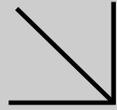




Environmental  
Calscience

Supplemental Report 1

Additional requested analyses are reported as a stand-alone report.



**WORK ORDER NUMBER: 14-10-1155**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**

**Client:** Yolo County District Attorney's Office

**Client Project Name:** Bioassay Testing

**Attention:** Heidi D'Agostino  
301 Second Street  
Woodland, CA 95695-3415

*Danielle Gonsman*

Approved for release on 11/25/2014 by:  
Danielle Gonsman  
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



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Work Order Number: 14-10-1155

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**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 10/15/14. They were assigned to Work Order 14-10-1155.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

New York NELAP air certification does not certify for all reported methods and analytes, reference the accredited items here: [http://www.calscience.com/PDF/New\\_York.pdf](http://www.calscience.com/PDF/New_York.pdf)

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

## Sample Summary

Client: Yolo County District Attorney's Office	Work Order: 14-10-1155
301 Second Street	Project Name: Bioassay Testing
Woodland, CA 95695-3415	PO Number:
	Date/Time Received: 10/15/14 11:20
	Number of Containers: 140
Attn: Heidi D'Agostino	

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
154B	14-10-1155-1	10/15/14 00:00	31	Solid
155B	14-10-1155-2	10/15/14 00:00	34	Solid
156B	14-10-1155-3	10/15/14 00:00	1	Solid
157B	14-10-1155-4	10/15/14 00:00	1	Solid
158B	14-10-1155-5	10/15/14 00:00	1	Solid
159B	14-10-1155-6	10/15/14 00:00	27	Solid
160B	14-10-1155-7	10/15/14 00:00	27	Solid
161B	14-10-1155-8	10/15/14 00:00	1	Solid
162B	14-10-1155-9	10/15/14 00:00	1	Solid
163B	14-10-1155-10	10/15/14 00:00	1	Solid
164B	14-10-1155-11	10/15/14 00:00	1	Solid
165B	14-10-1155-12	10/15/14 00:00	1	Solid
166B	14-10-1155-13	10/15/14 00:00	1	Solid
167B	14-10-1155-14	10/15/14 00:00	2	Solid
168B	14-10-1155-15	10/15/14 00:00	1	Solid
169B	14-10-1155-16	10/15/14 00:00	3	Solid
170B	14-10-1155-17	10/15/14 00:00	1	Solid
171B	14-10-1155-18	10/15/14 00:00	2	Solid
172B	14-10-1155-19	10/15/14 00:00	2	Solid
173B	14-10-1155-20	10/15/14 00:00	1	Solid



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## Analytical Report

Yolo County District Attorney's Office  
301 Second Street  
Woodland, CA 95695-3415

Date Received: 10/15/14  
Work Order: 14-10-1155  
Preparation: N/A  
Method: CA Fish and Game

Project: Bioassay Testing

Page 1 of 3

Test Species:	Fathead Minnow (Pimephales Promelas)	Mean Length:	43 mm	Mean Weight:	0.47 g
Sample Collected:	10/15/14 00:00:00	Sample Received:	10/15/14 11:20:00		
Test Start:	11/08/14 15:00:00	Test End:	11/12/14 15:00:00		

## Initial Water Quality Parameters

Residual Chlorine:	< 0.01 mg/L	Temperature:	20 °C
pH:	7.82 units	Conductivity:	910 umhos/cm
Dissolved Oxygen (D.O.):	7.12 mg/L	Alkalinity:	198 mg/L
Hardness:	42 mg/L	Ammonia:	N/A

## Sample Preparation

The sample was adjusted to test temperature.

## Sample Adjustment During Analysis

No Supplemental aeration needed.

If needed, supplemental aeration to maintain required Dissolved Oxygen level is supplied via a low pressure oil-free pump connected to individual lines for each tank/chamber from a common manifold. Individual valves at each tank/chamber control the flow rate as required.

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date/Time Analyzed	QC Batch ID
157B	14-10-1155-4	10/15/14	Solid	11/08/14	11/12/14 15:00:00	

Parameter	Result	Units
Bioassay Definitive LC50	124	mg/L

## Laboratory Notes

Sample was received within recommended holding time.

All testing was within method protocol.

## LC 50 Results

SRT sample (mg/L):	22.50	Sample (mg/L):	124.0
Upper 95% confidence limit:	23.90	Upper 95% confidence limit:	136.0
Lower 95% confidence limit:	21.10	Lower 95% confidence limit:	110.0

SRT: Standard Reference Toxicant.

## Analytical Report

Yolo County District Attorney's Office  
 301 Second Street  
 Woodland, CA 95695-3415

Date Received: 10/15/14  
 Work Order: 14-10-1155  
 Preparation: N/A  
 Method: CA Fish and Game

Project: Bioassay Testing

Page 2 of 3

Test Species:	Fathead Minnow (Pimephales Promelas)	Mean Length:	43 mm	Mean Weight:	0.47 g
Sample Collected:	10/15/14 00:00:00	Sample Received:	10/15/14 11:20:00		
Test Start:	11/08/14 15:00:00	Test End:	11/12/14 15:00:00		

## Initial Water Quality Parameters

Residual Chlorine:	< 0.01 mg/L	Temperature:	20 °C
pH:	7.83 units	Conductivity:	920 umhos/cm
Dissolved Oxygen (D.O.):	7.1 mg/L	Alkalinity:	200 mg/L
Hardness:	42 mg/L	Ammonia:	N/A

## Sample Preparation

The sample was adjusted to test temperature.

## Sample Adjustment During Analysis

No Supplemental aeration needed.

If needed, supplemental aeration to maintain required Dissolved Oxygen level is supplied via a low pressure oil-free pump connected to individual lines for each tank/chamber from a common manifold. Individual valves at each tank/chamber control the flow rate as required.

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date/Time Analyzed	QC Batch ID
158B	14-10-1155-5	10/15/14	Solid	11/08/14	11/12/14 15:00:00	

Parameter	Result	Units
Bioassay Definitive LC50	58	mg/L

## Laboratory Notes

Sample was received within recommended holding time.

All testing was within method protocol.

## LC 50 Results

SRT sample (mg/L):	22.50	Sample (mg/L):	58.00
Upper 95% confidence limit:	23.90	Upper 95% confidence limit:	63.70
Lower 95% confidence limit:	21.10	Lower 95% confidence limit:	52.20

SRT: Standard Reference Toxicant.



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## Analytical Report

Yolo County District Attorney's Office  
301 Second Street  
Woodland, CA 95695-3415

Date Received: 10/15/14  
Work Order: 14-10-1155  
Preparation: N/A  
Method: CA Fish and Game

Project: Bioassay Testing

Page 3 of 3

Test Species:	Fathead Minnow ( <i>Pimephales Promelas</i> )	Mean Length:	43 mm	Mean Weight:	0.47 g
Sample Collected:	10/15/14 00:00:00	Sample Received:	10/15/14 11:20:00		
Test Start:	11/08/14 15:00:00	Test End:	11/12/14 15:00:00		

## Initial Water Quality Parameters

Residual Chlorine:	< 0.01 mg/L	Temperature:	20 °C
pH:	7.84 units	Conductivity:	910 umhos/cm
Dissolved Oxygen (D.O.):	7.15 mg/L	Alkalinity:	198 mg/L
Hardness:	42 mg/L	Ammonia:	N/A

## Sample Preparation

The sample was adjusted to test temperature.

## Sample Adjustment During Analysis

No Supplemental aeration needed.

If needed, supplemental aeration to maintain required Dissolved Oxygen level is supplied via a low pressure oil-free pump connected to individual lines for each tank/chamber from a common manifold. Individual valves at each tank/chamber control the flow rate as required.

Client Sample Number	Lab Sample Number	Date Collected	Matrix	Date Prepared	Date/Time Analyzed	QC Batch ID
172B	14-10-1155-19	10/15/14	Solid	11/08/14	11/12/14 15:00:00	

Parameter	Result	Units
Bioassay Definitive LC50	126	mg/L

## Laboratory Notes

Sample was received within recommended holding time.

All testing was within method protocol.

## LC 50 Results

SRT sample (mg/L):	22.50	Sample (mg/L):	126.0
Upper 95% confidence limit:	23.90	Upper 95% confidence limit:	128.0
Lower 95% confidence limit:	21.10	Lower 95% confidence limit:	123.0

SRT: Standard Reference Toxicant.

## Glossary of Terms and Qualifiers

Work Order: 14-10-1155

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSO or PES/PESO associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



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WORK ORDER #: **14-10-1155**

**SAMPLE RECEIPT FORM**

Cooler 1 of 1

CLIENT: Dist. Attorney Yolo Co.

DATE: 10/15/14

**TEMPERATURE:** Thermometer ID: SC2 (Criteria: 0.0 °C – 6.0 °C, not frozen except sediment/tissue)

Temperature 21.4 °C - 0.2 °C (CF) = 21.2 °C     Blank     Sample

Sample(s) outside temperature criteria (PM/APM contacted by: 15)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

Received at ambient temperature, placed on ice for transport by Courier.

Ambient Temperature:     Air     Filter    Checked by: 15

**CUSTODY SEALS INTACT:**

Cooler     \_\_\_\_\_     No (Not Intact)     Not Present     N/A    Checked by: 15

Sample     \_\_\_\_\_     No (Not Intact)     Not Present    Checked by: 862

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Collection <u>date/time</u> , matrix, and/or # of containers logged in based on sample labels.			
<input type="checkbox"/> No analysis requested. <input type="checkbox"/> Not relinquished. <input type="checkbox"/> No date/time relinquished.			
Sampler's name indicated on COC.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Sample container label(s) consistent with COC.....	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and good condition.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers and sufficient volume for analyses requested.....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Analyses received within holding time.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Aqueous samples received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfides <input type="checkbox"/> Dissolved Oxygen.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation noted on COC or sample container.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Tedlar bag(s) free of condensation.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:**

**Solid:**  4ozCGJ     8ozCGJ     16ozCGJ     Sleeve (\_\_\_\_)     EnCores®     TerraCores®     various

**Aqueous:**  VOA     VOA<sub>h</sub>     VOAn<sub>2</sub>     125AGB     125AGB<sub>h</sub>     125AGB<sub>p</sub>     1AGB     1AGBna<sub>2</sub>     1AGBs

500AGB     500AGJ     500AGJs     250AGB     250CGB     250CGBs     1PB     1PBna     500PB

250PB     250PBn     125PB     125PBz<sub>nna</sub>     100PJ     100PJna<sub>2</sub>     \_\_\_\_\_     \_\_\_\_\_     \_\_\_\_\_

**Air:**  Tedlar®     Canister    **Other:**  \_\_\_\_\_    **Trip Blank Lot#:** \_\_\_\_\_    **Labeled/Checked by:** 862

**Container:** C: Clear A: Amber P: Plastic G: Glass J: Jar B: Bottle Z: Ziploc/Resealable Bag E: Envelope    **Reviewed by:** 862

**Preservative:** h: HCL n: HNO<sub>3</sub> na<sub>2</sub>:Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub> na: NaOH p: H<sub>3</sub>PO<sub>4</sub> s: H<sub>2</sub>SO<sub>4</sub> u: Ultra-pure z<sub>nna</sub>: ZnAc<sub>2</sub>+NaOH f: Filtered    **Scanned by:** 862

\*no collection date and time per label.

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WORK ORDER #: 14-10-

## SAMPLE ANOMALY FORM

**SAMPLES - CONTAINERS & LABELS:**

**Comments:**

- Sample(s) NOT RECEIVED but listed on COC
- Sample(s) received but NOT LISTED on COC
- Holding time expired – list sample ID(s) and test
- Insufficient quantities for analysis – list test
- Improper container(s) used – list test
- Improper preservative used – list test
- No preservative noted on COC or label – list test & notify lab
- Sample labels illegible – note test/container type
- Sample label(s) do not match COC – Note in comments
  - Sample ID
  - Date and/or Time Collected
  - Project Information
  - # of Container(s)
  - Analysis
- Sample container(s) compromised – Note in comments
  - Water present in sample container
  - Broken
- Sample container(s) not labeled
- Air sample container(s) compromised – Note in comments
  - Flat
  - Very low in volume
  - Leaking (Not transferred - duplicate bag submitted)
  - Leaking (transferred into Calscience Tedlar® Bag\*)
  - Leaking (transferred into Client's Tedlar® Bag\*)
- Other: \_\_\_\_\_

*(-2) Received 36 containers instead of 34.*

**HEADSPACE – Containers with Bubble > 6mm or ¼ inch:**

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

Comments: \_\_\_\_\_

\*Transferred at Client's request.

Initial / Date: *802* 10/15/14

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