

Mokelumne (FERC 137)
Supplemental Water Quality Monitoring Program
Analytical Laboratory Results

March 2002



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG & E
Address: 3400 Crow Canyon Rd.
City: San Ramon, CA 94583

Lab Number: L-159-02
Other Number:
Date Sampled: 03/27/02
Date Received: 04/02/02
Date Completed: 04/10/02
Index-PCA Code:

RE: Copper

RESULTS OF CHEMICAL ANALYSIS:

Sample Identification	Dissolved Copper $\mu\text{g/L}$ (ppb)
Mokelumne River Water Quality - Station BR1	22.4
Reporting Limit	1.0

METHOD REFERENCES:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

COST OF ANALYSIS: \$57.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00

Deposit recovery costs to the Fish and Wildlife Pollution Account with "cost of analysis:" identified separately.

Longuyen
Analyst

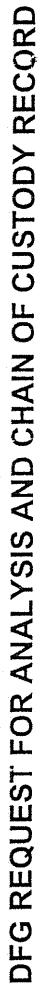
4/11/02
Date

Abdulla M. M. M.
Reviewed by

4.11.02
Date

BB Crane
Laboratory Director

4-11-02
Date

[illegible]

Submission #: 2002-04-0407

Metals



P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3010A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#1094

Sample ID: BR1	Lab Sample ID: 2002-04-0407-007
Project: Mokelumne River Proj.	Received: 04/24/2002 08:35
	Extracted: 04/24/2002 10:58
Sampled: 03/27/2002 12:35	QC-Batch: 2002/04/24-03.15
Matrix: Water	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.027	0.0050	mg/L	1.00	04/24/2002 23:10	

Submission #: 2002-04-0407

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

**SEVERN
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SERVICES**

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Sample ID: BR4	Lab Sample ID: 2002-04-0407-001
Project:	Received: 04/24/2002 08:35
	Extracted: 04/24/2002 10:22
Sampled: 03/27/2002 13:05	QC-Batch: 2002/04/24-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.0018	0.0050	0.0003	1.00	04/24/2002 19:58	J

Submission #: 2002-04-0407

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
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www.stl-inc.com

CA DHS ELAP#1094

Sample ID: BR3	Lab Sample ID: 2002-04-0407-002
Project:	Received: 04/24/2002 08:35
	Extracted: 04/24/2002 10:22
Sampled: 03/27/2002 13:20	QC-Batch: 2002/04/24-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.0015	0.0050	0.0003	1.00	04/24/2002 20:02	J

Submission #: 2002-04-0407



Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

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CA DHS ELAP#1094

Sample ID: UNT1	Lab Sample ID: 2002-04-0407-003
Project:	Received: 04/24/2002 08:35
	Extracted: 04/24/2002 10:22
Sampled: 03/27/2002 13:55	QC-Batch: 2002/04/24-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.0017	0.0050	0.0003	1.00	04/24/2002 20:07	J

Submission #: 2002-04-0407

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
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CA DHS ELAP#1094

Sample ID: UNT2	Lab Sample ID: 2002-04-0407-004
Project:	Received: 04/24/2002 08:35
	Extracted: 04/24/2002 10:22
Sampled: 03/27/2002 14:00	QC-Batch: 2002/04/24-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.0021	0.0050	0.0003	1.00	04/24/2002 20:11	J

Submission #: 2002-04-0407

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Sample ID: UNT3	Lab Sample ID: 2002-04-0407-005
Project:	Received: 04/24/2002 08:35
	Extracted: 04/24/2002 10:22
Sampled: 03/27/2002 14:20	QC-Batch: 2002/04/24-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.0027	0.0050	0.0003	1.00	04/24/2002 20:16	J

Submission #: 2002-04-0407

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
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www.stl-inc.com

CA DHS ELAP#1094

Sample ID: LBR1	Lab Sample ID: 2002-04-0407-006
Project:	Received: 04/24/2002 08:35
	Extracted: 04/24/2002 10:22
Sampled: 03/27/2002 13:40	QC-Batch: 2002/04/24-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	ND	0.0050	0.0003	1.00	04/24/2002 20:39	

Submission #: 2002-04-0407



Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Sample ID: BR1	Lab Sample ID: 2002-04-0407-007
Project:	Received: 04/24/2002 08:35
	Extracted: 04/24/2002 10:22
Sampled: 03/27/2002 12:35	QC-Batch: 2002/04/24-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.019	0.0050	0.0003	1.00	04/24/2002 20:43	

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N086-21

Date: 4/12/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

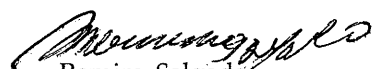
Project: Mokelumne River Water Quality

Date Rec'd: 3/27/02
Date Started: 3/27/02
Date Completed: 4/10/02

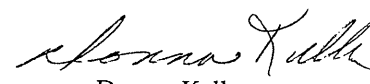
PO#

Date Sampled: 3/27/02
Time:
Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
BC2	N303212	1.0	200.7	Hardness as CaCO ₃	14	mg/L
		1.0	160.2	TSS (Nonfilterable Residue)	ND	mg/L
		5.0	SM2320B	Total Alkalinity as CaCO ₃	14	mg/L
		0.05	300.0	Nitrate as N	0.11	mg/L
MC2	N303213	1.0	200.7	Hardness as CaCO ₃	10	mg/L
		1.0	160.2	TSS (Nonfilterable Residue)	3.0	mg/L
		5.0	SM2320B	Total Alkalinity as CaCO ₃	15	mg/L
		0.05	300.0	Nitrate as N	0.12	mg/L
BR1	N303214	1.0	200.7	Hardness as CaCO ₃	7.2	mg/L
		1.0	160.2	TSS (Nonfilterable Residue)	1.0	mg/L
		5.0	SM2320B	Total Alkalinity as CaCO ₃	6.3	mg/L
		0.05	300.0	Nitrate as N	0.09	mg/L
NFMR2	N303215	1.0	200.7	Hardness as CaCO ₃	9.9	mg/L
		1.0	160.2	TSS (Nonfilterable Residue)	2.0	mg/L
		5.0	SM2320B	Total Alkalinity as CaCO ₃	11	mg/L
		0.05	300.0	Nitrate as N	0.18	mg/L
UNT3 SPC1	N303216	1.0	200.7	Hardness as CaCO ₃	4.9	mg/L


Ramiro Salgado
Chemist

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

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CERTIFICATE OF ANALYSIS

Report # N086-21

Date: 4/12/02

PG&E

3400 Crow Canyon Rd.

San Ramon CA 94583

Project: Mokelumne River Water Quality

PO#

Date Rec'd: 3/27/02

Date Started: 3/27/02

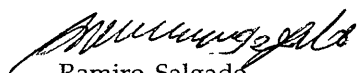
Date Completed: 4/10/02

Date Sampled: 3/27/02

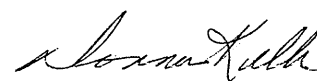
Time:

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
UNT2	N303217	1.0	200.7	Hardness as CaCO ₃	1.7	mg/L
UNT1	N303218	1.0	200.7	Hardness as CaCO ₃	2.3	mg/L
BR3	N303219	1.0	200.7	Hardness as CaCO ₃	4.4	mg/L
BR4	N303220	1.0	200.7	Hardness as CaCO ₃	3.9	mg/L
LBR1	N303221	1.0	200.7	Hardness as CaCO ₃	11	mg/L


Ramiro Salgado
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Certification # 1157


Donna Keller
Laboratory Director

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1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

QC REPORT

Report# N086-21

PG&E

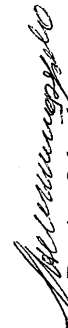
3400 Crow Canyon Rd.

San Ramon

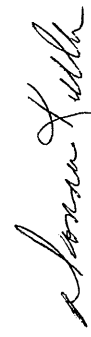
CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Total Coliform	9221B,C	B00175	3/27/02-3/31/02	<2	<2			0.0		<2	
Fecal Coliform	9221E,C	B00175	3/27/02-3/31/02	<2	<2			0.0		<2	

* LCS/LCSD (see comments)


Ramiro Salgado
Chemist

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

Report# N085-21

QC REPORT

PG&E

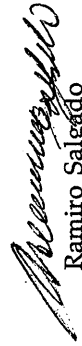
3400 Crow Canyon Rd.

San Ramon

CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec Blank	Comments
Copper	200.9	I02403	04/01/02			83.0	80.0	3.1	ND	
Dissolved Copper	200.9	I02404	04/01/02			92.0	88.0	4.0	ND	

* LCS/LCSD (see comments)


Ramiro Salgado
Chemist

Certification # 1157


Donna Keller
Laboratory Director

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Report# N086-21

QC REPORT

PG&E

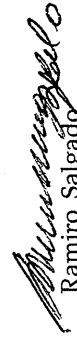
3400 Crow Canyon Rd.

San Ramon

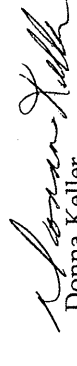
CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I02297	03/29/02			98.5	98.1	0.4	99.3	ND	
TSS (Nonfilterable Residue)	160.2	I02607	4/10/02	ND	ND			0.0		ND	
Total Alkalinity as CaCO ₃	SM2320B	I02229	03/28/02			104.1	105.4	0.9	109.7	ND	
Nitrate as N	300.0	I02259	3/28/02			94.2	93.2	1.0	91.8	ND	

* LCS/LCSD (see comments)


Ramiro Salgado
Chemist

Certification # 1157


Donna Keller
Laboratory Director

April 2002



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG & E
Address: 3400 Crow Canyon Rd.
City: San Ramon, CA 94583

Lab Number: L-199-02
Other Number:
Date Sampled: 04/23/02
Date Received: 04/25/02
Date Completed: 05/08/02
Index-PCA Code:

RE: Copper

RESULTS OF CHEMICAL ANALYSIS:

Sample
Identification

Dissolved Copper
 $\mu\text{g/L}$ (ppb)

BR1

19.2

Reporting Limit

1.00

METHOD REFERENCES:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

COST OF ANALYSIS: \$57.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00

Deposit recovery costs to the Fish and Wildlife Pollution Account with "cost of analysis:" identified separately.

Elizabeth Frantz
Analyst

5/10/02
Date

Abdel H. H. H.
Reviewed by

5.10.02
Date

John B. Crane
Laboratory Director

5-10-02
Date

[illegible]

Submission #: 2002-04-0408

Date: May 2, 2002



P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn: Elizabeth Frantz

Project: Mokelumne River Proj.

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com
CA DHS ELAP#1094

Attached is our report for your samples received on Wednesday April 24, 2002
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
June 8, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,
please call me at (925) 484-1919.
You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,

A handwritten signature in black ink that reads "Surinder Sidhu".

Surinder Sidhu
Project Manager

Dissolved Metals



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

P.G. & E TES

✉ 3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn: Elizabeth Frantz

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River Proj.

CA DHS ELAP#1094

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
UNT5	Water	04/23/2002 10:30	1
BR1	Water	04/23/2002 12:45	2
UNT4	Water	04/23/2002 12:05	3
SPC1	Water	04/23/2002 12:12	4
LBR1-CU	Water	04/23/2002 12:30	5
BR3	Water	04/23/2002 11:00	6
LBRR1-BOTTOM	Water	04/23/2002 12:38	7
BR4	Water	04/23/2002 10:00	8
LBRR1-TOP	Water	04/23/2002 12:30	9

Submission #: 2002-04-0408



Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Sample ID: UNT5	Lab Sample ID: 2002-04-0408-001
Project:	Received: 04/24/2002 08:25
	Extracted: 04/25/2002 05:38
Sampled: 04/23/2002 10:30	QC-Batch: 2002/04/25-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.00058	0.0050	0.0003	1.00	04/25/2002 08:21	J

0.58 µg/L

Submission #: 2002-04-0408

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

SEVERN

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SERVICES

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel 925 484 1919

Fax 925 484 1096

www.stl-inc.com

CA DHS ELAP#1094

Sample ID: BR1	Lab Sample ID: 2002-04-0408-002
Project:	Received: 04/24/2002 08:25
	Extracted: 04/25/2002 05:38
Sampled: 04/23/2002 12:45	QC-Batch: 2002/04/25-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.016	0.0050	0.0003	1.00	04/25/2002 08:26	

16 µg/L

Submission #: 2002-04-0408

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

SEVERN

TRENT

SERVICES

STL San Francisco

1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919

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www.stl-inc.com

CA DHS ELAP#1094

Sample ID: **UNT4**

Lab Sample ID: 2002-04-0408-003

Project:

Received: 04/24/2002 08:25

Sampled: 04/23/2002 12:05

Extracted: 04/25/2002 05:38

QC-Batch: 2002/04/25-02.15

Matrix: Water

Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.00075	0.0050	0.0003	1.00	04/25/2002 08:30	J

0.75 µg/L

Submission #: 2002-04-0408



Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Sample ID: SPC1	Lab Sample ID: 2002-04-0408-004
Project:	Received: 04/24/2002 08:25
	Extracted: 04/25/2002 05:38
Sampled: 04/23/2002 12:12	QC-Batch: 2002/04/25-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.00047	0.0050	0.0003	1.00	04/25/2002 08:45	J

0.47 mg/L

Submission #: 2002-04-0408

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
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CA DHS ELAP#1094

Sample ID: LBR1-CU	Lab Sample ID: 2002-04-0408-005
Project:	Received: 04/24/2002 08:25
	Extracted: 04/25/2002 05:38
Sampled: 04/23/2002 12:30	QC-Batch: 2002/04/25-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.00036	0.0050	0.0003	1.00	04/25/2002 08:49	J

0.36 µg/L

Submission #: 2002-04-0408

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



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CA DHS ELAP#1094

Sample ID: BR3	Lab Sample ID: 2002-04-0408-006
Project:	Received: 04/24/2002 08:25
	Extracted: 04/25/2002 05:38
Sampled: 04/23/2002 11:00	QC-Batch: 2002/04/25-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	ND	0.0050	0.0003	1.00	04/25/2002 08:53	

40.3ug/L

Submission #: 2002-04-0408

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



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Pleasanton, CA 94566

Tel 925 484 1919
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www.stl-inc.com

CA DHS ELAP#1094

Sample ID: LBRR1-BOTTOM	Lab Sample ID: 2002-04-0408-007
Project:	Received: 04/24/2002 08:25
	Extracted: 04/25/2002 05:38
Sampled: 04/23/2002 12:38	QC-Batch: 2002/04/25-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.00068	0.0050	0.0003	1.00	04/25/2002 08:58	J

0.68 µg/L

Submission #: 2002-04-0408



Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Sample ID: BR4	Lab Sample ID: 2002-04-0408-008
Project:	Received: 04/24/2002 08:25
	Extracted: 04/25/2002 05:38
Sampled: 04/23/2002 10:00	QC-Batch: 2002/04/25-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.00038	0.0050	0.0003	1.00	04/25/2002 09:02	J

0.38 µg/L

Submission #: 2002-04-0408

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Sample ID: LBRR1-TOP	Lab Sample ID: 2002-04-0408-009
Project:	Received: 04/24/2002 08:25
	Extracted: 04/25/2002 05:38
Sampled: 04/23/2002 12:30	QC-Batch: 2002/04/25-02.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.00031	0.0050	0.0003	1.00	04/25/2002 09:07	J

0.31 µg/L

Submission #: 2002-04-0408

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A

Method Blank

Water

QC Batch # 2002/04/25-02.15

MB: 2002/04/25-02.15-011

Date Extracted: 04/25/2002 05:38



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Compound	Result	Rep.Limit	MDL	Unit	Analyzed	Flag
Copper	ND	0.0050		mg/L	04/25/2002 07:50	

Submission #: 2002-04-0408

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#1094

Laboratory Control Spike (LCS/LCSD) Water QC Batch # 2002/04/25-02.15
LCS: 2002/04/25-02.15-012 Extracted: 04/25/2002 05:38 Analyzed: 04/25/2002 07:55
LCSD: 2002/04/25-02.15-013 Extracted: 04/25/2002 05:38 Analyzed: 04/25/2002 07:59

Compound	Conc. [mg/L]		Exp. Conc. [mg/L]		Recovery		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Copper	0.497	0.497	0.500	0.500	99.4	99.4	0.0	80-120	20		

Submission #: 2002-04-0408



Dissolved Metals

Legend & Notes

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

Analyte Flags

J

Estimated concentration below Reporting Limit but above Method Detection Limit

CA DHS ELAP#1094



Pacific Gas and Electric Company

Chain of Custody Record

2002-04-0408

65977

From: Pacific Gas & Electric Company ☐ PG&E Facility ☒ Sample Site
Address or Location: 3400 Crow Canyon Rd
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz

Ship To: Lab Name: _____
Address: _____
City: _____, CA (Zip) _____
Phone No. _____
Contact Name: _____

Turnaround Time ☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☒ FAX Give Results to: Elizabeth Frantz 925-866-5681
Name _____
Project Name: Mokelumne River Proj. Project Supervisor (Name/Phone No.): Elizabeth Frantz 925-866-5472
Sampled by: (Signature) Elizabeth Frantz (Print Name) _____

Sample No./Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. UNT-5	4/23	1030	River water	1	2.5L
2. BR-1	4/23	1245	"	1	"
3. UNT-4	4/23	1205	"	"	"
4. SPC-1	4/23	1212	"	"	"
5. LBR-1-Cu	4/23	1230	"	"	"
6. BR-3	4/23	1100	"	"	"
7. LBR-1-bottom	4/23	1238	"	"	"
8. BR-4	4/23	1000	"	"	"
9. LBR-1-top	4/23	1230	"	"	"
10.					
11.					
12.					

Analysis Requested: As listed copy

Remarks: all samples were field filtered
Please report to 0.5 ppb
Please report J flag values between
Reporting limit and MDL. 4.7 ppb

4.7°C

Relinquished by (Name&Dept.): Elizabeth Frantz Date&Time: 4/24/02 0825
Received by (Name&Dept.): _____
Relinquished by (Name&Dept.): _____
Received by (Name&Dept.): _____
Relinquished by (Name&Dept.): _____
Received by (Name&Dept.): _____
SAP Accounting Data: _____
Billing Contact: _____
Billing Address: _____
Date&Time: 4-24-02 8:25

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N113-26

Date: 4/29/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583


Project: Mokelumne Supplemental Cu Sampling

PO#

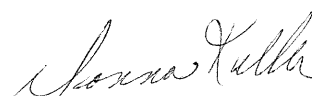
Date Rec'd: 4/23/02
Date Started: 4/26/02
Date Completed: 4/26/02

Date Sampled: 4/23/02
Time:
Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
BR1	N304123	1.0	200.7	Hardness as CaCO ₃	5.8	mg/L
BR4	N304124	1.0	200.7	Hardness as CaCO ₃	3.5	mg/L
SPC1	N304125	1.0	200.7	Hardness as CaCO ₃	5.0	mg/L
UNT5	N304126	1.0	200.7	Hardness as CaCO ₃	7.6	mg/L
LBRR1-bottom	N304127	1.0	200.7	Hardness as CaCO ₃	4.7	mg/L


Ramiro Salgado
Chemist

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N113-26

Date: 4/29/02

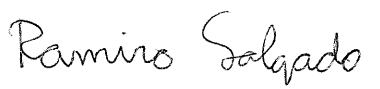
PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne Supplemental Cu Sampling
PO#

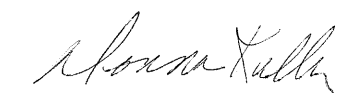
Date Rec'd: 4/23/02
Date Started: 4/26/02
Date Completed: 4/26/02

Date Sampled: 4/23/02
Time:
Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBRR1-top	N304128	1.0	200.7	Hardness as CaCO ₃	4.0	mg/L
BR3	N304129	1.0	200.7	Hardness as CaCO ₃	3.6	mg/L
LBR1-Cu	N304130	1.0	200.7	Hardness as CaCO ₃	7.5	mg/L
UNT4	N304131	1.0	200.7	Hardness as CaCO ₃	1.4	mg/L


Ramiro Salgado
Chemist

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

QC REPORT

Report# N113-26

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I03160	04/26/02			96.0	95.9	0.2	99.9	ND	

* LCS/LCSD (see comments)

Ramiro Salgado
M.D.
Ramiro Salgado
Chemist

Donna Keller
Donna Keller
Laboratory Director

Certification # 1157



Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☒ Sample Site
Address or Location: 3400 Crow Canyon Rd
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz

Ship To: Lab Name: N113-260
Address: N304120
City: CA (Zip)
Phone No.:
Contact Name:

Turnaround Time ☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time: _____
☐ TELEPHONE ☒ FAX Give Results to: Elizabeth Frantz 925-866-5681
Project Name: Mokelumne Supplemental Gas Sampling Project Supervisor (Name/Phone No.): Elizabeth Frantz 925-866-5472
Sampled by: (Signature) Elizabeth Frantz (Print Name)

Sample No./Equipment Serial No.	Sampled Date	Time	Sample Type/Description	Containers	
				No.	Size
1. BR1	4/23	12:45	River water	1	500ML
2. BR4	4/23	10:00	"	1	"
3. SPC1	4/23	12:12	"	1	"
4. UNT 5	4/23	10:30	"	1	"
5. LBRR1-bottom	4/23	12:38	"	1	"
6. LBRR1-top	4/23	12:38	"	1	"
7. BR3	4/23	11:00	"	1	"
8. LBRI-CU	4/23	12:30	"	1	"
9. UNT4	4/23	12:05	"	1	"
10.					
11.					
12.					

Relinquished by (Name&Dept.): Elizabeth Frantz Date/Time: 4/23/02 1706
Relinquished by (Name&Dept.): Elizabeth Frantz Date/Time: 4/23/02 1706
Relinquished by (Name&Dept.): Elizabeth Frantz Date/Time: 4/23/02 1706

SAP Accounting Data: _____ Billing Contact: _____ Billing Address: _____

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

May 2002



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG & E
Address: 3400 Crow Canyon Rd.
City: San Ramon, CA 94583

Lab Number: L-246-02
Other Number:
Date Sampled: 05/15/02
Date Received: 05/17/02
Date Completed: 05/17/02
Index-PCA Code:

RE: Copper

RESULTS OF CHEMICAL ANALYSIS:

Sample Identification	Dissolved Copper µg/L (ppb)
BR1 (QA/QC)	12.2
Reporting Limit	1.00

METHOD REFERENCES:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

COST OF ANALYSIS: \$57.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00

Deposit recovery costs to the Fish and Wildlife Pollution Account with "cost of analysis:" identified separately.

borreneyan
Analyst

5/17/02
Date

Andon Melabari 5.17.02
Reviewed by Date

DBC
Laboratory Director

5/17/02
Date

FG 1000 (Rev. 9/01)

Submission #: 2002-05-0294

Date: May 31, 2002



P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn: Elizabeth Frantz

Project: Mokelumne River WQ

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com
CA DHS ELAP#2496

Attached is our report for your samples received on Friday May 17, 2002
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
July 1, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,
please call me at (925) 484-1919.
You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,

A handwritten signature in cursive script that reads "Surinder Sidhu".

Surinder Sidhu
Project Manager

Dissolved Metals



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

P.G.& E TES

✉ 3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn: Elizabeth Frantz

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
LBR1-TOP	Water	05/16/2002 13:55	1
LBR1-MID	Water	05/16/2002 13:55	2
LBR1-BOTTOM	Water	05/16/2002 13:55	3

Submission #: 2002-05-0294

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Sample ID: LBR1-TOP	Lab Sample ID: 2002-05-0294-001
Project: Mokelumne River WQ	Received: 05/17/2002 15:33
	Extracted: 05/20/2002 05:36
Sampled: 05/16/2002 13:55	QC-Batch: 2002/05/20-01.15
Matrix: Water	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.00077	0.0050	mg/L	1.00	05/20/2002 08:48	J

0.77 ug/L

Submission #: 2002-05-0294

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

SEVERN

TRENT

SERVICES

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel 925 484 1919

Fax 925 484 1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP#2496

Sample ID: LBR1-MID	Lab Sample ID: 2002-05-0294-002
Project: Mokelumne River WQ	Received: 05/17/2002 15:33
	Extracted: 05/20/2002 05:36
Sampled: 05/16/2002 13:55	QC-Batch: 2002/05/20-01.15
Matrix: Water	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.00090	0.0050	mg/L	1.00	05/20/2002 08:53	J

0.90 µg/L

Submission #: 2002-05-0294

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

SEVERN
TRENT
SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Sample ID: LBR1-BOTTOM	Lab Sample ID: 2002-05-0294-003
Project: Mokelumne River WQ	Received: 05/17/2002 15:33
Sampled: 05/16/2002 13:55	Extracted: 05/20/2002 05:36
Matrix: Water	QC-Batch: 2002/05/20-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0012	0.0050	mg/L	1.00	05/20/2002 08:57	J

1.2 ug/L

Submission #: 2002-05-0294

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A

Method Blank

Water

QC Batch # 2002/05/20-01.15

MB: 2002/05/20-01.15-014

Date Extracted: 05/20/2002 05:36

**SEVERN
TRENT
SERVICES**

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Copper	ND	0.0050	mg/L	05/20/2002 07:32	

Submission #: 2002-05-0294

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Laboratory Control Spike (LCS/LCSD) Water QC Batch # 2002/05/20-01.15
LCS: 2002/05/20-01.15-015 Extracted: 05/20/2002 05:36 Analyzed: 05/20/2002 07:37
LCSD: 2002/05/20-01.15-016 Extracted: 05/20/2002 05:36 Analyzed: 05/20/2002 07:41

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Copper	0.470	0.487	0.500	0.500	94.0	97.4	3.6	80-120	20		

Submission #: 2002-05-0294



Dissolved Metals

Legend & Notes

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Analysis Notes

LBR1-BOTTOM (Lab# 2002-05-0294-003)
Field-filtered & acidified.

Analysis Notes

LBR1-MID (Lab# 2002-05-0294-002)
Field-filtered & acidified.

Analysis Notes

LBR1-TOP (Lab# 2002-05-0294-001)
Field-filtered & acidified.

Analyte Flags

J

Estimated concentration below Reporting Limit but above Method Detection Limit

2002-05-0294

Address or Location:

City: 340 Crow Canyon ^(Zip) 94583.

Contact Name/Phone No.: Elizbeth Frantz

☒ **NORMAL** (10 days or less) ☐ **RUSH** Turnaround Time _____
 Due Date & Time _____

☐ TELEPHONE ☐ FAX Give Results to:

Name P/FAX

Project Name:	Project Supervisor (Name/Phone No.):
---------------	--------------------------------------

Mokelumne R. W.D. Elizabeth Franz
Sampled by: (Signature) (Print Name)

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size

LAB 1 - TOP	45.16	1355	510		
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1321-000

13R1-Bottom

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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5

.....

					D-407	R-11-A	B-2
Delivered by Motor & Boat							

Received by (Name & Dept.): *Eric Kessler TES*
Date & Time: *5-17-02 12:00*

Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):
-------------------------------	--------------	---------------------------

Relinquished by (Name&Dept.):	Date & Time:	Received by (Name & Dept.):
<i>D. M. W. S.</i>	<i>1333-1104</i>	<i>W. M. S. H. R.</i>

Account	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377</
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SAP Accounting Data:	Billing Contact:
----------------------	------------------

Sw: Surface water

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

CPG&E

November 1998

66412



Sample Receipt Checklist

STL San Francisco

Client Name: PG+E-TES Date/Time Received: 5/17/02 @ 1533
Reference/Subm #: 2002-05-0294 Received by: Denise Harrington Date / Time
Checklist completed by: Denise Harrington 5/17/02 Reviewed By: _____
Signature / Date Initial/Date

Matrix: ☐ Soil ☒ Water ☐ Other _____ Carrier name: Client - STL SF - _____

Shipping container/cooler in good condition? Yes ☒ No _____ Not Present _____
Custody seals intact on shipping container/cooler? Yes _____ No _____ Not Present ☒
Custody seals intact on sample bottles? Yes _____ No _____ Not Present ☒
Chain of custody present? Yes ☒ No _____
Chain of custody signed when relinquished and received? Yes ☒ No _____
Chain of custody agrees with sample labels? Yes ☒ No _____
Samples in proper container/bottle? Yes ☒ No _____
Sample containers intact? Yes ☒ No _____
Sufficient sample volume for indicated test? Yes ☒ No _____
All samples received within holding time? Yes ☒ No _____
Container/Temp Blank temperature in compliance? Temp: 3.5 °C Yes ☒ No _____
Water - VOA vials have zero headspace? No VOA vials submitted ☒ Yes _____ No _____
Water - pH acceptable upon receipt? ☐ Yes ☐ No ☐ Checked by VOA chemist

☐ pH adjusted- Preservative used: ☐ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ ZnOAc Lot#(s) _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: _____

Corrective Action: _____

Submission #: 2002-05-0261



Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3010A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#2496

Sample ID: BR1	Lab Sample ID: 2002-05-0261-009
Project:	Received: 05/16/2002 13:25
	Extracted: 05/21/2002 07:36
Sampled: 05/15/2002 12:05	QC-Batch: 2002/05/21-04.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.014	0.0050	0.0003	1.00	05/21/2002 16:17	

Submission #: 2002-05-0261



Metals

Batch QC report

Test Method: 6010B

Prep Method: 3010A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

Method Blank	Water	QC Batch # 2002/05/21-04.15
MB: 2002/05/21-04.15-079		Date Extracted: 05/21/2002 07:36

CA DHS ELAP#2496

Compound	Result	Rep.Limit	MDL	Unit	Analyzed	Flag
Copper	ND	0.0050		mg/L	05/21/2002 13:31	

Submission #: 2002-05-0261



Metals

Batch QC report

Test Method: 6010B

Prep Method: 3010A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

Laboratory Control Spike (LCS/LCSD) Water QC Batch # 2002/05/21-04.15
LCS: 2002/05/21-04.15-080 Extracted: 05/21/2002 07:36 Analyzed: 05/21/2002 13:35
LCSD: 2002/05/21-04.15-083 Extracted: 05/21/2002 07:36 Analyzed: 05/21/2002 14:54

CA DHS ELAP#2496

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Copper	0.466	0.480	0.500	0.500	93.2	96.0	3.0	80-120	20		

Submission #: 2002-05-0261



Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#2496

Sample ID: BR4	Lab Sample ID: 2002-05-0261-005
Project:	Received: 05/16/2002 13:25
	Extracted: 05/17/2002 08:40
Sampled: 05/15/2002 10:55	QC-Batch: 2002/05/17-04.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	ND	0.0050	0.0003	1.00	05/17/2002 23:48	

Submission #: 2002-05-0261

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#2496

Sample ID: UNT5	Lab Sample ID: 2002-05-0261-006
Project:	Received: 05/16/2002 13:25
	Extracted: 05/17/2002 08:40
Sampled: 05/15/2002 11:15	QC-Batch: 2002/05/17-04.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.0033	0.0050	0.0003	1.00	05/17/2002 23:52	J

Submission #: 2002-05-0261

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

**SEVERN
TRENT
SERVICES**

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#2496

Sample ID: BR3	Lab Sample ID: 2002-05-0261-007
Project:	Received: 05/16/2002 13:25
	Extracted: 05/17/2002 08:40
Sampled: 05/15/2002 11:35	QC-Batch: 2002/05/17-04.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	ND	0.0050	0.0003	1.00	05/17/2002 23:57	

Submission #: 2002-05-0261

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

**SEVERN
TRENT
SERVICES**

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#2496

Sample ID: LBR1	Lab Sample ID: 2002-05-0261-008
Project:	Received: 05/16/2002 13:25
	Extracted: 05/17/2002 08:40
Sampled: 05/15/2002 11:50	QC-Batch: 2002/05/17-04.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	ND	0.0050	0.0003	1.00	05/18/2002 00:22	

Submission #: 2002-05-0261



Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#2496

Sample ID: BR1	Lab Sample ID: 2002-05-0261-010
Project:	Received: 05/16/2002 13:25
	Extracted: 05/17/2002 08:40
Sampled: 05/15/2002 12:05	QC-Batch: 2002/05/17-04.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.012	0.0050	0.0003	1.00	05/18/2002 00:27	

Submission #: 2002-05-0261



Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#2496

Sample ID: UNT6	Lab Sample ID: 2002-05-0261-011
Project:	Received: 05/16/2002 13:25
	Extracted: 05/17/2002 08:40
Sampled: 05/15/2002 12:35	QC-Batch: 2002/05/17-04.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	0.079	0.0050	0.0003	1.00	05/18/2002 00:31	

Submission #: 2002-05-0261

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

CA DHS ELAP#2496

Sample ID: UNT7	Lab Sample ID: 2002-05-0261-012
Project:	Received: 05/16/2002 13:25
	Extracted: 05/17/2002 08:40
Sampled: 05/15/2002 13:00	QC-Batch: 2002/05/17-04.15
Matrix: Water	Unit: mg/L

Compound	Result	Rep.Limit	MDL	Dilution	Analyzed	Flag
Copper	ND	0.0050	0.0003	1.00	05/18/2002 00:35	

Submission #: 2002-05-0261



Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

Method Blank

Water

QC Batch # 2002/05/17-04.15

MB: 2002/05/17-04.15-033

Date Extracted: 05/17/2002 08:40

CA DHS ELAP#2496

Compound	Result	Rep.Limit	MDL	Unit	Analyzed	Flag
Copper	ND	0.0050		mg/L	05/17/2002 22:31	

Submission #: 2002-05-0261

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A



STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

Laboratory Control Spike (LCS/LCSD) Water QC Batch # 2002/05/17-04.15
LCS: 2002/05/17-04.15-034 Extracted: 05/17/2002 08:40 Analyzed: 05/17/2002 22:35
LCSD: 2002/05/17-04.15-035 Extracted: 05/17/2002 08:40 Analyzed: 05/17/2002 22:39

CA DHS ELAP#2496

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Copper	0.501	0.488	0.500	0.500	100.2	97.6	2.6	80-120	20		

Submission #: 2002-05-0261



Dissolved Metals

Legend & Notes

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com

Analysis Notes

BC2 (Lab# 2002-05-0261-004)
Field-filtered & acidified.

CA DHS ELAP#2496

Analysis Notes

BR1 (Lab# 2002-05-0261-010)
Field-filtered & acidified.

Analysis Notes

BR3 (Lab# 2002-05-0261-007)
Field-filtered & acidified.

Analysis Notes

BR4 (Lab# 2002-05-0261-005)
Field-filtered & acidified.

Analysis Notes

LBR1 (Lab# 2002-05-0261-008)
Field-filtered & acidified.

Analysis Notes

MC2 (Lab# 2002-05-0261-002)
Field-filtered & acidified.

Analysis Notes

UNT5 (Lab# 2002-05-0261-006)
Field-filtered & acidified.

Analysis Notes

UNT6 (Lab# 2002-05-0261-011)
Field-filtered & acidified.

Analysis Notes

UNT7 (Lab# 2002-05-0261-012)
Field-filtered & acidified.

Analyte Flags

J

Estimated concentration below Reporting Limit but above Method Detection Limit

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N140-07

Date: 5/22/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

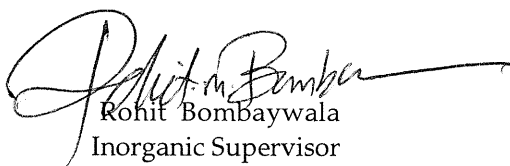
Project: Mokelumne River WQ

PO#

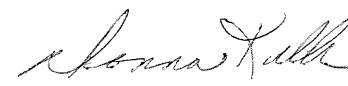
Date Rec'd: 5/20/02
Date Started: 5/20/02
Date Completed: 5/20/02

Date Sampled: 5/16/02
Time:
Sampler: Eric Kenzler

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBR1-Top	N305005	1.0	200.7	Hardness as CaCO ₃	5.0	mg/L
LBR1-Middle	N305006	1.0	200.7	Hardness as CaCO ₃	4.0	mg/L
LBR1-Bottom	N305007	1.0	200.7	Hardness as CaCO ₃	4.0	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916


Report# N140-07

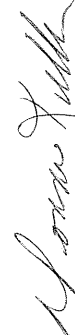
QC REPORT

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I03888	5/20/02			101.2	101.6	0.3	100.1	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor


Donna Keller
Laboratory Director

Certification # 1157



GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue, Suite "A"
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916

Lab Report #

N140-001

Regulatory ☐ Yes ☐ No CC: ☐ Yes ☐ No

Regulator:

Phone: () ()

Fax: () ()

Original To:

Reporting: ☐ EDF ☐ EDT

CHAIN OF CUSTODY

Client: Elizabeth Frantz PGE
Address: 3400 Crow Canyon Rd
City: San Ramon Zip: 94583

Project ID		McKelumme River WQ											
Sampled By	(Print Name)	Eric Kenzler											
	(Signature)												
Date	Time	Sample type	Matrix	Sample ID	Container	No. Of Containers	ANALYSIS	Remarks	Lab ID #	Preservative			
											Grab	Comp	
5-16-02	1355	X	RW	LBR1- TOP	500	1			N305005				
↓	↓	↓	↓	LBR1- MIDDLE	8x250	2			N305006				
↓	↓	↓	↓	LBR1- BOTTOM	500	1			N305007				
Remarks													
Report hardness to < 1.0 mg/l													
Relinquished by (Signature)		Eric Kenzler to Groundwater		Date	5-17-02	Time	10:00	Received by (Signature)	Courier	Date	5-17-02	Time	10:00
Relinquished by (Signature)		Courier		Date	5-20-02	Time	11:30	Received by (Signature)	Buchanan-Pachella	Date	5-20-02	Time	11:30
Preservative													
1-4°C 2-HCL 3-NaOH 4-Na ₂ S ₂ O ₃ 5-HNO ₃ 6-H ₂ SO ₄ 7-Other													
Site Time:		Finish:		Total Hours:		Driving Time:		Site Arrival:		x2=Total:		Mileage	
Start:						Start:							
Turnaround Time		Standard		Silver Rush		Gold Rush		Platinum Rush		Other:			
Approved By:													

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N135-19

Date: 5/20/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

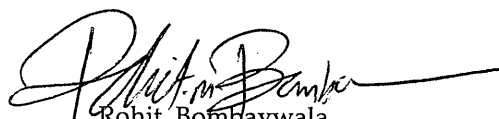
Project: Mokelumne River WQ

PO#

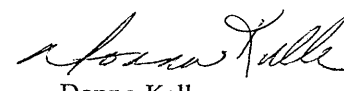
Date Rec'd: 5/15/02
Date Started: 5/17/02
Date Completed: 5/17/02

Date Sampled: 5/15/02
Time:
Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
MC2	N304865	1.0	200.7	Hardness as CaCO ₃	3.8	mg/L
BC2	N304866	1.0	200.7	Hardness as CaCO ₃	9.2	mg/L
BR4	N304867	1.0	200.7	Hardness as CaCO ₃	4.0	mg/L
UNT5	N304868	1.0	200.7	Hardness as CaCO ₃	7.4	mg/L
BR3	N304869	1.0	200.7	Hardness as CaCO ₃	3.4	mg/L
LBR1	N304870	1.0	200.7	Hardness as CaCO ₃	8.8	mg/L
BR1	N304871	1.0	200.7	Hardness as CaCO ₃	5.1	mg/L
UNT6	N304872	1.0	200.7	Hardness as CaCO ₃	11	mg/L
UNT7	N304873	1.0	200.7	Hardness as CaCO ₃	3.8	mg/L


Rohit Boinbaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

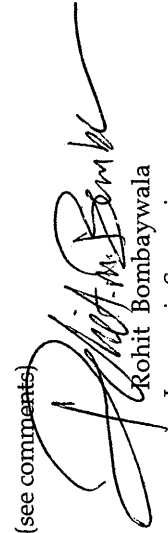
Report# N135-19


QC REPORT

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I03786	05/17/02			89.1	89.2	0.1	99.1	ND	
Hardness as CaCO ₃	200.7	I03791	05/17/02			100.1	100.2	0.1	99.8	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor


Donna Keller
Laboratory Director

Certification # 1157

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

Report# N135-19

QC REPORT

PG&E


3400 Crow Canyon Rd.

San Ramon


CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD %Rec	LCS Blank	Comments
Total Coliform	9221B,C	B00279	5/15/02-5/19/02	22	22			0.0	<2	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue, Suite "A"
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916

Lab Report # N135-19

Regulatory ☐ Yes ☐ No CC: ☐ Yes ☐ No

Regulator:

Phone: ()

Fax: ()

Original To:

Reporting: ☐ EDF ☐ EDT

CHAIN OF CUSTODY

Client: Elizabeth Frantz
Address: 3400 Crow Canyon Rd
City: San Ramon Zip: 94583

Project ID		McClumme River WQ		Sample ID		Container		No. Of Containers		ANALYSIS		Remarks		Lab ID #		Lab Use Only	
Sampled By		(Print Name)		(Signature)		Elizabeth Frantz											
Date	Time	Sample type		Matrix	Grab		Comp	Type	Size								
		Grab	Comp														
5/15	8:30	X		RW						2	X				N304865		
5/15	9:55	X		"						2	X				N304866		
5/15	10:55	X		"						1	X				N304867		
5/15	11:15	X		"						1	X				N304868		
5/15	11:35	X		"						1	X				N304869		
5/15	11:50	X		"						1	X				N304870		
5/15	12:05	X		"						2	X				N304871		
5/15	12:35	X		"						1	X				N304872		
5/15	13:00	X		"						1	X				N304873		

Remarks: report hardness to < 1.0 mg/L

Relinquished by (Signature)	5/15/02	16:06	Time	Received by (Signature)	Shannon Ingram	5/15/02	Time
Relinquished by (Signature)			Date	Received by (Signature)			Date

Preservative		RW = River Water Matrix					
1 -4°C	2 -HCL	3 -NaOH	4 -Na ₂ S ₂ O ₃	5 -HNO ₃	6 -H ₂ SO ₄	7 -Other	
Site Time: Start:		Total Hours:		Driving Time: Start:		Site Arrival:	
Turnaround Time		Finish:		x2=Total:		Mileage	
Standard		Silver Rush		Platinum Rush		Other:	
Approved By:							

June 2002



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG & E
Address: 3400 Crow Canyon Rd.
City: San Ramon, CA 94583

Lab Number: L-282-02
Other Number:
Date Sampled: 06/11/02
Date Received: 06/13/02
Date Completed: 06/24/02
Index-PCA Code:

RE: Copper

RESULTS OF CHEMICAL ANALYSIS:

Sample Identification	Dissolved Copper µg/L (ppb)
BR1 (QA/QC)	4.16
Reporting Limit	1.00

METHOD REFERENCES:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

COST OF ANALYSIS: \$57.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00

Deposit recovery costs to the Fish and Wildlife Pollution Account with "cost of analysis:" identified separately.

longuyen
Analyst

6/24/02
Date

Abdon Melendez
Reviewed by

6/24/02
Date

RBGano
Laboratory Director

6/24/02
Date



DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler Elizabeth Frantz Ph # 925-866-5472		Send Results To Elizabeth Frantz		Lab Number L-282-02	
Address 3400 Crow Canyon Rd		Address		Field Number	
City San Ramon		City		Lab Storage WPCL-R7	
Zip 94583		Copies To		Spill Title	
Date Required/Reason		Address		Suspect	
Shipped Via		City		Index-PCA	
Region:		Water Temp:		mg/L Conductivity:	
Date:		F or C		umhos/cm	
pH:		DO:			
Analysis Requested >>>		Sample Type		Number of Containers	
Collection		Filtered Water		Glass	
Date		Water		Plastic	
Time		Pesticides (Specify Below)		Tissue	
6/11		Trace Elements (Specify Below)		Soil	
BR1 QA/QC Sample		Petroleum Fingerprint		Acid	
Sample Identification/Location (Draw map on separate sheet if necessary)		Pesticides (Specify Below)		Temp	
DFG Code Violation:		Pesticides (Specify Below)		Preservation	
Suspected or Potential Problem		Pesticides (Specify Below)		HNO3	
Routine Analysis		Pesticides (Specify Below)			
Problem Description		Pesticides (Specify Below)			
Suspect/Incident Location		Pesticides (Specify Below)			
Comments/Special Instructions		Pesticides (Specify Below)			
Samples Relinquished By (Signature)		Pesticides (Specify Below)			
Elizabeth Frantz		Pesticides (Specify Below)			
Print Name		Pesticides (Specify Below)			
Elizabeth Frantz		Pesticides (Specify Below)			
Date		Pesticides (Specify Below)			
6/12/02		Pesticides (Specify Below)			
Received By (Signature)		Pesticides (Specify Below)			
Mantua Vazquez		Pesticides (Specify Below)			
Print Name		Pesticides (Specify Below)			
MANTUA VASQUEZ		Pesticides (Specify Below)			
Date		Pesticides (Specify Below)			
6/13/02		Pesticides (Specify Below)			
Pollution Action Kit: Yes <input type="checkbox"/> No <input type="checkbox"/>		Pesticides (Specify Below)			
Glove Size: Large <input type="checkbox"/> Medium <input type="checkbox"/>		Pesticides (Specify Below)			
Hazard Shipper Requested: Yes <input type="checkbox"/> No <input type="checkbox"/>		Pesticides (Specify Below)			
Water Pollution Control Lab		Pesticides (Specify Below)			
2005 Nimbus Road		Pesticides (Specify Below)			
Rancho Cordova, CA 95670		Pesticides (Specify Below)			
Pesticide Investigations Lab		Pesticides (Specify Below)			
1701 Nimbus Road		Pesticides (Specify Below)			
Rancho Cordova, CA 95670		Pesticides (Specify Below)			
Pesticide Investigations Lab		Pesticides (Specify Below)			
1701 Nimbus Road		Pesticides (Specify Below)			
Rancho Cordova, CA 95670		Pesticides (Specify Below)			
Pesticide Investigations Lab		Pesticides (Specify Below)			
1701 Nimbus Road		Pesticides (Specify Below)			
Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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1701 Nimbus Road		Pesticides (Specify Below)			
Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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1701 Nimbus Road		Pesticides (Specify Below)			
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Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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Rancho Cordova, CA 95670		Pesticides (Specify Below)			
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Pesticide Investigations Lab		Pesticides (Specify Below)			
1701 Nimbus Road		Pesticides (Specify Below)			
Rancho Cordova, CA 95670		Pesticides (Specify Below)			
Pesticide Investigations Lab		Pesticides (Specify Below)			

Submission #: 2002-06-0413

Date: July 8, 2002



P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn: Elizabeth Frantz

Project: Mekelumne WQ

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com
CA DHS ELAP#2496

Attached is our report for your samples received on Friday June 21, 2002
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
August 5, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,
please call me at (925) 484-1919.

You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,

A handwritten signature in cursive script that reads "Surinder Sidhu".

Surinder Sidhu
Project Manager

Submission #: 2002-06-0413

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mekelumne WQ

Received: 06/21/2002 17:41

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
LBR1-SURFACE	06/19/2002	Water	1
LBR1-8 METER	06/19/2002	Water	2
LBR1-BOTTOM	06/19/2002	Water	3

Submission #: 2002-06-0413

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mekelumne WQ

Received: 06/21/2002 17:41

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBR1-SURFACE	Lab ID:	2002-06-0413 - 1
Sampled:	06/19/2002	Extracted:	6/27/2002 06:11
Matrix:	Water	QC Batch#:	2002/06/27-04.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.0003	0.0050	mg/L	1.00	06/27/2002 12:33	

Submission #: 2002-06-0413

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mekelumne WQ

Received: 06/21/2002 17:41

SEVERN

TRENT

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STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBR1-8 METER	Lab ID:	2002-06-0413 - 2
Sampled:	06/19/2002	Extracted:	6/27/2002 06:11
Matrix:	Water	QC Batch#:	2002/06/27-04.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.0003	0.0050	mg/L	1.00	06/27/2002 12:46	

Submission #: 2002-06-0413

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mekelumne WQ

Received: 06/21/2002 17:41

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBR1-BOTTOM	Lab ID:	2002-06-0413 - 3
Sampled:	06/19/2002	Extracted:	6/27/2002 06:11
Matrix:	Water	QC Batch#:	2002/06/27-04.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.0003	0.0050	mg/L	1.00	06/27/2002 12:50	

Submission #: 2002-06-0413

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mekelumne WQ

Received: 06/21/2002 17:41

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Method Blank

MB: 2002/06/27-04.15-020

Water

Test(s): 6010B

QC Batch # 2002/06/27-04.15

Date Extracted: 06/27/2002 06:11

Compound	Conc.	MDL	RL	Unit	Analyzed	Flag
Copper	ND		0.0050	mg/L	06/27/2002 11:54	

Submission #: 2002-06-0413

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mekelumne WQ

Received: 06/21/2002 17:41

SEVERN

TRENT

LABORATORY

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
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www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2002/06/27-04.15

LCS 2002/06/27-04.15-023

Extracted: 06/27/2002

Analyzed: 06/27/2002 12:11

LCSD 2002/06/27-04.15-024

Extracted: 06/27/2002

Analyzed: 06/27/2002 12:15

Compound	Conc. mg/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.495	0.503	0.500	99.0	100.6	1.6	80-120	20		

Submission #: 2002-06-0413

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mekelumne WQ

Received: 06/21/2002 17:41

SEVERN

TRENT

LABORATORY

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Matrix Spike (MS / MSD)

Water

QC Batch # 2002/06/27-04.15

LBR1-SURFACE >> MS

Lab ID: 2002-06-0413 - 001

MS: 2002/06/27-04.15-029

Extracted: 06/27/2002

Analized: 06/27/2002 12:37

Dilution: 1.00

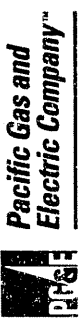
MSD: 2002/06/27-04.15-030

Extracted: 06/27/2002

Analized: 06/27/2002 12:42

Dilution: 1.00

Compound	Conc. mg/L			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Copper	0.485	0.479	ND	0.500	97.0	95.8	1.2	75-125	20		



2002-06-0413
Mokelumne River WQ

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☒ Sample Site
Address or Location: 3400 Crow Canyon
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz

Ship To: Lab Name: STL SF
Address:
City: CA (Zip)
Phone No.
Contact Name:

Turnaround Time
☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Project Supervisor (Name/Phone No.): Elizabeth Frantz
SAP Accounting Data: Charles White

Analysis Requested			Remarks
Equipment Serial No.	Sample No./	Sample Type/Description	
1. LBR1-Surface	6/19 am	Water	report to <0.5ppb
2. LBR1-8 meter	6/19 am		report J flag
3. LBR1-bottom	6/19 am		values between
4.			MDL and RL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

Relinquished by (Name&Dept.): Elizabeth Frantz
Relinquished by (Name&Dept.):
Relinquished by (Name&Dept.):
SAP Accounting Data: Charles White

Date&Time: 6/21/02 1038
Date&Time: 6/21/02 1741
Date&Time: 6/21/02 1741
Ship Via:
Bill of Lading/Airbill No.:
Billing Address: STL SF

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler
©PG&E November, 1998

67061



Sample Receipt Checklist

STL San Francisco

Submission #: 2002- 06 - 0413

Checklist completed by: (initials) CR Date: 06/24/02

Courier name: ☒ STL San Francisco ☐ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____

Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?

Temp: 4.5 °C Yes ☒ No _____

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O))

Water - pH acceptable upon receipt? ☐ Yes ☐ No

☐ pH adjusted- Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N163-08

Date: 6/14/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River

PO#

RECEIVED

JUN 19 2002

BSU ADMIN

Date Rec'd: 6/12/02

Date Started: 6/13/02


Date Completed: 6/13/02

Date Sampled: 6/11/02


Time:

Sampler:

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
SPC1	N305789	1.0	200.7	Hardness as CaCO ₃	5.4	mg/L
BR4	N305790	1.0	200.7	Hardness as CaCO ₃	4.4	mg/L
UNT5	N305791	1.0	200.7	Hardness as CaCO ₃	7.4	mg/L
BR3	N305792	1.0	200.7	Hardness as CaCO ₃	3.8	mg/L
UNT6a	N305793	1.0	200.7	Hardness as CaCO ₃	7.7	mg/L
BR1	N305794	1.0	200.7	Hardness as CaCO ₃	3.9	mg/L
UNT7-Outlet	N305795	1.0	200.7	Hardness as CaCO ₃	3.5	mg/L
UNT8a	N305796	1.0	200.7	Hardness as CaCO ₃	6.1	mg/L
UNT8b	N305797	1.0	200.7	Hardness as CaCO ₃	6.5	mg/L
UNT9	N305798	1.0	200.7	Hardness as CaCO ₃	3.7	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N163-08

Date: 6/14/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River

PO#

Date Rec'd: 6/12/02

Date Started: 6/13/02


Date Completed: 6/13/02

Date Sampled: 6/11/02

Time:

Sampler:

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
UNT6b	N305799	1.0	200.7	Hardness as CaCO ₃	3.4	mg/L
		NA	150.1	pH	7.0	Std. Units
LBR1	N305800	1.0	200.7	Hardness as CaCO ₃	9.1	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

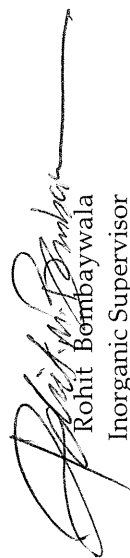
Report# N163-08

QC REPORT

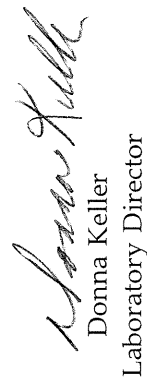
PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I04574	6/13/02			96.1	98.6	2.3	98.3	ND	
pH	150.1	I04513	6/13/02	7.1	7.1			0.0		5.3	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

3400 Crow Canyon Rd, San Ramon 94583

2163-08

Ship To: Lab Name: 500 Analytical
Address: _____
City: Modesto, CA (Zip) _____
Phone No. _____
Contact Name: _____

Analysis Requested		Remarks
Hardness	230.5789	hardness repeat to 41 mg/L
PH	230.5790	
	230.5791	
	230.5792	
	230.5793	
	230.5794	
	230.5795	
	230.5796	
	230.5797	
	230.5798	
	230.5799	
	230.5800	

Relinquished by (Name&Dept.):	Date& Time:	Received by (Name&Dept.):	Date& Time:	Ship Via:
Relinquished by (Name&Dept.):	Date& Time:	Received by (Name&Dept.):	Date& Time:	Bill of Lading/Airbill No.:
Relinquished by (Name&Dept.):	Date& Time:	Received by (Name&Dept.):	Date& Time:	
SAP Accounting Data:		Billing Address:		
Billing Contact:				

1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
4. The final PCB results will be the cumulative results added together for each PCB.
5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and notes:

Distribution (See note #5)

White: Laboratory
Canary: Originator
Pink: Sampler

©PG&E

November, 1998

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

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Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N175-08

Date: 6/26/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River WQ

PO#

Date Rec'd: 6/24/02

Date Started: 6/24/02


Date Completed: 6/24/02

Date Sampled: 6/19/02


Time:

Sampler: Charles White

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBR1-Surface	N306355	1.0	200.7	Hardness as CaCO ₃	3.6	mg/L
LBR1-8 Meters	N306356	1.0	200.7	Hardness as CaCO ₃	3.7	mg/L
LBR1- Bottom	N306357	1.0	200.7	Hardness as CaCO ₃	3.8	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

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Report# N175-08


QC REPORT

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I05009	06/24/02			99.4	99.4	0.0	99.1	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor


Donna Keller
Laboratory Director

Certification # 1157



N175-08

Chain of Custody Record

Mokelumne River WQ

From: Pacific Gas & Electric Company ☐ PG&E Facility ☒ Sample Site
Address or Location: 3400 Crow Canyon
City: San Ramon CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-866-5472

Ship To: Lab Name: GeoAnalytical
Address: 1405 Karsh's Ave
City: Modesto CA (Zip) 95351
Phone No. 209-572-0900
Contact Name:

☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Project Name: Mokelumne River WQ Project Supervisor (Name/Phone No.): Elizabeth Frantz
Sampled by: (Signature) Charles White (Print Name)

Analysis Requested

Sample No./Equipment Serial No.	Sampled Date	Sampled Time	Sample Type/Description	Containers No.	Size	Remarks
1. LBR1-Surface	6/19		lake water	1	250	
2. LBR1-8 meters				1		
3. LBR1-bottom						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:	Ship Via:
Elizabeth Frantz	6/19/12-1000	WPS	6/19/12 1000	
WPS	11:30 6/24/12	Elizabeth Frantz	6/24/12 11:30	
Relinquished by (Name&Dept.): <th>Date&Time:</th> <th>Received by (Name&Dept.):</th> <th>Date&Time:</th> <th>Bill of Lading/Airbill No.:</th>	Date&Time:	Received by (Name&Dept.):	Date&Time:	Bill of Lading/Airbill No.:
WPS		Elizabeth Frantz		

SAP Accounting Data: Billing Contact: Billing Address:

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

4.5°C

Submission #: 2002-06-0184

Date: June 19, 2002



P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn: Elizabeth Frantz

Project: Mokelumne WQ

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com
CA DHS ELAP#2496

Attached is our report for your samples received on Wednesday June 12, 2002
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
July 27, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,
please call me at (925) 484-1919.

You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,

A handwritten signature in cursive script that reads "Surinder Sidhu".

Surinder Sidhu
Project Manager

Submission #: 2002-06-0184

Dissolved Metals



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www.chromalab.com

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P.G.& E TES

✉ 3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn: Elizabeth Frantz

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne WQ

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SPC-1	Water	06/11/2002 09:30	1
BR4	Water	06/11/2002 10:23	2
UNT5	Water	06/11/2002 10:45	3
BR3	Water	06/11/2002 11:15	4
UNT6a	Water	06/11/2002 12:14	5
BR1	Water	06/11/2002 12:40	6

Submission #: 2002-06-0184

Dissolved Metals

P.G.& E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

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CA DHS ELAP#2496

Sample ID: SPC-1	Lab Sample ID: 2002-06-0184-001
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 09:30	QC-Batch: 2002/06/13-01.15
Matrix: Water	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0020	0.0050	mg/L	1.00	06/13/2002 07:50	J

2.0

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

Sample ID: BR4	Lab Sample ID: 2002-06-0184-002
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 10:23	QC-Batch: 2002/06/13-01.15
Matrix: Water	



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Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0019	0.0050	mg/L	1.00	06/13/2002 07:54	J

1.9

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



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CA DHS ELAP#2496

Sample ID: UNT5	Lab Sample ID: 2002-06-0184-003
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 10:45	QC-Batch: 2002/06/13-01.15
Matrix: Water	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0017	0.0050	mg/L	1.00	06/13/2002 07:59	J

1.7

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



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CA DHS ELAP#2496

Sample ID: BR3	Lab Sample ID: 2002-06-0184-004
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 11:15	QC-Batch: 2002/06/13-01.15
Matrix: Water	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0099	0.0050	mg/L	1.00	06/13/2002 08:21	

9.9

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



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CA DHS ELAP#2496

Sample ID: UNT6a	Lab Sample ID: 2002-06-0184-005
Project: Mokelumne WQ	Received: 06/12/2002 12:00
Sampled: 06/11/2002 12:14	Extracted: 06/13/2002 04:36
Matrix: Water	QC-Batch: 2002/06/13-01.15

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.038	0.0050	mg/L	1.00	06/13/2002 08:25	

38

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

Sample ID: BR1	Lab Sample ID: 2002-06-0184-006
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 12:40	QC-Batch: 2002/06/13-01.15
Matrix: Water	



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Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0058	0.0050	mg/L	1.00	06/13/2002 08:30	

5.8

Submission #: 2002-06-0184

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A

Method Blank

Water

QC Batch # 2002/06/13-01.15

MB: 2002/06/13-01.15-011

Date Extracted: 06/13/2002 04:36



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Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Copper	ND	0.0050	mg/L	06/13/2002 07:20	

Submission #: 2002-06-0184

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A



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CA DHS ELAP#2496

Laboratory Control Spike (LCS/LCSD) Water QC Batch # 2002/06/13-01.15
LCS: 2002/06/13-01.15-012 Extracted: 06/13/2002 04:36 Analyzed: 06/13/2002 07:24
LCSD: 2002/06/13-01.15-013 Extracted: 06/13/2002 04:36 Analyzed: 06/13/2002 07:28

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Copper	0.509	0.517	0.500	0.500	101.8	103.4	1.6	80-120	20		

Dissolved Metals

Legend & Notes

Test Method: 6010B

Prep Method: 3005A

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CA DHS ELAP#2496

Analysis Notes

BR1 (Lab# 2002-06-0184-006)
Field-filtered & acidified.

Analysis Notes

BR3 (Lab# 2002-06-0184-004)
Field-filtered & acidified.

Analysis Notes

BR4 (Lab# 2002-06-0184-002)
Field-filtered & acidified.

Analysis Notes

SPC-1 (Lab# 2002-06-0184-001)
Field-filtered & acidified.

Analysis Notes

UNT5 (Lab# 2002-06-0184-003)
Field-filtered & acidified.

Analysis Notes

UNT6a (Lab# 2002-06-0184-005)
Field-filtered & acidified.

Analyte Flags

J

Estimated concentration below Reporting Limit but above Method Detection Limit

Submission #: 2002-06-0184

Dissolved Metals



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CA DHS ELAP#2496

P.G.& E TES

✉ 3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn: Elizabeth Frantz

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne WQ

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
UNT7-OUTLET	Water	06/11/2002 13:00	7
UNT8a	Water	06/11/2002 13:15	8
UNT8b	Water	06/11/2002 13:35	9
UNT9	Water	06/11/2002 13:50	10
UNT6b	Water	06/11/2002 14:11	11
LBR1	Water	06/11/2002 14:45	12

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



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CA DHS ELAP#2496

Sample ID: UNT7-OUTLET	Lab Sample ID: 2002-06-0184-007
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 13:00	QC-Batch: 2002/06/13-01.15
Matrix: Water	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0011	0.0050	mg/L	1.00	06/13/2002 08:34	J

1,1

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

Sample ID: UNT8a	Lab Sample ID: 2002-06-0184-008
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 13:15	QC-Batch: 2002/06/13-01.15
Matrix: Water	



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CA DHS ELAP#2496

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.032	0.0050	mg/L	1.00	06/13/2002 08:38	

32

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A



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CA DHS ELAP#2496

Sample ID: UNT8b	Lab Sample ID: 2002-06-0184-009
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 13:35	QC-Batch: 2002/06/13-01.15
Matrix: Water	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.027	0.0050	mg/L	1.00	06/13/2002 08:43	

27

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

Sample ID: UNT9	Lab Sample ID: 2002-06-0184-010
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 13:50	QC-Batch: 2002/06/13-01.15
Matrix: Water	



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CA DHS ELAP#2496

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0087	0.0050	mg/L	1.00	06/13/2002 08:47	

8.7

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

Sample ID: UNT6b	Lab Sample ID: 2002-06-0184-011
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 14:11	QC-Batch: 2002/06/13-01.15
Matrix: Water	

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CA DHS ELAP#2496

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.0043	0.0050	mg/L	1.00	06/13/2002 08:52	J

4.3

Submission #: 2002-06-0184

Dissolved Metals

P.G. & E TES

Attn: Elizabeth Frantz

Test Method: 6010B

Prep Method: 3005A

Sample ID: LBR1	Lab Sample ID: 2002-06-0184-012
Project: Mokelumne WQ	Received: 06/12/2002 12:00
	Extracted: 06/13/2002 04:36
Sampled: 06/11/2002 14:45	QC-Batch: 2002/06/13-01.15
Matrix: Water	



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CA DHS ELAP#2496

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Copper	0.00052	0.0050	mg/L	1.00	06/13/2002 08:56	J

0.52

Submission #: 2002-06-0184

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A

Method Blank

Water

QC Batch # 2002/06/13-01.15

MB: 2002/06/13-01.15-011

Date Extracted: 06/13/2002 04:36



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CA DHS ELAP#2496

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Copper	ND	0.0050	mg/L	06/13/2002 07:20	

Submission #: 2002-06-0184

Dissolved Metals

Batch QC report

Test Method: 6010B

Prep Method: 3005A



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CA DHS ELAP#2496

Laboratory Control Spike (LCS/LCSD) Water QC Batch # 2002/06/13-01.15
LCS: 2002/06/13-01.15-012 Extracted: 06/13/2002 04:36 Analyzed: 06/13/2002 07:24
LCSD: 2002/06/13-01.15-013 Extracted: 06/13/2002 04:36 Analyzed: 06/13/2002 07:28

Compound	Conc. [mg/L]		Exp.Conc. [mg/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Copper	0.509	0.517	0.500	0.500	101.8	103.4	1.6	80-120	20		

Dissolved Metals

Legend & Notes

Test Method: 6010B

Prep Method: 3005A

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Sample Notes

LBR1 (Lab# 2002-06-0184-012)
Report to <0.5 ppb - report J flag values between RL & MDL.

Analysis Notes

LBR1 (Lab# 2002-06-0184-012)
Field-filtered & acidified.

Analysis Notes

UNT6b (Lab# 2002-06-0184-011)
Field-filtered & acidified.

Analysis Notes

UNT7-OUTLET (Lab# 2002-06-0184-007)
Field-filtered & acidified.

Analysis Notes

UNT8a (Lab# 2002-06-0184-008)
Field-filtered & acidified.

Analysis Notes

UNT8b (Lab# 2002-06-0184-009)
Field-filtered & acidified.

Analysis Notes

UNT9 (Lab# 2002-06-0184-010)
Field-filtered & acidified.

Analyte Flags

J

Estimated concentration below Reporting Limit but above Method Detection Limit

2002-06-0184

Alkaline Liver Supplement Cu Study

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☒ Sample Site
Address or Location: 3400 Crown Canyon
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.:

Ship To: Lab Name: STL San Francisco
Address: _____
City: Healdsburg, CA (Zip) _____
Phone No. _____
Contact Name: _____

☐ **NORMAL** (10 days or less) ☒ **RUSH** Turnaround Time 5 days
☐ **TELEPHONE** ☐ **FAX** ☐ **OTHER**, Specify _____
 Give Results to: Elizabeth Frantz Name _____ Phone/FAX _____

☐ **NORMAL** (10 days or less) ☒ **RUSH** Turnaround Time 5 days
☐ **TELEPHONE** ☐ **FAX** ☐ **OTHER**, Specify _____
 Give Results to: Elizabeth Frantz Name _____ Phone/FAX _____

Project Name: <i>Mokelumne RR</i>	Project Supervisor (Name/Phone No.):
Sampled by: (Signature) <i>Elizabeth Fantz</i> (Print Name) <i>925-866-5472</i>	

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. SRC-1	6/11	930	KIVER water	1	250ml
2. BR-1		1023		1	
3. UNT5		1045		1	
4. BR-3		1115		1	
5. UNT6a		1214		1	
6. BR-1		1240	↓	1	
7. UNT7-outlet		1300		1	
8. UNT8a		1315		1	
9. UNT8b		1335		1	
10. UNT9		1350		1	
11. UNT6b		1411	↓	1	
12. BR-1		1445		1	

Relinquished by (Name&Dept.)	Date&Time	Received by (Name&Dept.)	Date&Time
<i>John F. Frantz</i>	<i>6/12/02 1200</i>	<i>Wm. J. Frantz</i>	
Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:

Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):

SAP Accounting Data:

Billing Contact:

Analysis Requested						Remarks
						All samples were field filtered
						report to <0.5 ppb
						report J flag
						values between RL and MDL

Ship Via:	
Date & Time:	6/13/02 @ 1200
Bill of Lading/Airbill No.:	
Date & Time:	

	Date & Time:	9.20c
--	--------------	-------

Billing Address:

1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
4. The final PCB results will be the cumulative results added together for each PCB.
5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

CPG&E

November, 1998



STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 06 - 0184

Checklist completed by: (initials) DSH Date: 06/12/02

Courier name: ☒ STL San Francisco ☒ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____

Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?

Temp: 9.2 °C Yes ☒ No _____

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O))

Water - pH acceptable upon receipt? ☒ Yes ☐ No

☐ pH adjusted- Preservative used: ☐ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

July 2002

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N198-11

Date: 7/19/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Project:
PO#

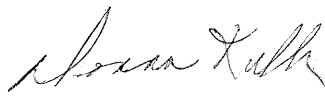
Date Rec'd: 7/17/02
Date Started: 7/18/02
Date Completed: 7/18/02

Date Sampled:
Time:
Sampler:

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
UNT 7	N307322	1.0	200.7	Hardness as CaCO ₃	4.5	mg/L
UNT 8a	N307323	1.0	200.7	Hardness as CaCO ₃	7.4	mg/L
UNT 8b	N307324	1.0	200.7	Hardness as CaCO ₃	7.2	mg/L
UNT 6b	N307325	1.0	200.7	Hardness as CaCO ₃	10	mg/L
BR1	N307326	1.0	200.7	Hardness as CaCO ₃	4.6	mg/L
UNT 6a	N307327	1.0	200.7	Hardness as CaCO ₃	9.6	mg/L
BR3	N307328	1.0	200.7	Hardness as CaCO ₃	3.7	mg/L
BR4	N307329	1.0	200.7	Hardness as CaCO ₃	6.3	mg/L

Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

QC REPORT

Report# N198-11


PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	105944	07/18/02			92.4	92.5	0.1	98.4	ND	

* LCS/LCSD (see comments)

Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue, Suite "A"
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916

Lab Report # N148-11

Regulatory ☐ Yes ☐ No CC: ☐ Yes ☐ No

Regulator: _____

Phone: () _____

Fax: () _____

Original To: _____

Reporting: ☐ EDF ☐ EDT

Client: PGE Elizabeth Frantz

Address: 3100 Crow Canyon Rd

City San Ramon Zip 94583

CHAIN OF CUSTODY

Project ID		(Print Name)		Sample ID		Container		No. Of Containers		ANALYSIS		Lab Use Only	
Sampled By		(Signature)								Preservative		Lab ID #	
Date	Time	Sample type	Grab	Comp	Matrix	Type	Size			Remarks			
7/16	14:40	X			RW		250	1					
7/16	15:05	X			"		"	1					
7/16	15:15	X			"		"	1					
7/16	15:30	X			"		"	1					
7/16	15:40	X			"		"	1					
7/16	16:10	X			"		"	1					
7/17	9:30	X			"		"	1					
7/17	10:05	X			"		"	1					
Remarks: Please report to < 1.0 mg/L													
Relinquished by (Signature)		Elizabeth Frantz		Date		7/17/02		Time		13:47		Received by (Signature)	
Relinquished by (Signature)				Date		7/17/02		Time		13:47		Received by (Signature)	
Preservative													
1 -4°C 2 -HCL 3 -NaOH 4 -Na ₂ S ₂ O ₃ 5 -HNO ₃ 6 -H ₂ SO ₄ 7 -Other <u>River water = RW</u>													
Matrix													
DW Drinking Water WW Waste Water HWW Hazardous Waste (Water) S Soil/Solid													
Site Time: Start:		Finish:		Total Hours:		Driving Time: Start:		Site Arrival:		x2=Total:		Time	
Turnaround Time		Standard		Silver Rush		Gold Rush		Platinum Rush		Other:		Approved By:	

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N200-21

Date: 7/23/02

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River

PO#

Date Rec'd: 7/19/02

Date Started: 7/22/02

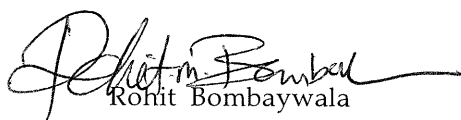
Date Completed: 7/22/02

Date Sampled: 7/17/02

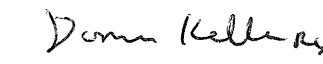
Time: 1:10pm

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBRR1- Top	N307485	1.0	200.7	Hardness as CaCO ₃	3.6	mg/L
LBRR1- Middle	N307486	1.0	200.7	Hardness as CaCO ₃	5.4	mg/L
LBRR1- Bottom	N307487	1.0	200.7	Hardness as CaCO ₃	4.8	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916


Report# N200-21

QC REPORT


Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	106068	7/22/02			101.7	103.4	1.4	101.7	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



Pacific Gas and
Electric Company

Chain of Custody Record

Mokelumne River

N200-21

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon Rd
City: San Ramon CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-866-5472

Ship To: Lab Name: Geo Analytical
Address: 1405 Kansas Ave
City: Modesto CA (Zip) 95351
Phone No. 209-572-0700
Contact Name:

☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Name POFAX

Analysis Requested

hardness		Remarks	
X	N307485	Report to <1.0 mg/L	
X	N307486		
X	N307487		

Relinquished by (Name&Dept.): Elizabeth Frantz Date/Time: 7/18/02 1000
Received by (Name&Dept.): (via Cowher) Date/Time: 7/19/02 12:53
Relinquished by (Name&Dept.): Date/Time: Date/Time: Bill of Lading/Airbill No.:
Relinquished by (Name&Dept.): Date/Time: Date/Time: Date/Time:
SAP Accounting Data: Billing Contact: Billing Address:

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: P G & E
Address: 3400 Crow Canyon Rd
City: San Ramon, CA 94583

Lab Number: L-333-02
Other Number:
Date Sampled: 07/16/02
Date Received: 07/19/02
Date Completed: 07/29/02
Index-PCA Code:

RE: BRI (QA/QC)

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Identification	Sample Identification	Dissolved Copper, $\mu\text{g/L}$ (ppb)
L-333-02-1	BRI (QA/QC)	6.3
Reporting Limit (RL)		1.0

METHOD REFERENCES:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

COST OF ANALYSIS: \$40.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00
Deposit recovery costs to the Fish and Wildlife Pollution Account with "cost of analysis:" identified separately.

Maria Martin
Analyst

7/30/02
Date

C.A. Zed for D. Crane 8/1/02
Reviewed Date

C.A. Zed for
Laboratory Director

8/5/02
Date

D. Crane



Water Pollution Control Lab	2005 Nimbus Road	Rancho Cordova, CA 95670	(916) 358-2858
Petroleum Chemistry Lab	1995 Nimbus Road	Rancho Cordova, CA 95670	(916) 358-2803
Pesticide Investigations Lab	1701 Nimbus Road	Rancho Cordova, CA 95670	(916) 358-2950

Submission#: 2002-07-0367

August 01, 2002

SEVERN

TRENT

LABORATORY

P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn.: Elizabeth Frantz
Project: Mokelumne River WQ

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

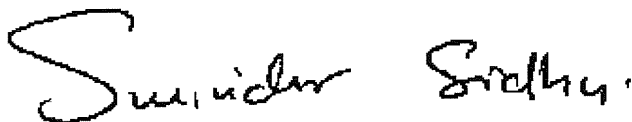
Attached is our report for your samples received on 07/18/2002 15:30
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
09/01/2002 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,



Surinder Sidhu
Project Manager

Submission #: 2002-07-0367

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
UNT 7	07/16/2002 14:40	Water	1
UNT 8A	07/16/2002 15:05	Water	2
UNT8B	07/16/2002 15:15	Water	3
UNT 6B	07/16/2002 15:30	Water	4
BR1	07/16/2002 15:40	Water	5
UNT 6A	07/16/2002 16:10	Water	6
BR3	07/17/2002 09:30	Water	7
BR4	07/17/2002 10:05	Water	8
LBRR1-TOP	07/17/2002 13:10	Water	9
LBRR1-MIDDLE	07/17/2002 13:10	Water	10
LBRR1-BOTTOM	07/17/2002 13:10	Water	11

Submission #: 2002-07-0367

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT 7	Lab ID:	2002-07-0367 - 1
Sampled:	07/16/2002 14:40	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0015	0.0003	0.0050	mg/L	1.00	07/19/2002 09:02	J

Submission #: 2002-07-0367

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT 8A	Lab ID:	2002-07-0367 - 2
Sampled:	07/16/2002 15:05	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.042	0.0003	0.0050	mg/L	1.00	07/19/2002 09:05	

Submission #: 2002-07-0367

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8B	Lab ID:	2002-07-0367 - 3
Sampled:	07/16/2002 15:15	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.036	0.0003	0.0050	mg/L	1.00	07/19/2002 09:10	

Submission #: 2002-07-0367

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT 6B	Lab ID:	2002-07-0367 - 4
Sampled:	07/16/2002 15:30	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.031	0.0003	0.0050	mg/L	1.00	07/19/2002 09:14	

Submission #: 2002-07-0367

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR1	Lab ID:	2002-07-0367 - 5
Sampled:	07/16/2002 15:40	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0087	0.0003	0.0050	mg/L	1.00	07/19/2002 09:18	

Submission #: 2002-07-0367

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT 6A	Lab ID:	2002-07-0367 - 6
Sampled:	07/16/2002 16:10	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.049	0.0003	0.0050	mg/L	1.00	07/19/2002 09:23	

Submission #: 2002-07-0367

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR3	Lab ID:	2002-07-0367 - 7
Sampled:	07/17/2002 09:30	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0011	0.0003	0.0050	mg/L	1.00	07/19/2002 09:27	J

Submission #: 2002-07-0367

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

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Pleasanton, CA 94566

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Fax: (925) 484-1096
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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR4	Lab ID:	2002-07-0367 - 8
Sampled:	07/17/2002 10:05	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.00050	0.0003	0.0050	mg/L	1.00	07/19/2002 09:31	J

Submission #: 2002-07-0367

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-TOP	Lab ID:	2002-07-0367 - 9
Sampled:	07/17/2002 13:10	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.0003	0.0050	mg/L	1.00	07/19/2002 09:36	

Submission #: 2002-07-0367

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

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STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-MIDDLE	Lab ID:	2002-07-0367 - 10
Sampled:	07/17/2002 13:10	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.0003	0.0050	mg/L	1.00	07/19/2002 09:40	

Submission #: 2002-07-0367

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN

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Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-BOTTOM	Lab ID:	2002-07-0367 - 11
Sampled:	07/17/2002 13:10	Extracted:	7/19/2002 05:31
Matrix:	Water	QC Batch#:	2002/07/19-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0013	0.0003	0.0050	mg/L	1.00	07/19/2002 09:58	J

Submission #: 2002-07-0367

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN

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www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Method Blank

MB: 2002/07/19-03.15-024

Water

Test(s): 6010B

QC Batch # 2002/07/19-03.15

Date Extracted: 07/19/2002 05:31

Compound	Conc.	MDL	RL	Unit	Analyzed	Flag
Copper	ND	0.0003	0.0050	mg/L	07/19/2002 08:09	

Submission #: 2002-07-0367

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

SEVERN

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2002/07/19-03.15

LCS 2002/07/19-03.15-025

Extracted: 07/19/2002

Analyzed: 07/19/2002 08:13

LCSD 2002/07/19-03.15-026

Extracted: 07/19/2002

Analyzed: 07/19/2002 08:18

Compound	Conc. mg/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.516	0.513	0.500	103.2	102.6	0.6	80-120	20		

Submission #: 2002-07-0367

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz

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San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River WQ

Received: 07/18/2002 15:30

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www.chromalab.com

CA DHS ELAP# 2496

Legend and Notes

Result Flag

J

Estimated value, less than reporting limits, but over the method detection limits.



2002-07-0367

Chain of Custody Record

Mokelumne River WQ

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon Rd
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-866-5442

Ship To: Lab Name: STL
Address:
City: Pleasanton, CA (Zip)
Phone No. 925-484-1919
Contact Name:

☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify
Due Date & Time
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Name

Analysis Requested
(distilled copper field field)

Sample No./Equipment Serial No.		Sampled Date	Time	Sample Type/Description	Containers	
					No.	Size
1.	UNT 7	7/16	1440	water	1	250
2.	UNT 8a	7/16	1505		1	
3.	UNT 8b	7/16	1515		1	
4.	UNT 6 b	7/16	1530		1	
5.	BR 1	7/16	1540		1	
6.	UNT 6 a	7/16	1610		1	
7.	BR 3	7/17	930		1	
8.	BR 4	7/17	1005		1	
9.	LB RRI-top	7/17	1310		1	
10.	LB RRI-middle	7/17	1310		1	
11.	LB RRI-bottom	7/17	1310		1	
12.						

Remarks
Report to <0.5 ppb
Report J flag values between MDL and RL
all samples were field filtered & preserved
4.2°C

Relinquished by (Name & Dept.): Elizabeth Frantz
Date & Time: 7/16/02 1000
Relinquished by (Name & Dept.): Denise Harrington
Date & Time: 7/18/02 1530
Relinquished by (Name & Dept.):
Date & Time:

Received by (Name & Dept.): Denise Harrington
Date & Time: 7/18/02 1450
Received by (Name & Dept.):
Date & Time:
Received by (Name & Dept.):
Date & Time:

SAP Accounting Data: Billing Contact: Billing Address:

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler



STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 07 - 0367

Checklist completed by: (initials) NK Date: 07 / 18 /02

Courier name: ☒ STL San Francisco ☐ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____

Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?

Temp: 4.2 °C Yes ☒ No _____

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small -O), M (medium - O) or L (large - O))

Water - pH acceptable upon receipt? ☐ Yes ☐ No

☐ pH adjusted- Preservative used: ☐ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____ / _____ /02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

August 2002



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG& E
Address: 3400 Crow Canyon Rd
City: San Ramon, CA 94583

Lab Number: L-406-02
Other Number:
Date Sampled: 08/28/02
Date Received: 09/23/02
Date Completed: 09/25/02
Index-PCA Code:

RE: LBRRI – QA/QC


RESULTS OF CHEMICAL ANALYSIS:

Laboratory Identification	Sample Identification	Dissolved Copper, $\mu\text{g/L}$ (ppb)
L-406-02-1	TOP	1.6
L-406-02-2	MIDDLE	19.1
L-406-02-3	BOTTOM	ND
Report Limit (RL)		1.0
Detection Limit		0.3
ND – not detected		

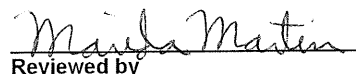
METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

Cost of Analysis: \$ 150.00


Analyst

10/30/02
Date


Reviewed by

10/30/02
Date


Laboratory Director

10/30/02
Date



DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Page 1 of 1

Sampler <i>Elizabeth Frantz</i>	Ph # 925-866 5472	Send Results To <i>Elizabeth Frantz</i>	Lab Number L-406-02
Address <i>Mesa Verde</i>	Address 3400 Crow Canyon Rd	Field Number	
City CA	City San Ramon	Lab Storage WPC-27	
Zip CA	Zip 94583	Spill Title	
Date Required/Reason	Address	Suspect	
Shipped Via	City	Index-PCA	
Region: _____		mg/L Conductivity: _____ umhos/cm	
<input type="checkbox"/> Fish & Wildlife Loss Date: _____		DO: _____ pH: _____	
<input type="checkbox"/> DFG Code Violation: _____		F or C	
<input type="checkbox"/> Suspected or Potential Problem		Water Temp: _____	
<input checked="" type="checkbox"/> Routine Analysis		Pesticides (Specify Below)	
Sample Identification/Location (Draw map on separate sheet if necessary)		Trace Elements (Specify Below)	
Analysis Requested >>>		Petroleum Fingerprint	
Collection Date Time		Water	
LBRR1-top-QA/QC 8/28 1310		X	
LBRR1-middle-QA/QC 8/28 1256		X	
LBRR1-bottom-QA/QC 8/28 1246		X	
Please report to <0.3 ppb (Low detection limit required)			
report 1.5' flag values between RL and MDL			
Problem Description		Sample Type	
Suspect/Incident Location		Filtered Water	
Comments/Special Instructions		Soil	
		Tissue	
		Plastic	
		Glass	
		VOA Vial	
		Number of Containers	
		Preservation	
		Temp	
		Acid	
		HNO3	
Water Pollution Control Lab 2005 Nimbus Road Rancho Cordova, CA 95670 (916) 358-2858		Pesticide Investigations Lab 1701 Nimbus Road Rancho Cordova, CA 95670 (916) 358-2950	
Water Pollution Control Lab 2005 Nimbus Road Rancho Cordova, CA 95670 (916) 358-2858		Pesticide Investigations Lab 1701 Nimbus Road Rancho Cordova, CA 95670 (916) 358-2950	

Samples Relinquished By (Signature) <i>Elizabeth Frantz</i>	Print Name Elizabeth Frantz	Date 9/19/02	Received By (Signature) <i>Long Nguyen</i>	Print Name LOC NGUYEN	Date 9/23/02
LAB COPIES: WHITE, CANARY, PINK			SUBMITTER: GOLDENROD		



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name:	Elizabeth Frantz	Lab Number:	L-378-02
Agency:	P G & E	Other Number:	
Address:	3400 Crow Canyon Rd	Date Sampled:	08/29/02
City:	San Ramon, CA 94583	Date Received:	09/04/02
		Date Completed:	09/09/02
		Index-PCA Code:	
RE:	BRI (QA/QC)		

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Identification	Sample Identification	Dissolved Copper, $\mu\text{g/L}$ (ppb)
L-378-02-1	BRI (QA/QC)	3.5
Reporting Limit (RL)		1.0

METHOD REFERENCES:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

COST OF ANALYSIS: \$50.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00
Deposit recovery costs to the Fish and Wildlife Pollution Account with "cost of analysis:" identified separately.

Analyst: MEV

Maida Martin
Inorganic Section Leader

9/11/02
Date

DB
Laboratory Director

9-12-02
Date

[illegible]

LAB COPIES: WHITE, CANARY, PINK

SUBMITTER: GOLDENROD

FG 1000 (Rev. 9/01)

Submission#: 2002-08-0621

September 16, 2002

SEVERN

TRENT

LABORATORY

P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn.: Elizabeth Frantz
Project: Mokelumne Copper

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

Attached is our report for your samples received on 08/30/2002 09:05
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
10/14/2002 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,



Surinder Sidhu
Project Manager

Submission #: 2002-08-0621

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

SEVERN

TRENT

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Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
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www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
LBRR1-TOP	08/28/2002 13:10	Water	1
LBRR1-MIDDLE	08/28/2002 12:56	Water	2
LBRR1-BOTTOM	08/28/2002 12:46	Water	3
UNT6a	08/29/2002 07:36	Water	4
UNT8a	08/29/2002 08:06	Water	5
UNT8b	08/29/2002 08:17	Water	6
UNT6b	08/29/2002 08:27	Water	7
UNT7	08/29/2002 08:35	Water	8
BR1	08/29/2002 08:50	Water	9
BR-RSC1	08/29/2002 10:16	Water	10
RSC	08/29/2002 10:36	Water	11
BR-RSC2	08/29/2002 10:52	Water	12
BR2	08/29/2002 11:48	Water	13

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

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San Ramon, CA 94583-1393
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Project: Mokelumne Copper

Received: 08/30/2002 09:05

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-TOP	Lab ID:	2002-08-0621 - 1
Sampled:	08/28/2002 13:10	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0037	0.0050	mg/L	1.00	09/08/2002 11:04	J

3.7 ug/L

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

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Project: Mokelumne Copper

Received: 08/30/2002 09:05

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-MIDDLE	Lab ID:	2002-08-0621 - 2
Sampled:	08/28/2002 12:56	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.019	0.0050	mg/L	1.00	09/08/2002 11:08	

19

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

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Project: Mokelumne Copper

Received: 08/30/2002 09:05

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www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: LBRR1-BOTTOM

Lab ID: 2002-08-0621 - 3

Sampled: 08/28/2002 12:46

Extracted: 9/6/2002 12:30

Matrix: Water

QC Batch#: 2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0016	0.0050	mg/L	1.00	09/08/2002 11:12	J

1.6

Submission #: 2002-08-0621

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
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Project: Mokelumne Copper

Received: 08/30/2002 09:05

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6a	Lab ID:	2002-08-0621 - 4
Sampled:	08/29/2002 07:36	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.038	0.0050	mg/L	1.00	09/08/2002 11:15	

38

Submission #: 2002-08-0621

Dissolved Metals

P.G.& E TES

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3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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Fax: (925) 484-1096
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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8a	Lab ID:	2002-08-0621 - 5
Sampled:	08/29/2002 08:06	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.029	0.0050	mg/L	1.00	09/08/2002 11:26	

29

Submission #: 2002-08-0621

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8b	Lab ID:	2002-08-0621 - 6
Sampled:	08/29/2002 08:17	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.023	0.0050	mg/L	1.00	09/08/2002 11:59	

23

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

SEVERN
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Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6b	Lab ID:	2002-08-0621 - 7
Sampled:	08/29/2002 08:27	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.022	0.0050	mg/L	1.00	09/08/2002 12:03	

22

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT7	Lab ID:	2002-08-0621 - 8
Sampled:	08/29/2002 08:35	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.0050	mg/L	1.00	09/08/2002 12:07	

< 0.30 µg/L

Submission #: 2002-08-0621

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR1	Lab ID:	2002-08-0621 - 9
Sampled:	08/29/2002 08:50	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0035	0.0050	mg/L	1.00	09/08/2002 12:11	J

3.5

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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Fax: (925) 484-1096
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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR-RSC1	Lab ID:	2002-08-0621 - 10
Sampled:	08/29/2002 10:16	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0024	0.0050	mg/L	1.00	09/08/2002 12:15	J

2.4

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	RSC	Lab ID:	2002-08-0621 - 11
Sampled:	08/29/2002 10:36	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.0050	mg/L	1.00	09/08/2002 12:19	

20.3 µg/L

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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Pleasanton, CA 94566

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Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR-RSC2	Lab ID:	2002-08-0621 - 12
Sampled:	08/29/2002 10:52	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0027	0.0050	mg/L	1.00	09/08/2002 12:23	J

2.7

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

SEVERN

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR2	Lab ID:	2002-08-0621 - 13
Sampled:	08/29/2002 11:48	Extracted:	9/6/2002 12:30
Matrix:	Water	QC Batch#:	2002/09/06-08.15

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0011	0.0050	mg/L	1.00	09/08/2002 12:27	J

Submission #: 2002-08-0621

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

SEVERN

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LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Method Blank

MB: 2002/09/06-08.15-047

Water

Test(s): 6010B

QC Batch # 2002/09/06-08.15

Date Extracted: 09/06/2002 12:30

Compound	Conc.	RL	Unit	Analyzed	Flag
Copper	ND	0.0050	mg/L	09/08/2002 10:53	

Submission #: 2002-08-0621

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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Pleasanton, CA 94566

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www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2002/09/06-08.15

LCS 2002/09/06-08.15-048

Extracted: 09/06/2002

Analyzed: 09/08/2002 10:57

LCSD 2002/09/06-08.15-049

Extracted: 09/06/2002

Analyzed: 09/08/2002 11:01

Compound	Conc. mg/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.524	0.533	0.500	104.8	106.6	1.7	80-120	20		

Submission #: 2002-08-0621

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Matrix Spike (MS / MSD)

Water

QC Batch # 2002/09/06-08.15

UNT6a >> MS

Lab ID: 2002-08-0621 - 004

MS: 2002/09/06-08.15-054

Extracted: 09/06/2002

Analyzed: 09/08/2002 11:20

Dilution: 1.00

MSD: 2002/09/06-08.15-055

Extracted: 09/06/2002

Analyzed: 09/08/2002 11:23

Dilution: 1.00

Compound	Conc. mg/L			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Copper	0.560	0.554	0.0384	0.500	104.3	103.1	1.2	75-125	20		

Submission #: 2002-08-0621

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
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San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper

Received: 08/30/2002 09:05

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www.chromalab.com

CA DHS ELAP# 2496

Legend and Notes

Sample Comment

Lab ID: 2002-08-0621-1
Field-filtered & acidified.

Lab ID: 2002-08-0621-10
Field-filtered & acidified.

Lab ID: 2002-08-0621-11
Field-filtered & acidified.

Lab ID: 2002-08-0621-12
Field-filtered & acidified.

Lab ID: 2002-08-0621-13
Field-filtered & acidified.

Lab ID: 2002-08-0621-2
Field-filtered & acidified.

Lab ID: 2002-08-0621-3
Field-filtered & acidified.

Lab ID: 2002-08-0621-4
Field-filtered & acidified.

Lab ID: 2002-08-0621-5
Field-filtered & acidified.

Lab ID: 2002-08-0621-6
Field-filtered & acidified.

Lab ID: 2002-08-0621-7
Field-filtered & acidified.

Lab ID: 2002-08-0621-8
Field-filtered & acidified.

Lab ID: 2002-08-0621-9
Field-filtered & acidified.

Result Flag

J

Estimated value, less than reporting limits, but over the method detection limits.

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 2400 Cien Canyon
City: San Ramon, CA (26) 94583
Contact Name/Phone No.: Elizabeth 11-12

Ship To: Lab Name: SIL
Address: _____
City: Healdsburg, CA (Zip) _____
Phone No. _____
Contact Name: _____

Turnaround Time

☒ **NORMAL** (10 days or less) ☐ **RUSH** ☐ **OTHER**, Specify _____
Due Date & Time _____
☐ **TELEPHONE** ☐ **FAX** Give Results to: Elizabeth Frantz
Name _____ PHONE# _____

Project Name: <i>Makelumne Copper</i>	Project Supervisor (Name)/Phone No.: <i>Elizabeth Frantz</i> / <i>925-866-5472</i>
Sampled by: (Signature) <i>10/1/00</i> (Print Name) <i>E. Frantz</i>	

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. LBR1 - top	8/28	13:10	water	1	250
2. LBR1 - middle	↓	1256		1	
3. LBR1 - bottom	8/29	1246		1	
4. UNT6a		736		1	
5. UNT8a	↓	806		1	
6. UNT8b		817		1	
7. UNT6b		827		1	
8. UNT7		835		1	
9. BR1		880		1	
10. BR-RSC1	↓	1016		1	
11. RSC		1036		1	
12. BR-RSC2	↓	1052		1	

Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):
Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):
Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):

SAP Accounting Data:	Billing Contact:	Billing Address:
----------------------	------------------	------------------

[illegible]

Report J flag values
between MDL and RL
report to $< 0.3 \text{ ppb}$

1.)	Date & Time:	Ship Via:
2.)	Date & Time:	Bill of Lading/Airbill No.:
3.)	Date & Time: 28/07/22 09:00	5

SAP Accounting Data:	Billing Contact:	Billing Address:
----------------------	------------------	------------------

Notes: 1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.

1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
4. The final PCB results will be the cumulative results added together for each PCB.
5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

CPG&E

November. 1998

Page 2 of 2
2002-08-06-21

Ship To: Lab Name: STL
Address: _____
City: Placentia, CA (Zip) _____
Phone No. _____
Contact Name: _____

<u>Analysis Requested</u>	<u>Remarks</u>
discarded copper field # HIRD	

Remarks
discarded
Field # 114
72

Remarks
Report 5 flag value between MDL and RL report to <u>50.3 ppb</u>

[illegible]

- Distribution (See note #5)
 White: Laboratory
 Canary: Originator
 Pink: Sampler
- ©PG&E November, 1998



STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 08 - 0621

Checklist completed by: (initials) DSH Date: 08/30/02

Courier name: ☐ STL San Francisco ☒ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____

Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?

Temp: 5.2 °C Yes ☒ No _____

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O))

Water - pH acceptable upon receipt? ☒ Yes ☐ No

☐ pH adjusted— Preservative used: ☐ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N241-20

Date: 9/04/02

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne

PO#

Date Rec'd: 8/29/02

Date Started: 9/03/02

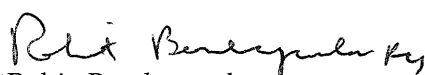
Date Completed: 9/03/02

Date Sampled:

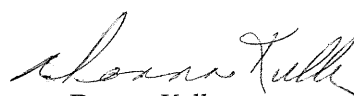
Time:

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBRR1-top	N308902	1.0	200.7	Hardness as CaCO ₃	3.9	mg/L
LBRR1-middle	N308903	1.0	200.7	Hardness as CaCO ₃	3.9	mg/L
LBRR1-bottom	N308904	1.0	200.7	Hardness as CaCO ₃	4.0	mg/L
UNT 6a	N308905	1.0	200.7	Hardness as CaCO ₃	11	mg/L
UNT 8a	N308906	1.0	200.7	Hardness as CaCO ₃	7.4	mg/L
UNT 8b	N308907	1.0	200.7	Hardness as CaCO ₃	7.7	mg/L
UNT 6b	N308908	1.0	200.7	Hardness as CaCO ₃	11	mg/L
UNT7	N308909	1.0	200.7	Hardness as CaCO ₃	3.7	mg/L
BR1	N308910	1.0	200.7	Hardness as CaCO ₃	4.5	mg/L
BR-RSC1	N308911	1.0	200.7	Hardness as CaCO ₃	4.3	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N241-20

Date: 9/04/02

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne

PO#

Date Rec'd: 8/29/02

Date Started: 9/03/02

Date Completed: 9/03/02

Date Sampled:

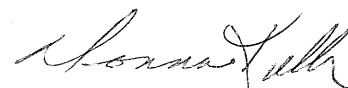
Time:

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
RSC	N308912	1.0	200.7	Hardness as CaCO ₃	9.8	mg/L
BR-RSC2	N308913	1.0	200.7	Hardness as CaCO ₃	5.0	mg/L
BR2	N308914	1.0	200.7	Hardness as CaCO ₃	6.2	mg/L



Rohit Bombaywala
Inorganic Supervisor



Donna Keller
Laboratory Director

Certification # 1157

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

QC REPORT

Report# N241-20

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	107501	9/03/02			98.1	97.1	1.0	96.6	ND	

* LCS/LCSD (see comments)

Rohit Bombaywala
Rohit Bombaywala
Inorganic Supervisor

Certification # 1157

Donna Keller
Donna Keller
Laboratory Director



Pacific Gas and
Electric Company™

62-1174 (Rev 2/99)
Environmental Affairs

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: PG&E
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz

Ship To: Lab Name: GeoAnalytical
Address: _____
City: _____, CA (Zip) _____
Phone No. _____
Contact Name: _____

Turnaround Time
☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz D/FAX _____
Project Name: Morelume River Project Supervisor (Name/Phone No.): Elizabeth Frantz 925-866-5472
Sampled by: (Signature) Elizabeth Frantz (Print Name)

Analysis Requested
hardness
report to
< 1mg/L

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. LBPR1-top	8/28	1310	water ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	1	500mL
2. LBPR1-middle	8/28	1256			
3. LBPR1-bottom	8/28	1246			
4. UNT6a	8/29	736			
5. UNT8a	8/29	806			
6. UNT8b	8/29	817			
7. UNT6b	8/29	827			
8. UNT7	8/29	835			
9. BR1	8/29	850			
10. BR-RSC1	8/29	1016			
11. RSC	8/29	1034			
12. BR-RSC2	8/29	1052			

Relinquished by (Name&Dept.): Elizabeth Frantz Date & Time: 8/29 1450
Relinquished by (Name&Dept.): _____ Date & Time: _____
Relinquished by (Name&Dept.): _____ Date & Time: _____

Received by (Name&Dept.): Elizabeth Frantz Date & Time: 8/29/02 1430
Received by (Name&Dept.): _____ Date & Time: _____
Received by (Name&Dept.): _____ Date & Time: _____

SAP Accounting Data: _____ Billing Contact: _____ Billing Address: _____

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

©PG&E

November, 1998



Pacific Gas and Electric Company

Chain of Custody Record

82-1174 (Rev 2/89)
Environmental Affairs

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 775
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz

Ship To: Lab Name: Geo Analytical
Address: _____
City: _____, CA (Zip) _____
Phone No. _____
Contact Name: _____

Turnaround Time ☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☒ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Name _____
Project Name: _____ Project Supervisor (Name/Phone No.): Elizabeth Frantz 925-866-5492
SAP Accounting Data: _____ (Print Name)

Analysis Requested		Containers No. Size	Sample Type/Description	Remarks
Sample No./Equipment Serial No.	Sampled Date Time			
1. <u>Bar 2</u>	<u>8/29 1148</u>	<u>1</u> <u>500</u>	<u>water</u>	<u>repeat to S. Long/C</u>
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:	Ship Via:
<u>Elizabeth Frantz</u>	<u>8/29/02 1450</u>	<u>Elizabeth Frantz</u>	<u>8/29/02 1450</u>	
Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:	Bill of Lading/Airbill No.:
Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:	

Billing Address: _____
Billing Contact: _____

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory
Canary: Originator
Pink: Sampler

©PG&E

November, 1998

September 2002

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N269-05

Date: 9/30/02

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River

PO#

Date Rec'd: 9/26/02

Date Started: 9/27/02

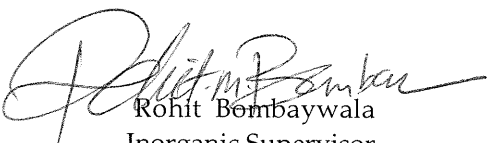
Date Completed: 9/27/02

Date Sampled: 9/25/02

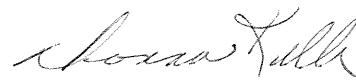
Time:

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
BR2	N309974	1.0	200.7	Hardness as CaCO ₃	5.7	mg/L
BR-RSC 1	N309975	1.0	200.7	Hardness as CaCO ₃	4.4	mg/L
RSC	N309976	1.0	200.7	Hardness as CaCO ₃	10	mg/L
BR-RSC2	N309977	1.0	200.7	Hardness as CaCO ₃	4.9	mg/L
BR 1	N309978	1.0	200.7	Hardness as CaCO ₃	4.4	mg/L
UNT 7	N309979	1.0	200.7	Hardness as CaCO ₃	3.8	mg/L
UNT 6B	N309980	1.0	200.7	Hardness as CaCO ₃	12	mg/L
UNT 8B	N309981	1.0	200.7	Hardness as CaCO ₃	7.8	mg/L
UNT 8A	N309982	1.0	200.7	Hardness as CaCO ₃	7.8	mg/L
UNT 6A	N309983	1.0	200.7	Hardness as CaCO ₃	12	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N269-05

Date: 9/30/02

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River
PO#


Date Rec'd: 9/26/02
Date Started: 9/27/02
Date Completed: 9/27/02

Date Sampled: 9/25/02
Time:
Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBRR1- TOP	N309984	1.0	200.7	Hardness as CaCO ₃	3.8	mg/L
LBRR 1- MIDDLE	N309985	1.0	200.7	Hardness as CaCO ₃	3.7	mg/L
LBRR 1- BOTTOM	N309986	1.0	200.7	Hardness as CaCO ₃	3.7	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

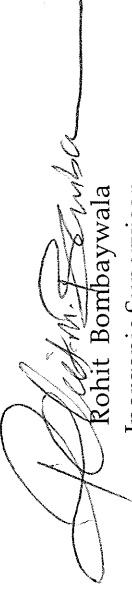
Report# N269-05

QC REPORT

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD %Rec	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I08182	9/27/02			98.7	101.6	2.9	98.7	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157

Donna Keller
Laboratory Director

October 2002



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG& E
Address: 3400 Crow Canyon Blvd
City: San Ramon, CA 94583

Lab Number: L-453-02
Other Number:
Date Sampled: 10/23/02
Date Received: 10/30/02
Date Completed: 11/22/02
Index-PCA Code:

RE: LBRR/BRI - QA/QC

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Identification	Sample Identification	Dissolved Copper, $\mu\text{g/L}$ (ppb)
L-453-02-1	LBRR - TOP	0.3 J
L-453-02-2	LBRR - MIDDLE	ND
L-453-02-3	LBRR - BOTTOM	ND
L-453-02-4	BRI	1.1
Report Limit (RL)		1.0
Detection Limit		0.3
ND - not detected		
J - less than report limit, not quantifiable		

METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

Cost of Analysis: \$ 200.00

Martinez Vazquez
Analyst

12/4/02
Date

Martha Martin
Reviewed by

12/4/02
Date

OB Crane
Laboratory Director

12-5-02
Date

[illegible]

Submission#: 2002-10-0527

November 07, 2002

SEVERN

TRENT

LABORATORY

P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn.: Elizabeth Frantz
Project: Mokelumne Copper Study

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

Attached is our report for your samples received on 10/24/2002 15:00

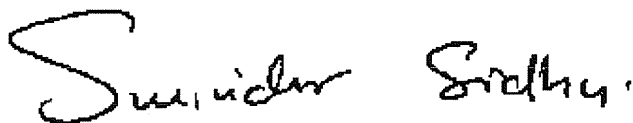
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/08/2002 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,



Surinder Sidhu
Project Manager

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
UNT10	10/23/2002 11:30	Water	1
LBRR1-mid	10/23/2002 12:00	Water	2
LBRR1-bottom	10/23/2002 11:50	Water	3
LBRR1-top	10/23/2002 12:10	Water	4
UNT8a	10/23/2002 13:48	Water	5
UNT8b	10/23/2002 14:00	Water	6
UNT6b	10/23/2002 14:11	Water	7
UNT7	10/23/2002 14:23	Water	8
BR1	10/23/2002 14:40	Water	9
UNT11	10/23/2002 15:35	Water	10
UNT12	10/24/2002 08:35	Water	11
BR-RSC1	10/24/2002 08:57	Water	12
RSC	10/24/2002 09:35	Water	13
BR-RSC2	10/24/2002 09:50	Water	14
BR2	10/24/2002 10:55	Water	15
UNT13	10/24/2002 11:05	Water	16
UNT6a	10/23/2002 15:15	Water	17

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

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Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A Test(s): 6010B
Sample ID: **UNT10** Lab ID: 2002-10-0527 - 1
Sampled: 10/23/2002 11:30 Extracted: 10/25/2002 05:38
Matrix: Water QC Batch#: 2002/10/25-02.15
Analysis Flag: . (See Legend and Note Section)

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0012	0.00070	0.0050	mg/L	1.00	10/25/2002 09:13	J

Submission #: 2002-10-0527

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-mid	Lab ID:	2002-10-0527 - 2
Sampled:	10/23/2002 12:00	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0012	0.00070	0.0050	mg/L	1.00	10/25/2002 09:17	J

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

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Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-bottom	Lab ID:	2002-10-0527 - 3
Sampled:	10/23/2002 11:50	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0010	0.00070	0.0050	mg/L	1.00	10/25/2002 09:21	J

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
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Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-top	Lab ID:	2002-10-0527 - 4
Sampled:	10/23/2002 12:10	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0010	0.00070	0.0050	mg/L	1.00	10/25/2002 09:25	J

Submission #: 2002-10-0527

Dissolved Metals

P.G.& E TES

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Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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Fax: (925) 484-1096
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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8a	Lab ID:	2002-10-0527 - 5
Sampled:	10/23/2002 13:48	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.019	0.00070	0.0050	mg/L	1.00	10/25/2002 09:29	

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
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Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8b	Lab ID:	2002-10-0527 - 6
Sampled:	10/23/2002 14:00	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.015	0.00070	0.0050	mg/L	1.00	10/25/2002 09:33	

Submission #: 2002-10-0527

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
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Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6b	Lab ID:	2002-10-0527 - 7
Sampled:	10/23/2002 14:11	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.018	0.00070	0.0050	mg/L	1.00	10/25/2002 09:37	

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
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San Ramon, CA 94583-1393
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Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT7	Lab ID:	2002-10-0527 - 8
Sampled:	10/23/2002 14:23	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00070	0.0050	mg/L	1.00	10/25/2002 09:40	

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
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Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR1	Lab ID:	2002-10-0527 - 9
Sampled:	10/23/2002 14:40	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0017	0.00070	0.0050	mg/L	1.00	10/25/2002 09:44	J

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT11	Lab ID:	2002-10-0527 - 10
Sampled:	10/23/2002 15:35	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0011	0.00070	0.0050	mg/L	1.00	10/25/2002 09:58	J

Submission #: 2002-10-0527

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT12	Lab ID:	2002-10-0527 - 11
Sampled:	10/24/2002 08:35	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00070	0.0050	mg/L	1.00	10/25/2002 10:01	

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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Tel: (925) 484-1919
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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR-RSC1	Lab ID:	2002-10-0527 - 12
Sampled:	10/24/2002 08:57	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0021	0.00070	0.0050	mg/L	1.00	10/25/2002 10:05	J

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	RSC	Lab ID:	2002-10-0527 - 13
Sampled:	10/24/2002 09:35	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.00090	0.00070	0.0050	mg/L	1.00	10/25/2002 10:08	J

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

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Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR-RSC2	Lab ID:	2002-10-0527 - 14
Sampled:	10/24/2002 09:50	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0019	0.00070	0.0050	mg/L	1.00	10/25/2002 10:12	J

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR2	Lab ID:	2002-10-0527 - 15
Sampled:	10/24/2002 10:55	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0015	0.00070	0.0050	mg/L	1.00	10/25/2002 10:15	J

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT13	Lab ID:	2002-10-0527 - 16
Sampled:	10/24/2002 11:05	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00070	0.0050	mg/L	1.00	10/25/2002 10:18	

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

SEVERN

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LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6a	Lab ID:	2002-10-0527 - 17
Sampled:	10/23/2002 15:15	Extracted:	10/25/2002 05:38
Matrix:	Water	QC Batch#:	2002/10/25-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.032	0.00070	0.0050	mg/L	1.00	10/25/2002 10:21	

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Method Blank

MB: 2002/10/25-02.15-028

Water

Test(s): 6010B

QC Batch # 2002/10/25-02.15

Date Extracted: 10/25/2002 05:38

Compound	Conc.	MDL	RL	Unit	Analyzed	Flag
Copper	ND	0.0007	0.0050	mg/L	10/25/2002 08:39	

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2002/10/25-02.15

LCS 2002/10/25-02.15-029

Extracted: 10/25/2002

Analyzed: 10/25/2002 08:43

LCSD 2002/10/25-02.15-030

Extracted: 10/25/2002

Analyzed: 10/25/2002 08:47

Compound	Conc. mg/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.491	0.509	0.500	98.2	101.8	3.6	80-120	20		

Submission #: 2002-10-0527

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Legend and Notes

Sample Comment

Lab ID: 2002-10-0527-1
Field-filtered & acidified.

Lab ID: 2002-10-0527-10
Field-filtered & acidified.

Lab ID: 2002-10-0527-11
Field-filtered & acidified.

Lab ID: 2002-10-0527-12
Field-filtered & acidified.

Lab ID: 2002-10-0527-13
Field-filtered & acidified.

Lab ID: 2002-10-0527-14
Field-filtered & acidified.

Lab ID: 2002-10-0527-15
Field-filtered & acidified.

Lab ID: 2002-10-0527-16
Field-filtered & acidified.

Lab ID: 2002-10-0527-17
Field-filtered & acidified.

Lab ID: 2002-10-0527-2
Field-filtered & acidified.

Lab ID: 2002-10-0527-3
Field-filtered & acidified.

Lab ID: 2002-10-0527-4
Field-filtered & acidified.

Lab ID: 2002-10-0527-5
Field-filtered & acidified.

Lab ID: 2002-10-0527-6
Field-filtered & acidified.

Lab ID: 2002-10-0527-7
Field-filtered & acidified.

Lab ID: 2002-10-0527-8
Field-filtered & acidified.

Lab ID: 2002-10-0527-9
Field-filtered & acidified.

Submission #: 2002-10-0527

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Copper Study

Received: 10/24/2002 15:00

Analysis Flag

Result Flag

J

Estimated value, less than reporting limits, but over the method detection limits.

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496



Pacific Gas and
Electric Company™

Chain of Custody Record

2002-10-0527

Page 1 of 2

62-1174 (Rev 2/99)
Environmental Affairs

69742

From: Pacific Gas & Electric Company	<input type="checkbox"/> PG&E Facility	<input type="checkbox"/> Sample Site
Address or Location: 3400 Crow Canyon		
City: San Ramon, CA (Zip) 94583		
Contact Name/Phone No.: Elizabeth Trantz		
Ship To:	Lab Name: STC	
Address:	City: Pleasanton, CA (Zip)	
Phone No.	484-1919	
Contact Name:		

Turnaround Time			Analysis Requested	
<input checked="" type="checkbox"/> NORMAL (10 days or less) <input type="checkbox"/> RUSH <input type="checkbox"/> OTHER, Specify _____				
Due Date & Time				
<input type="checkbox"/> TELEPHONE <input type="checkbox"/> FAX Give Results to: _____				
Name				
Project Supervisor (Name/Phone No.): Elizabeth Trantz 925-866-5472				
Sampled by: (Signature) Elizabeth Trantz (Print Name)				
Sample No./Equipment Serial No.	Sampled Date	Sampled Time	Sample Type/Description	Containers No. Size
1. UNT-10	10/23	1130	Water	1 250
2. LBRI-1 mid	1200			1
3. LBRI-1 bottom	1150			1
4. LBRI-1 top	1240			1
5. UNT-8a	1348			1
6. UNT-8b	1400			1
7. UNT-6b	1411			1
8. UNT-7	1423			1
9. BR-1	1440			1
10. UNT-11	1535			1
11. UNT-12	1024	835		1
12. BR-RSC 1	1024	857		1
Relinquished by (Name&Dept.): Elizabeth Trantz			Received by (Name&Dept.): Denise Garraway	
Date&Time: 10/29/02 1500			Date&Time: 10/29/02 1500	
Relinquished by (Name&Dept.):			Received by (Name&Dept.):	
Date&Time:			Date&Time:	
Relinquished by (Name&Dept.):			Received by (Name&Dept.):	
Date&Time:			Date&Time:	
SAP Accounting Data:			Billing Address:	

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

©PG&E

November, 1998



Chain of Custody Record

2002-10-0527

Page 2 of 2

609742

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon
City: San Ramon, CA 94583
Contact Name/Phone No.:
Ship To: Lab Name: STC
Address:
City: Pleasanton, CA (Zip)
Phone No. 484-1919
Contact Name:

☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☐ FAX Give Results to: _____
Name _____
Project Name: Morelumine Copper Study
Project Supervisor Name/Phone No.: Elizabeth Prantz
Sampled by: (Signature) Elizabeth Prantz (Print Name)

Analysis Requested			Containers	Sample Type/Description	Remarks
Sample No./Equipment Serial No.	Sampled Date	Time			
13 RSC	10/24	935	1	250	Report to <0.3 ppb
14 BR-RSC-2	10/24	950	1	250	Report 'J' flag values
15 BR-2	10/24	1055	1	250	between PL and MDL
16 UNIT-13	10/24	1105	1	250	
17 UNIT-1A	10/23	1515	1	250	
7					
8					
9					
10					
11					
12					

Field Filtered + preserved
distilled copper

Relinquished by (Name & Dept.): Elizabeth Prantz
Date & Time: 10/24/02 1500
Received by (Name & Dept.):
Date & Time:
Relinquished by (Name & Dept.):
Date & Time:
Received by (Name & Dept.):
Date & Time:
SAP Accounting Data:
Billing Contact:
Billing Address:

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler
©PG&E November, 1998



STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 10 - 0527

Checklist completed by: (initials) ASH Date: 10/24/02

Courier name: ☐ STL San Francisco ☒ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____

Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?

Temp: 5.1 °C Yes ☒ No _____

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as **S** (small ~O), **M** (medium ~ O) or **L** (large ~ O))

Water - pH acceptable upon receipt? ☒ Yes ☐ No

☐ pH adjusted- Preservative used: ☐ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N297-20

Date: 10/28/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583


Project: Mokelumne Copper Study

PO#

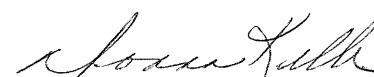
Date Rec'd: 10/24/02
Date Started: 10/24/02
Date Completed: 10/24/02

Date Sampled:
Time:
Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBRR1-mid	N310963	1.0	SM2340C	Total Hardness as CaCO ₃	3.4	mg/L
LBRR1-bottom	N310964	1.0	SM2340C	Total Hardness as CaCO ₃	3.7	mg/L
LBRR1-top	N310965	1.0	SM2340C	Total Hardness as CaCO ₃	3.7	mg/L
UNT8a	N310966	1.0	SM2340C	Total Hardness as CaCO ₃	7.9	mg/L
UNT8b	N310967	1.0	SM2340C	Total Hardness as CaCO ₃	8.0	mg/L
UNT6b	N310968	1.0	SM2340C	Total Hardness as CaCO ₃	14	mg/L
UNT7	N310969	1.0	SM2340C	Total Hardness as CaCO ₃	3.8	mg/L
BRI	N310970	1.0	SM2340C	Total Hardness as CaCO ₃	3.8	mg/L
UNT6a	N310971	1.0	SM2340C	Total Hardness as CaCO ₃	12	mg/L
BR-RSCI	N310972	1.0	SM2340C	Total Hardness as CaCO ₃	4.4	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N297-20

Date: 10/28/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne Copper Study

PO#

Date Rec'd: 10/24/02

Date Started: 10/24/02

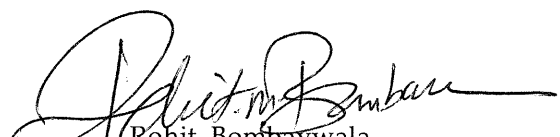
Date Completed: 10/24/02

Date Sampled:


Time:

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
RSC	N310973	1.0	SM2340C	Total Hardness as CaCO ₃	10	mg/L
BR-RSC2	N310974	1.0	SM2340C	Total Hardness as CaCO ₃	4.6	mg/L
BR2	N310975	1.0	SM2340C	Total Hardness as CaCO ₃	1.6	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

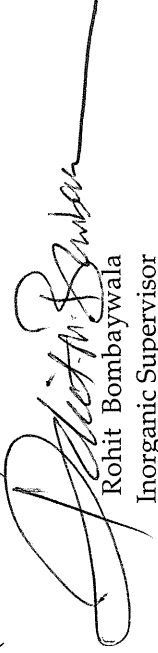
Report# N297-20

QC REPORT

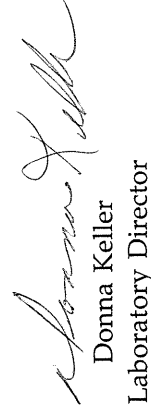
PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Total Hardness as CaCO ₃	SM2340C	I08983	10/24/02			97.9	97.9	0.0	99.8	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157



Donna Keller
Laboratory Director

Page 10 of 2

Ship To: Lab Name: GeoAnalytical Lab
Address: _____
City: Modesto, CA (Zip) _____
Phone No. _____
Contact Name: _____

[illegible][illegible]

Remarks
Report to <1.0 mg/L
N310963
N310964
N310965
N310966
N310967
N310968
N310969
N310970
N310971
N310972
N310973
N310974

	Date & Time:	10/24/02 1355	Ship Via: Bill of Lading/Airbill No.:
	Date & Time:		
	Date & Time:		
Billing Address:			

- Distribution (See note #5)**
White: Laboratory
Canary: Originator
Pink: Sampler

Ship To: Lab Name: Geotek Analytical
Address: _____
City: Modesto, CA (Zip) _____
Phone No. _____
Contact Name: _____

Analysis Requested
hazardness

haselnet

Remarks
Report to $< 1.0 \text{ mg/L}$

		Date & Time:	(07/24/09) 1355	Ship Via:	
		Date & Time:		Bill of Lading/Airbill No.:	
		Date & Time:			
Billing Address:					

1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
4. The final PCB results will be the cumulative results added together for each PCB.
5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

CPG&E

November, 1998

November 2002



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG& E
Address: 3400 Crow Canyon Blvd
City: San Ramon, CA 94583

Lab Number: L-478-02
Other Number:
Date Sampled: 11/12/02
Date Received: 11/13/02
Date Completed: 11/22/02
Index-PCA Code:

RE: QA/QC

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Identification	Sample Identification	Dissolved Copper, $\mu\text{g/L}$ (ppb)
L-478-02-1	UNT 6a – QA/QC	300
L-478-02-2	BRI – QA/QC	12.3
Report Limit (RL)		1.0

METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

Cost of Analysis: \$ 100.00

Martin Vazquez
Analyst

12/4/02
Date

Maria Martin
Reviewed by

12/4/02
Date

DB Crane
Laboratory Director

12-5-02
Date



Matrix

Page 1 of 1[illegible]

LAB COPIES: WHITE, CANARY, PINK

SUBMITTER: GOLDENROD

FG 1000 (Rev. 9/01)

Submission#: 2002-11-0308

November 27, 2002

SEVERN

TRENT

LABORATORY

P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn.: Elizabeth Frantz

Project: Mokelumne River

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

Attached is our report for your samples received on 11/13/2002 15:12

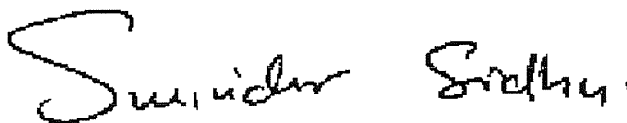
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 12/28/2002 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: ssidhu@stl-inc.com

Sincerely,



Surinder Sidhu
Project Manager

Submission #: 2002-11-0308

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
UNT8a	11/12/2002 13:00	Water	1
UNT8b	11/12/2002 13:20	Water	2
UNT6b	11/12/2002 13:30	Water	3
UNT7	11/12/2002 13:45	Water	4
BR1	11/12/2002 13:55	Water	5
UNT6a	11/12/2002 14:50	Water	6
BR-RSC1	11/13/2002 08:20	Water	7
RSC	11/13/2002 08:45	Water	8
BR-RSC2	11/13/2002 09:10	Water	9
BR2	11/13/2002 10:45	Water	10
UNT10	11/12/2002 12:45	Water	11

Submission #: 2002-11-0308

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: **UNT8a**

Lab ID: 2002-11-0308 - 1

Sampled: 11/12/2002 13:00

Extracted: 11/14/2002 09:44

Matrix: Water

QC Batch#: 2002/11/14-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.33	0.00070	0.0050	mg/L	1.00	11/18/2002 19:20	

Submission #: 2002-11-0308

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8b	Lab ID:	2002-11-0308 - 2
Sampled:	11/12/2002 13:20	Extracted:	11/14/2002 09:44
Matrix:	Water	QC Batch#:	2002/11/14-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.30	0.00070	0.0050	mg/L	1.00	11/18/2002 19:24	

Submission #: 2002-11-0308

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6b	Lab ID:	2002-11-0308 - 3
Sampled:	11/12/2002 13:30	Extracted:	11/15/2002 13:29
Matrix:	Water	QC Batch#:	2002/11/14-02.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.26	0.00070	0.0050	mg/L	1.00	11/19/2002 09:19	

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

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Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT7	Lab ID:	2002-11-0308 - 4
Sampled:	11/12/2002 13:45	Extracted:	11/20/2002 06:28
Matrix:	Water	QC Batch#:	2002/11/20-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00070	0.0050	mg/L	1.00	11/22/2002 18:37	

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR1	Lab ID:	2002-11-0308 - 5
Sampled:	11/12/2002 13:55	Extracted:	11/20/2002 06:28
Matrix:	Water	QC Batch#:	2002/11/20-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.015	0.00070	0.0050	mg/L	1.00	11/22/2002 18:41	

Submission #: 2002-11-0308

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6a	Lab ID:	2002-11-0308 - 6
Sampled:	11/12/2002 14:50	Extracted:	11/20/2002 06:28
Matrix:	Water	QC Batch#:	2002/11/20-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.28	0.00070	0.0050	mg/L	1.00	11/22/2002 18:45	

Submission #: 2002-11-0308

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR-RSC1	Lab ID:	2002-11-0308 - 7
Sampled:	11/13/2002 08:20	Extracted:	11/20/2002 06:28
Matrix:	Water	QC Batch#:	2002/11/20-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0073	0.00070	0.0050	mg/L	1.00	11/22/2002 18:49	

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	RSC	Lab ID:	2002-11-0308 - 8
Sampled:	11/13/2002 08:45	Extracted:	11/20/2002 06:28
Matrix:	Water	QC Batch#:	2002/11/20-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00070	0.0050	mg/L	1.00	11/22/2002 18:53	

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR-RSC2	Lab ID:	2002-11-0308 - 9
Sampled:	11/13/2002 09:10	Extracted:	11/20/2002 06:28
Matrix:	Water	QC Batch#:	2002/11/20-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0046	0.00070	0.0050	mg/L	1.00	11/22/2002 18:57	J

Submission #: 2002-11-0308

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR2	Lab ID:	2002-11-0308 - 10
Sampled:	11/13/2002 10:45	Extracted:	11/20/2002 06:28
Matrix:	Water	QC Batch#:	2002/11/20-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0021	0.00070	0.0050	mg/L	1.00	11/22/2002 19:01	J

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT10	Lab ID:	2002-11-0308 - 11
Sampled:	11/12/2002 12:45	Extracted:	11/20/2002 06:28
Matrix:	Water	QC Batch#:	2002/11/20-03.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00070	0.0050	mg/L	1.00	11/22/2002 19:05	

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Method Blank

Water

QC Batch # 2002/11/14-02.15

MB: 2002/11/14-02.15-013

Date Extracted: 11/14/2002 09:44

Compound	Conc.	MDL	RL	Unit	Analyzed	Flag
Copper	ND	0.0007	0.0050	mg/L	11/18/2002 09:12	

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN
TRENT
LABORATORY

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Method Blank

MB: 2002/11/20-03.15-116

Water

Test(s): 6010B

QC Batch # 2002/11/20-03.15

Date Extracted: 11/20/2002 06:28

Compound	Conc.	MDL	RL	Unit	Analyzed	Flag
Copper	ND	0.0007	0.0050	mg/L	11/21/2002 20:53	

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2002/11/14-02.15

LCS 2002/11/14-02.15-014

Extracted: 11/14/2002

Analyzed: 11/18/2002 09:16

LCSD 2002/11/14-02.15-015

Extracted: 11/14/2002

Analyzed: 11/18/2002 09:20

Compound	Conc. mg/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.506	0.516	0.500	101.2	103.2	2.0	80-120	20		

Submission #: 2002-11-0308

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2002/11/20-03.15

LCS 2002/11/20-03.15-117

Extracted: 11/20/2002

Analyzed: 11/21/2002 20:57

LCSD 2002/11/20-03.15-118

Extracted: 11/20/2002

Analyzed: 11/21/2002 21:00

Compound	Conc. mg/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.473	0.478	0.500	94.6	95.6	1.1	80-120	20		

Submission #: 2002-11-0308

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz

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San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 11/13/2002 15:12

SEVERN

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Pleasanton, CA 94566

Tel: (925) 484-1919

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www.chromalab.com

CA DHS ELAP# 2496

Legend and Notes

Result Flag

J

Estimated value, less than reporting limits, but over the method detection limits.



Pacific Gas and Electric Company
Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3600 Crow Canyon
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-846-5472

Ship To: Lab Name: STL
Address: Pleasanton, CA (Zip) 94566
City: Pleasanton, CA (Zip) 94566
Phone No.: 925-846-5472
Contact Name: Elizabeth Frantz

☒ **NORMAL** (10 days or less) ☐ **RUSH** ☐ **OTHER**, Specify _____
Due Date & Time _____
☐ **TELEPHONE** ☐ **FAX** Give Results to: Elizabeth Frantz PM/FAX _____
Name _____
Project Supervisor (Name/Phone No.): 925-846-5472
Name _____
SAP Accounting Data: _____
Billing Contact: _____
Billing Address: _____

Analysis Requested			Remarks
1. UNT-8a	4/12/1300	river water	report J flag values less than RL and greater than MDL (0.3ppb)
2. UNT-8b	4/12/1320		
3. UNT-8c	4/12/1330		
4. UNT-8d	4/12/1345		
5. BR-1	4/12/1355		
6. UNT-8e	4/12/1450		
7. BR-RSC-1	4/13/820		
8. RSC	4/13/845		
9. BR-RSC-2	4/13/910		
10. BR-2	4/13/1045		
11. UNT-10	4/13/1245		
12. UNT-11	4/13/1413		

Relinquished by (Name&Dept.): <u>Elizabeth Frantz</u>	Date&Time: <u>11/13/02 1512</u>	Received by (Name&Dept.): _____	Date&Time: _____	Ship Via: _____
Relinquished by (Name&Dept.): _____	Date&Time: _____	Received by (Name&Dept.): _____	Date&Time: _____	Bill of Lading/Airbill No.: <u>430</u>
Relinquished by (Name&Dept.): _____	Date&Time: _____	Received by (Name&Dept.): <u>Elizabeth Frantz</u>	Date&Time: <u>11/13/02 1512</u>	

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler
©PG&E November, 1998



STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 11 - 0308Checklist completed by: (initials) DSH Date: 11, 13 /02Courier name: ☐ STL San Francisco ☒ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?Temp: 4.3 °C Yes ☒ No _____

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O))

Water - pH acceptable upon receipt? ☐ Yes ☒ No☐ pH adjusted- Preservative used: ☒ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: acidified upon receipt @ lab

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____ / _____ /02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N317-22

Date: 11/18/02

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583


Project: Mokelumne River

PO#

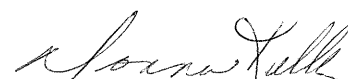
Date Rec'd: 11/13/02
Date Started: 11/14/02
Date Completed: 11/18/02

Date Sampled:
Time:
Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
UNT8a	N311778	1.0	SM2340C	Total Hardness as CaCO ₃	22	mg/L
		NA	150.1	pH	4.8	Std. Units
UNT8b	N311779	1.0	SM2340C	Total Hardness as CaCO ₃	20	mg/L
		NA	150.1	pH	4.8	Std. Units
UNT6b	N311780	1.0	SM2340C	Total Hardness as CaCO ₃	27	mg/L
		NA	150.1	pH	4.8	Std. Units
UNT7	N311781	1.0	SM2340C	Total Hardness as CaCO ₃	4.2	mg/L
		NA	150.1	pH	6.6	Std. Units
BR1	N311782	1.0	SM2340C	Total Hardness as CaCO ₃	6.0	mg/L
		NA	150.1	pH	6.6	Std. Units
UNT6a	N311783	1.0	SM2340C	Total Hardness as CaCO ₃	23	mg/L
		NA	150.1	pH	4.7	Std. Units
BR-RSC1	N311784	1.0	SM2340C	Total Hardness as CaCO ₃	5.5	mg/L
		NA	150.1	pH	6.6	Std. Units
RSC	N311785	1.0	SM2340C	Total Hardness as CaCO ₃	12	mg/L
		NA	150.1	pH	7.1	Std. Units
BR-RSC2	N311786	1.0	SM2340C	Total Hardness as CaCO ₃	7.8	mg/L
		NA	150.1	pH	7.0	Std. Units
BR2	N311787	1.0	SM2340C	Total Hardness as CaCO ₃	9.8	mg/L
		NA	150.1	pH	7.2	Std. Units


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

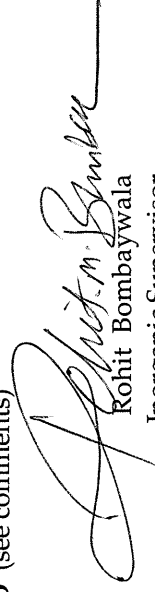
Report# N317-22

QC REPORT

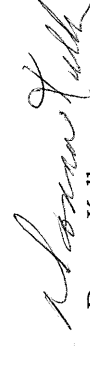
PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Total Hardness as CaCO ₃	SM2340C	I09540	11/14/02			100.8	99.1	1.5	99.2	ND	
pH	150.1	I09528	11/18/02	6.7	6.7			0.0		ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



Pacific Gas and Electric Company

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: 925-866-5472

Ship To: Lab Name: Geotechnical
Address: Moesta, CA (Zip)
Phone No.
Contact Name:

☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz P/FAX _____
Name _____

Project Name: Molokune River Project Supervisor (Name/Phone No.): Elizabeth Frantz
Sampled by: (Signature) Elizabeth Frantz (Print Name) 925-866-5472

Sample No./Equipment Serial No.	Sampled		Containers	
	Date	Time	No.	Size
1. UNT8a	11/12	1300	1	500
2. UNT8b	11/12	1320	1	
3. UNT6b	11/12	1330	1	
4. UNT7	11/12	1345	1	
5. BR1	11/12	1355	1	
6. UNT6a	11/12	1450	1	
7. BR-RSC1	11/13	820	1	
8. RSC	11/13	845	1	
9. BR-RSC2	11/13	910	1	
10. BR2	11/13	1045	1	
11.				
12.				

Analysis Requested		Remarks
Sample No./Equipment Serial No.	Sample Type/Description	
1. UNT8a	river water	
2. UNT8b	"	
3. UNT6b	"	
4. UNT7	"	
5. BR1	"	
6. UNT6a	"	
7. BR-RSC1	"	
8. RSC	"	
9. BR-RSC2	"	
10. BR2	"	
11.		
12.		

Relinquished by (Name&Dept.): Elizabeth Frantz Date & Time: 11/13/02 1355
Relinquished by (Name&Dept.): Date & Time:
Relinquished by (Name&Dept.): Date & Time:
SAP Accounting Data: Billing Contact:

Received by (Name&Dept.): 600 Date & Time: 11/13/02 1355
Received by (Name&Dept.): Date & Time:
Received by (Name&Dept.): Date & Time:
Billing Address:

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

December 2002



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG& E
Address: 3400 Crow Canyon Blvd
City: San Ramon, CA 94583

Lab Number: L-516-02
Other Number:
Date Sampled: 12/10/02
Date Received: 12/11/02
Date Completed: 12/23/02
Index-PCA Code:

RE: QA/QC

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Identification	Sample Identification	Dissolved Copper, $\mu\text{g/L}$ (ppb)
L-516-02-1	BRI – QA/QC	2.2
L-516-02-2	UNT 6a – QA/QC	103
Report Limit (RL)		1.0

METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

Cost of Analysis: \$ 100.00

Analyst

Date

Reviewed by

Date

Laboratory Director

Date



Sampler <i>Elizabeth Frantz</i>	Send Results To <i>Elizabeth Frantz</i>	Lab Number <i>L-516-02</i>
Address <i>3400 Crow Canyon Rd</i>	Address	Field Number
City <i>San Ramon</i>	City	Lab Storage <i>WPCL R7</i>
Zip <i>94583</i>	Copies To	Spill Title
Date Required/Reason <i>Normal 10 day TAT</i>	Address	Suspect
Shipped Via	City	Index-PCA

<input type="checkbox"/> Fish & Wildlife Loss Date: _____ Region: _____ <input type="checkbox"/> DFG Code Violation: _____ <input type="checkbox"/> Suspected or Potential Problem <input checked="" type="checkbox"/> Routine Analysis	Analysis Requested >>> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Sample Identification/Location <small>(Draw map on separate sheet if necessary)</small></th> <th>Collection Date</th> <th>Time</th> </tr> <tr> <td><i>BR1 QA/QC</i></td> <td><i>12/10</i></td> <td><i>1230</i></td> </tr> <tr> <td><i>UNT6A QA/QC</i></td> <td><i>12/10</i></td> <td><i>1300</i></td> </tr> </table>	Sample Identification/Location <small>(Draw map on separate sheet if necessary)</small>	Collection Date	Time	<i>BR1 QA/QC</i>	<i>12/10</i>	<i>1230</i>	<i>UNT6A QA/QC</i>	<i>12/10</i>	<i>1300</i>	Water Temp: _____ DO: _____ pH: _____ F or C _____ mg/L Conductivity: _____ umhos/cm	Number of Containers Plastic _____ Glass _____ VOA Vial _____ Sample Type Filtered Water _____ Soil _____ Tissue _____ Preservation Acid _____ Temp _____
Sample Identification/Location <small>(Draw map on separate sheet if necessary)</small>	Collection Date	Time										
<i>BR1 QA/QC</i>	<i>12/10</i>	<i>1230</i>										
<i>UNT6A QA/QC</i>	<i>12/10</i>	<i>1300</i>										

Problem Description <i>please report to <0.3 ppb, please report J values</i>	Pollution Action Kit: Yes <input type="checkbox"/> No <input type="checkbox"/> Glove Size: Large <input type="checkbox"/> Medium <input type="checkbox"/> Hazmat Shipper Requested: Yes <input type="checkbox"/> No <input type="checkbox"/>
Comments/Special Instructions	

Samples Relinquished By (Signature) <i>Elizabeth Frantz</i>	Print Name <i>Elizabeth Frantz</i>	Date <i>12/10/02</i>	Received By (Signature) <i>Markus Vogt</i>	Print Name <i>MARKUS VOGT</i>	Date <i>12/11/02</i>
--	---------------------------------------	-------------------------	---	----------------------------------	-------------------------

LAB COPIES: WHITE, CANARY, PINK

SUBMITTER: GOLDENROD

FG 1000 (Rev. 9/01)

P.G.& E TES

December 27, 2002

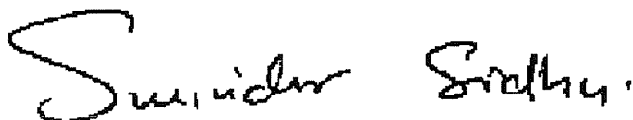
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Attn.: Elizabeth Frantz
Project: Mokelumne Study

Attached is our report for your samples received on 12/11/2002 16:30
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
01/25/2003 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: ssidhu@stl-inc.com

Sincerely,



Surinder Sidhu
Project Manager

Submission #: 2002-12-0239

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
UNT8a	12/10/2002 11:40	Water	1
UNT8b	12/10/2002 11:55	Water	2
UNT6b	12/10/2002 12:05	Water	3
UNT7	12/10/2002 12:20	Water	4
BR1	12/10/2002 12:30	Water	5
UNT6a	12/10/2002 13:00	Water	6
BR2	12/10/2002 13:55	Water	7
BR-RSC1	12/11/2002 08:20	Water	8
RSC	12/11/2002 08:45	Water	9
BR-RSC2	12/11/2002 09:00	Water	10
LBRR1-top	12/11/2002 11:40	Water	11
LBRR1-bottom	12/11/2002 12:00	Water	12

Submission #: 2002-12-0239

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8a	Lab ID:	2002-12-0239 - 1
Sampled:	12/10/2002 11:40	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.054	0.00070	0.0050	mg/L	1.00	12/16/2002 16:38	

Submission #: 2002-12-0239

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8b	Lab ID:	2002-12-0239 - 2
Sampled:	12/10/2002 11:55	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.040	0.00070	0.0050	mg/L	1.00	12/16/2002 16:58	

Submission #: 2002-12-0239

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6b	Lab ID:	2002-12-0239 - 3
Sampled:	12/10/2002 12:05	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.10	0.00070	0.0050	mg/L	1.00	12/16/2002 17:01	

Submission #: 2002-12-0239

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT7	Lab ID:	2002-12-0239 - 4
Sampled:	12/10/2002 12:20	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0013	0.00070	0.0050	mg/L	1.00	12/16/2002 17:05	J

Submission #: 2002-12-0239

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR1	Lab ID:	2002-12-0239 - 5
Sampled:	12/10/2002 12:30	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0036	0.00070	0.0050	mg/L	1.00	12/16/2002 17:08	J

Submission #: 2002-12-0239

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

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LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6a	Lab ID:	2002-12-0239 - 6
Sampled:	12/10/2002 13:00	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.11	0.00070	0.0050	mg/L	1.00	12/16/2002 17:12	

Submission #: 2002-12-0239

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN
TRENT
LABORATORY

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR2	Lab ID:	2002-12-0239 - 7
Sampled:	12/10/2002 13:55	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0022	0.00070	0.0050	mg/L	1.00	12/16/2002 17:15	J

Submission #: 2002-12-0239

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR-RSC1	Lab ID:	2002-12-0239 - 8
Sampled:	12/11/2002 08:20	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0044	0.00070	0.0050	mg/L	1.00	12/16/2002 17:19	J

Submission #: 2002-12-0239

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN
TRENT
LABORATORY

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Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	RSC	Lab ID:	2002-12-0239 - 9
Sampled:	12/11/2002 08:45	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0013	0.00070	0.0050	mg/L	1.00	12/16/2002 17:22	J

Submission #: 2002-12-0239

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR-RSC2	Lab ID:	2002-12-0239 - 10
Sampled:	12/11/2002 09:00	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0037	0.00070	0.0050	mg/L	1.00	12/16/2002 17:26	J

Submission #: 2002-12-0239

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-top	Lab ID:	2002-12-0239 - 11
Sampled:	12/11/2002 11:40	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0012	0.00070	0.0050	mg/L	1.00	12/16/2002 17:29	J

Submission #: 2002-12-0239

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-bottom	Lab ID:	2002-12-0239 - 12
Sampled:	12/11/2002 12:00	Extracted:	12/13/2002 17:03
Matrix:	Water	QC Batch#:	2002/12/13-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0011	0.00070	0.0050	mg/L	1.00	12/16/2002 17:50	J

Submission #: 2002-12-0239

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Method Blank

MB: 2002/12/13-05.15-114

Water

Test(s): 6010B

QC Batch # 2002/12/13-05.15

Date Extracted: 12/13/2002 17:03

Compound	Conc.	MDL	RL	Unit	Analyzed	Flag
Copper	ND	0.0007	0.0050	mg/L	12/16/2002 15:37	

Submission #: 2002-12-0239

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
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Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne Study

Received: 12/11/2002 16:30

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Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2002/12/13-05.15

LCS 2002/12/13-05.15-115

Extracted: 12/13/2002

Analyzed: 12/16/2002 15:41

LCSD 2002/12/13-05.15-116

Extracted: 12/13/2002

Analyzed: 12/16/2002 15:44

Compound	Conc. mg/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.510	0.521	0.500	102.0	104.2	2.1	80-120	20		

Submission #: 2002-12-0239

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
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Project: Mokelumne Study

Received: 12/11/2002 16:30

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Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Legend and Notes

Sample Comment

Lab ID: 2002-12-0239-1
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-10
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-11
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-12
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-2
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-3
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-4
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-5
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-6
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-7
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-8
Field-filtered; acidified at lab.

Lab ID: 2002-12-0239-9
Field-filtered; acidified at lab.

Result Flag

J

Estimated value, less than reporting limits, but over the method detection limits.



Pacific Gas and Electric Company

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Cow Canyon
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-846-5472

Turnaround Time ☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Name _____ POFAX _____

Project Name: Mollanville Shady
Sampled by: (Signature) Elizabeth Frantz (Print Name)
Project Supervisor (Name/Phone No.): _____

Sample No./ Equipment Serial No.	Sampled Date	Sampled Time	Sample Type/Description	Containers No.	Size
1. UNT-8a	12/10	1140	river water	1	250
2. UNT-8b	↓	1155	↓	↓	↓
3. UNT-6b	↓	1205	↓	↓	↓
4. UNT-7	↓	1220	↓	↓	↓
5. BR-1	↓	1230	↓	↓	↓
6. UNT-6a	↓	1300	↓	↓	↓
7. BR-2	↓	1355	↓	↓	↓
8. BR-RSC-1	12/11	0820	↓	↓	↓
9. RSC	↓	0845	↓	↓	↓
10. BR-RSC-2	↓	0900	↓	↓	↓
11. LBR-1-top	↓	1140	↓	↓	↓
12. LBR-1-bottom	↓	1200	↓	↓	↓

Relinquished by (Name&Dept.): Elizabeth Frantz
Relinquished by (Name&Dept.): _____
Relinquished by (Name&Dept.): _____
SAP Accounting Data: _____

Received by (Name&Dept.): _____
Received by (Name&Dept.): _____
Received by (Name&Dept.): _____

Date&Time: 12/10/02 1630
Date&Time: 12/10/02 1630
Date&Time: 12/10/02 1630

Ship To: Lab Name: _____
Address: _____
City: Pleasanton, CA (Zip) _____
Phone No.: 484-1919
Contact Name: _____

Analysis Requested: dissolved copper, held filtered, requires preservation
Remarks: Report 5 flag values, Report to < 0.3 ppb, please preserve!

Ship Via: _____
Bill of Lading/Airbill No.: 410C

Billing Address: _____
Billing Contact: _____

Notes: 1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
4. The final PCB results will be the cumulative results added together for each PCB.
5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler
©PG&E November, 1998



STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 12 - 0239

Checklist completed by: (initials) DSH Date: 12/11/02

Courier name: ☐ STL San Francisco ☒ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____

Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?

Temp: 4.1°C Yes ☒ No _____

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O))

Water - pH acceptable upon receipt? ☐ Yes ☒ No

☐ pH adjusted— Preservative used: ☒ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ ZnOAc

*acidified upon receipt
at lab - DSH*

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N345-20

Date: 12/17/02

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne Project

PO#

Date Rec'd: 12/11/02

Date Started: 12/14/02

Date Completed: 12/14/02

Date Sampled:

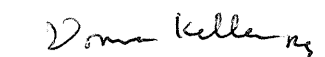
Time:

Sampler:

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
UNT8a	N312783	1.0	130.2	Hardness as CaCO ₃	10	mg/L
UNT8b	N312784	1.0	130.2	Hardness as CaCO ₃	12	mg/L
UNT6b	N312785	1.0	130.2	Hardness as CaCO ₃	10	mg/L
UNT7	N312786	1.0	130.2	Hardness as CaCO ₃	12	mg/L
BR1	N312787	1.0	130.2	Hardness as CaCO ₃	11	mg/L
UNT6a	N312788	1.0	130.2	Hardness as CaCO ₃	12	mg/L
BR2	N312789	1.0	130.2	Hardness as CaCO ₃	11	mg/L
BR-RSC1	N312790	1.0	130.2	Hardness as CaCO ₃	9	mg/L
RSC	N312791	1.0	130.2	Hardness as CaCO ₃	10	mg/L
BR-RSC2	N312792	1.0	130.2	Hardness as CaCO ₃	8.8	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # N345-20

Date: 12/17/02

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne Project

PO#

Date Rec'd: 12/11/02

Date Started: 12/14/02

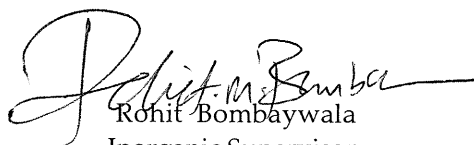
Date Completed: 12/14/02

Date Sampled:


Time:

Sampler:

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBRR1	N312793	1.0	130.2	Hardness as CaCO ₃	11	mg/L
LBRR1-bottom	N312794	1.0	130.2	Hardness as CaCO ₃	11	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



Chain of Custody Record

Page 1 of 1

N345-20

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Can Canyon
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-866-5472

Ship To: Lab Name: GeoAnalytical
Address: 1405 Kansas Ave
City: Modesto, CA (Zip)
Phone No.
Contact Name:

☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Name _____
Project Name: Mallettume Project Project Supervisor (Name/Phone No.): Elizabeth Frantz
Sampled by: (Signature) Elizabeth Frantz (Print Name)

Analysis Requested
by EPA 130.2
low-level hardness

Sample No./Equipment Serial No.	Sampled Date	Time	Sample Type/Description	Containers No.	Size	Remarks
1. UNT8a	12/10	1140	river water	1	1L	N312783 USE 1st level
2. UNT8b	12/10	1155		1		N312784 hardness to
3. UNT6b	12/10	1205		1		N312785 21.0 mg/L
4. UNT7	12/10	1230		1		N312786
5. BR1	12/10	1230		1		N312787 USE EPA 130.2
6. UNT6a	12/10	1300		1		N312788
7. BR2	12/10	1355		1		N312789
8. BR-RSC1	12/11	0820		1		N312790
9. RSC	12/11	0845		1		N312791
10. BR-RSC2	12/11	0900		1		N312792
11. LARR1-top	12/11	1140		1		N312793
12. LARR1-bottom	12/11	1200		1		N312794

Relinquished by (Name&Dept.): Elizabeth Frantz Date & Time: 12/11/02 155
Relinquished by (Name&Dept.): Received by (Name&Dept.):
Relinquished by (Name&Dept.): Received by (Name&Dept.):
SAP Accounting Data: Billing Contact: Billing Address:

Date & Time: 12/11/02 155
Date & Time:
Date & Time:
Ship Via:
Bill of Lading/Airbill No.:

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

January 2003



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG& E
Address: 3400 Crow Canyon Blvd
City: San Ramon, CA 94583

Lab Number: L-041-03
Other Number:
Date Sampled: 01/29/03
Date Received: 01/30/03
Date Completed: 02/07/03
Index-PCA Code:

RE: QA/QC

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Identification	Sample Identification	Dissolved Copper, $\mu\text{g/L}$ (ppb)
L-041-03-1	BR1	33.1
L-041-03-2	UNT 6A	440
Report Limit (RL)		1.0

METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

Cost of Analysis: \$ 100.00

Martin Vozz
Analyst

2/7/03
Date

Maida Martin 2/10/03
Reviewed by Date

DB Crane
Laboratory Director

2/11/03
Date

[illegible]

LAB COPIES: WHITE, CANARY, PINK

FG 1000 (Rev. 9/01)

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

Petroleum Chemistry Lab
1995 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2803

Water Pollution Control Lab
2005 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2858

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # P030-01

Date: 2/05/03

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne

PO#

Date Rec'd: 1/30/03

Date Started: 2/03/03

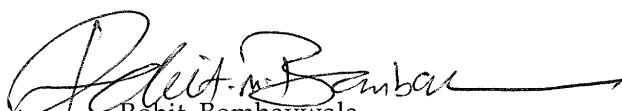
Date Completed: 2/03/03

Date Sampled: 1/29/03

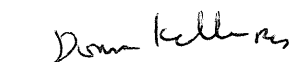
Time:

Sampler:

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
UNT 7	P300910	1.0	200.7	Hardness as CaCO ₃	4.2	mg/L
BR2	P300911	1.0	200.7	Hardness as CaCO ₃	9.1	mg/L
BR 1	P300912	1.0	200.7	Hardness as CaCO ₃	7.4	mg/L
BR RSC 2	P300913	1.0	200.7	Hardness as CaCO ₃	8.1	mg/L
BR RSC 1	P300914	1.0	200.7	Hardness as CaCO ₃	8.0	mg/L
RSC	P300915	1.0	200.7	Hardness as CaCO ₃	8.6	mg/L
UNT 8A	P300916	1.0	200.7	Hardness as CaCO ₃	29	mg/L
UNT 8B	P300917	1.0	200.7	Hardness as CaCO ₃	28	mg/L
UNT 6A	P300918	1.0	200.7	Hardness as CaCO ₃	30	mg/L
UNT 6B	P300919	1.0	200.7	Hardness as CaCO ₃	31	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

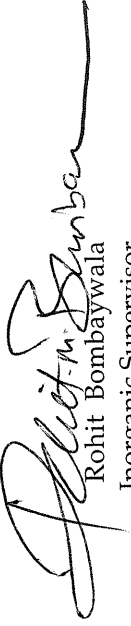
Report# P030-01

QC REPORT


Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I00775	02/03/03			99.9	101.0	1.1	97.6	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

Chain of Custody Record

From: Pacific Gas & Electric Company ☒ PG&E Facility ☐ Sample Site
Address or Location: 3400 Chow Canyon Rd.
City: SAN RAMON, CA (Zip)
Contact Name/Phone No.: ELIZABETH FRANZ

Ship To: Lab Name: GEO ANALYTICAL
Address: 1405 KANSAS
City: MORENO, CA (Zip) _____
Phone No. _____
Contact Name: _____

Turnaround Time _____
☒ **NORMAL** (10 days or less) ☐ **RUSH** _____
 Due Date & Time _____
☐ **TELEPHONE** ☒ **FAX** Give Results to: E. Frazz 925 866-56
 Name PUFAX
 Project Name: Mokelumne Cu Project Supervisor (Name/Phone No.): E - Frazz
 Sampled by: (Signature) _____ (Print Name) _____

Analysis Requested		Remarks
X		P300910
X		P300911
X		P300912
X		P300913
X		P300914
X		P300915
X		P300916
X		P300917
X		P300918
X		P300919

Relinquished by (Name & Dept.):	1-30-03 9:38	Received by (Name & Dept.):	Geo	Date & Time:	1/30/03 8:38	Ship Via:
Relinquished by (Name & Dept.):		Received by (Name & Dept.):		Date & Time:		Bill of Lading/Airbill No.:
Relinquished by (Name & Dept.):		Received by (Name & Dept.):		Date & Time:		
SAP Accounting Data:			Billing Address:			
Billing Contact:						

1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
4. The final PCB results will be the cumulative results added together for each PCB.
5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

CPG&E

November, 1998

P.G.& E TES

February 06, 2003

3400 Crow Canyon Road
San Ramon, CA 94583-1393
Attn.: Elizabeth Frantz

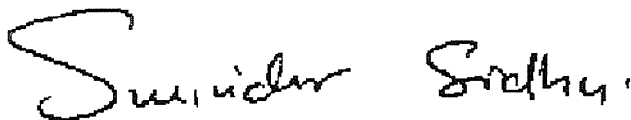
Attached is our report for your samples received on 01/30/2003 09:40
This report has been reviewed and approved for release. Reproduction of this report
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after
03/16/2003 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: ssidhu@stl-inc.com

Sincerely,



Surinder Sidhu
Project Manager

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
UNT 6A	01/29/2003	Water	1
UNT 6B	01/29/2003	Water	2
UNT 7	01/29/2003	Water	3
UNT 8A	01/29/2003	Water	4
UNT 8B	01/29/2003	Water	5
BR1	01/29/2003	Water	6
BR2	01/29/2003	Water	7
RSC	01/29/2003	Water	8
BR-RSC1	01/29/2003	Water	9
BR-RSC2	01/29/2003	Water	10

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: **UNT 6A**

Lab ID: 2003-01-0548 - 1

Sampled: 01/29/2003

Extracted: 1/30/2003 14:41

Matrix: Water

QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.50	0.00070	0.0050	mg/L	1.00	01/31/2003 09:16	

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A Test(s): 6010B
Sample ID: **UNT 6B** Lab ID: 2003-01-0548 - 2
Sampled: 01/29/2003 Extracted: 1/30/2003 14:41
Matrix: Water QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.42	0.00070	0.0050	mg/L	1.00	01/31/2003 09:28	

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: UNT 7

Lab ID: 2003-01-0548 - 3

Sampled: 01/29/2003

Extracted: 1/30/2003 14:41

Matrix: Water

QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0023	0.00070	0.0050	mg/L	1.00	01/31/2003 09:32	J

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: **UNT 8A**

Lab ID: 2003-01-0548 - 4

Sampled: 01/29/2003

Extracted: 1/30/2003 14:41

Matrix: Water

QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.60	0.00070	0.0050	mg/L	1.00	01/31/2003 09:35	

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A Test(s): 6010B
Sample ID: **UNT 8B** Lab ID: 2003-01-0548 - 5
Sampled: 01/29/2003 Extracted: 1/30/2003 14:41
Matrix: Water QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.58	0.00070	0.0050	mg/L	1.00	01/31/2003 09:39	

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN
TRENT
LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A Test(s): 6010B
Sample ID: **BR1** Lab ID: 2003-01-0548 - 6
Sampled: 01/29/2003 Extracted: 1/30/2003 14:41
Matrix: Water QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.035	0.00070	0.0050	mg/L	1.00	01/31/2003 09:43	

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: BR2

Lab ID: 2003-01-0548 - 7

Sampled: 01/29/2003

Extracted: 1/30/2003 14:41

Matrix: Water

QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0043	0.00070	0.0050	mg/L	1.00	01/31/2003 09:47	J

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: RSC

Lab ID: 2003-01-0548 - 8

Sampled: 01/29/2003

Extracted: 1/30/2003 14:41

Matrix: Water

QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0010	0.00070	0.0050	mg/L	1.00	01/31/2003 09:51	J

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: BR-RSC1

Lab ID: 2003-01-0548 - 9

Sampled: 01/29/2003

Extracted: 1/30/2003 14:41

Matrix: Water

QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.022	0.00070	0.0050	mg/L	1.00	01/31/2003 10:27	

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3005A Test(s): 6010B
Sample ID: BR-RSC2 Lab ID: 2003-01-0548 - 10
Sampled: 01/29/2003 Extracted: 1/30/2003 14:41
Matrix: Water QC Batch#: 2003/01/30-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0058	0.00070	0.0050	mg/L	1.00	01/31/2003 10:31	

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Method Blank

MB: 2003/01/30-05.15-042

Test(s): 6010B

Water

QC Batch # 2003/01/30-05.15

Date Extracted: 01/30/2003 14:41

Compound	Conc.	MDL	RL	Unit	Analyzed	Flag
Copper	ND	0.0007	0.0050	mg/L	01/31/2003 08:52	

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2003/01/30-05.15

LCS 2003/01/30-05.15-043
LCSD 2003/01/30-05.15-044

Extracted: 01/30/2003
Extracted: 01/30/2003

Analyzed: 01/31/2003 08:56
Analyzed: 01/31/2003 09:00

Compound	Conc. mg/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.513	0.513	0.500	102.6	102.6	0.0	80-120	20		

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Matrix Spike (MS / MSD)

Water

QC Batch # 2003/01/30-05.15

UNT 6A >> MS

Lab ID: 2003-01-0548 - 001

MS: 2003/01/30-05.15-048

Extracted: 01/30/2003

Analized: 01/31/2003 09:20

Dilution: 1.00

MSD: 2003/01/30-05.15-049

Extracted: 01/30/2003

Analized: 01/31/2003 09:24

Dilution: 1.00

Compound	Conc. mg/L			Spk.Level mg/L	Recovery			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Copper	0.983	0.964	0.495	0.500	97.6	93.8	4.0	75-125	20		

Submission #: 2003-01-0548

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project:

Received: 01/30/2003 09:40

SEVERN

TRENT

LABORATORY

STL San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

Tel: (925) 484-1919

Fax: (925) 484-1096

www.stl-inc.com

www.chromalab.com

CA DHS ELAP# 2496

Legend and Notes

Result Flag

J

Estimated value, less than reporting limits, but over the method detection limits.



Pacific Gas and Electric Company™
Chain of Custody Record

2003-01-0548

71702

From: Pacific Gas & Electric Company ☒ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon Road
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: E. Travitz

Ship To: Lab Name: SLZ
Address:
City: Pleasanton, CA (Zip)
Phone No.:
Contact Name:

Turnaround Time
☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☒ FAX Give Results to: E. Travitz
Name _____ POFAX _____
Project Name: _____
Project Supervisor (Name/Phone No.): _____
Name _____ POFAX _____
Sampled by: (Signature) _____ (Print Name)

Analysis Requested
Disolved Copper

Sample No./ Equipment Serial No.	Sample Type/Description	Containers No.	Size	Remarks
1. UNT-6A	WATER	1	250ml	Filtered in FIELD
2. UNT-6B		1		
3. UNT-7		1		
4. UNT-8A		1		
5. UNT-8B		1		
6. BR-1		1		
7. BR-2		1		
8. RSO		1		
9. BR-RSC-1		1		
10. BR-RSC-2		1		
11.				
12.				

Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:
Charles White (TES)	1/30/03 09:40		
Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:
Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.): E. Travitz	01/30/03 0940

SAP Accounting Data: _____ Billing Contact: _____ Billing Address: _____

Ship Via: _____
Date&Time: _____
Bill of Lading/Airbill No.: _____
Date&Time: _____
Date&Time: 01/30/03 0940

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler
©PG&E November, 1998

STL San Francisco

Sample Receipt Checklist

Submission #: 2003- 01 - 0548Checklist completed by: (initials) CR Date: 01 / 30 /03Courier name: ☐ STL San Francisco ☒ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?Temp 2.7 °C Yes ☒ No _____

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O))

*Water - pH acceptable upon receipt? ☐ Yes ☒ No☐ pH adjusted- Preservative used: ☐ HNO₃ ☐ HCl ☐ H₂SO₄ ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: preserved w/HNO₃ upon receipt
@ lab

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____ / _____ /03

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

February 2003

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
 7544 Sandholdt Road
 Moss Landing, CA 95039

Autumn Bonnema
 Business: 831-771-4175
 Facsimile: 831-633-0805
 Email: bonnema@mlml.calstate.edu



Copper Results

Project ID: PG&E

Report #: Cu03-0001

MLML Project ID: # 106

Date received: #####

Report Date: 3/25/2003

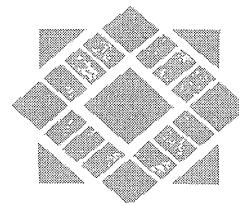
Analyst: JG

Lab Number	Station Code	Sampling Date	Sampling Time	Copper ppm <i>b</i>
2003-0480-w	BR1	2/26/2003	10:50	11.7
2003-0481-w	UNT7	2/26/2003	10:30	0.115
2003-0482-w	UNT6a	2/26/2003	12:10	362
2003-0483-w	UNT6b	2/26/2003	10:05	292
2003-0484-w	UNT8a	2/26/2003	9:10	235
2003-0485-w	UNT8b	2/26/2003	9:45	215
2003-0486-w	BR2	2/26/2003	13:50	1.83
2003-0487-w	Dup1	2/26/2003	14:20	11.3
2003-0488-w	Field Blank	2/26/2003	10:50	<MDL

MDL= 0.003 ppm *b*
 RL= 0.010 ppm *b*

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

Autumn Bonnema
 Business: 831-771-4175
 Facsimile: 831-633-0805
 Email: bonnema@mlml.calstate.edu



San José State
UNIVERSITY
FOUNDATION

Quality Assurance/ Quality Control for Report Cu03-0001

Station Code	Type	Cu ppm	RPD
UNT7	Native	0.115	23.22
UNT7-Dup	Duplicate	0.091	

Station Code	Type	Cu ppm	%Rec MS=125 ppm
UNT6b	Native	292	
UNT6b-MS	Matrix Spike	412	96%
UNT6b-MSD	Matrix Spike Duplicate	407	92%
BR2	Native	1.83	
BR2-MS	Matrix Spike	122	98%
BR2-MSD	Matrix Spike Duplicate	127	100%

MDL= 0.003 ppm
RL= 0.010 ppm

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # P059-06

Date: 3/05/03

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River

PO#

Date Rec'd: 2/28/03

Date Started: 2/28/03


Date Completed: 2/28/03

Date Sampled: 2/26/03

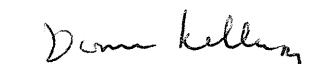
Time: 1050

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
BR - 1	P302155	1.0	130.2	Total Hardness as CaCO3	5.8	mg/L
UNT -7	P302156	1.0	130.2	Total Hardness as CaCO3	4.9	mg/L
UNT - 6A	P302157	1.0	130.2	Total Hardness as CaCO3	29	mg/L
UNT - 6B	P302158	1.0	130.2	Total Hardness as CaCO3	34	mg/L
UNT - 8A	P302159	1.0	130.2	Total Hardness as CaCO3	19	mg/L
UNT - 8B	P302160	1.0	130.2	Total Hardness as CaCO3	18	mg/L
BR - 2	P302161	1.0	130.2	Total Hardness as CaCO3	10	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

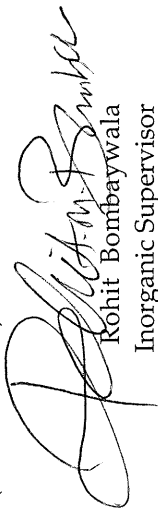
QC REPORT

Report# P059-06

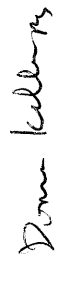
Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	130.2	I01529	02/28/03			102.1	102.7	0.5	103.3	ND	

* LCS/LCSD (see comments)


Kohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



Pacific Gas and
Electric Company

Chain of Custody Record

82-1174 (Rev 2/99)
Environmental Affairs

P059-00

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon Rd
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-866-5472

Ship To: Lab Name: Geo Analytical
Address: 1405 Canyon Ave
City: Modesto, CA (Zip) 95351
Phone No.: 209-572-0900
Contact Name: _____

☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz P/FAX _____
Name _____

Analysis Requested

Sample No./Equipment Serial No.	Sampled Date	Sampled Time	Sample Type/Description	Containers No.	Size	Remarks
1. BE-1	2/26/03	10:50	river water	1	500ml	
2. UNT-7	1	10:50		1		
3. UNT-6a	1	12:10		1		
4. UNT-6b	1	10:05		1		
5. UNT-8a	1	9:10		1		
6. UNT-8b	1	9:45		1		
7. BE-2	1	13:50		1		
8.						
9.						
10.						
11.						
12.						

Project Name: McCalumne River
Sampled by: (Signature) Elizabeth Frantz
Project Supervisor (Name/Phone No.): Elizabeth Frantz 925-866-5472
(Print Name)

Relinquished by (Name&Dept.): Elizabeth Frantz Date&Time: 2/27/03 1000
Relinquished by (Name&Dept.): OPS Date&Time: 2/28/03 11am
Relinquished by (Name&Dept.): Quichio Padulla Date&Time: _____

Date&Time: _____ Ship Via: _____
Date&Time: 2/28/03 11am Bill of Lading/Airbill No.: _____
Date&Time: _____

SAP Accounting Data: _____ Billing Contact: _____ Billing Address: _____

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

©PG&E

November, 1998

March 2003

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # P072-02

Date: 3/17/03

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River

PO#

Date Rec'd: 3/13/03

Date Started: 3/13/03


Date Completed: 3/14/03

Date Sampled: 3/12/03

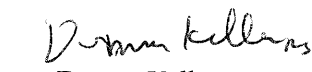
Time:

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
UNT 8A	P302611	1.0	130.2	Total Hardness as CaCO3	21	mg/L
UNT 8B	P302612	1.0	130.2	Total Hardness as CaCO3	21	mg/L
UNT 6A	P302613	1.0	130.2	Total Hardness as CaCO3	30	mg/L
UNT 6B	P302614	1.0	130.2	Total Hardness as CaCO3	33	mg/L
UNT 7	P302615	1.0	130.2	Total Hardness as CaCO3	5.5	mg/L
BR 1	P302616	1.0	130.2	Total Hardness as CaCO3	6.7	mg/L
BR-RSC1	P302617	1.0	130.2	Total Hardness as CaCO3	7.2	mg/L
RSC	P302618	1.0	130.2	Total Hardness as CaCO3	11	mg/L
BR- RSC2	P302619	1.0	130.2	Total Hardness as CaCO3	11	mg/L
BR 2	P302620	1.0	130.2	Total Hardness as CaCO3	12	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

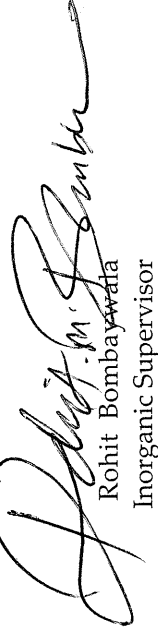
QC REPORT

Report# P072-02

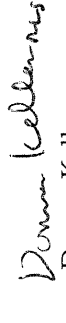
PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Total Hardness as CaCO ₃	130.2	I01924	3/14/03			111.7	110.1	1.2	108.0	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



Pacific Gas and
Electric Company

62-1174 (Rev 2/99)
Environmental Affairs

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon Rd
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-866-5472

Ship To: Lab Name: Geo Analytical Lab
Address: 1405 Karban Ave
City: Modesto, CA (Zip)
Phone No: 209-572-0900
Contact Name:

Turnaround Time
☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify
Due Date & Time
☐ TELEPHONE ☐ FAX Give Results to: E. Frantz 925-866-5472
Name Phone

Project Name: Mokelumne River
Sampled by: (Signature) Elizabeth Frantz
Project Supervisor (Name/Phone No.): Elizabeth Frantz (Print Name)

Sample No./ Equipment Serial No.	Sampled Date	Time	Sample Type/Description	Containers No.	Size
1. UNT 8a	3/12	1045	river water	1	100ml
2. UNT 8b		1100		1	
3. UNT 6a		1245		1	
4. UNT 6b		1120		1	
5. UNT 7		1140		1	
6. BR 1		1200		1	
7. BR-RSC 1		835		1	
8. RSC		930		1	
9. BR-RSC 2		950		1	
10. BR 2		1400		1	
11.					
12.					

Relinquished by (Name&Dept.): Elizabeth Frantz
Relinquished by (Name&Dept.):
Relinquished by (Name&Dept.):
SAP Accounting Data:
Billing Contact:
Billing Address:

Analysis Requested	Remarks
(sampled 130.2)	
P302611	
P302612	report to <1 mg/L
P302613	
P302614	
P302615	
P302616	
P302617	USE EPA 130.2
P302618	
P302619	
P302620	

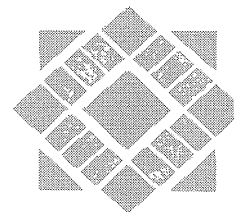
Date& Time: 3/13/03 8:35
Date& Time:
Date& Time:
Ship Via:
Bill of Lading/Airbill No.:

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

Autumn Bonnema
Business: 831-771-4175
Facsimile: 831-633-0805
Email: bonnema@mlml.calstate.edu



San José State
UNIVERSITY
FOUNDATION

Trace Metal Results

Project ID: PG&E-Mokelumne River
MLML Project ID: 106
Date received: 13 March, 2003
Analyst: Jon Goetzl
Date Analyzed: 19 March, 2003

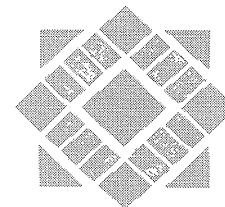
Report #: Cu03-0003

Report Date: 8 July, 2003

Lab Number	Station Name	Sampling Date	Sampling Time	Cu ppb
2003-0574	UNT8a	3/12/2003	10:45	218
2003-0575	UNT8b	3/12/2003	11:00	202
2003-0576	UNT6a	3/12/2003	12:45	355
2003-0577	UNT6b	3/12/2003	11:20	308
2003-0578	UNT7	3/12/2003	11:40	0.136
2003-0579	BR1	3/12/2003	12:00	10.1
2003-0580	BR-RSC1	3/12/2003	8:35	6.80
2003-0581	RSC	3/12/2003	9:30	0.1
2003-0582	BR-RSC2	3/12/2003	9:50	1.69
2003-0583	BR2	3/12/2003	14:00	1.61
2003-0584	Field Blank	3/12/2003	14:35	0.016
2003-0585	Field Dup	3/12/2003	12:10	9.53
MDL				0.003
RL				0.01

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
 7544 Sandholdt Road
 Moss Landing, CA 95039

Autumn Bonnema
 Business: 831-771-4175
 Facsimile: 831-633-0805
 Email: bonnema@mlml.calstate.edu



San José State
 UNIVERSITY
 FOUNDATION

Quality Assurance/ Quality Control for Report

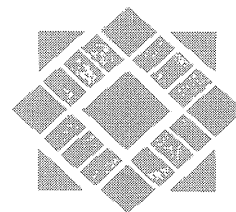
Cu03-0003

Station Code	Type	Cu ppb
1643d (10x dilution)	SRM (true value)	2.09
	SRM	1.90
	% Recovery	91%
BR2	Native	1.61
BR2 d	Duplicate	1.53
	RPD	4.66%
UNT8A	Native	218
UNT8A d	Duplicate	220
	RPD	1.00%
	Spike Value	125.00
UNT8B	Native	202
UNT8B-MS	Matrix Spike	325
UNT8B-MSD	Matrix Spike Duplicate	324
	% Recovery MS	98%
	% Recovery MSD	97%
	RPD	0.91%
	MDL	0.003
	RL	0.01

April 2003

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

Autumn Bonnema
Business: 831-771-4175
Facsimile: 831-633-0805
Email: bonnema@mlml.calstate.edu



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FOUNDATION

Trace Metal Results

Project ID: PG&E-Mokelumne River
MLML Project ID: 106
Date received: 3/28/2003
Analyst: Jon Goetzl
Date Analyzed: 6 May, 2003

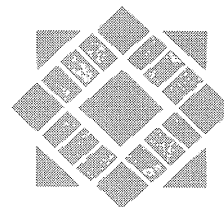
Report #: Cu03-0002

Report Date: 16 May, 2003

Lab Number	Station Name	Sampling Date	Sampling Time	Cu ppb
2003-1170	BR-RSC1	4/15/2003		20.9
2003-1171	RSC	4/15/2003		0.060
2003-1172	BR-RSC2	4/15/2003		7.61
2003-1173	UNT6b +UNT8b	4/15/2003		449
2003-1174	UNT 7	4/15/2003		0.097
2003-1175	BR1	4/15/2003	10:30	39.9
2003-1176	BR2	4/15/2003	11:00	2.32
2003-1177	Dup1	4/15/2003		39.8
2003-1178	Field Blank	4/15/2003		0.019
MDL				0.003
RL				0.01

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

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 Facsimile: 831-633-0805
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Quality Assurance/ Quality Control for Report

Cu03-0002

Station Cor	Type	Cu ppb
1643d (10x dilu	SRM (true value)	2.05
	SRM	1.90
	% Recovery	93%
UNT6B-UNT1	Native	449
UNT6B-UNT8B	Duplicate	447
	RPD	0.36%
UNT7	Spike Value	1.25
UNT7-MS	Native	0.10
UNT7-MSD	Matrix Spike	1.35
	Matrix Spike Duplicate	1.31
	% Recovery MS	100%
	% Recovery MSD	97%
	RPD	3.02%
	MDL	0.003
	RL	0.01

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # P105-10

Date: 4/18/03

Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River

PO#

Date Rec'd: 4/15/03

Date Started: 4/15/03

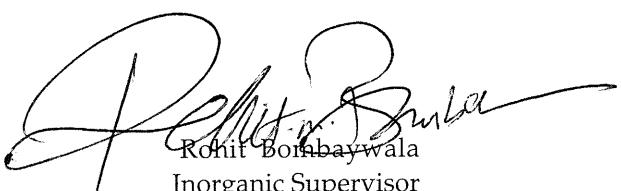
Date Completed: 4/16/03

Date Sampled: 4/15/03


Time: 8:35am

Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
BR - RSC1	P303651	1.0	200.7	Hardness as CaCO ₃	5.5	mg/L
		NA	150.1	pH	7.0	Std. Units
RSC	P303652	1.0	200.7	Hardness as CaCO ₃	9.2	mg/L
		NA	150.1	pH	6.8	Std. Units
BR -RSC 2	P303653	1.0	200.7	Hardness as CaCO ₃	7.3	mg/L
		NA	150.1	pH	6.6	Std. Units
UNT 6b & UNT 8b	P303654	1.0	200.7	Hardness as CaCO ₃	25	mg/L
		NA	150.1	pH	4.7	Std. Units
UNT 7	P303655	1.0	200.7	Hardness as CaCO ₃	4.0	mg/L
		NA	150.1	pH	5.6	Std. Units
BR 1	P303656	1.0	200.7	Hardness as CaCO ₃	7.0	mg/L
		NA	150.1	pH	5.6	Std. Units
BR 2	P303657	1.0	200.7	Hardness as CaCO ₃	9.6	mg/L
		NA	150.1	pH	6.1	Std. Units


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

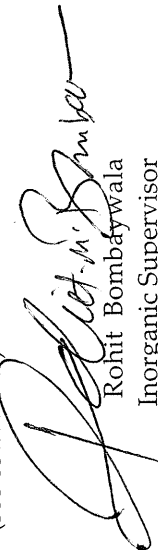
QC REPORT

Report# P105-10


Pacific Gas & Electric Company
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Hardness as CaCO ₃	200.7	I02728	4/16/03			92.9	93.5	0.5	97.7	ND	
pH	150.1	I02692	4/15/03	7.0	7.0			0.0		NA	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



Pacific Gas and
Electric Company™

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Cow Canyon Rd
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-866-5472

Ship To: Lab Name: GeoAnalytical
Address: 1405 Karlson Ave
City: Modesto, CA (Zip)
Phone No. 209-572-0900
Contact Name:

☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time _____
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Name _____ Ph/FAX _____

Project Name: Makelumne River
Project Supervisor (Name/Phone No.):
Sampled by: (Signature) Elizabeth Frantz (Print Name)

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. BR-RSC1	4/15	835	river water	1	125ml
2. RSC	4/15	905		1	
3. BR-RSC2	4/15	920		1	
4. UNT8a	4/15	1010		1	
5. UNT8b	4/15	1010		1	
6. UNT8c	4/15	955		1	
7. UNT8d	4/15	1030		1	
8. BR1	4/15	1100		1	
9. BR2	4/15	1100		1	
10. BR2					
11.					
12.					

Relinquished by (Name & Dept.): Elizabeth Frantz
Date & Time: 4/15/03 14:40
Received by (Name & Dept.):
Date & Time:
Relinquished by (Name & Dept.):
Date & Time:
Received by (Name & Dept.):
Date & Time:
SAP Accounting Data: Billing Contact: Billing Address:

Analysis Requested
hardness method 130.2
PF
P3034051
P3034052 Use method 130.2
P3034053 report to <1.0mg/L
P3034054
P3034055 Run all samples
P3034056 by 20.7 & calculate
P3034057 for Elizabeth
4/15/03 at 3:03 PM
Price OK
4/30=00 per sample

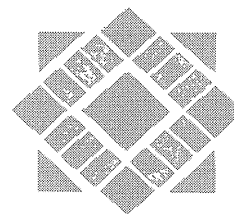
- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

May 2003

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

Autumn Bonnema
Business: 831-771-4175
Facsimile: 831-633-0805
Email: bonnema@mlml.calstate.edu



San José State
UNIVERSITY
FOUNDATION

Trace Metal Results

Project ID: PG&E-Mokelumne River
MLML Project ID: 114
Date received: 6-9 May, 2003
Analyst: Jon Goetzl
Date Analyzed: 20 May, 2003

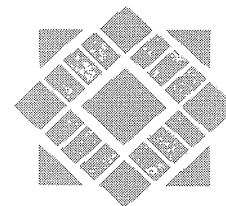
Report #: Cu03-0004

Report Date: #####

Lab Number	Station Name	Sampling Date	Sampling Time	Cu ppb
2003-1614	UNT6a	5/5/2003	12:00	617
2003-1615	UNT6b	5/5/2003	10:00	471
2003-1616	UNT8a	5/5/2003	9:10	798
2003-1617	UNT8b	5/5/2003	9:40	729
2003-1618	UNT7	5/5/2003	10:20	0.09
2003-1619	BR1	5/5/2003	10:45	93.8
2003-1620	BR2	5/5/2003	14:30	4.28
2003-1621	Dup 1	5/5/2003	10:50	93.7
2003-1655	BR-RSC1	5/6/2003	8:40	49.5
2003-1656	RSC	5/6/2003	9:15	0.17
2003-1657	BR-RCS2	5/6/2003	9:40	17.0
2003-1658	Field Blank	5/6/2003	10:20	0.17
2003-1664	LBRR1-top	5/7/2003	15:41	0.09
2003-1665	LBRR1-bottom	5/7/2003	15:45	0.15
MDL				0.003
RL				0.01

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

Autumn Bonnema
 Business: 831-771-4175
 Facsimile: 831-633-0805
 Email: bonnema@mlml.calstate.edu

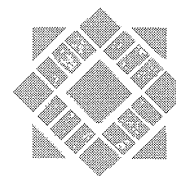


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Quality Assurance/ Quality Control for Report

Cu03-0004

Station Code	Type	Cu ppb
1643d (10x dilution)	SRM (true value)	2.09
	SRM	1.98
	% Recovery	95%
BR2	Native	4.28
BR2 DUP	Duplicate	4.37
	RPD	2.02%
	Spike Value	12.5
BR2	Native	4.28
BR2-MS	Matrix Spike	17.7
BR2-MSD	Matrix Spike Duplicate	17.8
	% Recovery MS	107%
	% Recovery MSD	108%
	RPD	1.13%
	MDL	0.003
	RL	0.01



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QA/QC SUMMARY

PROGRAM: PG&E Mokelumne River
PARAMETER: Dissolved Copper
LABORATORY: MPSL-DFG
MATRIX: Filtered Water

SAMPLE CUSTODY

Fourteen water samples were received in good condition on 6-9 May 2003. All samples were acidified upon receipt to a final concentration of 1% v/v HNO₃.

QA/QC DATA QUALITY OBJECTIVES

<u>Reference Method</u>	<u>Range of Recovery</u>	<u>Relative Precision</u>	<u>Detection Limit</u>
EPA 1638	75% - 125%	±25%	0.003 ppb

METHOD

All samples were analyzed using ICP-MS.

HOLDING TIME

Samples were analyzed on 20 May 2003. All samples were analyzed within the EPA holding time of 6 months from collection.

DETECTION LIMIT

The achieved detection limit is 0.003 ppb.

METHOD BLANKS

One method blank was analyzed with the samples. A small amount of copper was detected in the blank (.0282 ppb). Sample results are blank corrected.

REPLICATES

One pair of analytical duplicates selected at random were analyzed with the water samples. The RPD was 2.02%, which meets the data quality objective of ±25%.

MATRIX SPIKES

One matrix spike/matrix spike duplicate pair was analyzed with the water samples. The recoveries ranged from 107% to 108% with RPD of 1.13%, which meets the data quality objectives of 75-125% and ±25%.

STANDARD REFERENCE MATERIAL

One SRM 1643d was analyzed with the samples. The recovery was 95% of the certified value, which is within acceptance limits of ±25%.

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # P129-07

Date: 5/16/03

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Project: Mokelumne River

PO#

Date Rec'd: 5/09/03

Date Started: 5/09/03

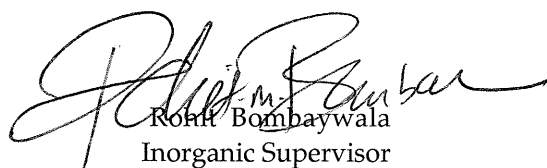
Date Completed: 5/09/03

Date Sampled: 5/07/03

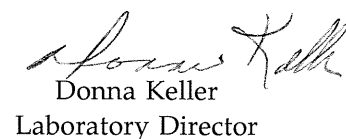
Time:

Sampler: Brian Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
LBRR1 - Top	P304593	1.0	SM2340C	Total Hardness as CaCO ₃	4.4	mg/L
LBRR1 - Bottom	P304594	1.0	SM2340C	Total Hardness as CaCO ₃	4.2	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

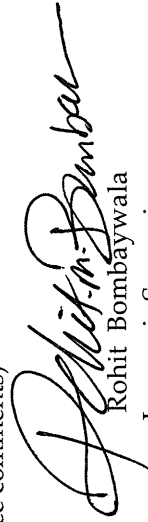
QC REPORT

Report# P129-07


PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Total Hardness as CaCO ₃	SM2340C	103292	5/08/03			96.2	96.2	0.0	100.5	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



7129-027

Ship To: Lab Name: GeoAnalytical Lab
Address: 1405 Kansas Ave
City: Modesto, CA (Zip) 95351
Phone No. 209-572-0900
Contact Name: _____

[illegible]

Remarks
hardness
US EPA 130

[illegible]

Date		Date & Time:	Ship Via:
:			
:	(GREG ANGLYNAL)	Date & Time: 5/9/03 10:20	Bill of Lading/Airbill No.:
:		Date & Time:	

Billing Address:	
------------------	--

1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
4. The final PCB results will be the cumulative results added together for each PCB.
5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351

Phone (209) 572-0900

Fax (209) 572-0916

CERTIFICATE OF ANALYSIS

Report # P126-15

Date: 5/07/03

PG&E
3400 Crow Canyon Rd.
San Ramon CA 94583

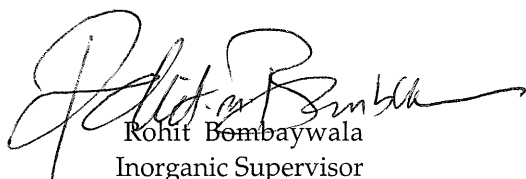
Project: Mokelumne River

PO#


Date Rec'd: 5/06/03
Date Started: 5/06/03
Date Completed: 5/06/03

Date Sampled: 5/05/03
Time: 12:00pm
Sampler: Elizabeth Frantz

Sample ID	Lab ID	RL	Method	Analyte	Results	Units
UNT 6A	P304316	1.0	SM2340C	Total Hardness as CaCO ₃	29	mg/L
UNT 6B	P304317	1.0	SM2340C	Total Hardness as CaCO ₃	34	mg/L
UNT 8A	P304318	1.0	SM2340C	Total Hardness as CaCO ₃	36	mg/L
UNT 8B	P304319	1.0	SM2340C	Total Hardness as CaCO ₃	33	mg/L
UNT 7	P304320	1.0	SM2340C	Total Hardness as CaCO ₃	4.2	mg/L
BR 1	P304321	1.0	SM2340C	Total Hardness as CaCO ₃	9.0	mg/L
BR 2	P304322	1.0	SM2340C	Total Hardness as CaCO ₃	9.9	mg/L
BR - RSC1	P304323	1.0	SM2340C	Total Hardness as CaCO ₃	7.0	mg/L
RSC	P304324	1.0	SM2340C	Total Hardness as CaCO ₃	9.0	mg/L
BR - RSC2	P304325	1.0	SM2340C	Total Hardness as CaCO ₃	7.9	mg/L


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director

GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue Modesto, CA 95351 Phone (209) 572-0900 Fax (209) 572-0916

Report# P126-15

QC REPORT

PG&E

3400 Crow Canyon Rd.

San Ramon

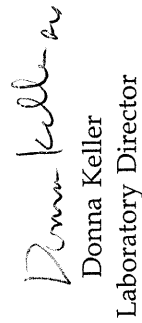
CA 94583

Analyte	Method	Batch #	Dates Analyzed	Orig.	Dupl.	MS %Rec	MSD %Rec	RPD	LCS %Rec	Blank	Comments
Total Hardness as CaCO ₃	SM2340C	I03146	5/06/03			98.3	98.5	0.1	99.1	ND	

* LCS/LCSD (see comments)


Rohit Bombaywala
Inorganic Supervisor

Certification # 1157


Donna Keller
Laboratory Director



Pacific Gas and
Electric Company

62-1174 (Rev 2/99)
Environmental Affairs

P126-15

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon
City: San Ramon CA (Zip) 94583
Contact Name/Phone No.: 425-846-5472
E. Frantz

Ship To: Lab Name: GeoAnalytical
Address: _____
City: _____, CA (Zip) _____
Phone No. _____
Contact Name: _____

Turnaround Time _____
☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
☐ TELEPHONE ☐ FAX Give Results to: Elizabeth Frantz
Name _____

Project Name: McKelum River
Sampled by: (Signature) Elizabeth Frantz
Project Supervisor (Name/Phone No.): _____
(Print Name) _____

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. UNT6a	5/5	1200	river water	1	125
2. UNT6b		1000			
3. UNT8a		910			
4. UNT8b		940			
5. UNT7		1020			
6. BR1		1045			
7. BR2		1430			
8. BR-RSC1	5/6	840			
9. RSC		915			
10. BR-RSC2		940			
11.					
12.					

Analysis Requested				Remarks
Sample No./ Equipment Serial No.	Date	Time	Sample Type/Description	
P304316				
P304317				
P304318				
P304319				
P304320				
P304321				
P304322				
P304323				
P304324				
P304325				

Relinquished by (Name&Dept.): Elizabeth Frantz Date& Time: 5/6/03 1330
Relinquished by (Name&Dept.): _____ Date& Time: _____
Relinquished by (Name&Dept.): _____ Date& Time: _____
SAP Accounting Data: _____ Billing Contact: _____
Billing Address: _____

Received by (Name&Dept.): Shannon Nguyen Date& Time: 5/6/03 1:30p
Received by (Name&Dept.): _____ Date& Time: _____
Received by (Name&Dept.): _____ Date& Time: _____
Ship Via: _____
Bill of Lading/Airbill No.: _____

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

©PG&E

November, 1998

June 2003

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

Autumn Bonnema
Business: 831-771-4175
Facsimile: 831-633-0805
Email: bonnema@mlml.calstate.edu



Trace Metal Results

Project ID: PG&E-Mokelumne River
MLML Project ID: 114
Date received: 3-4 June 2003
Analyst: Jon Goetzl
Date Analyzed: 16 July 2003

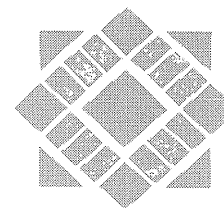
Report #: Cu03-0005

Report Date: 8/5/2003

Lab Number	Station Name	Sampling Date	Sampling Time	Cu ppb
2003-1949	BR1	6/2/2003	11:05	0.610
2003-1950	Dup 1	6/2/2003	11:05	0.570
2003-1951	UNT 8b	6/2/2003	11:45	0.948
2003-1952	UNT 7	6/2/2003	12:00	0.117
2003-1953	UNT6b	6/2/2003	12:15	0.378
2003-1954	UNT 6a	6/2/2003	13:05	68.3
2003-2004	BR-RSC1	6/3/2003	10:00	0.798
2003-2005	BR-RSC2	6/3/2003	10:30	0.733
2003-2006	BR2	6/3/2003	12:00	0.795
2003-2007	LBRR1-top	6/3/2003	12:00	0.122
2003-2008	LBRR1-bottom	6/3/2003	12:00	0.145
2003-2009	field blank	6/3/2003	13:40	0.019
2003-2010	UNT8a	6/3/2003	8:15	60.3
2003-2011	UNT 9	6/3/2003	7:30	0.154
MDL				0.003
RL				0.01

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

Autumn Bonnema
 Business: 831-771-4175
 Facsimile: 831-633-0805
 Email: bonnema@mlml.calstate.edu



San José State
 UNIVERSITY
 FOUNDATION

Quality Assurance/ Quality Control for Report

Cu03-0005

Station Code	Type	Cu ppb
1643d (10x dilution)	SRM (true value)	2.09
	SRM	2.04
	% Recovery	98%
BR-RSC2	Native	0.733
BR-RSC2 ICP DUP	Duplicate	0.768
	RPD	4.68%
BR2	Spike Value	1.25
BR2- MS	Native	0.795
BR2- MSD	Matrix Spike	2.09
	Matrix Spike Duplicate	2.06
	% Recovery MS	103%
	% Recovery MSD	101%
	RPD	1.31%
	MDL	0.003
	RL	0.01

QA/QC SUMMARY

PROGRAM: PG&E Mokelumne River
PARAMETER: Dissolved Copper
LABORATORY: MPSL-DFG
MATRIX: Filtered Water



SAMPLE CUSTODY

Fourteen water samples were received in good condition on 3-4 June 2003. All samples were acidified upon receipt to a final concentration of 1% v/v HNO₃.

QA/QC DATA QUALITY OBJECTIVES

<u>Reference Method</u>	<u>Range of Recovery</u>	<u>Relative Precision</u>	<u>Detection Limit</u>
EPA 1638	75% - 125%	±25%	0.003 ppb

METHOD

All samples were analyzed using ICP-MS.

HOLDING TIME

Samples were analyzed on 16 July 2003. All samples were analyzed within the EPA holding time of 6 months from collection.

DETECTION LIMIT

The achieved detection limit is 0.003 ppb.

METHOD BLANKS

One method blank was analyzed with the samples. No copper was detected in the blank, therefore samples are not blank corrected.

REPLICATES

One pair of analytical duplicates selected at random was analyzed with the water samples. The RPD was 4.68%, which falls within the data quality objective of ±25%.

MATRIX SPIKES

One matrix spike/matrix spike duplicate pair was analyzed with the water samples. The recoveries ranged from 101% to 103% with RPD of 1.31%, which meets the data quality objectives of 75-125% and ±25%.

STANDARD REFERENCE MATERIAL

One SRM 1643d was analyzed with the samples. The recovery was 98% of the certified value, which is within acceptance limits of ±25%.



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG&E
Address: 3400 Crow Canyon Rd
City: San Ramon, CA 94583

Lab Number: L-271-03
Other Number:
Date Sampled: 06/02/03 and 06/03/03
Date Received: 06/04/03
Date Completed: 06/05/03
Index-PCA Code:

RE: Hardness

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Number	Sample Description	Collection Date	Hardness, mg/L as CaCO ₃
L-271-03-1	BR-RSC1	06/03/03	6.9
L-271-03-2	BR-RSC2	06/03/03	4.0
L-271-03-3	BR2	06/03/03	4.0
L-271-03-4	BR1	06/02/03	5.0
L-271-03-5	UNT6a	06/02/03	10.9
L-271-03-6	UNT6b	06/02/03	4.0
L-271-03-7	UNT8a	06/03/03	9.9
L-271-03-8	UNT8b	06/02/03	5.0
L-271-03-9	UNT7	06/02/03	4.0
L-271-03-10	UNT9	06/03/03	4.0
Reporting Limit			1.0

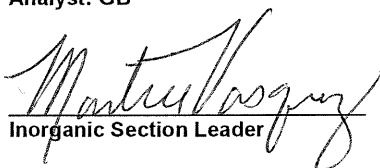
METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 2340C EDTA Titrimetric.

Cost of Analysis: \$ 250.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00
Deposit recovery costs to the Fish and Wildlife Account with "cost of analysis" identified separately.

Analyst: GB


Inorganic Section Leader

6/20/03
Date


Laboratory Director

6/23/03
Date

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Crow Canyon Rd
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frantz 925-866-5472

Ship To: Lab Name: WPCF
Address: 2005 Nimbus Road
City: Rancho Cordova, CA (Zip) 95670
Phone No. 916-358-0318
Contact Name: Martice Vasquez

Turnaround Time

☒ **NORMAL** (10 days or less) ☐ **RUSH** ☐ **OTHER**, Specify _____

Due Date & Time _____

☐ **TELEPHONE** ☐ **FAX** Give Results to: Elizabeth Franz Name _____ P/FAX _____

Project Name: Mo Kelleme Co. Study Project Supervisor (Name/Phone No.): Elizabeth Franz 925-866-5472

Sampled by: (Signature) _____ (Print Name) _____

[illegible]

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. BE-RSC1	6/13	1000	Circr water	1	250m
2. RSC				1	250m
3. BR-RSC2	6/13	1050		1	250
4. BR2	6/13	1200		1	250
5. BR1	6/13	1115		1	
6. UNIT6a	6/14	1302		1	
7. UNIT6b	6/12	1215		1	
8. UNIT8a	6/13	0815		1	
9. UNIT8b	6/12	1145		1	
10. UNIT 7	6/12	0730 1200		1	↓
1. UNIT 9	6/13	6730		1	↓
2.					

Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):
Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):
Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):
SAP Accounting Data:		Billing Contact:

- Notes:**
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and on-site personnel.

Distribution (See note #5)

White: Laboratory

Canary: Originator

Pink: Sampler

CPG&E

November, 1998



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG&E
Address: 3400 Crow Canyon Rd
City: San Ramon, CA 94583

Lab Number: L-269-03
Other Number:
Date Sampled: 06/03/03
Date Received: 06/04/03
Date Completed: 06/05/03
Index-PCA Code:

RE: Hardness

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Number	Sample Description	Hardness, mg/L as CaCO ₃
L-269-03-1	LBRR1 - top	4.0
L-269-03-2	LBRR1 - bottom	3.0
Reporting Limit		1.0

METHOD REFERENCE:

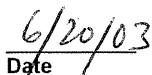
Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 2340C EDTA Titrimetric.

Cost of Analysis: \$ 50.00

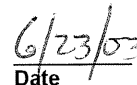
POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00
Deposit recovery costs to the Fish and Wildlife Account with "cost of analysis" identified separately.

Analyst: GB


Inorganic Section Leader


Date


Laboratory Director


Date

Chain of Custody Record

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 Corn Canyon Rd
City: San Ramon, CA (Zip) 94583
Contact Name/Phone No.: Elizabeth Frazer 925-860-5470

<input checked="" type="checkbox"/> NORMAL (10 days or less) <input type="checkbox"/> RUSH		Turnaround Time _____	
<input type="checkbox"/> TELEPHONE <input type="checkbox"/> FAX		Due Date & Time _____	
<input type="checkbox"/> OTHER , Specify _____		Give Results to: <u>Elizabeth Frantz</u>	
Project Name: _____		Name _____	
Project Supervisor (Name/Phone No.): _____		Pto/FAX _____	
Sampled by: (Signature) _____		(Print Name) _____	

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. LBERT- top	8/5	10:00	lake water	1	200ml
2. LBERT-middle				1	
3. LBERT- bottom	8/5	10:00	↓	1	↓
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):
Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):
Relinquished by (Name&Dept.):	Date & Time:	Received by (Name&Dept.):

SAP Accounting Data: Billing Contact:

Ship To: Lab Name: Water Pollution Control Lab
Address: 2005 Nimbus Rd
City: Rancho Cordova, CA (Zip) 95670
Phone No. 916-358-0318
Contact Name: Martin Vasquez

[illegible]

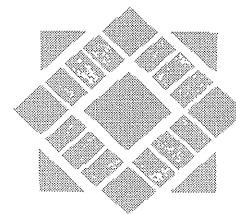
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
4. The final PCB results will be the cumulative results added together for each PCB.
5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and the laboratory.

Distribution (See note #5)
White: Laboratory
Canary: Originator
Pink: Sampler

July 2003

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
7544 Sandholdt Road
Moss Landing, CA 95039

Autumn Bonnema
Business: 831-771-4175
Facsimile: 831-633-0805
Email: bonnema@mlml.calstate.edu



San José State
UNIVERSITY
FOUNDATION

Trace Metal Results

Project ID: PG&E-Mokelumne River
MLML Project ID: 114
Date received: 2-3 July 2003
Analyst: Jon Goetzl
Date Analyzed: 17 July 2003

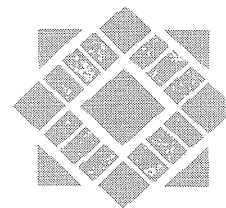
Report #: Cu03-0006

Report Date: 8/5/2003

Lab Number	Station Name	Sampling Date	Sampling Time	Cu ppb
2003-2644	UNT 6a	7/1/2003	11:38	49.1
2003-2645	UNT 6b	7/1/2003	10:16	15.4
2003-2646	UNT 8a	7/1/2003	10:31	22.4
2003-2647	UNT 8b	7/1/2003	10:27	22.0
2003-2648	UNT 7	7/1/2003	10:50	0.140
2003-2649	BR1	7/1/2003	11:08	8.17
2003-2650	Dup 1	7/1/2003	11:08	7.99
2003-2651	BR-RSC1	7/2/2003		5.85
2003-2652	RSC	7/2/2003		0.067
2003-2653	BR-RSC2	7/2/2003		4.48
2003-2654	Field Blank	7/2/2003		<MDL
2003-2748	BR2	7/10/2003	13:38	1.82
2003-2746	LBRR1 BOT	7/10/2003	12:24	0.376
2003-2745	LBRR1 MID	7/10/2003	12:31	0.187
2003-2744	LBRR1 TOP	7/10/2003	12:37	0.112
2003-2747	Field Blank	7/10/2003	14:40	<MDL
MDL				0.003
RL				0.01

San Jose State University Foundation
Marine Pollution Studies Laboratories -MLML@ Norte
CA Dept of Fish and Game
 7544 Sandholdt Road
 Moss Landing, CA 95039

Autumn Bonnema
 Business: 831-771-4175
 Facsimile: 831-633-0805
 Email: bonnema@mlml.calstate.edu



San José State
 UNIVERSITY
 FOUNDATION

Quality Assurance/ Quality Control for Report

Cu03-0006

Station Code	Type	Cu ppb
1643d (10x dilution)	SRM (true value)	2.09
	SRM	1.99
	% Recovery	95%
BR-RSC2	Native	4.478
BR-RSC2 ICP DUP	Duplicate	4.421
	RPD	1.28%
BR-RSC1	Spike Value	12.50
	Native	5.852
BR-RSC1- MS	Matrix Spike	18.47
BR-RSC1- MSD	Matrix Spike Duplicate	18.73
	% Recovery MS	101%
	% Recovery MSD	103%
	RPD	1.41%
	MDL	0.003
	RL	0.01

QA/QC SUMMARY

PROGRAM: PG&E Mokelumne River
PARAMETER: Dissolved Copper
LABORATORY: MPSL-DFG
MATRIX: Filtered Water



SAMPLE CUSTODY

Eleven water samples were received in good condition on 2-3 July 2003, with an additional five samples received on 10 July 2003. All samples were acidified upon receipt to a final concentration of 1% v/v HNO_3 .

QA/QC DATA QUALITY OBJECTIVES

<u>Reference Method</u>	<u>Range of Recovery</u>	<u>Relative Precision</u>	<u>Detection Limit</u>
EPA 1638	75% - 125%	$\pm 25\%$	0.003 ppb

METHOD

All samples were analyzed using ICP-MS.

HOLDING TIME

Samples were analyzed on 17 July 2003. All samples were analyzed within the EPA holding time of 6 months from collection.

DETECTION LIMIT

The achieved detection limit is 0.003 ppb.

METHOD BLANKS

One method blank was analyzed with the samples. No copper was detected in the blank, therefore samples are not blank corrected.

REPLICATES

One pair of analytical duplicates selected at random was analyzed with the water samples. The RPD was 1.28%, which falls within the data quality objective of $\pm 25\%$.

MATRIX SPIKES

One matrix spike/matrix spike duplicate pair was analyzed with the water samples. The recoveries ranged from 101% to 103% with RPD of 1.41%, which meets the data quality objectives of 75-125% and $\pm 25\%$.

STANDARD REFERENCE MATERIAL

One SRM 1643d was analyzed with the samples. The recovery was 95% of the certified value, which is within acceptance limits of $\pm 25\%$.



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG&E
Address: 3400 Crow Canyon Rd
City: San Ramon, CA 94583

Lab Number: L-340-03
Other Number:
Date Sampled: 07/10/03
Date Received: 07/11/03
Date Completed: 07/11/03
Index-PCA Code:

RE: Mokelumne Project

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Number	Sample Description	Collection Date	Hardness, mg/L as CaCO ₃
L-340-03-1	LBRR1-top	7/10/03	3.8
L-340-03-2	LBRR1-mid	7/10/03	3.8
L-340-03-3	LBRR1-bottom	7/10/03	3.8
Reporting Limit			1.0

CC: Lauri Park – SJSU Foundation

METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 2340C EDTA Titrimetric.

Cost of Analysis: \$ 75.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00
Deposit recovery costs to the Fish and Wildlife Account with "cost of analysis" identified separately.

Jessica Smith
Analyst

7/11/03
Date

Martín Vasquez
Inorganic Section Leader

7/11/03
Date

RBC
Laboratory Director

7/15/03
Date

Chain of Custody Record

L-340-03

Samples in #7

From: Pacific Gas & Electric Company ☐ PG&E Facility ☐ Sample Site
Address or Location: 3400 CNU Canyon Rd
City: San Ramon CA, CA (zip) 94583
Contact Name/Phone No.: E. Hantz

Ship To: Lab Name: Water Pollution Control Lab
Address: 2005 Nimbus Rd
City: Kanaka, California CA (zip) 945670
Phone No. 415-358-0318
Contact Name: Marilee Vazquez

Turnaround Time ☒ NORMAL (10 days or less) ☐ RUSH ☐ OTHER, Specify _____
Due Date & Time: _____
☐ TELEPHONE ☐ FAX Give Results to: E. Hantz Name: _____ P/FAX: _____

Project Name: Water Pollution Project Supervisor (Name/Phone No.): E. Hantz 925-866-5442
Sampled by: (Signature) _____ (Print Name)

Sample No./Equipment Serial No.	Sampled		Sample Type/Description	Containers		Analysis Requested	Remarks
	Date	Time		No.	Size		
1. <u>LABREL- TOP</u>	<u>7/10</u>	<u>12:37</u>	<u>Lab water</u>	<u>1</u>	<u>250ml</u>	<u>hardness</u>	<u>Report to</u>
2. <u>LABREL- mid</u>	<u>7/10</u>	<u>12:31</u>					
3. <u>LABREL- bottom</u>	<u>7/10</u>	<u>12:24</u>					
4.							
5.							
6.							
7.							
8.							
9.							
10.							
11.							
12.							
Relinquished by (Name&Dept.): <u>E. Hantz</u>			Date&Time: <u>7/10/99</u>	Received by (Name&Dept.): <u>E. Hantz</u>		Date&Time: <u>7/11/03</u>	Ship Via:
Relinquished by (Name&Dept.):			Date&Time:	Received by (Name&Dept.):		Date&Time:	Bill of Lading/Airbill No.:
Relinquished by (Name&Dept.):			Date&Time:	Received by (Name&Dept.):		Date&Time:	
SAP Accounting Data:			Billing Contact:		Billing Address:		

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
 4. The final PCB results will be the cumulative results added together for each PCB.
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG&E
Address: 3400 Crow Canyon Rd
City: San Ramon, CA 94583

Lab Number: L-326-03
Other Number:
Date Sampled: 07/01/03 and 07/02/03
Date Received: 07/03/03
Date Completed: 07/03/03
Index-PCA Code:

RE: Mokelumne Project

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Number	Sample Description	Collection Date	Hardness, mg/L as CaCO ₃
L-326-03-1	UNT6a	07/01/03	9.5
L-326-03-2	UNT6b	07/01/03	6.7
L-326-03-3	UNT8a	07/01/03	7.1
L-326-03-4	UNT8b	07/01/03	7.1
L-326-03-5	UNT7	07/01/03	3.8
L-326-03-6	BR1	07/01/03	5.7
L-326-03-7	BRRSC1	07/02/03	4.8
L-326-03-8	RSC	07/02/03	11.4
L-326-03-9	BRRSC2	07/02/03	6.7
L-326-03-10	BR2	07/01/03	9.5
Reporting Limit			1.0

CC: Lauri Park – SJSU Foundation

METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 2340C EDTA Titrimetric.

Cost of Analysis: \$ 250.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00
Deposit recovery costs to the Fish and Wildlife Account with "cost of analysis" identified separately.

Jessica Smith
Analyst

7/9/03
Date

Martine Vasquez
Inorganic Section Leader

7/9/03
Date

[Signature]
Laboratory Director

7/9/03
Date

Page 7 of 7

Pesticide Investigations Lab
1701 Nimbus Road
Rancho Cordova, CA 95670
(916) 358-2950

August 2003

Moss Landing Marine Laboratories
Marine Pollution Studies Laboratories

7544 Sandholdt Road
Moss Landing, CA 95039

Project Manager: **Autumn Bonnema**
Phone: **831-771-4175**
Fax: **831-633-0805**
Email: bonnema@mlmlc.calstate.edu



Trace Metal Results

Project Name: PGE Cu August Mokelumne
Project Number: **114**
Analyst: Jon Goetzl

REPORT #: TM03-0013

Report Date: 9/26/03

Lab Number	Station Name	Sample Type	Date Collected	Date Received	Batch Number	Cu ppb	Flag
03-3156	BR1	Raw Water	8/19/2003	8/20/2003	1	4.33	
03-3157	BR2	Raw Water	8/19/2003	8/20/2003	1	1.59	
03-3159	BR-RSC1	Raw Water	8/19/2003	8/20/2003	1	3.47	
03-3161	BR-RSC2	Raw Water	8/19/2003	8/20/2003	1	3.00	
03-3158	DUP1	Raw Water	8/19/2003	8/20/2003	1	4.30	
03-3162	FIELD BL	Raw Water	8/19/2003	8/20/2003	1	<.003	
03-3218	LBRR1-BOT	Raw Water	8/19/2003	8/20/2003	1	0.13	
03-3217	LBRR1-MID	Raw Water	8/19/2003	8/20/2003	1	0.13	
03-3216	LBRR1-SURF	Raw Water	8/19/2003	8/20/2003	1	0.10	
03-3160	RSC	Raw Water	8/19/2003	8/20/2003	1	0.05	
03-3151	UNT6A	Raw Water	8/19/2003	8/20/2003	1	48.6	
03-3152	UNT6B	Raw Water	8/19/2003	8/20/2003	1	28.8	
03-3153	UNT7	Raw Water	8/19/2003	8/20/2003	1	0.11	
03-3154	UNT8A	Raw Water	8/19/2003	8/20/2003	1	22.3	
03-3155	UNT8B	Raw Water	8/19/2003	8/20/2003	1	21.0	

MDL	0.003
RL	0.01

Method: modified EPA 1638

<MDL: sample value below method detection limit or value itself<.008
Sample value between detection limit and reporting limit in red

Moss Landing Marine Laboratories
Marine Pollution Studies Laboratories

7544 Sandholdt Road
Moss Landing, CA 95039

Project Manager: **Autumn Bonnema**
Phone: **831-771-4175**
Fax: **831-633-0805**
Email: bonnema@mlml.calstate.edu



Quality Assurance/ Quality Control for Report

TM03-0013

Batch Number	Station Code	Type	Cu ppb
1		Method Blank	<.003
<hr/>			
	1643d (10x)	SRM (true value)	2.05
		SRM	2.15
		% Recovery	105%
<hr/>			
	UNT6A	Native	48.6
	UNT6A	Duplicate	48.1
		RPD	1%
<hr/>			
		Spike Value	1.25
	BR2	Native	1.59
	BR2	Matrix Spike	2.82
	BR2	Matrix Spike Duplicate	2.84
		% Recovery MS	98%
		% Recovery MSD	101%
		RPD	3.0%
<hr/>			
		MDL	0.003
		RL	0.01

<MDL: sample value below method detection limit or value itself <.008
Sample value between detection limit and reporting limit in red



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG&E
Address: 3400 Crow Canyon Rd
City: San Ramon, CA 94583

Lab Number: L-417-03
Other Number:
Date Sampled: 08/19/03, 08/20/03, 08/21/03
Date Received: 08/22/03
Date Completed: 08/22/03
Index-PCA Code:

RE: Mokelumne Project

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Number	Sample Description	Collection Date	Hardness mg/L as CaCO ₃
L-417-03-1	UNT6a	08/19/03	14.7
L-417-03-2	UNT6b	08/19/03	16.8
L-417-03-3	UNT7	08/19/03	5.2
L-417-03-4	UNT8a	08/19/03	10.0
L-417-03-5	UNT8b	08/19/03	11.6
L-417-03-6	BR1	08/19/03	8.4
L-417-03-7	BR2	08/19/03	8.4
L-417-03-8	BR-RSC1	08/20/03	7.4
L-417-03-9	BR-RSC2	08/20/03	9.4
L-417-03-10	RSC	08/20/03	13.6
L-417-03-11	LBRR1-top	08/21/03	6.3
L-417-03-12	LBRR1-mid	08/21/03	7.4
L-417-03-13	LBRR1-bottom	08/21/03	8.4
Reporting Limit			1.0

CC: Lauri Park – SJSU Foundation

METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 2340C EDTA Titrimetric.

Cost of Analysis: \$ 325.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00
Deposit recovery costs to the Fish and Wildlife Account with "cost of analysis" identified separately.

Jessica Smith
Analyst

8/25/03
Date

Martin Vazquez
Inorganic Section Leader

8/25/03
Date

[Signature]
Laboratory Director

8/26/03
Date

	Hardness as CaCO ₃ , mg/L
Reference Standard ID	IPS-hard-03-30E
True Value Ref Std	91.4
Laboratory Result	101
% Recovery Ref Std	111
Sample Duplicate ID	L-417-03-1
Sample Value	14.7
Duplicate Value	14.7
Average Sample Value	14.7
RPD	0.00



Ph #	Send Results To	Lab Number
Brian Frantz	Elizabeth Frantz	L-417-03
Address	Address	Field Number
3400 Crow Canyon Rd		
City	City	Lab Storage
San Ramon	CA	Walk-In
Zip	Zip	Spill Title
94583		
Date Required/Reason	Address	Suspect
Shipped Via	City	Index-PCA
22 overnight		
<input type="checkbox"/> Fish & Wildlife Loss	Date:	Region:
<input type="checkbox"/> DFG Code Violation:		
<input type="checkbox"/> Suspected or Potential Problem		
<input checked="" type="checkbox"/> Routine Analysis		
Sample Identification/Location (Draw map on separate sheet if necessary)	Analysis Requested >>>	
UNT00a	Date	Time
UNT00b	8/19	12:47
UNT07	8/19	11:28
UNT80	8/19	12:02
UNT86	8/19	11:50
BR1	8/19	11:41
BR2	8/19	12:15
BR-PSC1	8/19	14:07
BR-PSC2	8/20	9:42
PSC	8/20	10:12
	8/20	9:54
Problem Description		
Suspect/Incident Location		
Comments/Special Instructions		
repat to <1.0 mg/L		
Samples Requested By (Signature)	Print Name	Date
B-F	Brian Frantz	8/21/03
Received By (Signature)	Print Name	Date
Jessica Smith	JESSICA SMITH	8/22/03



DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

[illegible]

September 2003

Moss Landing Marine Laboratories
Marine Pollution Studies Laboratories

7544 Sandholdt Road
Moss Landing, CA 95039

Project Manager: **Autumn Bonnema**
Phone: **831-771-4175**
Fax: **831-633-0805**
Email: bonnema@mlml.calstate.edu



Trace Metal Results

Project Name: PGE Cu September Mokelumne
Project Number: **114**
Analyst: Jon Goetzl

REPORT # TM03-0014

REPORT DATE 10/07/03

Lab Number	Station Name	Sample Type	Date Collected	Date Received	Batch Number	Cu ppb	Flag
03-3420	BR1	Raw Water	9/9/2003	9/10/2003	1	2.97	
03-3421	BR2	Raw Water	9/9/2003	9/10/2003	1	1.39	
03-3422	BR-RSC1	Raw Water	9/9/2003	9/10/2003	1	2.49	
03-3424	BR-RSC2	Raw Water	9/9/2003	9/10/2003	1	2.34	
03-3426	DUP1	Raw Water	9/9/2003	9/10/2003	1	3.09	
03-3425	FIELD BLANK	Raw Water	9/9/2003	9/10/2003	1	<.003	
03-3495	LBRR1-BOT	Raw Water	9/11/2003	9/12/2003	1	0.19	
03-3494	LBRR1-MID	Raw Water	9/11/2003	9/12/2003	1	0.29	
03-3493	LBRR1-TOP	Raw Water	9/11/2003	9/12/2003	1	0.13	
03-3423	RSC	Raw Water	9/9/2003	9/10/2003	1	0.07	
03-3415	UNT6A	Raw Water	9/9/2003	9/10/2003	1	52.0	
03-3416	UNT6B	Raw Water	9/9/2003	9/10/2003	1	33.1	
03-3417	UNT7	Raw Water	9/9/2003	9/10/2003	1	0.13	
03-3418	UNT8A	Raw Water	9/9/2003	9/10/2003	1	22.5	
03-3419	UNT8B	Raw Water	9/9/2003	9/10/2003	1	20.6	

MDL	0.003
RL	0.01

Method: modified EPA 1638

<value: sample value below given detection limit.

Sample value between detection limit and reporting limit in red

Moss Landing Marine Laboratories
Marine Pollution Studies Laboratories

7544 Sandholdt Road
Moss Landing, CA 95039



Project Manager: **Autumn Bonnema**
Phone: **831-771-4175**
Fax: **831-633-0805**
Email: bonnema@mlml.calstate.edu

REPORT NUMBER TM03-0014

Quality Assurance/ Quality Control for Report

Batch Number	Station Code	Type	Cu ppb
1		Method Blank	<.003
<hr/>			
	1643d (10x)	SRM (true value)	2.05
		SRM	2.15
		% Recovery	105%
<hr/>			
	BR1	Native	2.97
	BR1	Duplicate	3.00
		RPD	1.00%
<hr/>			
		Spike Value	1.25
	RSC	Native	0.07
	RSC	Matrix Spike	1.31
	RSC	Matrix Spike Duplicate	1.34
		% Recovery MS	99%
		% Recovery MSD	102%
		RPD	3.0%
<hr/>			
		MDL	0.003
		RL	0.01

<value: sample value below given detection limit.
Sample value between detection limit and reporting limit in red



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: Pacific Gas & Electric Company
Address: 3400 Crow Canyon Rd.
City: San Ramon, CA 94583

Lab Number: L-453-03
Other Number:
Date Sampled: 09/09/03 & 09/11/03
Date Received: 09/12/03
Date Completed: 09/15/03
Index-PCA Code:

RE: Mokelumne WQ

RESULTS OF CHEMICAL ANALYSIS:

Lab Sample ID	Station code	Hardness as CaCO ₃ , mg/L
L-453-03-1	UNT6a	19.2
L-453-03-2	UNT6b	15.8
L-453-03-3	UNT7	4.8
L-453-03-4	UNT8a	6.7
L-453-03-5	UNT8b	8.6
L-453-03-6	BR1	6.2
L-453-03-7	BR-RSC1	5.3
L-453-03-8	RSC	11.5
L-453-03-9	BR-RSC2	7.2
L-453-03-10	BR2	9.1
L-453-03-11	LBRR1-top	4.8
L-453-03-12	LBRR1-middle	4.8
L-453-03-13	LBRR1-bottom	4.6
Method Blank		<1.0
Method Detection Limit (MDL)		1.0
Reporting Limit (RL)		1.0

*See attached page for QA summary

CC: Lauri Park – SJSU Foundation

Method References:

Standard Methods for the Examination of the Water Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method SM 2340C

Cost of Analysis: \$ 325.00

POLLUTION ACTION KIT (IF USED): \$110.00 AND HAZMAT SHIPPER (IF USED): \$25.00
Deposit recovery costs to the Fish and Wildlife Pollution Account with "cost of analysis" identified separately.

Analyst: CO


Inorganic Section Leader

9/22/03
Date


Laboratory Director

9/23/03
Date

	Hardness as CaCO ₃ , mg/L
Reference Standard ID	IPS-HARD-03-40A
True Value Ref Std	99.1
Laboratory Result	109
% Recovery Ref Std	110
Sample Duplicate ID	L-453-03-13
Sample Value	4.8
Duplicate Value	4.3
Average Sample Value	4.6
RPD	11.0



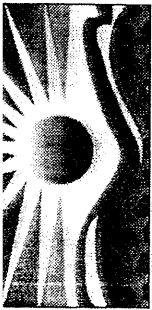
DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Page 1 of 1

Sampler	Sep-03	Ph #	Send Results To		Lab Number
Brian Frantz	Mokelumne WQ	925-866-5345	Elizabeth Frantz		L-453-03
Address	3400 Crow Canyon Rd	Address	3400 Crow Canyon Rd		Field Number
City	San Ramon	City	San Ramon	CA	Lab Storage
Zip	CA	City	San Ramon	CA	Spill Title
Date Required/Reason	standard TAT	Address			Suspect
Shipped Via	California Overnight	City	CA		Index-PCA
Fish & Wildlife Loss		Date:	Region:	Water Temp:	DO:
DFG Code Violation:		pH:		F or C	mg/L Conductivity:
Suspected or Potential Problem		Hardness			umhos/cm
Routine Analysis		Analysis Requested >>>			
Sample Identification/Location		Collection			
(Draw map on separate sheet if necessary)		Date	Time		
UNT6a		9/9	1200	X	
UNT6b		9/9	1050	X	
UNT7		9/9	1117	X	
UNT8a		9/9	1108	X	
UNT8b		9/9	1059	X	
BR1		9/9	1129	X	
BR-RSC1		9/9	1307	X	
RSC		9/9	1320	X	
BR-RSC2		9/9	1331	X	
BR2		9/10	1420	X	
LBRR1-top		9/11	10:35	X	
LBRR1-middle		9/11	10:43	X	
LBRR1-bottom		9/11	10:55	X	
Problem Description	None	Pollution Action Kit:		Yes	No
Suspect/Incident Location	None	Glove Size:		Large	Medium
Comments/Special Instructions	SEND RESULTS TO E. FRANTZ	Hazard Shipper Requested:		Yes	No
Samples Relinquished By (Signature)	Brian Frantz	Date	Received By (Signature)	Print Name	Date
		9/11/03	Elizabeth Frantz	Elizabeth Frantz	9/12/03

LAB COPIES: WHITE, CANARY, PINK SUBMITTER: GOLDENROD

FG 1000 (Rev. 9/01)



GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue, Suite "A"
Modesto, CA 95351

Phone: (209) 572-0900
Fax: (209) 572-0916

Lab Report # N269-U5

Regulatory ☐ Yes ☐ No CC: ☐ Yes ☐ No

Regulator:

Phone: (925) 866-5472

Fax: (925) 866-5681

Original To: Elizabeth Frantz

Reporting: ☐ EDF ☐ EDT

CHAIN OF CUSTODY

Client: Elizabeth Frantz (FGE)

Address: 3400 Crow Canyon Rd

City San Ramon Zip 94583

Project ID		Moelunne River				Sample ID		Container		No. Of Containers	ANALYSIS				Lab Use Only		
Sampled By		(Print Name)		(Signature)							hardness				Lab ID #		
Date		Time		Sample type		Matrix		Sample ID		Type		Size		Remarks		Preservative	
9/25	0900	X					RW	BR2					500mL			N309974	
9/25	1015	X					"	BR-RSC1					"			N309975	
9/25	1020	X					"	RSC					"			N309976	
9/25	1030	X					"	BR-RSC2					"			N309977	
9/25	1230	X					"	BR1					"			N309978	
9/25	1240	X					"	UNT7					"			N309979	
9/25	1255	X					"	UNT66					"			N309980	
9/25	1305	X					"	UNT86					"			N309981	
9/25	1320	X					"	UNT8a					"			N309982	
9/25	1351	X					"	UNT6a					"			N309983	
9/25	1415	X					"	LBRR1-top					"			N309984	
9/25	1430	X					"	LBRR1-middle					"			N309985	
9/25	1445	X					"	LBRR1-bottom					"			N309986	
													al				

* Report to <1.0 mg/L for hardness

Relinquished by (Signature)	<u>Elizabeth Frantz</u>	Date	9/26	Time	0907	Received by (Signature)	<u>[Signature]</u>	Date	9/26	Time	0905
Relinquished by (Signature)		Date		Time		Received by (Signature)		Date		Time	

Preservative						Matrix					
1 -4°C	2 -HCL	3 -NaOH	4 -Na ₂ S ₂ O ₃	5 -HNO ₃	6 -H ₂ SO ₄	7 -Other	DW Drinking Water	WW Waste Water	HWV Hazardous Waste (Water)	S Soil/Solid	
Site Time: Start:			Total Hours:			Driving Time: Start:			Site Arrival:		
Finish:			x2=Total:			Time			Mileage		
Turnaround Time						Approved By:					



DEPARTMENT OF FISH AND GAME
FISH AND WILDLIFE
WATER POLLUTION CONTROL LABORATORY

2005 NIMBUS ROAD
RANCHO CORDOVA, CA 95670
PHONE (916) 358-2858 ATSS 8-434-2858 FAX (916) 985-4301

LABORATORY REPORT

Name: Elizabeth Frantz
Agency: PG& E
Address: 3400 Crow Canyon Rd
City: San Ramon, CA 94583

Lab Number: L-418-02
Other Number:
Date Sampled: 09/25/02
Date Received: 10/01/02
Date Completed: 10/25/02
Index-PCA Code:

RE: BRI and LBRRI – QA/QC

RESULTS OF CHEMICAL ANALYSIS:

Laboratory Identification	Sample Identification	Dissolved Copper, $\mu\text{g/L}$ (ppb)
L-418-02-1	BRI – QA/QC	2.0
L-418-02-2	LBRRI – top – QA/QC	ND
L-418-02-3	LBRRI – middle – QA/QC	0.3 J
L-418-02-4	LBRRI – bottom – QA/QC	ND
Report Limit (RL)		1.0
Detection Limit		0.3
ND – not detected		
J – less than report limit, not quantifiable		

METHOD REFERENCE:

Standard Methods for the Examination of Water and Wastewater, 18th edition, 1992, American Public Health Association, American Water Works Association, Water Pollution Control Federation, Method 3113 Electrothermal AAS.

Cost of Analysis: \$ 200.00

Martin Lopez
Analyst

10/30/02
Date

Maida Martin
Reviewed by

10/30/02
Date

DB Crane
Laboratory Director

10/30/02
Date



DFG REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY RECORD

Sampler Elizabeth Frantz Ph # 925-866-5472		Send Results To Elizabeth Frantz		Lab Number L-418-02	
Address		Address		Field Number	
3400 Crow Canyon Rd				WPCL R7	
City	Zip	City	CA	Lab Storage	
San Ramon	94583				
Date Required/Reason		Copies To		Spill Title	
		Address		Suspect	
Shipped Via		City	Zip	Index-PCA	

		Water Temp:		F or C		pH:	DO:		mg/L Conductivity:		umhos/cm	
		Petroleum Fingerprint	Trace Elements (Specify Below)	Pesticides (Specify Below)	(Specify Below)	Sample Type	Number of Containers	Preservation				
<input type="checkbox"/> Fish & Wildlife Loss Date: _____ Region: _____ <input type="checkbox"/> DFG Code Violation: _____ <input type="checkbox"/> Suspected or Potential Problem <input checked="" type="checkbox"/> Routine Analysis	Analysis Requested >>>											
	Sample Identification/Location <small>(Draw map on separate sheet if necessary)</small>		Date	Time								
	BR1 - QA/QC		9/25	1230								
	LBRR1-top-QA/QC		9/25	1615								
LBRR1-middle-QA/QC		9/25	1630									
LBRR1-bottom-QA/QC		9/25	1645									
Report to <0.3ppb report "5' flag values between MD Land RL"												
Problem Description												
Suspect/Incident Location												
Comments/Special Instructions												

Samples Relinquished By (Signature) Elizabeth Frantz		Print Name Elizabeth Frantz	Date 9/26/02	Received By (Signature) Kathleen [signature]	Print Name Kathleen [signature]	Date 10-1-02
LAB COPIES: WHITE, CANARY, PINK		SUBMITTER: GOLDENROD				

EG 1000 (Rev. 9/01)

LAB COPIES: WHITE. CANARY. PINK.

SUBMITTER: GOLDENROD

FG 1000 (Rev. 9/01)



STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 09 - 0610

Checklist completed by: (Initials) DSH Date: 09, 26/02

Courier name: ☐ STL San Francisco ☒ Client _____

Custody seals intact on shipping container/samples

Yes _____ No _____ Not Present ☒

Chain of custody present?

Yes ☒ No _____

Chain of custody signed when relinquished and received?

Yes ☒ No _____

Chain of custody agrees with sample labels?

Yes ☒ No _____

Samples in proper container/bottle?

Yes ☒ No _____

Sample containers intact?

Yes ☒ No _____

Sufficient sample volume for indicated test?

Yes ☒ No _____

All samples received within holding time?

Yes ☒ No _____

Container/Temp Blank temperature in compliance ($4^{\circ}\text{C} \pm 2$)?

Temp: 9.8 °C Yes ☒ No ☒ (1)

Water - VOA vials have zero headspace?

No VOA vials submitted ☒ Yes _____ No _____

(if bubble is present, refer to approximate bubble size and itemize in comments as **S** (small -O), **M** (medium - O) or **L** (large - O))

Water - pH acceptable upon receipt? ☒ Yes ☐ No

☐ pH adjusted- Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: (1) preserved for metals

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: _____/_____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

Submission#: 2002-09-0610

October 03, 2002

SEVERN

TRENT

LABORATORY

P.G.& E TES

3400 Crow Canyon Road
San Ramon, CA 94583-1393

Attn.: Elizabeth Frantz
Project: Mokelumne River

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

Attached is our report for your samples received on 09/26/2002 11:40

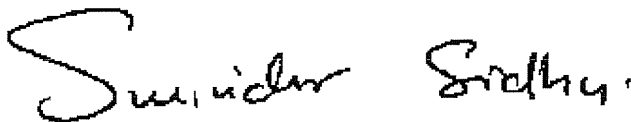
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 11/10/2002 unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions,

You can also contact me via email. My email address is: ssidhu@chromalab.com

Sincerely,



Surinder Sidhu
Project Manager

Submission #: 2002-09-0610

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
UNT10	09/25/2002 08:46	Water	1
RSC	09/25/2002 10:20	Water	2
UNT7	09/25/2002 12:40	Water	3
BRRSC2	09/25/2002 10:30	Water	4
BRRSC1	09/25/2002 10:15	Water	5
UNT11	09/25/2002 14:46	Water	6
LBRR1-TOP	09/25/2002 16:15	Water	7
LBRR1-MIDDLE	09/25/2002 16:30	Water	8
LBRR1-BOTTOM	09/25/2002 16:45	Water	9
BR2	09/25/2002 09:00	Water	10
BR1	09/25/2002 12:30	Water	11
UNT6a	09/25/2002 13:51	Water	12
UNT8a	09/25/2002 13:00	Water	13
UNT8b	09/25/2002 13:05	Water	14
UNT6b	09/25/2002 12:55	Water	15
UNT12	09/26/2002 07:30	Water	16

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT10	Lab ID:	2002-09-0610 - 1
Sampled:	09/25/2002 08:46	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00030	0.0050	mg/L	1.00	10/02/2002 21:53	

Submission #: 2002-09-0610

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

SEVERN

TRENT

LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	RSC	Lab ID:	2002-09-0610 - 2
Sampled:	09/25/2002 10:20	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00030	0.0050	mg/L	1.00	10/02/2002 22:04	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

SEVERN

TRENT

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STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT7	Lab ID:	2002-09-0610 - 3
Sampled:	09/25/2002 12:40	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00030	0.0050	mg/L	1.00	10/02/2002 22:08	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BRRSC2	Lab ID:	2002-09-0610 - 4
Sampled:	09/25/2002 10:30	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0015	0.00030	0.0050	mg/L	1.00	10/02/2002 22:12	J

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
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Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BRRSC1	Lab ID:	2002-09-0610 - 5
Sampled:	09/25/2002 10:15	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0019	0.00030	0.0050	mg/L	1.00	10/02/2002 22:16	J

Submission #: 2002-09-0610

Dissolved Metals

P.G. & E TES

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Project: Mokelumne River

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT11	Lab ID:	2002-09-0610 - 6
Sampled:	09/25/2002 14:46	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00030	0.0050	mg/L	1.00	10/02/2002 22:20	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
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Project: Mokelumne River

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-TOP	Lab ID:	2002-09-0610 - 7
Sampled:	09/25/2002 16:15	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00030	0.0050	mg/L	1.00	10/02/2002 22:24	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
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Project: Mokelumne River

Received: 09/26/2002 11:40

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	LBRR1-MIDDLE	Lab ID:	2002-09-0610 - 8
Sampled:	09/25/2002 16:30	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.00091	0.00030	0.0050	mg/L	1.00	10/02/2002 22:28	J

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

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CA DHS ELAP# 2496

Prep(s): 3005A Test(s): 6010B
Sample ID: LBRR1-BOTTOM Lab ID: 2002-09-0610 - 9
Sampled: 09/25/2002 16:45 Extracted: 10/1/2002 18:08
Matrix: Water QC Batch#: 2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00030	0.0050	mg/L	1.00	10/02/2002 22:51	

Submission #: 2002-09-0610

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz

3400 Crow Canyon Road

San Ramon, CA 94583-1393

Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

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CA DHS ELAP# 2496

Prep(s): 3005A

Test(s): 6010B

Sample ID: BR2

Lab ID: 2002-09-0610 - 10

Sampled: 09/25/2002 09:00

Extracted: 10/10/2002 08:50

Matrix: Water

QC Batch#: 2002/10/10-05.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0034	0.00030	0.0050	mg/L	1.00	10/10/2002 11:27	J

Submission #: 2002-09-0610

Dissolved Metals

P.G. & E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
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Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	BR1	Lab ID:	2002-09-0610 - 11
Sampled:	09/25/2002 12:30	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.0018	0.00030	0.0050	mg/L	1.00	10/02/2002 22:59	J

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
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Project: Mokelumne River

Received: 09/26/2002 11:40

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6a	Lab ID:	2002-09-0610 - 12
Sampled:	09/25/2002 13:51	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.031	0.00030	0.0050	mg/L	1.00	10/02/2002 23:03	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
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Project: Mokelumne River

Received: 09/26/2002 11:40

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8a	Lab ID:	2002-09-0610 - 13
Sampled:	09/25/2002 13:00	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.020	0.00030	0.0050	mg/L	1.00	10/02/2002 23:07	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
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Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT8b	Lab ID:	2002-09-0610 - 14
Sampled:	09/25/2002 13:05	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.016	0.00030	0.0050	mg/L	1.00	10/02/2002 23:11	

Submission #: 2002-09-0610

Dissolved Metals

P.G. & E TES

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Project: Mokelumne River

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CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT6b	Lab ID:	2002-09-0610 - 15
Sampled:	09/25/2002 12:55	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	0.015	0.00030	0.0050	mg/L	1.00	10/02/2002 23:15	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
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Project: Mokelumne River

Received: 09/26/2002 11:40

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s):	3005A	Test(s):	6010B
Sample ID:	UNT12	Lab ID:	2002-09-0610 - 16
Sampled:	09/26/2002 07:30	Extracted:	10/1/2002 18:08
Matrix:	Water	QC Batch#:	2002/10/01-06.15

Compound	Conc.	MDL	RL	Unit	Dilution	Analyzed	Flag
Copper	ND	0.00030	0.0050	mg/L	1.00	10/02/2002 23:19	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

Received: 09/26/2002 11:40

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Method Blank

MB: 2002/10/01-06.15-125

Water

Test(s): 6010B

QC Batch # 2002/10/01-06.15

Date Extracted: 10/01/2002 18:08

Compound	Conc.	MDL	RL	Unit	Analyzed	Flag
Copper	ND	0.0003	0.0050	mg/L	10/02/2002 21:35	

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3005A

Test(s): 6010B

Laboratory Control Spike

Water

QC Batch # 2002/10/01-06.15

LCS 2002/10/01-06.15-126

Extracted: 10/01/2002

Analyzed: 10/02/2002 21:39

LCSD 2002/10/01-06.15-127

Extracted: 10/01/2002

Analyzed: 10/02/2002 21:42

Compound	Conc. mg/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Copper	0.486	0.490	0.500	97.2	98.0	0.8	80-120	20		

Submission #: 2002-09-0610

Dissolved Metals

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Project: Mokelumne River

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CA DHS ELAP# 2496

Legend and Notes

Sample Comment

Lab ID: 2002-09-0610-1
Field-filtered & acidified.

Lab ID: 2002-09-0610-10
Field-filtered & acidified.

Lab ID: 2002-09-0610-11
Field-filtered & acidified.

Lab ID: 2002-09-0610-12
Field-filtered & acidified.

Lab ID: 2002-09-0610-13
Field-filtered & acidified.

Lab ID: 2002-09-0610-14
Field-filtered & acidified.

Lab ID: 2002-09-0610-15
Field-filtered & acidified.

Lab ID: 2002-09-0610-16
Field-filtered & acidified.

Lab ID: 2002-09-0610-2
Field-filtered & acidified.

Lab ID: 2002-09-0610-3
Field-filtered & acidified.

Lab ID: 2002-09-0610-4
Field-filtered & acidified.

Lab ID: 2002-09-0610-5
Field-filtered & acidified.

Lab ID: 2002-09-0610-6
Field-filtered & acidified.

Lab ID: 2002-09-0610-7
Field-filtered & acidified.

Lab ID: 2002-09-0610-8
Field-filtered & acidified.

Lab ID: 2002-09-0610-9
Field-filtered & acidified.

Result Flag

Submission #: 2002-09-0610

Dissolved Metals

P.G.& E TES

Attn.: Elizabeth Frantz
3400 Crow Canyon Road
San Ramon, CA 94583-1393
Phone: (925) 866-5472 Fax: (925) 866-5681

Project: Mokelumne River

J

Received: 09/26/2002 11:40

Estimated value, less than reporting limits, but over the method
detection limits.

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CA DHS ELAP# 2496