0.11	mg/L	0.10	EPA 350.1	EPA-350.1	02/13/09	02/13/09 13:51	JSM	SC-1	1	BSB1015	0901865-2	Ammonia(asN):MUL	0325	
													T		
Chemical Oxygen Demand	ND	mg O/L	25	EPA 410.4	EPA-410.4	02/17/09	02/17/09 13:00	HPR	SPEC05	1	BSB1198	0901896-1	E410.4	1875	

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COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-17			Client Sample Name: Surface Water Monitoring Program - ASWMP, 55441, 55441, 2/6/2009 9:30:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Total Magnesium	0.25	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:41	ARD	PE-OP1	1	BSB0873	0901797-3	E200.7:MG	5500	

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Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (Metals)

BCL Sample ID: 0901768-17		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55441, 55441, 2/6/2009 9:30:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Prep Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Total Arsenic	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:41	ARD	PE-OP1	1	BSB0873	0901797-2	E200.7:AS	0450	
Total Cadmium	ND	mg/L	0.010	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:41	ARD	PE-OP1	1	BSB0873	0901797-2	E200.7:CD	1650	
Total Lead	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:41	ARD	PE-OP1	1	BSB0873	0901797-2	E200.7:PB	5450	
Total Mercury	ND	mg/L	0.00020	EPA 245.1	EPA-245.1	02/12/09	02/17/09 14:48	MEV	CETAC1	1	BSB1056	0901871-1	MET-aq:M ULT-Hg	5600	
Total Selenium	ND	mg/L	0.10	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:41	ARD	PE-OP1	1	BSB0873	0901797-2	E200.7:SE	7600	
Total Silver	ND	mg/L	0.010	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:41	ARD	PE-OP1	1	BSB0873	0901797-3	E200.7:AG	7800	

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COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-18			Client Sample Name: Surface Water Monitoring Program - ASWMP, 55442, 55442, 2/6/2009 9:30:00AM, John Jelinski												
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Total Cyanide	ND	mg/L	0.0050	A 335.4 To	EPA-335.4	02/10/09	02/13/09 11:28	TDC	KONE-1	1	BSB0710	0901946-2	E335.2	2850	

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COC Number: 05979

Water Analysis (General Chemistry)

BCL Sample ID: 0901768-19		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55447, 55447, 2/6/2009 11:00:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Total Magnesium	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873	0901797-3	E200.7:MG	5500	

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COC Number: 05979

Water Analysis (Metals)

BCL Sample ID: 0901768-19		Client Sample Name: Surface Water Monitoring Program - ASWMP, 55447, 55447, 2/6/2009 11:00:00AM, John Jelinski													
Constituent	Result	Units	PQL	Prep Method	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	CCV Ref ID	LLNL Method	LLNL Code	Lab Quals
Total Aluminum	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873 0901797-2	0901797-2	E200.7:AL	0313	
Total Arsenic	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873 0901797-2	0901797-2	E200.7:AS	0450	
Total Cadmium	ND	mg/L	0.010	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873 0901797-2	0901797-2	E200.7:CD	1650	
Total Iron	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873 0901797-3	0901797-3	E200.7:FE	5350	
Total Lead	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873 0901797-2	0901797-2	E200.7:PB	5450	
Total Mercury	ND	mg/L	0.00020	EPA 245.1	EPA-245.1	02/12/09	02/17/09 14:54	MEV	CETAC1	1	BSB1056 0901871-2	0901871-2	MET-aq:M ULT-Hg	5600	
Total Selenium	ND	mg/L	0.10	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873 0901797-2	0901797-2	E200.7:SE	7600	
Total Silver	ND	mg/L	0.010	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873 0901797-3	0901797-3	E200.7:AG	7800	
Total Zinc	ND	mg/L	0.050	EPA 3010A	EPA-200.7	02/11/09	02/13/09 08:43	ARD	PE-OP1	1	BSB0873 0901797-3	0901797-3	E200.7:ZN	9050	



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Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

EPA Method 1664

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery Lab Quals
Oil and Grease	BSB1304	Duplicate	0901538-53	0.75000	ND		mg/L			18	
		Matrix Spike	0901538-53	0.75000	34.100	39.300	mg/L		84.9		78 - 114
		Matrix Spike Duplicate	0901538-53	0.75000	36.300	39.300	mg/L	6.4	90.5	18	78 - 114

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Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (General Chemistry)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery Lab Quals
Total Suspended Solids (Glass Fiber)	BSB0526	Duplicate	0901751-02	48.400	48.800		mg/L	0.8		10	
Total Cyanide	BSB0687	Duplicate	0901762-03	-0.00066200	ND		mg/L			10	
		Matrix Spike	0901762-03	-0.00066200	0.087777	0.10000	mg/L		87.8		90 - 110 Q03
		Matrix Spike Duplicate	0901762-03	-0.00066200	0.084975	0.10000	mg/L	3.2	85.0	20	90 - 110 Q03
Total Cyanide	BSB0710	Duplicate	0901773-01	-0.00072800	ND		mg/L			10	
		Matrix Spike	0901773-01	-0.00072800	0.10175	0.10000	mg/L		102		90 - 110
		Matrix Spike Duplicate	0901773-01	-0.00072800	0.098509	0.10000	mg/L	3.5	98.5	20	90 - 110
pH	BSB0812	Duplicate	0901773-01	7.8700	7.8700		pH Units	0		20	
Electrical Conductivity @ 25 C	BSB0812	Duplicate	0901773-01	715.60	703.20		umhos/cm	1.7		10	
Chemical Oxygen Demand	BSB0869	Duplicate	0901762-02	88.400	85.990		mg O/L	2.8		20	
		Matrix Spike	0901762-02	88.400	837.81	750.00	mg O/L		99.9		80 - 120
		Matrix Spike Duplicate	0901762-02	88.400	849.85	750.00	mg O/L	2.1	102	20	80 - 120
Total Magnesium	BSB0873	Duplicate	0901768-08	1.5057	1.4256		mg/L	5.5		20	
		Matrix Spike	0901768-08	1.5057	12.710	10.000	mg/L		112		75 - 125
		Matrix Spike Duplicate	0901768-08	1.5057	12.214	10.000	mg/L	4.6	107	20	75 - 125
Ammonia as N (Distilled)	BSB1015	Duplicate	0901893-04	0.13660	0.16840		mg/L	20.9		20	A02
		Matrix Spike	0901893-04	0.13660	1.1245	1.0000	mg/L		98.8		80 - 120
		Matrix Spike Duplicate	0901893-04	0.13660	1.1702	1.0000	mg/L	4.2	103	20	80 - 120
Nitrate/Nitrite as N	BSB1107	Duplicate	0901628-01	0.058200	ND		mg/L			10	A02
		Matrix Spike	0901628-01	0.058200	2.1060	2.1053	mg/L		97.3		90 - 110
		Matrix Spike Duplicate	0901628-01	0.058200	2.1376	2.1053	mg/L	1.5	98.8	10	90 - 110
Chemical Oxygen Demand	BSB1198	Duplicate	0901968-02	237.30	242.04		mg O/L	2.0		20	
		Matrix Spike	0901968-02	237.30	951.94	750.00	mg O/L		95.3		80 - 120
		Matrix Spike Duplicate	0901968-02	237.30	951.94	750.00	mg O/L	0	95.3	20	80 - 120

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Lawrence Berkeley National Laboratory
Environmental Services Group
1 Cyclotron Road, Mail Stop 85B0198
Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (Metals)

Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits	
										RPD	Percent Recovery Lab Quals
Total Aluminum	BSB0873	Duplicate	0901768-08	2.1616	2.0685		mg/L	4.4		20	
		Matrix Spike	0901768-08	2.1616	4.6273	1.0000	mg/L		247		75 - 125 Q02,Q03
		Matrix Spike Duplicate	0901768-08	2.1616	4.1622	1.0000	mg/L	21.0	200	20	75 - 125 Q02,Q03
Total Arsenic	BSB0873	Duplicate	0901768-08	0.00099517	ND		mg/L			20	
		Matrix Spike	0901768-08	0.00099517	0.22635	0.20000	mg/L		113		75 - 125
		Matrix Spike Duplicate	0901768-08	0.00099517	0.22456	0.20000	mg/L	0.9	112	20	75 - 125
Total Cadmium	BSB0873	Duplicate	0901768-08	0.014195	0.014415		mg/L	1.5		20	
		Matrix Spike	0901768-08	0.014195	0.22469	0.20000	mg/L		105		75 - 125
		Matrix Spike Duplicate	0901768-08	0.014195	0.22656	0.20000	mg/L	0.9	106	20	75 - 125
Total Iron	BSB0873	Duplicate	0901768-08	4.4557	4.2867		mg/L	3.9		20	
		Matrix Spike	0901768-08	4.4557	6.7933	1.0000	mg/L		234		75 - 125 A03
		Matrix Spike Duplicate	0901768-08	4.4557	6.0192	1.0000	mg/L	40.0	156	20	75 - 125 A03,Q02
Total Lead	BSB0873	Duplicate	0901768-08	0.076240	0.079468		mg/L	4.1		20	
		Matrix Spike	0901768-08	0.076240	0.52739	0.40000	mg/L		113		75 - 125
		Matrix Spike Duplicate	0901768-08	0.076240	0.52578	0.40000	mg/L	0.9	112	20	75 - 125
Total Selenium	BSB0873	Duplicate	0901768-08	0.014441	ND		mg/L			20	A02
		Matrix Spike	0901768-08	0.014441	0.17606	0.20000	mg/L		80.8		75 - 125
		Matrix Spike Duplicate	0901768-08	0.014441	0.19641	0.20000	mg/L	11.9	91.0	20	75 - 125
Total Silver	BSB0873	Duplicate	0901768-08	-0.00051653	ND		mg/L			20	
		Matrix Spike	0901768-08	-0.00051653	0.10365	0.10000	mg/L		104		75 - 125
		Matrix Spike Duplicate	0901768-08	-0.00051653	0.10522	0.10000	mg/L	1.0	105	20	75 - 125
Total Zinc	BSB0873	Duplicate	0901768-08	0.72881	0.73600		mg/L	1.0		20	
		Matrix Spike	0901768-08	0.72881	1.2988	0.50000	mg/L		114		75 - 125
		Matrix Spike Duplicate	0901768-08	0.72881	1.3204	0.50000	mg/L	3.4	118	20	75 - 125
Total Mercury	BSB1056	Duplicate	0901773-01	3.0000025000	ND		mg/L			20	
		Matrix Spike	0901773-01	3.0000025000	0.00096000	0.0010000	mg/L		95.8		70 - 130
		Matrix Spike Duplicate	0901773-01	3.0000025000	0.00092500	0.0010000	mg/L	3.8	92.2	20	70 - 130

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Lawrence Berkeley National Laboratory
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1 Cyclotron Road, Mail Stop 85B0198
Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

EPA Method 1664

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Oil and Grease	BSB1304	BSB1304-BS1	LCS	36.050	39.300	5.0	mg/L	91.7		78 - 114		

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Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (General Chemistry)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery		Control Limits		Lab Quals
								RPD	RPD	Percent Recovery	RPD	
Total Cyanide	BSB0687	BSB0687-BS1	LCS	0.15091	0.15000	0.0050	mg/L	101		90 - 110		
Total Cyanide	BSB0710	BSB0710-BS1	LCS	0.14003	0.15000	0.0050	mg/L	93.4		90 - 110		
pH	BSB0812	BSB0812-BS2	LCS	7.0100	7.0000	0.05	pH Units	100		95 - 105		
Electrical Conductivity, @ 25 C	BSB0812	BSB0812-BS1	LCS	325.10	303.00	1.00	umhos/cm	107		90 - 110		
Chemical Oxygen Demand	BSB0869	BSB0869-BS1	LCS	753.47	750.00	25	mg O/L	100		85 - 115		
Total Magnesium	BSB0873	BSB0873-BS1	LCS	9.6942	10.000	0.050	mg/L	96.9		85 - 115		
Ammonia as N (Distilled)	BSB1015	BSB1015-BS1	LCS	0.95050	1.0000	0.10	mg/L	95.0		85 - 115		
Nitrate/Nitrite as N	BSB1107	BSB1107-BS1	LCS	1.9895	2.0000	0.10	mg/L	99.5		90 - 110		
Chemical Oxygen Demand	BSB1198	BSB1198-BS1	LCS	750.13	750.00	25	mg O/L	100		85 - 115		

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Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (Metals)

Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Control Limits		Lab Quals
								Percent Recovery	RPD	
Total Aluminum	BSB0873	BSB0873-BS1	LCS	0.93777	1.0000	0.050	mg/L	93.8		85 - 115
Total Arsenic	BSB0873	BSB0873-BS1	LCS	0.19208	0.20000	0.050	mg/L	96.0		85 - 115
Total Cadmium	BSB0873	BSB0873-BS1	LCS	0.19169	0.20000	0.010	mg/L	95.8		85 - 115
Total Iron	BSB0873	BSB0873-BS1	LCS	0.97296	1.0000	0.050	mg/L	97.3		85 - 115
Total Lead	BSB0873	BSB0873-BS1	LCS	0.39127	0.40000	0.050	mg/L	97.8		85 - 115
Total Selenium	BSB0873	BSB0873-BS1	LCS	0.21221	0.20000	0.10	mg/L	106		85 - 115
Total Silver	BSB0873	BSB0873-BS1	LCS	0.098155	0.10000	0.010	mg/L	98.2		85 - 115
Total Zinc	BSB0873	BSB0873-BS1	LCS	0.50400	0.50000	0.050	mg/L	101		85 - 115
Total Mercury	BSB1056	BSB1056-BS1	LCS	0.00095750	0.0010000	0.00020	mg/L	95.8		85 - 115

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Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

EPA Method 1664

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Oil and Grease	BSB1304	BSB1304-BLK1	ND	mg/L	5.0		

**BC Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Lawrence Berkeley National Laboratory
Environmental Services Group
1 Cyclotron Road, Mail Stop 85B0198
Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (General Chemistry)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Total Suspended Solids (Glass Fiber)	BSB0526	BSB0526-BLK1	ND	mg/L	0.50		
Total Cyanide	BSB0687	BSB0687-BLK1	ND	mg/L	0.0050		
Total Cyanide	BSB0710	BSB0710-BLK1	ND	mg/L	0.0050		
Chemical Oxygen Demand	BSB0869	BSB0869-BLK1	ND	mg O/L	25		
Total Magnesium	BSB0873	BSB0873-BLK1	ND	mg/L	0.050		
Ammonia as N (Distilled)	BSB1015	BSB1015-BLK1	ND	mg/L	0.10		
Nitrate/Nitrite as N	BSB1107	BSB1107-BLK1	ND	mg/L	0.10		
Chemical Oxygen Demand	BSB1198	BSB1198-BLK1	ND	mg O/L	25		

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Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Water Analysis (Metals)

Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Total Aluminum	BSB0873	BSB0873-BLK1	ND	mg/L	0.050		
Total Arsenic	BSB0873	BSB0873-BLK1	ND	mg/L	0.050		
Total Cadmium	BSB0873	BSB0873-BLK1	ND	mg/L	0.010		
Total Iron	BSB0873	BSB0873-BLK1	ND	mg/L	0.050		
Total Lead	BSB0873	BSB0873-BLK1	ND	mg/L	0.050		
Total Selenium	BSB0873	BSB0873-BLK1	ND	mg/L	0.10		
Total Silver	BSB0873	BSB0873-BLK1	ND	mg/L	0.010		
Total Zinc	BSB0873	BSB0873-BLK1	ND	mg/L	0.050		
Total Mercury	BSB1056	BSB1056-BLK1	ND	mg/L	0.00020		

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Environmental Testing Laboratory Since 1949

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Environmental Services Group
1 Cyclotron Road, Mail Stop 85B0198
Berkeley, CA 94720

Project: Surface Water Monitoring Program - ASWMP
Project Number: Preliminary ASWMP Sampling
Project Manager: John Jelinski

Reported: 02/25/2009 15:28

COC Number: 05979

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A02	The difference between duplicate readings is less than the PQL.
A03	The sample concentration is more than 4 times the spike level.
Q02	Matrix spike precision is not within the control limits.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.

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

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

Laboratory Job Number 209820
ANALYTICAL REPORT

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

ccc 05920

<u>Sample ID</u>	<u>Lab ID</u>
55443	209820-001
55444	209820-002
55445	209820-003
55446	209820-004
55448	209820-005

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 signatures. 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: 02/19/2009

Signature: _____

Senior Program Manager

Date: 02/20/2009

NELAP # 01107CA

CASE NARRATIVE

Laboratory number: 209820
Client: Lawrence Berkeley National Lab
Location: Surface Water Monitoring Program
Request Date: 02/06/09
Samples Received: 02/06/09

This data package contains sample and QC results for five water samples, requested for the above referenced project on 02/06/09. The samples were received cold and intact. All holding times and calibration criteria were met.

Metals (EPA 200.7 and EPA 245.1):

No analytical problems were encountered.

Conductivity (SM2510B):

No analytical problems were encountered.

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

Low recovery was observed for oil & grease (HEM) in the MS for batch 147836; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Total Suspended Solids (TSS) (SM2540D):

No analytical problems were encountered.

pH (EPA 9040C):

No analytical problems were encountered.

Nitrate-Nitrite Nitrogen (EPA 353.2):

Cal Science in Garden Grove, CA performed the analysis. Please see the Cal Science case narrative. Results for this sample are not in your required format and are not in the associated EDD because the sample required us to subcontract it to Cal Science in Garden Grove. The sample container arrived preserved with H2SO4 which we can not analyze at Curtis & Tompkins. We require unpreserved containers to analyze Nitrate/Nitrite by EPA method 300.0.

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

LBNL ENVIRONMENTAL SERVICES GROUP
Chain of Custody

Send final reports to: Suiyng Xu, Mailstop 85B0198

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

Phone: 510-486-7616

Fax: 510-486-7034

COC No.: 05980

Page 1 of 2

Release Number / Document Control No.: ESG-05980

Collection(s): 6755

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
55443	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	1 Liter PE	1	None	E120.1		
	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	1 Liter PE	1	None	pH-ag:SM4500H+B		
	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	1 Liter PE	1	None	TSS:SM2540D		
55444	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	1 Liter AG	1	HCL	E1664		
55445	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	500 ml PE	1	H2SO4	NO3+NO2(asN):MULT		
55446	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	500 ml PE	1	None	E200.7:AL		preserve upon receipt
	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	500 ml PE	1	None	E200.7:FE		preserve upon receipt
	2/6/2009 8:45	2/6/2009 8:45	Grab	Aqueous	500 ml PE	1	None	E200.7:ZN		preserve upon receipt
55448	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:AG		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:AL		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:AS		preserve upon receipt

Total No. of Containers: 5

Shipping Document ID: drop off

Turnaround Time****: 20 days

Lab Name: CURTISTOMP

Sampled by:

Special Instructions/Comments:

on ice & in the

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

Send final reports to: Suiyng Xu, Mailstop 85B0198
For questions contact John Jelinski, e-mail: JAJelinski@lbl.gov
Phone: 510-486-7616 Fax: 510-486-7034

COC No.: 05980

Page 2 of 2

Release Number / Document Control No.: ESG-05980

Collection(s): 6755

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
55448	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:CD		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:FE		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:MG		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:PB		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:SE		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	E200.7:ZN		preserve upon receipt
	2/6/2009 11:00	2/6/2009 11:00	Grab	Aqueous	500 ml PE	1	None	MET-aq:MULT-Hg		preserve upon receipt

Total No. of Containers: 5	Relinquished By (Sampler)	Relinquished By	Relinquished By
Shipping Document ID: drop off	Signature: [Signature] Time: 12:15	Signature	Signature
Turnaround Time****: 20 days	Printed Name: Jelinski Date: 2/6/09	Printed Name	Printed Name
Lab Name: CURTISTOMP	Company: LBNL	Company	Company
Sampled by:	Received By	Received By	Received By
Special Instructions/Comments:	Signature: [Signature] Time: 12:15	Signature	Signature
ON ice & indur.	Printed Name: Tracy Suber Date: 2/6/09	Printed Name	Printed Name
	Company: C&T	Company	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 # 209820 Date Received 2-6-9 Number of coolers 1
Client LRNL Project SURFACE WATER MONITOR

Date Opened 2-6-9 By (print) S. Evans (sign) [Signature]
Date Logged in X By (print) [Signature] (sign) [Signature]

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 1/2 Name [Signature] Date [Signature]

2B. Were custody seals intact upon arrival? YES NO N/A

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

ADDED AND'S TO METALS SAMPLES

Metals Analytical Report			
Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.7
Project#:	STANDARD	Analysis:	EPA 200.7
Location: Surface Water Monitoring Program			
COC #:	05980	Instrument:	MET08
Field ID:	55446	Chemist:	AH
Lab ID:	209820-004	Sampled:	02/06/09 08:45
Matrix:	Water	Received:	02/06/09
Units:	ug/L	Prepared:	02/08/09 13:30
Diln Fac:	1.000	Analyzed:	02/11/09 12:12
Batch#:	147727		

Analyte	Code Requested	Result	RL
Aluminum	0313 E200.7:AL	3,700	100
Iron	5350 E200.7:FE	5,300	100
Zinc	9050 E200.7:ZN	730	20

RL= Reporting Limit



Curtis & Tompkins, Ltd.

Metals Analytical Report

Lab #:	209820	Location:	Surface Water Monitoring Program
Client:	Lawrence Berkeley National Lab	Cert #:	01107CA
Project#:	STANDARD		
COC #:	05980	Diln Fac:	1.000
Field ID:	55448	Sampled:	02/06/09 11:00
Lab ID:	209820-005	Received:	02/06/09
Matrix:	Water		

Analyte	Code	Requested	Result	RL	Units	Batch#	Instrument	Chemist	Prepared	Analyzed	Prep	Analysis
Aluminum	0313	E200.7:AL	ND	100	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7
Arsenic	0450	E200.7:AS	ND	5.0	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7
Cadmium	1650	E200.7:CD	ND	5.0	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7
Iron	5350	E200.7:FE	ND	100	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7
Lead	5450	E200.7:PB	ND	3.0	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7
Magnesium	5500	E200.7:MG	ND	500	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7
Mercury	5600	MET-aq:MULT-Hg	ND	0.00020	mg/L	147735	MET14	RFW	02/09/09 09:00	02/09/09 15:41	METHOD	EPA 245.1
Selenium	7600	E200.7:SE	ND	10	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7
Silver	7800	E200.7:AG	ND	5.0	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7
Zinc	9050	E200.7:ZN	ND	20	ug/L	147727	MET08	AH	02/08/09 13:30	02/11/09 12:23	EPA 200.7	EPA 200.7

ND= Not Detected
RL= Reporting Limit
Page 1 of 1

3.2

Batch QC Report

Metals Analytical Report			
Lab #:	209820	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#:	147735
Requested:	MET-aq:MULT-Hg	Instrument:	MET14
Type:	BLANK	Chemist:	RFW
Lab ID:	QC482597	Prepared:	02/09/09 09:00
Matrix:	Water	Analyzed:	02/09/09 15:37
Units:	mg/L		

Result	RL
ND	0.00020



Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report			
Lab #:	209820	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#:	147735
Requested:	MET-aq:MULT-Hg	Instrument:	MET14
Type:	LCS	Chemist:	RFW
Lab ID:	QC482598	Prepared:	02/09/09 09:00
Matrix:	Water	Analyzed:	02/09/09 15:39
Units:	mg/L		

Spiked	Result	%REC	Limits
0.005000	0.004780	96	80-120



Curtis & Tompkins, Ltd.

Batch QC Report

Metals Analytical Report			
Lab #:	209820	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#:	147735
Requested:	MET-aq:MULT-Hg	Instrument:	MET14
Field ID:	55448	Chemist:	RFW
MSS Lab ID:	209820-005	Sampled:	02/06/09 11:00
Matrix:	Water	Received:	02/06/09
Units:	mg/L	Prepared:	02/09/09 09:00

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
MS	QC482599	<0.00003335	0.005000	0.005170	103	71-124			02/09/09 15:45
MSD	QC482600		0.005000	0.005100	102	71-124	1	20	02/09/09 15:47

RPD= Relative Percent Difference

Batch QC Report

Metals Analytical Report			
Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.7
Project#:	STANDARD	Analysis:	EPA 200.7
Location:	Surface Water Monitoring Program		
Type:	BLANK	Batch#:	147727
Lab ID:	QC482561	Instrument:	MET08
Matrix:	Water	Chemist:	AH
Units:	ug/L	Prepared:	02/08/09 13:30
Diln Fac:	1.000		

Analyte	Code Requested	Result	RL	Analyzed
Aluminum	0313 E200.7:AL	ND	100	02/11/09 13:20
Arsenic	0450 E200.7:AS	ND	5.0	02/11/09 11:59
Cadmium	1650 E200.7:CD	ND	5.0	02/11/09 11:59
Iron	5350 E200.7:FE	ND	100	02/11/09 11:59
Lead	5450 E200.7:PB	ND	3.0	02/11/09 11:59
Magnesium	5500 E200.7:MG	ND	500	02/11/09 11:59
Selenium	7600 E200.7:SE	ND	10	02/11/09 11:59
Silver	7800 E200.7:AG	ND	5.0	02/11/09 11:59
Zinc	9050 E200.7:ZN	ND	20	02/11/09 11:59

Batch QC Report

Metals Analytical Report			
Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.7
Project#:	STANDARD	Analysis:	EPA 200.7
Location:	Surface Water Monitoring Program		
Field ID:	55446	Instrument:	MET08
MSS Lab ID:	209820-004	Chemist:	AH
Matrix:	Water	Sampled:	02/06/09 08:45
Units:	ug/L	Received:	02/06/09
Diln Fac:	1.000	Prepared:	02/08/09 13:30
Batch#:	147727		

Type: MS Analyzed: 02/11/09 12:15
Lab ID: QC482564

Analyte	Code Requested	MSS Result	Spiked	Result	%REC	Limits
Aluminum	0313 E200.7:AL	3,748	2,000	5,590	92	67-121
Arsenic	0450 E200.7:AS	4.541	100.0	112.4	108	79-125
Cadmium	1650 E200.7:CD	14.14	50.00	67.74	107	80-120
Iron	5350 E200.7:FE	5,309	1,000	5,881	57 NM	66-126
Lead	5450 E200.7:PB	72.57	100.0	173.1	101	71-120
Magnesium	5500 E200.7:MG	1,805	20,000	22,930	106	66-126
Selenium	7600 E200.7:SE	<2.787	100.0	110.2	110	73-125
Silver	7800 E200.7:AG	<1.054	50.00	54.67	109	69-120
Zinc	9050 E200.7:ZN	729.4	500.0	1,251	104	74-122

Type: MSD Analyzed: 02/11/09 12:19
Lab ID: QC482565

Analyte	Code Requested	Spiked	Result	%REC	Limits	RPD	Lim
Aluminum	0313 E200.7:AL	2,000	5,409	83	67-121	3	20
Arsenic	0450 E200.7:AS	100.0	105.1	101	79-125	7	20
Cadmium	1650 E200.7:CD	50.00	65.20	102	80-120	4	20
Iron	5350 E200.7:FE	1,000	5,939	63 NM	66-126	1	20
Lead	5450 E200.7:PB	100.0	169.2	97	71-120	2	20
Magnesium	5500 E200.7:MG	20,000	22,010	101	66-126	4	20
Selenium	7600 E200.7:SE	100.0	103.9	104	73-125	6	20
Silver	7800 E200.7:AG	50.00	52.21	104	69-120	5	20
Zinc	9050 E200.7:ZN	500.0	1,214	97	74-122	3	20

NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference

Batch QC Report
Metals Analytical Report

Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	EPA 200.7
Project#:	STANDARD	Analysis:	EPA 200.7
Location:	Surface Water Monitoring Program		
Type:	LCS	Batch#:	147727
Lab ID:	QC483013	Instrument:	MET08
Matrix:	Water	Chemist:	AH
Units:	ug/L	Prepared:	02/08/09 13:30
Diln Fac:	1.000	Analyzed:	02/11/09 13:23

Analyte	Code Requested	Spiked	Result	%REC	Limits
Aluminum	0313 E200.7:AL	2,000	2,247	112	80-120
Arsenic	0450 E200.7:AS	100.0	105.8	106	80-120
Cadmium	1650 E200.7:CD	50.00	52.50	105	80-120
Iron	5350 E200.7:FE	1,000	1,013	101	80-120
Lead	5450 E200.7:PB	100.0	105.5	105	80-120
Magnesium	5500 E200.7:MG	20,000	21,120	106	80-120
Selenium	7600 E200.7:SE	100.0	109.3	109	80-120
Silver	7800 E200.7:AG	50.00	52.77	106	80-120
Zinc	9050 E200.7:ZN	500.0	540.3	108	80-120



Curtis & Tompkins, Ltd.

Total Oil & Grease (HEM)

Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 1664A
Location: Surface Water Monitoring Program			
Analyte:	Oil & Grease (HEM)	Batch#:	147836
Code:	6325	Instrument:	H3000
COC #:	05980	Chemist:	PAP
Requested:	E1664	Sampled:	02/06/09 08:45
Field ID:	55444	Received:	02/06/09
Matrix:	Water	Analyzed:	02/11/09 18:00
Units:	mg/L		

Type	Lab ID	Result	RL	Diln Fac
SAMPLE	209820-002	7.77	4.75	0.9500
BLANK	QC483014	ND	5.00	1.000

Batch QC Report

Total Oil & Grease (HEM)			
Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 1664A
Location: Surface Water Monitoring Program			
Analyte:	Oil & Grease (HEM)	Diln Fac:	1.000
Code:	6325	Batch#:	147836
Requested:	E1664	Instrument:	H3000
Field ID:	ZZZZZZZZZZ	Chemist:	PAP
MSS Lab ID:	209862-003	Sampled:	02/06/09 14:50
Matrix:	Water	Received:	02/09/09
Units:	mg/L	Analyzed:	02/11/09 18:00

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC483015		40.00	43.40	109	78-114		
MS	QC483016	58.80	40.00	81.00	56 *	68-124		
MSD	QC483017		40.00	88.40	74	68-124	9	28

*= Value outside of QC limits; see narrative
 RPD= Relative Percent Difference



Curtis & Tompkins, Ltd.

Conductivity			
Lab #:	209820	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#:	147687
COC #:	05980	Instrument:	VWR_EC
Requested:	E120.1	Chemist:	STL
Field ID:	55443	Sampled:	02/06/09 08:45
Matrix:	Water	Received:	02/06/09
Units:	umhos/cm		

Type	Lab ID	Result	RL	Analyzed
SAMPLE	209820-001	44	1.0	02/06/09 14:25
BLANK	QC482413	ND	1.0	02/06/09 11:55



Curtis & Tompkins, Ltd.

Batch QC Report

Conductivity			
Lab #:	209820	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#:	147687
Requested:	E120.1	Instrument:	VWR_EC
Field ID:	ZZZZZZZZZZ	Chemist:	STL
MSS Lab ID:	209801-002	Sampled:	02/05/09 12:00
Matrix:	Water	Received:	02/06/09
Units:	umhos/cm	Analyzed:	02/06/09 11:55

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC482414		1,000	930.0		93	90-110		
SDUP	QC482415	92.30		93.00	1.000			1	30

RL= Reporting Limit
RPD= Relative Percent Difference
Page 1 of 1

18.0

pH			
Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 9040C
Location:	Surface Water Monitoring Program		
Analyte:	pH	Diln Fac:	1.000
Code:	7000	Batch#:	147688
COC #:	05980	Instrument:	OR PH
Requested:	pH-aq:SM4500H+B	Chemist:	STL
Field ID:	55443	Sampled:	02/06/09 08:45
Lab ID:	209820-001	Received:	02/06/09
Matrix:	Water	Analyzed:	02/06/09 14:25
Units:	SU		
Result			
	6.5	RL	1.0

Batch QC Report

pH			
Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	EPA 9040C
Location: Surface Water Monitoring Program			
Analyte:	pH	Units:	SU
Code:	7000	Diln Fac:	1.000
Requested:	pH-aq:SM4500H+B	Batch#:	147688
Field ID:	ZZZZZZZZZZ	Instrument:	OR_PH
Type:	SDUP	Chemist:	STL
MSS Lab ID:	209801-002	Sampled:	02/05/09 12:00
Lab ID:	QC482416	Received:	02/06/09
Matrix:	Water	Analyzed:	02/06/09 11:55

MSS Result	Result	RL	RPD	Lim
6.720	6.720	1.000	0	20



Curtis & Tompkins, Ltd.

Total Suspended Solids (TSS)

Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2540D
Location: Surface Water Monitoring Program			
Analyte:	Total Suspended Solids	Diln Fac:	1.000
Code:	7450	Batch#:	147750
COC #:	05980	Instrument:	SCALE
Requested:	TSS:SM2540D	Chemist:	STL
Field ID:	55443	Sampled:	02/06/09 08:45
Matrix:	Water	Received:	02/06/09
Units:	mg/L	Analyzed:	02/09/09 14:15

Type	Lab ID	Result	RL
SAMPLE	209820-001	130	5
BLANK	QC482653	ND	5



Curtis & Tompkins, Ltd.

Batch QC Report

Total Suspended Solids (TSS)			
Lab #:	209820	Cert #:	01107CA
Client:	Lawrence Berkeley National Lab	Prep:	METHOD
Project#:	STANDARD	Analysis:	SM2540D
Location: Surface Water Monitoring Program			
Analyte:	Total Suspended Solids	Diln Fac:	1.000
Code:	7450	Batch#:	147750
Requested:	TSS:SM2540D	Instrument:	SCALE
Field ID:	55443	Chemist:	STL
MSS Lab ID:	209820-001	Sampled:	02/06/09 08:45
Matrix:	Water	Received:	02/06/09
Units:	mg/L	Analyzed:	02/09/09 14:15

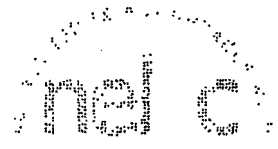
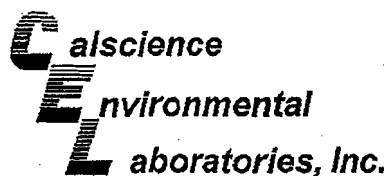
Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC482654		50.00	49.00		98	80-120		
SDUP	QC482657	125.0		126.0	5.000			1	45

RL= Reporting Limit
RPD= Relative Percent Difference

Laboratory Job Number 209820

Subcontracted Products

Cal Science



February 17, 2009

Micah Smith
Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710-2407

Subject: **Calscience Work Order No.: 09-02-0940**
Client Reference: **209820**

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 2/10/2009 and analyzed in accordance with the attached chain-of-custody.

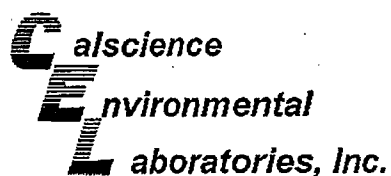
Unless otherwise noted, all analytical testing was accomplished in accordance with the guidelines established in our Quality Systems Manual, applicable standard operating procedures, and other related documentation. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

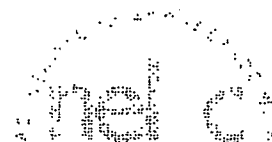
Sincerely,

A handwritten signature in black ink, reading "Vikas Patel", is written over a horizontal line.

Calscience Environmental
Laboratories, Inc.
Vikas Patel
Project Manager



Analytical Report



Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710-2407

Date Received: 02/10/09
Work Order No: 09-02-0940

Project: 209820

Page 1 of 1

Client Sample Number	Lab Sample Number	Date Collected	Matrix
55445	09-02-0940-1	02/06/09	Aqueous

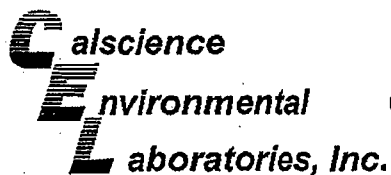
Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate-Nitrite (as N)	0.35	0.10	1		mg/L	N/A	02/10/09	SM 4500-NO3 E

Method Blank	N/A	Aqueous
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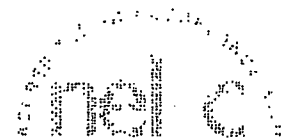
Parameter	Result	RL	DF	Qual	Units	Date Prepared	Date Analyzed	Method
Nitrate-Nitrite (as N)	ND	0.10	1		mg/L	N/A	02/10/09	SM 4500-NO3 E

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL: (714) 895-5494 • FAX: (714) 894-7501



Quality Control - Spike/Spike Duplicate



Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710-2407

Date Received:
Work Order No:

N/A
09-02-0940

Project: 209820

Matrix: Aqueous

Parameter	Method	Quality Control Sample ID	Date Analyzed	Date Extracted	MS% REC	MSD % REC	%REC CL	RPD	RPD CL	Qualifiers
Nitrate-Nitrite (as N)	SM 4500-NO3 E	09-02-0845-1	02/10/09	N/A	100	100	70-130	0	0-25	

RPD - Relative Percent Difference, CL - Control Limit.

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL: (714) 895-5494 • FAX: (714) 894-7501

Calscience**E**nvironmental**L**aboratories, Inc.

Quality Control - Laboratory Control Sample

anal c

Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710-2407

Date Received:

N/A

Work Order No:

09-02-0940

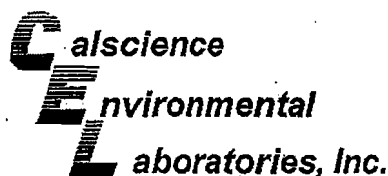
Project: 209820

Matrix: Aqueous

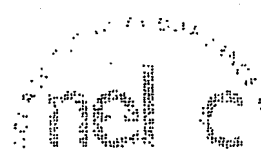
<u>Parameter</u>	<u>Method</u>	<u>Quality Control</u> <u>Sample ID</u>	<u>Date</u> <u>Analyzed</u>	<u>Date</u> <u>Extracted</u>	<u>Conc</u> <u>Added</u>	<u>Conc</u> <u>Recovered</u>	<u>LCS</u> <u>%Rec</u>	<u>%Rec</u> <u>CL</u>	<u>Qualifiers</u>
Nitrate-Nitrite (as N)	SM 4500-NO3 E	099-05-120-1,624	02/10/09	N/A	0.500	0.497	99	80-120	

RPD - Relative Percent Difference, CL - Control Limit

7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX: (714) 894-7501



Glossary of Terms and Qualifiers



Work Order Number: 09-02-0940

<u>Qualifier</u>	<u>Definition</u>
*	See applicable analysis comment.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported with no further corrective action required.
A	Result is the average of all dilutions, as defined by the method.
B	Analyte was present in the associated method blank.
C	Analyte presence was not confirmed on primary column.
E	Concentration exceeds the calibration range.
H	Sample received and/or analyzed past the recommended holding time.
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
N	Nontarget Analyte.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
U	Undetected at the laboratory method detection limit.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900
(510) 486-0532

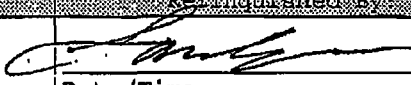
Project Number: 209820
Site: Surface Water Monitoring Program

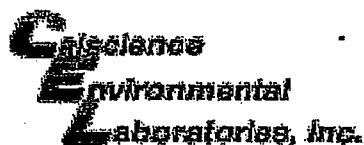
Subcontract Laboratory:
Cal Science
7440 Lincoln Way
Garden Grove, CA 92841-1432
(714) 895-5494
ATTN: Vik Patel

Results due: Report Level: II

Please send report to: Micah Smith
*** Please report using Sample ID rather than C&T Lab #.

Sample ID	Sampled	Matrix	Analysis	C&T Lab #	Comments
55445	02/06 08:45	Water	NITRATE/NITRITE	209820-003	

Notes:	Requested By: 	Received By: W. Deane C. Jr.
	Date/Time: 2-9-9 1300	Date/Time: 2/10/09 0815
ONV24EC108999100002313		



WORK ORDER #: 09-02-0940

SAMPLE RECEIPT FORM

Cooler 1 of 1

CLIENT: CURTIS + TOMPKINS

DATE: 2 / 10 / 09

TEMPERATURE: (Criteria: 0.0 °C – 6.0 °C, not frozen)Temperature 2.1 °C – 0.2 °C (CF) = 1.9 °C ☒ Blank ☐ Sample☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.☐ Received at ambient temperature, placed on ice for transport by Courier.Ambient Temperature: ☐ Air ☐ Filter ☐ Metals Only ☐ PCBs OnlyInitial: WB**CUSTODY SEALS INTACT:**☐ Cooler ☐ _____ ☐ No (Not Intact) ☒ Not Present ☐ N/AInitial: WB☒ Sample ☐ _____ ☐ No (Not Intact) ☐ Not PresentInitial: WB**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Correct containers and volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve ☐ EnCores® ☐ TerraCores® ☐ _____
 Water: ☐ VOA ☐ VOA_h ☐ VOANa₂ ☐ 125AGB ☐ 125AGB_h ☐ 125AGB_{po4} ☐ 1AGB ☐ 1AGB_{Na2}
☐ 1AGB_s ☐ 500AGB ☐ 500AGB_s ☐ 250CGB ☐ 250CGB_s ☐ 1PB ☒ 500PB₃ ☐ 500PB_{Na} ☐ 250PB
☐ 250PB_N ☐ 125PB ☐ 125PB_{znna} ☐ 100PBsterile ☐ 100PB_{Na2} ☐ _____ ☐ _____ ☐ _____
Air: ☐ Tedlar® ☐ Summa® ☐ _____Checked/Labeled by: WB

Container: C:Clear A:Amber P:Poly/Plastic G:Glass J:Jar B:Bottle

Reviewed by: JPPreservative: h:HCL n:HNO₃ na₂:Na₂S₂O₃ na:NaOH po₄:H₃PO₄ s:H₂SO₄ znna:ZnAc₂+NaOHScanned by: WB

SOP T100_090 (12/10/08)