

# Laboratory Report

## Report ID: 107232



Sierra  
Environmental  
Monitoring, Inc.

Stillwater Sciences  
Attn: Noah Hume  
2855 Telegraph Ave., Suite 400  
Berkeley, CA 94705

Date: 8/10/2010  
Client: STW-90902  
Taken by: Reymann/Wood  
PO #: 398.01/1330

Dear Noah Hume,

It is the policy of Sierra Environmental Monitoring, Inc to strictly adhere to a comprehensive Quality Assurance Plan that insures the data presented in this report are both accurate and precise. Sierra Environmental Monitoring, Inc. maintains accreditation in the State of Nevada (NV-15) and the State of California (ELAP 2526).

The data presented in this report were obtained from the analysis of samples received under a chain of custody. Unless otherwise noted below, samples were received in good condition, properly preserved and within the hold time for the requested analyses. Any anomalies associated with the analysis of the samples have been flagged with appropriate explanation in the Analysis Report section of this Laboratory Report.

### General Comments:

- There are no general comments for this report.

### Individual Sample Comments:

- S201007-1461 - S201007-1461 Ortho Phosphorus re-analyzed to confirm concentration.
- S201007-1461 - S201007-1461 Total Phosphorus analyzed twice to confirm concentration.
- S201007-1462 - S201007-1462 Ortho Phosphorus re-analyzed to confirm concentration.
- S201007-1462 - S201007-1462 Total Phosphorus analyzed twice to confirm concentration.
- S201007-1464 - S201007-1464 Ortho Phosphorus re-analyzed to confirm concentration.
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- S201007-1465 - S201007-1465 Ortho Phosphorus re-analyzed to confirm concentration.
- S201007-1465 - S201007-1465 Total Phosphorus analyzed twice to confirm concentration.

Approved By:

Date:



Sierra Environmental Monitoring, Inc.

8/10/2010

This report is applicable only to the sample received by the laboratory. The liability of the laboratory is limited to the amount paid for this report. This report is for the exclusive use of the client to whom it is addressed and upon the condition that the client assumes all liability for the further distribution of the report or its contents.



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*Analysis Report*

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received				
S201007-1458	R 1	7/27/2010	10:50 AM	7/29/2010	Reporting Limit	Analyst	Date Analyzed	Data Flag
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag	
Ammonia-N	EPA 350.3	0.1	mg/L N	0.1	Pacheco	8/2/2010		
Chlorophyll a	SM 10200 H	3	ug/L	2	Keller	8/3/2010		
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	0.1	mg/L N	0.1	Pacheco	8/4/2010		
Nitrate-N - Ion Chromatography	EPA 300.0	6.1	mg/L N	0.05	Faulstich	7/29/2010	Hr	
Nitrite-N - Ion Chromatography	EPA 300.0	0.27	mg/L N	0.05	Faulstich	7/29/2010	Hr	
Phosphorus - Ortho	EPA 365.3	<0.02	mg/L	0.02	Pacheco	7/29/2010		
Phosphorus - Total	EPA 365.3	0.05	mg/L	0.02	Keller	8/3/2010		

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received				
S201007-1459	EM 1	7/27/2010	12:00 PM	7/29/2010	Reporting Limit	Analyst	Date Analyzed	Data Flag
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag	
Ammonia-N	EPA 350.3	<0.1	mg/L N	0.1	Pacheco	8/2/2010		
Chlorophyll a	SM 10200 H	42	ug/L	2	Keller	8/3/2010		
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	1.5	mg/L N	0.1	Pacheco	8/4/2010		
Nitrate-N - Ion Chromatography	EPA 300.0	3.2	mg/L N	0.05	Faulstich	7/29/2010		
Nitrite-N - Ion Chromatography	EPA 300.0	0.54	mg/L N	0.05	Faulstich	7/29/2010		
Phosphorus - Ortho	EPA 365.3	0.41	mg/L	0.02	Pacheco	7/29/2010		
Phosphorus - Total	EPA 365.3	1.0	mg/L	0.04	Keller	8/3/2010		



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***Analysis Report***

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received				
S201007-1460	EM 2	7/27/2010	12:30 PM	7/29/2010	Reporting Limit	Analyst	Date Analyzed	Data Flag
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag	
Ammonia-N	EPA 350.3	0.1	mg/L N	0.1	Pacheco	8/2/2010		
Chlorophyll a	SM 10200 H	11	ug/L	2	Keller	8/3/2010		
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	0.8	mg/L N	0.1	Pacheco	8/4/2010		
Nitrate-N - Ion Chromatography	EPA 300.0	8.5	mg/L N	0.05	Faulstich	7/29/2010		
Nitrite-N - Ion Chromatography	EPA 300.0	0.38	mg/L N	0.05	Faulstich	7/29/2010		
Phosphorus - Ortho	EPA 365.3	3.1	mg/L	0.2	Pacheco	7/29/2010		
Phosphorus - Total	EPA 365.3	3.1	mg/L	0.2	Keller	8/3/2010		

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received				
S201007-1461	EU 1	7/27/2010	10:10 AM	7/29/2010	Reporting Limit	Analyst	Date Analyzed	Data Flag
Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag	
Ammonia-N	EPA 350.3	<0.1	mg/L N	0.1	Pacheco	8/2/2010		
Chlorophyll a	SM 10200 H	42	ug/L	2	Keller	8/3/2010		
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	1.5	mg/L N	0.1	Pacheco	8/4/2010		
Nitrate-N - Ion Chromatography	EPA 300.0	2.2	mg/L N	0.05	Faulstich	7/29/2010	Hr	
Nitrite-N - Ion Chromatography	EPA 300.0	0.55	mg/L N	0.05	Faulstich	7/29/2010	Hr	
Phosphorus - Ortho	EPA 365.3	0.40	mg/L	0.02	Pacheco	7/29/2010		
Phosphorus - Total	EPA 365.3	0.18	mg/L	0.02	Keller	8/6/2010	Jl	



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***Analysis Report***

**Sample ID:** S201007-1462      **Customer Sample ID:** EU 2      **Date Sampled:** 7/27/2010      **Time Sampled:** 11:30 AM      **Date Received:** 7/29/2010

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Ammonia-N	EPA 350.3	<0.1	mg/L N	0.1	Pacheco	8/2/2010	
Chlorophyll a	SM 10200 H	21	ug/L	2	Keller	8/3/2010	
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	1.0	mg/L N	0.1	Pacheco	8/4/2010	
Nitrate-N - Ion Chromatography	EPA 300.0	2.3	mg/L N	0.05	Faulstich	7/29/2010	Hr
Nitrite-N - Ion Chromatography	EPA 300.0	0.49	mg/L N	0.05	Faulstich	7/29/2010	Hr
Phosphorus - Ortho	EPA 365.3	0.33	mg/L	0.02	Pacheco	7/29/2010	
Phosphorus - Total	EPA 365.3	0.17	mg/L	0.02	Keller	8/6/2010	Jl

**Sample ID:** S201007-1463      **Customer Sample ID:** EU 3      **Date Sampled:** 7/27/2010      **Time Sampled:** 12:15 PM      **Date Received:** 7/29/2010

Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
Ammonia-N	EPA 350.3	0.2	mg/L N	0.1	Pacheco	8/2/2010	
Chlorophyll a	SM 10200 H	<2	ug/L	2	Keller	8/3/2010	
Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	0.4	mg/L N	0.1	Pacheco	8/4/2010	
Nitrate-N - Ion Chromatography	EPA 300.0	13	mg/L N	0.05	Faulstich	7/29/2010	
Nitrite-N - Ion Chromatography	EPA 300.0	0.50	mg/L N	0.05	Faulstich	7/29/2010	
Phosphorus - Ortho	EPA 365.3	3.8	mg/L	0.2	Pacheco	7/29/2010	
Phosphorus - Total	EPA 365.3	4.0	mg/L	0.5	Keller	8/3/2010	



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**Taken by:** Reymann/Wood  
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***Analysis Report***

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received								
S201007-1464	EL 1	7/27/2010	12:50 PM	7/29/2010	Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
					Ammonia-N	EPA 350.3	<0.1	mg/L N	0.1	Pacheco	8/2/2010	
					Chlorophyll a	SM 10200 H	35	ug/L	2	Keller	8/3/2010	
					Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	1.8	mg/L N	0.1	Pacheco	8/4/2010	
					Nitrate-N - Ion Chromatography	EPA 300.0	2.5	mg/L N	0.05	Faulstich	7/29/2010	
					Nitrite-N - Ion Chromatography	EPA 300.0	0.57	mg/L N	0.05	Faulstich	7/29/2010	
					Phosphorus - Ortho	EPA 365.3	0.39	mg/L	0.04	Pacheco	7/29/2010	
					Phosphorus - Total	EPA 365.3	0.22	mg/L	0.02	Keller	8/6/2010	J1

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received								
S201007-1465	EL 2	7/27/2010	1:10 PM	7/29/2010	Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
					Ammonia-N	EPA 350.3	<0.1	mg/L N	0.1	Pacheco	8/2/2010	
					Chlorophyll a	SM 10200 H	46	ug/L	2	Keller	8/3/2010	
					Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	1.6	mg/L N	0.1	Pacheco	8/4/2010	
					Nitrate-N - Ion Chromatography	EPA 300.0	2.1	mg/L N	0.05	Faulstich	7/29/2010	
					Nitrite-N - Ion Chromatography	EPA 300.0	0.59	mg/L N	0.05	Faulstich	7/29/2010	
					Phosphorus - Ortho	EPA 365.3	0.26	mg/L	0.02	Pacheco	7/29/2010	
					Phosphorus - Total	EPA 365.3	0.17	mg/L	0.04	Keller	8/6/2010	J1



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*Analysis Report*

Sample ID:	Customer Sample ID	Date Sampled	Time Sampled	Date Received								
S201007-1466	EU 2 DUP	7/27/2010	11:30 AM	7/29/2010	Parameter	Method	Result	Units	Reporting Limit	Analyst	Date Analyzed	Data Flag
					Ammonia-N	EPA 350.3	<0.1	mg/L N	0.1	Pacheco	8/2/2010	
					Chlorophyll a	SM 10200 H	19	ug/L	2	Keller	8/3/2010	
					Kjeldahl Nitrogen - Digestion/Analys	SM 4500 N(org)	0.9	mg/L N	0.1	Pacheco	8/4/2010	
					Nitrate-N - Ion Chromatography	EPA 300.0	2.3	mg/L N	0.05	Faulstich	7/29/2010	Hr
					Nitrite-N - Ion Chromatography	EPA 300.0	0.49	mg/L N	0.05	Faulstich	7/29/2010	Hr
					Phosphorus - Ortho	EPA 365.3	0.33	mg/L	0.02	Pacheco	7/29/2010	
					Phosphorus - Total	EPA 365.3	0.36	mg/L	0.02	Keller	8/3/2010	

**Data Flag Legend:**

*Hr - Sample was received beyond holding time for this parameter and analyzed per client's request.*  
*Jl - The batch MS and/or MSD were outside acceptance limits. The batch LCS was acceptable.*



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***Quality Control Report***

<i>Parameter</i>	<i>LCS, % Recovery</i>	<i>MS, % Recovery</i>	<i>MSD, % Recovery</i>	<i>RPD, %</i>	<i>Method Blank</i>
Ammonia-N	98.0	97.0	102.0	4.82	<0.1 mg/L
Chlorophyll a				0.00	<2 ug/L
Kjeldahl Nitrogen - Digestion/Anal	97.0	89.0	89.0	0.00	
Nitrate-N - Ion Chromatography	98.0	100.0	101.0	0.99	<0.05 mg/L
Nitrite-N - Ion Chromatography	103.0	111.0	113.0	1.79	<0.05 mg/L
Phosphorus - Ortho	100.0	112.0		0.00	<0.02 mg/L
Phosphorus - Total	102.0	-13.0	-13.0	0.00	<0.02 mg/L
Phosphorus - Total	104.0	99.0	99.0	0.00	<0.02 mg/L

**Legend:** *LCS- Laboratory Control Standard*      *MS- Matrix Spike*      *MSD- Matrix Spike Duplicate*  
*RPD- Relative Percent Difference*

**SIERRA ENVIRONMENTAL MONITORING, INC.**  
 1135 FINANCIAL BOULEVARD - RENO - NEVADA - 89502



**CHAIN OF CUSTODY RECORD**

107232

PHONE: (775) 857 - 2400 FAX: (775) 857 - 2404 E-Mail sem@sem-analytical.com

Client Name Stillwater Sciences Purchase Order 398.01/1330

Address 2855 Telegraph Ave, #400 Phone/Fax # 510-848-8098

City Berkeley State CA Zip 94705 Report Attention: Noah Hume

Sampled by: M. Reymann, S. Wood Signature: [Signature]

Date Sampled	Time Sampled	Sample Type *	Sample Identification	Preservative* See Key Below	Number of Containers	TKN, NH3, NO3	NO2	Total Phosphorus	Ortho-Phosphate	Chlorophyll a	Remarks	Lab Use Only Sub-Sample pH
7/27/10	1050	2	R1	6.4	5	X	X	X	X	X	Please provide results in PDF and EDD (xls) formats. Send to Mike@stillwaterscience.com.	<2
	1200	2	EM1	6.4	5	X	X	X	X	X		>12
	1230	2	EM2	6.4	5	X	X	X	X	X		
	1010	2	EU1	6.4	5	X	X	X	X	X		
	1130	2	EU2	6.4	5	X	X	X	X	X		
	1215	2	EU3	6.4	5	X	X	X	X	X	Thanks, Mike Reymann	
	1250	2	EU1	6.4	5	X	X	X	X	X		
	1310	2	EU2	6.4	5	X	X	X	X	X		
	1130	2	EU2 Dup	6.4	5	X	X	X	X	X		

Relinquished By: [Signature] Print Name: Mike Reymann Date: 7/27/10 Time: 1600

Received By: [Signature]

Relinquished By: [Signature]

Received By: [Signature]

Received By Laboratory: [Signature] [Signature] SEM

Custody Seal Intact: Yes \_\_\_ No \_\_\_ None \_\_\_

Sample Temperature: Degrees C 5

Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense. The analytical results associated with this COC apply only to the samples as they are received by the laboratory. The liability of the laboratory is limited to the amount paid for the report.

Terms: Net thirty days on approved credit.

\* KEY: Sample Type: 1=Drinking Water, 2=Surface Water, 3=Ground Water, 4=Waste Water, 5=Soil, 6=FCRA, 7=Other  
 Preservative: 1=NaOH, 2=NaOH + ZnOAC, 3=HNO3, 4=H2SO4, 5=Na2S2O3, 6=None, 7=Other

SEM COC Form Revised 02/01