December 23, 2014

Mr. Samuel Unger
Executive Officer
State Regional Water Quality Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Nursery Growers Association
Los Angeles County Irrigated Lands Group
Conditional Waiver for Irrigated Lands
ANNUAL MONITORING REPORT-YEAR THREE UNDER ORDER # R4-2010-0186 (MAY 15, 2013 THROUGH MAY 14, 2014)

Dear Mr. Unger:

PW Environmental prepared this *Annual Monitoring Report* on behalf of Nursery Growers Association, Los Angeles County Irrigated Lands Group (LAILG). Monitoring and reporting was conducted in accordance with the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (CWIL; Order # R4-2010-0186), and the associated Quality Assurance Project Plan and Monitoring and Reporting Plan submitted by LAILG.

During the second sampling year under the CWIL (May 15, 2012 through May 14, 2013), two sampling events were conducted during the dry season and one sampling event was conducted during the wet season. Due to the low rainfall conditions throughout the sampling year, sufficient rain was not encountered to trigger a second wet season sampling event. Five samples were collected in the one sampling event of the wet season.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment.

Respectfully submitted,

Los Angeles Irrigated Lands Group

Tara C. Herrera
Project Manager

PWENVIRONMENTAL

ANNUAL MONITORING REPORT-
YEAR THREE UNDER ORDER # R4-2010-0186
(MAY 15, 2013 THROUGH MAY 14, 2014)

NURSERY GROWERS ASSOCIATION
LOS ANGELES COUNTY
IRRIGATED LANDS GROUP

December 23, 2014

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ACRONYMS

ABC	Aquatic Bioassay and Consulting Laboratories
ALB	Aquatic Life Benchmark
AMR	Annual Monitoring Report
BMP	Best Management Practice
COC	Chain of Custody
CWIL	Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order #R4-2010-0186)
EPA	United States Environmental Protection Agency
GPS	Global Positioning System
LAILG	Los Angeles Irrigated Lands Group
LARWQCB	Los Angeles Regional Water Quality Control Board
MDL	Method Detection Limit
MRP	Monitoring and Reporting Plan
NGA	Nursery Growers Association
OC	Organochlorinated Pesticides
OP	Organophosphate Pesticides
PW	PW Environmental
PP	Pyrethroid Pesticides
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QAQC	Quality Assurance Quality Control
RPD	Relative Percent Difference
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
TIE	Toxicity Identification Evaluation
TUc	Toxicity concentration in toxicity units
WMA	Watershed Management Area
WQBs	Water Quality Benchmarks
WQMP	Water Quality Management Plan

ANNUAL MONITORING REPORT-YEAR THREE UNDER ORDER # R4-2010-0186 (MAY 15, 2013 THROUGH MAY 14, 2014)

NURSERY GROWERS ASSOCIATION
LOS ANGELES COUNTY IRRIGATED LANDS GROUP

1.0 INTRODUCTION

The NGA is a non-profit association chartered in the late 1950s. The purpose of NGA is to foster and encourage the growth and development of quality stock and to promote all matters that pertain to the best interests of the wholesale nursery growers. NGA developed the LAILG for compliance with the CWIL, Order #R4-2010-0186. PW was contracted by NGA to manage the technical aspect of the LAILG.

The LARWQCB is a State of California Agency that regulates water quality within the coastal watershed of Ventura and Los Angeles Counties under the authorities of the Federal Clean Water Act and State Porter Cologne Water Quality Control Act. The area under the jurisdiction of the LARWQCB is known as the Los Angeles Region.

In the Los Angeles Region, irrigated crops are the dominant agricultural land use. Water quality impacts associated with agriculture can be primarily traced to discharges resulting from irrigation or stormwater. These discharges typically contain pollutants that have been imported or introduced into the irrigation or stormwater; in addition, irrigation practices can mobilize and or concentrate some pollutants. In order to mitigate these potentially polluted discharges from impacting the beneficial uses of water bodies within the Los Angeles Region, the LARWQCB adopted a CWIL (Order No. R4-2005-0080) on November 3, 2005, as mandated by state law and policy.

The LAILG has members within the Dominguez Channel LA/Long Beach Harbors WMA, the Los Angeles River Watershed, the San Gabriel River Watershed, the Santa Monica Bay WMA, and the eastern portion of the Santa Clara River Watershed. AMRs submitted by the LAILG during the original CWIL term reported runoff water quality that exceeded established water quality benchmarks. All five Watersheds and WMAs have impacted waterbodies that appear on the Federal 303(d) list, and listed contaminants include constituents that could be related to agricultural uses.

On October 7, 2010, the LARWQCB adopted a second CWIL for the Los Angeles Region (Order No. R4-2010-0186). Under the second CWIL, water quality monitoring is to be continued throughout the Los Angeles Region. Exceedances are to be dealt with by implementing a WQMP that establishes procedures to reduce or eliminate pollutant loading into receiving waters. The goal of this program is to protect and improve water quality, and to attain water quality objectives in the receiving water bodies. As a condition of the CWIL program, dischargers are required to implement monitoring programs to assess the impacts of discharges from irrigated lands.

The objective of this AMR is to evaluate compliance with water quality benchmarks established in the CWIL during the third year of Order No. R4-2010-0186, and to report findings to the

LARWQCB as specified in the MRP. This AMR describes the monitoring efforts and results that have been undertaken by the NGA for compliance with the CWIL from May 15, 2013 through May 14, 2014, along with presenting historical data collected throughout the life of the program.

Implementation and results from the WQMP will be presented in a standalone WQMP update report, and are not included in this document.

2.0 BACKGROUND AND SAMPLING METHODOLOGY

As of September 2014, the LAILG is comprised of 209 sites and an estimated 1,683.61 irrigated acres. A complete list of current group members is included in Appendix A.

As outlined in the MRP, dated April 7, 2011, the LAILG collects water quality data at 20 sampling sites throughout each year. All enrolled growers are segregated into four distinct sampling regions (Group 1 - Group 4) based on their geographic location. The majority of the sampling sites were continued from the last CWIL period and the sampling region boundaries were established to ensure that each group contained 4 of the 16 established fixed sampling sites and approximately the same number of total enrolled growers. Refer to Appendix A for all LAILG enrolled growers and sampling regions. An updated map of enrolled members is currently being prepared, and will be submitted to the LARWQCB upon completion.

A rotating sampling schedule was implemented for the 16 fixed sampling sites; 4 sites are sampled during each distinct sampling event. The sampling groups are cycled throughout the year, ensuring that each fixed sample site is visited at least once per year (Table 1). The approved sampling schedule ensures each sampling group collects a sample during each possible event (first or second, wet and dry) throughout the CWIL period.

Table 1 Sampling Schedule

YEAR	DRY SEASON MAY 15-OCTOBER 14		WET SEASON OCTOBER 15-MAY 14	
	EVENT #1	EVENT #2	EVENT #1	EVENT #2
1 (MAY 15, 2011-MAY 14, 2012)	GROUP 1	GROUP 2	GROUP 3	GROUP 4
2 (MAY 15, 2012-MAY 14, 2013)	GROUP 2	GROUP 3	GROUP 4	GROUP 1
3 (MAY 15, 2013-MAY 14, 2014)	GROUP 3	GROUP 4	GROUP 1	GROUP 2
4 (MAY 15, 2014-MAY 14, 2015)	GROUP 4	GROUP 1	GROUP 2	GROUP 3

A single revolving sampling site was added to the four fixed sampling sites for each sampling event. Five sites were chosen for each sampling group region to serve as potential revolving sampling sites. Revolving sampling sites have been chosen using the criteria listed above. Fixed and revolving sampling sites are presented on Table 2 in Section 3.

For each sampling event, the revolving sampling site is selected from the list of potential revolving sampling sites for each sampling group region. The revolving site sampled is selected from the sampling group region scheduled for a particular sampling event.

If an exceedance is detected in a revolving sampling site, that site will be re-visited and re-sampled when the particular sampling group region is scheduled for the following years sampling event. If no exceedance is detected, or samples are not collected, a new revolving site is selected for the following years sampling event.

3.0 CURRENT EVENTS

Since the onset of Order R4-2010-0186, a number of growers that were originally selected as sampling locations (fixed and rotating) have abandoned operations and are no longer enrolled in the group. In group two, one fixed sampling location was lost and two rotating sampling locations were lost, and in group three one fixed sampling location was lost and one rotating sampling location was lost. Groups one and four remain the same. In order to compensate the losses, NGA turned rotating sampling sites into fixed locations, and added additional rotating sites as necessary.

The fixed sampling location that was lost from group two was replaced by a parcel operated by the same grower, and should be roughly equivalent. The fixed sampling location lost from group three was from a large grower, and was replaced by a medium sized grower that was previously a rotating site.

The updated site list is presented on Table 2. Appendix A presents the most recent list of enrolled members, and Figures 1 through 1.5 presents the most recent maps of members enrolled in the program.

A WQMP was submitted to the LARWQCB on July 26, 2013, and was conditionally approved in a letter dated November 26, 2013. The currently approved version of the WQMP has begun implementation, but is currently behind schedule due to language barriers encountered during the data collection process. LAILG is currently in the process of addressing this concern, and is revising a data collection website and text message data collection system. Currently, it is anticipated that sufficient information will be collected to prepare an updated WQMP by the end of the first quarter, 2015.

Education requirements for the group are continuing on an on-going basis. Educational records for members of the LAILG are kept on file by NGA, and are available upon request.

Table 2 – Fixed Sampling Locations

NAME	SITE #	APPROXIMATE GPS LOCATION	ADDRESS	ACRES IRRIGATED	CROP TYPE
GROUP 1					
Boething Treeland Farms, Inc.	19	N 34° 09' 51.1" W 118° 38' 20.7"	23475 Long Valley Road Woodsland Hills, CA	14.68	General Ornamentals
Norman's Nursery	125	N 34° 05' 42.3" W 118° 04' 53.5"	8550 E Broadway San Gabriel, CA	7.00	General Ornamentals
Ultra Greens Nursery	178	N 34° 17' 57.4" W 118° 25' 06.5"	13102 Maclay Street Sylmar, CA	8.50	General Ornamentals
Valley Sod Farms, Inc.	184	N 34° 13' 23.1" W 118° 29' 34.5"	16405 Chase Street North Hills, CA	36.00	Sod Farms
GROUP 2					
Acosta Growers, Inc.	11	N 34° 06' 38.0" W 117° 54' 19.9"	669 S. Azusa Ave Azusa, CA	7.50	General Ornamentals
Rainbow Garden Nursery	110	N 34° 07' 05.5" W 117° 52' 19.8"	1132 S Grand Avenue Glendora, CA	3.75	Retail / Multiple
Colorama Wholesale Nursery	150	N 34° 08' 27.5" W 117° 55' 35.9"	1025 N. Todd Ave. Asuza, CA	15.30	Color Plants
West Covina Wholesale	189	N 34° 06' 58.1" W 117° 47' 05.1"	3425 Damien Ave La Verne, CA	1.25	General Ornamentals
GROUP 3					
Coiner Nursery	31	N 34° 02' 19.1" W 118° 01' 28.4"	285 San Fidel La Puente, CA	48.00	General Ornamentals
H&H Nursery	64	N 33° 52' 07.1" W 118° 08' 32.4"	6220 Lakewood Boulevard Lakewood, CA	2.50	Retail / Multiple
Centeno's Nursery and Landscaping	81	N 33° 52' 46.9" W 118° 09' 20.7"	6850 Paramount Blvd Long Beach , CA	3.00	General Ornamentals
SY Nursery Inc.	168	N 33° 50' 59.2" W 118° 04' 36.0"	19900 S Pioneer Blvd Cerritos, CA	4.75	General Ornamentals
GROUP 4					
ABC Nursery, Inc.	4	N 33° 52' 55.7" W 118° 16' 06.0"	424 E. Gardena Boulevard Gardina, CA	11.51	General Ornamentals
New West Growers	53	N 33° 52' 51.1" W 118° 12' 56.3"	1601 S. Santa Fe Ave Compton, CA	1.70	General Ornamentals
T-Y Nursery	176	N 33° 51' 18.7" W 118° 23' 10.9"	Between Flagler/Paulina Redondo Beach, CA	7.50	General Ornamentals
Church Estate Vineyards	210	N 34° 01' 10.0" W 118° 49' 05.6"	6415 Busch Drive Malibu, CA	2.75	Vineyard

Table 2 – Rotating Sampling Locations

NAME	SITE #	APPROXIMATE GPS LOCATION	ADDRESS	ACRES IRRIGATED	CROP TYPE
GROUP 1					
Canyon Way Nursery	26	N 34° 12' 04.9" W 118° 13' 22.3"	11745 Sherman Way Studio City, CA	4.25	General Ornamentals
Live Art Plantscapes, Inc.	105	N 34° 14' 34.3" W 118° 32' 36.1"	18809 Plummer St Northridge, CA	1.80	Greenhouse
Green Landscape Nursery	143	N 34° 23' 01.2" W 118° 31' 34.1"	22216 1/2 Placerita Canyon Rd Newhall, CA	4.00	General Ornamentals
Sakaida Nursery, Inc.	158	N 34° 06' 49.0" W 118° 04' 54.8"	8538-8601 Longden Ave San Gabriel, CA	6.89	General Ornamentals
Worldwide Exotics Inc	204	N 34° 16' 23.8" W 118° 22' 06.1"	11157 Orcas Avenue Lake Terrace, CA	2.00	General Ornamentals
GROUP 2					
Coiner Nursery	32	N 34° 6' 25.9" W 117°46' 19.7"	3000 B Street La Verne, CA	15.00	General Ornamentals
West Covina Wholesale	188	N 34° 05' 38.0" W 117° 47' 31.3"	West end of Puddingstone La Verne, CA	15.25	General Ornamentals
El Nativo Growers, Inc.	202	N 34° 06' 34.8" W 117°56' 29.8"	200 S. Peckham Azusa, CA	7.00	General Ornamentals
Choji Matsushita	226	N 34° 06' 52.9" W 117°48' 41.1"	724 N. Cataract Avenue San Dimas, CA	1.70	Cutflower
Organicado	255	N 34° 08' 55.0" W 117°58' 24.4"	460 Old ranch Road Bradbury, CA	1.00	Orchard
GROUP 3					
Carreon Nursery	50	N 34° 03' 10.6" W 118° 05' 48.5"	7900 La Merced Road Rosemead, CA	6.00	General Ornamentals
Humedo Nursery	70	N 33° 55' 00.5" W 118° 06' 44.3"	10040 Imperial Highway Downey, CA	2.20	General Ornamentals
San Gabriel Nursery & Florist	162	N 34° 02' 27.4" W 118° 06' 20.5"	2015 Potrero Grande Monterey Park, CA	6.00	General Ornamentals
Lam Farms	212	N 33° 53' 34.5" W 118° 08' 49.9"	8600 Jefferson Street Paramount, CA	1.00	Row Crop
ABC Rhubarb Farms	261	N 33° 57' 44.0" W 118° 09' 19.3"	6208 Clara Street Bell Gardens, CA	5.00	Row Crop
GROUP 4					
Color Spot Nurseries, Inc.	33	N 33° 48' 28.6" W 118° 16' 59.9"	321 W. Sepulveda Blvd Carson, CA	18.50	Color Plants
International Plant Growers, Inc.	73	N 33° 47' 55.4" W 118° 17' 26.0"	24500 Vermont Ave Harbor City, CA	5.00	Color Plants
Toro Nursery Inc.	170	N 33° 52' 15.3" W 118° 19' 35.9"	17585 Crenshaw Blvd Torrance, CA	15.78	Color Plants
The Malibu Vineyard	221	N 34° 02' 36.5" W 118° 38' 47.5"	3222 Rambla Pacifico Malibu, CA	2.00	Vineyards
Schoelkopf Vineyard	224	N 34° 02' 19.6" W 118° 51' 36.9"	31499 Pacific Coast Hwy Malibu, CA	0.80	Vineyards

4.0 SAMPLING EVENTS

During the dry season of the third year of the program, which lasted from May 15, 2013 through October 14, 2013, fixed and rotating sampling sites from Group #3 and Group #4 were visited on October 10, 2013 and October 11, 2013, respectively. All sampling sites were visited during normal operating hours with visits lasting for one hour or for a complete watering cycle, whichever was greater. During the visits, irrigation watering practices were observed and noted. Inspections included communicating with site operators regarding recently implemented BMPs at each site and verifying BMPs that had been implemented in the past. Irrigation runoff was not observed and samples were not collected at any of the selected sites visited during the dry season. Photographs were taken at each site, and are included in Section 6.

During the wet season of the third year of the program, which lasted from October 15, 2013 through May 14, 2014, fixed and rotating sampling sites from Group #1 were visited on February 28, 2014. Due to a lack of qualifying storm events during daylight hours, a second sampling event was not conducted during the wet season. During the sampling event on February 28, 2014, all of the five sites visited had sufficient stormwater runoff to collect samples.

A total of 69 samples have been collected by LAILG during the life of the program. The majority of the samples were collected during the first two years of the CWIL, prior to the suspension of the monitoring group. Samples were primarily from storm water runoff during the wet season; irrigated runoff from the dry season has not been encountered since 2008. This is in part due to a concerted effort by LAILG to educate growers on field conditions that were observed during sampling events, to eliminate dry season runoff. A summarized history of collected samples is presented on Table 3. A complete history of collected samples in presented in Appendix B.

Table 3- Sampling Timeline

	CWIL Order # R4-2005-0080												Total
	YEAR 1 [1]				YEAR 2 [2]				YEAR 3		YEAR 4		
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season	Dry Season	Wet Season	
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #1	Event #1	
Number of Samples Collected	5	3	14	8	2	1	8	11	0	ns*	0	ns*	52
Total Number of Sites Visited	16	16	16	16	14	14	18	18	18	N/A	18	N/A	164

1 Wet Season sampling events took place over five storms due to localized rain patterns and a general lack of uniform storm intensity and duration.

2 Wet Season sampling events took place during two storm days where all sites were visited.

	CWIL Order # R4-2010-0186													Total
	Interim Sampling Event [3]	YEAR 1				YEAR 2				YEAR 3				
		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		
	March 2011	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	0	5	0	17
Total Number of Sites Visited	4	5	5	5	5	5	5	na	na	5	5	5	na	49

3 The previous CWIL (Order R4-2005-0080) was replaced on October 7, 2010 with the adoption of a new Waiver (Order R4-2010-0186). As a good faith measure, the LAILG conducted a sampling event during the wet season between the execution of the new CWIL and the required submittal date of an MRP on April 7, 2011.

5.0 WATER QUALITY BENCHMARKS

Samples were collected and analyzed as presented in the MRP and QAPP. Table 4 presents the list of constituents analyzed during this reporting period.

Table 4- List of Constituents for Testing

CONSTITUENT	UNITS	FIELD/LABORATORY TEST
Flow	Cubic feet per second	Field
pH	pH units	Field
Temperature	°F	Field
Dissolved Oxygen	mg/L	Field
Turbidity	NTU	Field
Total Dissolved Solids	mg/L	Laboratory
Total Suspended Solids	mg/L	Laboratory
Hardness (as)	mg/L	Laboratory
Chloride	mg/L	Laboratory
Ammonia	mg/L	Laboratory
Nitrate-Nitrogen	mg/L	Laboratory
Phosphate	mg/L	Laboratory
Sulfate	mg/L	Laboratory
Total Copper	ng/L	Laboratory
Organophosphate	ng/L	Laboratory
Organochlorines	ng/L	Laboratory
Toxaphene	ng/L	Laboratory
Pyrethroids	ng/L	Laboratory
Toxicity		Laboratory
Trash	Observations	Field

[1] Organophosphate Suite: Bolstar, Chlorpyrifos, Demeton, Diazinon, Dichlorvos, Dimethoate, Disulfoton, Ethoprop, Fenchlorophos, Fensulfothion, Fenthion, Malathion, Merphos, Methyl Parathion, Mevinphos, Phorate, Tetrachlorvinphos, Tokuthion, Trichloronate.

[2] Organochlorine Suite: 2.4' - DDD, 2,4' - DDE, 2,4' DDT, 4,4' -DDD, 4,4' -DDE, 4,4' -DDT, Aldrin, BHC-alpha, BHC-beta, BHC-delta, BHC-gamma, Chlordane-alpha, Chlordane-gamma, Dieldrin, Endosulfan sufate, Endosulfan-I, Endosulfan-II, Endrin, Endrin Aldehyde, Endrin Ketone.

[3] Chronic Toxic Unit is the reciprocal of the sample concentration that caused no observable effect on the test organism by the end of a chronic toxicity test.

mg/l	milligrams per liter
ng/L	nanograms per liter
	degrees Fahrenheit
TUc	chronic toxic unit
NTU	nephalitic turbidity units

5.1 Water Quality Benchmarks

The following tables present water quality benchmarks that apply to this program. They are derived from language included in Appendix 1 and Appendix 2 of the Waiver, along with the Water Quality Control Plan Los Angeles Region (Basin Plan) objectives, California Toxics Rule benchmarks, USEPA ALB guidelines, and CCR Title 22 maximum contamination levels for municipal water (organic chemicals).

For the purpose of analysis, benchmarks are broken into four general groups: general chemistry (including nutrients), pesticides, toxicity, and field monitoring results.

General Chemistry

General Chemistry water quality objectives for each site were obtained from the *Water Quality Control Plan, Los Angeles Region*, dated June 13, 1994. To choose the most appropriate water quality objectives for each site, all sites were assumed to drain through storm drains that ran perpendicularly to the closest blue line stream. The most relevant stream reach and related water quality objectives were chosen for each site using this assumption. Table 5 outlines the site-specific water quality objectives and associated fixed sampling sites used to evaluate general chemistry results for this report. Rotating sites are evaluated on a case-by-case basis.

Table 5. Water Quality Benchmarks, General Chemistry

Watershed/stream reach	NGA Site #	Ammonia	TDS	Sulfate	Chloride	Nitrogen	TSS	Copper (µg/L)	Phosphate
Los Angeles River:									
Between Figueroa and Willow St.	53, 81	a)	1,500	350	150	8	—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
Above Figueroa St.	19, 184	a)	950	300	150	8	—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
Rio Hondo above Santa Ana Freeway	125	a)	750	300	150	8	—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
Pacoima Wash above Pacoima spreading grounds	178	a)	250	30	10	MUN	—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
San Gabriel River:									
Between Firestone Blvd. and San Gabriel River Estuary	168, 64	a)	MUN				—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
Between Ramona and Firestone Blvd.	11, 31, 189, 110	a)	750	300	150	8	—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
Between Morris Dam and Ramona Blvd.	150	a)	450	100	100	8	—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
Dominguez Channel	4	a)	MUN				—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
Santa Monica Bay	176, 210	a)	MUN				—	$CCC=0.960e^{[(0.8545(\ln(\text{hardness}))+(-1.702)]}$	—
USEPA Municipal Drinking Water Standard		a)	500	250	400	10	—	1.3 (mg/L)	—

* All limits are recorded for milligrams per liter (mg/L)

a) Limit varies as a factor of temperature and pH. Objectives based on corresponding field readings for WARM water (One-hour average concentration), as outlined in the Water Quality Control Plan, Los Angeles Region

MUN No site specific objectives have been established. Objectives are based on USEPA guidelines for municipal drinking water standards.

— No numeric benchmarks, water quality benchmarks shall be based on the surface water and groundwater basin objectives currently contained in the Water Quality Control Plan Los Angeles Region (Basin Plan) or other applicable water quality standards established for the Los Angeles Region.

Pesticides

Pesticide water quality objectives were taken from the Waiver, USEPA ALB guidelines, and the California Toxics Rule. Table 6 presents pesticide benchmarks outlined in the Waiver. Table 7 presents OC pesticide benchmarks outlined by the California Toxics Rule.

Table 6. Water Quality Benchmarks, Pesticides, CWIL

CONSTITUENT	UNITS	WATER QUALITY BENCHMARK
Chlordane	µg/L	0.00059
4,4' - DDT	µg/L	0.00059
4,4' - DDD	µg/L	0.00084
DDE	µg/L	0.00059
Dieldrin	µg/L	0.00014
Toxaphene	µg/L	0.00075
Chlorpyrifos	µg/L	0.025
Diazinon	µg/L	0.10
µg/L micrograms per liter		

Table 7. Additional Water Quality Benchmarks, Pesticides, California Toxics Rule

C O N S T I T U E N T	UNITS	WATER QUALITY BENCHMARK Human Health (30-day Average) Drinking Water Sources (consumption of water and aquatic organisms)
Aldrin	ug/L	0.00013
alpha-BHC	ug/L	0.0039
beta-BHC	ug/L	0.014
gamma-BHC (Lindane)	ug/L	0.019
Endosulfan and derivatives	ug/L	110
Endrin	ug/L	0.76
Endrin aldehyde	ug/L	0.76
Heptachlor	ug/L	0.00021
Heptachlor epoxide	ug/L	0.0001

Table 8 presents ALB benchmarks for OP and pyrethroid pesticides. Any pesticide that exceeded the value reported for acute invertebrates were considered a water quality exceedance for LAILG evaluation purposes. The guidelines for acute invertebrates were chosen because historically the most sensitive species in toxicity testing was Ceriodaphna dubia, a species of water flea. The CWIL does not directly cover benchmarks for these constituents, and does not specifically require ALB benchmarks to be considered as WQBs.

Table 8. Water Quality Benchmarks, Pesticides, Aquatic Life Benchmarks

Pesticides	Footnote	CAS Number	Fish		Invertebrates		Nonvascular Plants	Vascular Plants	Office of Water Aquatic Life Criteria	
			Acute 1	Chronic 2	Acute 3	Chronic 4	Acute 5	Acute 6	Maximum Concentration (CMC)	Continuous Concentration (CCC)
OP Pesticides										
Azinphos Methyl	9	86-50-0	0.18	0.055	0.08	0.036	—	—	—	—
Coumaphos	10	56-72-4	140	11.7	0.037	0.0337	—	—	—	—
Dichlovos (DDVP)		62-73-7	91.50	5.200	0.035	0.0058	14,000	—	—	—
Dimethoate	9	60-51-5	3100	430	21.5	0.5	84	—	—	—
Disulfoton	9	298-04-4	19.5	4	1.95	0.01	—	—	—	—
Ethoprop		13194-48-4	150	24	22	0.8	8,400	—	—	—
Fenthion	8	55-38-9	415	7.5	2.6	0.013	400	> 2,800	—	—
Malathion		121-75-5	16.5	8.6	0.295	0.035	2,400	>9,630	—	0.1
Methyl Parathion	13	298-00-0	925	< 10	0.485	0.25	15,000	18,000	—	—
Naled		300-76-5	46	2.9	0.07	0.045	25	> 1,800	—	—
Phorate	8	298-02-2	1.175	0.34	0.3	0.21	> 1,300	—	—	—
Pyrethroid Pesticides										
Allethrin		584-79-2	9.5	—	1.05	—	—	—	—	—
Bifenthrin		82657-04-3	0.075	0.04	0.8	0.0013	—	—	—	—
Cyfluthrin		68359-37-5	0.034	0.01	0.0125	0.0074	<181	—	—	—
Cypermethrin		52315-07-8	0.195	0.14	0.21	0.069	—	—	—	—
Fenpropathrin (Danitol)		64257-84-7	1.1	0.091	0.265	0.064	—	—	—	—
Deltamethrin		52918-63-5	0.29	0.017	0.055	0.0041	—	—	—	—
Esfenvalerate	9	66230-04-4	0.035	0.035	0.025	0.017	—	—	—	—
Lambda-cyhalothrin		91465-08-6	0.105	0.031	0.0035	0.002	> 310	—	—	—
Pendimethalin		40487-42-1	69	6.3	140	14.5	5.2	12.5	—	—
Permethrin	16	52645-53-1	0.395	0.0515	0.0106	0.0014	68	—	—	—
Prallethrin		23031-36-9	6	3	3.1	0.65	—	—	—	—
Sumithrin		26002-80-2	7.9	1.1	2.2	0.47	—	—	—	—
Telfluthrin		79538-32-2	0.03	0.004	0.035	0.008	—	—	—	—

Limits Reported in ug/L

[8] Because the underlying toxicity value is a "greater-than" value (such as >265,000), this benchmark may overestimate toxicity.

[9] The chronic benchmark is based on the acute toxicity value (which was lower than the lowest available chronic toxicity value), and therefore may underestimate chronic

[10] Although the underlying acute toxicity value is greater than or equal to the chronic toxicity value, the acute benchmark is lower than the chronic benchmark because acute and chronic toxicity values were multiplied by LOC values of 0.5 and 1, respectively.

[13] Because the underlying toxicity value is a "less-than" value (such as <1,500), this benchmark may underestimate toxicity.

[16] Toxicity values and benchmarks apply to permethrin. If monitoring data represent only the *cis* isomer of permethrin in water, comparison with benchmarks may underestimate potential toxicity.

Toxicity

Toxicity water quality objectives were determined as outlined in the MRP and QAPP, and through communications with ABC laboratory. Because tests are run on 100% concentration of samples (no dilution water), numerical values of TUc cannot be accurately determined. Due to the lack of TUc values, a TIE was generally run on samples that exhibited a high mortality. Chronic toxicity testing was conducted for *Pimephales promelas* (fathead minnow), *Ceriodaphnia* (water flea), and *Selenastrum capricornutum* (green algae).

Adequate sample volume was collected during sampling events so that TIE procedures could be initiated as soon as possible after toxicity was observed. TIE testing was only initiated if initial testing indicated the presence of significant toxicity in the sample. For the purpose of triggering TIE procedures, significant toxicity was defined as at least 50 percent mortality or a 50 percent reduction in growth. The 50 percent threshold is consistent with the approach recommended in guidance published by the EPA for conducting TIEs, which recommends a minimum threshold of 50 percent mortality because the probability of completing a successful TIE decreases rapidly for samples with less than this level of toxicity.

Field Monitoring

For field monitoring results, the Basin Plan for the Los Angeles Region contains narrative objectives for certain chemicals, most notably: biostimulatory substances, temperature, pH, turbidity, and Total Suspended Solids. Table 9 presents field monitoring and toxicity benchmarks, as outlined in the Los Angeles Basin Plan. These narrative objectives contain verbiage stating that the natural or ambient conditions of receiving waters are not to be altered by discharges, including some of the constituents listed above. This is problematic, as natural or ambient conditions have not been established in many receiving waters, and discharges from growing operations in the urban Los Angeles Region drain primarily to storm drains. The ultimate endpoint of these storm drains are not well mapped or established, and are comingled with discharges from a number of land use types. Due to the difficulty in ascertaining the impacts to receiving waters, it is assumed in this report that discharges do not affect the receiving water bodies in a large enough magnitude to alter natural or ambient conditions.

Table 9. Water Quality Benchmarks, Field Monitoring and Toxicity

Constituent	Narrative Objective	Applicable Benchmarks
pH	The pH of inland surface water shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed by more than 0.5 pH units from natural conditions as a result of waste discharges.	$6.5 \leq pH \leq 8.5$ Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
Temperature	For water designated WARM, water temperature shall not be altered by more than 5°F above natural temperature. At no time shall WARM-designated waters be raised above 80°F as a result of water discharge	WARM: ≤ 80°F Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
	For waters designated as COLD, water temperature shall not be altered by more than 5°F above the natural temperature.	COLD: No numeric benchmark. Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established.
Dissolved Oxygen	No single dissolved oxygen determintation shall be less than 5 mg/L, except when natural conditions cause lesser concentrations.	≥ 5 mg/L
	The dissolved owygen content of all surface waters designated as WARM shall not be depressed below 5 mg/L as a result of waste discharge.	WARM: ≥ 5 mg/L
	The dissolved owygen content of all surface waters designated as COLD and SPWN shall not be depressed below 7 mg/L as a result of waste discharge.	COLD, SPWN: ≥ 7 mg/L
Turbidity	Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attribute to contrallable water quality factors shall not exceed the following limits: Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.	No Numeric benchmarks. Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established.
Toxicity	All waters shall be free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal or aquatic life. There shall be no chronic toxicity in smbient waters outside mixing zones.	≤ 1.0 Tuc[3]
Biostimulatory Substances	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growwth to the extent that such growth causes nuisance or adversely affect benficial uses.	No Numeric benchmarks. Nutrients listed on Table X.
Total Suspended Solids (TSS)	Wastes shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.	No muneric benchmarks.

6.0 INDIVIDUAL SAMPLING SITE RESULTS

6.1 SAMPLING SITES

This section presents current and historical sampling events on a site by site basis for sampling sites chosen for this program. Information includes: a summary of detected constituents from water quality sampling, photographs from visits conducted during the third year of the current program, site maps, and basic site information. All permanent sampling sites are included, along with the rotating sampling sites that were visited this sampling year. Samples collected from sampling sites that are no longer operating or from rotating sampling sites not visited this quarter are evaluated in Section 7 and included in Appendix B, but are not presented in this section.

Laboratory analytical results for samples collected during this sampling year are included in Appendix C. A complete tabulated summary of results from this sampling year, along with historical sampling results, is presented in Appendix B.

6.1.1 GROUP 1

NGA SITE #19

Sampling Group: Group 1
Sampling Frequency - Fixed
Total / Irrigated Acres: 32.0/14.7 Acres
Sample site GPS location: N 09’ 51.1” W 38’ 2.07”

February 28, 21014, wet season, sample collected

Site Drainage - The main area of the site drains eastward onto Valley Circle Boulevard. Based on site topography, the eastern edge of the site along Valley Circle Boulevard was chosen as the sampling location. An aerial photo of the site and sampling location is presented on Figure 4 (Google mapping services).

Sampling– Seven samples collected to date. This site was visited during the first wet season sampling event during this sampling year; a sample was collected on February 28, 2014.

Historical sampling results for this site are presented in Table 10.

Aerial photography of the site is presented on Figure 2.

Table 10 – Summary of samples collected, NGA #19

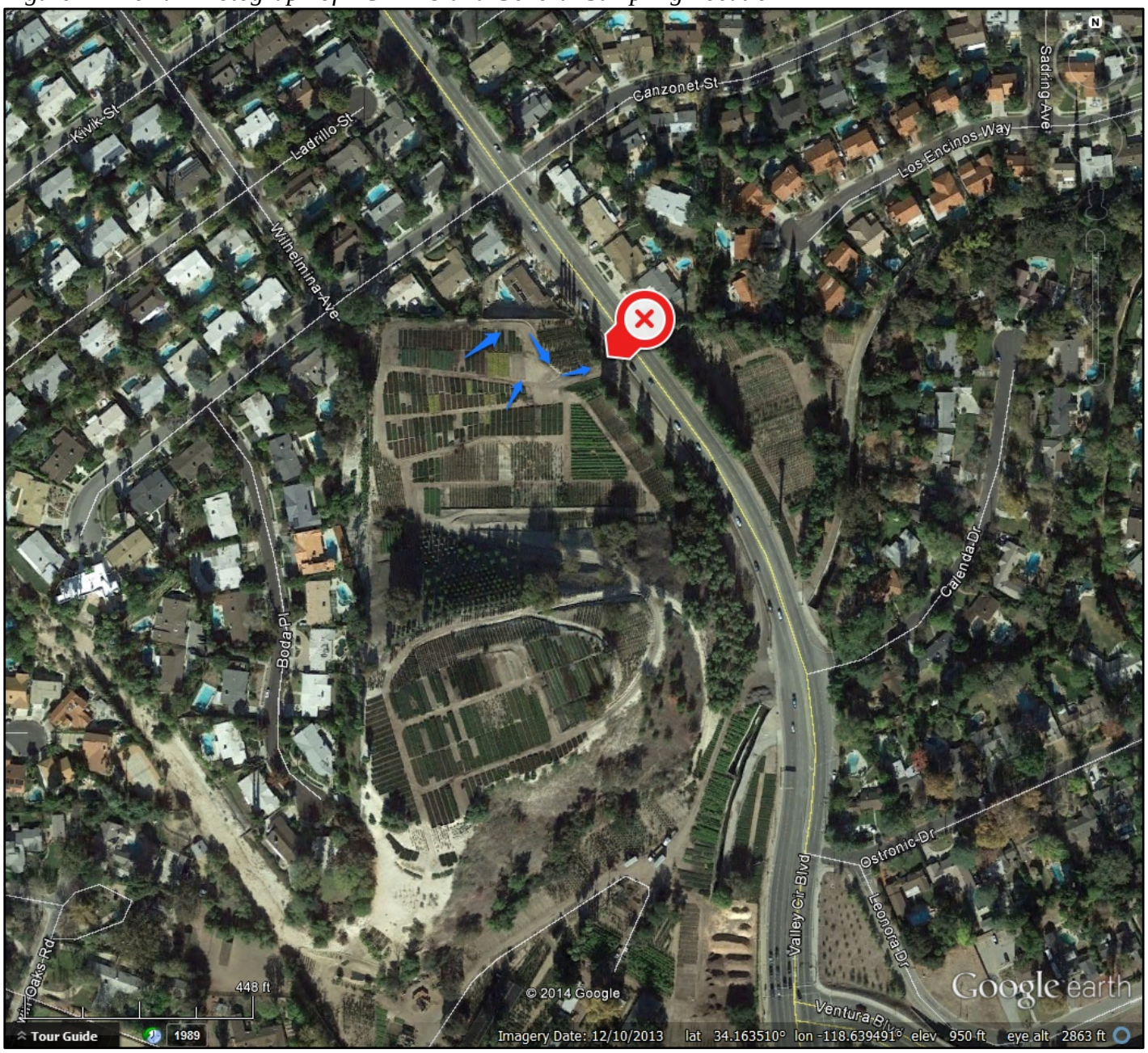
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #19	NGA-#19-LAILG-1	8/13/07	1	108.57	2.2882	**10.84**	118.85	2.68	772	4.62	5.09	568	na	na	na
NGA #19	LAILG-NGA#19-2	12/18/07	1.4	**162.66**	11.2352	**86.7**	290.99	2.13	**1,292**	4.01	5.544	684	na	na	na
NGA #19	LAILG-NGA19-3	1/5/08	0.12	**157.52**	0.2125	0.44	**451.78**	0.96	**1,030**	1.26	1.173	84	na	na	na
NGA #19	LAILG-NGA 19-4	8/12/08	0.03	104.03	1.1877	**12.65**	107.33	1.75	834	1.86	15.494	213	na	na	na
NGA #19	LAILG-NGA 19-5	11/26/08	0.96	115.72	1.507	**26.94**	126.35	1.356	748	4.69	4.884	995	na	na	na
NGA #19	LAILG-NGA 19-6	3/23/11	0.54	110	0.86	**55**	250	1.1	**1,200**	0.860	3.4	550	440	180	0.090
NGA #19	LAILG-NGA 19-7	2/28/14	1.4	120	2.400**	**53**	160	2.8	**1,000**	2.4**	4.7	650	319	128	0.056

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)			Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Total Chlordane	Chlorpyrifos	Diazinon	Malathion	Total sum of all detected Pyrethroids
NGA #19	NGA-#19-LAILG-1	8/13/07	nd	nd	nd	nd	nd	0
NGA #19	LAILG-NGA#19-2	12/18/07	nd	**2.4**	nd	15	2,291.3	1,814
NGA #19	LAILG-NGA19-3	1/5/08	**5.6**	**14**	nd	nd	nd	6.8
NGA #19	LAILG-NGA 19-4	8/12/08	nd	**1.3**	nd	nd	nd	91.8
NGA #19	LAILG-NGA 19-5	11/26/08	**24.7**	**6.6**	**130.1**	32.6	nd	2,236.2
NGA #19	LAILG-NGA 19-6	3/23/11	nd	nd	**25**	nd	nd	29
NGA #19	LAILG-NGA 19-7	2/28/14	nd	nd	**22**	nd	nd	30

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 2 – Aerial Photograph of NGA #19 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #124/125

Sampling Group: Group 1
Sampling Frequency - Fixed
Total/Irrigated Acres: 10.4/8.3 Acres
Sample site GPS location: N 05’ 56.9” W 04’ 56.0”

February 28, 2014, wet season, sample collected

Site Drainage - The site drains southward into a gravel bed along the southern border of the property, near the railroad tracks. Based on drainage and runoff indicators, the south/southwest edge of the property was chosen as the sampling location. An aerial photo of the site and sampling location is presented on Figure 10 (Google mapping services).

Sampling– Seven samples collected to date. This site was visited during the first wet season sampling event during this sampling year; a sample was collected on February 28, 2014.

Historical sampling results for this site are presented in Table 11.

Aerial photography of the site is presented on Figure 3.

Table 11 – Summary of samples collected, NGA #124

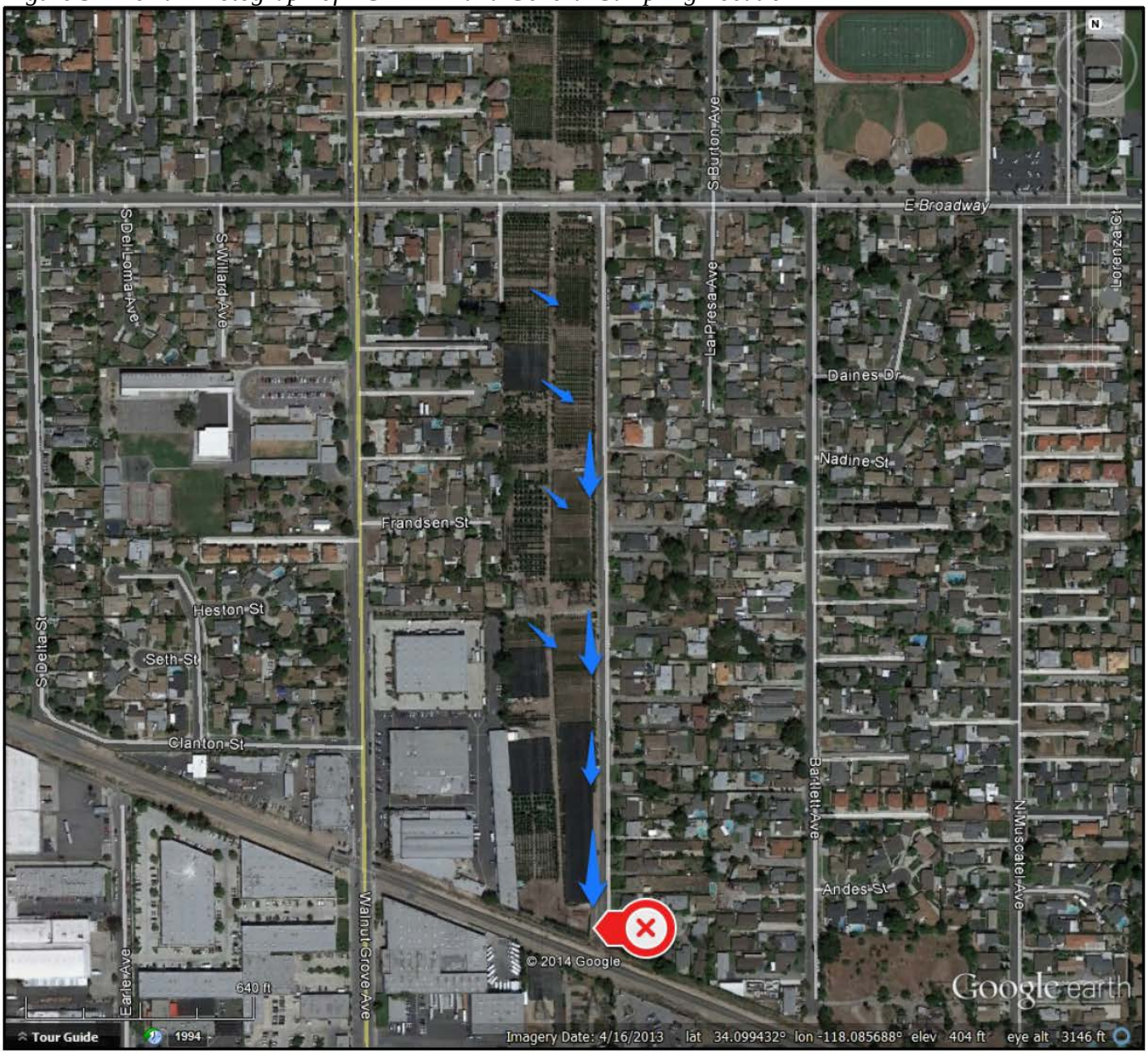
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #124	NGA-#124-LAILG-1	8/13/07	9.8	69.23	3.5006	**72.48**	206.25	4.31	**1,002**	3.96	4.627	99.5	na	na	na
NGA #124	NGA-#124-LAILG-2	12/7/07	4.6	33.03	3.9247	**45.41**	59.24	2.9	550	2.76	3.168	90	na	na	na
NGA #124	LAILG-NGA#124-3	1/5/08	15.5	28.3	0.9814	**28.34**	57.68	1.66	378	1.66	2.228	40	na	na	na
NGA #124	LAILG-NGA#124-4	11/26/08	0.48	37.78	2.595	**28.36**	84.22	2.975	568	2.53	3.297	117	na	na	na
NGA #124	LAILG-NGA 124-5	12/15/08	1.68	26.51	24.4087	**40.43**	45.28	21.115	424	3.66	2.706	115.5	na	na	na
NGA #124	LAILG-NGA 124-6	3/21/11	0.36	9.4	1.8	6.7	24	1.8	240	1.800	2.7	620	61	24	0.045
NGA #124	LAILG-NGA 124-7	2/28/14	4.5	21	1,200**	**13**	100	1.5	420	1.2	2.2	160	125	50.2	0.049

Site	Sample #	Date	OC Pesticides (ng/L)			OP Pesticides (ng/L)		Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Dieldrin	Total Chlordane	Chlorpyrifos	Malathion	Total sum of all detected Pyrethroids
NGA #124	NGA-#124-LAILG-1	8/13/07	**51.5**	na	**34**	nd	nd	136.9
NGA #124	NGA-#124-LAILG-2	12/7/07	**37.4**	na	**11.4**	nd	nd	3,704.3
NGA #124	LAILG-NGA#124-3	1/5/08	nd	na	**17.1**	nd	nd	1,898.6
NGA #124	LAILG-NGA#124-4	11/26/08	**19.3**	na	**8.2**	nd	nd	7,536.1
NGA #124	LAILG-NGA 124-5	12/15/08	**10.4**	na	**13.6**	nd	85.3	19,281.3
NGA #124	LAILG-NGA 124-6	3/21/11	nd	**33**	nd	10	nd	169.8
NGA #124	LAILG-NGA 124-7	2/28/14	nd	nd	nd	17	13	3,916

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 3 – Aerial Photograph of NGA #124 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #178

Sampling Group: Group 1
Sampling Frequency - Fixed
Total/Irrigated Area: 10.0/8.5 Acres
Sample site GPS location: N 17’ 57.42” W 25’ 06.46”

February 28, 2014, wet season, sample collected

Site Drainage - The drainage gradient flows to the south, through a channel that crosses the property. Based on drainage properties, the end of the channel was identified as the anticipated sampling location. An aerial photo of the site and anticipated sampling location is presented on Figure 14 (Google mapping services).

Sampling– Two samples collected to date. This site was visited during the first wet season sampling event during this sampling year; a sample was collected on February 28, 2014.

Historical sampling results for this site are presented in Table 12.

Aerial photography of the site is presented on Figure 4.

Table 12 – Summary of samples collected, NGA #178

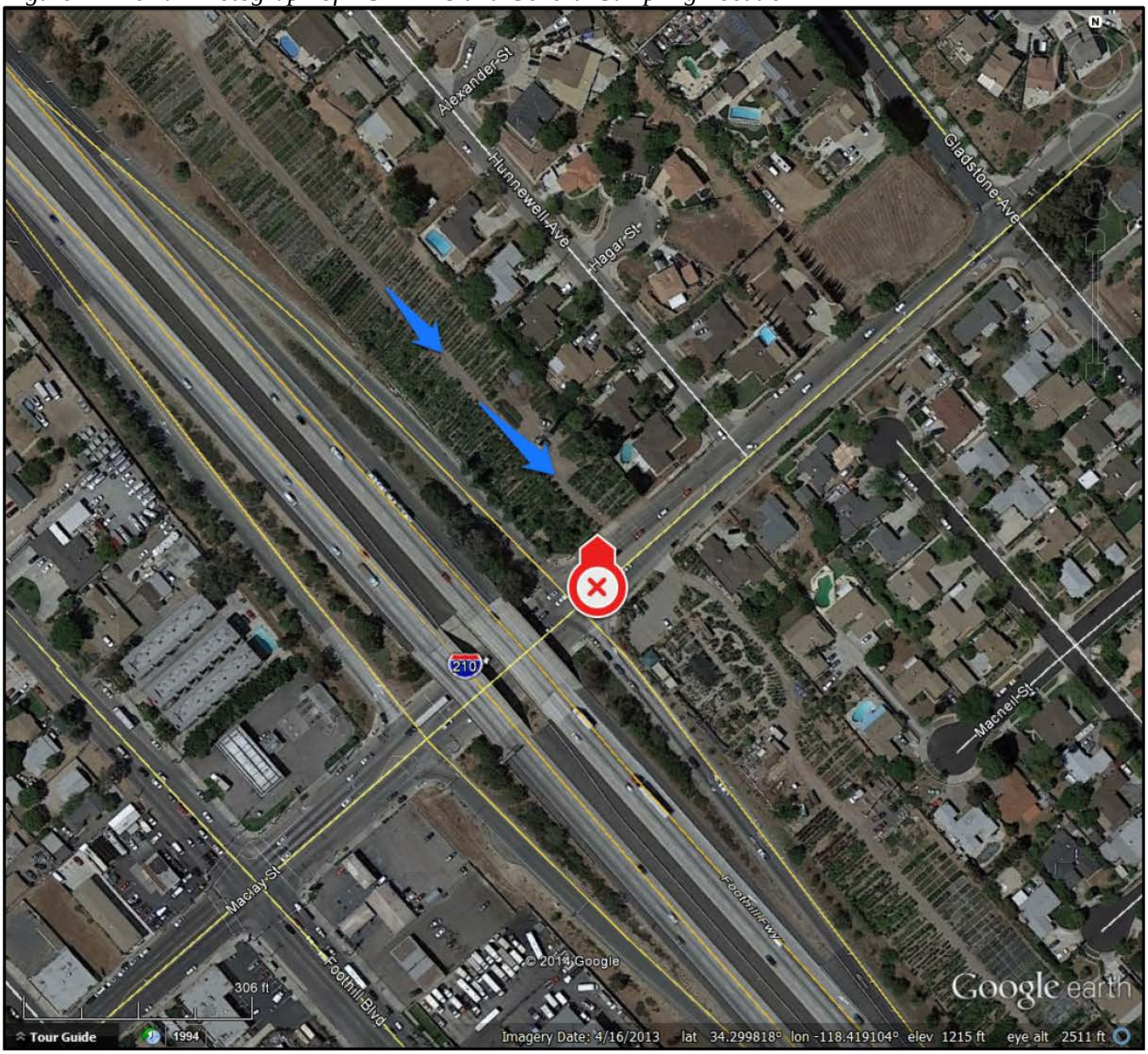
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA # 178	LAILG-NGA 178-1	12/15/08	0.81	**85.04**	2.4077	**12.99**	**148.27**	2.648	**462**	2.64	2.934	72.7	na	na	na
NGA # 178	LAILG-NGA 178-2	2/28/14	0.87	**120**	2.200**	**10**	**370**	2.4	**940**	2.2	3.6	270	324	130	0.030

Site	Sample #	Date	OC Pesticides (ng/L)	OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			Total DDT and Derivatives	No OP Pesticides Detected	Total sum of all detected Pyrethroids
NGA # 178	LAILG-NGA 178-1	12/15/08	**25.3**		4.9
NGA # 178	LAILG-NGA 178-2	2/28/14	nd		40

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 4 – Aerial Photograph of NGA #178 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #184

Sampling Group: Group 1
Sampling Frequency - Fixed
Total/Irrigated Area: 36.0/36.0 Acres
Sample site GPS location: N 13’ 29.41” W 29’ 22.83”

February 28, 2014, wet season, sample collected

Site Drainage - The site is split into three lots, with the northern section selected as the sampling location based on site topology and drainage patterns. The northern section is a five-acre lot with a drainage gradient flowing to the north. Water flows into a drainage ditch along the eastern side of the property and flows south onto Chase Street. Based on drainage properties, the point of exit from the property onto Chase Street was identified as the anticipated sampling location. An aerial photo of the site and anticipated sampling location is presented on Figure 15 (Google mapping services).

Sampling– Three samples collected to date. This site was visited during the first wet season sampling event during this sampling year; a sample was collected on February 28, 2014.

Historical sampling results for this site are presented in Table 13.

Aerial photography of the site is presented on Figure 5.

Table 13 – Summary of samples collected, NGA #184

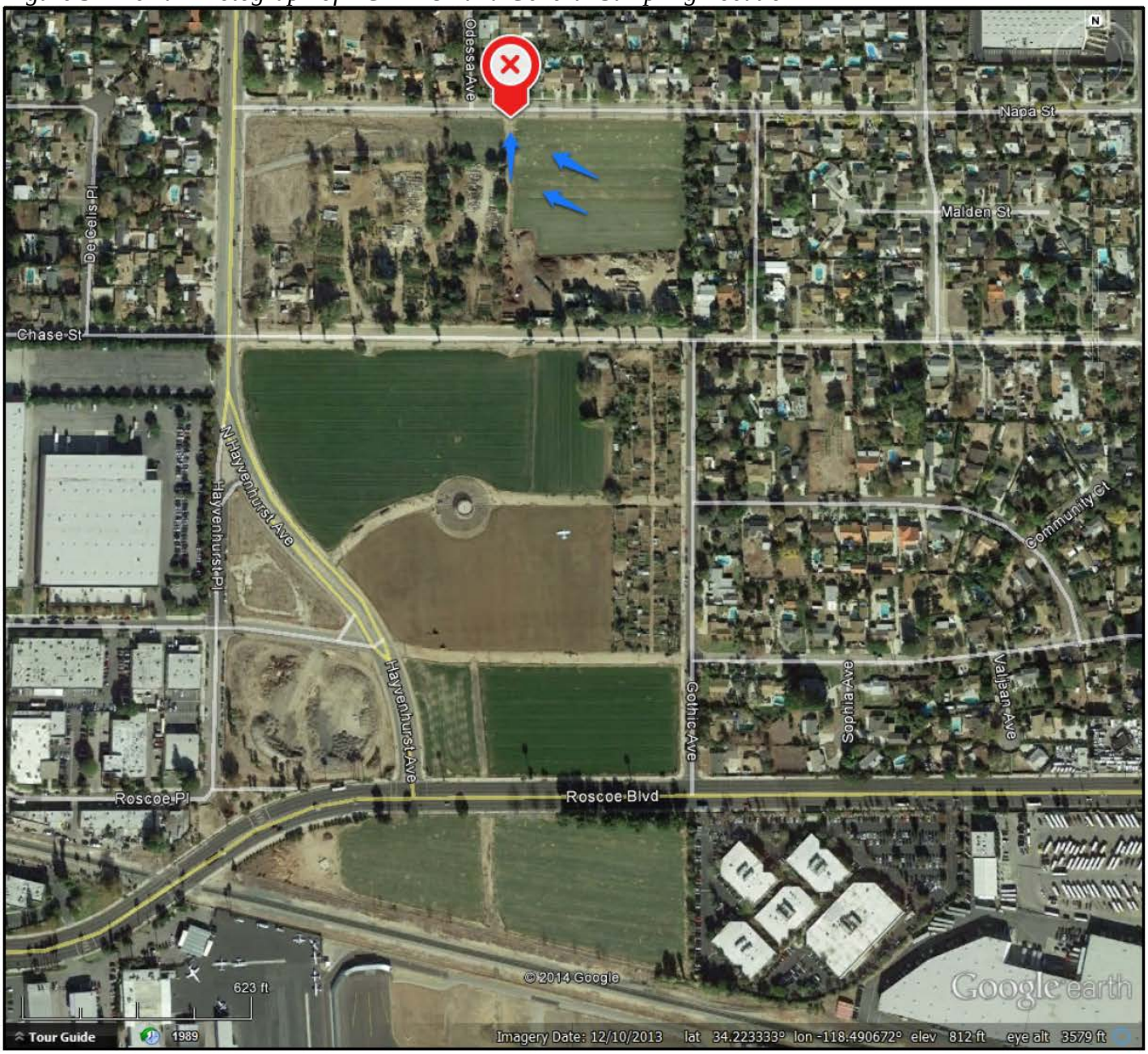
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #184	LAILG-NGA 184-1	11/26/08	0.46	31.44	0.609	3.12	17.92	0.643	206	0.88	1.3	129.5	na	na	na
NGA #184	LAILG-NGA 184-2	12/15/08	0.64	27.46	0.7339	4.41	33.57	0.502	240	2.16	2.94	1,079	na	na	na
NGA #184	LAILG-NGA 184-3	2/28/14	0.23	2.5	0.33	0.4	1.6	0.44	41	0.33	0.72	160	13.8	5.54	0.0079

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Total Chlordane	No OP Pesticides Detected	Total sum of all detected Pyrethroids
NGA #184	LAILG-NGA 184-1	11/26/08	nd	nd		3.1
NGA #184	LAILG-NGA 184-2	12/15/08	**22**	**4.2**		30.7
NGA #184	LAILG-NGA 184-3	2/28/14	nd	nd		2.5

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 5 – Aerial Photograph of NGA #184 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

6.1.2 GROUP 2

6.1.2 NGA SITE #11

Sampling Group: Group 2
Sampling Frequency - Fixed
Total/Irrigated Acres: 10/7.5 Acres
Sample site GPS location: N 06' 38.4" W 54' 41.5"

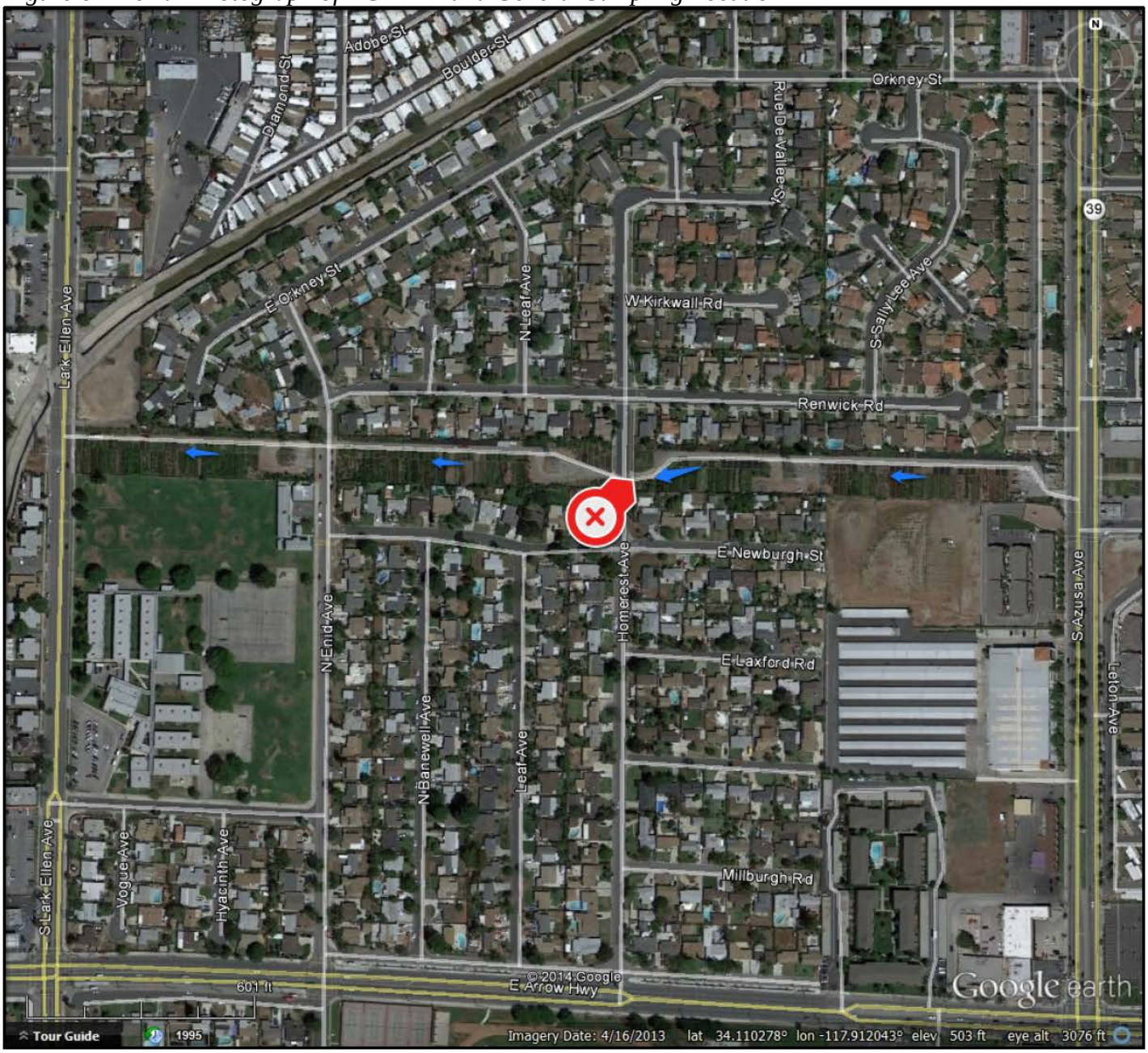
Site Drainage - The topography is relatively flat, and drains west as surface flow. Based on drainage properties and site access, the western gate of the eastern property was chosen as the most likely sampling location.

Sampling– No samples collected to date. This site was not visited during this sampling year, as there was not sufficient precipitation to conduct a second wet season sampling event.

There are no historical sampling results for this site.

Aerial photography of the site is presented on Figure 6.

Figure 6 – Aerial Photograph of NGA #11 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #109/110

Sampling Group: Group 2
Sampling Frequency - Fixed
Total/Irrigated Acres: 1.8/1.0 Acres
Sample site GPS location: N 07' 4.8" W 52' 22.8"

Site Drainage - The site drains southward into a dirt road and eventually to Big Dalton Wash. Based on drainage and runoff indicators, the southern edge of the property exhibiting the most flow will be chosen as the sampling location. An aerial photo of the site and anticipated sampling location is presented on Figure 8 (Google mapping services).

Sampling– Two samples collected to date. This site was not visited during this sampling year, as there was not sufficient precipitation to conduct a second wet season sampling event.

Historical sampling results for this site are presented in Table 14.

Aerial photography of the site is presented on Figure 7.

Table 14 – Summary of samples collected, NGA #109/110

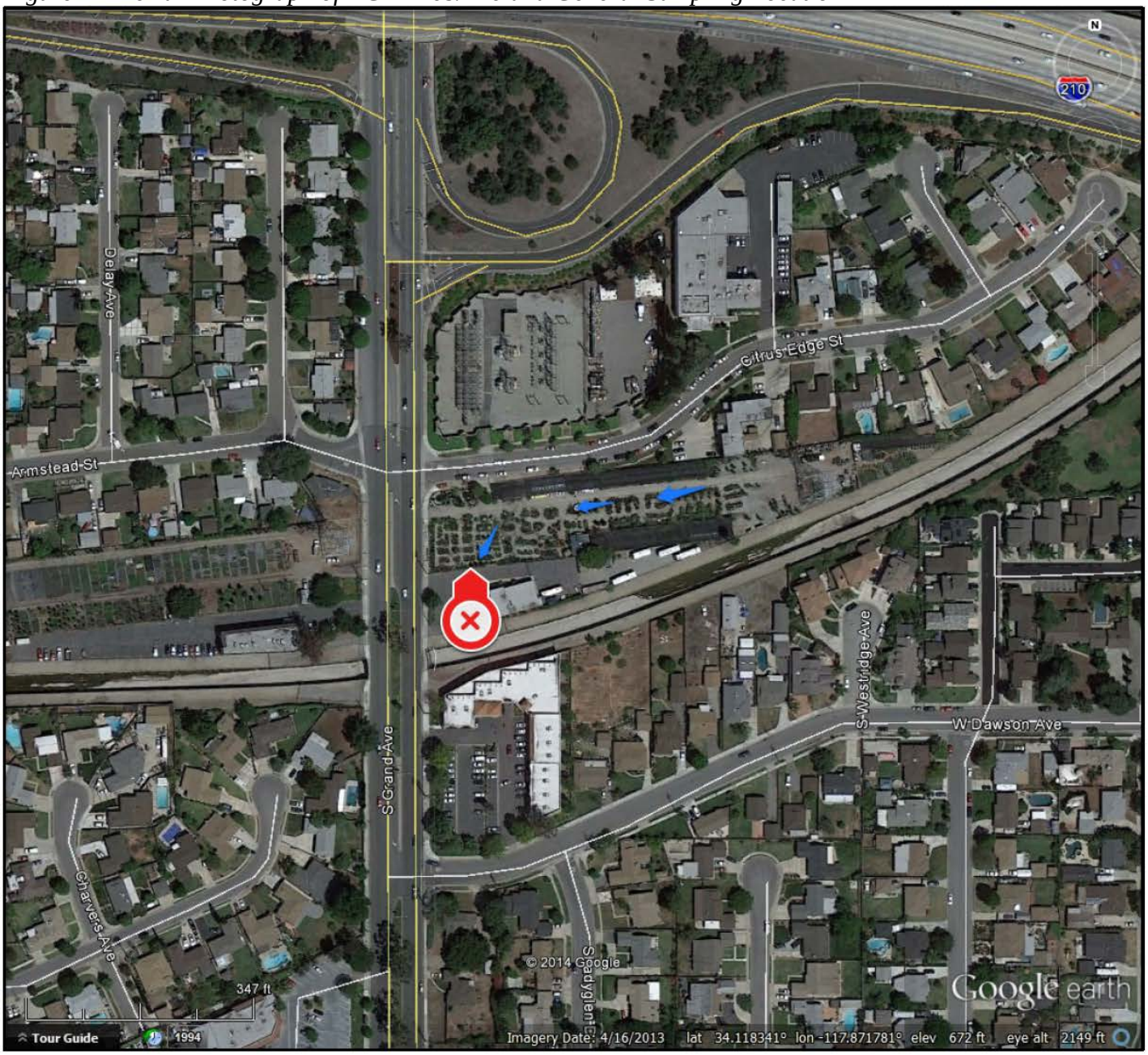
Site	Sample #	Date	General Chemistry (mg/L)									
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS
NGA #110	LAILG-NGA110-1	1/4/08	0.41	10.65	1.3052	2.36	18.22	1.74	162	1.81	2.033	24
NGA # 110	LAILG-NGA 110-2	12/15/08	0.31	28.59	1.186	**8.48**	50.87	1.469	328	1.6	1.868	93

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)		Pyd Pesticides (ng/L)
			Total DDT and Derivatives	No Detected Chlordanes	Chlorpyrifos	Diazinon	Total DDT and Derivatives
NGA #110	LAILG-NGA110-1	1/4/08	nd		**88.5**	**534.8**	0
NGA # 110	LAILG-NGA 110-2	12/15/08	**6.2**		nd	79.8	67.2

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 7 – Aerial Photograph of NGA #109/110 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #150

Sampling Group: Group 2
Sampling Frequency - Fixed
Total/Irrigated Acres: 26.0/15.3 Acres
Sample site GPS location: N 08'27.3" W 55' 33.8"

Site Drainage - Based on site topography, it appears that there could be some slight runoff on the southwestern corner of the property during heavy rain events. The majority of the site drains to the center, and they are currently installing a sump pump with two collection ponds to catch and reuse all the irrigation and storm runoff from the site. Based on drainage properties, the southwestern corner of the property was chosen as the sampling location. An aerial photo of the site and sampling location is presented on Figure 11 (Google mapping services).

Sampling– Five samples collected to date. This site was not visited during this sampling year, as there was not sufficient precipitation to conduct a second wet season sampling event.

Historical sampling results for this site are presented in Table 15.

Aerial photography of the site is presented on Figure 8.

Table 15 – Summary of samples collected, NGA #150

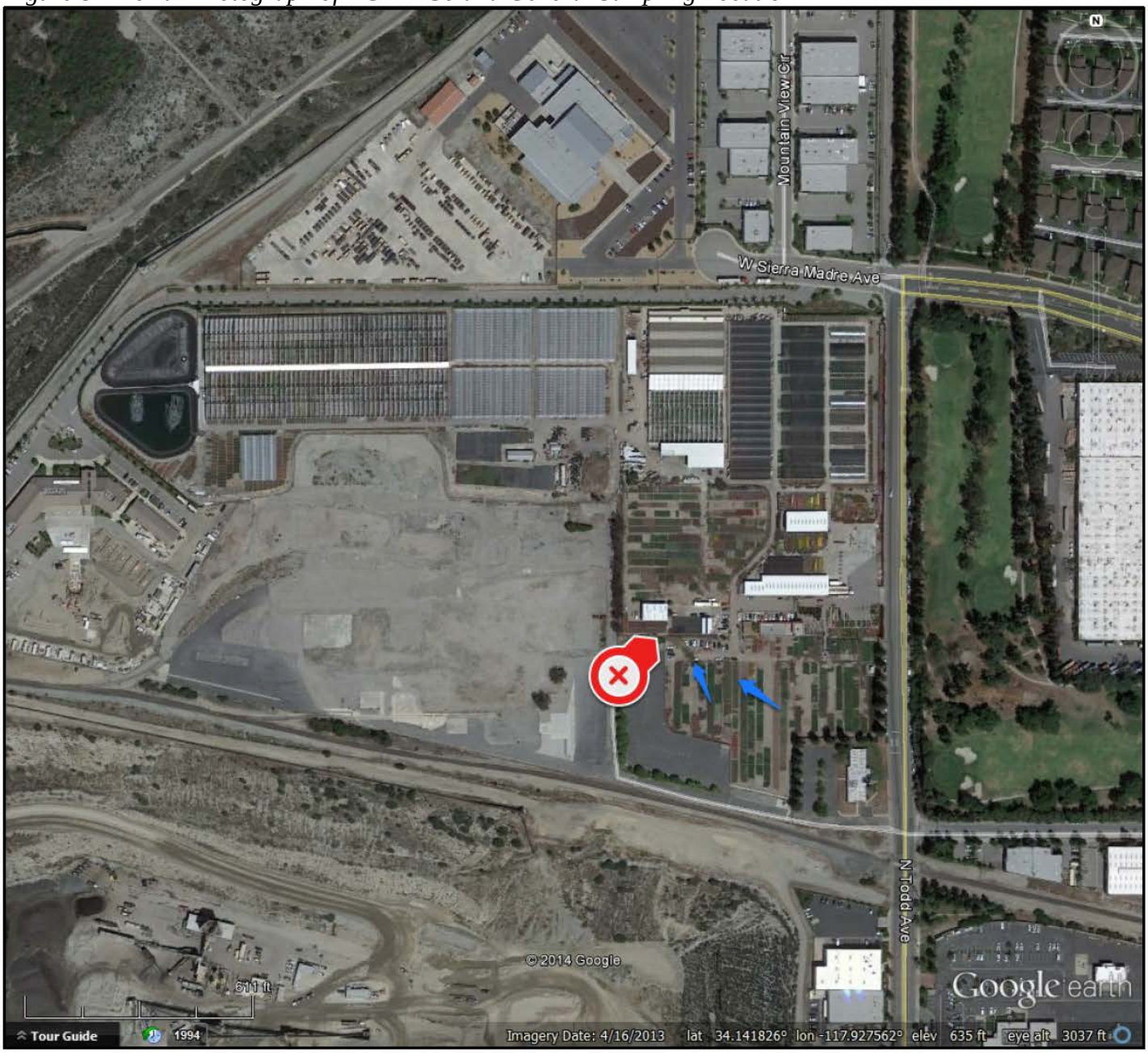
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #150	NGA-#150-LAILG	9/25/07	**52.4**	95.9	26.84	**355.6**	87	22.5	**2279**	23	24	57	na	na	na
NGA #150	NGA #150-LAILG-2	12/7/07	2.9	27.34	14.0243	**80.89**	56.59	9.43	**780**	8.89	9.445	40	na	na	na
NGA # 150	LAILG-NGA 150-3	11/26/08	**32.2**	65.92	31.579	**114.76**	**258.65**	49.896	**2,446**	37.69	48.048	45.5	na	na	na
NGA # 150	LAILG-NGA 150-4	12/15/08	15.75	47.27	26.0911	**268.53**	**125.27**	24.935	**1,704**	2.94	24.75	333.5	na	na	na
NGA # 150	LAILG-NGA 150-5	3/21/11	3.7	28	12	**120**	60	32	**1,200**	12.00	32	110	300	120	0.031

Site	Sample #	Date	OC Pesticides (ng/L)			OP Pesticides (ng/L)		Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Aldrin	Total Chlordane	Chlorpyrifos	Malathion	Total sum of all detected Pyrethroids
NGA #150	NGA-#150-LAILG	9/25/07	nd	nd	nd	nd	nd	41,733.0
NGA #150	NGA #150-LAILG-2	12/7/07	nd	**35.2**	nd	nd	nd	40,296.5
NGA # 150	LAILG-NGA 150-3	11/26/08	nd	nd	nd	nd	nd	42,355.2
NGA # 150	LAILG-NGA 150-4	12/15/08	nd	nd	nd	**90.2**	nd	41,952.4
NGA # 150	LAILG-NGA 150-5	3/21/11	nd	nd	nd	**33**	nd	528

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 8 – Aerial Photograph of NGA #150 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #189

Sampling Group: Group 2
Sampling Frequency - Fixed
Total/Irrigated Area: 1.5/1.25 Acres
Sample site GPS location: N 06' 59.1" W 47' 03.9"

Site Drainage - The western end of the site drains westward into a grass field that borders the edge of the property. The eastern half appears to drain eastward towards Damien Avenue as sheet flow. Based on drainage properties, the eastern edge of the property along Damien Avenue was identified as the anticipated sampling location.. An aerial photo of the site and anticipated sampling location is presented on Figure 16 (Google mapping services).

Sampling– Two samples collected to date. This site was not visited during this sampling year, as there was not sufficient precipitation to conduct a second wet season sampling event.

Historical sampling results for this site are presented in Table 16.

Aerial photography of the site is presented on Figure 9.

Table 16 – Summary of samples collected, NGA #189

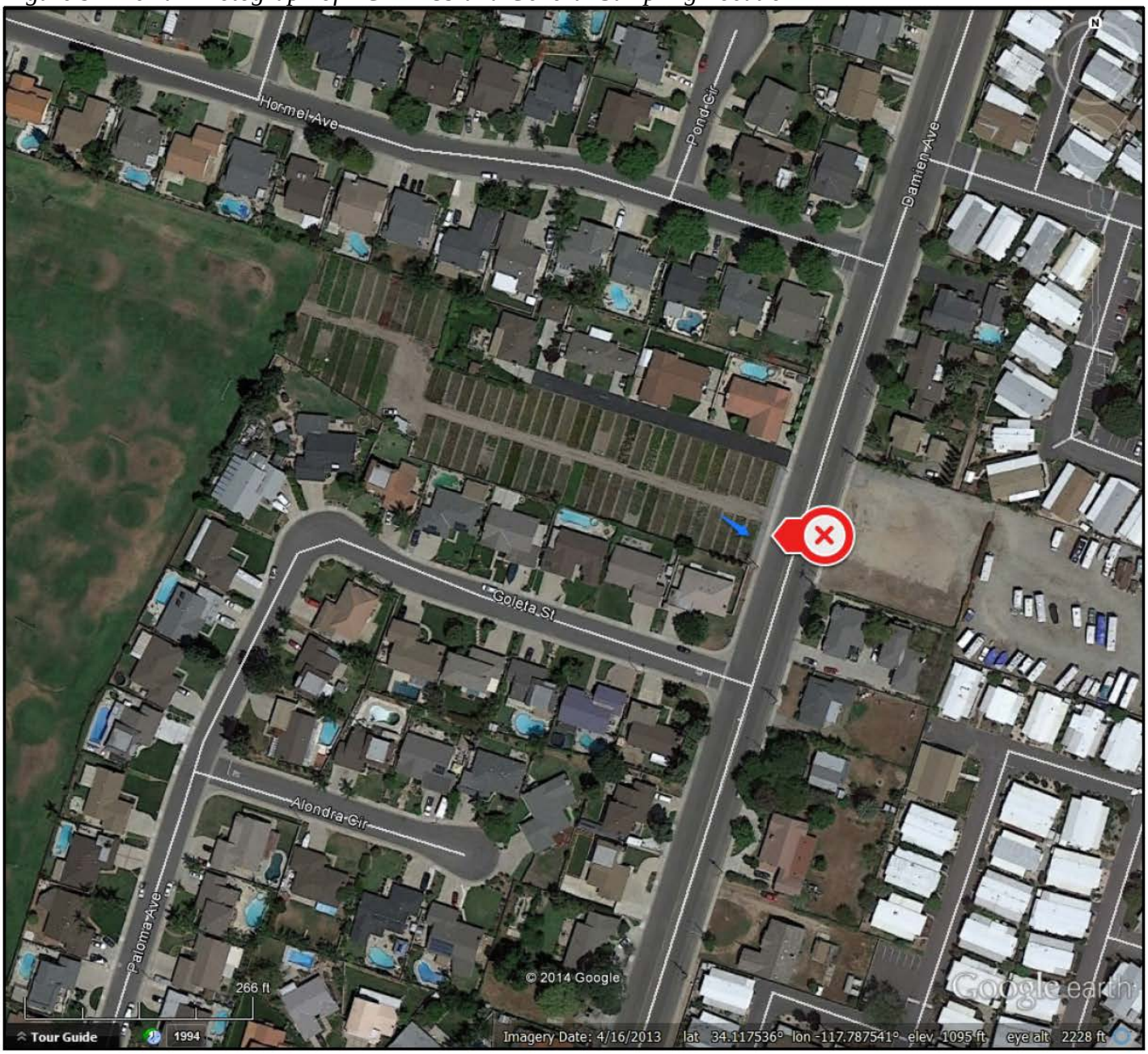
Site	Sample #	Date	General Chemistry (mg/L)									
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS
NGA # 189	LAILG-NGA189-1	1/4/08	0.59	7.29	0.6851	1.83	26.43	1.33	192	1.8	2.475	20
NGA # 189	LAILG-NGA 189-2	12/15/08	0.54	31.28	0.6795	**9.87**	41.27	0.813	220	0.99	1.261	111.3

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Total Chlordane	Malathion	Total sum of all detected Pyrethroids
NGA # 189	LAILG-NGA189-1	1/4/08	**22.5**	**14.9**	26.9	0
NGA # 189	LAILG-NGA 189-2	12/15/08	nd	nd	nd	6.1

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 9 – Aerial Photograph of NGA #189 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

6.1.3 GROUP 3

NGA SITE #31

Sampling Group: Group 3
Sampling Frequency - Fixed
Total/Irrigated Acres: 62.0/62.0 Acres
Sample site GPS location: N 3’ 0” W 0’ 14.4”

October 10, 2013, dry season, no sample collected

Site Drainage - The site drains southward, with the majority of the flow entering a catch basin. Based on drainage, the southern ditch adjacent to drainage pipes leaving the property was chosen as the sampling location. An aerial photo of the site and sampling location is presented on Figure 5 (Google mapping services).

Sampling– Four samples collected to date. This site was visited during the first dry season sampling event during this sampling year; no runoff was observed.

Historical sampling results for this site are presented in Table 17.

Aerial photography of the site is presented on Figure 10.

Table 17 – Summary of samples collected, NGA #31

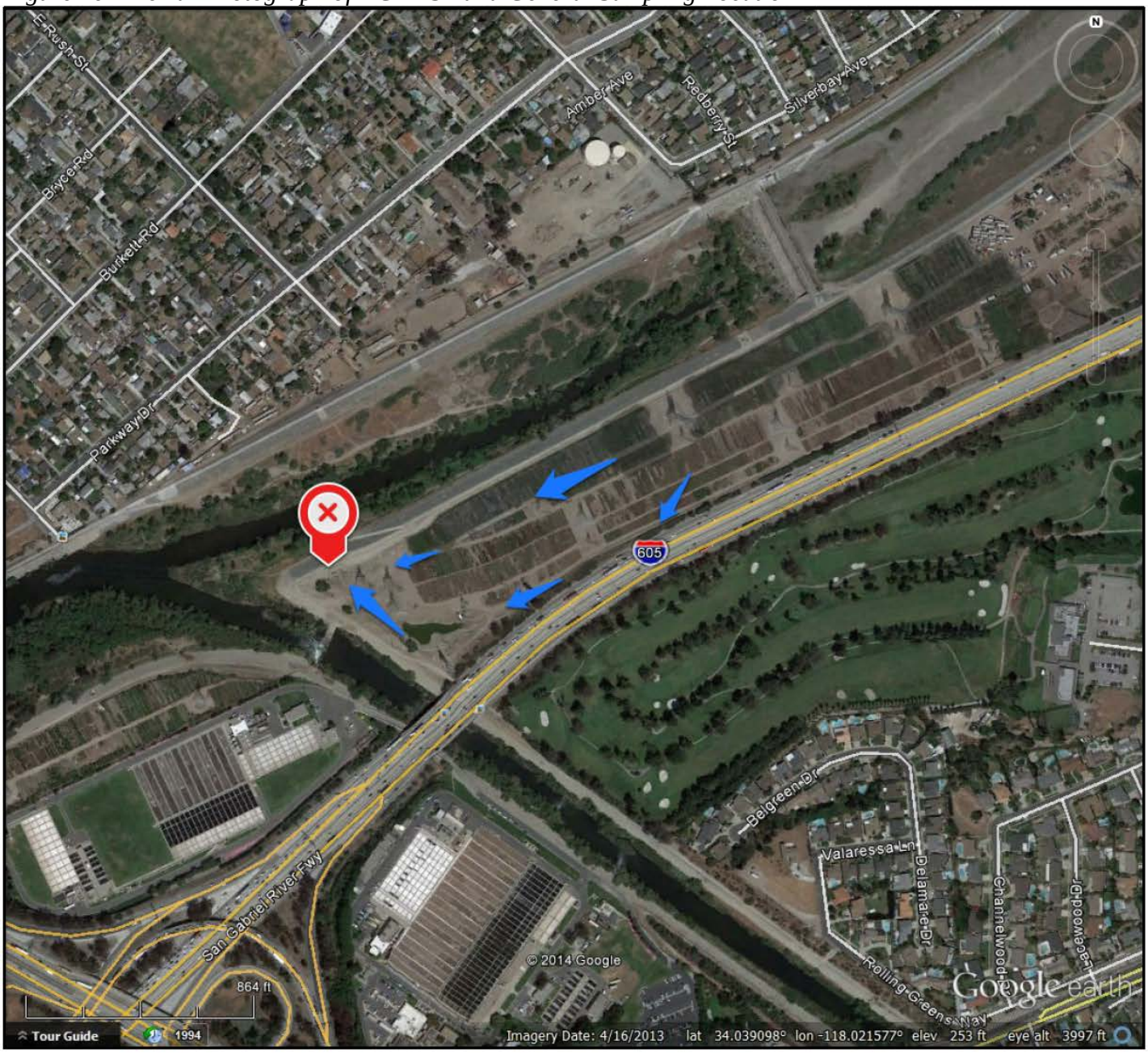
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA # 31	LAILG-NGA 31-1	9/23/08	0.13	82.13	1.562	**17.3**	134.93	1.472	602	2.34	1.813	162	na	na	na
NGA # 31	LAILG-NGA 31-2	11/26/08	0.76	6.12	0.474	3.6	14.84	0.497	104	1.63	1.94	353	na	na	na
NGA # 31	LAILG-NGA 31-3	12/15/08	4.32	36.98	3.0228	**12.14**	57.58	2.148	364	2.87	3.155	85.5	na	na	na
NGA # 31	LAILG-NGA 31-4	3/17/12	1.1	55	1.0	**12**	160	0.90	520	1.0	2.0	81	240	95	0.027

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)		Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Total Chlordane	Chlorpyrifos	Malathion	Total sum of all detected Pyrethroids
NGA # 31	LAILG-NGA 31-1	9/23/08	**13.5**	**15.2**	nd	nd	78.6
NGA # 31	LAILG-NGA 31-2	11/26/08	nd	**17.9**	nd	nd	460.2
NGA # 31	LAILG-NGA 31-3	12/15/08	nd	nd	**44.5**	**3,433.9**	52.6
NGA # 31	LAILG-NGA 31-4	3/17/12	nd	nd	nd	nd	35.9

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 10 – Aerial Photograph of NGA #31 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #64

Sampling Group: Group 3
Sampling Frequency - Fixed
Total/Irrigated Acres: 5.5/2.5 Acres
Sample site GPS location: N 52’ 05.9” W 08’ 32.3”

October 10, 2013, dry season, no sample collected

Site Drainage - The site drains to the west, into two drains on the western border of the property that feed directly to Lakewood Boulevard. Based on drainage, one of the western drains was chosen as the sampling location. An aerial photo of the site and sampling location is presented on Figure 7 (Google mapping services).

Sampling– Three samples collected to date. This site was visited during the first dry season sampling event during this sampling year; no runoff was observed.

Historical sampling results for this site are presented in Table 18.

Aerial photography of the site is presented on Figure 11.

Table 18 – Summary of samples collected, NGA #64

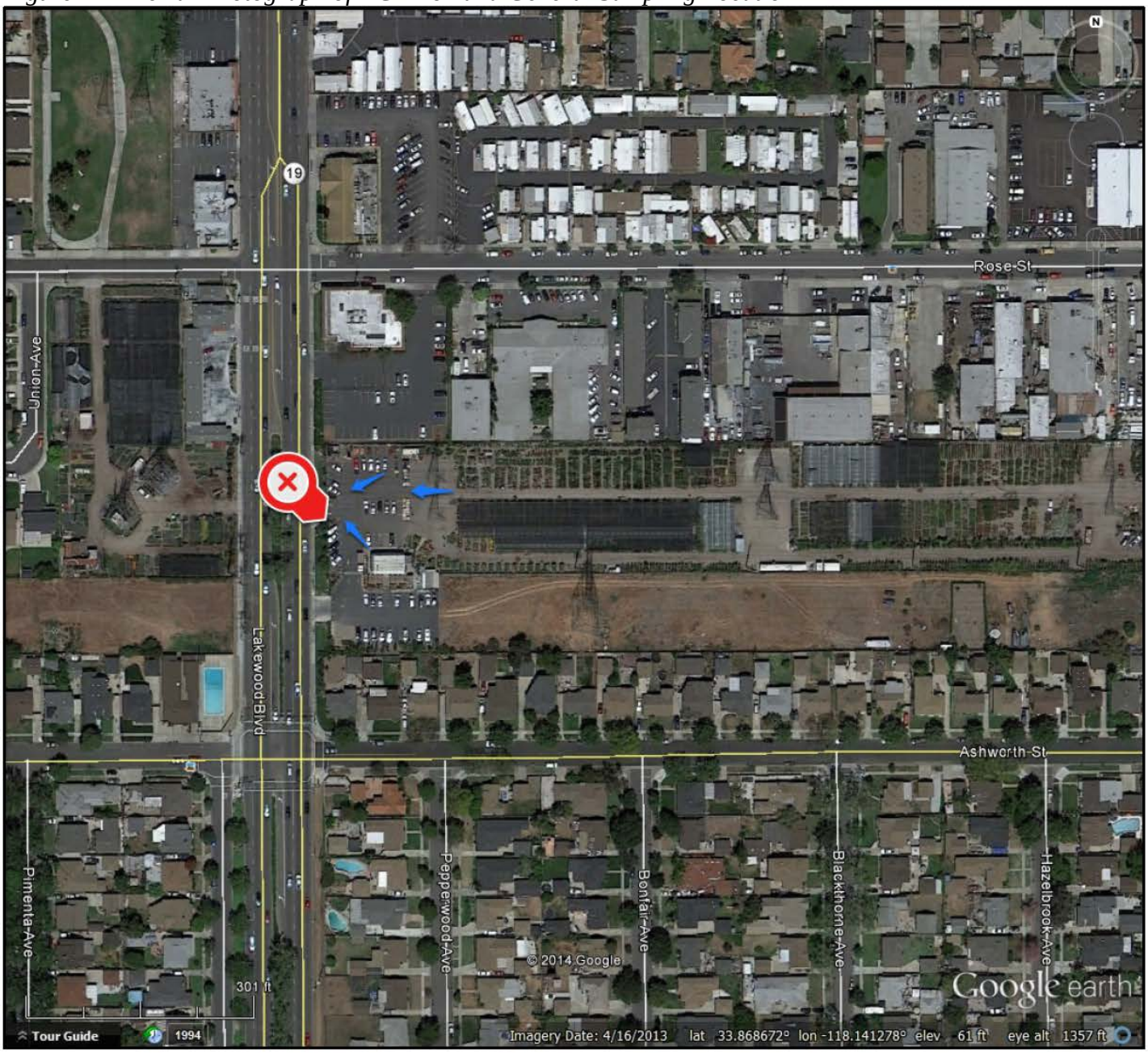
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #64	LAILG-NGA64-1	1/23/08	0.2	3.82	0.2818	3.83	101.1	0.3	nd	0.46	0.393	76	na	na	na
NGA #64	LAILG-NGA 64-2	12/15/08	1.15	12.38	0.4307	5.39	35.34	0.49	232	0.71	0.868	112	na	na	na
NGA #64	LAILG-NGA 64-3	3/17/12	0.79	5.8	0.28	0.70	8.4	0.32	57	0.28	1.5	500	51	21	0.047

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Toxaphene	No OP Pesticides Detected	Total sum of all detected Pyrethroids
NGA #64	LAILG-NGA64-1	1/23/08	0	0		47.4
NGA #64	LAILG-NGA 64-2	12/15/08	**43.3**	**666**		110
NGA #64	LAILG-NGA 64-3	3/17/12	**28**	nd		22

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 11 – Aerial Photograph of NGA #64 and General Sampling Location



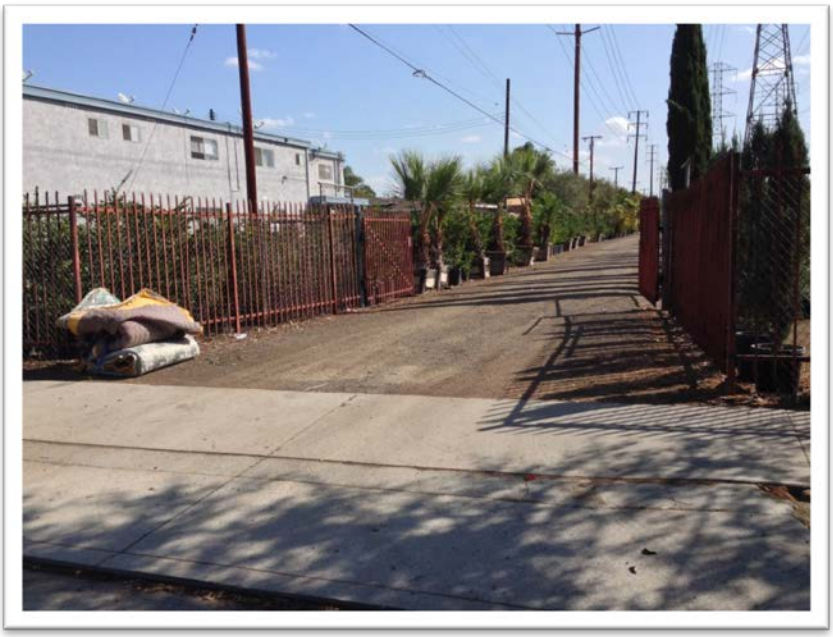
General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #81

Sampling Group: Group 3
Sampling Frequency - Fixed
Total/Irrigated Acres: 4.7/3.0 Acres
Sample site GPS location: N 52' 46.9" W 09' 20.7"

October 10, 2013, dry season, no sample collected



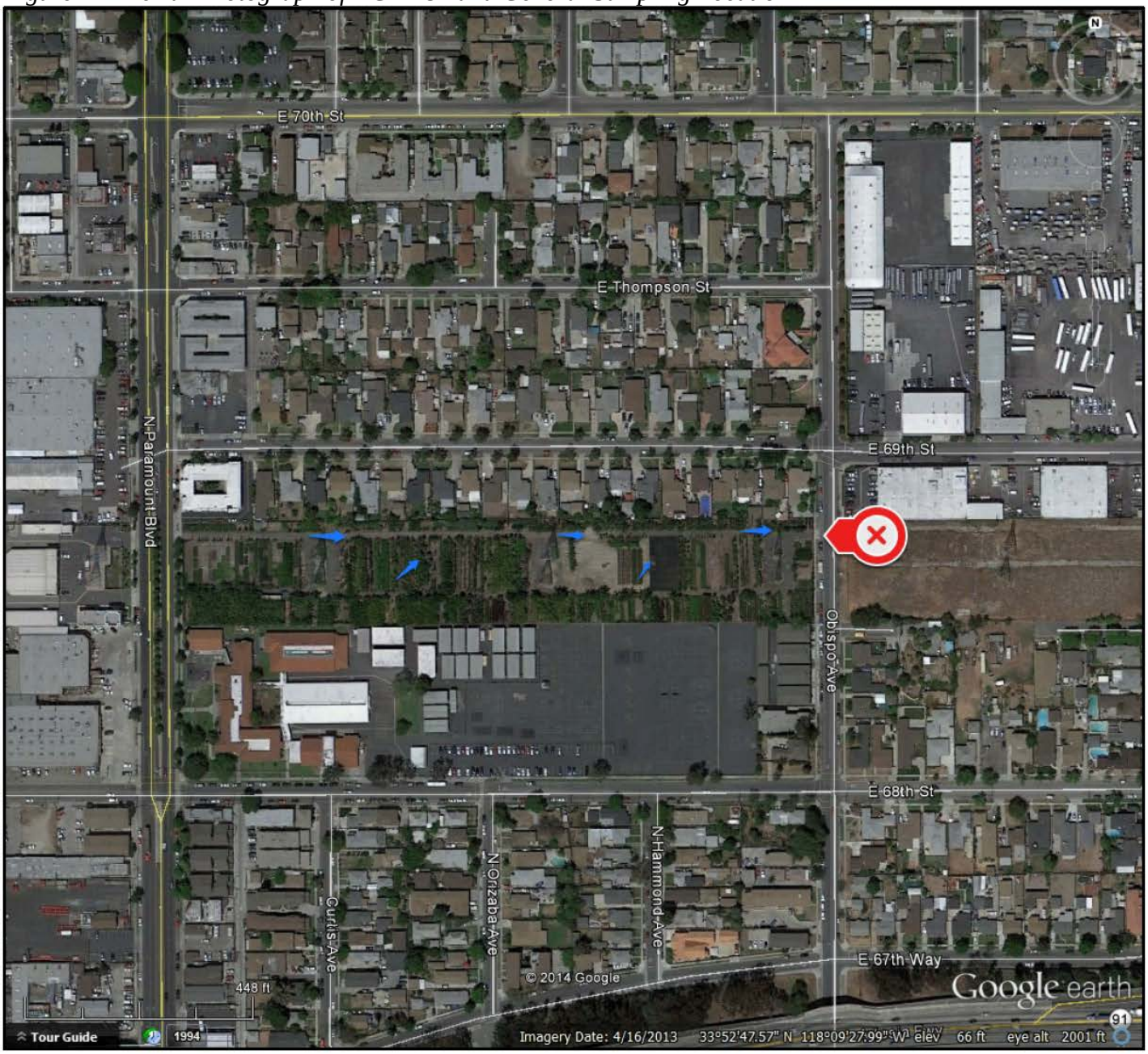
Site Drainage – Currently, the site has not been visited during a storm event. It is anticipated that any discharge from the property will be from sheet flow towards Obispo Avenue.

Sampling– No samples collected to date. This site was visited during the first dry season sampling event during this sampling year; no runoff was observed.

There are no historical sampling results for this site.

Aerial photography of the site is presented on Figure 12.

Figure 12– Aerial Photograph of NGA #81 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #168

Sampling Group: Group 3
Sampling Frequency - Fixed
Total/Irrigated Acres: 6.0/4.75 Acres
Sample site GPS location: N 51' 3.2" W 4' 55.2"

October 10, 2013, dry season, no sample collected

Site Drainage -The site drains to the east of the property through drainage ditches and runs into Jacob Avenue. Based on drainage properties, the eastern edge of the property by the drainage ditches was chosen as the sampling location. An aerial photo of the site and the sampling location is presented on Figure 12 (Google mapping services).

Sampling– Six samples collected to date. This site was visited during the first dry season sampling event during this sampling year; no runoff was observed.

Historical sampling results for this site are presented in Table 19.

Aerial photography of the site is presented on Figure 13.

Table 19 – Summary of samples collected, NGA #168

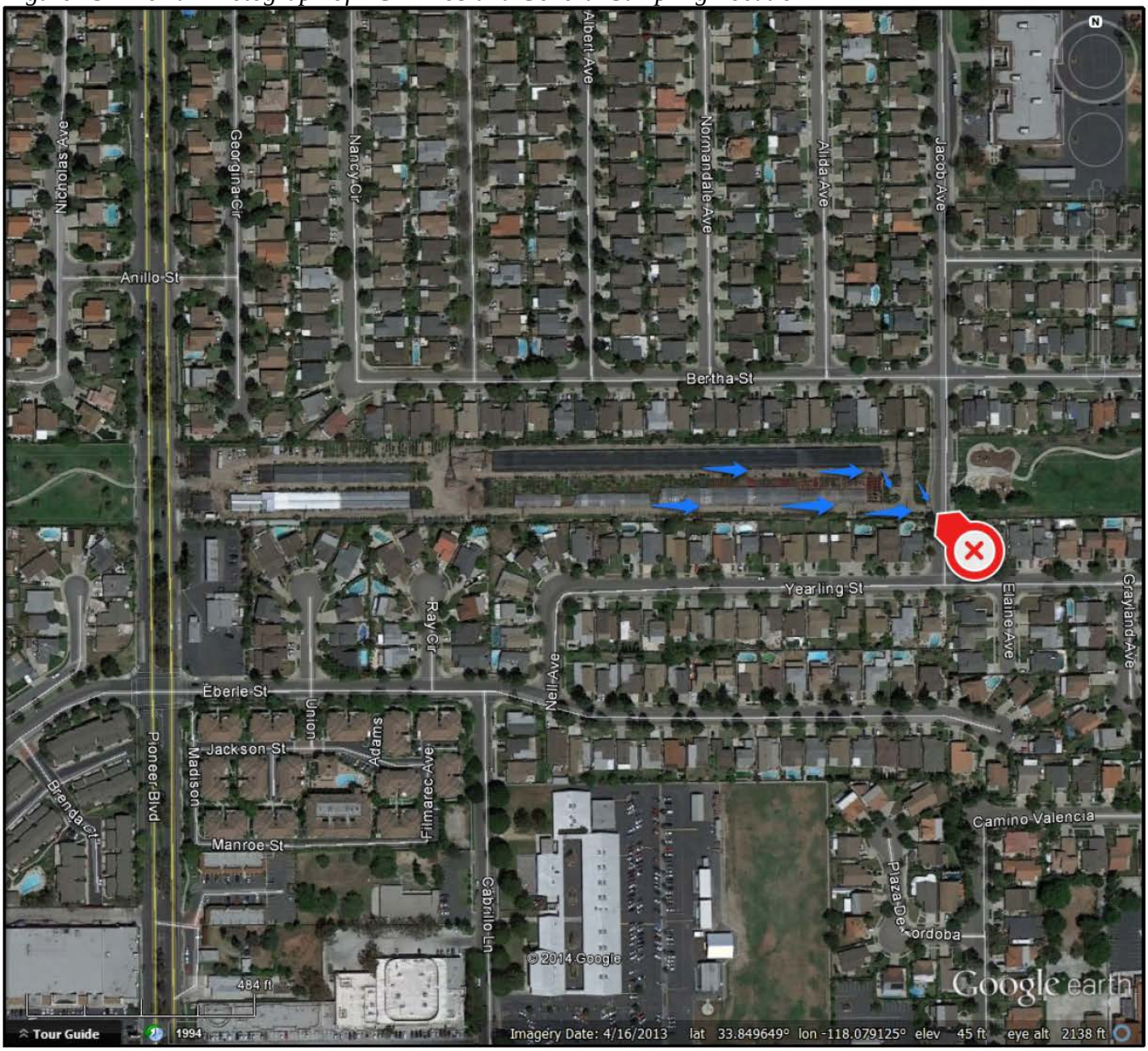
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #168	NGA-#168-LAILG-1	8/13/07	0.4	81.85	1.977	4.93	131.16	2.28	**664**	2.13	3.243	122	na	na	na
NGA #168	ILGNGA-#168-2	9/28/07	2.2	172.52	1.582	8.91	340.14	2.15	**1,297**	3.51	5.379	504	na	na	na
NGA #168	NGA-#168-LAILG-3	11/30/07	0.48	101.43	2.1635	**30.81**	245.04	2.67	**951**	3.13	3.548	nd	na	na	na
NGA #168	LAILG-NGA168-4	1/25/08	0.38	65.9	3.053	**14.58**	117.44	3.07	**592**	5.45	2.363	1126.7	na	na	na
NGA # 168	LAILG-NGA 168-5	12/15/08	0.25	53.4	1.4434	**15.33**	130.75	1.568	492	2.24	2.386	236	na	na	na
NGA #168	LAILG-NGA168-6	3/17/12	0.89	82	1.1	**35**	**470**	1.7	**1,100**	1.1	8.4	1200	500	200	0.110

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Total Chlordane	Malathion	Total sum of all detected Pyrethroids
NGA #168	NGA-#168-LAILG-1	8/13/07	nd	nd	nd	40,231.8
NGA #168	ILGNGA-#168-2	9/28/07	118	nd	nd	41,623.2
NGA #168	NGA-#168-LAILG-3	11/30/07	2.7	2.8	8.9	40,635.8
NGA #168	LAILG-NGA168-4	1/25/08	19.2	nd	nd	41,338.2
NGA # 168	LAILG-NGA 168-5	12/15/08	11.8	nd	38.9	40,712.6
NGA #168	LAILG-NGA168-6	3/17/12	nd	nd	nd	72

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 13 – Aerial Photograph of NGA #168 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

6.1.4 GROUP 4

NGA SITE #4

Sampling Group: Group 4
Sampling Frequency - Fixed
Total / Irrigated Acres: 19.2 / 11.5
Sample site GPS location: N 52' 55.5" W 16' 06.1"

October 11, 2013, dry season, no sample collected

Site Drainage - The northern half of the site drains northward into two storm drains located on the property boundary along Gardena Boulevard. The southern half of the site drains to the south, where the majority appears to percolate into the soil. Another storm drain is located on the southwest corner of the property. Based on drainage properties, one of the northern storm drains on the edge of the site was chosen as the sampling location.

Sampling– Six samples collected to date. This site was visited during the second dry season sampling event during this sampling year; no runoff was observed.

Historical sampling results for this site are presented in Table 20.

Aerial photography of the site is presented on Figure 14.

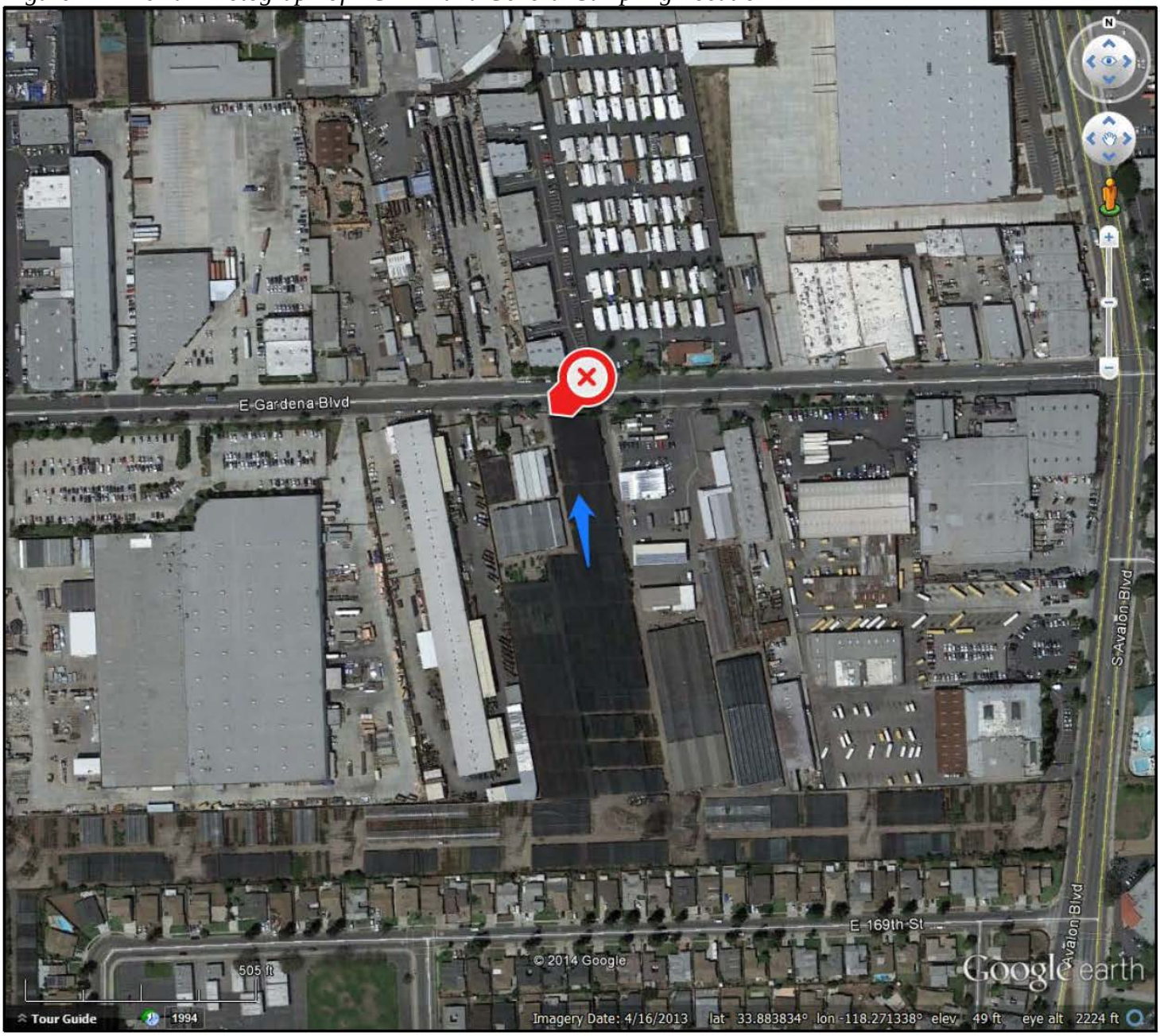
Table 20 – Summary of samples collected, NGA #4

Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #4	NGA #4-LAILG-1	12/7/07	0.48	20.64	1.1355	4.03	20.39	0.8	186	0.77	0.829	58	na	na	na
NGA #4	LAILG-NGA4-2	1/23/08	0.24	1.45	0.1891	0.6	3.87	0.15	145	0.26	1.848	27	na	na	na
NGA # 4	LAILG-NGA 4-3	8/13/08	0.68	350.11	11.5262	**200.18**	219.52	69.7	**2,238**	13.05	31.713	371	na	na	na
NGA # 4	LAILG-NGA 4-4	12/15/08	0.52	8.67	1.0382	2.7	15.23	0.158	238	2.33	2.231	295	na	na	na
NGA # 4	LAILG-NGA 4-5	3/21/11	0.69	10	0.31	1.5	8.3	0.52	110	0.310	2.6	810	62	25	0.230
NGA # 4	LAILG-NGA 4-6	3/25/12	na	69	1.1	**17**	52	1.0	320	1.1	1.4	34	100	42	0.051

Site	Sample #	Date	OC Pesticides (ng/L)			OP Pesticides (ng/L)				Pyd Pesticides (ng/L)
			Dicofol	Total DDT and Derivatives	Total Chlordane	Chlorpyrifos	Diazinon	Dichlorvos	Malathion	Total sum of all detected Pyrethroids
NGA #4	NGA #4-LAILG-1	12/7/07	nd	nd	nd	**1,122.6**	**175.2**	11.3	nd	2,107.5
NGA #4	LAILG-NGA4-2	1/23/08	nd	nd	nd	**153.8**	**2,212.1**	nd	**15,453.2**	1,389.4
NGA # 4	LAILG-NGA 4-3	8/13/08	485.7	nd	**38.8**	nd	**6,058.9**	nd	**1,148,630**	26,753.7
NGA # 4	LAILG-NGA 4-4	12/15/08	nd	nd	**99.5**	**590.9**	**859**	nd	**102,357.2**	96,588.0
NGA # 4	LAILG-NGA 4-5	3/21/11	na	**38**	**39.6**	**11,000**	**1,000**	nd	**7,300**	1,625.3
NGA # 4	LAILG-NGA 4-6	3/25/12	nd	nd	nd	**44,000**	nd	nd	**2,100**	109.7

Results above CWIL Limits are presented in **BOLD.**	
mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 14 – Aerial Photograph of NGA #4 and General Sampling Location



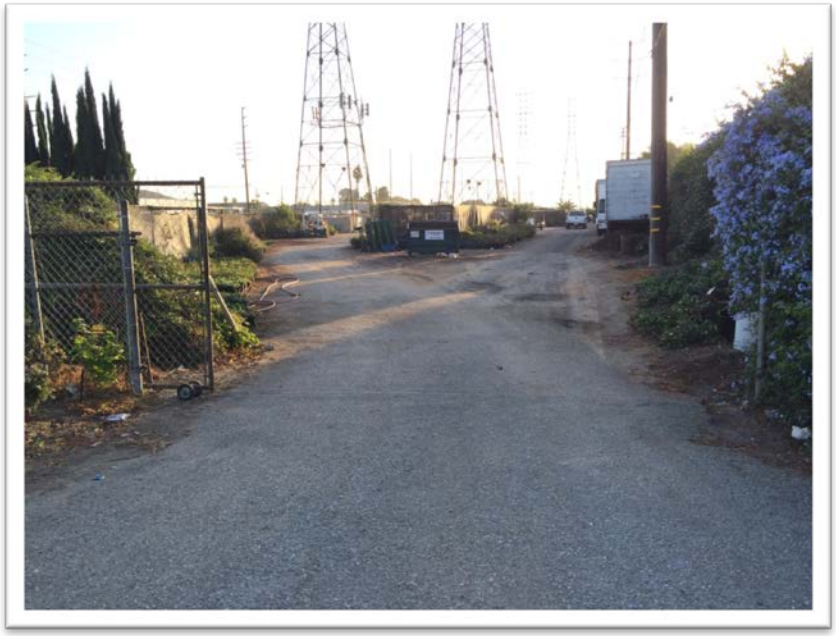
General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #53

Sampling Group: Group 4
Sampling Frequency - Fixed
Total/Irrigated Acres: 3.5/1.7 Acres
Sample site GPS location: N 52' 51.1" W 12' 56.3"

October 11, 2013, dry season, no sample collected



Site Drainage - The site drains into a small ditch that runs eastward into Santa Fe Avenue. Based on site topography, the eastern edge of the property by the drainage ditch was identified as the anticipated sampling location.

Sampling– Two samples collected to date. This site was visited during the second dry season sampling event during this sampling year; no runoff was observed.

Historical sampling results for this site are presented in Table 21.

Aerial photography of the site is presented on Figure 15.

Table 21 – Summary of samples collected, NGA #53

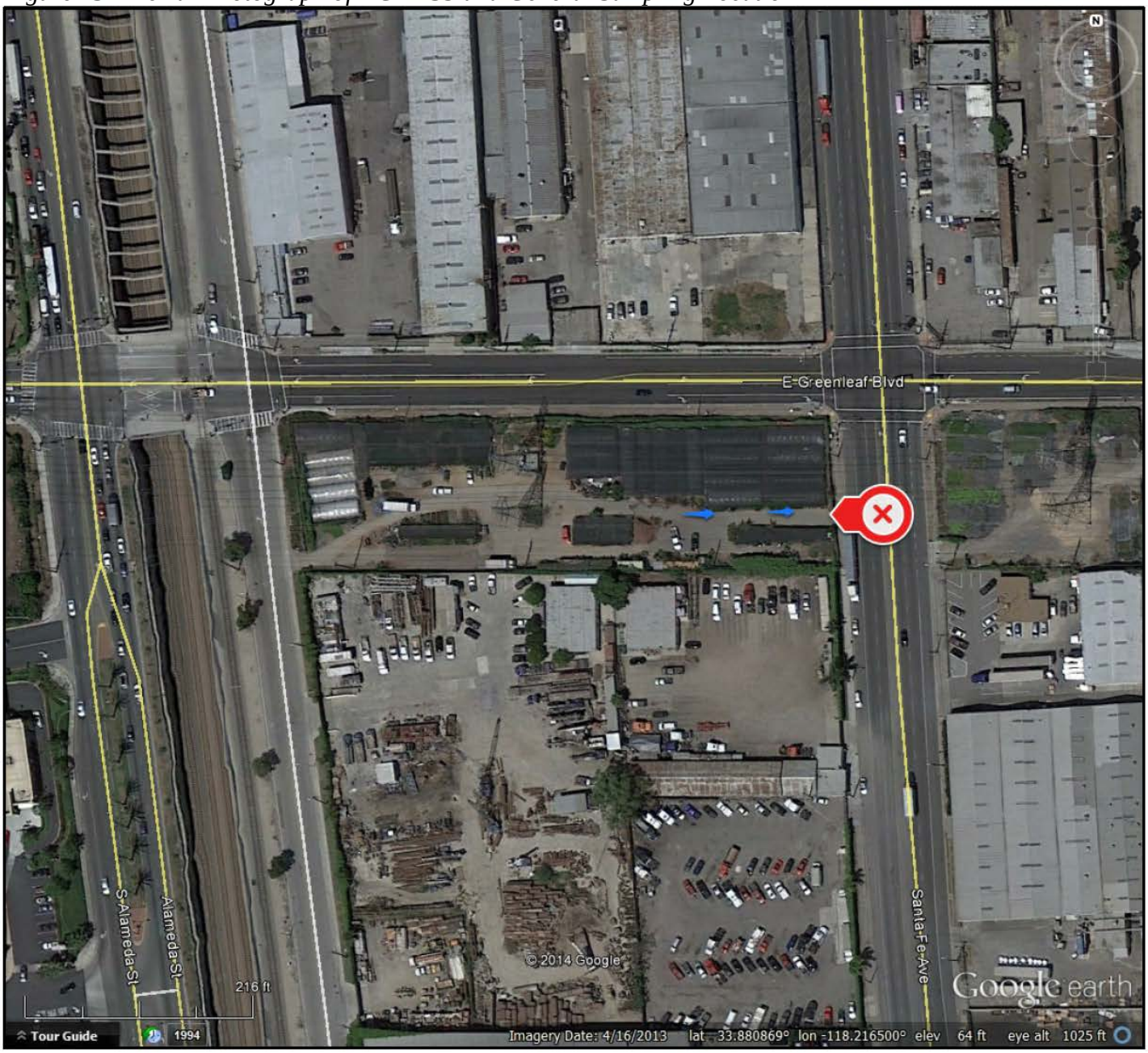
Site	Sample #	Date	General Chemistry (mg/L)									
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS
NGA #53	LAILG-NGA#53-1	12/18/07	0.7	4.72	0.2973	0.49	12.51	0.57	132	0.75	1.188	124
NGA #53	LAILG-NGA#53-2	1/23/08	0.31	2.19	0.6425	0.76	14.92	0.82	nd	0.68	1.993	516

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			No Detected DDT and Derivatives	No Detected Chlordanes	No OP Pesticides Detected	Total sum of all detected Pyrethroids
NGA #53	LAILG-NGA#53-1	12/18/07				11.5
NGA #53	LAILG-NGA#53-2	1/23/08				0

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 15 – Aerial Photograph of NGA #53 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #176

Sampling Group: Group 4
Sampling Frequency - Fixed
Total/Irrigated Acres: 12.0/7.5 Acres
Sample site GPS location: N 51' 24.4" W 22' 51.6"

October 11, 2013, dry season, no sample collected

Site Drainage - The site drains to the center, and they currently have a catch basin in the center to catch site runoff. During heavy rains, runoff from the site is reported to occur, and appears that it would run off to the southeast corner of the site.

Sampling– Two samples collected to date. This site was visited during the second dry season sampling event during this sampling year; no runoff was observed.

Historical sampling results for this site are presented in Table 22.

Aerial photography of the site is presented on Figure 16.

Table 22 – Summary of samples collected, NGA #176

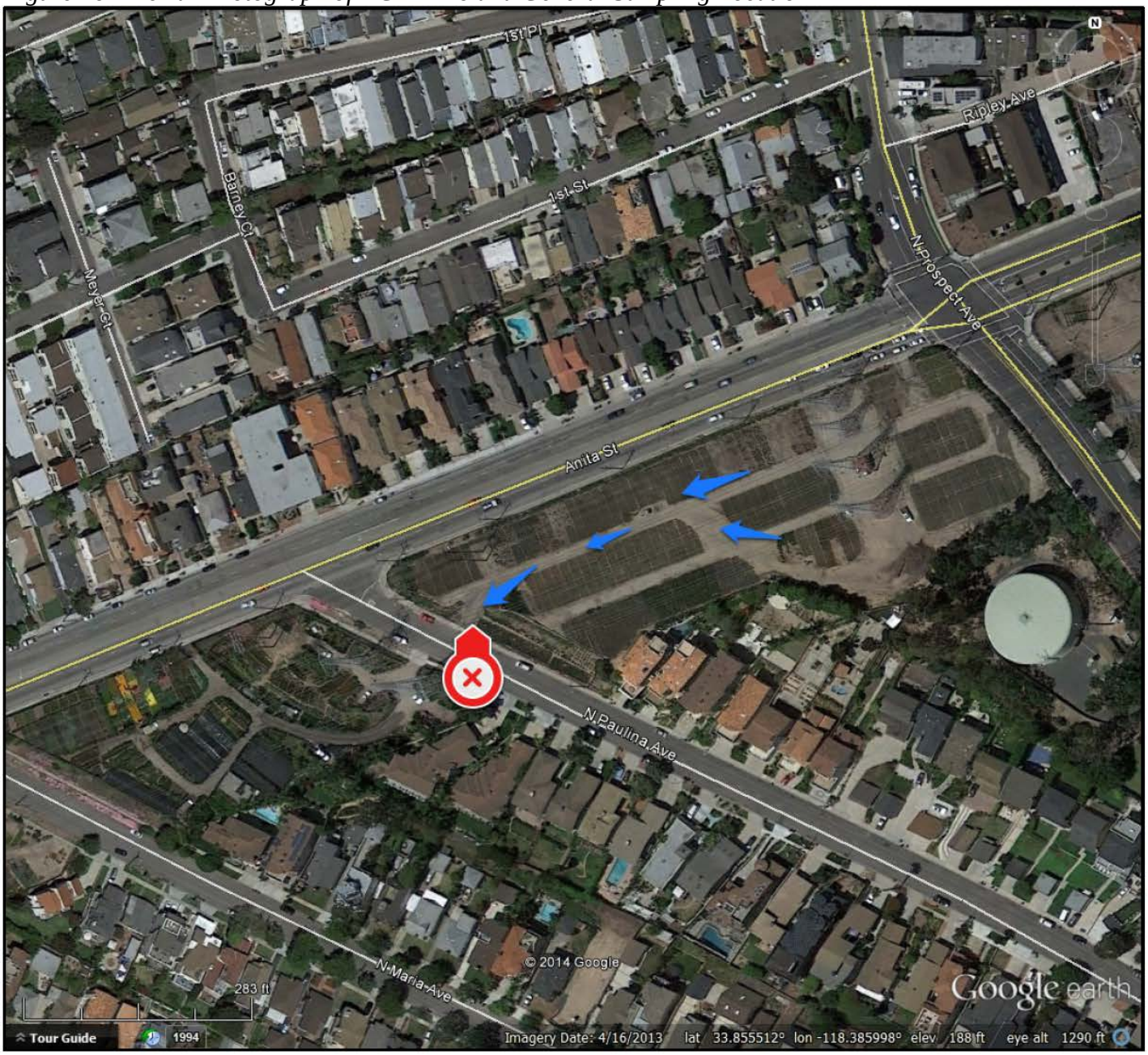
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #176	NGA-#176-LAILG-1	12/18/07	5.5	56.82	0.7145	3.85	**293.12**	0.54	**680**	12.21	3.447	6,168	na	na	na
NGA #176	NGA-#176-LAILG-2	3/25/12	0.30	29	0.99	8.7	43	0.99	220	0.99	2.2	550	80	32	0.066

Site	Sample #	Date	OC Pesticides (ng/L)	OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			No Detected DDT and Derivatives	No Detected OP Pesticides Detected	Total sum of all detected Pyrethroids
NGA #176	NGA-#176-LAILG-1	12/18/07			873.9
NGA #176	NGA-#176-LAILG-2	3/25/12			305

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 16 – Aerial Photograph of NGA #176 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE #210

Sampling Group: Group 4
Sampling Frequency - Fixed
Total/Irrigated Area: 2.0/1.4 Acres
Approximate sample site GPS location: N 01’ 11.59” W 49’ 10.89”

October 11, 2013, dry season, no sample collected

Site Drainage - The vineyard is located on the northwestern section of the site. A series of concrete channels collect surface water and direct it towards the southern gate. Based on drainage properties, the area immediately outside the southern gate was chosen as the sampling location.

Sampling– Two samples collected to date. This site was visited during the second dry season sampling event during this sampling year; no runoff was observed.

Historical sampling results for this site are presented in Table 23.

Aerial photography of the site is presented on Figure 17.

Table 23 – Summary of samples collected, NGA #210

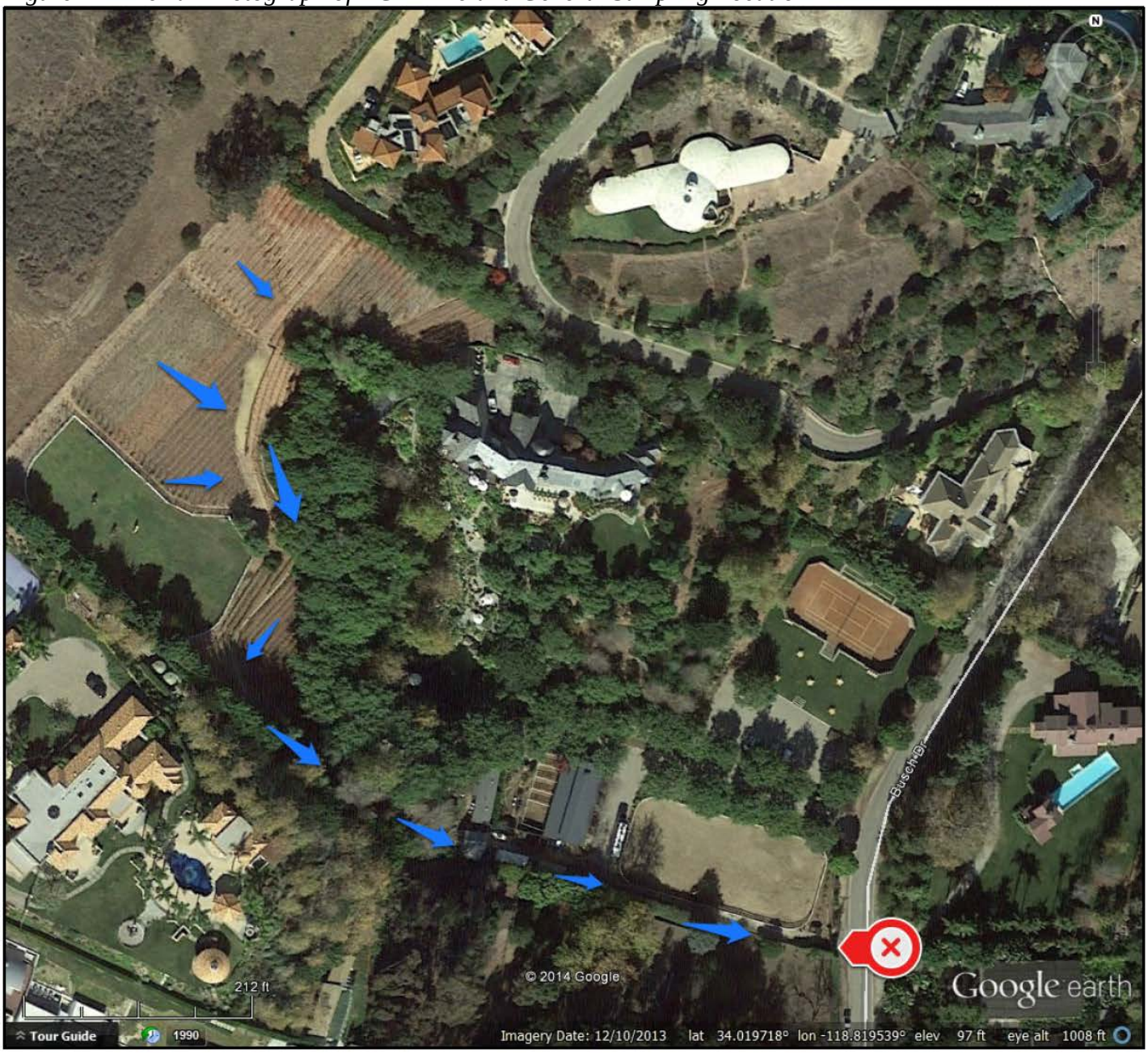
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA # 210	LAILG-NGA 210-1	11/26/08	0.11	155.92	1.892	0.92	**336.78**	2.185	**884**	3.23	3.722	542	na	na	na
NGA # 210	LAILG-NGA 210-2	3/25/12	0.20	110	1.4	0.57	**250**	1.3	**700**	1.4	2.8	86	270	110	0.0060

Site	Sample #	Date	OC Pesticides (ng/L)	OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			No OP Pesticides Detected	Malathion	Total sum of all detected Pyrethroids
NGA # 210	LAILG-NGA 210-1	11/26/08		56.4	279.8
NGA # 210	LAILG-NGA 210-2	3/25/12		41	82.7

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 17 – Aerial Photograph of NGA #210 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

6.2 VISITED REVOLVING SAMPLING SITES

NGA SITE # 26

Sampling Group: Group 1
Sampling Frequency - Rotating
Total / Irrigated Acres: 10.0 / 6.0
Sample site GPS location: N 12’ 04.9” W 13’ 22.3”

February 28, 2014, wet season, sample collected

Site Drainage – The topography is relatively flat, and drains as surface flow. Based on drainage properties and site access, the southern gate was chosen as the sampling location.

Sampling– One sample collected to date. This site was visited during the first wet season sampling event during this sampling year; a sample was collected on February 28, 2014.

Historical sampling results for this site are presented in Table 24.

Aerial photography of the site is presented on Figure 18.

Table 24 – Summary of samples collected, NGA #26

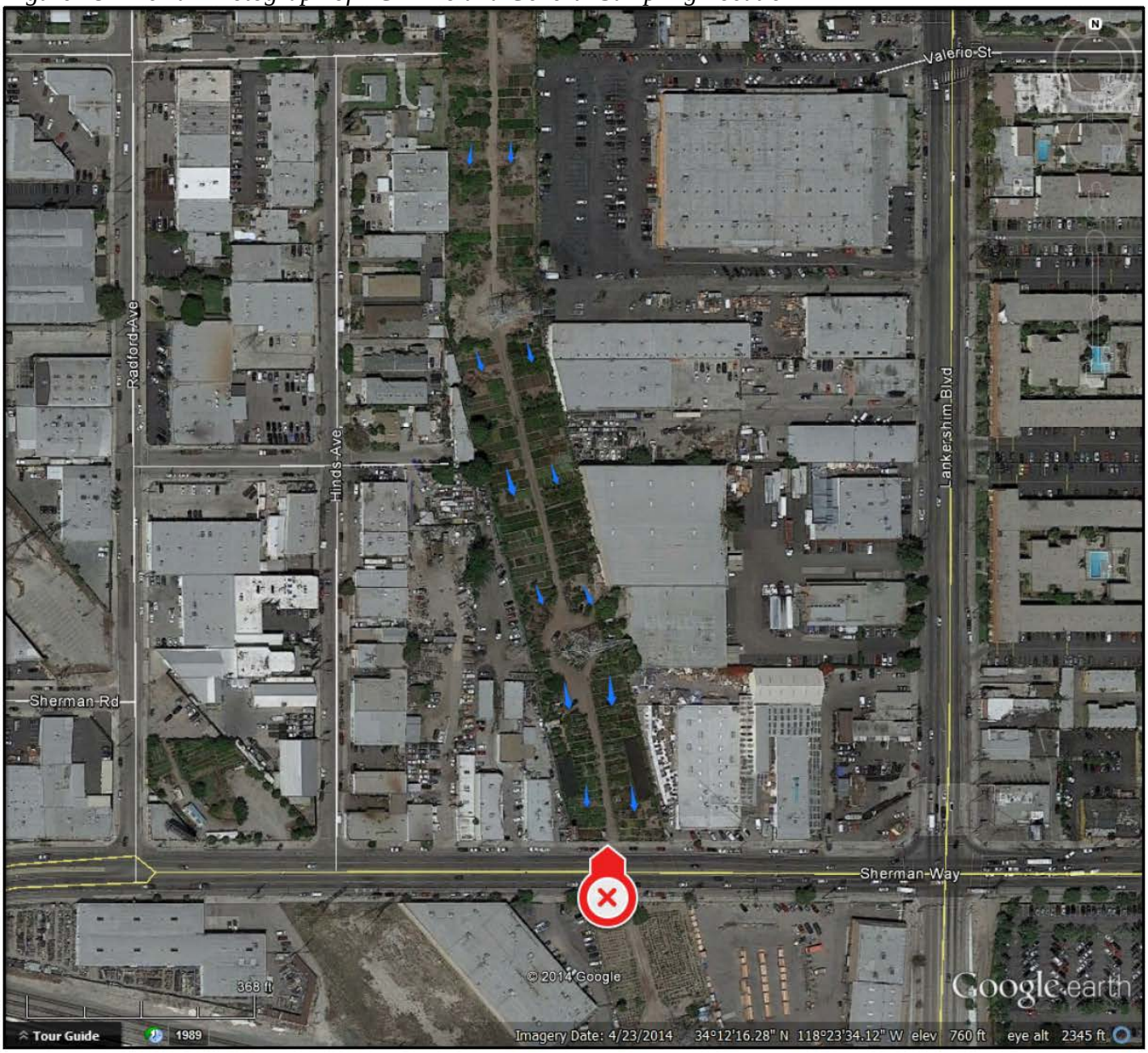
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #26	LAILG-NGA 26-1	2/28/14	2.4	73	1.8	6.4	180	2.1	590	1.80	2.3	49	158	63.2	0.056

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)			Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Total Chlordane	Chlorpyrifos	Diazinon	Malathion	Total sum of all detected Pyrethroids
NGA #26	LAILG-NGA 26-1	2/28/14	nd	nd	nd	nd	23.0	29.4

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 18 – Aerial Photograph of NGA #26 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE # 33

Sampling Group: Group 4
Sampling Frequency - 11Rotating
Total / Irrigated Acres: 32.0 / 18.5
Sample site GPS location: N 48’ 28.7” W 17’ 00.0”

October 11, 2014, dry season, no sample collected

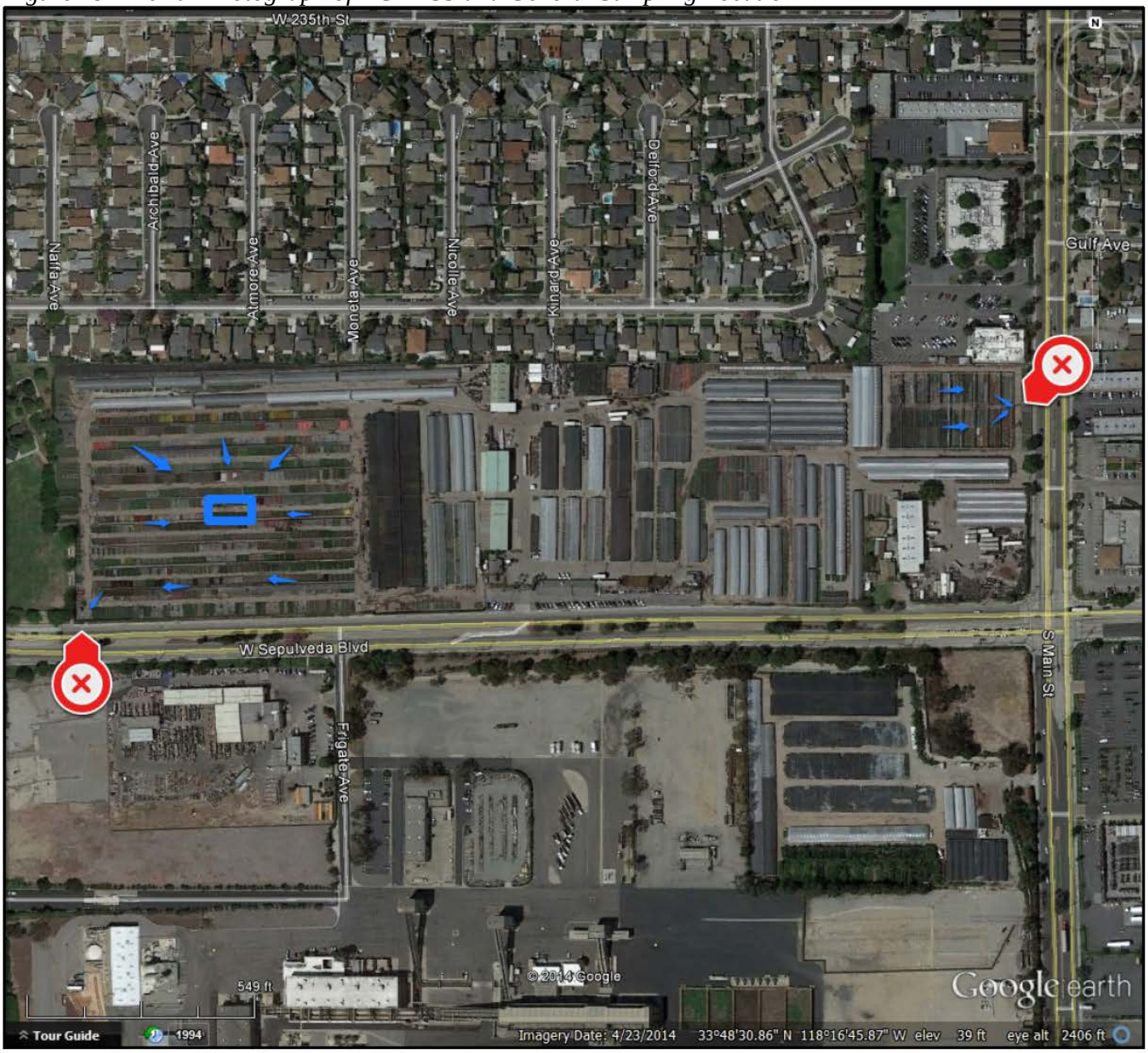
Site Drainage – The topography is relatively flat, and there is a large catchment basin in the center of the property that collects most of the water. The catchment basin is aerated and reused for landscaping. There are two drainage locations that do not drain to the basin; one in the southwest corner, and one in the northeast corner. Based on drainage properties and site access, either of these locations would suffice for a sampling location.

Sampling– No samples collected to date. This site was visited during the second dry season sampling event during this sampling year; no runoff was observed.

There are no historical sampling results for this site.

Aerial photography of the site is presented on Figure 19.

Figure 19 – Aerial Photograph of NGA #33 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

NGA SITE # 162

Sampling Group: Group 3
Sampling Frequency - Rotating
Total / Irrigated Acres: 10.0 / 6.0
Sample site GPS location: N 02’ 27.4” W 06’ 20.5”

October 10, 2013, dry season, no sample collected

Site Drainage - Two concrete channels collect surface water and direct it towards drainage area on the southeastern border. The eastern most gate collects water from the site as well as the adjacent Edison lot. Based on drainage properties, the western most gate was chosen as the sampling location.

Sampling– One sample collected to date. This site was visited during the first dry season sampling event during this sampling year; no runoff was observed.

Historical sampling results for this site are presented in Table 25.

Aerial photography of the site is presented on Figure 20.

Table 25 – Summary of samples collected, NGA #162

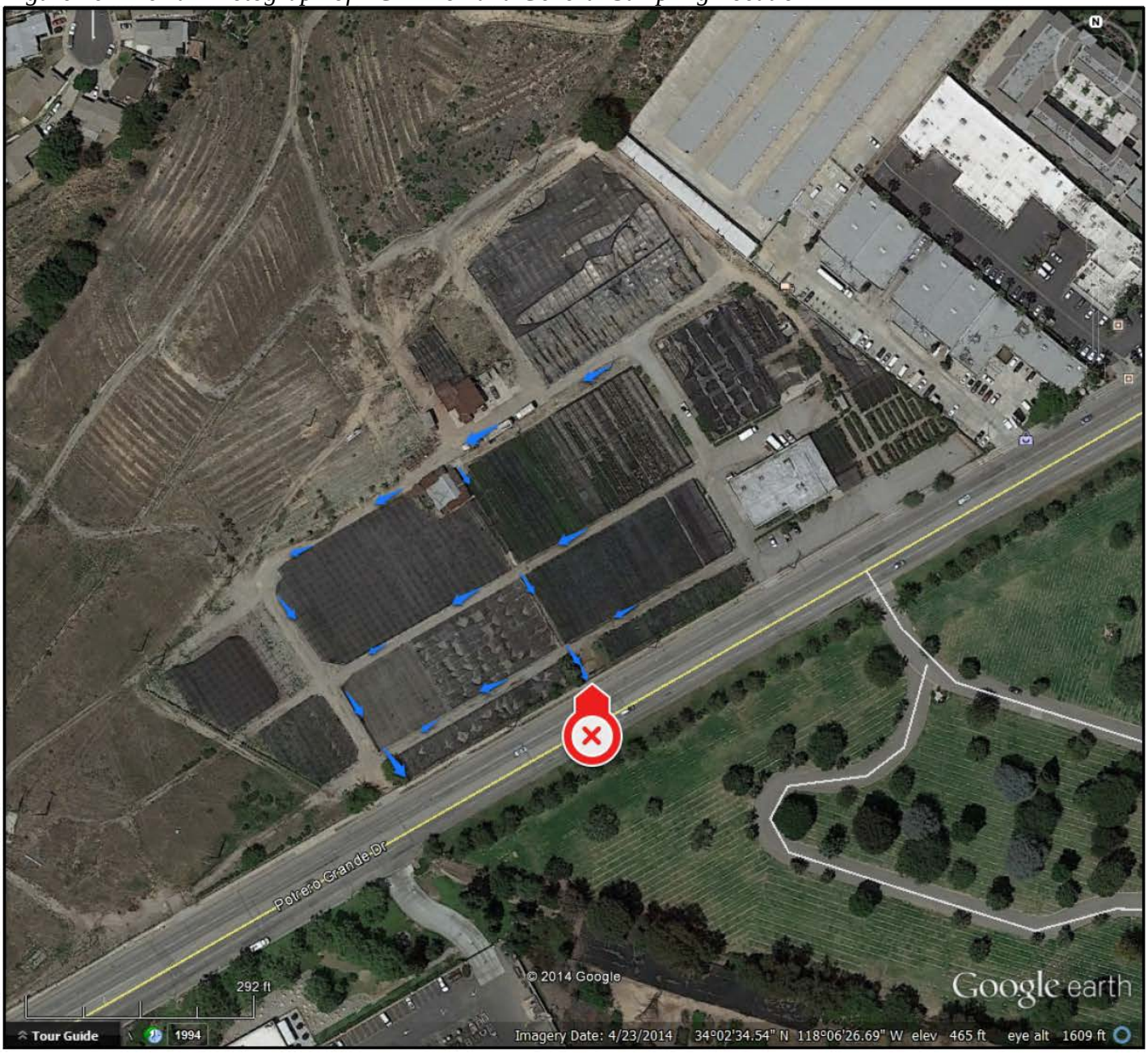
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #162	NGA #162-LAILG-1	3/17/12	0.16	35	0.96	5.9	120	0.95	350	0.96	1.0	5	140	57	0.014

Site	Sample #	Date	OC Pesticides (ng/L)	OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			No OC Pesticides Detected	No OP Pesticides Detected	Total sum of all detected Pyrethroids
NGA #162	NGA #162-LAILG-1	3/17/12			264

Results above CWIL Limits are presented in **BOLD.**

mg/L	milligrams per liter
ng/L	nanograms per liter
OC	Organochlorinated Pesticide
OP	Organophosphorus Pesticide
Pyd	Pyrethroid Pesticide
na	Constituent not analyzed
nd	Constituent not detected

Figure 20 – Aerial Photograph of NGA #162 and General Sampling Location



General Sampling Location

General Surface Flow to Sampling Location

7.0 SUMMARY OF SAMPLING SITE RESULTS

7.1 WATER QUALITY BENCHMARK EXCEENDANCES

A total of 69 samples have been collected since the inception of the program. During this sampling year, a total of 5 samples were collected.

For or the purpose of analysis, benchmarks are broken into four general groups: general chemistry (including nutrients), pesticides, toxicity, and field monitoring. Water quality benchmarks for each group are presented in Section 5. A summary of WQBs exceeded during this sampling year, and throughout the life of the program, is presented below. Numerical values for each constituent are presented on the tables included in Appendix B, and laboratory analytical results are presented in Appendix C. A discussion of the exceedances follows.

7.1.1 General Chemistry

Based on laboratory analytical results, WQBs were exceeded for seven general chemistry constituents in samples collected at four of the five sites sampled during this sampling year (Year 3 under Order No. R4-2010-0186). Table 26 summarizes general chemistry exceedances for individual constituents reported during this sampling year and throughout the life of the program. A complete summary of analytical results for general chemistry constituents is included in Appendix B.

Total Dissolved Solids

Laboratory results reported TDS exceedances in two of the five samples collected this sampling year, and 26 of the 69 total samples collected throughout the life of the program.

Chloride

Laboratory results reported Chloride exceedances in one of the five samples collected during this sampling period, and six of the 69 total samples collected throughout the life of the program.

Sulfate

Laboratory results reported Sulfate exceedances in one of the five samples collected during this sampling period, and nine of the 69 total samples collected throughout the life of the program.

Nutrients (Nitrate/Ammonia/Phosphorus)

Laboratory results reported Nitrogen as Nitrate exceedances in three of the five samples during this sampling period, and 36 of the 69 total samples collected throughout the life of the program. Laboratory results reported no Nitrogen as Ammonia exceedances in the five samples during this sampling period, and in four of the 69 total samples collected throughout the life of the program. WQBs for Phosphate have not been established.

Table 26. Summary of Water Quality Exceedances, General Chemistry

Constituent	CWIL Order # R4-2005-0080												Total	% of samples
	YEAR 1				YEAR 2				YEAR 3		YEAR 4			
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season	Dry Season	Wet Season		
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #1	Event #1		
Ammonia	1	1	0	1	0	0	1	0	ns	ns	ns	ns	4	7.7%
TDS	4	3	5	2	1	0	2	2	ns	ns	ns	ns	19	36.5%
Sulfate	0	0	1	1	0	0	2	2	ns	ns	ns	ns	6	11.5%
Chloride	1	0	2	1	0	0	0	1	ns	ns	ns	ns	5	9.6%
Nitrogen	3	3	7	2	2	1	4	8	ns	ns	ns	ns	30	57.7%
Total Number of Exceedances	**9**	**7**	**15**	**7**	**3**	**1**	**9**	**13**	**ns**	**ns**	**ns**	**ns**	**64**	
Average # of Exceedances per sample	1.80	2.33	1.07	0.88	1.50	1.00	1.13	1.18	ns	ns	ns	ns	1.23	
Number of Samples Collected	**5**	**3**	**14**	**8**	**2**	**1**	**8**	**11**	**ns**	**ns**	**ns**	**ns**	**52**	

ns Program suspended, no sample collected

Constituents	CWIL Order # R4-2010-0186											Total	% of samples
	Interim Sampling	YEAR 1				YEAR 2			YEAR 3				
		Dry Season		Wet Season		Dry Season		Wet Season	Dry Season		Wet Season		
	March 2011	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #2	Event #1		
Ammonia	0	--	--	0	0	--	--	--	--	--	0	0	0.0%
TDS	3	--	--	1	1	--	--	--	--	--	2	7	41.2%
Sulfate	0	--	--	1	1	--	--	--	--	--	1	3	17.6%
Chloride	0	--	--	0	0	--	--	--	--	--	1	1	5.9%
Nitrogen	2	--	--	2	1	--	--	--	--	--	3	8	47.1%
Total Number of Exceedances	**5**	**0**	**0**	**4**	**3**	**0**	**0**	**0**	**0**	**0**	**7**	**19**	
Average # of Exceedances per sample	1.25	--	--	1.00	0.75	--	--	--	--	--	1.40	1.12	
Number of Samples Collected	**4**	**0**	**0**	**4**	**4**	**0**	**0**	**0**	**0**	**0**	**5**	**17**	

-- No sample collected

7.1.2 Pesticides

Based on laboratory analytical results, WQBs were exceeded for four pesticides in samples collected at three of the five sites sampled during this sampling year (Year 3 under Order No. R4-2010-0186). Table 27 summarizes pesticide exceedances for individual constituents reported during this sampling year and throughout the life of the program. A complete summary of analytical results for the analyzed pesticide constituents is included in Appendix B.

OC Pesticides

Laboratory results reported no OC Pesticide exceedances in the five samples collected this sampling year. There have been 58 individual constituent exceedances in the 69 total samples collected throughout the life of the program.

Chlordane and 4,4' DDE have been the most prevalent OC pesticides detected, accounting for 39 of the 58 total exceedances.

OP Pesticides

Laboratory results reported OP Pesticide exceedances in one of the five samples collected this sampling year. There have been 25 individual constituent exceedances in the 69 total samples collected throughout the life of the program.

Chlorpyrifos was the only OP pesticide detected over WQBs for this sampling year, and the sample was considered estimated due to an elevated RPD with the field duplicate. OP pesticides detected over WQBs throughout both waiver periods have been Chlorpyrifos, Diazinon, and Malathion.

Pyrethroids

Laboratory results reported Pyrethroid Pesticide exceedances in two of the five samples collected this sampling year. There have been 89 individual constituent exceedances in the 69 total samples collected throughout the life of the program.

Pyrethroid pesticides detected over WQBs for this sampling year included Bifenthrin, Cyfluthrin, and Permethrin. Pyrethroid pesticides detected over WQBs throughout both waiver periods have been: Bifenthrin, Cyfluthrin, Danitol, Deltamethrin, Fluvalinate, lambda-Cyhalothrin, and Permethrin.

Table 27. Summary of Water Quality Exceedances, Pesticides

Constituent	CWIL Order # R4-2005-0080												Total	% of samples
	YEAR 1				YEAR 2				YEAR 3		YEAR 4			
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season	Dry Season	Wet Season		
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #1	Event #1		
Waiver Limitations														
OC Pesticides														
Clordane	1	0	6	1	2	1	4	3	ns	ns	ns	ns	18	34.62%
4,4' DDT	2	2	2	1	0	0	0	0	ns	ns	ns	ns	7	13.46%
4,4' DDD	2	2	2	1	0	0	0	2	ns	ns	ns	ns	9	17.31%
4,4' DDE	2	1	5	2	0	1	2	4	ns	ns	ns	ns	17	32.69%
Dieldrin	0	0	0	0	0	0	0	0	ns	ns	ns	ns	0	0.00%
Toxaphene	0	0	0	0	0	0	0	1	ns	ns	ns	ns	1	1.92%
Waiver, OC Pesticide # of Exceedances	**7**	**5**	**15**	**5**	**2**	**2**	**6**	**10**	**0**	**0**	**0**	**0**	**52**	
OP Pesticides														
Chlorpyrifos	0	0	2	1	0	0	1	3	ns	ns	ns	ns	7	13.46%
Diazinon	0	0	2	1	1	0	0	1	ns	ns	ns	ns	5	9.62%
Waiver, OP Pesticide # of Exceedances	**0**	**0**	**4**	**2**	**1**	**0**	**1**	**4**	**0**	**0**	**0**	**0**	**12**	
Aquatic Life Guidelines														
OP Pesticides														
Malathion	0	0	1	1	1	0	0	2	ns	ns	ns	ns	5	9.62%
ALB, OP Pesticide # of Exceedances	**0**	**0**	**1**	**1**	**1**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**5**	
Pyrethroid Pesticides														
Bifenthrin	1	2	4	0	0	0	2	3	ns	ns	ns	ns	12	23.08%
Cyfluthrin	2	1	4	2	0	0	5	4	ns	ns	ns	ns	18	34.62%
Fenpropathrin (Danitol)	1	0	3	2	1	0	2	2	ns	ns	ns	ns	11	21.15%
Fluvalinate	0	1	0	0	1	0	2	3	ns	ns	ns	ns	7	13.46%
Deltamethrin	0	0	2	2	1	0	0	2	ns	ns	ns	ns	7	13.46%
Lambda-cyhalothrin	1	0	1	1	1	0	6	2	ns	ns	ns	ns	12	23.08%
Permethrin	1	1	4	0	1	0	3	4	ns	ns	ns	ns	14	26.92%
ALB, Pyrethroid Pesticide # of Exceedances	**6**	**5**	**18**	**7**	**5**	**0**	**20**	**20**	**0**	**0**	**0**	**0**	**81**	

Total Number of Exceedances	**13**	**10**	**38**	**15**	**9**	**2**	**27**	**36**	**ns**	**ns**	**ns**	**ns**	**150**
Average # of Exceedances per sample	2.60	3.33	2.71	1.88	4.50	2.00	3.38	3.27	ns	ns	ns	ns	2.88
Number of Samples Collected	**5**	**3**	**14**	**8**	**2**	**1**	**8**	**11**	**ns**	**ns**	**ns**	**ns**	**52**

ni Not included in laboratory analytical suite during this Waiver period

ns Program suspended, no sample collected

Table 27, cont. Summary of Water Quality Exceedances, Pesticides

Constituents	CWIL Order # R4-2010-0186											Total	% of samples
	Interim Sampling	YEAR 1				YEAR 2			YEAR 3				
		Dry Season		Wet Season		Dry Season		Wet Season	Dry Season		Wet Season		
	March 2011	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #2	Event #1		
Waiver Limitations													
OC Pesticides													
Clordane	1	--	--	0	0	--	--	--	--	--	0	1	5.88%
4,4' DDT	1	--	--	0	0	--	--	--	--	--	0	1	5.88%
4,4' DDD	0	--	--	0	0	--	--	--	--	--	0	0	0.00%
4,4' DDE	1	--	--	1	1	--	--	--	--	--	0	3	17.65%
Dieldrin	1	--	--	0	0	--	--	--	--	--	0	1	5.88%
Toxaphene	0	--	--	0	0	--	--	--	--	--	0	0	0.00%
Waiver, OC Pesticide # of Exceedances	**4**	**0**	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	
OP Pesticides													
Chlorpyrifos	3	--	--	0	1	--	--	--	--	--	1	5	29.41%
Diazinon	1	--	--	0	0	--	--	--	--	--	0	1	5.88%
Waiver, OP Pesticide # of Exceedances	**4**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**6**	
Aquatic Life Guidelines													
OP Pesticides													
Malathion	1	--	--	0	1	--	--	--	--	--	0	2	11.76%
ALB, OP Pesticide # of Exceedances	**1**	--	--	**0**	**1**	--	--	--	--	--	**0**	**2**	
Pyrethroid Pesticides													
Bifenthrin	0	--	--	0	0	--	--	--	--	--	1	1	5.88%
Cyfluthrin	0	--	--	0	0	--	--	--	--	--	1	1	5.88%
Cypermethrin	0	--	--	0	0	--	--	--	--	--	0	0	0.00%
Fenpropathrin (Danitol)	–	--	--	ni	ni	--	--	--	--	--	0	0	0.00%
Deltamethrin	0	--	--	1	0	--	--	--	--	--	0	1	5.88%
Lambda-cyhalothrin	0	--	--	0	0	--	--	--	--	--	0	0	0.00%
Permethrin	2	--	--	0	1	--	--	--	--	--	1	4	23.53%
ALB, Pyrethroid Pesticide # of Exceedances	**2**	--	--	**1**	**1**	--	--	--	--	--	**3**	**7**	
Total # of Exceedances	**11**	--	--	**2**	**4**	--	--	--	--	--	**4**	**21**	
Average # of Exceedances per sample	2.75	--	--	0.50	1.00	--	--	--	--	--	0.80	1.24	
Number of Samples Collected	**4**	**0**	**0**	**4**	**4**	**0**	**0**	**0**	**0**	**0**	**5**	**17**	

ni Not included in laboratory analytical suite during this Waiver period

-- No samples collected

7.1.3 Toxicity

Based on laboratory analytical results, toxicity was not significant enough to initiate a TIE in any of the five samples collected this sampling year. A total of 15 TIEs have been conducted throughout the life of the program. Seven of the TIEs did not show a significant observed toxicity effect in follow up testing.

TIE results indicated a variety of reasons for toxicity, including non-polar organic compounds, particulate-bound toxicants, volatile compounds, organophosphates, particulate bound toxicants, metals, and a combination of the previously listed toxicants. Comparing TIE results to laboratory data in corresponding samples did not show a correlation between pesticide results and reported toxicity, except at NGA site #4, where elevated levels of pesticides corresponded with organophosphate and particulate bound toxicity. To date, results from TIE testing have not provided significant evidence of a prevailing issue across sites, and does not appear to correlate strongly with laboratory analytical results. A historical summary of analytical results for toxicity testing is included for each site in Appendix B.

7.1.4 Field Monitoring Results

Field Monitoring Water Quality Benchmarks are based on the surface water and groundwater basin objectives currently contained in the Basin Plan or other applicable water quality standards established for the Los Angeles Region. Field monitoring readings did not exceed Basin Plan objectives at any site sampled during the Waiver Period. A historical summary of results for field measurements is included for each site in Appendix B. Hard copies of field data sheets and field reports are kept on file at PW, and are available upon request.

7.2 QUALITY ASSURANCE AND QUALITY CONTROL

QA/QC of data collected during Year 3 under CWIL Order No. R4-2010-0186 fell within acceptable control limits established by the analyzing laboratories, and are included in the tables in Appendix B and laboratory analytical documentation included in Appendix C. Field blanks and equipment blanks collected by PW did not report any concentrations above laboratory MRLs. All field monitoring equipment was calibrated prior to each monitoring event, and verified after calibration with mid-range standards. Calibration logs are kept on-file at PW.

Field duplicates and laboratory duplicates are used to check the precision of samples. The precision of field duplicates were acceptable for all constituents except for TSS (32% RPD) and Chlorpyrifos (34% RPD) in the samples collecting from NGA#19. Lab duplicates, blank spike duplicates, laboratory control spike duplicates, and matrix spike duplicates were all accepted by the laboratory and did not cause any data to be estimated, as discussed in the laboratory analytical report.

Percent recoveries for bank spike samples, laboratory control samples, and matrix spike samples are used to check the accuracy of samples. Some of these values fell outside the QAQC limits set in the QAPP, however, data was considered valid due to varying reasons, as discussed in the laboratory analytical report included in Appendix X.

8.0 DISCUSSION / CONCLUSION

A total of two sampling event were conducted during the dry season and one sampling event were conducted during the wet season during the third year of CWIL Order No. R4-2010-0186. No runoff was observed or sampled during the dry season, and all five sites were sampled during the wet season. A second wet season sampling event was not conducted, as there was not a storm of sufficient magnitude to trigger a sampling event.

WQB exceedances were observed in the collected samples. In general, nitrogen and TSS that may carry particulate bound pesticides continue to be the primary concern fot the monitoring group. The currently approved version of the WQMP has begun implementation, but is currently behind schedule due to language barriers encountered during the data collection process. LAILG is currently in the process of addressing this concern, and is revising a data collection website and text message data collection system. Currently, it is anticipated that sufficient information will be collected to prepare an updated WQMP by the end of the first quarter, 2015. The WQMP will also present BMPS that have been implemented by growers, and a more in depth discussion of sampling and analysis trends reported across the group.

FIGURE 1 LOS ANGELES COUNTY IRRIGATED LANDS GROUP

LOS ANGELES REGIONAL WATERSHEDS

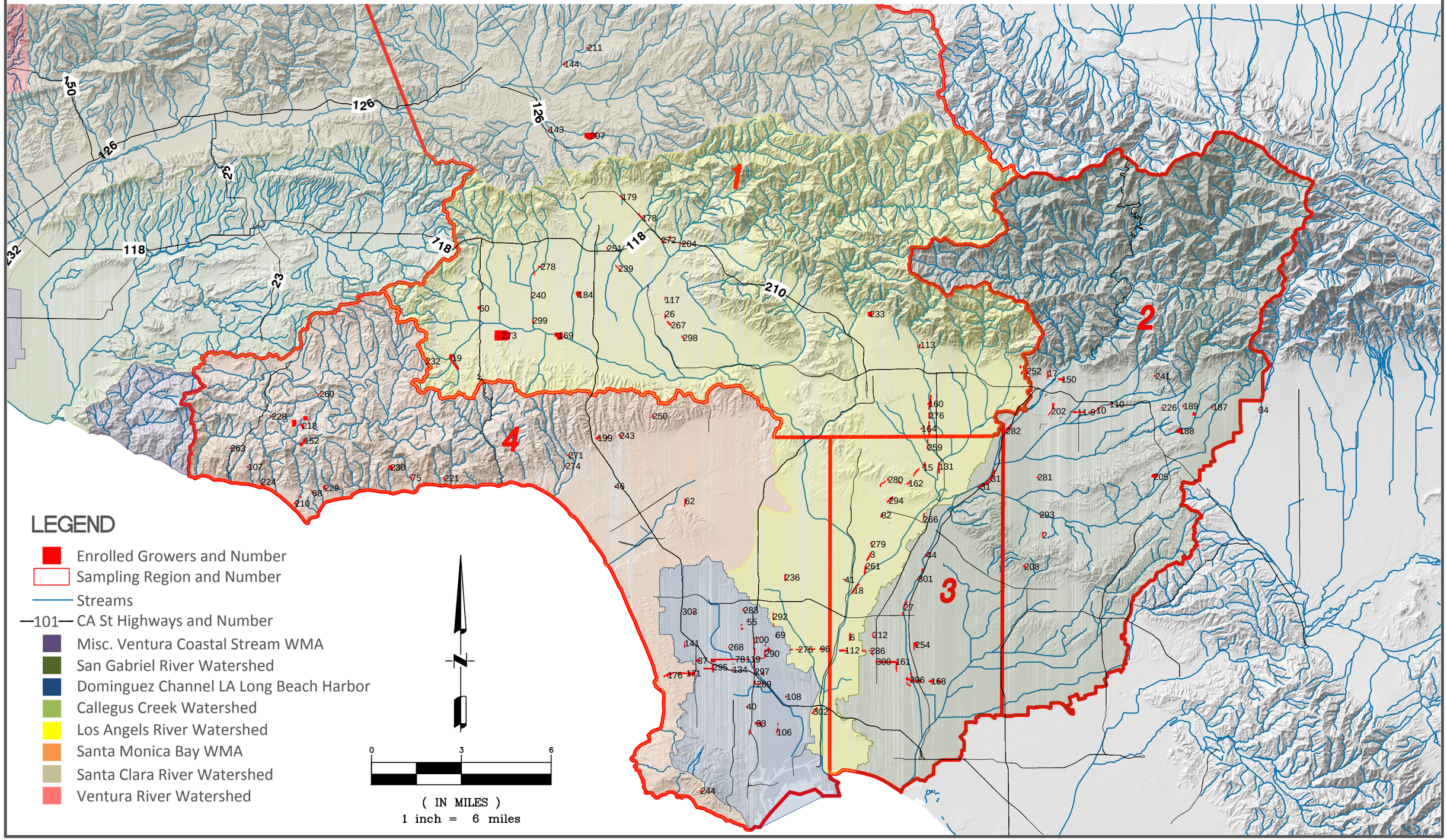
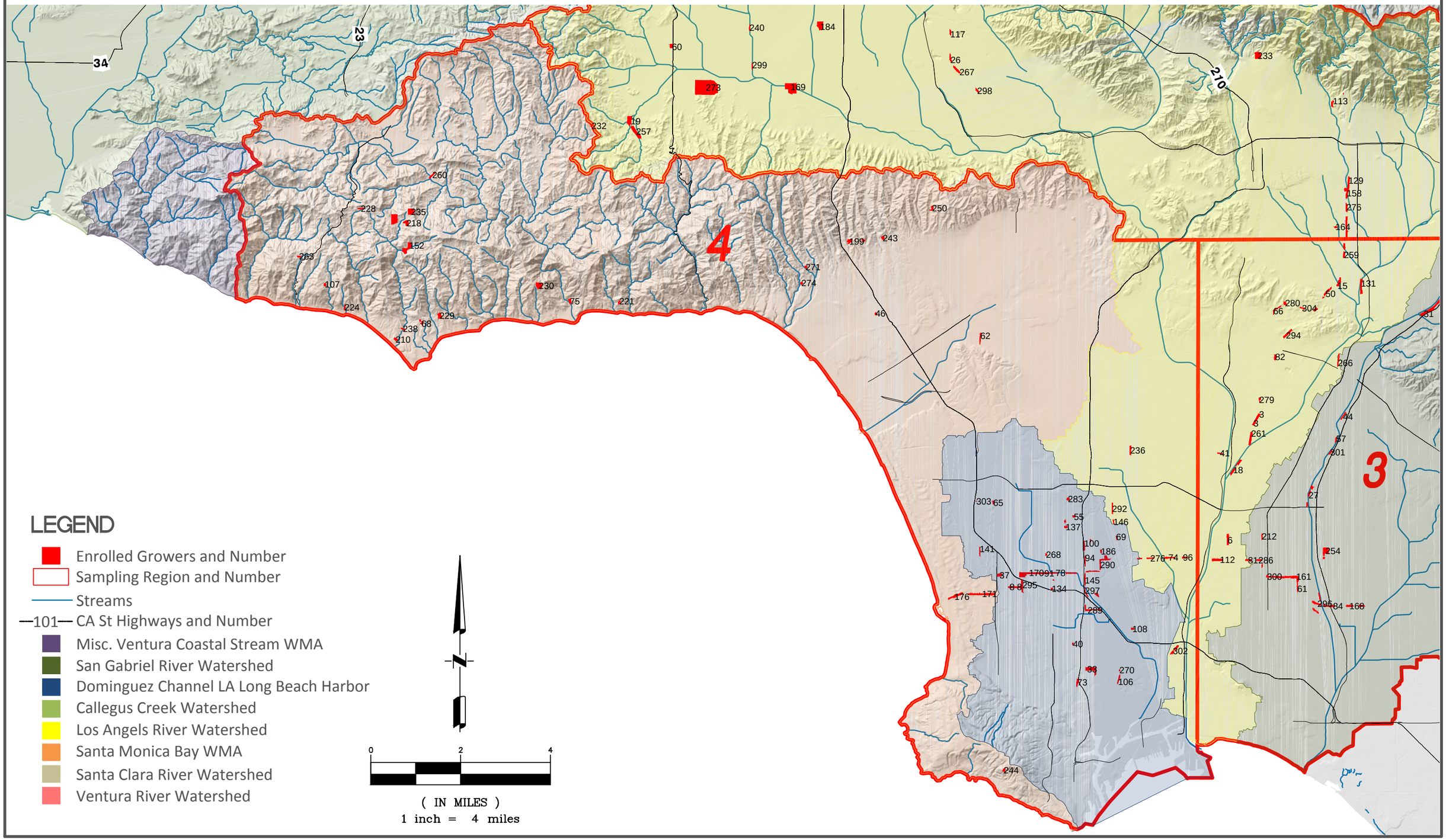


FIGURE 1.1 LOS ANGELES COUNTY IRRIGATED LANDS GROUP

SANTA MONICA BAY WMA



LEGEND

- Enrolled Growers and Number
- Sampling Region and Number
- Streams
- —101— CA St Highways and Number
- Misc. Ventura Coastal Stream WMA
- San Gabriel River Watershed
- Dominguez Channel LA Long Beach Harbor
- Callegus Creek Watershed
- Los Angels River Watershed
- Santa Monica Bay WMA
- Santa Clara River Watershed
- Ventura River Watershed

0 2 4

(IN MILES)

1 inch = 4 miles

FIGURE 1.2 LOS ANGELES COUNTY IRRIGATED LANDS GROUP

SANTA CLARA RIVER WATERSHED

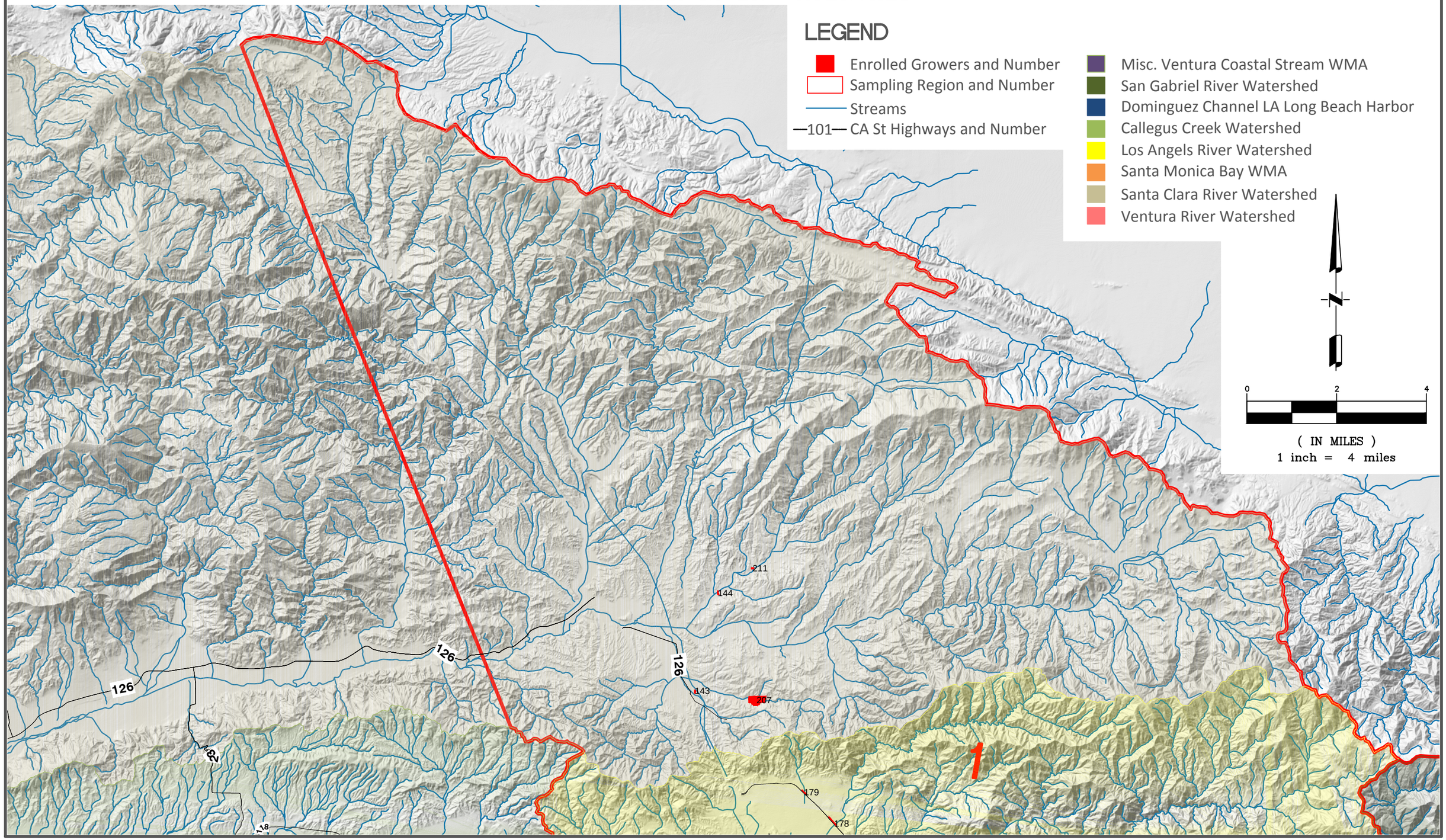


FIGURE 1.3 LOS ANGELES COUNTY IRRIGATED LANDS GROUP

LOS ANGELES RIVER WATERSHED

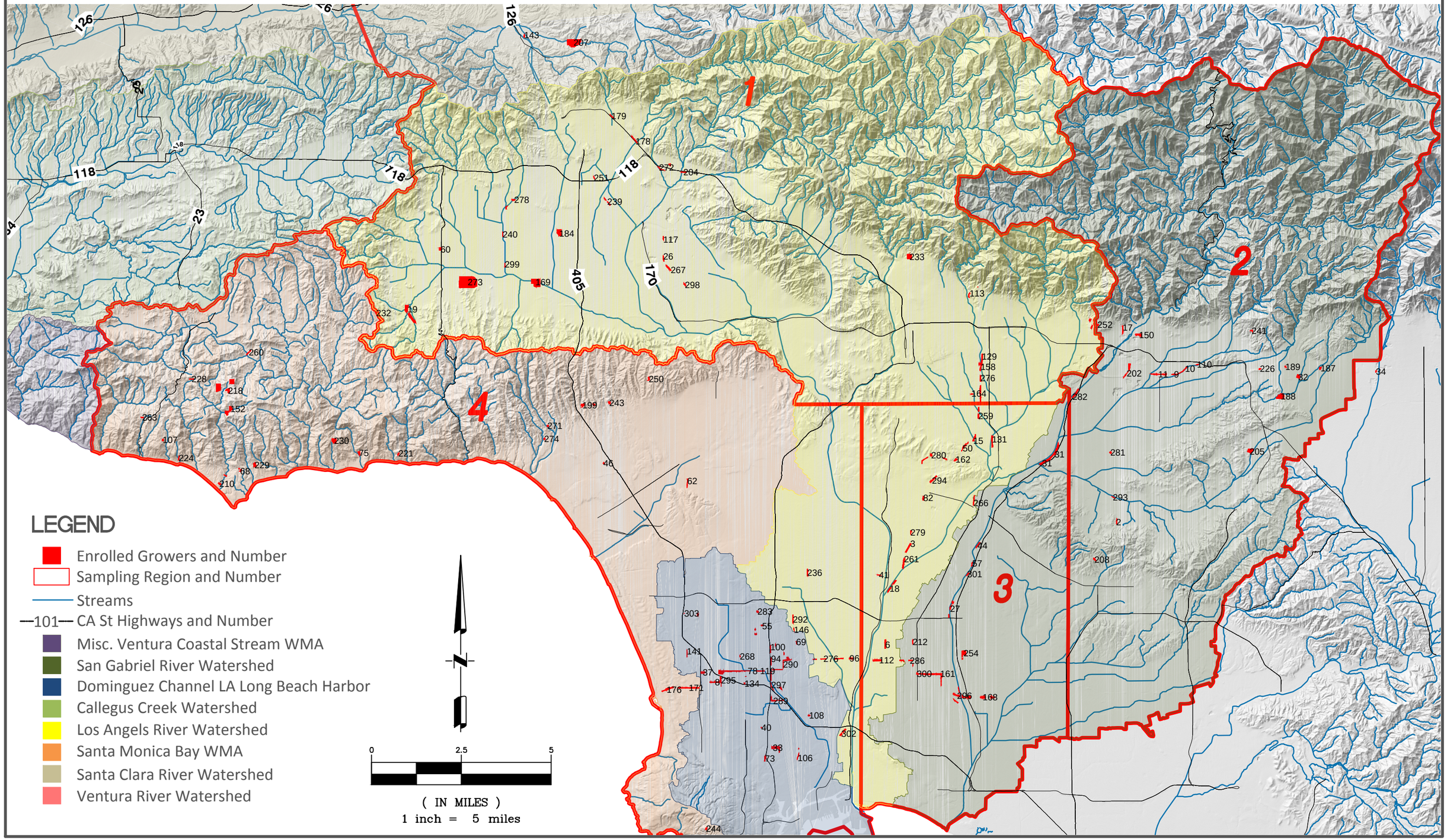


FIGURE 1.4 LOS ANGELES COUNTY IRRIGATED LANDS GROUP

DOMINGUEZ CHANNEL LA/LONG BEACH HARBORS WMA

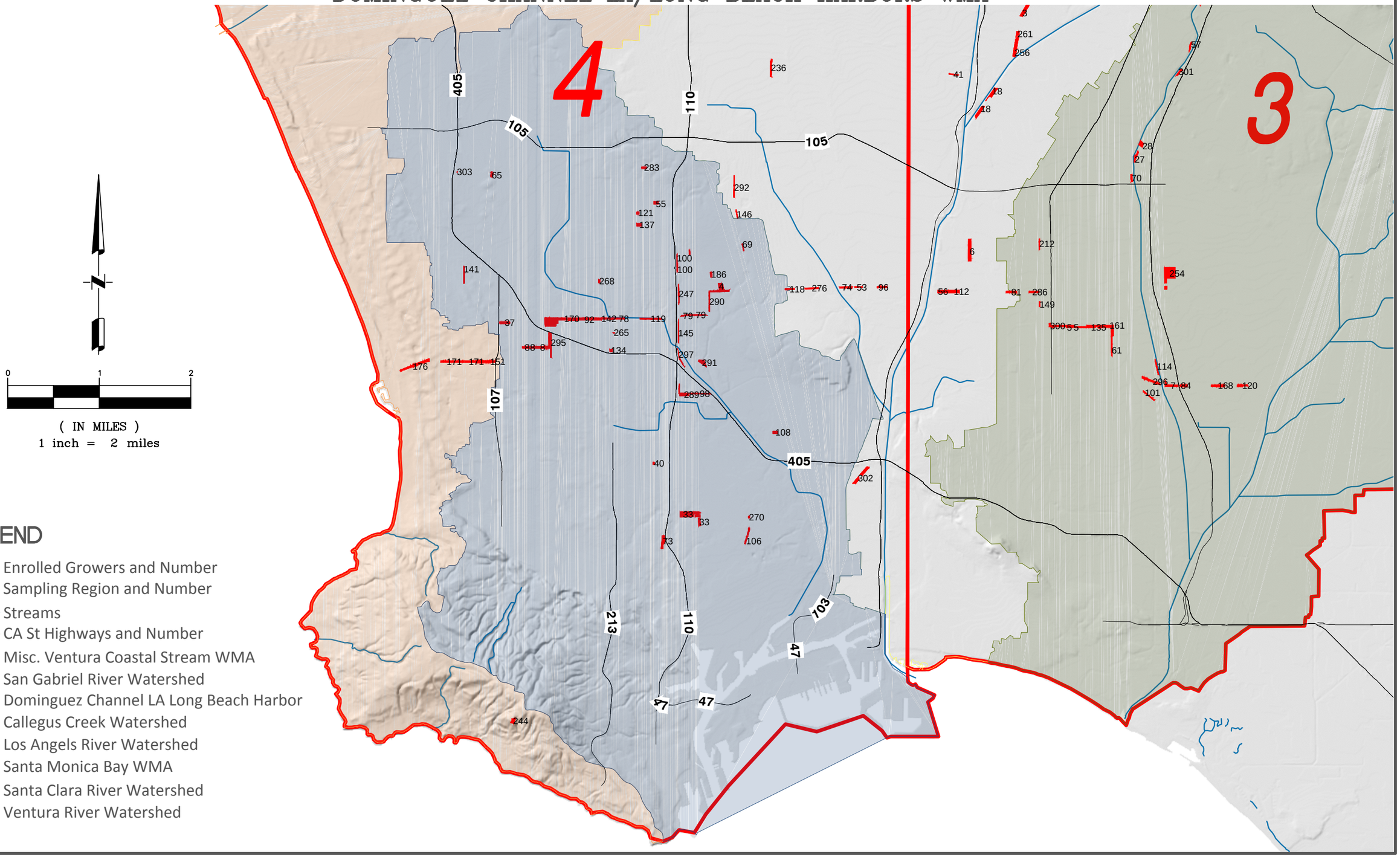
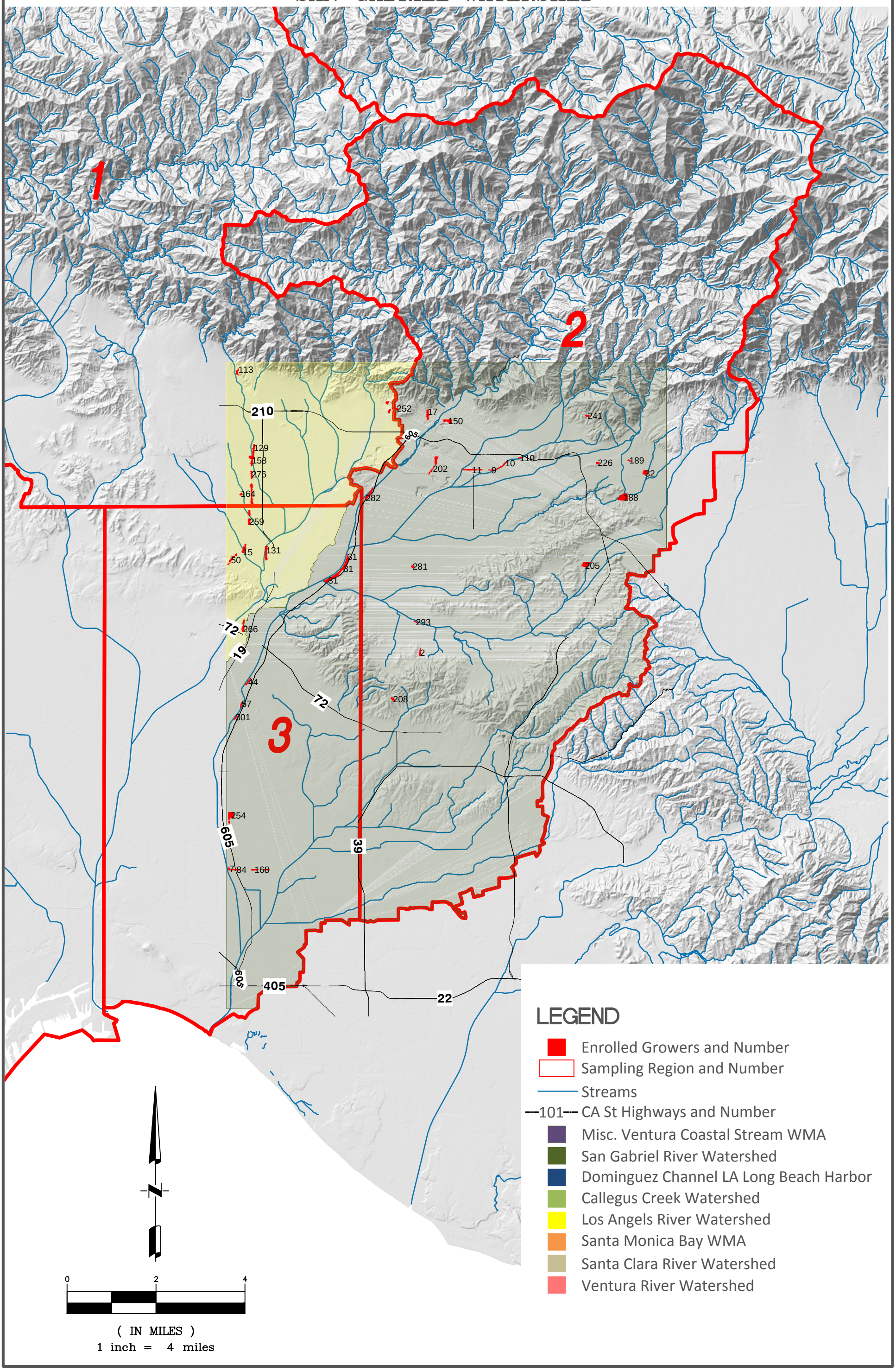


FIGURE 1.5 LOS ANGELES COUNTY IRRIGATED LANDS GROUP

SAN GABRIEL WATERSHED



APPENDIX A

UPDATED LIST OF LOS ANGELES COUNTY IRRIGATED LANDS GROUP, AS OF DECEMBER, 2014

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
2	Ayon Nursery	Adriana Ayon - Jesus Ayon	8207019801 8207019802	16448 Haliburton Rd	Hacienda Heights	16448 Haliburton Rd	Hacienda Heights	CA	91745	General Ornamental	SG	6.00	5.00
3	ABC Nursery, Inc.	Eric Yonemura	6329001800 6329001801 6330019801 6330019800	6800 Darwell Avenue	Bell Gardens	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	LA	22.21	10.20
4	ABC Nursery, Inc.	Eric Yonemura	6126011028 6126011029 6126011035 6126011036 6126011800	424 E. Gardena Boulevard	Gardena	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	D	19.19	11.51
5	ABC Nursery, Inc.	Eric Yonemura	7168034800 7168034801 7168034281 7168034285 7168034270 7168034289 7168034276 7168034278 7168034272 7168034280 7168034273 7168034274	6221 Clark Avenue	Lakewood	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	SG	6.40	2.70
6	ABC Nursery, Inc.	Eric Yonemura	6240008800 6240008801 6240008802	7132 Somerset Boulevard	Paramount	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	LA	9.52	4.87
7	ABC Nursery, Inc.	Eric Yonemura	7049021800 7049021801 7049021802 7049021803 7049021802 7049021800	20200 Studebaker	Cerritos	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	LA	13.84	8.30
8	ABC Nursery, Inc.	Eric Yonemura	4089009800, 4089016802, 4089016800, 4089011801, 4089011800, 4089010800, 4089009800 4089010800 4089011800 4089011801 4089017800 4089016802 4089016800	18601 Yukon Avenue	Torrance	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	D	21.97	10.20

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
9	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	8622022270 8622012271 8622013270 8622022006	5359 Citrus Ave	Azusa	18012 E. Alford St.	Azusa	CA	91702	General Ornamental	SG	3.00	2.25
10	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	8630008274 8629002270	1050 E Gladstone St	Azusa	18012 E. Alford St.	Azusa	CA	91702	General Ornamental	SG	7.00	5.25
11	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	8620022270 8620015270 8620015272 8620005271 8620024273 8620024272 8621025271 8621025270 8621015270 8621016272 8620015270 8620015272 8620022270 8620024272 8620022270 8620024272 8620024273	669 S Azusa Ave	Azusa	18012 E. Alford St.	Azusa	CA	91702	General Ornamental	SG	10.00	7.50
14	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	5283007271	2657 Delta Ave	Rosemead	18012 E. Alford St.	Azusa	CA	91702	General Ornamental	LA	1.50	1.13
15	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	5283017270 5283017271 5283017271	2450 Charlotte Ave	Rosemead	18012 E. Alford St.	Azusa	CA	91702	General Ornamental	LA	2.50	1.88
17	Arbor Nursery Plus	Tony Rodriquez	8610001800 8602011801 8602011800 8602010800	2865 Royal Oaks Dr	Duarte	P O Box 398	Azusa	CA	91702	T	SG	8.00	6.00
18	AY Nursery, Inc.	Hugo Ayon	6233003803 6233003802 6233003800 6232016801 6232016800 6232016802 6232017804 6232017803	10115 South Garfield Ave	South Gate	P. O. Box 4115	Riverside	CA	92514	General Ornamental	LA	4.5 (8.9)	3.50
19	Boething Treeland Farms, Inc.	Bruce Pherson	2047001004 2047001001 2047001005 2047001002 2044020022 2047001001 2047001002 2047001004 2047001005	23475 Long Valley Road	Woodland Hills	23475 Long Valley Road	Woodland Hills	CA	91367	General Ornamental	LA	32.00	14.68

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
24	Calscape Growers	Chester (Dan) Robinson	5860004004	2103 Villa Heights Rd	Pasadena	1969 Oakwood Street	Pasadena	CA	91104	General Ornamental	LA	0.25	0.20
26	Canyon Way Nursery	Mark Wurzel	2317019900 2317018900 2317017900 2317018900 2317019900	11745 Sherman Way	North Hollywood	3214 Oakdell Road	Studio City	CA	91604	General Ornamental	LA	4.98	4.25
27	Certified Plant Growers, Inc.	Tom Miesen	8021020800 8021008806 8021008802 8021008801 8021008902	10400 Downey/Norwalk Rd	Norwalk	P.O. Box 1696	Temecula	CA	92593	Color	SG	10.00	6.50
28	Certified Plant Growers, Inc.	Tom Miesen	8021005915 8021004801 8021004800 8021004805 8021004804	10524 E Firestone Blvd	Norwalk	P.O. Box 1696	Temecula	CA	92593	Color	SG	2.50	1.50
31	Coiner Nursery	James Coiner	8110029800 8110029910 8110029904 8110029905 8110029906 8110029907 8110029908 8115002908 8115002907 8115002906 8115002800 8115002905 8115002904 8115002801 8115001801 8115001908 8115001800 8115001909 8115001270	285 San Fidel	La Puente	3000 B Street	La Verne	CA	91750	General Ornamental	SG	62.00	48.00
32	Coiner Nursery	James Coiner	8381009014 8381009002	3000 B Street	La Verne	3000 B Street	La Verne	CA	91750	General Ornamental	SG	15.00	15.00

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
33	Color Spot Nurseries, Inc.	Dixon Suzuki	7330007906 7330008902 7330009901 7330009904 7406026913 7330009909 7330009910 7330009908 7330009907 7330009905 7330009903 7330009911	321 W. Sepulveda Blvd	Carson	321 W Sepulveda Blvd.	Carson	CA	90745	Color	D	32.00	18.50
34	Corey Nursery Co.	Jeff Corey	8307002032	1650 Monte Vista Avenue	Claremont	P. O. Box 609	Claremont	CA	91711	Greenhouse	SA	6.80	3.00
35	Cyclamen Growers Inc.(dba C Grows)	Tomoko Copon	2530003017 2530003018	11545 Kagel Canyon St	Sylmar	11545 Kagel Canyon St.	Lake View Terrace	CA	91342	Greenhouse	LA	3.54 (4.5)	2.60
37	Higo Nursery	Daniel Kato	4085026800	17715 Amie Ave	Torrance	14515 S. Raymond Ave	Gardena	CA	90247	General Ornamental	D	3.75	2.50
39	Dave's 4 Seasons Growers	Dave Martinez	5277028802 5277023807	7701 Mooney Drive	Rosemead	7701 Mooney Drive	S. San Gabriel	CA	91770	General Ornamental	SG	1 (0.57)	0.75 (0.57
40	Mikamo Nursery	Edith Mikamo	7344007038 7344007039	1029 W. 223 Street	Torrance	1029 W. 223 Rd St.	Torrance	CA	90502	Cutflower	D	1.00	0.75
41	Esequiel Nursery	Esequiel Hernandez/ Perla Hernandez	6222005273	9000 Atlantic Ave	South Gate	9000 Atlantic Ave.	South Gate	CA	90280	General Ornamental	LA	1.5 (2.5)	1.50
42	Fausto's Nursery	Fausto Garcia/ Eduardo Garcia	7165020270 7165020800	5759 Allington St	Lakewood	15317 McRae St.	Norwalk	CA	90650	General Ornamental	SG	5.00	4.00
44			8177001802 8177001801 8177001800 8177001805 8177001804	10490 Washington Blvd	Whittier							5.20	3.00
45	Shima Nursery	Frank Tsushima / Roger Tsushima	5389006807	8625 Grand Ave	Rosemead	8625 E. Grand Ave	Rosemead	CA	91770	General Ornamental	LA	2.90	1.30
46	F K Nursery, Inc.	Eric Kageyama	4261037001 4261037005 4261037006 4261037007 4261037004 4261037008	2027 Colby Ave	Los Angeles	2027 Colby Avenue	Los Angeles	CA	90025	General Ornamental	SM	1.46	0.92
50	Carreon Nursery	Guadalupe Carreon/ Adriana Carreon	5277023802 5277023803 5277023804 5277023805	7900 La Merced Road	Rosemead	472 Giano Avenue	La Puente	CA	91744	General Ornamental	LA	6.00	6.00
53	New West Growers, Inc.	Grace Hernandez	7318004803	1601 S. Santa Fe Ave	Compton	1413 Kenneth Rd. #227	Glendale	CA	91201	General Ornamental	LA	3.50	1.70

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
54	New West Growers, Inc.	Grace Hernandez		110 West Green Leaf	Compton	1413 Kenneth Rd. #227	Glendale	CA	91201	General Ornamental	LA	3.00	1.00
55	Moneta Nursery, Inc.	Gary Ishii	6115019043 6115019044 6115019045 6115019042	13633 South Vermont Avenue	Gardena	13633 S. Vermont Avenue	Gardena	CA	90247	Retail / Multiple	D	4.75 (4.1)	3.00
56	Ricardo's Nursery	Ricardo Arrivillaga	7116016802 7116016801	6850 Atlantic Ave	Long Beach	6850 Atlantic Ave	Long Beach	CA	90805	General Ornamental	LA	9.00	7.00
57		Reuben Valdez	6385005800 6385005801 6385016800 6385016801	8406 Pico Vista Dr.	Pico Rivera						SG	2.70	1.50
58	GM Nursery	Juan Diaz	5283015806 5283016804	2563 Angelus Ave	Rosemead	2563 Angelus Ave	Rosemead	CA	91770	General Ornamental	LA	4.00	3.00
60	Green Thumb Nursery	Frank Soriano	2012022012 2012022015 2012022011 2012022010 2012022014 2012022007	7659 Topanga Canyon Blvd	Canoga Park	7659 Topanga Cyn Blvd	Canoga Park	CA	91305	General Ornamental	LA	19(17.5)	10.00
61	My Hoa Farm	Han Luong	7165012282 7165013274	5760 Allington Street	Lakewood	5726 Candor St.	Lakewood	CA	90713	Row Crop	SG	2.5 (5.25)	2.50
62	Hernandez Nursery	Eric Hernandez	5047014902	5501 Rodeo Rd	Los Angeles	5501 Rodeo Rd	Los Angeles	CA	90016	General Ornamental	SM	3.00	2.00
64	H & H Nursery	Robert Reyes	7168033800 7168033801 7168033274 7168033289 7168033285	6220 Lakewood Boulevard	Lakewood	6220 Lakewood Blvd.	Lakewood	CA	90712	Retail / Multiple	SG	5.50	2.50
65	Hawthorne Nursery, Inc.	Kei Nakai	4041013015 4041013016 4041013017 4041013018 4041013019 4041013014 4041013013 4042031010 4042031009 4042031008 4042031007 4042031006 4042031005	4519 W. El Segundo Bl	Hawthorne	4519 W. El Segundo Blvd.	Hawthorne	CA	90250	General Ornamental	D	2.87	2.50
66	Hill Grove Nursery	Raul Mejia	5266018801 5266017802 5266017800 5262028800 5263029800	450 West Almora	Monterey Park	PO Box 92966	City of Industry	CA	91715			3.50	2.00

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
68	Hoyt Family Vineyards	Carol & Steven Hoyt	4467018025	5929 Kanan Dume Rd	Malibu	5929 Kanan Dume Road	Malibu	CA	90265	Vineyard	SM	1.50	0.80
69	Humedo Nursery	Martin Torres	6139004271 6139004273	860 East Redondo Beach Boulevard	Compton	P.O. Box 40299	Long Beach	CA	90804	General Ornamental	D	2.00	1.39
70	Humedo Nursery	Martin Torres	6283024801	10040 Imperial Highway	Downey	P.O. Box 40299	Long Beach	CA	90804	General Ornamental	SG	3.00	2.20
73	International Plant Growers, Inc.	Peter Landowski / Jeff Nakasone	7409020009	24500 Vermont Ave	Harbor City	24500 Vermont Avenue	Harbor City	CA	90710	Color	D	6 (10)	5.00
74	Jorge's Nursery	Jorge Alcaraz	7318003809 7318003808 7318003811 7318003807	100 E Greenleaf Blvd	Compton	4867 Daisy Ave	Long Beach	CA	90805	General Ornamental	LA	6.50	5.00
75	Bridgeman Ranch	Jackie Bridgeman/ Bob Tobias	4452014006	3415 Cross Creek Rd	Malibu	3415 Crosscreek Rd.	Malibu	CA	90265	Orchard	SM	5.00	3.00
78	Centeno's Nursery & Landscaping	Jose Centeno/ Rene Centeno	6106013800	17600 S. Western Ave	Gardena	17514 S. Figueroa St.	Gardena	CA	90248	General Ornamental	D	4.39	3.00
79	Centeno's Nursery & Landscaping	Jose Centeno/ Rene Centeno	7339006800 7339002803 7339003801 7339003800 7339007802	17514 S. Figueroa Street	Gardena	17514 S. Figueroa St.	Gardena	CA	90248	General Ornamental	D	7.70	6.00
81	Centeno's Nursery & Landscaping	Jose Centeno/ Rene Centeno	7113014800	6850 Paramount Blvd	Long Beach	17514 S. Figueroa St.	Gardena	CA	90248	General Ornamental	SG	4.70	3.00
82	Damas Nursery	Julian Damas/ Yuniva Pierce	6351036800 6351036801 6351036802 6351036803 6351036804 6351036805	6265 E. Hereford Drive	E. Los Angeles	8210 Passons Blvd	Pico Rivera	CA	90660	General Ornamental	LA	7.00	5.00
84	Cerritos Growers	Jose de Jesus Gallo/ Maria Silva	7050005800 7050005801	19805 Gridley Rd	Cerritos	4943 Buffington Rd	El Monte	CA	91732	General Ornamental	SG	4 (3.5)	3.00
90	Kobata Growers, Inc.	Jack Mayesh	7336004277 7336004276	20300 Figueroa Street	Carson	17622 Van Ness	Torrance	CA	90504	Color	D	3.00	2.50
91	Kobata Growers, Inc.	Jack Mayesh	4096005800 4096005801 4096005802	17622 Van Ness Avenue	Torrance	17622 Van Ness	Torrance	CA	90504	General Ornamental	D	8.00	6.50
92	Kobata Growers, Inc.	Jack Mayesh	4095001800 4095001802	17629 Van Ness Avenue	Torrance	17622 Van Ness	Torrance	CA	90504	Color	D	5.00	6.50
94	Gardena Nursery & Landscape Maintenance	Janet Mercado	6121004901	551 W. 168th Street	Gardena	551 W. 168th St.	Gardena	CA	90248	General Ornamental	D	1.60	1.60
95	Wilmington Nursery	Juan Ramirez	7404034900	898 Deloras Drive	Wilmington	898 E Deloras Drive	Carson	CA	90745	General Ornamental	D	3.50	2.50

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
96	Ruiz Nursery	Jose Ruiz	7304024802 7304024801 7304024800 7304012803 7304012804 7304012805 7304012806 7304012807 7304012808 7304012809 7318006801	7045 N. Long Beach Blvd	Long Beach	7045 N. Long Beach Blvd	Long Beach	CA	90805	General Ornamental	LA	4.16	2.00
98	Jauregui Nursery, LLC	Filiberto Jauregui	7336009271	20300 Main	Carson	4185 Paseo de Oro	Cypress	CA	90630	General Ornamental	D	4.80	1.50
100	Jauregui Nursery, LLC	Filiberto Jauregui	6120025900 6120024900 6120026902 6120027901	551 West Alondra	Gardena	4185 Paseo de Oro	Cypress	CA	90630	General Ornamental	D	4.00	3.00
101	Jauregui Nursery, LLC	Filiberto Jauregui	7048021271 7061008270 7061008275 7061008276	6741 Del Amo	Lakewood	4185 Paseo de Oro	Cypress	CA	90630	General Ornamental	SG	3.10	2.00
105	Live Art Plantscapes, Inc.	Larry Tabeling	2763001904 2763030900	18809 Plummer St	Northridge	3351 La Cienega Place	Los Angeles	CA	90016	Greenhouse	LA	3.66	1.80
106	Lomita Plant Growers	Mercedes Sanabria	7404030900	835 E Lomita Blvd	Wilmington	835 East Lomita Blvd.	Wilmington	CA	90744	General Ornamental	D	3.02	2.50
107	Riverview Farm Associates	Marty Cable	4472028022	3640 Noranda Lane	Malibu	3640 Noranda Ln	Malibu	CA	90265	Vineyard	SM	1.80	0.75
108	Marcelino Contreras	Marcelino Contreras	7326019800	Vera and E 213th St.	Carson	1702 E 213th St.	Carson	CA	90745	Row Crop	D	1.00	1.00
110	Glendora Gardens	Melina Serrandino	8641001274 8641001273	1135 S Grand Avenue	Glendora	1132 S. Grand Avenue	Glendora	CA	91740	Retail / Multiple	SG	4.36	3.75
112	Green Life Nursery	Marcelino Rodriguez	7116001800	6901 Orange Ave	Long Beach	1993 Saint Lawrence St.	Riverside	CA	92504	General Ornamental	LA	2.00	2.00
113	Magic Growers, Inc.	Joe Brosius	5751022801 5860013800 5857035901	2795 Eaton Canyon Drive	Pasadena	2795 Eaton Canyon Drive	Pasadena	CA	91107	General Ornamental	LA	8.00	8.00
114	Mariposa Garden	Ron Hill	7049014904	6664 South Street	Lakewood	6664 South Street	Lakewood	CA	90713	General Ornamental	SG	4.00	3.68
117	Nick's Nursery	Nicolas Alvarado	2310006900 2310007900	11800 Roscoe Blvd.	Sun Valley	11800 Roscoe Blvd	Sun Valley	CA	91352	General Ornamental	LA	3.25	2.25
118	C Stars Nursery, Inc.	Armida Torres or Norma Gonzales	7319002806	1400 West Greenleaf Boulevard	Compton	P O Box 342	Gardena	CA	90247	Color	D	4.50	2.50
119	C Stars Nursery, Inc.	Armida Torres or Norma Gonzales	6111023800	17654 South Normandie Avenue	Gardena	P O Box 342	Gardena	CA	90247	Color	D	8.00	4.00

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
120	Cerritos Nursery, LLC	Norman Ozawa	7056013800	19820 Norwalk Blvd	Cerritos	19820 Norwalk Blvd.	Cerritos	CA	90703	General Ornamental	SG	4.50	4.50
121	Lloyd's Nursery/Nakayama Nursery Inc.	Lloyd Nakayama	6115013007 6115013008 6115013009 6115013010 6115013011	1341 W. 141st Street	Gardena	1341 W 141st Street	Gardena	CA	90247	General Ornamental	D	0.75	0.75
125	Norman's Nursery, Inc.	Nancy Webb	5387037800 5388036800 5388036801 5388038802 5388038803 5388038800 5388038801	1150 E Broadway	San Gabriel	8665 E. Duarte Rd.	San Gabriel	CA	91775	General Ornamental	LA	10.40	7.00
129	Norman's Nursery, Inc.	Nancy Webb	5376008800 5376008801 5376008802	8633 Duarte Rd North	San Gabriel	8665 E. Duarte Rd.	San Gabriel	CA	91775	General Ornamental	LA	12.49	9.73
131	Norman's Nursery, Inc.	Nancy Webb	5282031901 5282031900 5282028904 5282028902 5282028903	1601 Loma Ave	El Monte	8665 E. Duarte Rd.	San Gabriel	CA	91775	General Ornamental	SG	9.13	7.30
132	Norman's Nursery, Inc.	Nancy Webb	5381009815 5381009814 5381009816 5381009817 5381015805	8624 Duarte Rd South	San Gabriel	8665 E. Duarte Rd.	San Gabriel	CA	91775	General Ornamental	LA	8.63	6.50
134	Okada Nursery, Inc.	Herb Okada	4096001054	18715 S Western Ave	Gardena	18715 S Western Ave	Gardena	CA	90248	Color	D	2.00	0.50
135	Okada Nursery, Inc.	Herb Okada	7167034270 7167034801 7167034800 7167033270	6239 Bellflower Blvd	Lakewood	18715 S Western Ave	Gardena	CA	90248	General Ornamental	SG	8.00	6.00
136	Peter's Garden Center, Inc.	Peter Serrato / Teresa Serrato	7502006802 7502006803 7502004806 7502004807 7502001803 7502001804 7502001802	Corner of 190th & Paulina	Redondo Beach	814 N. Pacific Coast Hwy.	Redondo Beach	CA	90277	Retail / Multiple	SM	2.50	1.00
137	Pacific Nursery	Sharon/Glenn Tachibana	6114001007	14504 S Normandie Ave	Gardena	14504 S. Normandie Ave.	Gardena	CA	90247	General Ornamental	D	4.50	3.00
141	Performance Nursery, Inc.	Tom Lucas	4151012800 4151013800	2500 Manhattan Beach Boulevard	Redondo Beach	6001 E Los Angeles Avenue	Somis	CA	93066	General Ornamental	D	4.78	3.00
142	Sunflower Farms	Ron Akiyama	4096005007 4096005800	17609 S. Western Ave.	Torrance	17609 S Western Avenue	Gardena	CA	90247	Row Crop	D	4.00	3.50

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143	Green Landscape Nursery	Richard Green	2833001087 2833004097	22216 1/2 Placerita Canyon Rd	Newhall	26191 Bouquet Canyon Rd.	Saugus	CA	91350	General Ornamental	SC	4.50	4.00
144	Green Landscape Nursery	Richard Green	2809003270	Rosedel Street	Saugus	26191 Bouquet Canyon Rd.	Saugus	CA	91350	General Ornamental	SC	4.00	2.00
145	Centeno's Nursery & Landscaping	Jose Centeno/ Rene Centeno	7339008913 7339008911 7339007901	565 W. 189th Street	Gardena	17514 S. Figueroa St.	Gardena	CA	90248	General Ornamental	D	4.67	3.00
146	Estanfor Nursery	Rafael Rangel	6134039270	1130 Stanford Ave	Compton	1017 E. 150th Street	Compton	CA	90220	General Ornamental	D	1.90	1.25
149	Vargas Nursery	Oscar Vargas/ Reuben Vargas	7162001274	17020 Passage Ave	Bellflower	3925 E. Elizabeth St	Compton	CA	90221	General Ornamental	SG	1.75	1.75
150	Colorama Wholesale Nursery	Richard Wilson	8617001029	1025 N. Todd Ave.	Azusa	1025 N Todd Avenue	Azusa	CA	91702	Color	SG	26.00	15.30
151	Rainforest Flora Inc.	Jerry Robinson	7522006800	19121 Hawthorne Blvd	Torrance	19121 Hawthorne Blvd.	Torrance	CA	90503	Greenhouse	D	5.00	1.00
152	Rancho Escondido Vineyard	George Rosenthal	4464027018 4464027013	Newton Cyn & Kanan Rd	Malibu	Raleigh Enterprises, 100 Wilshire Blvd., 8th Floor	Santa Monica	CA	90401	Vineyard	SM	25.00	25.00
154	Rolling Hills Nursery	Esteban Villafana / Koji Shimohara	7116001800	6944 Orange Ave	Long Beach	PO Box 789	Paramount	CA	90723	General Ornamental	LA	8.00	6.00
158	Sakaida Nursery, Inc.	Mike Gutierrez	5381015802 5381015806 5381015807 5381015808 5381015809	8538-8601 Longden Ave	San Gabriel	8626 E. Grand Ave.	Rosemead	CA	91770	General Ornamental	LA	7.00	6.89
159	Sakaida Nursery, Inc.	Mike Gutierrez	5389005800 5389005803	8626 E Grand Ave	Rosemead	8626 E. Grand Ave.	Rosemead	CA	91770	General Ornamental	LA	4.50	4.00
160	Sakaida Nursery, Inc.	Mike Gutierrez	5381011011	6544 N. Vista Street	San Gabriel	8626 E. Grand Ave.	Rosemead	CA	91770	General Ornamental	LA	4.00	3.00
161	Salco Growers	Frank Spina	7165001270 7165001011 7165001271 7165001275 7165001272 7165019270 7165001801 7165001800 7165019800 7165019801 7165019805 7165019804 7165019803	6236 Bellflower Rd	Lakewood	6236 Bellflower Blvd	Lakewood	CA	90713	Color	SG	4.00	2.00
162	San Gabriel Nursery & Florist	Fred Yoshimura/ Mary Swanton	5276018003	2015 Potrero Grande	Monterey Park	632 South San Gabriel Blvd.	San Gabriel	CA	91776	General Ornamental	LA	10.00	6.00

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164	San Gabriel Nursery & Florist	Fred Yoshimura/ Mary Swanton	5373028024 5373028025 5373028026 5373028027 5373028028 5373028029 5373028036 5373028009 5373028010 5373028011 5373028012 5373028013 5373028014 5373028015 5373028016 5373028017 5373028018 5373028019 5373028020 5373028021 5373028022	632 S San Gabriel Blvd	San Gabriel	632 South San Gabriel Blvd.	San Gabriel	CA	91776	Retail / Multiple	LA	5.00	4.00
165	Sempervirens Botanical Company	John Low	4091025800	3237 West 178th Street	Torrance	3237 West 178th Street	Torrance	CA	90504	General Ornamental	D	2.00	1.50
168	S Y Nursery, Inc.	Patty Yasutake	7055008800	19900 S Pioneer Blvd	Cerritos	19900 S. Pioneer Blvd.	Cerritos	CA	90703	General Ornamental	SG	6.00	4.75
169	Tapia Bros., Inc.	Felix Tapia	2229033900	Sepulveda Flood Control Basin	Van Nuys	6908 De Celis Place	Van Nuys	CA	91406	Row Crop	LA	60.00	40.00
170	Toro Nursery Inc.	Salvador Sanchez	4095001801 4095001803 4091010800 4091010801 4091010802 4091025800	17585 Crenshaw Blvd	Torrance	17585 Crenshaw Blvd	Torrance	CA	90504	Color	D	17.00	15.78
171	T-Y Nursery, Inc.	Terry Yasutake	7521012800 7521001802 7522006800 7520009801	Between Firmona/Beryl	Torrance	5221 Arvada Street	Torrance	CA	90503	General Ornamental	SM	21.25	13.50
176	T-Y Nursery, Inc.	Terry Yasutake	7502012800 7502008804 7502008802 7502008805 7502008800 7502013800	Between Flagler/ Paulina	Redondo Beach	5221 Arvada Street	Torrance	CA	90503	General Ornamental	SM	12.00	7.50
178	Ultra Greens Nursery	Michael Lentz	2525001802 2525001801 2525001800	13102 Maclay Street	Sylmar	P O Box 922259	Sylmar	CA	91392	General Ornamental	LA	10.00	8.50

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179	Ultra Greens Nursery	Michael Lentz	2504009800	14025 Polk Street	Sylmar	P O Box 922259	Sylmar	CA	91392	General Ornamental	LA	1.23	1.50
180	United Plant Growers/Gomez Growers	Jose Gomez	7311013800 7311017800	3698 Caspian Avenue	Long Beach	3698 Caspian Avenue	Long Beach	CA	90810	Color	LA	8.10	7.30
184	Valley Sod Farm, Inc.	Dan Gibson	2689002910 2689002909	16405 Chase Street	North Hills	16405 Chase Street	North Hills	CA	91343	Sod	LA	36.00	36.00
186	I.T. Nursery Inc	Wayne Tagawa	6125014003	256 East Alondra	Gardena	256 E Alondra Blvd	Gardena	CA	90248	General Ornamental	D	2.76	1.75
187	West Covina Wholesale Nursery	Dave Zylstra	8666021902 8666021904	2820 Amherst Ave	La Verne	P. O. Box 8046	La Verne	CA	91750	General Ornamental	SG	5.00	4.50
188	West Covina Wholesale Nursery	Dave Zylstra	8378022910	West end of Puddingstone West off of Fairplex at Bracket Field	La Verne	P. O. Box 8046	La Verne	CA	91750	General Ornamental	SG	20.00	15.25
189	West Covina Wholesale Nursery	Dave Zylstra	8391003911	3425 Damien Ave	La Verne	P. O. Box 8046	La Verne	CA	91750	General Ornamental	SG	1.50	1.25
190	West Covina Wholesale Nursery	Dave Zylstra	5386015800 5386015801 5386015802 5386015803 5387004801 5387004800 5387004802 5387004803	5815 Burton Ave	San Gabriel	P. O. Box 8046	La Verne	CA	91750	General Ornamental	LA	10.00	9.25
199	Moraga Vineyards	Scott Rich	4368005025 4368006007 4368024020 4368024025	1070 Moraga Dr.	Los Angeles	650 N. Sepulveda Blvd	Los Angeles	CA	90049	Vineyard	LA	8.00	7.00
200	C & S Nursery, Inc.	Santiago Rosales II	5025006900	3615 Hauser Bl	Los Angeles	P.O. Box 642179	Los Angeles	CA	90064	General Ornamental	LA	2.50	2.00
202	El Nativo Growers, Inc.	James Campbell	8533010909 8619002903 8533012908	200 S. Peckham	Azusa	200 South Peckham Rd.	Azusa	CA	91702	General Ornamental	SM	9.00	7.00
204	Worldwide Exotics Inc.	Michele Jennings	2528025800	11157 Orcas Avenue	Lake View Terrace	10260 Arnwood Rd.	Lake View Terrace	CA	91342	General Ornamental	LA	6.00	2.00
205	California State Polytechnic University	Dan Hostetler	8709023908 8709023907 8709023910	3801 W. Temple	Pomona	3801 W. Temple Ave.	Pomona	CA	91768	Multiple	SG	1,200.00	336.00
206	A & R Nursery, Inc.	Adrian Lopez	5284023801	7950 Graves Ave	Rosemead	7950 Graves Ave	Rosemead	CA	91770	General Ornamental	LA	2.50	0.80
207	Golden Oak Ranch	Steve Sligh	2848010020	19802 Placerita Canyon Rd	Newhall	19802 Placerita Canyon Rd	Newhall	CA	91321	Multiple	SC	890.00	200.00
208	1940 Las Palomas, LLC	Raul Alvarado	8237010012	1940 Las Palomas Drive	La Habra Heights	1940 Las Palomas Drive	La Habra Heights	CA	90631	Orchard	SM	4.00	3.50

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210	Hevadu Vineyard Vineyards	Megan Cunha	4469021032	6415 Busch Drive	Malibu	6415 Busch Drive	Malibu	CA	90265	Vineyard	LA	8.00	2.75
211	Rosealina Malta	Rosealina Malta	2812005016	28920 Bouquet Canyon Road	Saugus	28920 Boquet Canyon Road	SAUGUS	CA	91390	Orchard	SC	2.50	2.00
212	Lam Farms	Nhi Lam	6268017270 6268017274 6268017275	8600 Jefferson	Paramount	6319 California Ave	Long Beach	CA	90805	Row Crop	LA	3.00	1.00
218	Cielo Farms Vineyard	Richard Hirsh	4464008045 4464008019 4464008044 4464008032	31424 Mulholland Highway	Malibu	31424 Mulholland Highway	Malibu	CA	90265	Vineyard	LA	18.00	3.00
221	The Malibu Vineyard	Michael McCarty	4451016022 4451016050	3222 Rambla Pacifico	Malibu	3222 Rambla Pacifico	Malibu	CA	90265	Vineyard	LA	2.00	2.00
223	Nijjar Vineyard	Sanjeet Nijjar	8527004025	29 Starlite Drive	Bradbury	29 Starlite Drive	Bradbury	CA	91010	Vineyard	LA	0.90	0.50
224	Schoelkopf Vineyard	Juergen Schoelkopf	4470009058	31499 Pacific Coast Hwy	Malibu	31499 Pacific Coast Highway	Malibu	CA	90265	Vineyard	LA	1.00	0.80
225	Valdez Vineyard /Caro's Ridge	Deborah Valdez	4467018038	28885 Via Venezia	Malibu	28885 Via Venezia	Malibu	CA	90265	Vineyard	LA	1.00	1.00
226	Choji Matsushita	Richard Matsushita	8392014036 8392014035	724 N. Cataract Avenue	San Dimas	724 N. Cataract Ave	San Dimas	CA	91773	Cutflower	SG	3.80	1.70
228	La Vina Gomez de Malibu	Bob Tobias/ David Gomez	2058014014	32720 Mulholland Hwy	Malibu	P.O. Box 577	Agoura Hills	CA	91376	Vineyard	LA	5.00	0.90
229	Schetter Malibu Vineyard	Charles Schetter	4467003023	5825 Murphy Way	Malibu	5825 Murphy Way	Malibu	CA	90265	Vineyard	LA	0.80	0.50
230	Rancho Mar LLC	Bob Tobias	4457004048	2800 Malibu Canyon Road	Malibu	1250 4th Street	Santa Monica	CA	90401	Multiple	LA	40.00	5.00
232	Wish Vineyard LLC	Susan Hayes	2049006031	25045 Jim Bridger Rd	Hidden Hills	25045 Jim Bridger Rd	Hidden Hills	CA	93102	Vineyard	LA	0.66	0.66
233	Nuccio's Nursery, Inc.	Julius, Tom & Jim Nuccio	5830018003	3555 Chaney Trail	Altadena	3555 Chaney Trail	Altadena	CA	91001	General Ornamental	LA	80.00	5.00
235	Rocky Oaks Vineyard	Bob Tobias	2058017025	340 Kanan Road	Malibu	340 Kanan Road	Malibu	CA	90265	Vineyard	LA	35.00	7.00
236	Amigos Nursery, LLC	Sergio Vasquez	6049008278 6049009282 6049018292 6049009285	1420 E. 92nd Street	Los Angeles	P.O. Box 927	Downey	CA	90241	General Ornamental	LA	9.00	7.00
237	Saddlerock Ranch/ The Semler Companies Malibu	Ronald H. Semler	2058016008 2058016022	31727 Mulholland Hwy	Malibu	32111 Mulholland Hwy	Malibu	CA	90265	Multiple	LA	90.00	38.00
238	Zuma Canyon Orchids	George Vasquez	4467024003	5949 Bonsall Drive	Malibu	5949 Bonsall Dr.	Malibu	CA	90265	Greenhouse	LA	3.89	0.20

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239	California Nurseries	Jose Gutierrez	2647023903 2644002905 2644002904 2644002900 2644004900 2644004902 2644004903 2644004901 2647025902 2647025901 2647025900	14301 Van Nuys Blvd	Arleta	P.O. Box 2778	North Hills	CA	91393	General Ornamental	LA	7.50	7.50
240	California Nurseries	Jose Gutierrez	2784009902	18955 Roscoe Blvd	Northridge	P.O. Box 2778	North Hills	CA	91393	General Ornamental	LA	1.50	1.50
241	Bernard Abrams Vineyard	Bernard Abrams	8658019047	606 Gordon Highland Rd	Glendora	606 Gordon Highland Rd	Glendora	CA	91741	Vineyard	SG	1.90	0.50
243	Chartwell Estate Vineyard	Roland Venturini	4362016008	750 Bel Air Rd	Los Angeles	750 Bel Air Rd	Los Angeles	CA	90077	Vineyard	SM	1.50	1.00
244	Clark Vineyard	Chris Shaver/ Dave Clark	7567010026	11 Packsaddle Rd East	Rolling Hills	11 Packsaddle Rd East	Rolling Hills	CA	90274	Vineyard	SM	0.90	0.50
246	Elliott Dolin	Elliott Dolin	4467018045	5970 Cavalleri Rd	Malibu	5970 Cavalleri Rd	Malibu	CA	90265	Vineyard	SM	1.80	0.50
247	Fuku Bonsai Nursery	Juan Duran	6121003902 6121002901	560 W. 168th St.	Gardena	11862 Balboa Blvd, PMB 164	Grenada Hills	CA	91344	General Ornamental	D	2.20	1.75
249	Hotchkis Vineyard	Frances Lacey	4369028005	10939 Chalon Rd	Los Angeles	10939 Chalon Rd	Los Angeles	CA	90077	Vineyard	SM	1.70	0.40
250	Greene - Lania Vineyard	Jeff Greene	4387028008	9505 Lania Ln.	Beverly Hills	9505 Lania Ln.	Beverly Hills	CA	90210	Vineyard	SM	5.00	3.00
251	Kenyon Landscape	Kenny Unger	2615010901	14899 Chatsworth Dr.	North Hills	9816 Burnet Ave	Woodland Hills	CA	91343	General Ornamental	LA	2.00	1.50
252	Kolawa Properties, LLC	Adam Kolawa	8527007032	673 Deodar Ln	Bradbury	101 E, Huntington Dr., 2nd Floor	Monrovia	CA	91016	Vineyard	SG	4.00	1.00
253	Landscape Warehouse Nursery & Supply	Jennifer Hata	8610001800	2800 Royal Oaks Dr	Duarte	2800 Royal Oaks Dr	Duarte	CA	91010	General Ornamental	SG	2.00	1.25
254	Manassero Farms	Dan Manassero	7016007906	16500 Studebaker Rd	Cerritos	5408 Alton Pkwy, A-622	Irvine	CA	92604	Row Crop	SG	4.00	3.00
255	Organicado	Farid Shalabi and Sahar Shalabi	8527025022	460 Old Ranch Rd	Bradbury	13985 Live Oak Ave	Irwindale	CA	91706	Orchard	LA	5.00	1.00
256	Pro Growers, Inc.	Sal Mora	6230023801 6230023800	8303 S. Scout Ave	Bell Gardens	8303 S. Scout Ave	Bell Gardens	CA	90201	General Ornamental	LA	13.00	8.00
257	Scarborough Farms	Ann Stein	2068001003	23302 Mulholand Dr	Woodland Hills	PO Box 1267	Oxnard	CA	93032	Row Crop	LA	7.00	6.00
258	Shima Nursery	Frank Tsushima / Roger Tsushima	5372020804 5372020801	8521 Valley Blvd.	Rosemead	8625 E. Grand Ave	Rosemead	CA	91770	General Ornamental	LA	7.80	5.00
259	Shima Nursery	Frank Tsushima / Roger Tsushima	5371010802	8524 E. Marshall	Rosemead	8625 E. Grand Ave	Rosemead	CA	91770	General Ornamental	LA	8.60	6.50
260	Triunfo Canyon Vineyards	Laura Gilbard	2063002092	3030 Triunfo Canyon Rd	Agoura	3030 Triunfo Canyon Rd	Agoura	CA	91301	Vineyard	SM	10.00	1.25

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261	ABC Rhubarb Farms	Sonia Chavez	6230022800	6208 Clara St	Bell Gardens	PO Box 39145	Downey	CA	90239	Row Crop	LA	5.83	5.00
262	The Orchid Garden	James Weiss	4088019802 4088019803	3511 W. 182nd St.	Torrance	2506 Ardmore Ave.	Hermosa Beach	CA	90254	General Ornamental	D	1.25	0.20
263	Malibu Vineyards	James Palmer	4472019030	33169 Decker School Rd	Malibu	22631 Pacific Coast Highway, Suite 900	Malibu	CA	90265	Vineyard	SM	4.20	3.00
264	Ben K Bonsai	Young Min/ Edward Min	5284020801	2301 Kelburn Ave	Rosemead	2301 Kelburn Ave	Rosemead	CA	91770	General Ornamental	LA	1.00	0.50
265	Chikugo-En Bonsai Nursery	Gary Ishii	6106019064 6106019063 6106019062	18110 S Western Ave	Gardena	18110 S Western Ave	Gardena	CA	90248	Retail / Multiple	D	1.00	0.75
266	Girasol Nursery	Angela Montoya	6373016270 6373017272 6373021270 6373016906 5272031274 5272032271 5272005271 5272005273	8555 Spruce St	Pico Rivera	PO Box 6862	Pico Rivera	CA	90661	General Ornamental	LA	9.00	2.50
267	Jackson Shrub Supply, Inc.	Gary Jackson	2320001902 2320008904 2320009902 2320006907 2320005904 2320005903	11505 Vanowen St	North Hollywood	11505 Vanowen St	North Hollywood	CA	91605	General Ornamental	LA	9.00	9.00
268	K. Yuge Nursery	Steve Yuge	4066016054	2027 W 164th St	Torrance	2027 W 164th St	Torrance	CA	90504	Greenhouse	D	1.50	0.75
269	K. Yuge Nursery	Steve Yuge	6129004024	336 W Redondo Beach Blvd	Gardena	2027 W 164th St	Torrance	CA	90504	Greenhouse	D	2.00	1.50
270	Lucky Plants	Javier Lopez	7404001278	902 Sepulveda Blvd	Carson	902 Sepulveda Blvd	Carson	CA	90745	General Ornamental	D	1.00	0.75
271	Melhill Vineyard	Corky Roche / Jeff Lotman	4432011045	1805 Melhill Way	Los Angeles	1805 Melhill Way	Los Angeles	CA	90049	Vineyard	SM	0.30	0.30
272	Paramount Landscape	Becilio Cabral / Magaly Cabral	2531016801 2530006800	11944 Terra Bella St	Lake View Terrace	9848 Ramona Ave	North Hills	CA	91343	General Ornamental	LA	7.00	5.00
273	Pierce College	Larry Kraus	2149007902	6201 Winnetka Ave	Woodland Hills	6201 Winnetka Ave	Woodland Hills	CA	91371	Multiple	LA	430.00	200.00
274	SAM Trust- Amalfi Vineyard	Meghan Christiansen	4425005032	1515 Amalfi Dr	Pacific Palisades	Breslauer, Rutman and Anderson, 11400 Olympic Blvd, Ste 550	Los Angeles	CA	90064	Vineyard	SM	1.00	1.00
209b	Greenshower Nursery	Sid Lao	8272003003 8272003004	2040 Desire Avenue	Rowland Heights	2040 Desire Avenue	ROWLAND HEIGHTS	CA	91748		SM	2.60	2.00
276	AJ Nursery, Inc.	Juan Ramos/ Augustin Cazarez	7318001802 7318001801	1600 S. Wilmington Ave	Compton	1600 S. Wilmington Ave	Compton	CA	90220	General Ornamental		6.50	5.00
277	Abeja Nursery	Marlene/Dimas Carbajal Abeja	4089016802	18601 Ermanita Ave.	Torrance	18601 Ermanita Ave.	Torrance	CA	90504	General Ornamental		4.00	3.00

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278	Bertha's Gardens/Western Gardens	Paul Diehl	2731024901 2729024901	18451 Lassen St.	Northridge	18451 Lassen St.	Northridge	CA	91325	General Ornamental		2.50	2.50
279	Castaneda Nursery	Salud Castaneda	6332018818 6332018815 6332018809 6332018811	6270 Slauson Ave	Commerce	11500 Blanding St.	Whittier	CA	90606	General Ornamental		8.50	5.00
280	Castaneda Nursery	Salud Castaneda	5263037804 5263037801 5263037802 5263037805	1690 Isabella St.	Monterey Park	11500 Blanding St.	Whittier	CA	90606	General Ornamental		5.00	4.00
281	Fairgrove Nursery	Diego Martinez / Reuben Martinez	8471002804 8471002805	14855 Fairgrove Ave	La Puente	14826 Fairgrove Ave	La Puente	CA	91744	General Ornamental		2.50	2.00
282	Garden View Inc.	Julie Meahl	8535020902 8535020801 8535020800	12901 Lower Azusa Rd	Irwindale	114 E. Railroad Ave	Monrovia	CA	91016	General Ornamental		10.00	5.00
283	Gardena Hills Nursery	Gilberto Lopez	6089023282	12597 S Budlong Ave	Los Angeles	2579 E. 219 St.	Long Beach	CA	90810	General Ornamental		1.75	1.25
284	House of Bonsai	Victoria Lee	7048012800 7048012801 7048012802	5214 Palo Verde Avenue	Lakewood	5214 Palo Verde Avenue	Lakewood	CA	90713			5.00	3.00
285	Kangaru Enterprises, LLC	Bret Carman/ A/P	7480043020	1 El Rancho Escondido Rd.	Avalon	1825 Ballard Canyon Rd.	Solvang	CA	93463	Vineyard		4.90	4.90
286	LB Palm Growers	Cipriano Martinez	7107004800	17020 Downey Rd.	Bellflower	19820 N. 7th St., Suite 260	Phoenix	AZ	85024	General Ornamental		4.50	4.00
287	Maggie's Farm	Nate Pietso/ Casey Kramer	2055001032	6500 Chesboro Rd	Agoura Hills	918 11th St #9	Santa Monica	CA	90403	Row Crop		4.00	4.00
288	Malibu Organic Lemon	Mike Zacha	4472010023	1872 Encinal Canyon	Malibu	1700 Decker Canyon Rd	Malibu	CA	90265	Orchard		220.00	15.00
289	MB Landscaping and Nursery	Vera Martinez	7336004010	20300 S. Figueroa St	Carson	20300 S. Figueroa St.	Carson	CA	90745	General Ornamental		2.50	1.50
290	MB Landscaping and Nursery	Vera Martinez	6126009802	201 E Walnut Street	Carson	20300 S. Figueroa St.	Carson	CA	90745	General Ornamental		6.20	5.00
291	MB Landscaping and Nursery	Vera Martinez	7339017014	19202 Main St.	Carson	20300 S. Figueroa St.	Carson	CA	90745	General Ornamental		6.00	1.50
292	MB Landscaping and Nursery	Vera Martinez	6134008270 6134001271 6134001270	700 135th St.	Los Angeles	20300 S. Figueroa St.	Carson	CA	90745	General Ornamental		6.20	4.00
293	N.K. Nursery	Kaz Kitajima	8242016810	780 S. Stimson Ave	City of Industry	780 S. Stimson Ave	City of Industry	CA	91745	General Ornamental		2.00	1.00
294	Premium Trees, LLC	Cipriano Martinez	5268005801 5268005802	2600 W Lincoln Ave	Montebello	19820 N. 7th St., Suite 260	Phoenix	AZ	85024	General Ornamental		16.50	7.00
295	Torrance Wholesale Nursery	Margaret Edelman	none?	18901 Ermanita Ave	Torrance					General Ornamental		2.00	1.87
296	United Plant Growers/Gomez Growers	Jose Gomez	7048015801 7048015802	5150 Knoxville Ave	Lakewood							3.50	2.00

LAILG December 2014 Enrolled Grower List

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
297	UVA Nursery	Alberto Gomez / Ariana Gutierrez	7339009901 7339009272	19033 Anelo Ave	Gardena	17516 Scudder Ct.	Carson	CA	90746	General Ornamental		2.00	1.50
298	Vineland Growers Nursery	Fidel Montenegro/ Gaby Ruiz	2414003902 2414003901	6200 Vineland Ave	North Hollywood	6200 Vineland Ave	North Hollywood	CA	91606			5.00	2.00
299	VN Nursery	Jose Uribe	2126014900 2126015902	18841 Hart St	Reseda	3948 Sepulveda Blvd.	Culver City	CA	90230	General Ornamental		3.00	1.50
300	Garibaldo's Nursery	Filemon Garibaldo	7160003801 7160003800 7162007800 7162007801	8834 Rose St.	Bellflower	8834 Rose St.	Bellflower	Bellflower	CA			1.80	
301	Horizon Nursery	Rafael Rosalez	8007001906 8007001800	9919 Cedardale Dr.	Santa Fe Springs	9919 Cedardale Dr.	Santa Fe Springs	CA	90670			3.50	2.00
302	Ramirez Strawberry Ranch	Rigoberto Ramirez	7317015805 7317015806	3511 Santa Fe Ave.	Long Beach	2710 Delta Ave	Long Beach	CA	90810			2.50	2.00
303	Western Plants and Trees	Alberto Reyes	4142011803	12703 BART AVE.	Hawthorne	13712 Milton Ave	Westminster	CA	92863			0.68	0.50
304	Chuy's Nursery	Jesus Martinez	5265001808	1996 S. Orange Ave	Monterey Park	9124 E. Gallatin Rd.	Pico Rivera	CA	90660			3.00	2.00
305	Le Chene	Juan Alonso	3214043017 3214043027 3214020064 3214020044	12625 Sierra Hwy	Santa Clarita	9124 E. Gallatin Rd.	Pico Rivera	CA	90660			39.00	6.50
306	Mimosa Nursery LA		6351035804 6351035803 6351035807	6270 Allston Street	Los Angeles							3.30	2.20
307	Hana Star Farms, Inc		8174013800 8174004800	6509 Pioneer Blvd	Whittier							5.90	2.80

Total	**209**
Total	4,265.78
Total	**1,683.44**

IP Mapping In Progress

Watersheds:

D-Dominguez Channel LA/Long Beach Harbors WMA
LA-Los Angeles River Watershed
SC-Santa Clara River Watershed
SG- San Gabriel River Watershed
SM-Santa Monica WMA
SA*-Santa Anna River Watershed (Located in the Santa Anna Region)

APPENDIX B

TABULATED DATA, CURRENT AND HISTORICAL SAMPLING RESULTS

TABLE 14

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 1
FIELD MONITORING RESULTS
NURSERY GROWERS ASSOCIATION
LOS ANGELES IRRIGATED LANDS GROUP

Site	Sample ID	Date	Sample Type	Time (24hr)	*Approximate Flow Cross Section (ft^2)	Flow (ft/s)	Temperature (^oC)	pH	E.C. (uS)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
NGA #4	LAILG-NGA#4-5	3/21/11	Bucket	10:40	0.1250	0.01	11.0	9.81	43	na*	85
				10:44		0.01	11.1	9.64	25	na*	181
				10:50		0.01	11.2	9.29	25	na*	197
NGA #124	LAILG-NGA#124-6	3/21/11	Bucket	8:00	nm	9	10.4	7.89	292	na*	54.9
				8:05		11	10.5	7.82	282	na*	49.7
				8:10		13	10.5	7.87	268	na*	16.8
NGA #150	LAILG-NGA#150-5	3/21/11	Bucket	10:47	0.0185	4	15.4	6.70	1170	na*	34.7
				10:49		4	16.0	6.61	1127	na*	33.7
				10:50		5	15.9	6.59	1163	na*	38.0
NGA #19	LAILG-NGA#19-6	3/23/11	Grab	16:58	nm	nm	13.9	8.88	1.32	na*	999
				17:00		nm	14.2	8.83	1.05	na*	999
				17:02		nm	12.6	8.87	1.19	na*	999
NGA #31	LAILG-NGA#31-4	3/17/12	Grab	14:30	0.6042	0.88	13.83	7.73	99.9	9.33	220
				14:34		0.84	13.63	7.75	99.9	8.77	174
				14:38		0.94	13.44	7.95	98.6	8.51	181
NGA #64	LAILG-NGA#64-3	3/17/12	Grab	9:50	0.0833	1.3	14.7	5.5	14.3	10.48	352
				9:53		1.2	14.5	4.9	9.4	10.58	623
				9:58		1.3	14.5	5.2	4.2	10.43	179
NGA #162	LAILG-NGA#162-1	3/17/12	Grab	13:00	nm	nm	13.37	6.94	66.2	10.67	3.3
				13:02		nm	13.42	7.24	65.9	10.33	1.6
				13:05		nm	13.32	7.46	66.1	9.93	1.2
NGA #168	LAILG-NGA#168-6	3/17/12	Grab	11:15	0.0556	0.71	13.78	6.1	84.5	10.68	>800
				11:18		0.52	13.83	6.8	85.9	10.05	>800
				11:21		0.71	13.77	7.1	82.2	9.62	>800
NGA #4	LAILG-NGA#4-6	3/25/12	Pump	12:50	No flow measurements due to access restrictions		16.21	5.63	43.7	8.52	44.9
				12:52			16.31	5.74	39.3	8.58	35.7
				12:54			15.95	5.89	37.1	8.89	42.9

* Runoff streams were assumed to have a parabolic shape unless field measurements indicated otherwise. The cross sectional area of a parabola is 2/3*width*depth.

ft/s feet per second

^oC degrees celcius

uS microsiemens

na* Not analyzed, DO meter was not functioning properly at the time of field sampling

mg/L milligrams per liter

NTU Nephelometric Turbidity Units

TABLE 14, cont.

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 1
FIELD MONITORING RESULTS
NURSERY GROWERS ASSOCIATION
LOS ANGELES IRRIGATED LANDS GROUP

Site	Sample ID	Date	Sample Type	Time (24hr)	*Approximate Flow Cross Section (ft^2)	Flow (ft/s)	Temperature (^oC)	pH	E.C. (uS)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
NGA #170	LAILG-NGA#170-1	3/25/12	Grab	14:35	nm	nm	13.81	6.18	25.8	10.59	512
				14:37		nm	13.98	6.32	22.1	10.23	452
				14:40		nm	13.73	6.27	19.8	10.31	446
NGA #176	LAILG-NGA#176-2	3/25/12	Grab	15:15	nm	nm	13.17	6.49	39.7	10.69	>800
				15:17		nm	13.16	6.63	38.4	10.41	>800
				15:21		nm	12.73	6.44	40.2	10.69	>800
NGA #210	LAILG-NGA#210-2	3/25/12	Grab	17:45	nm	nm	13.21	7.22	0.129	10.55	5.8
				17:47		nm	13.35	7.75	0.130	10.40	3.8
				17:50		nm	13.88	7.93	0.133	10.24	5.5

* Runoff streams were assumed to have a parabolic shape unless field measurements indicated otherwise. The cross sectional area of a parabola is 2/3*width*depth.

ft/s	feet per second	mg/L	milligrams per liter
°C	degrees celcius	NTU	Nephelometric Turbidity Units
uS	microsiemens	nm	not monitored

APPENDIX C

LABORATORY ANALYTICAL RESULTS AND CHAIN OF CUSTODY DOCUMENTATION

ENVIRONMENTAL
230 DOVE COURT ▪ SANTA PAULA, CA 93060
(805) 525-5563 ▪ FAX (805) 525-2896

CHAIN OF CUSTODY RECORD

Lab: ABC — ANALYSIS REQUESTED

PROJECT NAME: Los Angeles Irrigated Lands Group

PROJECT ADDRESS: NGA

PROJECT MANAGER: Bryan Hone

SAMPLER NAME (PRINT): Scott Jordan

P.O. #: 1384-LAB-19077

SAMPLE ~~ID~~	SAMPLE ~~LOCATION~~ ID	DEPTH	DATE	TIME	SAMPLE MATRIX	NUMBER OF CONTAINERS	Pres: Ice (Dry) HCl Other None	TPH-G 8015M	TPH-D 8015M	TPH-O 8015M	TPH-Char, 8015M FC	BTEX, OXYG, EDB, EDC 8260B	FULL VOCs w/Oxygenates 8260B	Dissolved Lead 6010	Total Lead 6020	Metals: CAM 17 PP13	Methanol 8015B	Ethanol 8260B	Ceriodaphnia dubia, 7-day chron	Fathead Minnow, 7-day	Selenastrum 96-hr		Flash Point 1010	Fixed Gas	TPHG/BTEX/MTBE (Carb 410-T03)	Lab Filter	TAT: RUSH 24-HR 48-HR 72-HR STD	PID Reading, Odor, Staining, Other TAT, etc.	Ammonia
	LAILG-NGA26-1	N/A	2/28/14	8:50	H_2O	2													X	X	/								0.0
	LAILG-NGA124-7	↓	↓	11:10	↓	↓													X	X	X							100%	3.0
	LAILG-NGA178-2	↓	↓	9:45	↓	↓													X	X	X							sample	0.0
	LAILG-NGA19-7	↓	↓	5:40	↓	↓													X	X	X							only	0.0
	LAILG-NGA184-3	↓	↓	7:00	↓	↓													X	X	X							* RUN	0.0
																												TIE if	
																												over 50%	
	Temp = 16.2 °C																											Note: TIE	
	Chlorine = <0.1																											if IC50 is	
	~~Ammonia~~ = 0.0 mg																											less than	
																												50% per	
																					phone call w/ Bryan								

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	DATE	TIME
[signature]	[signature]	3-3-14	1415

mjm 4/1/14

Method of shipment, additional comments:
☐ USTCF
☐ EDF-COELT
☐ NONE
☒ ~~Fax~~ Email preliminary data ASAP

Required MRLs to:
San Diego County | VCEHD | S.B. CO FPD | Los Angeles RWQCB | Lahontan RWQCB | Central Coast RWQCB | San Bernardino County FD | KCEHD Kern County | OCHCA Orange County

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA26-1
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.148

CHRONIC FATHEAD LARVAE SURVIVAL & GROWTH BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
GROWTH	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	09-1997-4974	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-5614-8114	**Code:**	PWE0314.148fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
21-4616-8061	7d Survival Rate	100	>100	NA	4.67%	1	Wilcoxon Rank Sum Two-Sample Test
02-6268-7831	Mean Dry Biomass-mg	100	>100	NA	16.6%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
11-8495-3755	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
03-6873-9274	Mean Dry Biomass-mg	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
11-8495-3755	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
21-4616-8061	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
02-6268-7831	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
03-6873-9274	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
02-6268-7831	Mean Dry Biomass-mg	PMSD	0.1662	0.12 - 0.3	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%
100		4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.4987	0.4207	0.5766	0.4513	0.5647	0.0245	0.04899	9.83%	-6.97%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	1	0.9333	1

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.4747	0.4513	0.5647	0.504

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	15/15	14/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	21-4616-8061	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:23	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	09-1997-4974	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-5614-8114	**Code:**	PWE0314.148fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Angular (Corrected)	NA	C > T	NA	NA	4.67%	Passes 7d survival rate

Wilcoxon Rank Sum Two-Sample Test

Control	vs	C-%	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	18	NA	2	6	0.7857	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	0	1.0000	Non-Significant Effect
Error	0.02601601	0.004336001	6			
Total	0.02601601		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1	47.47	1.0000	Equal Variances
Variances	Mod Levene Equality of Variance	0	13.75	1.0000	Equal Variances
Variances	Levene Equality of Variance	0	13.75	1.0000	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.5659	0.6451	<0.0001	Non-normal Distribution
Distribution	Kolmogorov-Smirnov D	0.4554	0.3313	<0.0001	Non-normal Distribution
Distribution	Anderson-Darling A2 Normality	1.973	3.878	<0.0001	Non-normal Distribution

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	0.0%
100		4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	0.0%

Angular (Corrected) Transformed Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contr	4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	0.0%
100		4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	0.0%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	1	0.9333	1

Angular (Corrected) Transformed Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.441	1.31	1.441	1.441
100		1.441	1.441	1.31	1.441

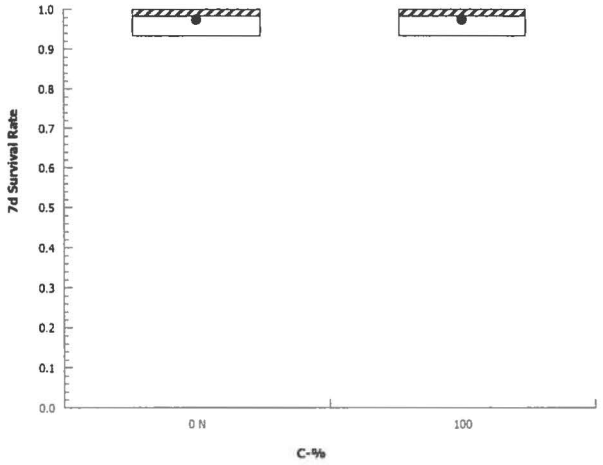
7d Survival Rate Binomials

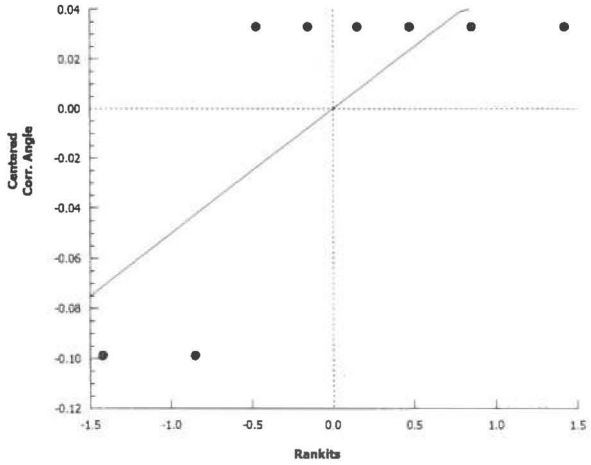
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	15/15	14/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	21-4616-8061	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:23	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-6268-7831	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	09-1997-4974	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-5614-8114	**Code:**	PWE0314.148fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	16.6%	Passes mean dry biomass-mg

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-0.8153	1.943	0.077	6	0.7770	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.002112501	0.002112501	1	0.6647	0.4460	Non-Significant Effect
Error	0.01906788	0.003177981	6			
Total	0.02118038		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.648	47.47	0.6916	Equal Variances
Variances	Mod Levene Equality of Variance	0.7738	13.75	0.4129	Equal Variances
Variances	Levene Equality of Variance	0.8926	13.75	0.3813	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9145	0.6451	0.3867	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1772	0.3313	0.8204	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.3428	3.878	0.4945	Normal Distribution

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4597	0.4047	0.5407	0.03145	13.49%	0.0%
100		4	0.4987	0.4207	0.5766	0.4893	0.4513	0.5647	0.0245	9.83%	-6.97%

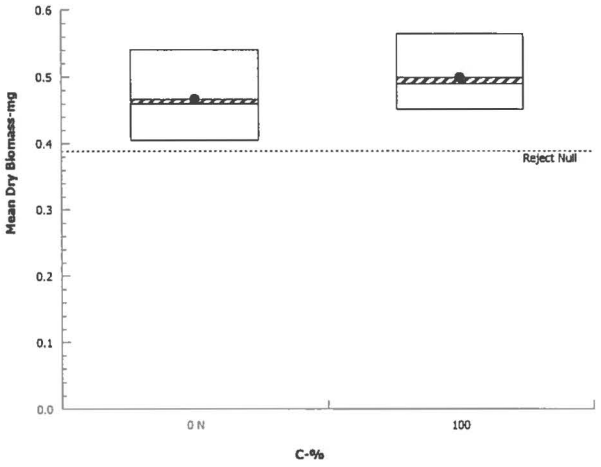
Mean Dry Biomass-mg Detail

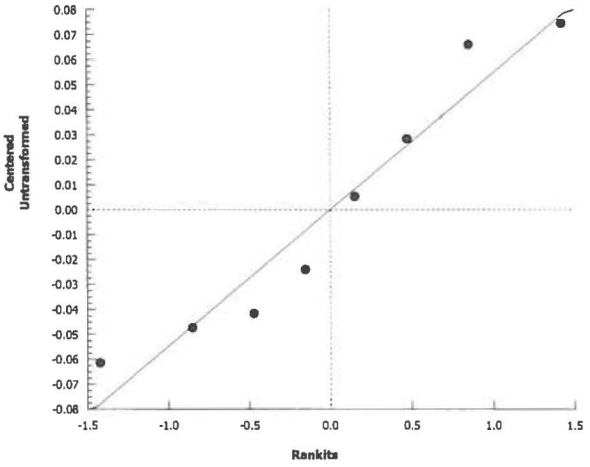
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.4747	0.4513	0.5647	0.504

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-6268-7831	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:23	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	11-8495-3755	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:23	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	09-1997-4974	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-5614-8114	**Code:**	PWE0314.148fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60
100		4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60

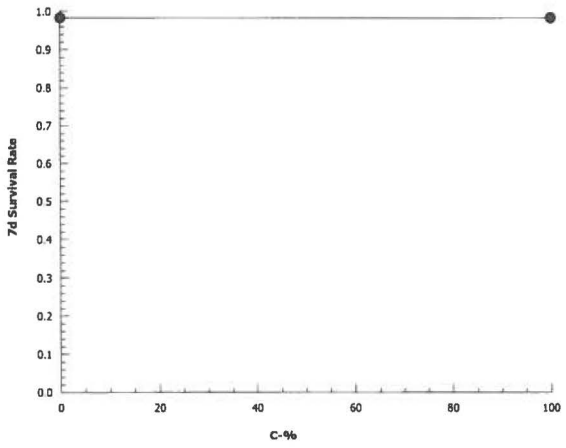
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	1	0.9333	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	15/15	14/15	15/15

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	03-6873-9274	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:23	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	09-1997-4974	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-5614-8114	**Code:**	PWE0314.148fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	69529	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

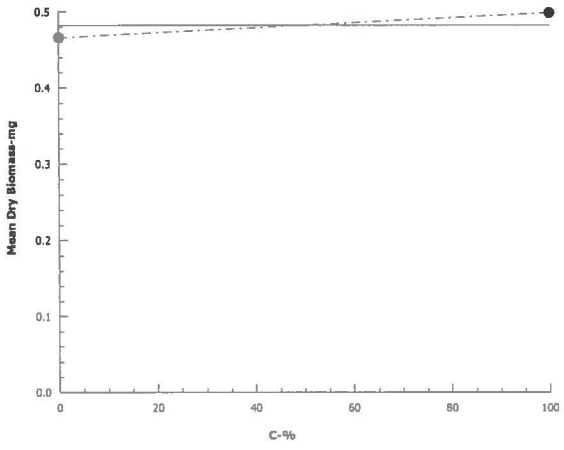
Mean Dry Biomass-mg Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.4987	0.4513	0.5647	0.0245	0.04899	9.83%	-6.97%

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.4747	0.4513	0.5647	0.504

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	09-1997-4974	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-5614-8114	**Code:**	PWE0314.148fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	81	81	81	81	81	0	0	0.0%	0
Overall		16	73.56			65	81				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	819.1	811.3	827	803	829	3.314	9.372	1.14%	0
Overall		16	578.4			321	829				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	6.388	5.676	7.099	4.9	7.2	0.3009	0.8509	13.32%	0
Overall		16	7.088			4.9	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	158	158	158	158	158	0	0	0.0%	0
Overall		16	124.6			89	158				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	7.075	6.935	7.215	6.8	7.3	0.05901	0.1669	2.36%	0
Overall		16	7.45			6.8	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
100		8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
Overall		16	24.06			24	24.5				0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		81	81	81	81	81	81	81	81

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		810	818	825	829	824	803	815	829

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		7.2	6.8	6.7	6.7	6.6	7	4.9	5.2

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		158	158	158	158	158	158	158	158

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		7.1	7.2	7.3	7.2	6.9	7	6.8	7.1

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
100		24.5	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	American Scientific Labs
SAMPLE I.D.:	LAILG-NGA26-1
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.148

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
REPRODUCTION	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	14-2093-7150	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-4308-3823	**Code:**	PWE0314.148c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
11-4840-2761	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact Test
08-9436-0323	Reproduction	100	>100	NA	33.4%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
00-9518-2259	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
04-7780-2830	Reproduction	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
00-9518-2259	7d Survival Rate	Control Resp	0.9	0.8 - NL	Yes	Passes Acceptability Criteria
11-4840-2761	7d Survival Rate	Control Resp	0.9	0.8 - NL	Yes	Passes Acceptability Criteria
04-7780-2830	Reproduction	Control Resp	15.7	15 - NL	Yes	Passes Acceptability Criteria
08-9436-0323	Reproduction	Control Resp	15.7	15 - NL	Yes	Passes Acceptability Criteria
08-9436-0323	Reproduction	PMSD	0.3337	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	0.0%
100		10	1	1	1	1	1	0	0	0.0%	-11.11%

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.7	10.91	20.49	4	25	2.119	6.701	42.68%	0.0%
100		10	22.2	17.33	27.07	12	36	2.154	6.812	30.68%	-41.4%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		26	36	21	25	16	16	24	20	26	12

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	08-9436-0323	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	14-2093-7150	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-4308-3823	**Code:**	PWE0314.148c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	33.4%	Passes reproduction

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-2.151	1.734	5.24	18	0.9774	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	211.25	211.25	1	4.628	0.0453	Significant Effect
Error	821.7	45.65	18			
Total	1032.95		19			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.033	6.541	0.9618	Equal Variances
Variances	Mod Levene Equality of Variance	0.002936	8.285	0.9574	Equal Variances
Variances	Levene Equality of Variance	0.0005204	8.285	0.9821	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9847	0.866	0.9797	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.09238	0.2235	1.0000	Normal Distribution
Distribution	D'Agostino Skewness	0.476	2.576	0.6341	Normal Distribution
Distribution	D'Agostino Kurtosis	0.03497	2.576	0.9721	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	0.2278	9.21	0.8923	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.1688	3.878	0.9880	Normal Distribution

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	10	15.7	10.91	20.49	14.5	4	25	2.119	42.68%	0.0%
100		10	22.2	17.33	27.07	22.5	12	36	2.154	30.68%	-41.4%

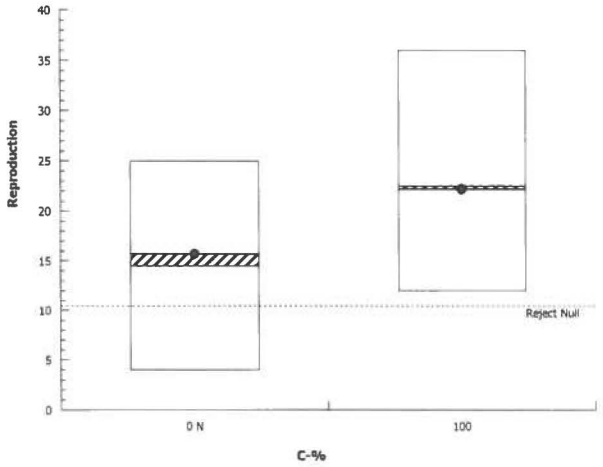
Reproduction Detail

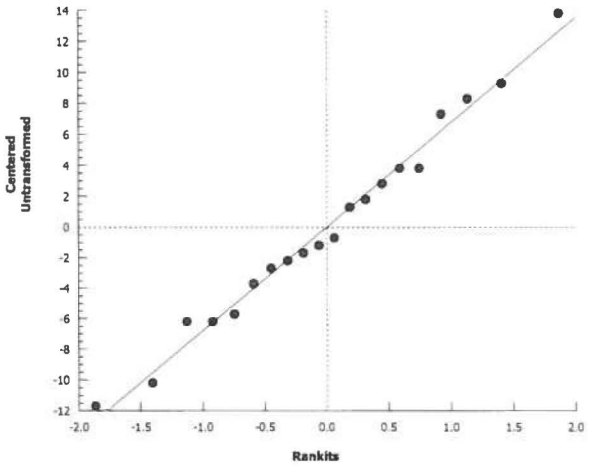
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		26	36	21	25	16	16	24	20	26	12

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	08-9436-0323	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	00-9518-2259	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:08	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	14-2093-7150	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-4308-3823	**Code:**	PWE0314.148c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	10	0.9	0	1	0.1	0.3162	35.14%	0.0%	9	10
100		10	1	1	1	0	0	0.0%	-11.11%	10	10

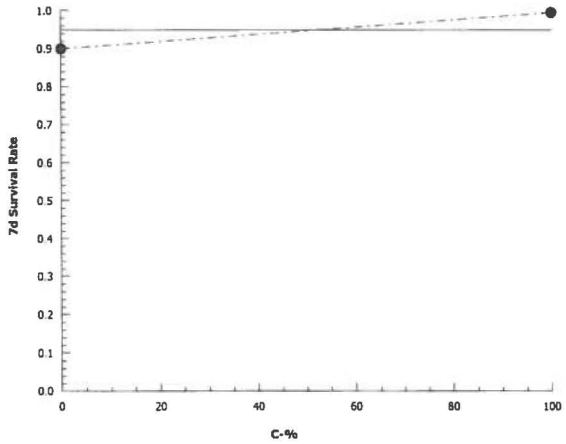
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-7780-2830	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:08	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	14-2093-7150	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-4308-3823	**Code:**	PWE0314.148c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	612717	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

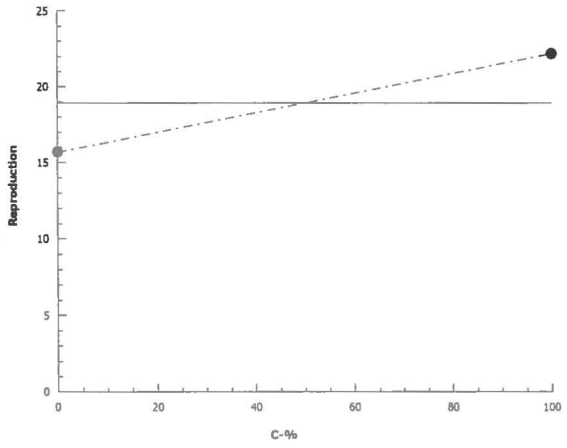
Reproduction Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.7	4	25	2.119	6.701	42.68%	0.0%
100		10	22.2	12	36	2.154	6.812	30.68%	-41.4%

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		26	36	21	25	16	16	24	20	26	12

Graphics



CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	11-4840-2761	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:08	**Analysis:**	Single 2x2 Contingency Table	**Official Results:**	Yes
Batch ID:	14-2093-7150	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-4308-3823	**Code:**	PWE0314.148c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Data Transform	Zeta	Alt Hyp	Trials	Seed	Test Result
Untransformed		C > T	NA	NA	Passes 7d survival rate

Fisher Exact Test

Control	vs	C-%	Test Stat	P-Value	P-Type	Decision(α:5%)
Negative Control		100	1	1.0000	Exact	Non-Significant Effect

Data Summary

C-%	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect
0	Negative Contr	9	1	10	0.9	0.1	0.0%
100		10	0	10	1	0	-11.11%

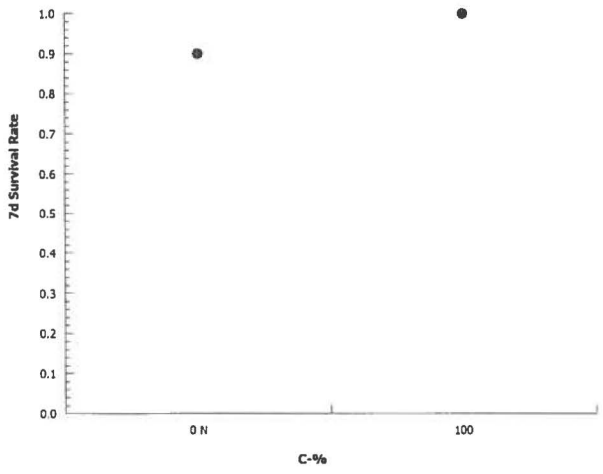
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



CETIS Measurement Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	14-2093-7150	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:45	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:45	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-4308-3823	**Code:**	PWE0314.148c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 7h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	81	81	81	81	81	0	0	0.0%	0
Overall		16	73.56			65	81				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	819.1	811.3	827	803	829	3.314	9.372	1.14%	0
Overall		16	578.4			321	829				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	6.388	5.676	7.099	4.9	7.2	0.3009	0.8509	13.32%	0
Overall		16	7.088			4.9	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	158	158	158	158	158	0	0	0.0%	0
Overall		16	124.6			89	158				0 (0%)

Total Ammonia (N)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	0	0	0	0	0	0	0		0
100		8	0	0	0	0	0	0	0		0
Overall		16	0			0	0				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	7.075	6.935	7.215	6.8	7.3	0.05901	0.1669	2.36%	0
Overall		16	7.45			6.8	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
100		8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
Overall		16	24.06			24	24.5				0 (0%)

Ceriodaphnia 7-d Survival and Reproduction Test — Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		81	81	81	81	81	81	81	81

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		810	818	825	829	824	803	815	829

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		7.2	6.8	6.7	6.7	6.6	7	4.9	5.2

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		158	158	158	158	158	158	158	158

Total Ammonia (N)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	0	0	0	0	0	0	0	0
100		0	0	0	0	0	0	0	0

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		7.1	7.2	7.3	7.2	6.9	7	6.8	7.1

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
100		24.5	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA26-1
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.148

CHRONIC SELENASTRUM ALGAE GROWTH BIOASSAY

NOEC	=	100.00 %
TUc	=	1.00
IC25	=	>100.00 %
IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	09-6338-1165	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:04	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:05	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	17-6600-5869	**Code:**	PWE0314.148s	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	81h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
10-6384-3042	Cell Density	100	>100	NA	9.91%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
16-6388-3840	Cell Density	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
10-6384-3042	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
16-6388-3840	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
10-6384-3042	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
16-6388-3840	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
10-6384-3042	Cell Density	PMSD	0.09907	0.091 - 0.29	Yes	Passes Acceptability Criteria

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	1.418E+6	1.253E+6	1.583E+6	1.311E+6	1.526E+6	5.182E+4	1.036E+5	7.31%	-37.44%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		1.350E+6	1.311E+6	1.526E+6	1.485E+6

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	10-6384-3042	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	13 Mar-14 12:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	09-6338-1165	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:04	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:05	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	17-6600-5869	**Code:**	PWE0314.148s	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	81h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	9.91%	Passes cell density

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-7.343	1.943	1E+05	6	0.9998	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	2.983781E+11	2.983781E+11	1	53.92	0.0003	Significant Effect
Error	33200750000	5533458000	6			
Total	3.315789E+11		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	33.06	47.47	0.0169	Equal Variances
Variances	Mod Levene Equality of Variance	31.2	13.75	0.0014	Unequal Variances
Variances	Levene Equality of Variance	35.18	13.75	0.0010	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.9766	0.6451	0.9444	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1766	0.3313	0.8290	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.2064	3.878	0.9101	Normal Distribution

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1025000	1.019E+6	1.058E+6	9.013E+3	1.75%	0.0%
100		4	1.418E+6	1.253E+6	1.583E+6	1418000	1.311E+6	1.526E+6	5.182E+4	7.31%	-37.44%

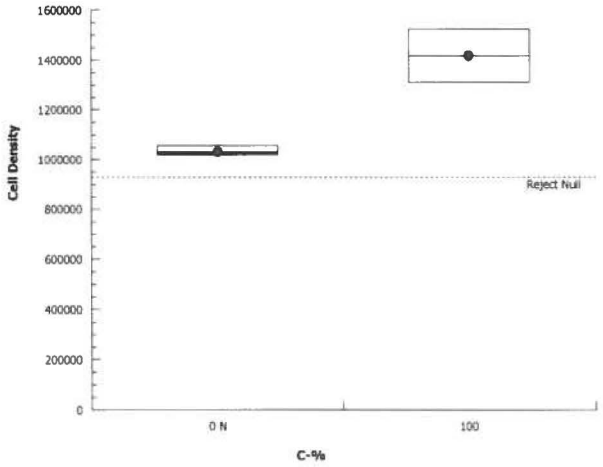
Cell Density Detail

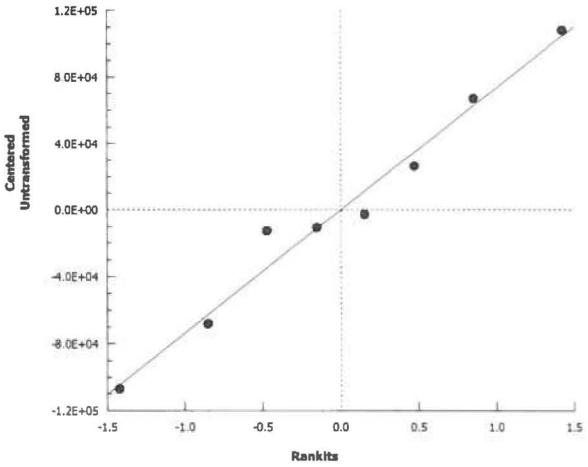
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		1.350E+6	1.311E+6	1.526E+6	1.485E+6

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	10-6384-3042	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	13 Mar-14 12:41	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-6388-3840	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	13 Mar-14 12:41	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	09-6338-1165	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:04	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:05	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	17-6600-5869	**Code:**	PWE0314.148s	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	81h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

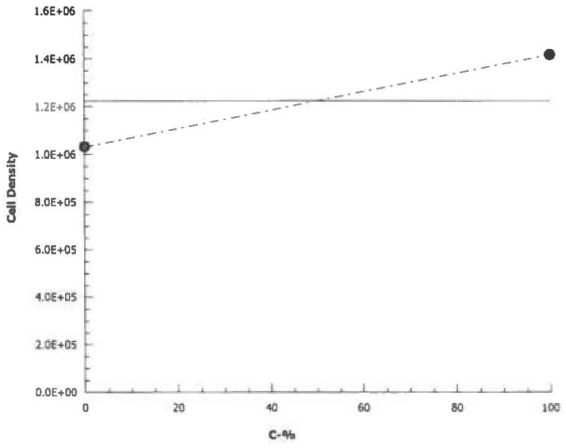
Cell Density Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	1.418E+6	1.311E+6	1.526E+6	5.182E+4	1.036E+5	7.31%	-37.44%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		1.350E+6	1.311E+6	1.526E+6	1.485E+6

Graphics



Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	09-6338-1165	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:04	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:05	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	17-6600-5869	**Code:**	PWE0314.148s	**Client:**	PW Environmental
Sample Date:	28 Feb-14 08:50	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	81h (16.2 °C)	**Station:**	LAILG-NGA26-1		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	67			67	67	0	0	0.0%	0
100		1	81			81	81	0	0	0.0%	0
Overall		2	74			67	81				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	422	389.7	454.3	385	448	11.63	26.01	6.16%	0
100		5	670.2	637.7	702.7	633	698	11.71	26.18	3.91%	0
Overall		10	546.1			385	698				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	94			94	94	0	0	0.0%	0
100		1	158			158	158	0	0	0.0%	0
Overall		2	126			94	158				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	7.56	7.372	7.748	7.4	7.7	0.06782	0.1517	2.01%	0
100		5	7.62	7.516	7.724	7.5	7.7	0.03742	0.08367	1.1%	0
Overall		10	7.59			7.4	7.7				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
100		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
Overall		10	24.68			24.5	25				0 (0%)

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	67
100		81

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5
0	Negative Contr	406	385	440	448	431
100		660	633	668	692	698

Hardness (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	94
100		158

pH-Units

C-%	Control Type	1	2	3	4	5
0	Negative Contr	7.7	7.6	7.4	7.4	7.7
100		7.7	7.6	7.6	7.5	7.7

Temperature-°C

C-%	Control Type	1	2	3	4	5
0	Negative Contr	25	24.5	24.7	24.6	24.6
100		25	24.5	24.7	24.6	24.6

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA124-7
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.149

CHRONIC FATHEAD LARVAE SURVIVAL & GROWTH BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
GROWTH	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-0814-6001	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	14-0602-1559	**Code:**	PWE0314.149fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
16-2982-1467	7d Survival Rate	100	>100	NA	5.03%	1	Equal Variance t Two-Sample Test
12-3743-9678	Mean Dry Biomass-mg	100	>100	NA	15.3%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
04-2705-7964	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
16-5486-5529	Mean Dry Biomass-mg	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
04-2705-7964	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
16-2982-1467	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
12-3743-9678	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
16-5486-5529	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
12-3743-9678	Mean Dry Biomass-mg	PMSD	0.153	0.12 - 0.3	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%
100		4	0.9667	0.9054	1	0.9333	1	0.01925	0.03849	3.98%	1.7%

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.501	0.4408	0.5612	0.4573	0.5493	0.01892	0.03785	7.55%	-7.47%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		0.9333	1	1	0.9333

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5033	0.494	0.5493	0.4573

Analyst: _____ QA: PASS

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		14/15	15/15	15/15	14/15

CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-2982-1467	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	12-0814-6001	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	14-0602-1559	**Code:**	PWE0314.149fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Angular (Corrected)	NA	C > T	NA	NA	5.03%	Passes 7d survival rate

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	0.6547	1.943	0.098	6	0.2685	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.002168001	0.002168001	1	0.4286	0.5370	Non-Significant Effect
Error	0.03035201	0.005058668	6			
Total	0.03252001		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.333	47.47	0.8187	Equal Variances
Variances	Mod Levene Equality of Variance	1	13.75	0.3559	Equal Variances
Variances	Levene Equality of Variance	1	13.75	0.3559	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.8283	0.6451	0.0570	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.3165	0.3313	0.0179	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.7591	3.878	0.0480	Normal Distribution

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	0.0%
100		4	0.9667	0.9054	1	0.9667	0.9333	1	0.01924	3.98%	1.7%

Angular (Corrected) Transformed Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contr	4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	0.0%
100		4	1.375	1.254	1.496	1.375	1.31	1.441	0.03802	5.53%	2.34%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		0.9333	1	1	0.9333

Angular (Corrected) Transformed Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.441	1.31	1.441	1.441
100		1.31	1.441	1.441	1.31

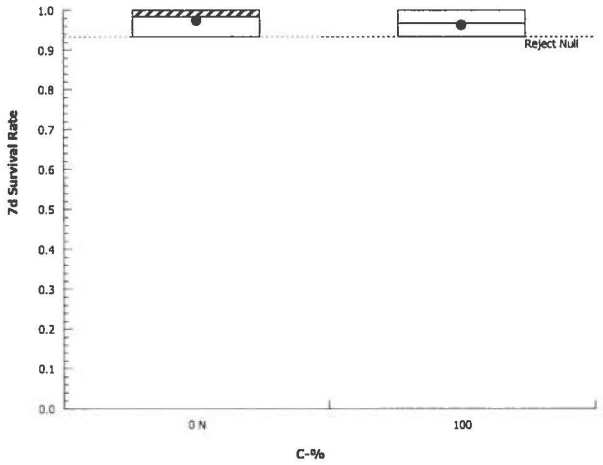
7d Survival Rate Binomials

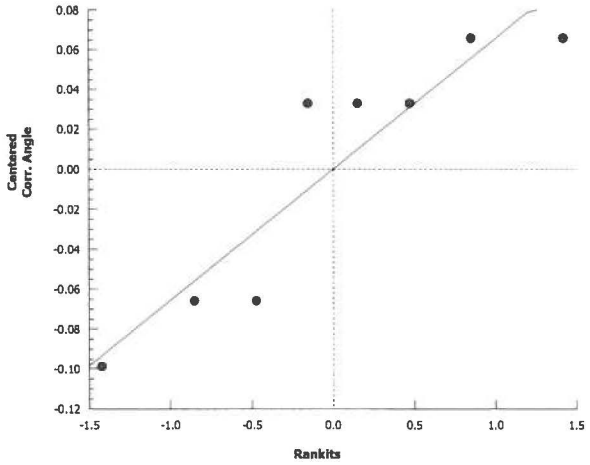
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		14/15	15/15	15/15	14/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-2982-1467	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-3743-9678	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	12-0814-6001	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	14-0602-1559	**Code:**	PWE0314.149fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	15.3%	Passes mean dry biomass-mg

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-0.9491	1.943	0.071	6	0.8104	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.002426722	0.002426722	1	0.9008	0.3792	Non-Significant Effect
Error	0.01616432	0.002694054	6			
Total	0.01859105		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	2.761	47.47	0.4263	Equal Variances
Variances	Mod Levene Equality of Variance	2.585	13.75	0.1590	Equal Variances
Variances	Levene Equality of Variance	2.75	13.75	0.1484	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9539	0.6451	0.7503	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1811	0.3313	0.7668	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.2322	3.878	0.8300	Normal Distribution

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4597	0.4047	0.5407	0.03145	13.49%	0.0%
100		4	0.501	0.4408	0.5612	0.4987	0.4573	0.5493	0.01892	7.55%	-7.47%

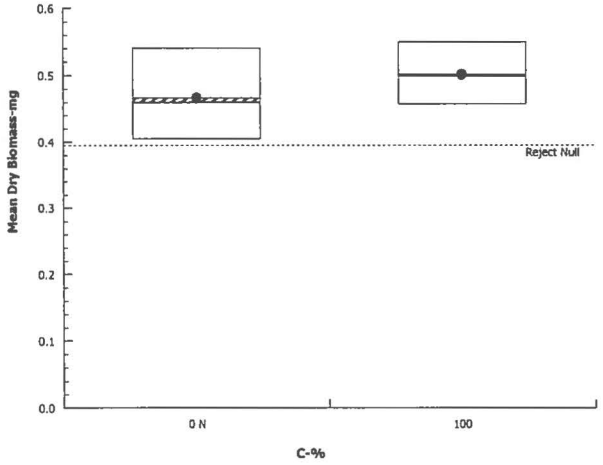
Mean Dry Biomass-mg Detail

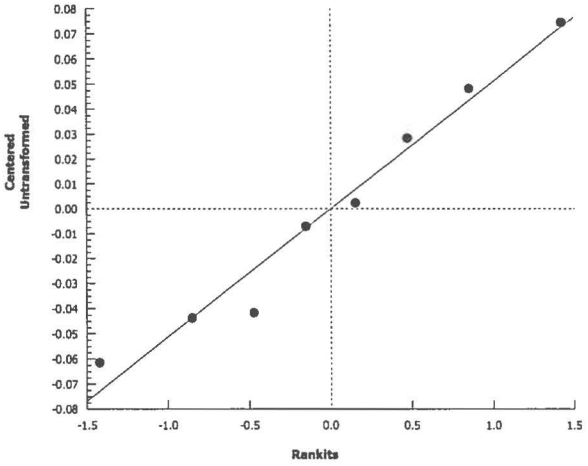
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5033	0.494	0.5493	0.4573

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-3743-9678	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:29	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-2705-7964	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:29	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	12-0814-6001	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	14-0602-1559	**Code:**	PWE0314.149fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60
100		4	0.9667	0.9333	1	0.01924	0.03849	3.98%	1.7%	58	60

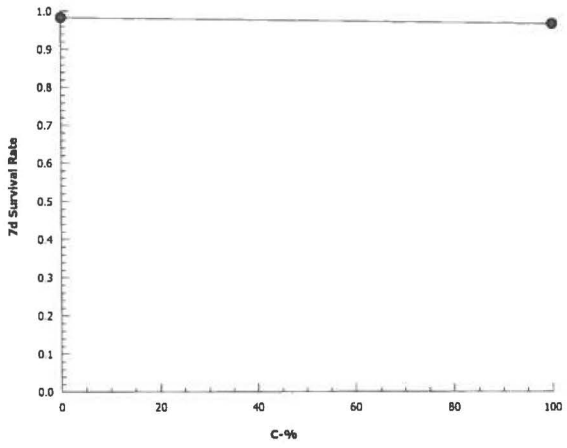
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		0.9333	1	1	0.9333

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		14/15	15/15	15/15	14/15

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-5486-5529	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:29	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	12-0814-6001	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	14-0602-1559	**Code:**	PWE0314.149fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2068712	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

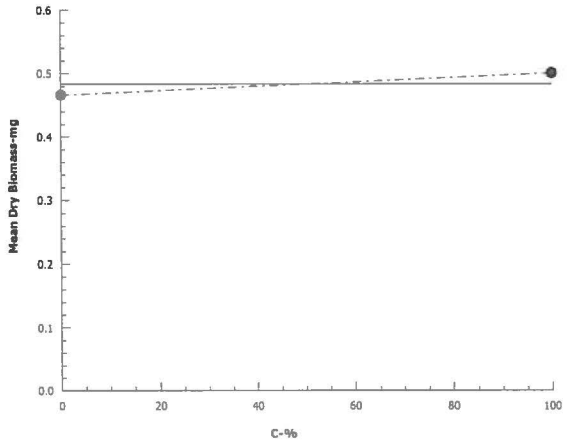
Mean Dry Biomass-mg Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.501	0.4573	0.5493	0.01892	0.03785	7.55%	-7.47%

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5033	0.494	0.5493	0.4573

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-0814-6001	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	14-0602-1559	**Code:**	PWE0314.149fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	75	75	75	75	75	0	0	0.0%	0
Overall		16	70.56			65	75				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	562.5	498.8	626.2	374	593	26.96	76.25	13.55%	0
Overall		16	450.1			321	593				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	5.975	5.068	6.882	4.1	8	0.3835	1.085	18.15%	0
Overall		16	6.881			4.1	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	183	183	183	183	183	0	0	0.0%	0
Overall		16	137.1			89	183				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	6.925	6.753	7.097	6.6	7.2	0.07258	0.2053	2.96%	0
Overall		16	7.375			6.6	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
100		8	24.05	23.93	24.17	24	24.4	0.05	0.1414	0.59%	0
Overall		16	24.06			24	24.5				0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		75	75	75	75	75	75	75	75

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		587	590	592	582	591	374	591	593

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		6.2	5.9	6.4	5.6	6.1	8	4.1	5.5

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		183	183	183	183	183	183	183	183

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		7	7.1	7.2	7	6.8	7	6.6	6.7

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
100		24.4	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	American Scientific Labs
SAMPLE I.D.:	LAILG-NGA124-7
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.149

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
REPRODUCTION	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	05-8815-0856	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	15-9668-2613	**Code:**	PWE0314.149c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
10-6670-4009	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact Test
18-3135-8867	Reproduction	100	>100	NA	38.1%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
12-0388-3371	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
02-2017-8271	Reproduction	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
10-6670-4009	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
12-0388-3371	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
02-2017-8271	Reproduction	Control Resp	15.3	15 - NL	Yes	Passes Acceptability Criteria
18-3135-8867	Reproduction	Control Resp	15.3	15 - NL	Yes	Passes Acceptability Criteria
18-3135-8867	Reproduction	PMSD	0.3809	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	1	1	1	1	1	0	0	0.0%	0.0%
100		10	1	1	1	1	1	0	0	0.0%	0.0%

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.3	9.617	20.98	5	33	2.512	7.945	51.93%	0.0%
100		10	18.5	13.45	23.55	4	28	2.232	7.059	38.16%	-20.92%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	20	11	11	14	5	22	9	33	14
100		4	16	10	28	22	22	21	21	24	17

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	18-3135-8867	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	05-8815-0856	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	15-9668-2613	**Code:**	PWE0314.149c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	38.1%	Passes reproduction

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-0.9521	1.734	5.828	18	0.8232	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	51.2	51.2	1	0.9066	0.3536	Non-Significant Effect
Error	1016.6	56.47778	18			
Total	1067.8		19			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.267	6.541	0.7305	Equal Variances
Variances	Mod Levene Equality of Variance	0.02504	8.285	0.8760	Equal Variances
Variances	Levene Equality of Variance	0.0411	8.285	0.8416	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9805	0.866	0.9402	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1205	0.2235	0.6587	Normal Distribution
Distribution	D'Agostino Skewness	0.5854	2.576	0.5583	Normal Distribution
Distribution	D'Agostino Kurtosis	0.989	2.576	0.3227	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	1.321	9.21	0.5166	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.2512	3.878	0.7670	Normal Distribution

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	10	15.3	9.617	20.98	14	5	33	2.512	51.93%	0.0%
100		10	18.5	13.45	23.55	21	4	28	2.232	38.16%	-20.92%

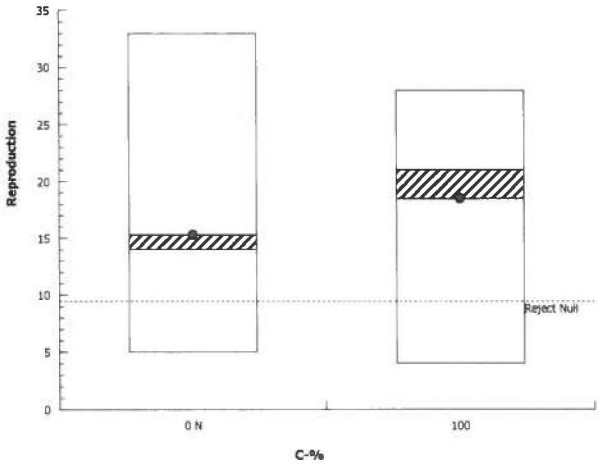
Reproduction Detail

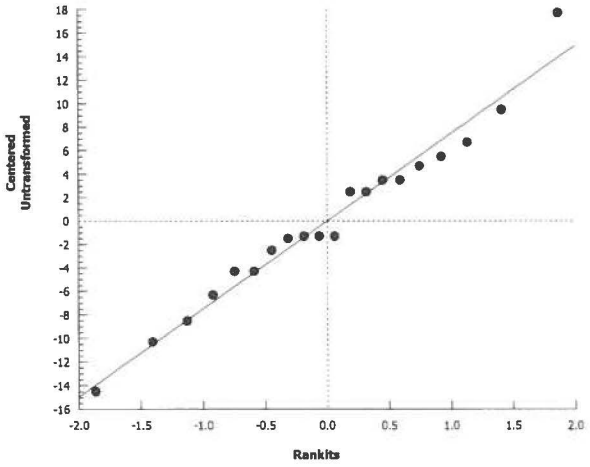
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	20	11	11	14	5	22	9	33	14
100		4	16	10	28	22	22	21	21	24	17

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	18-3135-8867	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:09	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-0388-3371	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:09	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	05-8815-0856	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	15-9668-2613	**Code:**	PWE0314.149c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	10	1	1	1	0	0	0.0%	0.0%	10	10
100		10	1	1	1	0	0	0.0%	0.0%	10	10

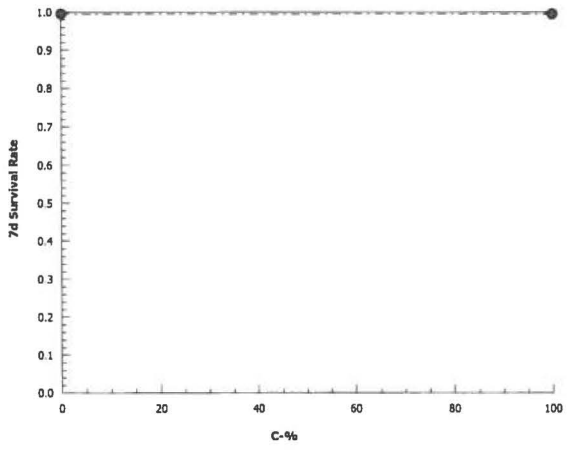
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	02-2017-8271	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:09	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	05-8815-0856	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	15-9668-2613	**Code:**	PWE0314.149c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2060136	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

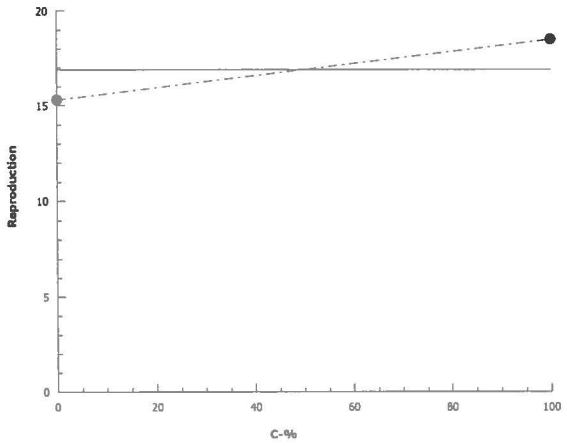
Reproduction Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.3	5	33	2.512	7.945	51.93%	0.0%
100		10	18.5	4	28	2.232	7.059	38.16%	-20.92%

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	20	11	11	14	5	22	9	33	14
100		4	16	10	28	22	22	21	21	24	17

Graphics



CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	10-6670-4009	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:09	**Analysis:**	Single 2x2 Contingency Table	**Official Results:**	Yes
Batch ID:	05-8815-0856	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	15-9668-2613	**Code:**	PWE0314.149c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	Test Result
Untransformed		C > T	NA	NA	Passes 7d survival rate

Fisher Exact Test

Control	vs	C-%	Test Stat	P-Value	P-Type	Decision(α:5%)
Negative Control		100	1	1.0000	Exact	Non-Significant Effect

Data Summary

C-%	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect
0	Negative Contr	10	0	10	1	0	0.0%
100		10	0	10	1	0	0.0%

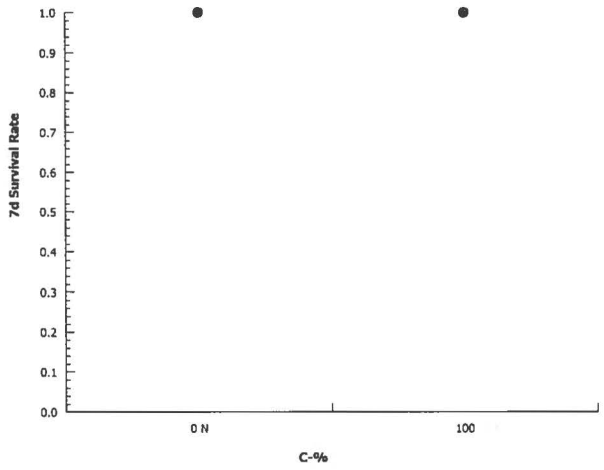
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



CETIS Measurement Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	05-8815-0856	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:47	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	12 Mar-14 13:50	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	7d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	15-9668-2613	**Code:**	PWE0314.149c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 5h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	75	75	75	75	75	0	0	0.0%	0
Overall		16	70.56			65	75				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	562.5	498.8	626.2	374	593	26.96	76.25	13.55%	0
Overall		16	450.1			321	593				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	5.975	5.068	6.882	4.1	8	0.3835	1.085	18.15%	0
Overall		16	6.881			4.1	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	183	183	183	183	183	0	0	0.0%	0
Overall		16	137.1			89	183				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	6.925	6.753	7.097	6.6	7.2	0.07258	0.2053	2.96%	0
Overall		16	7.375			6.6	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
100		8	24.05	23.93	24.17	24	24.4	0.05	0.1414	0.59%	0
Overall		16	24.06			24	24.5				0 (0%)

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		75	75	75	75	75	75	75	75

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		587	590	592	582	591	374	591	593

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		6.2	5.9	6.4	5.6	6.1	8	4.1	5.5

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		183	183	183	183	183	183	183	183

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		7	7.1	7.2	7	6.8	7	6.6	6.7

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
100		24.4	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA124-7
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.149

CHRONIC SELENASTRUM ALGAE GROWTH BIOASSAY

NOEC = <100.00 %
TUc = >1.00

IC25 = >100.00 %
IC50 = >100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	21-0341-6758	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:05	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:10	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	16-0553-6050	**Code:**	PWE0314.149sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	79h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
19-9339-4232	Cell Density	<100	100	NA	2.39%	>1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
01-1274-0704	Cell Density	IC5	56.85	39.93	84.58	1.759	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
01-1274-0704	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
19-9339-4232	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
01-1274-0704	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
19-9339-4232	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
19-9339-4232	Cell Density	PMSD	0.02393	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	9.410E+5	9.125E+5	9.695E+5	9.250E+5	9.660E+5	8.954E+3	1.791E+4	1.9%	8.8%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		9.320E+5	9.250E+5	9.660E+5	9.410E+5

CETIS Analytical Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-9339-4232	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	21-0341-6758	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:05	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:10	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	16-0553-6050	**Code:**	PWE0314.149sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	79h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	2.39%	Fails cell density

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100*	7.143	1.943	24690	6	0.0002	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	16471120000	16471120000	1	51.03	0.0004	Significant Effect
Error	1936750000	322791700	6			
Total	18407870000		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.013	47.47	0.9916	Equal Variances
Variances	Mod Levene Equality of Variance	0.0066	13.75	0.9379	Equal Variances
Variances	Levene Equality of Variance	0.007528	13.75	0.9337	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.8154	0.6451	0.0417	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.25	0.3313	0.1599	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.753	3.878	0.0498	Normal Distribution

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1025000	1.019E+6	1.058E+6	9.013E+3	1.75%	0.0%
100		4	9.410E+5	9.125E+5	9.695E+5	936500	9.250E+5	9.660E+5	8.954E+3	1.9%	8.8%

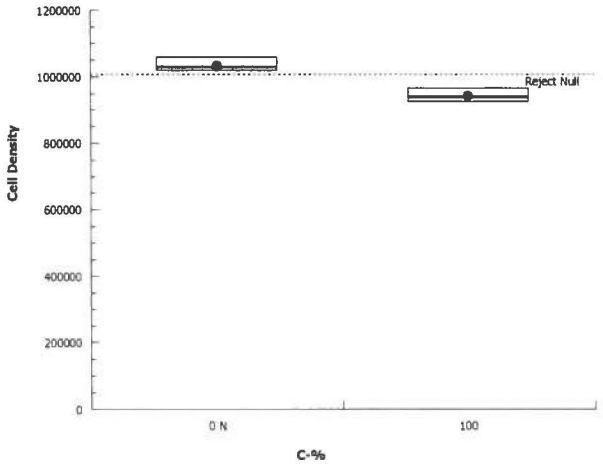
Cell Density Detail

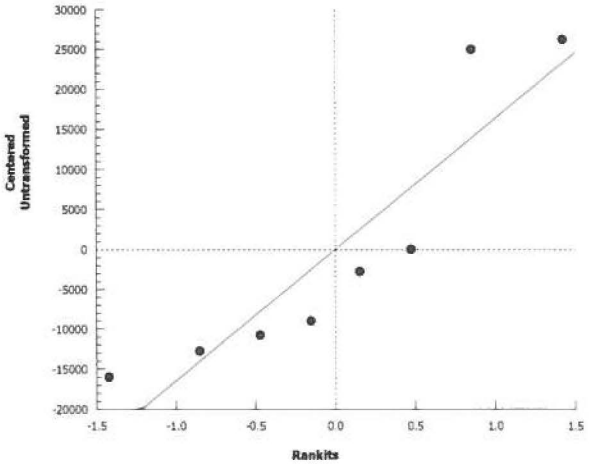
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		9.320E+5	9.250E+5	9.660E+5	9.410E+5

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-9339-4232	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	01-1274-0704	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:49	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	21-0341-6758	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:05	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:10	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	16-0553-6050	**Code:**	PWE0314.149sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	79h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	56.85	39.93	84.58	1.759	1.182	2.504
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

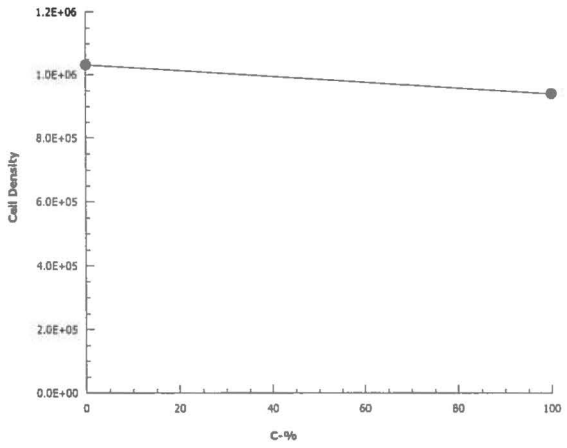
Cell Density Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	9.410E+5	9.250E+5	9.660E+5	8.954E+3	1.791E+4	1.9%	8.8%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		9.320E+5	9.250E+5	9.660E+5	9.410E+5

Graphics



Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	21-0341-6758	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:05	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:10	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	16-0553-6050	**Code:**	PWE0314.149sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 11:10	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	79h (16.2 °C)	**Station:**	LAILG-NGA124-7		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	67			67	67	0	0	0.0%	0
100		1	75			75	75	0	0	0.0%	0
Overall		2	71			67	75				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	422	389.7	454.3	385	448	11.63	26.01	6.16%	0
100		5	881.6	871.6	891.6	873	890	3.586	8.019	0.91%	0
Overall		10	651.8			385	890				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	94			94	94	0	0	0.0%	0
100		1	183			183	183	0	0	0.0%	0
Overall		2	138.5			94	183				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	7.56	7.372	7.748	7.4	7.7	0.06782	0.1517	2.01%	0
100		5	7.56	7.492	7.628	7.5	7.6	0.02449	0.05477	0.72%	0
Overall		10	7.56			7.4	7.7				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
100		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
Overall		10	24.68			24.5	25				0 (0%)

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	67
100		75

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5
0	Negative Contr	406	385	440	448	431
100		882	874	873	890	889

Hardness (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	94
100		183

pH-Units

C-%	Control Type	1	2	3	4	5
0	Negative Contr	7.7	7.6	7.4	7.4	7.7
100		7.6	7.5	7.6	7.5	7.6

Temperature-°C

C-%	Control Type	1	2	3	4	5
0	Negative Contr	25	24.5	24.7	24.6	24.6
100		25	24.5	24.7	24.6	24.6

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA178-2
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.150

CHRONIC FATHEAD LARVAE SURVIVAL & GROWTH BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
GROWTH	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	05-8870-5232	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	19-4822-5601	**Code:**	PWE0314.150fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
19-0297-7094	7d Survival Rate	100	>100	NA	5.03%	1	Equal Variance t Two-Sample Test
12-0799-1428	Mean Dry Biomass-mg	100	>100	NA	17.0%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
20-7785-3131	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
06-1931-6285	Mean Dry Biomass-mg	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
19-0297-7094	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
20-7785-3131	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
06-1931-6285	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
12-0799-1428	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
12-0799-1428	Mean Dry Biomass-mg	PMSD	0.1702	0.12 - 0.3	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%
100		4	0.9667	0.9054	1	0.9333	1	0.01925	0.03849	3.98%	1.7%

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.4978	0.415	0.5807	0.4387	0.5627	0.02603	0.05206	10.46%	-6.79%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	0.9333	0.9333	1

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5627	0.4387	0.5093	0.4807

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	14/15	14/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-0297-7094	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	05-8870-5232	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	19-4822-5601	**Code:**	PWE0314.150fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Angular (Corrected)	NA	C > T	NA	NA	5.03%	Passes 7d survival rate

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	0.6547	1.943	0.098	6	0.2685	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.002168001	0.002168001	1	0.4286	0.5370	Non-Significant Effect
Error	0.03035201	0.005058668	6			
Total	0.03252001		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.333	47.47	0.8187	Equal Variances
Variances	Mod Levene Equality of Variance	1	13.75	0.3559	Equal Variances
Variances	Levene Equality of Variance	1	13.75	0.3559	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.8283	0.6451	0.0570	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.3165	0.3313	0.0179	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.7591	3.878	0.0480	Normal Distribution

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	0.0%
100		4	0.9667	0.9054	1	0.9667	0.9333	1	0.01924	3.98%	1.7%

Angular (Corrected) Transformed Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contr	4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	0.0%
100		4	1.375	1.254	1.496	1.375	1.31	1.441	0.03802	5.53%	2.34%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	0.9333	0.9333	1

Angular (Corrected) Transformed Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.441	1.31	1.441	1.441
100		1.441	1.31	1.31	1.441

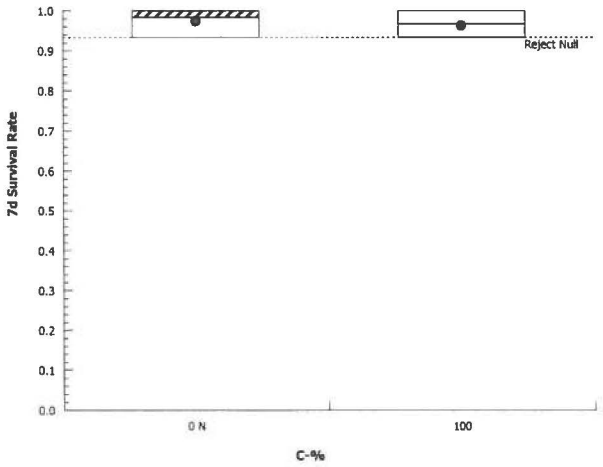
7d Survival Rate Binomials

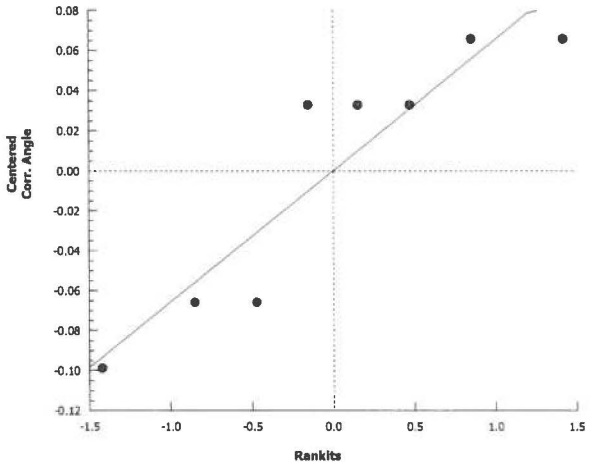
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	14/15	14/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-0297-7094	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-0799-1428	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	05-8870-5232	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	19-4822-5601	**Code:**	PWE0314.150fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	17.0%	Passes mean dry biomass-mg

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-0.7757	1.943	0.079	6	0.7663	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.002005555	0.002005555	1	0.6017	0.4674	Non-Significant Effect
Error	0.01999799	0.003332998	6			
Total	0.02200354		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.459	47.47	0.7635	Equal Variances
Variances	Mod Levene Equality of Variance	0.5669	13.75	0.4800	Equal Variances
Variances	Levene Equality of Variance	0.5989	13.75	0.4684	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9166	0.6451	0.4027	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1563	0.3313	1.0000	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.3068	3.878	0.5923	Normal Distribution

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4597	0.4047	0.5407	0.03145	13.49%	0.0%
100		4	0.4978	0.415	0.5807	0.495	0.4387	0.5627	0.02603	10.46%	-6.79%

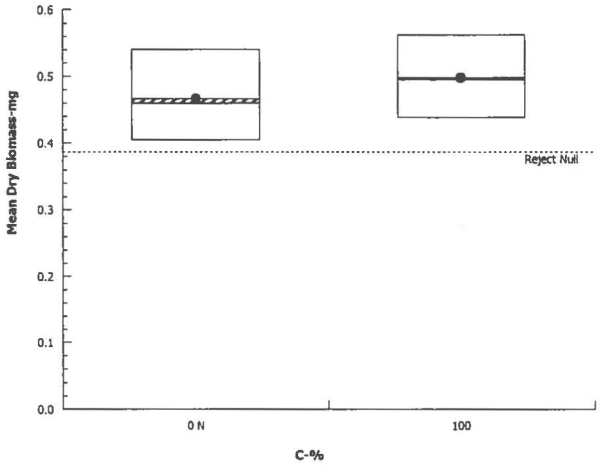
Mean Dry Biomass-mg Detail

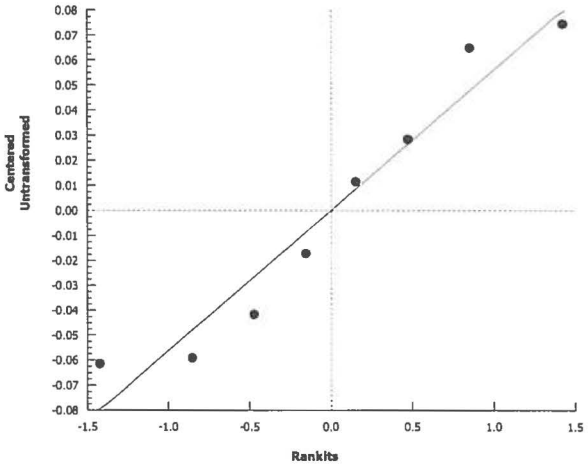
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5627	0.4387	0.5093	0.4807

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-0799-1428	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:34	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-7785-3131	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:35	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	05-8870-5232	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	19-4822-5601	**Code:**	PWE0314.150fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60
100		4	0.9667	0.9333	1	0.01924	0.03849	3.98%	1.7%	58	60

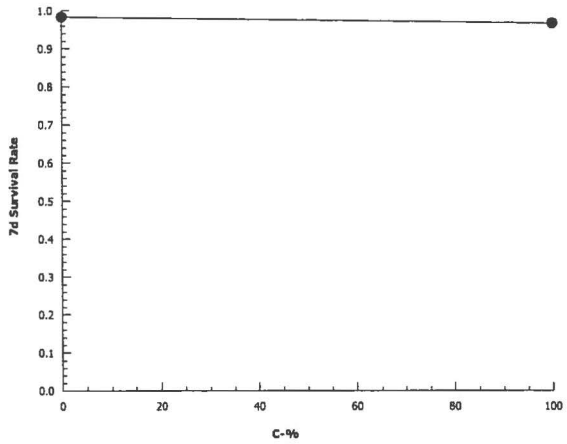
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	0.9333	0.9333	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	14/15	14/15	15/15

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	06-1931-6285	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:34	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	05-8870-5232	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	19-4822-5601	**Code:**	PWE0314.150fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	416899	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

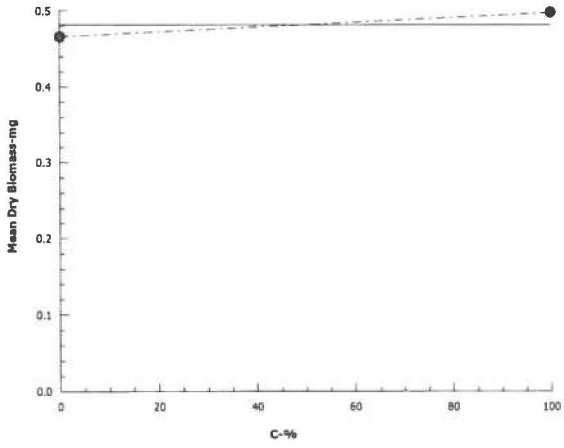
Mean Dry Biomass-mg Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.4978	0.4387	0.5627	0.02603	0.05206	10.46%	-6.79%

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5627	0.4387	0.5093	0.4807

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	05-8870-5232	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	

Sample ID:	19-4822-5601	**Code:**	PWE0314.150fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	81	81	81	81	81	0	0	0.0%	0
Overall		16	73.56			65	81				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	1215	1209	1221	1203	1225	2.584	7.308	0.6%	0
Overall		16	776.5			321	1225				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	6.538	5.953	7.122	5.3	7.5	0.2471	0.6989	10.69%	0
Overall		16	7.163			5.3	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	437	437	437	437	437	0	0	0.0%	0
Overall		16	264.1			89	437				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	7	6.821	7.179	6.7	7.2	0.07559	0.2138	3.05%	0
Overall		16	7.413			6.7	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
100		8	24.05	23.93	24.17	24	24.4	0.05	0.1414	0.59%	0
Overall		16	24.06			24	24.5				0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		81	81	81	81	81	81	81	81

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		1223	1203	1225	1214	1208	1215	1219	1216

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		7.5	6.9	6.7	6.2	6.8	7	5.3	5.9

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		437	437	437	437	437	437	437	437

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		7.1	7.2	7.2	7	6.9	7.2	6.7	6.7

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
100		24.4	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	American Scientific Labs
SAMPLE I.D.:	LAILG-NGA178-2
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.150

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
REPRODUCTION	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-7251-9762	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	01-2721-2782	**Code:**	PWE0314.150c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
07-4317-6533	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact Test
07-4224-7986	Reproduction	100	>100	NA	35.8%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
16-2949-0718	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
07-1608-3649	Reproduction	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
07-4317-6533	7d Survival Rate	Control Resp	0.9	0.8 - NL	Yes	Passes Acceptability Criteria
16-2949-0718	7d Survival Rate	Control Resp	0.9	0.8 - NL	Yes	Passes Acceptability Criteria
07-1608-3649	Reproduction	Control Resp	15.7	15 - NL	Yes	Passes Acceptability Criteria
07-4224-7986	Reproduction	Control Resp	15.7	15 - NL	Yes	Passes Acceptability Criteria
07-4224-7986	Reproduction	PMSD	0.3583	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	0.0%
100		10	1	1	1	1	1	0	0	0.0%	-11.11%

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.7	10.91	20.49	4	25	2.119	6.701	42.68%	0.0%
100		10	15.1	9.544	20.66	5	29	2.456	7.767	51.44%	3.82%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		29	19	5	9	12	13	5	23	18	18

Ceriodaphnia 7-d Survival and Reproduction Test **Aquatic Bioassay & Consulting Labs, Inc.**

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

CETIS Analytical Report

Test Code: PWE0314.150cer | 12-2714-3873

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-4224-7986	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	12-7251-9762	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	01-2721-2782	**Code:**	PWE0314.150c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	35.8%	Passes reproduction

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	0.185	1.734	5.625	18	0.4277	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1.8	1.8	1	0.03421	0.8553	Non-Significant Effect
Error	947	52.61111	18			
Total	948.8		19			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.343	6.541	0.6672	Equal Variances
Variances	Mod Levene Equality of Variance	0.4235	8.285	0.5234	Equal Variances
Variances	Levene Equality of Variance	0.367	8.285	0.5522	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9729	0.866	0.8151	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.09943	0.2235	1.0000	Normal Distribution
Distribution	D'Agostino Skewness	0.2979	2.576	0.7658	Normal Distribution
Distribution	D'Agostino Kurtosis	0.6397	2.576	0.5224	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	0.4979	9.21	0.7796	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.2354	3.878	0.8196	Normal Distribution

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	10	15.7	10.91	20.49	14.5	4	25	2.119	42.68%	0.0%
100		10	15.1	9.544	20.66	15.5	5	29	2.456	51.44%	3.82%

Reproduction Detail

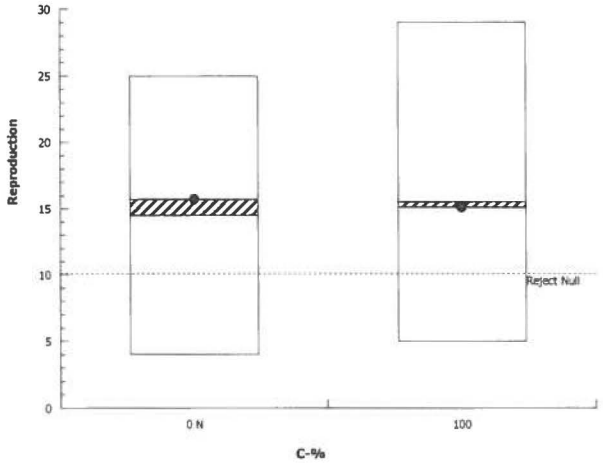
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		29	19	5	9	12	13	5	23	18	18

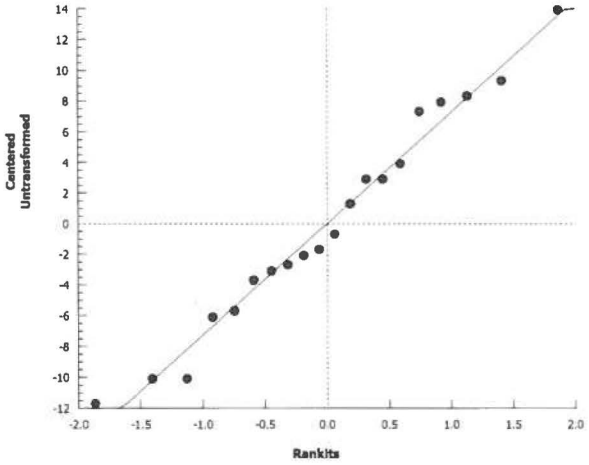
Analyst:_____ QA:_____

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-4224-7986	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:10	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-2949-0718	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:10	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	12-7251-9762	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	01-2721-2782	**Code:**	PWE0314.150c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	10	0.9	0	1	0.1	0.3162	35.14%	0.0%	9	10
100		10	1	1	1	0	0	0.0%	-11.11%	10	10

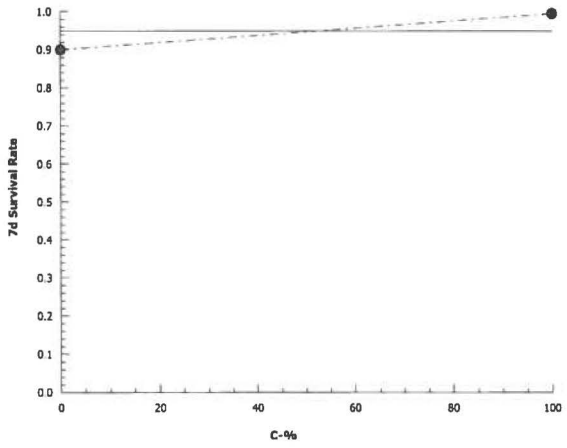
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-1608-3649	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:10	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	12-7251-9762	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	01-2721-2782	**Code:**	PWE0314.150c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	743851	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

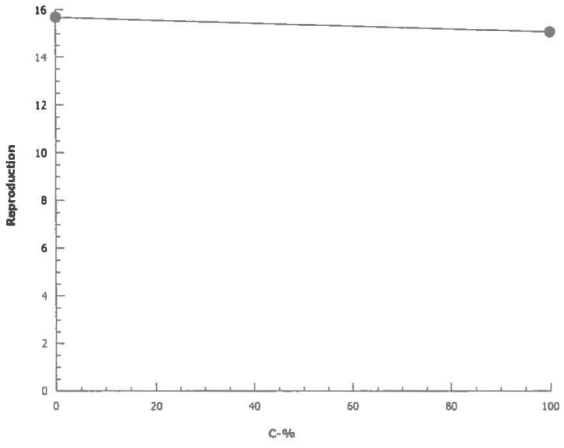
Reproduction Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.7	4	25	2.119	6.701	42.68%	0.0%
100		10	15.1	5	29	2.456	7.767	51.44%	3.82%

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		29	19	5	9	12	13	5	23	18	18

Graphics



CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-4317-6533	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:10	**Analysis:**	Single 2x2 Contingency Table	**Official Results:**	Yes
Batch ID:	12-7251-9762	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	01-2721-2782	**Code:**	PWE0314.150c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Data Transform	Zeta	Alt Hyp	Trials	Seed	Test Result
Untransformed		C > T	NA	NA	Passes 7d survival rate

Fisher Exact Test

Control	vs	C-%	Test Stat	P-Value	P-Type	Decision(α:5%)
Negative Control		100	1	1.0000	Exact	Non-Significant Effect

Data Summary

C-%	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect
0	Negative Contr	9	1	10	0.9	0.1	0.0%
100		10	0	10	1	0	-11.11%

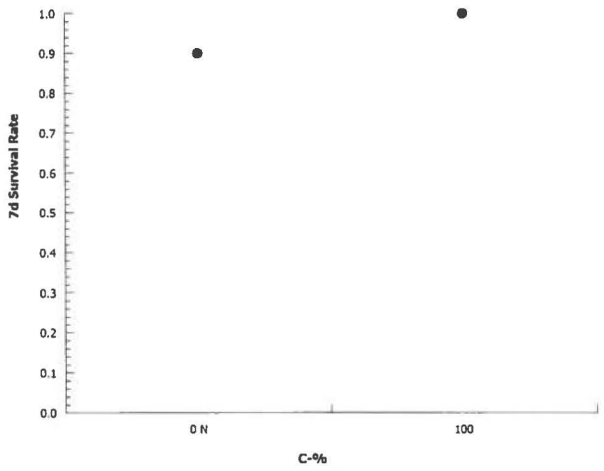
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



CETIS Measurement Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	12-7251-9762	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:49	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	01-2721-2782	**Code:**	PWE0314.150c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 6h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	81	81	81	81	81	0	0	0.0%	0
Overall		16	73.56			65	81				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	1215	1209	1221	1203	1225	2.584	7.308	0.6%	0
Overall		16	776.5			321	1225				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	6.538	5.953	7.122	5.3	7.5	0.2471	0.6989	10.69%	0
Overall		16	7.163			5.3	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	437	437	437	437	437	0	0	0.0%	0
Overall		16	264.1			89	437				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	7	6.821	7.179	6.7	7.2	0.07559	0.2138	3.05%	0
Overall		16	7.413			6.7	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
100		8	24.05	23.93	24.17	24	24.4	0.05	0.1414	0.59%	0
Overall		16	24.06			24	24.5				0 (0%)

Ceriodaphnia 7-d Survival and Reproduction Test — Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		81	81	81	81	81	81	81	81

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		1223	1203	1225	1214	1208	1215	1219	1216

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		7.5	6.9	6.7	6.2	6.8	7	5.3	5.9

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		437	437	437	437	437	437	437	437

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		7.1	7.2	7.2	7	6.9	7.2	6.7	6.7

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
100		24.4	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA178-2
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.150

CHRONIC SELENASTRUM ALGAE GROWTH BIOASSAY

NOEC	=	<100.00 %
TUc	=	>1.00
IC25	=	48.99 %
IC50	=	97.98 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	06-8557-3208	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:06	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:15	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-6532-0656	**Code:**	PWE0314.150sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	80h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
21-3334-2070	Cell Density	<100	100	NA	2.75%	>1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
17-7023-8434	Cell Density	IC5	9.798	9.284	10.5	10.21	Linear Interpolation (ICPIN)
		IC10	19.6	18.57	20.99	5.103	
		IC15	29.39	27.85	31.49	3.402	
		IC20	39.19	37.14	41.99	2.551	
		IC25	48.99	46.42	52.49	2.041	
		IC40	78.39	74.27	83.98	1.276	
		IC50	97.98	92.84	N/A	1.021	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
17-7023-8434	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
21-3334-2070	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
17-7023-8434	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
21-3334-2070	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
21-3334-2070	Cell Density	PMSD	0.02747	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	5.053E+5	4.687E+5	5.418E+5	4.850E+5	5.380E+5	1.147E+4	2.294E+4	4.54%	51.03%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		5.380E+5	4.960E+5	5.020E+5	4.850E+5

CETIS Analytical Report

Test Code: PWE0314.150sel | 01-1021-9981

Selenastrum Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	21-3334-2070	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	06-8557-3208	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:06	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:15	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-6532-0656	**Code:**	PWE0314.150sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	80h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	2.75%	Fails cell density

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100*	36.09	1.943	28350	6	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5.544045E+11	5.544045E+11	1	1303	<0.0001	Significant Effect
Error	2553500000	425583300	6			
Total	5.56958E+11		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.62	47.47	0.7017	Equal Variances
Variances	Mod Levene Equality of Variance	0.07349	13.75	0.7954	Equal Variances
Variances	Levene Equality of Variance	0.1601	13.75	0.7030	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.8339	0.6451	0.0651	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.3072	0.3313	0.0252	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.7497	3.878	0.0507	Normal Distribution

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1025000	1.019E+6	1.058E+6	9.013E+3	1.75%	0.0%
100		4	5.053E+5	4.687E+5	5.418E+5	499000	4.850E+5	5.380E+5	1.147E+4	4.54%	51.03%

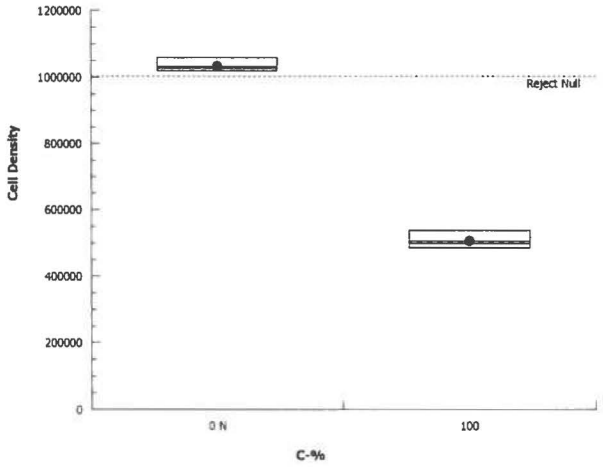
Cell Density Detail

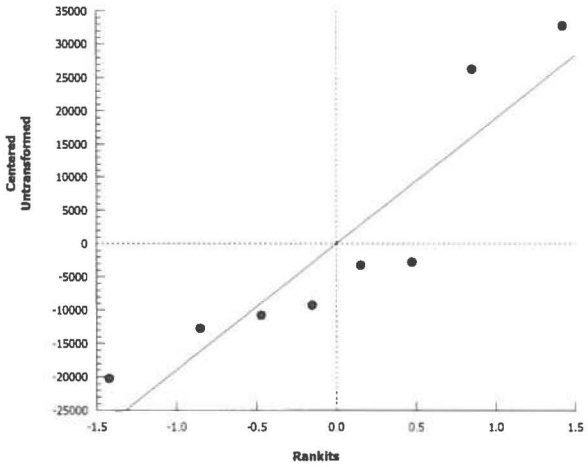
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		5.380E+5	4.960E+5	5.020E+5	4.850E+5

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	21-3334-2070	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:52	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	17-7023-8434	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:52	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	06-8557-3208	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:06	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:15	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-6532-0656	**Code:**	PWE0314.150sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	80h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	9.798	9.284	10.5	10.21	9.526	10.77
IC10	19.6	18.57	20.99	5.103	4.763	5.386
IC15	29.39	27.85	31.49	3.402	3.175	3.59
IC20	39.19	37.14	41.99	2.551	2.382	2.693
IC25	48.99	46.42	52.49	2.041	1.905	2.154
IC40	78.39	74.27	83.98	1.276	1.191	1.346
IC50	97.98	92.84	N/A	1.021	NA	1.077

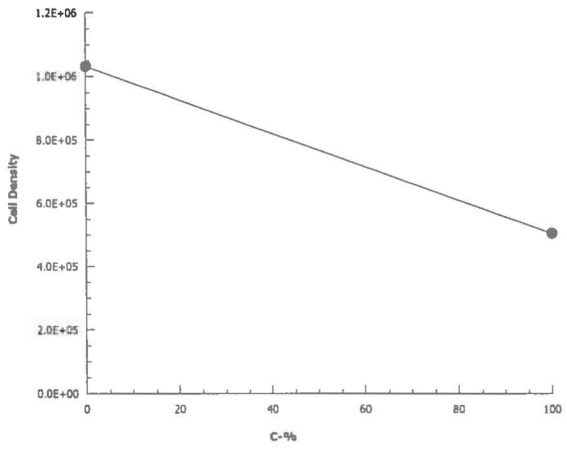
Cell Density Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	5.053E+5	4.850E+5	5.380E+5	1.147E+4	2.294E+4	4.54%	51.03%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		5.380E+5	4.960E+5	5.020E+5	4.850E+5

Graphics



Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	06-8557-3208	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:06	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:15	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-6532-0656	**Code:**	PWE0314.150sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 09:45	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	80h (16.2 °C)	**Station:**	LAILG-NGA178-2		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	67			67	67	0	0	0.0%	0
100		1	81			81	81	0	0	0.0%	0
Overall		2	74			67	81				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	422	389.7	454.3	385	448	11.63	26.01	6.16%	0
100		5	1262	1251	1274	1250	1274	4.179	9.343	0.74%	0
Overall		10	842.2			385	1274				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	94			94	94	0	0	0.0%	0
100		1	437			437	437	0	0	0.0%	0
Overall		2	265.5			94	437				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	7.56	7.372	7.748	7.4	7.7	0.06782	0.1517	2.01%	0
100		5	7.54	7.398	7.682	7.4	7.7	0.05099	0.114	1.51%	0
Overall		10	7.55			7.4	7.7				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
100		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
Overall		10	24.68			24.5	25				0 (0%)

Selenastrum Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	67
100		81

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5
0	Negative Contr	406	385	440	448	431
100		1260	1259	1250	1274	1269

Hardness (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	94
100		437

pH-Units

C-%	Control Type	1	2	3	4	5
0	Negative Contr	7.7	7.6	7.4	7.4	7.7
100		7.7	7.5	7.5	7.4	7.6

Temperature-°C

C-%	Control Type	1	2	3	4	5
0	Negative Contr	25	24.5	24.7	24.6	24.6
100		25	24.5	24.7	24.6	24.6

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA19-7
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.151

CHRONIC FATHEAD LARVAE SURVIVAL & GROWTH BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
GROWTH	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	07-3341-3659	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	07-7237-2757	**Code:**	PWE0314.151fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
10-7877-6347	7d Survival Rate	100	>100	NA	4.67%	1	Wilcoxon Rank Sum Two-Sample Test
09-7036-7687	Mean Dry Biomass-mg	100	>100	NA	14.7%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
09-8103-3626	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
14-5234-8474	Mean Dry Biomass-mg	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
09-8103-3626	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
10-7877-6347	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
09-7036-7687	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
14-5234-8474	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
09-7036-7687	Mean Dry Biomass-mg	PMSD	0.1475	0.12 - 0.3	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%
100		4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.4995	0.4479	0.5511	0.4647	0.5427	0.01621	0.03243	6.49%	-7.15%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	0.9333	1	1

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5427	0.4647	0.4907	0.5

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	14/15	15/15	15/15

CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	10-7877-6347	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:43	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	07-3341-3659	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	07-7237-2757	**Code:**	PWE0314.151fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Angular (Corrected)	NA	C > T	NA	NA	4.67%	Passes 7d survival rate

Wilcoxon Rank Sum Two-Sample Test

Control	vs	C-%	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	18	NA	2	6	0.7857	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	0	1.0000	Non-Significant Effect
Error	0.02601601	0.004336001	6			
Total	0.02601601		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1	47.47	1.0000	Equal Variances
Variances	Mod Levene Equality of Variance	0	13.75	1.0000	Equal Variances
Variances	Levene Equality of Variance	0	13.75	1.0000	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.5659	0.6451	<0.0001	Non-normal Distribution
Distribution	Kolmogorov-Smirnov D	0.4554	0.3313	<0.0001	Non-normal Distribution
Distribution	Anderson-Darling A2 Normality	1.973	3.878	<0.0001	Non-normal Distribution

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	0.0%
100		4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	0.0%

Angular (Corrected) Transformed Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contr	4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	0.0%
100		4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	0.0%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	0.9333	1	1

Angular (Corrected) Transformed Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.441	1.31	1.441	1.441
100		1.441	1.31	1.441	1.441

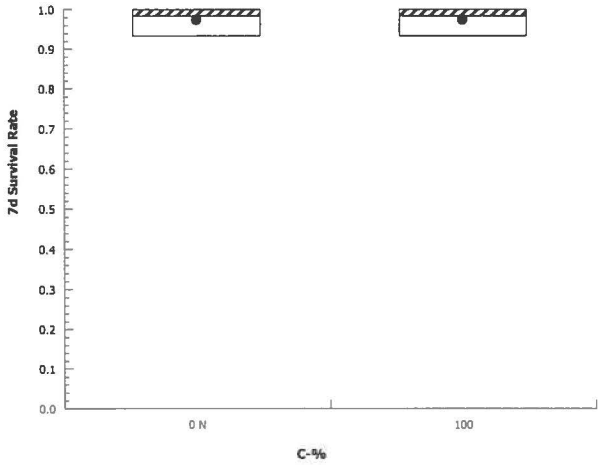
7d Survival Rate Binomials

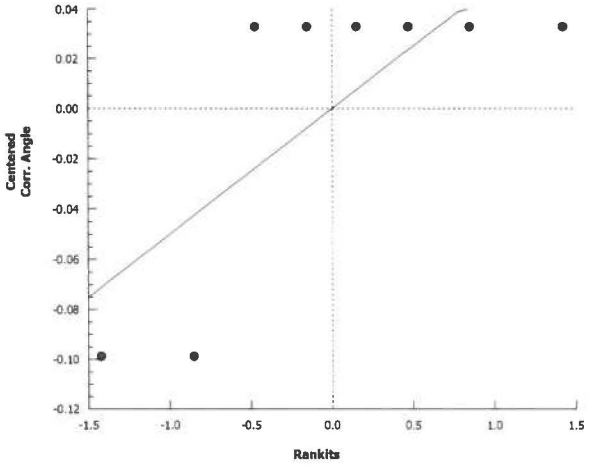
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	14/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	10-7877-6347	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:43	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	09-7036-7687	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	07-3341-3659	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	07-7237-2757	**Code:**	PWE0314.151fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	14.7%	Passes mean dry biomass-mg

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-0.9421	1.943	0.069	6	0.8087	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.002222223	0.002222223	1	0.8876	0.3825	Non-Significant Effect
Error	0.01502199	0.002503665	6			
Total	0.01724422		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	3.761	47.47	0.3054	Equal Variances
Variances	Mod Levene Equality of Variance	3.848	13.75	0.0975	Equal Variances
Variances	Levene Equality of Variance	4.214	13.75	0.0859	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9696	0.6451	0.8947	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.149	0.3313	1.0000	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.1866	3.878	0.9595	Normal Distribution

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4597	0.4047	0.5407	0.03145	13.49%	0.0%
100		4	0.4995	0.4479	0.5511	0.4953	0.4647	0.5427	0.01621	6.49%	-7.15%

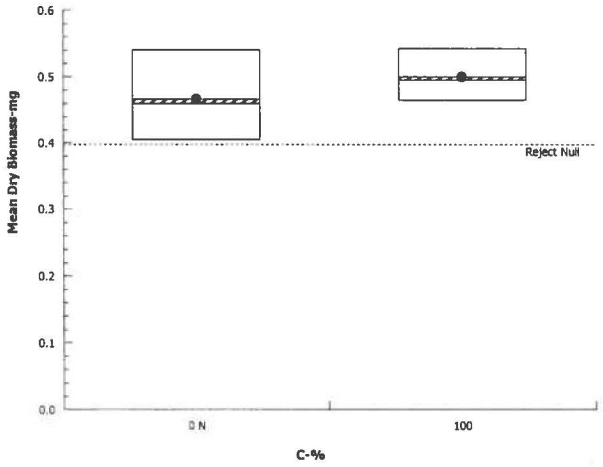
Mean Dry Biomass-mg Detail

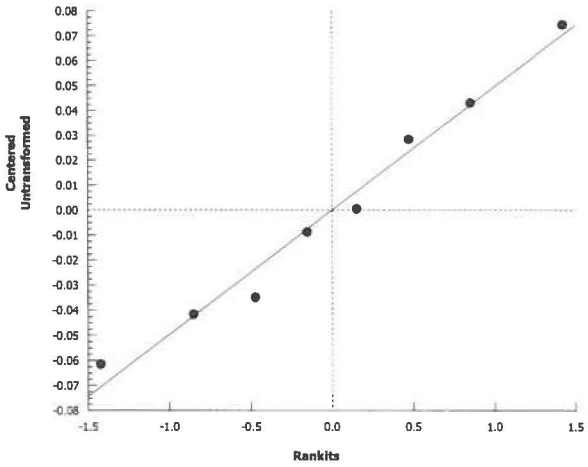
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5427	0.4647	0.4907	0.5

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	09-7036-7687	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:43	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	09-8103-3626	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:43	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	07-3341-3659	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	07-7237-2757	**Code:**	PWE0314.151fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60
100		4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60

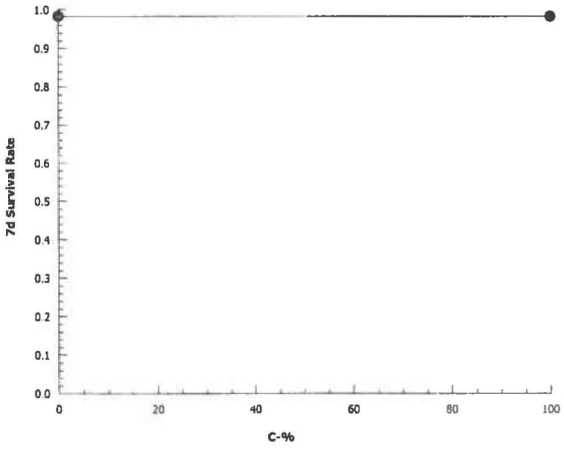
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		1	0.9333	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		15/15	14/15	15/15	15/15

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	14-5234-8474	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:43	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	07-3341-3659	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	07-7237-2757	**Code:**	PWE0314.151fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1634654	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

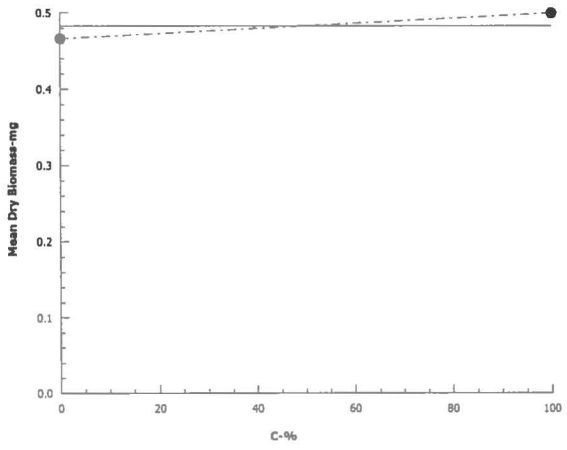
Mean Dry Biomass-mg Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.4995	0.4647	0.5427	0.01621	0.03243	6.49%	-7.15%

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5427	0.4647	0.4907	0.5

Graphics



CETIS Measurement Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	07-3341-3659	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	07-7237-2757	**Code:**	PWE0314.151fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	57	57	57	57	57	0	0	0.0%	0
Overall		16	61.56			57	68				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	1133	1125	1140	1121	1145	3.087	8.73	0.77%	0
Overall		16	735.2			321	1145				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	6.863	6.29	7.435	6.2	8.1	0.242	0.6844	9.97%	0
Overall		16	7.325			6.2	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	344	344	344	344	344	0	0	0.0%	0
Overall		16	217.6			89	344				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	6.838	6.729	6.946	6.7	7	0.04605	0.1302	1.91%	0
Overall		16	7.331			6.7	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.08	23.93	24.22	24	24.5	0.06196	0.1752	0.73%	0
100		8	24.09	23.91	24.26	24	24.6	0.07425	0.21	0.87%	0
Overall		16	24.08			24	24.6				0 (0%)

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		57	57	57	57	57	57	57	57

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		1133	1136	1134	1123	1121	1127	1145	1143

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		7.7	6.6	6.4	6.3	6.8	8.1	6.2	6.8

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		344	344	344	344	344	344	344	344

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		6.9	7	6.9	6.8	6.7	7	6.7	6.7

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24.1	24	24	24	24	24	24
100		24.6	24.1	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	American Scientific Labs
SAMPLE I.D.:	LAILG-NGA19-7
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.151

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
REPRODUCTION	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	06-0231-0981	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	20-0844-4891	**Code:**	PWE0314.151c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-4144-9116	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact Test
19-8298-2818	Reproduction	100	>100	NA	39.6%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
00-9758-4716	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
19-4764-4564	Reproduction	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
00-4144-9116	7d Survival Rate	Control Resp	0.9	0.8 - NL	Yes	Passes Acceptability Criteria
00-9758-4716	7d Survival Rate	Control Resp	0.9	0.8 - NL	Yes	Passes Acceptability Criteria
19-4764-4564	Reproduction	Control Resp	15.7	15 - NL	Yes	Passes Acceptability Criteria
19-8298-2818	Reproduction	Control Resp	15.7	15 - NL	Yes	Passes Acceptability Criteria
19-8298-2818	Reproduction	PMSD	0.3955	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	0.0%
100		10	1	1	1	1	1	0	0	0.0%	-11.11%

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.7	10.91	20.49	4	25	2.119	6.701	42.68%	0.0%
100		10	16	9.47	22.53	2	34	2.887	9.129	57.05%	-1.91%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		13	9	11	13	19	27	2	18	34	14

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-8298-2818	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	06-0231-0981	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	20-0844-4891	**Code:**	PWE0314.151c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	39.6%	Passes reproduction

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-0.08378	1.734	6.21	18	0.5329	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.45	0.45	1	0.007018	0.9342	Non-Significant Effect
Error	1154.1	64.11667	18			
Total	1154.55		19			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.856	6.541	0.3706	Equal Variances
Variances	Mod Levene Equality of Variance	0.271	8.285	0.6090	Equal Variances
Variances	Levene Equality of Variance	0.5251	8.285	0.4780	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.967	0.866	0.6908	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1363	0.2235	0.4317	Normal Distribution
Distribution	D'Agostino Skewness	0.9638	2.576	0.3351	Normal Distribution
Distribution	D'Agostino Kurtosis	0.546	2.576	0.5851	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	1.227	9.21	0.5414	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.4067	3.878	0.3544	Normal Distribution

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	10	15.7	10.91	20.49	14.5	4	25	2.119	42.68%	0.0%
100		10	16	9.47	22.53	13.5	2	34	2.887	57.05%	-1.91%

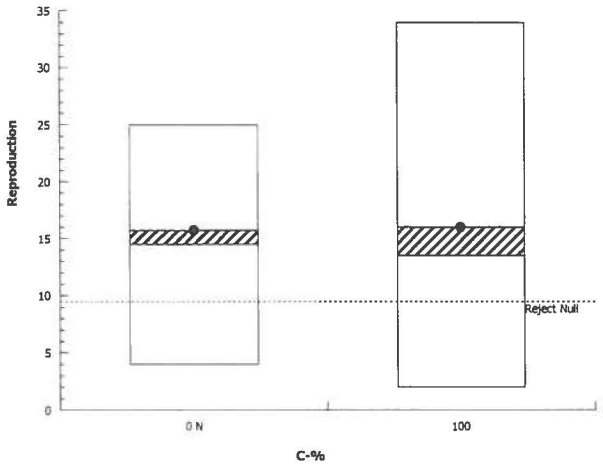
Reproduction Detail

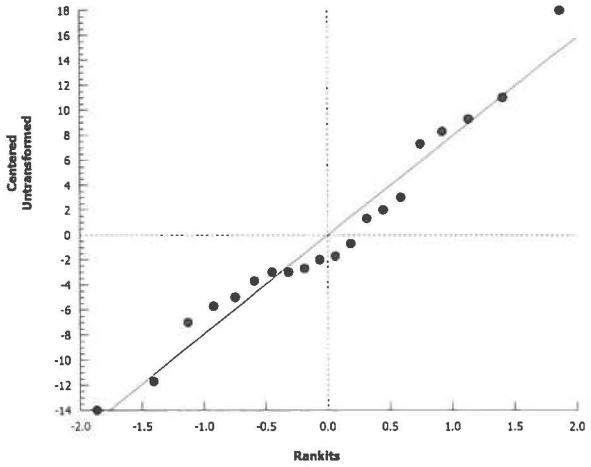
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		13	9	11	13	19	27	2	18	34	14

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-8298-2818	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:11	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	00-9758-4716	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:11	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	06-0231-0981	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	20-0844-4891	**Code:**	PWE0314.151c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	10	0.9	0	1	0.1	0.3162	35.14%	0.0%	9	10
100		10	1	1	1	0	0	0.0%	-11.11%	10	10

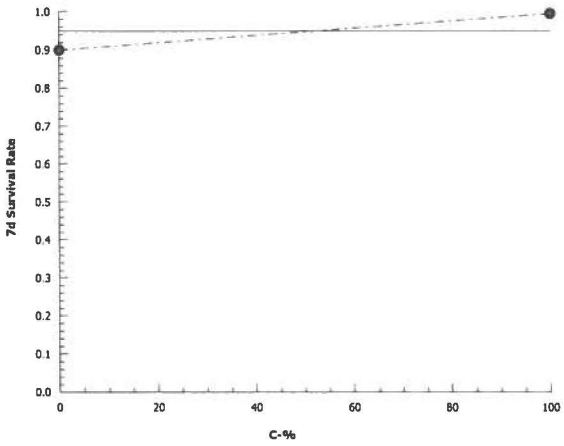
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-4764-4564	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:11	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	06-0231-0981	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	20-0844-4891	**Code:**	PWE0314.151c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1220038	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

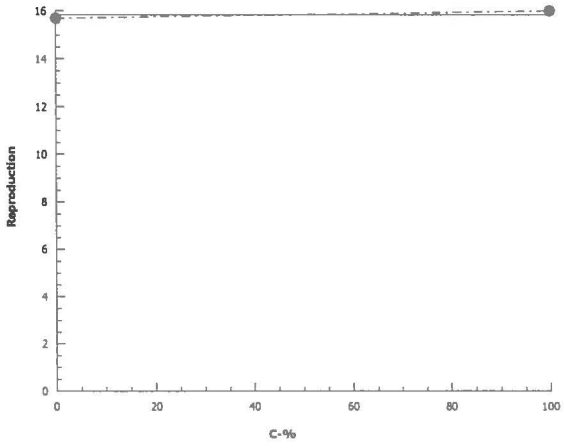
Reproduction Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.7	4	25	2.119	6.701	42.68%	0.0%
100		10	16	2	34	2.887	9.129	57.05%	-1.91%

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	14	4	15	13	10	12	23	25	24	17
100		13	9	11	13	19	27	2	18	34	14

Graphics



CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	00-4144-9116	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:11	**Analysis:**	Single 2x2 Contingency Table	**Official Results:**	Yes
Batch ID:	06-0231-0981	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	20-0844-4891	**Code:**	PWE0314.151c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	Test Result
Untransformed		C > T	NA	NA	Passes 7d survival rate

Fisher Exact Test

Control	vs	C-%	Test Stat	P-Value	P-Type	Decision(α:5%)
Negative Control		100	1	1.0000	Exact	Non-Significant Effect

Data Summary

C-%	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect
0	Negative Contr	9	1	10	0.9	0.1	0.0%
100		10	0	10	1	0	-11.11%

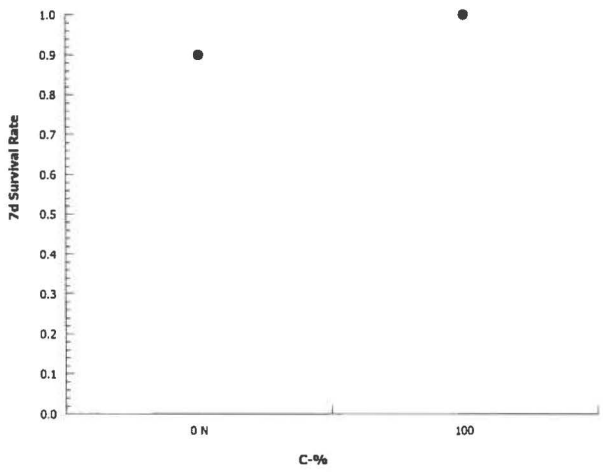
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	0	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	06-0231-0981	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:51	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	20-0844-4891	**Code:**	PWE0314.151c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 10h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	57	57	57	57	57	0	0	0.0%	0
Overall		16	61.56			57	68				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	1133	1125	1140	1121	1145	3.087	8.73	0.77%	0
Overall		16	735.2			321	1145				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	6.863	6.29	7.435	6.2	8.1	0.242	0.6844	9.97%	0
Overall		16	7.325			6.2	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	344	344	344	344	344	0	0	0.0%	0
Overall		16	217.6			89	344				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	6.838	6.729	6.946	6.7	7	0.04605	0.1302	1.91%	0
Overall		16	7.331			6.7	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.08	23.93	24.22	24	24.5	0.06196	0.1752	0.73%	0
100		8	24.09	23.91	24.26	24	24.6	0.07425	0.21	0.87%	0
Overall		16	24.08			24	24.6				0 (0%)

Ceriodaphnia 7-d Survival and Reproduction Test — Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		57	57	57	57	57	57	57	57

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		1133	1136	1134	1123	1121	1127	1145	1143

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		7.7	6.6	6.4	6.3	6.8	8.1	6.2	6.8

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		344	344	344	344	344	344	344	344

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		6.9	7	6.9	6.8	6.7	7	6.7	6.7

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24.1	24	24	24	24	24	24
100		24.6	24.1	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA19-7
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.151

CHRONIC SELENASTRUM ALGAE GROWTH BIOASSAY

NOEC	=	<100.00 %
TUc	=	>1.00
IC25	=	43.52 %
IC50	=	87.03 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Test Code: PWE0314.151sel | 10-1258-5345

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	10-0912-6923	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:07	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:20	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	00-5528-6247	**Code:**	PWE0314.151sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	84h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
09-9501-5680	Cell Density	<100	100	NA	3.07%	>1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
13-4778-9080	Cell Density	IC5	8.703	8.255	9.326	11.49	Linear Interpolation (ICPIN)
		IC10	17.41	16.51	18.65	5.745	
		IC15	26.11	24.76	27.98	3.83	
		IC20	34.81	33.02	37.31	2.873	
		IC25	43.52	41.27	46.63	2.298	
		IC40	69.62	66.04	74.61	1.436	
		IC50	87.03	82.55	93.26	1.149	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
09-9501-5680	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
13-4778-9080	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
09-9501-5680	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
13-4778-9080	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
09-9501-5680	Cell Density	PMSD	0.03072	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	4.390E+5	3.957E+5	4.823E+5	4.130E+5	4.760E+5	1.360E+4	2.719E+4	6.19%	57.45%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		4.130E+5	4.410E+5	4.760E+5	4.260E+5

CETIS Analytical Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	09-9501-5680	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	10-0912-6923	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:07	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:20	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	00-5528-6247	**Code:**	PWE0314.151sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	84h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	3.07%	Fails cell density

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100*	36.34	1.943	31700	6	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	7.027051E+11	7.027051E+11	1	1321	<0.0001	Significant Effect
Error	3192750000	532125000	6			
Total	7.058978E+11		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	2.275	47.47	0.5170	Equal Variances
Variances	Mod Levene Equality of Variance	0.5066	13.75	0.5033	Equal Variances
Variances	Levene Equality of Variance	0.4963	13.75	0.5075	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.8988	0.6451	0.2817	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.2127	0.3313	0.4085	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.4963	3.878	0.2170	Normal Distribution

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1025000	1.019E+6	1.058E+6	9.013E+3	1.75%	0.0%
100		4	4.390E+5	3.957E+5	4.823E+5	433500	4.130E+5	4.760E+5	1.360E+4	6.19%	57.45%

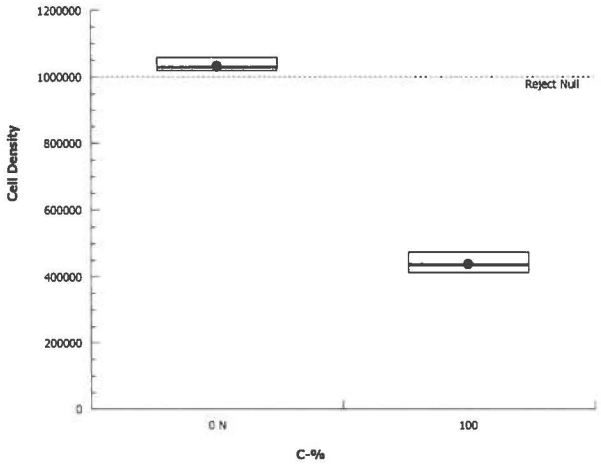
Cell Density Detail

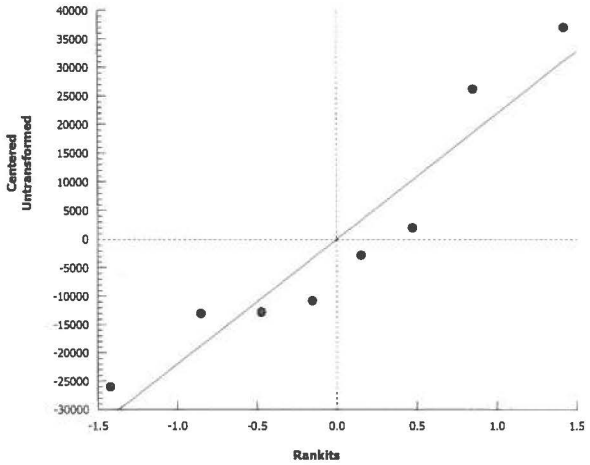
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		4.130E+5	4.410E+5	4.760E+5	4.260E+5

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	09-9501-5680	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:56	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	13-4778-9080	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 15:56	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	10-0912-6923	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:07	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:20	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	00-5528-6247	**Code:**	PWE0314.151sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	84h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	8.703	8.255	9.326	11.49	10.72	12.11
IC10	17.41	16.51	18.65	5.745	5.361	6.057
IC15	26.11	24.76	27.98	3.83	3.574	4.038
IC20	34.81	33.02	37.31	2.873	2.681	3.029
IC25	43.52	41.27	46.63	2.298	2.144	2.423
IC40	69.62	66.04	74.61	1.436	1.34	1.514
IC50	87.03	82.55	93.26	1.149	1.072	1.211

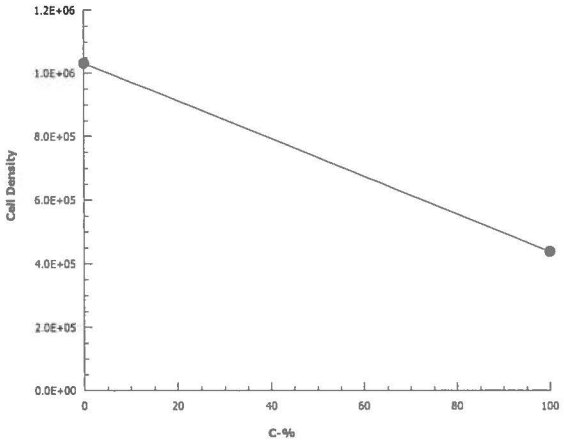
Cell Density Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	4.390E+5	4.130E+5	4.760E+5	1.360E+4	2.719E+4	6.19%	57.45%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		4.130E+5	4.410E+5	4.760E+5	4.260E+5

Graphics



CETIS Measurement Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	10-0912-6923	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:07	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:20	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	00-5528-6247	**Code:**	PWE0314.151sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 05:40	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	84h (16.2 °C)	**Station:**	LAILG-NGA19-7		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	67			67	67	0	0	0.0%	0
100		1	57			57	57	0	0	0.0%	0
Overall		2	62			57	67				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	422	389.7	454.3	385	448	11.63	26.01	6.16%	0
100		5	1187	1168	1206	1171	1208	6.866	15.35	1.29%	0
Overall		10	804.4			385	1208				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	94			94	94	0	0	0.0%	0
100		1	344			344	344	0	0	0.0%	0
Overall		2	219			94	344				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	7.56	7.372	7.748	7.4	7.7	0.06782	0.1517	2.01%	0
100		5	7.44	7.198	7.682	7.2	7.7	0.08718	0.1949	2.62%	0
Overall		10	7.5			7.2	7.7				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
100		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
Overall		10	24.68			24.5	25				0 (0%)

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	67
100		57

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5
0	Negative Contr	406	385	440	448	431
100		1176	1171	1182	1208	1197

Hardness (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	94
100		344

pH-Units

C-%	Control Type	1	2	3	4	5
0	Negative Contr	7.7	7.6	7.4	7.4	7.7
100		7.7	7.5	7.5	7.2	7.3

Temperature-°C

C-%	Control Type	1	2	3	4	5
0	Negative Contr	25	24.5	24.7	24.6	24.6
100		25	24.5	24.7	24.6	24.6

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA184-3
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.152

CHRONIC FATHEAD LARVAE SURVIVAL & GROWTH BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
GROWTH	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	13-8627-8132	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	02-0400-5197	**Code:**	PWE0314.152fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-.3		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
05-0950-5064	7d Survival Rate	100	>100	NA	4.67%	1	Wilcoxon Rank Sum Two-Sample Test
16-9798-5755	Mean Dry Biomass-mg	100	>100	NA	15.7%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
06-5374-4150	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
09-2385-8061	Mean Dry Biomass-mg	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
05-0950-5064	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
06-5374-4150	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
09-2385-8061	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
16-9798-5755	Mean Dry Biomass-mg	Control Resp	0.4662	0.25 - NL	Yes	Passes Acceptability Criteria
16-9798-5755	Mean Dry Biomass-mg	PMSD	0.1574	0.12 - 0.3	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%
100		4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.4872	0.4207	0.5537	0.4493	0.5247	0.0209	0.0418	8.58%	-4.51%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		0.9333	1	1	1

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5247	0.4493	0.522	0.4527

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		14/15	15/15	15/15	15/15

CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	05-0950-5064	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:49	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	13-8627-8132	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	02-0400-5197	**Code:**	PWE0314.152fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-.3		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Angular (Corrected)	NA	C > T	NA	NA	4.67%	Passes 7d survival rate

Wilcoxon Rank Sum Two-Sample Test

Control	vs	C-%	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	18	NA	2	6	0.7857	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	1	0	1.0000	Non-Significant Effect
Error	0.02601601	0.004336001	6			
Total	0.02601601		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1	47.47	1.0000	Equal Variances
Variances	Mod Levene Equality of Variance	0	13.75	1.0000	Equal Variances
Variances	Levene Equality of Variance	0	13.75	1.0000	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.5659	0.6451	<0.0001	Non-normal Distribution
Distribution	Kolmogorov-Smirnov D	0.4554	0.3313	<0.0001	Non-normal Distribution
Distribution	Anderson-Darling A2 Normality	1.973	3.878	<0.0001	Non-normal Distribution

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	0.0%
100		4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	0.0%

Angular (Corrected) Transformed Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contr	4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	0.0%
100		4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	0.0%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		0.9333	1	1	1

Angular (Corrected) Transformed Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.441	1.31	1.441	1.441
100		1.31	1.441	1.441	1.441

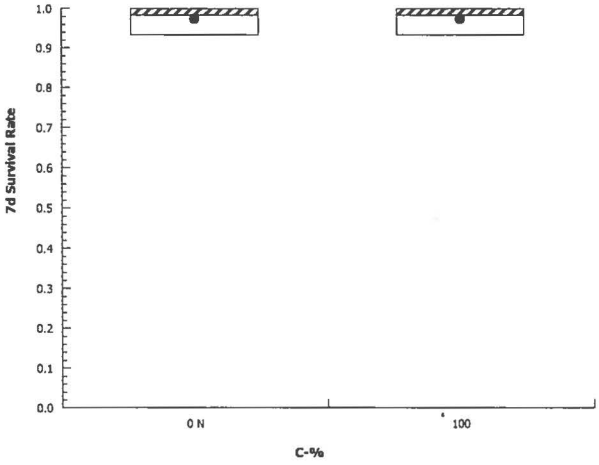
7d Survival Rate Binomials

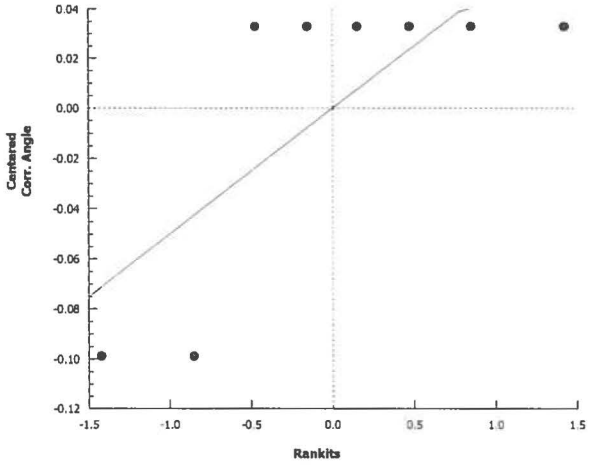
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		14/15	15/15	15/15	15/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	05-0950-5064	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:49	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-9798-5755	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	13-8627-8132	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	02-0400-5197	**Code:**	PWE0314.152fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-.3		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	15.7%	Passes mean dry biomass-mg

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-0.5562	1.943	0.073	6	0.7009	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.0008819998	0.0008819998	1	0.3093	0.5982	Non-Significant Effect
Error	0.01710822	0.00285137	6			
Total	0.01799022		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	2.264	47.47	0.5195	Equal Variances
Variances	Mod Levene Equality of Variance	1.964	13.75	0.2106	Equal Variances
Variances	Levene Equality of Variance	2.227	13.75	0.1863	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.8924	0.6451	0.2462	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.2574	0.3313	0.1296	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.5382	3.878	0.1715	Normal Distribution

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.4662	0.3661	0.5662	0.4597	0.4047	0.5407	0.03145	13.49%	0.0%
100		4	0.4872	0.4207	0.5537	0.4873	0.4493	0.5247	0.0209	8.58%	-4.51%

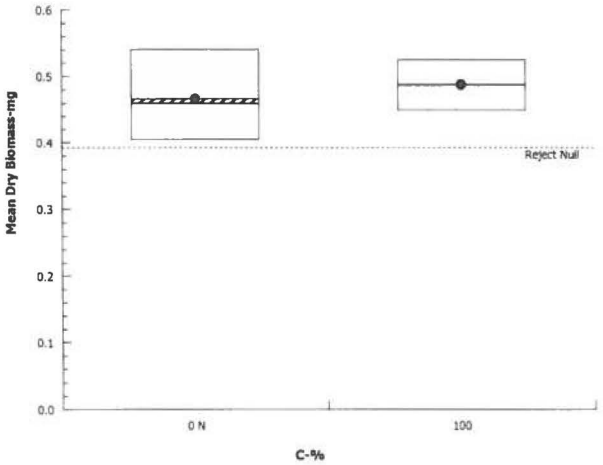
Mean Dry Biomass-mg Detail

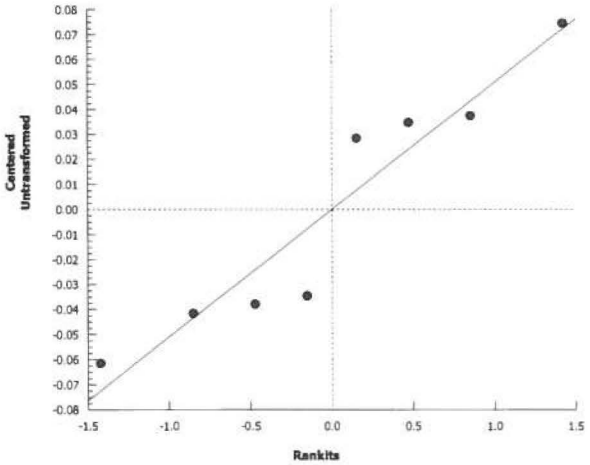
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5247	0.4493	0.522	0.4527

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	16-9798-5755	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:49	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	06-5374-4150	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:49	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	13-8627-8132	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	02-0400-5197	**Code:**	PWE0314.152fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-.3		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60
100		4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60

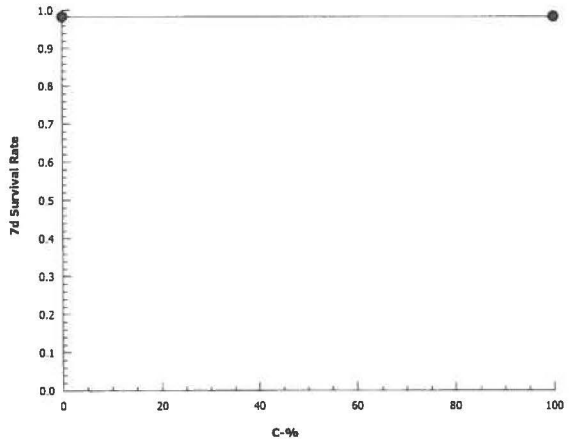
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	0.9333	1	1
100		0.9333	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	14/15	15/15	15/15
100		14/15	15/15	15/15	15/15

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	09-2385-8061	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:49	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	13-8627-8132	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	02-0400-5197	**Code:**	PWE0314.152fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-.3		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1840195	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	>100	N/A	N/A	<1	NA	NA
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

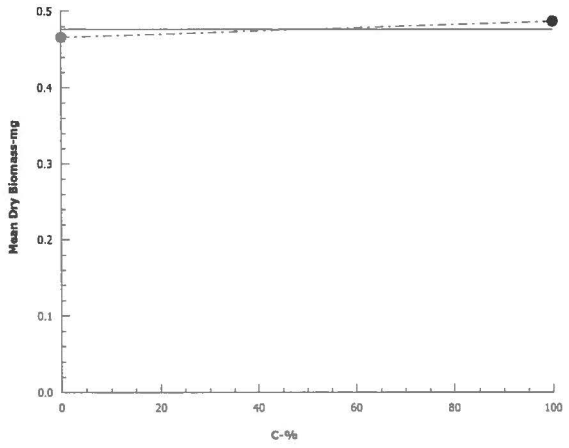
Mean Dry Biomass-mg Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.4662	0.4047	0.5407	0.03145	0.06289	13.49%	0.0%
100		4	0.4872	0.4493	0.5247	0.0209	0.0418	8.58%	-4.51%

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.4947	0.4247	0.4047	0.5407
100		0.5247	0.4493	0.522	0.4527

Graphics



CETIS Measurement Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	13-8627-8132	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	02-0400-5197	**Code:**	PWE0314.152fml	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-.3		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	31	31	31	31	31	0	0	0.0%	0
Overall		16	48.56			31	68				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	94.5	76	113	72	140	7.822	22.12	23.41%	0
Overall		16	216.1			72	348				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	7.375	7.073	7.677	6.7	7.9	0.1278	0.3615	4.9%	0
Overall		16	7.581			6.7	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	28	28	28	28	28	0	0	0.0%	0
Overall		16	59.63			28	95				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	6.925	6.801	7.049	6.7	7.1	0.05261	0.1488	2.15%	0
Overall		16	7.375			6.7	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
100		8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
Overall		16	24.06			24	24.5				0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		31	31	31	31	31	31	31	31

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		89	140	82	77	102	72	85	109

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		7.9	7.3	7.6	7.6	7.2	7.5	7.2	6.7

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		28	28	28	28	28	28	28	28

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		6.7	7	7.1	6.9	7	7.1	6.8	6.8

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
100		24.5	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	American Scientific Labs
SAMPLE I.D.:	LAILG-NGA184-3
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.152

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

SURVIVAL	NOEC	=	100.00 %
	TUc	=	1.00
	EC25	=	>100.00 %
	EC50	=	>100.00 %
REPRODUCTION	NOEC	=	100.00 %
	TUc	=	1.00
	IC25	=	>100.00 %
	IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	09-4985-6531	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	18-3694-8979	**Code:**	PWE0314.152c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
03-5908-1307	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact Test
17-7419-8915	Reproduction	100	>100	NA	31.0%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
02-5114-2977	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
		EC50	>100	N/A	N/A	<1	
05-5686-0272	Reproduction	IC5	31.41	10.3	N/A	3.184	Linear Interpolation (ICPIN)
		IC10	62.81	20.61	N/A	1.592	
		IC15	94.22	30.91	N/A	1.061	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
02-5114-2977	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
03-5908-1307	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
05-5686-0272	Reproduction	Control Resp	20.1	15 - NL	Yes	Passes Acceptability Criteria
17-7419-8915	Reproduction	Control Resp	20.1	15 - NL	Yes	Passes Acceptability Criteria
17-7419-8915	Reproduction	PMSD	0.3102	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	1	1	1	1	1	0	0	0.0%	0.0%
100		10	1	1	1	1	1	0	0	0.0%	0.0%

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	20.1	14.96	25.24	11	29	2.273	7.187	35.76%	0.0%
100		10	16.9	10.6	23.2	3	30	2.787	8.812	52.14%	15.92%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	16	21	13	11	12	28	17	28	29	26
100		16	30	21	16	9	8	3	18	30	18

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	17-7419-8915	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	09-4985-6531	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	18-3694-8979	**Code:**	PWE0314.152c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	31.0%	Passes reproduction

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	0.8899	1.734	6.236	18	0.1926	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	51.2	51.2	1	0.7919	0.3853	Non-Significant Effect
Error	1163.8	64.65556	18			
Total	1215		19			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.503	6.541	0.5533	Equal Variances
Variances	Mod Levene Equality of Variance	0.0101	8.285	0.9211	Equal Variances
Variances	Levene Equality of Variance	0.01045	8.285	0.9197	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9614	0.866	0.5723	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1178	0.2235	0.7021	Normal Distribution
Distribution	D'Agostino Skewness	0.212	2.576	0.8321	Normal Distribution
Distribution	D'Agostino Kurtosis	1.097	2.576	0.2725	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	1.249	9.21	0.5354	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.3132	3.878	0.5738	Normal Distribution

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	10	20.1	14.96	25.24	19	11	29	2.273	35.76%	0.0%
100		10	16.9	10.6	23.2	17	3	30	2.787	52.14%	15.92%

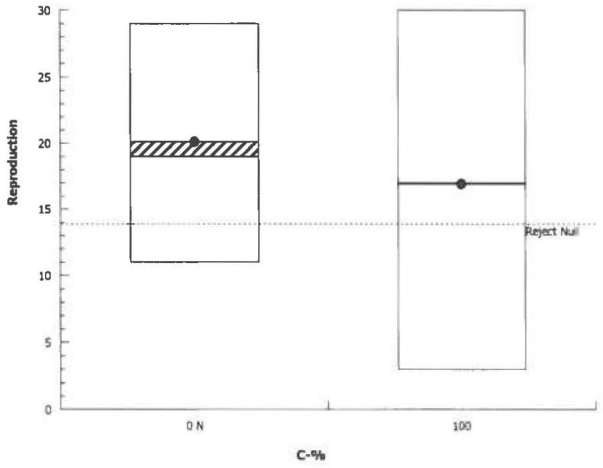
Reproduction Detail

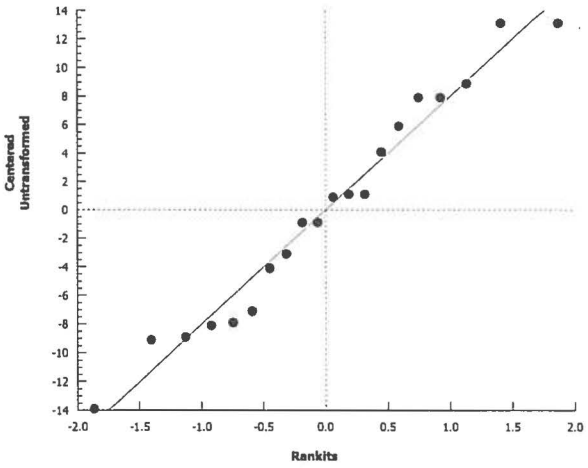
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	16	21	13	11	12	28	17	28	29	26
100		16	30	21	16	9	8	3	18	30	18

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	17-7419-8915	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:12	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Test Code: PWE0314.152cer | 15-4876-0103

Ceriodaphnia 7-d Survival and Reproduction Test — Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	02-5114-2977	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:12	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	09-4985-6531	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	18-3694-8979	**Code:**	PWE0314.152c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
EC5	>100	N/A	N/A	<1	NA	NA
EC10	>100	N/A	N/A	<1	NA	NA
EC15	>100	N/A	N/A	<1	NA	NA
EC20	>100	N/A	N/A	<1	NA	NA
EC25	>100	N/A	N/A	<1	NA	NA
EC40	>100	N/A	N/A	<1	NA	NA
EC50	>100	N/A	N/A	<1	NA	NA

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	10	1	1	1	0	0	0.0%	0.0%	10	10
100		10	1	1	1	0	0	0.0%	0.0%	10	10

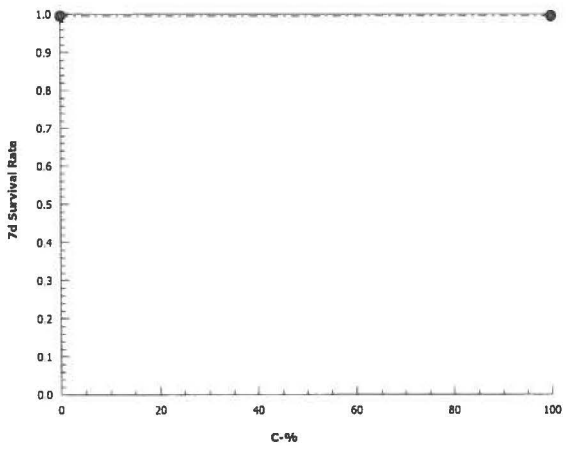
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



Analyst:_____ QA:_____

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	05-5686-0272	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:12	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	09-4985-6531	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	18-3694-8979	**Code:**	PWE0314.152c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	679684	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	31.41	10.3	N/A	3.184	NA	9.706
IC10	62.81	20.61	N/A	1.592	NA	4.853
IC15	94.22	30.91	N/A	1.061	NA	3.235
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

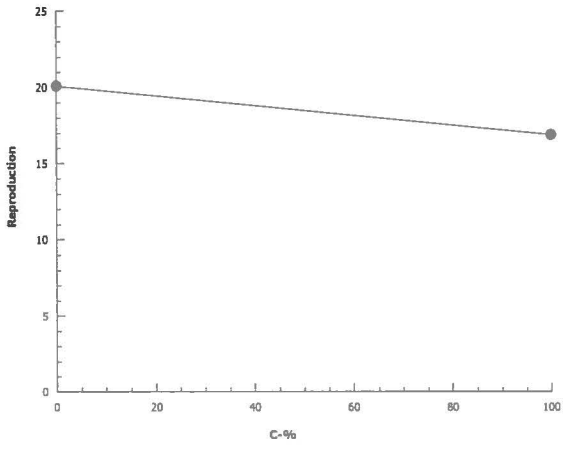
Reproduction Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	20.1	11	29	2.273	7.187	35.76%	0.0%
100		10	16.9	3	30	2.787	8.812	52.14%	15.92%

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	16	21	13	11	12	28	17	28	29	26
100		16	30	21	16	9	8	3	18	30	18

Graphics



CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	03-5908-1307	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	27 Mar-14 14:12	**Analysis:**	Single 2x2 Contingency Table	**Official Results:**	Yes
Batch ID:	09-4985-6531	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	18-3694-8979	**Code:**	PWE0314.152c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Data Transform	Zeta	Alt Hyp	Trials	Seed	Test Result
Untransformed		C > T	NA	NA	Passes 7d survival rate

Fisher Exact Test

Control	vs	C-%	Test Stat	P-Value	P-Type	Decision(α:5%)
Negative Control		100	1	1.0000	Exact	Non-Significant Effect

Data Summary

C-%	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect
0	Negative Contr	10	0	10	1	0	0.0%
100		10	0	10	1	0	0.0%

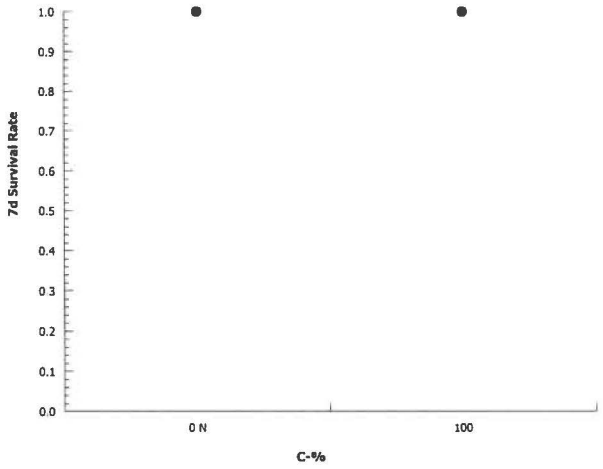
7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
100		1	1	1	1	1	1	1	1	1	1

7d Survival Rate Binomials

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	09-4985-6531	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:53	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:59	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	18-3694-8979	**Code:**	PWE0314.152c	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	Los Angeles Irrigated Lands Group
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	4d 9h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
100		8	31	31	31	31	31	0	0	0.0%	0
Overall		16	48.56			31	68				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
100		8	94.5	76	113	72	140	7.822	22.12	23.41%	0
Overall		16	216.1			72	348				0 (0%)

Dissolved Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
100		8	7.375	7.073	7.677	6.7	7.9	0.1278	0.3615	4.9%	0
Overall		16	7.581			6.7	8.1				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
100		8	28	28	28	28	28	0	0	0.0%	0
Overall		16	59.63			28	95				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
100		8	6.925	6.801	7.049	6.7	7.1	0.05261	0.1488	2.15%	0
Overall		16	7.375			6.7	8				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
100		8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
Overall		16	24.06			24	24.5				0 (0%)

Ceriodaphnia 7-d Survival and Reproduction Test — Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
100		31	31	31	31	31	31	31	31

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
100		89	140	82	77	102	72	85	109

Dissolved Oxygen-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
100		7.9	7.3	7.6	7.6	7.2	7.5	7.2	6.7

Hardness (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
100		28	28	28	28	28	28	28	28

pH-Units

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
100		6.7	7	7.1	6.9	7	7.1	6.8	6.8

Temperature-°C

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
100		24.5	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

March 28, 2014

Mr. Bryn Home
PW Environmental
230 Dove Court
Santa Paula, CA 93060

Dear Mr. Home:

We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013.* "All acceptability criteria were met and the concentration-response was normal. This is a valid test." Results were as follows:

CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA184-3
DATE RECEIVED:	3 March -14
ABC LAB. NO.:	PWE0314.152

CHRONIC SELENASTRUM ALGAE GROWTH BIOASSAY

NOEC	=	<100.00 %
TUc	=	>1.00
IC25	=	>100.00 %
IC50	=	>100.00 %

Yours very truly,

Scott Johnson
Laboratory Director

CETIS Summary Report

Test Code: PWE0314.152sel | 12-1814-3155

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	18-5629-8678	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:25	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	17-7464-9395	**Code:**	PWE0314.152sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	83h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
12-8748-4784	Cell Density	<100	100	NA	3.59%	>1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
21-2257-3445	Cell Density	IC5	62.72	38.61	121.8	1.594	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
12-8748-4784	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
21-2257-3445	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
12-8748-4784	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
21-2257-3445	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
12-8748-4784	Cell Density	PMSD	0.03594	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	9.495E+5	8.960E+5	1.003E+6	9.240E+5	9.980E+5	1.682E+4	3.364E+4	3.54%	7.97%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		9.460E+5	9.240E+5	9.300E+5	9.980E+5

Analyst: QA: PASS

CETIS Analytical Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-8748-4784	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 16:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes
Batch ID:	18-5629-8678	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:25	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	17-7464-9395	**Code:**	PWE0314.152sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	83h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	3.59%	Fails cell density

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100*	4.31	1.943	37080	6	0.0025	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	13530130000	13530130000	1	18.58	0.0050	Significant Effect
Error	4369750000	728291600	6			
Total	17899880000		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	3.483	47.47	0.3327	Equal Variances
Variances	Mod Levene Equality of Variance	0.5539	13.75	0.4849	Equal Variances
Variances	Levene Equality of Variance	1.118	13.75	0.3311	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.8629	0.6451	0.1283	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.2938	0.3313	0.0406	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.6067	3.878	0.1159	Normal Distribution

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1025000	1.019E+6	1.058E+6	9.013E+3	1.75%	0.0%
100		4	9.495E+5	8.960E+5	1.003E+6	938000	9.240E+5	9.980E+5	1.682E+4	3.54%	7.97%

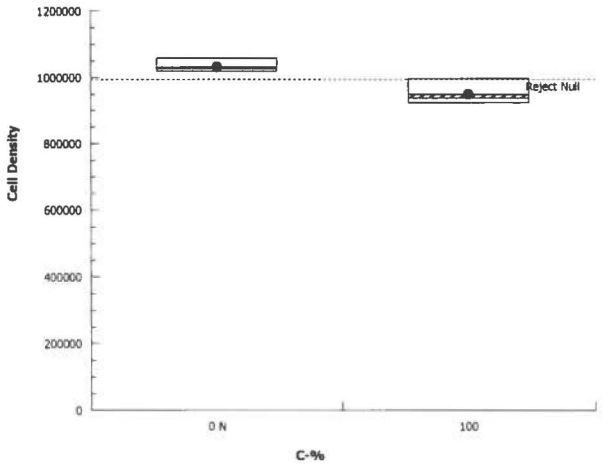
Cell Density Detail

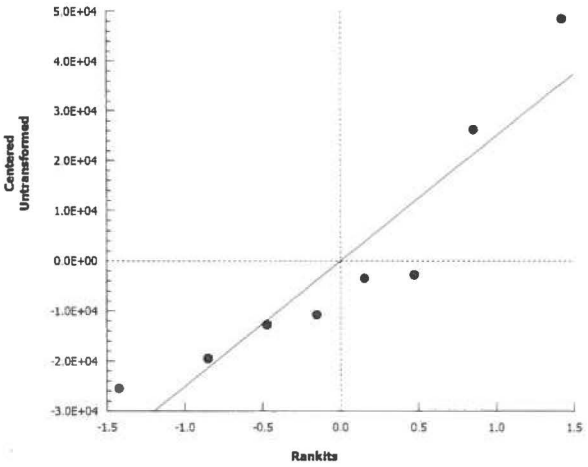
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		9.460E+5	9.240E+5	9.300E+5	9.980E+5

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	12-8748-4784	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 16:08	**Analysis:**	Parametric-Two Sample	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	21-2257-3445	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	11 Mar-14 16:08	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	18-5629-8678	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:25	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	17-7464-9395	**Code:**	PWE0314.152sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	83h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	62.72	38.61	121.8	1.594	0.8211	2.59
IC10	>100	N/A	N/A	<1	NA	NA
IC15	>100	N/A	N/A	<1	NA	NA
IC20	>100	N/A	N/A	<1	NA	NA
IC25	>100	N/A	N/A	<1	NA	NA
IC40	>100	N/A	N/A	<1	NA	NA
IC50	>100	N/A	N/A	<1	NA	NA

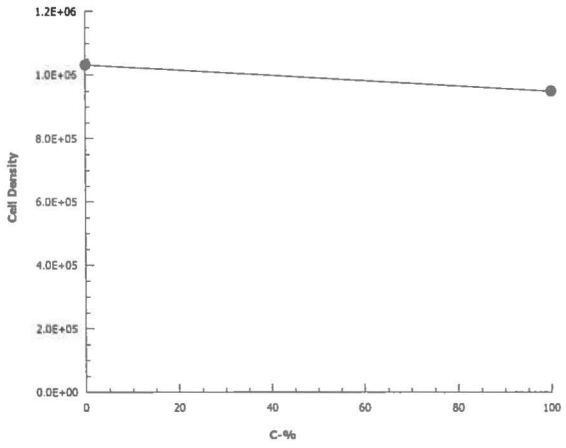
Cell Density Summary

			Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
100		4	9.495E+5	9.240E+5	9.980E+5	1.682E+4	3.364E+4	3.54%	7.97%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
100		9.460E+5	9.240E+5	9.300E+5	9.980E+5

Graphics



CETIS Measurement Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	18-5629-8678	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:08	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:25	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	17-7464-9395	**Code:**	PWE0314.152sel	**Client:**	PW Environmental
Sample Date:	28 Feb-14 07:00	**Material:**	Sample Water	**Project:**	
Receive Date:	03 Mar-14 14:15	**Source:**	Bioassay Report		
Sample Age:	83h (16.2 °C)	**Station:**	LAILG-NGA184-3		

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	67			67	67	0	0	0.0%	0
100		1	31			31	31	0	0	0.0%	0
Overall		2	49			31	67				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	422	389.7	454.3	385	448	11.63	26.01	6.16%	0
100		5	212.8	168.4	257.2	168	256	16.01	35.79	16.82%	0
Overall		10	317.4			168	448				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	94			94	94	0	0	0.0%	0
100		1	28			28	28	0	0	0.0%	0
Overall		2	61			28	94				0 (0%)

pH-Units

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	7.56	7.372	7.748	7.4	7.7	0.06782	0.1517	2.01%	0
100		5	7.54	7.254	7.826	7.3	7.9	0.103	0.2302	3.05%	0
Overall		10	7.55			7.3	7.9				0 (0%)

Temperature-°C

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
100		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
Overall		10	24.68			24.5	25				0 (0%)

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	67
100		31

Conductivity-µmhos

C-%	Control Type	1	2	3	4	5
0	Negative Contr	406	385	440	448	431
100		168	188	214	238	256

Hardness (CaCO3)-mg/L

C-%	Control Type	1
0	Negative Contr	94
100		28

pH-Units

C-%	Control Type	1	2	3	4	5
0	Negative Contr	7.7	7.6	7.4	7.4	7.7
100		7.9	7.5	7.6	7.3	7.4

Temperature-°C

C-%	Control Type	1	2	3	4	5
0	Negative Contr	25	24.5	24.7	24.6	24.6
100		25	24.5	24.7	24.6	24.6

aquatic bioassay & consulting laboratories, inc

CHRONIC FATHEAD MINNOW SURVIVAL AND GROWTH BIOASSAY

DATE: 4 March 2014

STANDARD TOXICANT: Copper Chloride

ENDPOINT: SURVIVAL

NOEC = 38.00 ug/l

EC25 = 68.27 ug/l
EC50 = 106.50 ug/l

ENDPOINT: GROWTH

NOEC = 19.00 ug/l

IC25 = 34.21 ug/l
IC50 = 66.93 ug/l

Yours very truly,

Scott Johnson
Laboratory Director

29 north olive st. ventura, ca 93001 (805) 643 5621 www.aquabio.org

CETIS Summary Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	13-1824-1977	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-7005-3805	**Code:**	FML030414f	**Client:**	ABC Labs
Sample Date:	04 Mar-14 15:00	**Material:**	Copper chloride	**Project:**	REF TOX
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
04-8817-7072	7d Survival Rate	38	75	53.39	9.38%		Steel Many-One Rank Sum Test
19-9546-1518	Mean Dry Biomass-mg	19	38	26.87	15.2%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
17-3771-6371	7d Survival Rate	EC5	28.5	22.42	51.1		Linear Interpolation (ICPIN)
		EC10	38	25.84	65.32		
		EC15	48.09	28.91	94.22		
		EC20	58.18	39.55	97.4		
		EC25	68.27	46.15	100.2		
		EC40	91.94	61.55	111.7		
		EC50	106.5	80.13	122.5		
20-9102-2310	Mean Dry Biomass-mg	IC5	22.04	10.23	23.47		Linear Interpolation (ICPIN)
		IC10	25.08	15.75	27.94		
		IC15	28.13	19.81	32.41		
		IC20	31.17	23.88	37.12		
		IC25	34.21	28.43	42.21		
		IC40	51.52	35.61	68.67		
		IC50	66.93	52.22	92.55		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
04-8817-7072	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
17-3771-6371	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
19-9546-1518	Mean Dry Biomass-mg	Control Resp	0.41	0.25 - NL	Yes	Passes Acceptability Criteria
20-9102-2310	Mean Dry Biomass-mg	Control Resp	0.41	0.25 - NL	Yes	Passes Acceptability Criteria
19-9546-1518	Mean Dry Biomass-mg	PMSD	0.1518	0.12 - 0.3	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1	1	1	1	1	0	0	0.0%	0.0%
10		4	1	1	1	1	1	0	0	0.0%	0.0%
19		4	1	1	1	1	1	0	0	0.0%	0.0%
38		4	0.9	0.763	1	0.8	1	0.04303	0.08607	9.56%	10.0%
75		4	0.7167	0.4515	0.9819	0.5333	0.9333	0.08333	0.1667	23.26%	28.33%
150		4	0.2	0.1134	0.2866	0.1333	0.2667	0.02722	0.05443	27.22%	80.0%

Mean Dry Biomass-mg Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.41	0.3807	0.4393	0.3853	0.4273	0.009201	0.0184	4.49%	0.0%
10		4	0.4767	0.4324	0.5209	0.4493	0.5107	0.0139	0.02779	5.83%	-16.26%
19		4	0.4482	0.3675	0.5289	0.3853	0.5033	0.02536	0.05072	11.32%	-9.31%
38		4	0.306	0.2423	0.3697	0.262	0.3507	0.02003	0.04006	13.09%	25.37%
75		4	0.1992	0.1198	0.2785	0.162	0.2687	0.02493	0.04985	25.03%	51.42%
150		4	0.04383	0.01866	0.069	0.02733	0.06533	0.007909	0.01582	36.08%	89.31%

Fathead Minnow 7-d Larval Survival and Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

7d Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	1	1	1
10		1	1	1	1
19		1	1	1	1
38		0.8	0.9333	0.8667	1
75		0.6667	0.7333	0.9333	0.5333
150		0.2667	0.2	0.1333	0.2

Mean Dry Biomass-mg Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.3853	0.42	0.4273	0.4073
10		0.5107	0.4593	0.4493	0.4873
19		0.4333	0.3853	0.5033	0.4707
38		0.2847	0.3267	0.262	0.3507
75		0.162	0.202	0.2687	0.164
150		0.06533	0.04267	0.02733	0.04

7d Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		12/15	14/15	13/15	15/15
75		10/15	11/15	14/15	8/15
150		4/15	3/15	2/15	3/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-8817-7072	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	19 Mar-14 13:36	**Analysis:**	Nonparametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	13-1824-1977	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-7005-3805	**Code:**	FML030414f	**Client:**	ABC Labs
Sample Date:	04 Mar-14 15:00	**Material:**	Copper chloride	**Project:**	REF TOX
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Angular (Corrected)	NA	C > T	NA	NA	9.38%	38	75	53.39	

Steel Many-One Rank Sum Test

Control	vs	C-µg/L	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		10	18	10	1	6	0.8333	Asymp	Non-Significant Effect
		19	18	10	1	6	0.8333	Asymp	Non-Significant Effect
		38	12	10	1	6	0.1424	Asymp	Non-Significant Effect
		75*	10	10	0	6	0.0417	Asymp	Significant Effect
		150*	10	10	0	6	0.0417	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	3.008319	0.6016637	5	52.75	<0.0001	Significant Effect
Error	0.2052919	0.0114051	18			
Total	3.213611		23			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	3.793	4.248	0.0160	Equal Variances
Variances	Levene Equality of Variance	4.133	4.248	0.0112	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.8019	0.884	0.0003	Non-normal Distribution
Distribution	Kolmogorov-Smirnov D	0.3219	0.2056	<0.0001	Non-normal Distribution
Distribution	D'Agostino Skewness	1.703	2.576	0.0886	Normal Distribution
Distribution	D'Agostino Kurtosis	2.51	2.576	0.0121	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	9.198	9.21	0.0101	Normal Distribution
Distribution	Anderson-Darling A2 Normality	2.759	3.878	<0.0001	Non-normal Distribution

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1	1	1	1	1	1	0	0.0%	0.0%
10		4	1	1	1	1	1	1	0	0.0%	0.0%
19		4	1	1	1	1	1	1	0	0.0%	0.0%
38		4	0.9	0.763	1	0.9	0.8	1	0.04303	9.56%	10.0%
75		4	0.7167	0.4515	0.9819	0.7	0.5333	0.9333	0.08333	23.26%	28.33%
150		4	0.2	0.1134	0.2866	0.2	0.1333	0.2667	0.02722	27.22%	80.0%

Angular (Corrected) Transformed Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contr	4	1.441	1.441	1.442	1.441	1.441	1.441	0	0.0%	0.0%
10		4	1.441	1.441	1.442	1.441	1.441	1.441	0	0.0%	0.0%
19		4	1.441	1.441	1.442	1.441	1.441	1.441	0	0.0%	0.0%
38		4	1.264	1.034	1.494	1.253	1.107	1.441	0.07224	11.43%	12.32%
75		4	1.028	0.6988	1.357	0.9917	0.8188	1.31	0.1034	20.12%	28.68%
150		4	0.4609	0.3511	0.5707	0.4636	0.3738	0.5426	0.0345	14.97%	68.02%

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-8817-7072	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	19 Mar-14 13:36	**Analysis:**	Nonparametric-Control vs Treatments	**Official Results:**	Yes

7d Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	1	1	1
10		1	1	1	1
19		1	1	1	1
38		0.8	0.9333	0.8667	1
75		0.6667	0.7333	0.9333	0.5333
150		0.2667	0.2	0.1333	0.2

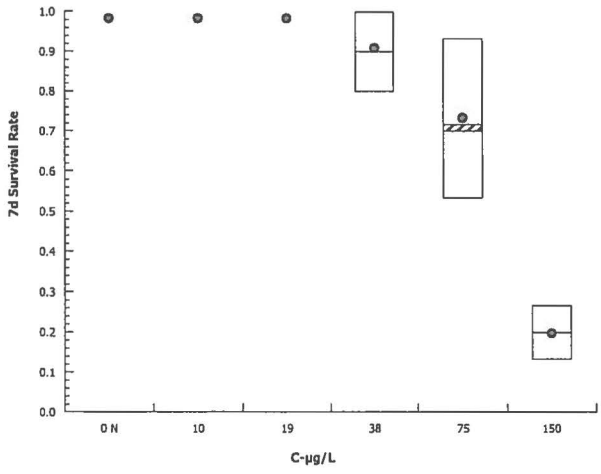
Angular (Corrected) Transformed Detail

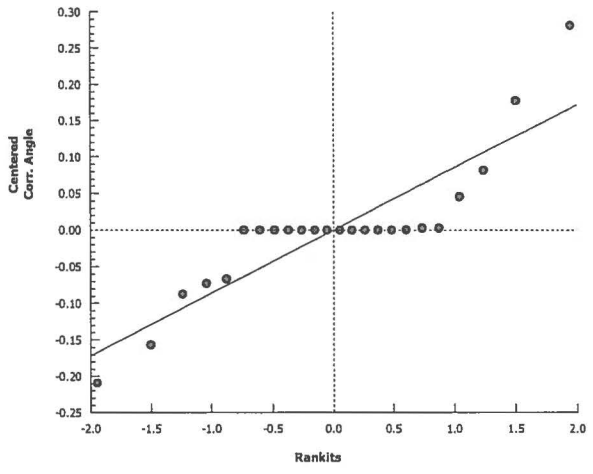
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.441	1.441	1.441	1.441
10		1.441	1.441	1.441	1.441
19		1.441	1.441	1.441	1.441
38		1.107	1.31	1.197	1.441
75		0.9553	1.028	1.31	0.8188
150		0.5426	0.4636	0.3738	0.4636

7d Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		12/15	14/15	13/15	15/15
75		10/15	11/15	14/15	8/15
150		4/15	3/15	2/15	3/15

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-9546-1518	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	19 Mar-14 13:36	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	13-1824-1977	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-7005-3805	**Code:**	FML030414f	**Client:**	ABC Labs
Sample Date:	04 Mar-14 15:00	**Material:**	Copper chloride	**Project:**	REF TOX
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	15.2%	19	38	26.87	

Dunnett Multiple Comparison Test

Control	vs	C-µg/L	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		10	-2.578	2.407	0.062	6	0.9999	CDF	Non-Significant Effect
		19	-1.476	2.407	0.062	6	0.9956	CDF	Non-Significant Effect
		38*	4.022	2.407	0.062	6	0.0018	CDF	Significant Effect
		75*	8.153	2.407	0.062	6	<0.0001	CDF	Significant Effect
		150*	14.16	2.407	0.062	6	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.5596714	0.1119343	5	83.7	<0.0001	Significant Effect
Error	0.02407122	0.00133729	18			
Total	0.5837426		23			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.689	15.09	0.3376	Equal Variances
Variances	Mod Levene Equality of Variance	1.586	4.248	0.2145	Equal Variances
Variances	Levene Equality of Variance	1.917	4.248	0.1413	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9886	0.884	0.9919	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.09338	0.2056	0.9580	Normal Distribution
Distribution	D'Agostino Skewness	0.5745	2.576	0.5657	Normal Distribution
Distribution	D'Agostino Kurtosis	0.01418	2.576	0.9887	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	0.3302	9.21	0.8478	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.1558	3.878	0.9973	Normal Distribution

Mean Dry Biomass-mg Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.41	0.3807	0.4393	0.4137	0.3853	0.4273	0.009201	4.49%	0.0%
10		4	0.4767	0.4324	0.5209	0.4733	0.4493	0.5107	0.0139	5.83%	-16.26%
19		4	0.4482	0.3675	0.5289	0.452	0.3853	0.5033	0.02536	11.32%	-9.31%
38		4	0.306	0.2423	0.3697	0.3057	0.262	0.3507	0.02003	13.09%	25.37%
75		4	0.1992	0.1198	0.2785	0.183	0.162	0.2687	0.02493	25.03%	51.42%
150		4	0.04383	0.01866	0.069	0.04133	0.02733	0.06533	0.007909	36.08%	89.31%

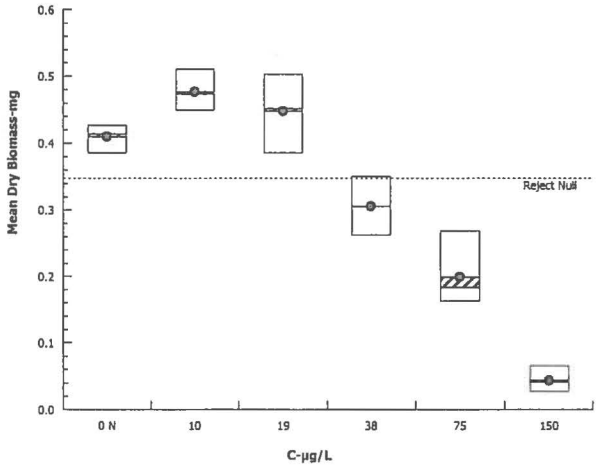
Mean Dry Biomass-mg Detail

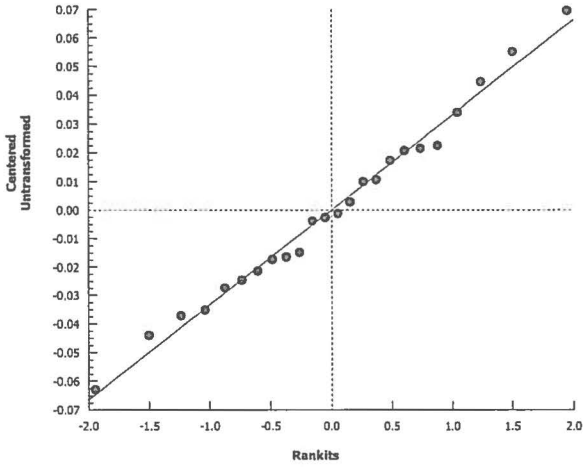
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.3853	0.42	0.4273	0.4073
10		0.5107	0.4593	0.4493	0.4873
19		0.4333	0.3853	0.5033	0.4707
38		0.2847	0.3267	0.262	0.3507
75		0.162	0.202	0.2687	0.164
150		0.06533	0.04267	0.02733	0.04

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	19-9546-1518	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	19 Mar-14 13:36	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	17-3771-6371	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	19 Mar-14 13:36	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	13-1824-1977	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-7005-3805	**Code:**	FML030414f	**Client:**	ABC Labs
Sample Date:	04 Mar-14 15:00	**Material:**	Copper chloride	**Project:**	REF TOX
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC5	28.5	22.42	51.1
EC10	38	25.84	65.32
EC15	48.09	28.91	94.22
EC20	58.18	39.55	97.4
EC25	68.27	46.15	100.2
EC40	91.94	61.55	111.7
EC50	106.5	80.13	122.5

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	4	1	1	1	0	0	0.0%	0.0%	60	60
10		4	1	1	1	0	0	0.0%	0.0%	60	60
19		4	1	1	1	0	0	0.0%	0.0%	60	60
38		4	0.9	0.8	1	0.04303	0.08607	9.56%	10.0%	54	60
75		4	0.7167	0.5333	0.9333	0.08333	0.1667	23.26%	28.33%	43	60
150		4	0.2	0.1333	0.2667	0.02722	0.05443	27.22%	80.0%	12	60

7d Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	1	1	1
10		1	1	1	1
19		1	1	1	1
38		0.8	0.9333	0.8667	1
75		0.6667	0.7333	0.9333	0.5333
150		0.2667	0.2	0.1333	0.2

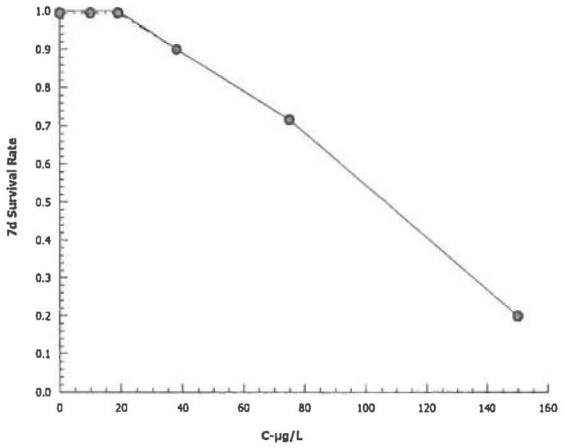
7d Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	15/15	15/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		12/15	14/15	13/15	15/15
75		10/15	11/15	14/15	8/15
150		4/15	3/15	2/15	3/15

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	17-3771-6371	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	19 Mar-14 13:36	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Graphics



Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9102-2310	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	19 Mar-14 13:36	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	13-1824-1977	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-7005-3805	**Code:**	FML030414f	**Client:**	ABC Labs
Sample Date:	04 Mar-14 15:00	**Material:**	Copper chloride	**Project:**	REF TOX
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1771552	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC5	22.04	10.23	23.47
IC10	25.08	15.75	27.94
IC15	28.13	19.81	32.41
IC20	31.17	23.88	37.12
IC25	34.21	28.43	42.21
IC40	51.52	35.61	68.67
IC50	66.93	52.22	92.55

Mean Dry Biomass-mg Summary

			Calculated Variate						
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.41	0.3853	0.4273	0.009201	0.0184	4.49%	0.0%
10		4	0.4767	0.4493	0.5107	0.0139	0.02779	5.83%	-16.26%
19		4	0.4482	0.3853	0.5033	0.02536	0.05072	11.32%	-9.31%
38		4	0.306	0.262	0.3507	0.02003	0.04006	13.09%	25.37%
75		4	0.1992	0.162	0.2687	0.02493	0.04985	25.03%	51.42%
150		4	0.04383	0.02733	0.06533	0.007909	0.01582	36.08%	89.31%

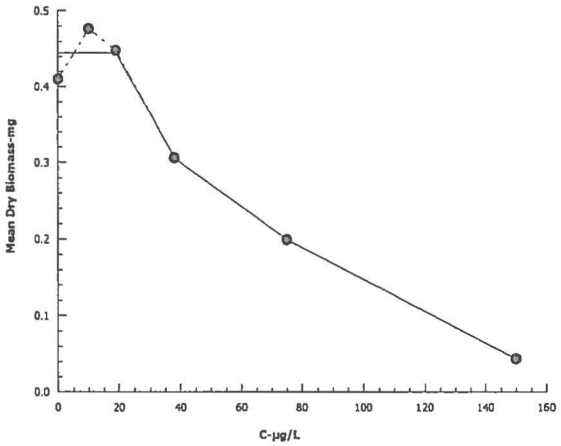
Mean Dry Biomass-mg Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.3853	0.42	0.4273	0.4073
10		0.5107	0.4593	0.4493	0.4873
19		0.4333	0.3853	0.5033	0.4707
38		0.2847	0.3267	0.262	0.3507
75		0.162	0.202	0.2687	0.164
150		0.06533	0.04267	0.02733	0.04

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	20-9102-2310	**Endpoint:**	Mean Dry Biomass-mg	**CETIS Version:**	CETISv1.8.7
Analyzed:	19 Mar-14 13:36	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Graphics



CETIS Measurement Report

Fathead Minnow 7-d Larval Survival and Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	13-1824-1977	**Test Type:**	Growth-Survival (7d)	**Analyst:**	
Start Date:	04 Mar-14 15:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	11 Mar-14 13:00	**Species:**	Pimephales promelas	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	04-7005-3805	**Code:**	FML030414f	**Client:**	ABC Labs
Sample Date:	04 Mar-14 15:00	**Material:**	Copper chloride	**Project:**	REF TOX
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.13	64.83	67.42	65	68	0.5489	1.553	2.35%	0
150		8	66	66	66	66	66	0	0	0.0%	0
Overall		16	66.06			65	68				0 (0%)

Conductivity-µmhos

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	337.6	330.6	344.6	321	348	2.952	8.348	2.47%	0
10		8	341.9	331.1	352.7	330	371	4.561	12.9	3.77%	0
19		8	332.1	328.3	335.9	322	337	1.608	4.549	1.37%	0
38		8	327.4	318.1	336.7	301	335	3.923	11.1	3.39%	0
75		8	333	327	339	327	350	2.521	7.131	2.14%	0
150		8	330.6	326.9	334.4	323	338	1.58	4.47	1.35%	0
Overall		48	333.8			301	371				0 (0%)

Dissolved Oxygen-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.788	7.63	7.945	7.5	8.1	0.06665	0.1885	2.42%	0
10		8	7.75	7.252	8.248	6.5	8.3	0.2104	0.5952	7.68%	0
19		8	7.975	7.515	8.435	7	8.9	0.1943	0.5497	6.89%	0
38		8	7.863	7.5	8.225	7	8.4	0.1535	0.434	5.52%	0
75		8	7.925	7.568	8.282	7.1	8.4	0.1509	0.4268	5.39%	0
150		8	7.9	7.54	8.26	7	8.3	0.1524	0.4309	5.46%	0
Overall		48	7.867			6.5	8.9				0 (0%)

Hardness (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	91.25	88.65	93.85	89	95	1.098	3.105	3.4%	0
150		8	100	100	100	100	100	0	0	0.0%	0
Overall		16	95.63			89	100				0 (0%)

pH-Units

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.825	7.709	7.941	7.6	8	0.0491	0.1389	1.78%	0
10		8	7.6	7.359	7.841	7.1	7.9	0.1018	0.2878	3.79%	0
19		8	7.588	7.367	7.808	7.1	7.9	0.09342	0.2642	3.48%	0
38		8	7.575	7.376	7.774	7.1	7.8	0.08399	0.2375	3.14%	0
75		8	7.588	7.412	7.763	7.2	7.8	0.07425	0.21	2.77%	0
150		8	7.575	7.376	7.774	7.1	7.8	0.08399	0.2375	3.14%	0
Overall		48	7.625			7.1	8				0 (0%)

Fathead Minnow 7-d Larval Survival and Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Temperature-°C

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.06	23.91	24.21	24	24.5	0.0625	0.1768	0.73%	0
10		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
19		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
38		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
75		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
150		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
Overall		48	24.02			24	24.5				0 (0%)

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	65	65	65	65	65
150		66	66	66	66	66	66	66	66

Conductivity-µmhos

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	343	348	321	332	337	336	341	343
10		371	330	347	338	339	335	333	342
19		334	330	322	337	333	335	333	333
38		330	330	325	335	331	301	334	333
75		330	330	333	333	331	350	327	330
150		329	330	338	333	330	323	328	334

Dissolved Oxygen-mg/L

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.5	7.9	8.1	7.9	7.7	7.8	7.6
10		8.3	7.3	8.2	8.1	7.9	7.7	8	6.5
19		8.2	7.5	8.1	8.1	8	8.9	8	7
38		8.2	7.6	8.4	8.1	7.9	7.7	8	7
75		8.2	7.6	8.4	8.2	8.1	7.7	8.1	7.1
150		8.2	7.6	8.3	8.2	8.1	7.8	8	7

Hardness (CaCO3)-mg/L

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	89	89	89	89	89
150		100	100	100	100	100	100	100	100

pH-Units

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	8	7.8	7.7	7.9	7.8	8	7.6
10		7.9	7.4	7.5	7.5	7.9	7.6	7.9	7.1
19		7.8	7.4	7.5	7.5	7.9	7.7	7.8	7.1
38		7.8	7.5	7.5	7.5	7.8	7.6	7.8	7.1
75		7.8	7.5	7.5	7.5	7.8	7.6	7.8	7.2
150		7.8	7.5	7.5	7.5	7.8	7.6	7.8	7.1

Temperature-°C

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24.5	24	24	24	24	24	24	24
10		24.1	24	24	24	24	24	24	24
19		24.1	24	24	24	24	24	24	24
38		24.1	24	24	24	24	24	24	24
75		24.1	24	24	24	24	24	24	24
150		24.1	24	24	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

CHRONIC CERIODAPHNIA SURVIVAL AND REPRODUCTION BIOASSAY

DATE: 3 March - 2014

STANDARD TOXICANT: Copper Chloride

ENDPOINT: SURVIVAL

NOEC = 30.00 ug/l

EC25 = 26.67 ug/l
EC50 = 36.67 ug/l

ENDPOINT: REPRODUCTION

NOEC = 30.00 ug/l

IC25 = 27.68 ug/l
IC50 = 36.06 ug/l

Yours very truly,

Scott Johnson
Laboratory Director

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Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	20-2463-1114	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	03 Mar-14 16:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	10 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	09-3567-4029	**Code:**	CER030314c	**Client:**	Internal Lab
Sample Date:	03 Mar-14 16:00	**Material:**	Copper chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
07-9263-5274	7d Survival Rate	30	50	38.73	NA		Fisher Exact/Bonferroni-Holm Test
14-1680-6370	Reproduction	30	50	38.73	27.2%		Steel Many-One Rank Sum Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
08-0885-9790	7d Survival Rate	EC5	13.33	11.67	31.11		Linear Interpolation (ICPIN)
		EC10	16.67	13.33	32.22		
		EC15	20	15	33.33		
		EC20	23.33	16.67	34.44		
		EC25	26.67	18.33	35.56		
		EC40	33.33	23.33	38.89		
		EC50	36.67	26.67	41.43		
04-6206-3606	Reproduction	IC5	13.54	4.541	30.29		Linear Interpolation (ICPIN)
		IC10	17.07	12.21	31.33		
		IC15	20.61	14.67	32.37		
		IC20	24.14	16.95	33.41		
		IC25	27.68	19.01	34.44		
		IC40	33.27	25.11	37.55		
		IC50	36.06	28.89	39.63		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
07-9263-5274	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
08-0885-9790	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
04-6206-3606	Reproduction	Control Resp	15.1	15 - NL	Yes	Passes Acceptability Criteria
14-1680-6370	Reproduction	Control Resp	15.1	15 - NL	Yes	Passes Acceptability Criteria
14-1680-6370	Reproduction	PMSD	0.2721	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	1	1	1	1	1	0	0	0.0%	0.0%
3		10	1	1	1	1	1	0	0	0.0%	0.0%
5		10	1	1	1	1	1	0	0	0.0%	0.0%
10		10	1	1	1	1	1	0	0	0.0%	0.0%
30		10	0.7	0.3544	1	0	1	0.1528	0.483	69.01%	30.0%
50		10	0.1	0	0.3262	0	1	0.1	0.3162	316.2%	90.0%

Reproduction Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.1	12.83	17.37	11	21	1.005	3.178	21.05%	0.0%
3		10	16.2	14.1	18.3	13	21	0.9286	2.936	18.13%	-7.29%
5		10	16.7	13.92	19.48	9	22	1.23	3.889	23.29%	-10.6%
10		10	16.7	15.23	18.17	13	19	0.6506	2.058	12.32%	-10.6%
30		10	11.6	6.676	16.52	3	22	2.177	6.883	59.34%	23.18%
50		10	0	0	0	0	0	0	0		100.0%

Ceriodaphnia 7-d Survival and Reproduction Test — Aquatic Bioassay & Consulting Labs, Inc.

7d Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
3		1	1	1	1	1	1	1	1	1	1
5		1	1	1	1	1	1	1	1	1	1
10		1	1	1	1	1	1	1	1	1	1
30		1	1	1	1	0	1	0	0	1	1
50		0	0	0	0	0	0	0	1	0	0

Reproduction Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	21	19	15	11	14	17	11	14	15	14
3		20	15	19	14	21	17	16	13	14	13
5		17	16	18	16	22	9	17	12	19	21
10		17	16	19	13	19	19	17	16	14	17
30		13	15	16	22	3	19	3	3	13	9
50		0	0	0	0	0	0	0	0	0	0

7d Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
3		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
10		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
30		1/1	1/1	1/1	1/1	0/1	1/1	0/1	0/1	1/1	1/1
50		0/1	0/1	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1

CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	14-1680-6370	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	21 Mar-14 15:14	**Analysis:**	Nonparametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	20-2463-1114	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	03 Mar-14 16:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	10 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	09-3567-4029	**Code:**	CER030314c	**Client:**	Internal Lab
Sample Date:	03 Mar-14 16:00	**Material:**	Copper chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	27.2%	30	50	38.73	

Steel Many-One Rank Sum Test

Control	vs	C-µg/L	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		3	113.5	76	5	18	0.9452	Asymp	Non-Significant Effect
		5	122	76	3	18	0.9910	Asymp	Non-Significant Effect
		10	122.5	76	3	18	0.9920	Asymp	Non-Significant Effect
		30	90.5	76	2	18	0.3322	Asymp	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	184.52	46.13	4	2.699	0.0424	Significant Effect
Error	769.1	17.09111	45			
Total	953.62		49			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	14.72	13.28	0.0053	Unequal Variances
Variances	Mod Levene Equality of Variance	3.303	3.767	0.0186	Equal Variances
Variances	Levene Equality of Variance	4.882	3.767	0.0023	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.9756	0.9367	0.3862	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.101	0.1453	0.2171	Normal Distribution
Distribution	D'Agostino Skewness	0.4142	2.576	0.6787	Normal Distribution
Distribution	D'Agostino Kurtosis	1.002	2.576	0.3164	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	1.175	9.21	0.5556	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.4326	3.878	0.3083	Normal Distribution

Reproduction Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	10	15.1	12.83	17.37	14.5	11	21	1.005	21.05%	0.0%
3		10	16.2	14.1	18.3	15.5	13	21	0.9286	18.13%	-7.29%
5		10	16.7	13.92	19.48	17	9	22	1.23	23.29%	-10.6%
10		10	16.7	15.23	18.17	17	13	19	0.6506	12.32%	-10.6%
30		10	11.6	6.676	16.52	13	3	22	2.177	59.34%	23.18%
50		10	0	0	0	0	0	0	0		100.0%

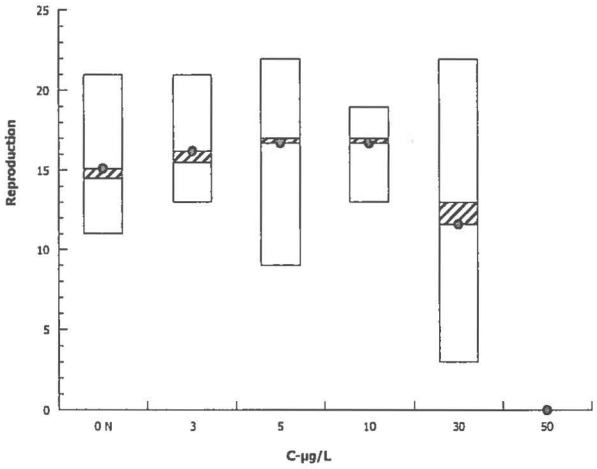
Reproduction Detail

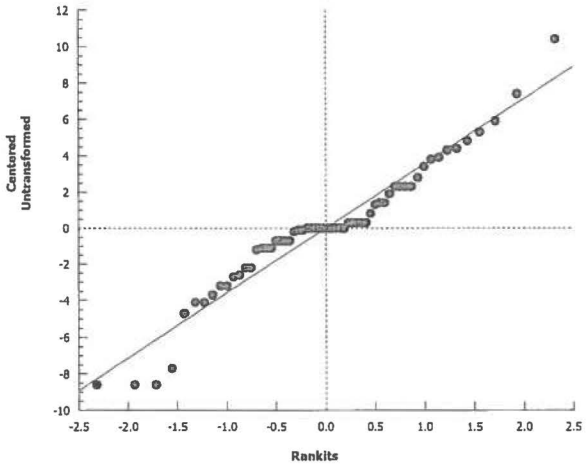
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	21	19	15	11	14	17	11	14	15	14
3		20	15	19	14	21	17	16	13	14	13
5		17	16	18	16	22	9	17	12	19	21
10		17	16	19	13	19	19	17	16	14	17
30		13	15	16	22	3	19	3	3	13	9
50		0	0	0	0	0	0	0	0	0	0

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	14-1680-6370	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	21 Mar-14 15:14	**Analysis:**	Nonparametric-Control vs Treatments	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	08-0885-9790	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	21 Mar-14 15:14	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	20-2463-1114	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	03 Mar-14 16:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	10 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	09-3567-4029	**Code:**	CER030314c	**Client:**	Internal Lab
Sample Date:	03 Mar-14 16:00	**Material:**	Copper chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC5	13.33	11.67	31.11
EC10	16.67	13.33	32.22
EC15	20	15	33.33
EC20	23.33	16.67	34.44
EC25	26.67	18.33	35.56
EC40	33.33	23.33	38.89
EC50	36.67	26.67	41.43

7d Survival Rate Summary

			Calculated Variate(A/B)								
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	10	1	1	1	0	0	0.0%	0.0%	10	10
3		10	1	1	1	0	0	0.0%	0.0%	10	10
5		10	1	1	1	0	0	0.0%	0.0%	10	10
10		10	1	1	1	0	0	0.0%	0.0%	10	10
30		10	0.7	0	1	0.1528	0.483	69.01%	30.0%	7	10
50		10	0.1	0	1	0.1	0.3162	316.2%	90.0%	1	10

7d Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
3		1	1	1	1	1	1	1	1	1	1
5		1	1	1	1	1	1	1	1	1	1
10		1	1	1	1	1	1	1	1	1	1
30		1	1	1	1	0	1	0	0	1	1
50		0	0	0	0	0	0	0	1	0	0

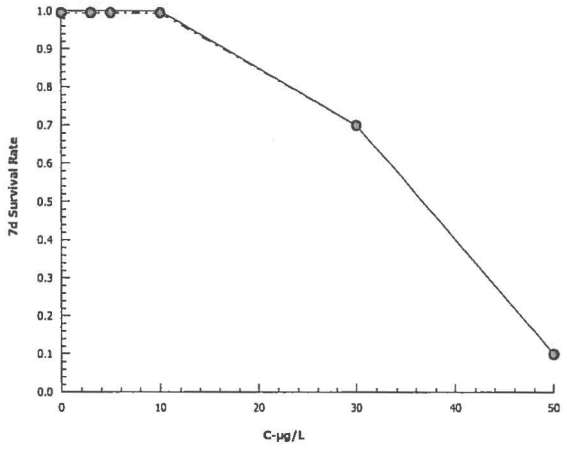
7d Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
3		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
10		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
30		1/1	1/1	1/1	1/1	0/1	1/1	0/1	0/1	1/1	1/1
50		0/1	0/1	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	08-0885-9790	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	21 Mar-14 15:14	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Graphics



Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	04-6206-3606	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	21 Mar-14 15:14	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	20-2463-1114	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	03 Mar-14 16:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	10 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	09-3567-4029	**Code:**	CER030314c	**Client:**	Internal Lab
Sample Date:	03 Mar-14 16:00	**Material:**	Copper chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2136435	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC5	13.54	4.541	30.29
IC10	17.07	12.21	31.33
IC15	20.61	14.67	32.37
IC20	24.14	16.95	33.41
IC25	27.68	19.01	34.44
IC40	33.27	25.11	37.55
IC50	36.06	28.89	39.63

Reproduction Summary

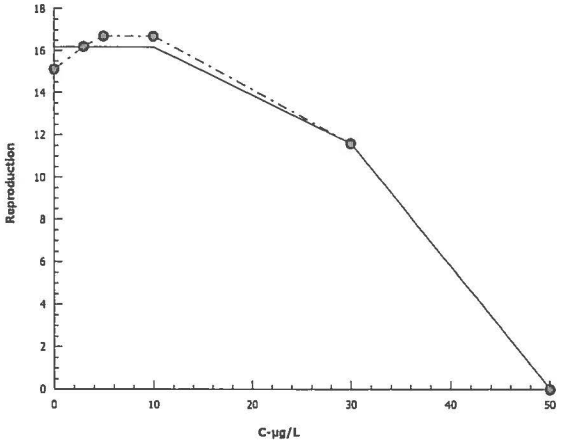
			Calculated Variate						
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	15.1	11	21	1.005	3.178	21.05%	0.0%
3		10	16.2	13	21	0.9286	2.936	18.13%	-7.29%
5		10	16.7	9	22	1.23	3.889	23.29%	-10.6%
10		10	16.7	13	19	0.6506	2.058	12.32%	-10.6%
30		10	11.6	3	22	2.177	6.883	59.34%	23.18%
50		10	0	0	0	0	0		100.0%

Reproduction Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	21	19	15	11	14	17	11	14	15	14
3		20	15	19	14	21	17	16	13	14	13
5		17	16	18	16	22	9	17	12	19	21
10		17	16	19	13	19	19	17	16	14	17
30		13	15	16	22	3	19	3	3	13	9
50		0	0	0	0	0	0	0	0	0	0

Analysis ID:	04-6206-3606	**Endpoint:**	Reproduction	**CETIS Version:**	CETISv1.8.7
Analyzed:	21 Mar-14 15:14	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Graphics



CETIS Analytical Report

Ceriodaphnia 7-d Survival and Reproduction Test — Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	07-9263-5274	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	21 Mar-14 15:14	**Analysis:**	STP 2x2 Contingency Tables	**Official Results:**	Yes
Batch ID:	20-2463-1114	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	03 Mar-14 16:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	10 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	09-3567-4029	**Code:**	CER030314c	**Client:**	Internal Lab
Sample Date:	03 Mar-14 16:00	**Material:**	Copper chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed		C > T	NA	NA	30	50	38.73	

Fisher Exact/Bonferroni-Holm Test

Control	vs	C-µg/L	Test Stat	P-Value	P-Type	Decision(α:5%)
Negative Control		3	1	1.0000	Exact	Non-Significant Effect
		5	1	1.0000	Exact	Non-Significant Effect
		10	1	1.0000	Exact	Non-Significant Effect
		30	0.1053	0.4211	Exact	Non-Significant Effect
		50	5.954E-05	0.0003	Exact	Significant Effect

Data Summary

C-µg/L	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect
0	Negative Contr	10	0	10	1	0	0.0%
3		10	0	10	1	0	0.0%
5		10	0	10	1	0	0.0%
10		10	0	10	1	0	0.0%
30		7	3	10	0.7	0.3	30.0%
50		1	9	10	0.1	0.9	90.0%

7d Survival Rate Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1	1	1	1	1	1	1	1	1	1
3		1	1	1	1	1	1	1	1	1	1
5		1	1	1	1	1	1	1	1	1	1
10		1	1	1	1	1	1	1	1	1	1
30		1	1	1	1	0	1	0	0	1	1
50		0	0	0	0	0	0	0	1	0	0

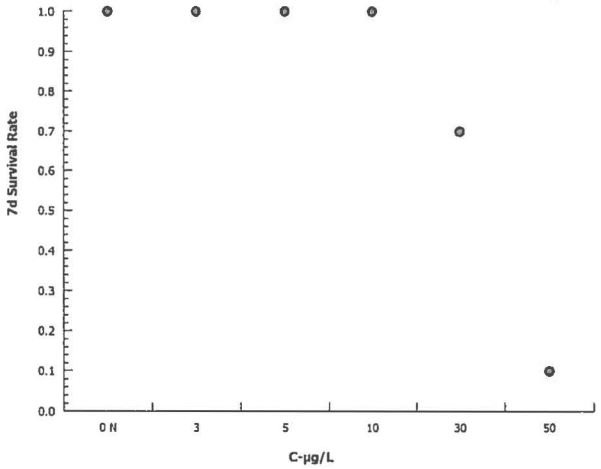
7d Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
3		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
5		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
10		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
30		1/1	1/1	1/1	1/1	0/1	1/1	0/1	0/1	1/1	1/1
50		0/1	0/1	0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	07-9263-5274	**Endpoint:**	7d Survival Rate	**CETIS Version:**	CETISv1.8.7
Analyzed:	21 Mar-14 15:14	**Analysis:**	STP 2x2 Contingency Tables	**Official Results:**	Yes

Graphics



CETIS Measurement Report

Ceriodaphnia 7-d Survival and Reproduction Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	20-2463-1114	**Test Type:**	Reproduction-Survival (7d)	**Analyst:**	
Start Date:	03 Mar-14 16:00	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	10 Mar-14 14:00	**Species:**	Ceriodaphnia dubia	**Brine:**	Not Applicable
Duration:	6d 22h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	09-3567-4029	**Code:**	CER030314c	**Client:**	Internal Lab
Sample Date:	03 Mar-14 16:00	**Material:**	Copper chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	66.5	65.16	67.84	65	68	0.5669	1.604	2.41%	0
50		8	69	69	69	69	69	0	0	0.0%	0
Overall		16	67.75			65	69				0 (0%)

Conductivity-µmhos

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	335.8	329	342.5	321	348	2.839	8.031	2.39%	0
3		8	342.1	327	357.3	319	369	6.413	18.14	5.3%	0
5		8	331.4	316.9	345.8	294	352	6.103	17.26	5.21%	0
10		8	334.3	328.1	340.4	326	347	2.583	7.305	2.19%	0
30		8	322.3	301.8	342.7	264	343	8.631	24.41	7.58%	0
50		8	330.5	321.8	339.2	317	349	3.669	10.38	3.14%	0
Overall		48	332.7			264	369				0 (0%)

Dissolved Oxygen-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.838	7.683	7.992	7.5	8.1	0.06529	0.1847	2.36%	0
3		8	7.563	6.586	8.539	5.5	8.6	0.4131	1.169	15.45%	0
5		8	7.575	6.598	8.552	5.3	8.6	0.4131	1.168	15.42%	0
10		8	7.675	6.837	8.513	6	8.6	0.3544	1.002	13.06%	0
30		8	7.738	6.936	8.539	6	8.6	0.3391	0.9591	12.4%	0
50		8	7.65	6.806	8.494	6	8.5	0.3571	1.01	13.2%	0
Overall		48	7.673			5.3	8.6				0 (0%)

Hardness (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	92	89.32	94.68	89	95	1.134	3.207	3.49%	0
50		8	99	99	99	99	99	0	0	0.0%	0
Overall		16	95.5			89	99				0 (0%)

pH-Units

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.775	7.628	7.922	7.4	8	0.06196	0.1753	2.25%	0
3		8	7.5	7.259	7.741	7	7.8	0.1018	0.2878	3.84%	0
5		8	7.488	7.258	7.717	7	7.8	0.09717	0.2748	3.67%	0
10		8	7.5	7.277	7.723	7	7.8	0.09449	0.2673	3.56%	0
30		8	7.5	7.272	7.728	7	7.8	0.09636	0.2726	3.63%	0
50		8	7.5	7.272	7.728	7	7.8	0.09636	0.2726	3.63%	0
Overall		48	7.544			7	8				0 (0%)

Ceriodaphnia 7-d Survival and Reproduction Test — Aquatic Bioassay & Consulting Labs, Inc.

Temperature-°C

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24	24	24	24	24	0	0	0.0%	0
3		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
5		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
10		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
30		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
50		8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
Overall		48	24.01			24	24.1				0 (0%)

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	68	68	68	68	65	65	65	65
50		69	69	69	69	69	69	69	69

Conductivity-µmhos

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	332	343	348	321	332	337	336	337
3		328	329	342	360	332	319	358	369
5		325	333	333	339	331	294	344	352
10		330	332	332	333	330	326	344	347
30		331	331	333	320	330	326	343	264
50		329	330	333	326	317	320	349	340

Dissolved Oxygen-mg/L

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	8	7.8	7.5	7.9	8.1	7.9	7.7	7.8
3		8.6	8	7.8	7.8	8.6	8.2	6	5.5
5		8.6	8.2	7.7	7.8	8.5	8.2	6.3	5.3
10		8.6	8.2	7.7	7.7	8.5	8.4	6.3	6
30		8.6	8.2	7.7	7.8	8.5	8.5	6.6	6
50		8.5	8.2	7.7	7.7	8.5	8.4	6.2	6

Hardness (CaCO3)-mg/L

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	95	95	95	95	89	89	89	89
50		99	99	99	99	99	99	99	99

pH-Units

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.8	7.8	8	7.8	7.7	7.9	7.8	7.4
3		7.4	7.4	7.8	7.8	7.8	7.5	7.3	7
5		7.6	7.4	7.8	7.7	7.7	7.5	7.2	7
10		7.6	7.5	7.8	7.6	7.7	7.6	7.2	7
30		7.7	7.5	7.8	7.5	7.7	7.6	7.2	7
50		7.7	7.5	7.8	7.5	7.7	7.6	7.2	7

Temperature-°C

C-µg/L	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24	24	24	24	24	24	24	24
3		24	24	24.1	24	24	24	24	24
5		24	24	24.1	24	24	24	24	24
10		24	24	24.1	24	24	24	24	24
30		24	24	24.1	24	24	24	24	24
50		24	24	24.1	24	24	24	24	24

aquatic bioassay & consulting laboratories, inc

CHRONIC SELENASTRUM GROWTH BIOASSAY

DATE: 3 March - 2014

STANDARD TOXICANT: Cadmium Chloride

NOEC = 20.00 ug/l

IC25 = 48.45 ug/l
IC50 = 77.93 ug/l

Yours very truly,

Scott Johnson
Laboratory Director

29 north olive st. ventura, ca 93001 (805) 643 5621 www.aquabio.org

CETIS Summary Report

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Batch ID:	18-9586-9365	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:14	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:14	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-8076-1318	**Code:**	SEL030314s	**Client:**	Internal Lab
Sample Date:	03 Mar-14 18:14	**Material:**	Cadmium chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
05-4616-1526	Cell Density	20	40	28.28	3.96%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
01-1227-8494	Cell Density	IC5	25	21.47	26.72		Linear Interpolation (ICPIN)
		IC10	30.84	27.92	33.05		
		IC15	36.69	33.37	39.57		
		IC20	42.55	39.04	45.38		
		IC25	48.45	45.11	51.22		
		IC40	66.14	61.16	70.48		
		IC50	77.93	71.56	84.62		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
01-1227-8494	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
05-4616-1526	Cell Density	Control CV	0.01747	NL - 0.2	Yes	Passes Acceptability Criteria
01-1227-8494	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
05-4616-1526	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
05-4616-1526	Cell Density	PMSD	0.03961	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
20		4	1.024E+6	9.995E+5	1.049E+6	1.010E+6	1.045E+6	7.782E+3	1.556E+4	1.52%	0.73%
40		4	8.478E+5	8.211E+5	8.744E+5	8.250E+5	8.650E+5	8.380E+3	1.676E+4	1.98%	17.83%
80		4	4.978E+5	4.271E+5	5.684E+5	4.360E+5	5.330E+5	2.221E+4	4.442E+4	8.92%	51.76%
140		4	1.485E+5	1.100E+5	1.870E+5	1.290E+5	1.800E+5	1.210E+4	2.420E+4	16.3%	85.61%
180		4	7.450E+4	6.299E+4	8.601E+4	6.600E+4	8.300E+4	3.617E+3	7.234E+3	9.71%	92.78%

Cell Density Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
20		1.045E+6	1.015E+6	1.027E+6	1.010E+6
40		8.480E+5	8.650E+5	8.250E+5	8.530E+5
80		4.950E+5	4.360E+5	5.330E+5	5.270E+5
140		1.800E+5	1.290E+5	1.300E+5	1.550E+5
180		7.700E+4	7.200E+4	6.600E+4	8.300E+4

CETIS Analytical Report

Test Code: SEL030314 | 21-3150-2124

Selenastrum Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	05-4616-1526	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	13 Mar-14 12:38	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	18-9586-9365	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:14	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:14	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-8076-1318	**Code:**	SEL030314s	**Client:**	Internal Lab
Sample Date:	03 Mar-14 18:14	**Material:**	Cadmium chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	3.96%	20	40	28.28	

Dunnett Multiple Comparison Test

Control	vs	C-µg/L	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		20	0.4418	2.407	40870	6	0.6725	CDF	Non-Significant Effect
		40*	10.84	2.407	40870	6	<0.0001	CDF	Significant Effect
		80*	31.45	2.407	40870	6	<0.0001	CDF	Significant Effect
		140*	52.02	2.407	40870	6	<0.0001	CDF	Significant Effect
		180*	56.38	2.407	40870	6	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	3.672535E+12	7.34507E+11	5	1274	<0.0001	Significant Effect
Error	10377000000	576500000	18			
Total	3.682912E+12		23			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	8.797	15.09	0.1174	Equal Variances
Variances	Mod Levene Equality of Variance	1.525	4.248	0.2316	Equal Variances
Variances	Levene Equality of Variance	2.138	4.248	0.1074	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9403	0.884	0.1656	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1004	0.2056	0.8271	Normal Distribution
Distribution	D'Agostino Skewness	1.447	2.576	0.1480	Normal Distribution
Distribution	D'Agostino Kurtosis	1.744	2.576	0.0812	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	5.134	9.21	0.0768	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.4428	3.878	0.2917	Normal Distribution

Cell Density Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1.032E+6	1.003E+6	1.060E+6	1025000	1.019E+6	1.058E+6	9.013E+3	1.75%	0.0%
20		4	1.024E+6	9.995E+5	1.049E+6	1021000	1.010E+6	1.045E+6	7.782E+3	1.52%	0.73%
40		4	8.478E+5	8.211E+5	8.744E+5	850500	8.250E+5	8.650E+5	8.380E+3	1.98%	17.83%
80		4	4.978E+5	4.271E+5	5.684E+5	511000	4.360E+5	5.330E+5	2.221E+4	8.92%	51.76%
140		4	1.485E+5	1.100E+5	1.870E+5	142500	1.290E+5	1.800E+5	1.210E+4	16.3%	85.61%
180		4	7.450E+4	6.299E+4	8.601E+4	74500	6.600E+4	8.300E+4	3.617E+3	9.71%	92.78%

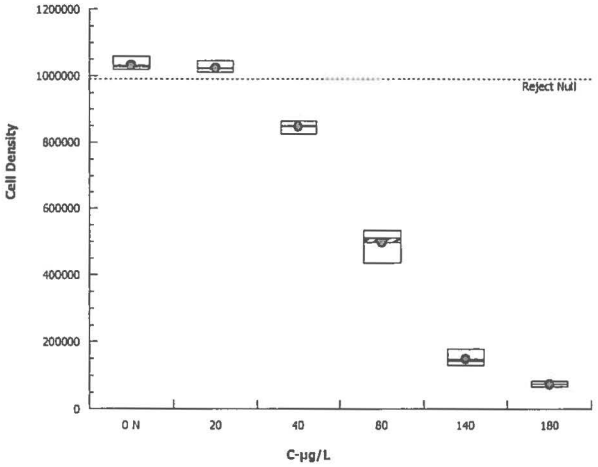
Cell Density Detail

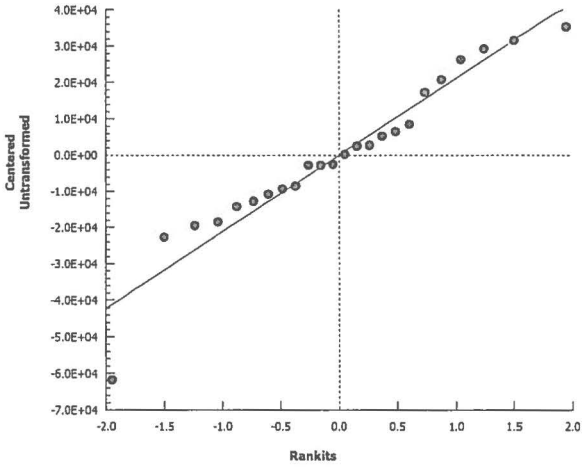
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
20		1.045E+6	1.015E+6	1.027E+6	1.010E+6
40		8.480E+5	8.650E+5	8.250E+5	8.530E+5
80		4.950E+5	4.360E+5	5.330E+5	5.270E+5
140		1.800E+5	1.290E+5	1.300E+5	1.550E+5
180		7.700E+4	7.200E+4	6.600E+4	8.300E+4

Selenastrum Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	05-4616-1526	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	13 Mar-14 12:38	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





CETIS Analytical Report

Selenastrum Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	01-1227-8494	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	13 Mar-14 12:38	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes
Batch ID:	18-9586-9365	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:14	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:14	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-8076-1318	**Code:**	SEL030314s	**Client:**	Internal Lab
Sample Date:	03 Mar-14 18:14	**Material:**	Cadmium chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

Level	µg/L	95% LCL	95% UCL
IC5	25	21.47	26.72
IC10	30.84	27.92	33.05
IC15	36.69	33.37	39.57
IC20	42.55	39.04	45.38
IC25	48.45	45.11	51.22
IC40	66.14	61.16	70.48
IC50	77.93	71.56	84.62

Cell Density Summary

			Calculated Variate						
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.032E+6	1.019E+6	1.058E+6	9.013E+3	1.803E+4	1.75%	0.0%
20		4	1.024E+6	1.010E+6	1.045E+6	7.782E+3	1.556E+4	1.52%	0.73%
40		4	8.478E+5	8.250E+5	8.650E+5	8.380E+3	1.676E+4	1.98%	17.83%
80		4	4.978E+5	4.360E+5	5.330E+5	2.221E+4	4.442E+4	8.92%	51.76%
140		4	1.485E+5	1.290E+5	1.800E+5	1.210E+4	2.420E+4	16.3%	85.61%
180		4	7.450E+4	6.600E+4	8.300E+4	3.617E+3	7.234E+3	9.71%	92.78%

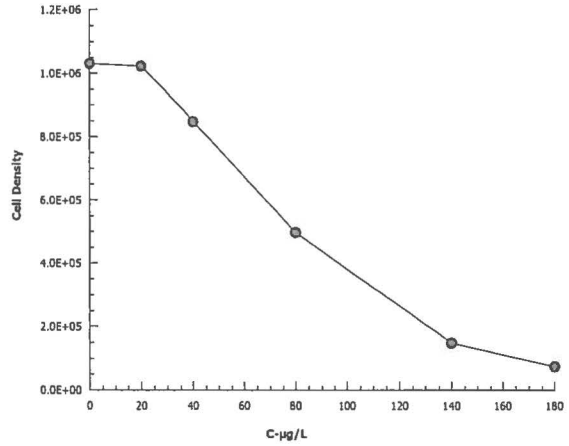
Cell Density Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.019E+6	1.029E+6	1.058E+6	1.021E+6
20		1.045E+6	1.015E+6	1.027E+6	1.010E+6
40		8.480E+5	8.650E+5	8.250E+5	8.530E+5
80		4.950E+5	4.360E+5	5.330E+5	5.270E+5
140		1.800E+5	1.290E+5	1.300E+5	1.550E+5
180		7.700E+4	7.200E+4	6.600E+4	8.300E+4

Selenastrum Growth Test — **Aquatic Bioassay & Consulting Labs, Inc.**

Analysis ID:	01-1227-8494	**Endpoint:**	Cell Density	**CETIS Version:**	CETISv1.8.7
Analyzed:	13 Mar-14 12:38	**Analysis:**	Linear Interpolation (ICPIN)	**Official Results:**	Yes

Graphics



CETIS Measurement Report

Test Code: SEL030314 | 21-3150-2124

Selenastrum Growth Test — Aquatic Bioassay & Consulting Labs, Inc.

Batch ID:	18-9586-9365	**Test Type:**	Cell Growth	**Analyst:**	
Start Date:	03 Mar-14 18:14	**Protocol:**	EPA/821/R-02-013 (2002)	**Diluent:**	Laboratory Water
Ending Date:	07 Mar-14 16:14	**Species:**	Selenastrum capricornutum	**Brine:**	Not Applicable
Duration:	94h	**Source:**	Aquatic Biosystems, CO	**Age:**	
Sample ID:	11-8076-1318	**Code:**	SEL030314s	**Client:**	Internal Lab
Sample Date:	03 Mar-14 18:14	**Material:**	Cadmium chloride	**Project:**	
Receive Date:		**Source:**	Reference Toxicant		
Sample Age:	NA	**Station:**	REF TOX		

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	67			67	67	0	0	0.0%	0
20		1	60			60	60	0	0	0.0%	0
40		1	58			58	58	0	0	0.0%	0
80		1	65			65	65	0	0	0.0%	0
140		1	51			51	51	0	0	0.0%	0
180		1	53			53	53	0	0	0.0%	0
Overall		6	59			51	67				0 (0%)

Conductivity-µmhos

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	422	389.7	454.3	385	448	11.63	26.01	6.16%	0
20		5	414.2	402.6	425.8	400	426	4.176	9.338	2.25%	0
40		5	407.6	398.9	416.3	400	416	3.124	6.986	1.71%	0
80		5	402	392.7	411.3	395	414	3.362	7.517	1.87%	0
140		5	378.8	364.7	392.9	368	392	5.083	11.37	3.0%	0
180		5	365.8	349	382.6	353	388	6.045	13.52	3.7%	0
Overall		30	398.4			353	448				0 (0%)

Hardness (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	94			94	94	0	0	0.0%	0
20		1	97			97	97	0	0	0.0%	0
40		1	87			87	87	0	0	0.0%	0
80		1	100			100	100	0	0	0.0%	0
140		1	89			89	89	0	0	0.0%	0
180		1	92			92	92	0	0	0.0%	0
Overall		6	93.17			87	100				0 (0%)

pH-Units

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	7.56	7.372	7.748	7.4	7.7	0.06782	0.1517	2.01%	0
20		5	7.56	7.372	7.748	7.4	7.8	0.06782	0.1517	2.01%	0
40		5	7.56	7.372	7.748	7.4	7.8	0.06782	0.1517	2.01%	0
80		5	7.62	7.458	7.782	7.5	7.8	0.05831	0.1304	1.71%	0
140		5	7.64	7.498	7.782	7.5	7.8	0.05099	0.114	1.49%	0
180		5	7.64	7.498	7.782	7.5	7.8	0.05099	0.114	1.49%	0
Overall		30	7.597			7.4	7.8				0 (0%)

Temperature-°C

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
20		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
40		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
80		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
140		5	24.66	24.39	24.93	24.4	25	0.09799	0.2191	0.89%	0
180		5	24.68	24.44	24.92	24.5	25	0.08603	0.1924	0.78%	0
Overall		30	24.68			24.4	25				0 (0%)

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	1
0	Negative Contr	67
20		60
40		58
80		65
140		51
180		53

Conductivity-µmhos

C-µg/L	Control Type	1	2	3	4	5
0	Negative Contr	406	385	440	448	431
20		414	400	417	426	414
40		404	414	400	416	404
80		395	397	400	414	404
140		368	370	374	390	392
180		353	359	361	388	368

Hardness (CaCO3)-mg/L

C-µg/L	Control Type	1
0	Negative Contr	94
20		97
40		87
80		100
140		89
180		92

pH-Units

C-µg/L	Control Type	1	2	3	4	5
0	Negative Contr	7.7	7.6	7.4	7.4	7.7
20		7.8	7.5	7.5	7.4	7.6
40		7.8	7.5	7.5	7.4	7.6
80		7.8	7.5	7.6	7.5	7.7
140		7.7	7.6	7.6	7.5	7.8
180		7.7	7.5	7.6	7.6	7.8

Temperature-°C

C-µg/L	Control Type	1	2	3	4	5
0	Negative Contr	25	24.5	24.7	24.6	24.6
20		25	24.5	24.7	24.6	24.6
40		25	24.5	24.7	24.6	24.6
80		25	24.5	24.7	24.6	24.6
140		25	24.4	24.7	24.6	24.6
180		25	24.5	24.7	24.6	24.6

ENVIRONMENTAL
230 DOVE COURT ▪ SANTA PAULA, CA 93060
(805) 525-5563 ▪ FAX (805) 525-2896

CHAIN OF CUSTODY RECORD

Lab: ABC — ANALYSIS REQUESTED

PROJECT NAME: Los Angeles Irrigated Lands Group

PROJECT ADDRESS: NGA

PROJECT MANAGER: Bryn Home

SAMPLER NAME (PRINT): Scott Jordan — P.O. # 1384-LAB-19077

SAMPLE ~~#~~	SAMPLE ~~LOCATION~~ ID	DEPTH	DATE	TIME	SAMPLE MATRIX	NUMBER OF CONTAINERS	Pres: Ice (Dry) HCl Other None	TPH-G 8015M	TPH-D 8015M	TPH-O 8015M	TPH-Char, 8015M FC	BTEX, OXYG, EDB, EDC 8260B	FULL VOCs w/Oxygenates 8260B	Dissolved Lead 6010	Total Lead 6020	Metals: CAM 17 PP13	Methanol 8015B	Ethanol 8260B	Ceriodaphnia dubia, 7-day chron	Fathead Minnow, 7-day	Selenastrum 96-hr		Flash Point 1010	Fixed Gas	TPHG/BTEX/MTBE (Carb 410-T03)	Lab Filter	TAT: RUSH 24-HR 48-HR 72-HR STD	PID Reading, Odor, Staining, Other TAT, etc.
	LAILG-NGA26-1	N/A	2/28/14	8:50	H_2O	2													X	X	/							
	LAILG-NGA124-7	↓	↓	11:10	↓	↓													X	X	X							100%
	LAILG-NGA178-2	↓	↓	9:45	↓	↓													X	X	X							sample
	LAILG-NGA19-7	↓	↓	5:40	↓	↓													X	X	X							only
	LAILG-NGA184-3	↓	↓	7:00	↓	↓													X	X	X							

Temp = 16.2 °C
Chlorine = <0.1
~~Ammonia~~ = 0 [illegible]

✱ RUN TIE if over 50%
Note: TIE if IC50 is less than 50%, per phone conv. with Bryn

Ammonia: 0.0, 3.[illegible], 0.[illegible], 0.[illegible], 0.[illegible]

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	DATE	TIME
[signature]	[signature]	3-3-14	1415

mjm 4/11/14

Method of shipment, additional comments:
☐ USTCF
☐ EDF-COELT
☐ NONE
☒ Email ~~Fax~~ preliminary data ASAP

Required MRLs to: San Diego County | VCEHD | S.B. CO FPD | Los Angeles RWQCB | Lahontan RWQCB | Central Coast RWQCB | San Bernardino County FD | KCEHD Kern County | OCHCA Orange County

CERTIFICATE OF ANALYSIS

Client:	PW Environmental 230 Dove Ct. Santa Paula CA, 93060	**Report Date:**	03/31/14 10:06
		Received Date:	02/28/14 16:10
		Turn Around:	Normal
Attention:	Bryn Home	**Client Project:**	PW Environmental / Blanket
Phone:	(805) 525-5563		
Fax:	(805) 525-2896		
Work Order(s):	4B28113		

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Bryn Home :

Enclosed are the results of analyses for samples received 02/28/14 16:10 with the Chain of Custody document. The samples were received in good condition, at 11.4 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Case Narrative:

Reviewed by:

Brandon Gee
Project Manager

Weck Laboratories, Inc. 14859 East Clark Avenue City of Industry California 91745-1396 (626) 336-2139 FAX (626) 336-2634

PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
LAILG - NGA - EB	Scott Jordan		4B28113-01	Water	02/28/14 04:15
LAILG - NGA - FB	Scott Jordan		4B28113-02	Water	02/28/14 14:30
LAILG - NGA26 - 1	Scott Jordan		4B28113-03	Water	02/28/14 09:00
LAILG - NGA124 - 7	Scott Jordan		4B28113-04	Water	02/28/14 11:20
LAILG - NGA178 - 2	Scott Jordan		4B28113-05	Water	02/28/14 09:55
LAILG - NGA19 - 7	Scott Jordan		4B28113-06	Water	02/28/14 05:50
LAILG - NGA184 - 3	Scott Jordan		4B28113-07	Water	02/28/14 07:10
LAILG - NGA- DUP	Scott Jordan		4B28113-08	Water	02/28/14 06:05

ANALYSES

Anions by IC, EPA Method 300.0/300.1/326

Chlorinated Pesticides and/or PCBs

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Metals by EPA 200 Series Methods

Pyrethroid Pesticides by GC/MS SIM

Semivolatile Organic Compounds by GC/MS

PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-01 LAILG - NGA - EB

Sampled: 02/28/14 04:15 **Sampled By:** Scott Jordan **Matrix:** Water

Anions by IC, EPA Method 300.0/300.1/326

Method: EPA 300.0 Batch: W4B1338 Prepared: 02/28/14 20:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	ND	0.50	mg/l	1	02/28/14 23:20	
NO2+NO3 as N	ND	0.11	mg/l	1	02/28/14 23:20	
Sulfate as SO4	ND	0.50	mg/l	1	02/28/14 23:20	

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	5.0	ng/l	1	03/11/14 18:10	
2,4'-DDE	ND	5.0	ng/l	1	03/11/14 18:10	
2,4'-DDT	ND	5.0	ng/l	1	03/11/14 18:10	
4,4'-DDD	ND	5.0	ng/l	1	03/11/14 18:10	
4,4'-DDE	ND	5.0	ng/l	1	03/11/14 18:10	
4,4'-DDT	ND	5.0	ng/l	1	03/11/14 18:10	
Aldrin	ND	5.0	ng/l	1	03/11/14 18:10	
alpha-BHC	ND	5.0	ng/l	1	03/11/14 18:10	
alpha-Chlordane	ND	5.0	ng/l	1	03/11/14 18:10	
Aroclor 1016	ND	100	ng/l	1	03/11/14 18:10	
Aroclor 1221	ND	100	ng/l	1	03/11/14 18:10	
Aroclor 1232	ND	100	ng/l	1	03/11/14 18:10	
Aroclor 1242	ND	100	ng/l	1	03/11/14 18:10	
Aroclor 1248	ND	100	ng/l	1	03/11/14 18:10	
Aroclor 1254	ND	100	ng/l	1	03/11/14 18:10	
Aroclor 1260	ND	100	ng/l	1	03/11/14 18:10	
beta-BHC	ND	5.0	ng/l	1	03/11/14 18:10	
Chlordane (tech)	ND	100	ng/l	1	03/11/14 18:10	
cis-Nonachlor	ND	5.0	ng/l	1	03/11/14 18:10	
delta-BHC	ND	5.0	ng/l	1	03/11/14 18:10	
Dieldrin	ND	5.0	ng/l	1	03/11/14 18:10	
Endosulfan I	ND	5.0	ng/l	1	03/11/14 18:10	
Endosulfan II	ND	5.0	ng/l	1	03/11/14 18:10	
Endosulfan sulfate	ND	5.0	ng/l	1	03/11/14 18:10	
Endrin	ND	5.0	ng/l	1	03/11/14 18:10	
Endrin aldehyde	ND	5.0	ng/l	1	03/11/14 18:10	
gamma-BHC (Lindane)	ND	5.0	ng/l	1	03/11/14 18:10	
gamma-Chlordane	ND	5.0	ng/l	1	03/11/14 18:10	
Heptachlor	ND	5.0	ng/l	1	03/11/14 18:10	
Heptachlor epoxide	ND	5.0	ng/l	1	03/11/14 18:10	
Methoxychlor	ND	5.0	ng/l	1	03/11/14 18:10	
Mirex	ND	5.0	ng/l	1	03/11/14 18:10	
Toxaphene	ND	500	ng/l	1	03/11/14 18:10	

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PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-01 LAILG - NGA - EB

Sampled: 02/28/14 04:15 **Sampled By:** Scott Jordan **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
trans-Nonachlor	ND		5.0	ng/l	1	03/11/14 18:10	
Surr: Decachlorobiphenyl	*44 %*	Conc:*44.4*	*0.1-118*	%			
Surr: Tetrachloro-meta-xylene	*74 %*	Conc:*73.9*	*12-117*	%			

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1 Batch: W4C0084 Prepared: 03/03/14 12:40 Analyst: Rebecca Juea Song

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	ND	0.10	mg/l	1	03/04/14 16:04	

Method: EPA 365.1 Batch: W4C0009 Prepared: 03/01/14 12:40 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	ND	0.0020	mg/l	1	03/01/14 14:38	**
o-Phosphate as P, dissolved	ND	2.0	ug/l	1	03/01/14 14:38	**

Method: EPA 365.1 Batch: W4C0397 Prepared: 03/07/14 12:25 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	ND	0.010	mg/l	1	03/17/14 11:22	

Method: EPA 365.1 Batch: W4C0935 Prepared: 03/18/14 09:59 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	ND	0.010	mg/l	1	03/20/14 14:39	

Method: SM 2540C Batch: W4C0327 Prepared: 03/06/14 14:59 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	ND	10	mg/l	1	03/06/14 16:52	

Method: SM 2540D Batch: W4C0238 Prepared: 03/05/14 16:12 Analyst: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	ND	5	mg/l	1	03/05/14 17:50	

Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	ND	0.250	mg/l	1	03/13/14 13:40	

Method: EPA 200.7 Batch: W4C0593 Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	ND	0.100	mg/l	1	03/13/14 13:40	

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier

PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-01 LAILG - NGA - EB

Sampled: 02/28/14 04:15 **Sampled By:** Scott Jordan **Matrix:** Water

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	ND	0.50	ug/l	1	03/17/14 23:20	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4C0266 Prepared: 03/06/14 08:23 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	03/18/14 02:30	
Bifenthrin	ND		2.0	ng/l	1	03/18/14 02:30	
Cyfluthrin	ND		2.0	ng/l	1	03/18/14 02:30	
Cypermethrin	ND		2.0	ng/l	1	03/18/14 02:30	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	03/18/14 02:30	
Dichloran	ND		2.0	ng/l	1	03/18/14 02:30	
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	03/18/14 02:30	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	03/18/14 02:30	
L-Cyhalothrin	ND		2.0	ng/l	1	03/18/14 02:30	
Pendimethalin	ND		2.0	ng/l	1	03/18/14 02:30	
Permethrin	ND		5.0	ng/l	1	03/18/14 02:30	
Prallethrin	ND		2.0	ng/l	1	03/18/14 02:30	
Sumithrin	ND		10	ng/l	1	03/18/14 02:30	
Tefluthrin	ND		2.0	ng/l	1	03/18/14 02:30	
Surr: Perylene-d12	*115 %*	Conc:*289*	*2-205*	%			
Surr: Triphenyl phosphate	*312 %*	Conc:*780*	*6-222*	%			*S-GC*

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PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-01RE1 **LAILG - NGA - EB**

Sampled: 02/28/14 04:15 **Sampled By:** Scott Jordan **Matrix:** Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2M Batch: W4C0643 Prepared: 03/12/14 12:19 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND		10	ng/l	1	03/17/14 16:33	
Bolstar	ND		10	ng/l	1	03/17/14 16:33	
Chlorpyrifos	ND		10	ng/l	1	03/17/14 16:33	
Coumaphos	ND		10	ng/l	1	03/17/14 16:33	
Demeton-o	ND		10	ng/l	1	03/17/14 16:33	
Demeton-s	ND		10	ng/l	1	03/17/14 16:33	
Diazinon	ND		10	ng/l	1	03/17/14 16:33	
Dichlorvos	ND		10	ng/l	1	03/17/14 16:33	
Dimethoate	ND		10	ng/l	1	03/17/14 16:33	
Disulfoton	ND		10	ng/l	1	03/17/14 16:33	
Ethoprop	ND		10	ng/l	1	03/17/14 16:33	
Ethyl parathion	ND		10	ng/l	1	03/17/14 16:33	
Fensulfothion	ND		10	ng/l	1	03/17/14 16:33	
Fenthion	ND		10	ng/l	1	03/17/14 16:33	
Malathion	ND		10	ng/l	1	03/17/14 16:33	
Merphos	ND		10	ng/l	1	03/17/14 16:33	
Methyl parathion	ND		10	ng/l	1	03/17/14 16:33	
Mevinphos	ND		10	ng/l	1	03/17/14 16:33	
Naled	ND		10	ng/l	1	03/17/14 16:33	
Phorate	ND		10	ng/l	1	03/17/14 16:33	
Ronnel	ND		10	ng/l	1	03/17/14 16:33	
Stirophos	ND		10	ng/l	1	03/17/14 16:33	
Tokuthion (Prothiofos)	ND		10	ng/l	1	03/17/14 16:33	
Trichloronate	ND		10	ng/l	1	03/17/14 16:33	
Surr: 1,3-Dimethyl-2-nitrobenzene	*104 %*	Conc:*518*	*76-128*	%			
Surr: Triphenyl phosphate	*81 %*	Conc:*407*	*40-163*	%			

PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-02 LAILG - NGA - FB

Sampled: 02/28/14 14:30 **Sampled By:** Scott Jordan **Matrix:** Water

Anions by IC, EPA Method 300.0/300.1/326

Method: EPA 300.0 Batch: W4B1338 Prepared: 02/28/14 20:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	ND	0.50	mg/l	1	02/28/14 23:38	
NO2+NO3 as N	ND	0.11	mg/l	1	02/28/14 23:38	
Sulfate as SO4	ND	0.50	mg/l	1	02/28/14 23:38	

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	5.0	ng/l	1	03/11/14 18:40	
2,4'-DDE	ND	5.0	ng/l	1	03/11/14 18:40	
2,4'-DDT	ND	5.0	ng/l	1	03/11/14 18:40	
4,4'-DDD	ND	5.0	ng/l	1	03/11/14 18:40	
4,4'-DDE	ND	5.0	ng/l	1	03/11/14 18:40	
4,4'-DDT	ND	5.0	ng/l	1	03/11/14 18:40	
Aldrin	ND	5.0	ng/l	1	03/11/14 18:40	
alpha-BHC	ND	5.0	ng/l	1	03/11/14 18:40	
alpha-Chlordane	ND	5.0	ng/l	1	03/11/14 18:40	
Aroclor 1016	ND	100	ng/l	1	03/11/14 18:40	
Aroclor 1221	ND	100	ng/l	1	03/11/14 18:40	
Aroclor 1232	ND	100	ng/l	1	03/11/14 18:40	
Aroclor 1242	ND	100	ng/l	1	03/11/14 18:40	
Aroclor 1248	ND	100	ng/l	1	03/11/14 18:40	
Aroclor 1254	ND	100	ng/l	1	03/11/14 18:40	
Aroclor 1260	ND	100	ng/l	1	03/11/14 18:40	
beta-BHC	ND	5.0	ng/l	1	03/11/14 18:40	
Chlordane (tech)	ND	100	ng/l	1	03/11/14 18:40	
cis-Nonachlor	ND	5.0	ng/l	1	03/11/14 18:40	
delta-BHC	ND	5.0	ng/l	1	03/11/14 18:40	
Dieldrin	ND	5.0	ng/l	1	03/11/14 18:40	
Endosulfan I	ND	5.0	ng/l	1	03/11/14 18:40	
Endosulfan II	ND	5.0	ng/l	1	03/11/14 18:40	
Endosulfan sulfate	ND	5.0	ng/l	1	03/11/14 18:40	
Endrin	ND	5.0	ng/l	1	03/11/14 18:40	
Endrin aldehyde	ND	5.0	ng/l	1	03/11/14 18:40	
gamma-BHC (Lindane)	ND	5.0	ng/l	1	03/11/14 18:40	
gamma-Chlordane	ND	5.0	ng/l	1	03/11/14 18:40	
Heptachlor	ND	5.0	ng/l	1	03/11/14 18:40	
Heptachlor epoxide	ND	5.0	ng/l	1	03/11/14 18:40	
Methoxychlor	ND	5.0	ng/l	1	03/11/14 18:40	
Mirex	ND	5.0	ng/l	1	03/11/14 18:40	
Toxaphene	ND	500	ng/l	1	03/11/14 18:40	

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4B28113-02 LAILG - NGA - FB

Sampled: 02/28/14 14:30 **Sampled By:** Scott Jordan **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
trans-Nonachlor	ND		5.0	ng/l	1	03/11/14 18:40	
Surr: Decachlorobiphenyl	*80 %*	Conc:*80.1*	*0.1-118*	%			
Surr: Tetrachloro-meta-xylene	*89 %*	Conc:*89.3*	*12-117*	%			

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1 Batch: W4C0084 Prepared: 03/03/14 12:40 Analyst: Rebecca Juea Song

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	ND	0.10	mg/l	1	03/04/14 16:04	

Method: EPA 365.1 Batch: W4C0009 Prepared: 03/01/14 12:40 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	ND	0.0020	mg/l	1	03/01/14 14:40	**
o-Phosphate as P, dissolved	ND	2.0	ug/l	1	03/01/14 14:40	**

Method: EPA 365.1 Batch: W4C0397 Prepared: 03/07/14 12:25 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	ND	0.010	mg/l	1	03/17/14 11:24	

Method: EPA 365.1 Batch: W4C0935 Prepared: 03/18/14 09:59 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	ND	0.010	mg/l	1	03/20/14 14:29	

Method: SM 2540C Batch: W4C0327 Prepared: 03/06/14 14:59 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	ND	10	mg/l	1	03/06/14 16:52	

Method: SM 2540D Batch: W4C0238 Prepared: 03/05/14 16:12 Analyst: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	ND	5	mg/l	1	03/05/14 17:50	

Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	ND	0.250	mg/l	1	03/13/14 13:42	

Method: EPA 200.7 Batch: W4C0593 Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	ND	0.100	mg/l	1	03/13/14 13:42	

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier

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Date Reported: 03/31/14 10:06

4B28113-02 LAILG - NGA - FB

Sampled: 02/28/14 14:30 **Sampled By:** Scott Jordan **Matrix:** Water

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	ND	0.50	ug/l	1	03/17/14 23:37	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4C0266 Prepared: 03/06/14 08:23 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	03/18/14 02:54	
Bifenthrin	ND		2.0	ng/l	1	03/18/14 02:54	
Cyfluthrin	ND		2.0	ng/l	1	03/18/14 02:54	
Cypermethrin	ND		2.0	ng/l	1	03/18/14 02:54	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	03/18/14 02:54	
Dichloran	ND		2.0	ng/l	1	03/18/14 02:54	
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	03/18/14 02:54	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	03/18/14 02:54	
L-Cyhalothrin	ND		2.0	ng/l	1	03/18/14 02:54	
Pendimethalin	ND		2.0	ng/l	1	03/18/14 02:54	
Permethrin	ND		5.0	ng/l	1	03/18/14 02:54	
Prallethrin	ND		2.0	ng/l	1	03/18/14 02:54	
Sumithrin	ND		10	ng/l	1	03/18/14 02:54	
Tefluthrin	ND		2.0	ng/l	1	03/18/14 02:54	
Surr: Perylene-d12	*74 %*	Conc:*184*	*2-205*	%			
Surr: Triphenyl phosphate	*251 %*	Conc:*628*	*6-222*	%			*S-GC*

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4B28113-02RE1 **LAILG - NGA - FB**

Sampled: 02/28/14 14:30 **Sampled By:** Scott Jordan **Matrix:** Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2M Batch: W4C0643 Prepared: 03/12/14 12:19 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND		10	ng/l	1	03/17/14 17:01	
Bolstar	ND		10	ng/l	1	03/17/14 17:01	
Chlorpyrifos	ND		10	ng/l	1	03/17/14 17:01	
Coumaphos	ND		10	ng/l	1	03/17/14 17:01	
Demeton-o	ND		10	ng/l	1	03/17/14 17:01	
Demeton-s	ND		10	ng/l	1	03/17/14 17:01	
Diazinon	ND		10	ng/l	1	03/17/14 17:01	
Dichlorvos	ND		10	ng/l	1	03/17/14 17:01	
Dimethoate	ND		10	ng/l	1	03/17/14 17:01	
Disulfoton	ND		10	ng/l	1	03/17/14 17:01	
Ethoprop	ND		10	ng/l	1	03/17/14 17:01	
Ethyl parathion	ND		10	ng/l	1	03/17/14 17:01	
Fensulfothion	ND		10	ng/l	1	03/17/14 17:01	
Fenthion	ND		10	ng/l	1	03/17/14 17:01	
Malathion	ND		10	ng/l	1	03/17/14 17:01	
Merphos	ND		10	ng/l	1	03/17/14 17:01	
Methyl parathion	ND		10	ng/l	1	03/17/14 17:01	
Mevinphos	ND		10	ng/l	1	03/17/14 17:01	
Naled	ND		10	ng/l	1	03/17/14 17:01	
Phorate	ND		10	ng/l	1	03/17/14 17:01	
Ronnel	ND		10	ng/l	1	03/17/14 17:01	
Stirophos	ND		10	ng/l	1	03/17/14 17:01	
Tokuthion (Prothiofos)	ND		10	ng/l	1	03/17/14 17:01	
Trichloronate	ND		10	ng/l	1	03/17/14 17:01	
Surr: 1,3-Dimethyl-2-nitrobenzene	*102 %*	Conc:*508*	*76-128*	%			
Surr: Triphenyl phosphate	*77 %*	Conc:*384*	*40-163*	%			

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Date Reported: 03/31/14 10:06

4B28113-03 **LAILG - NGA26 - 1**

Sampled: 02/28/14 09:00 **Sampled By:** Scott Jordan **Matrix:** Water

Anions by IC, EPA Method 300.0/300.1/326

Method: EPA 300.0 Batch: W4B1338 Prepared: 02/28/14 20:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	**73**	0.50	mg/l	1	02/28/14 23:57	
NO2+NO3 as N	**6.4**	0.11	mg/l	1	02/28/14 23:57	

Method: EPA 300.0 Batch: W4C0134 Prepared: 03/04/14 10:23 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Sulfate as SO4	**180**	5.0	mg/l	10	03/04/14 19:57	

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	25	ng/l	5	03/12/14 02:19	M-04
2,4'-DDE	ND	25	ng/l	5	03/12/14 02:19	M-04
2,4'-DDT	ND	25	ng/l	5	03/12/14 02:19	M-04
4,4'-DDD	ND	25	ng/l	5	03/12/14 02:19	M-04
4,4'-DDE	ND	25	ng/l	5	03/12/14 02:19	M-04
4,4'-DDT	ND	25	ng/l	5	03/12/14 02:19	M-04
Aldrin	ND	25	ng/l	5	03/12/14 02:19	M-04
alpha-BHC	ND	25	ng/l	5	03/12/14 02:19	M-04
alpha-Chlordane	ND	25	ng/l	5	03/12/14 02:19	M-04
Aroclor 1016	ND	500	ng/l	5	03/12/14 02:19	M-04
Aroclor 1221	ND	500	ng/l	5	03/12/14 02:19	M-04
Aroclor 1232	ND	500	ng/l	5	03/12/14 02:19	M-04
Aroclor 1242	ND	500	ng/l	5	03/12/14 02:19	M-04
Aroclor 1248	ND	500	ng/l	5	03/12/14 02:19	M-04
Aroclor 1254	ND	500	ng/l	5	03/12/14 02:19	M-04
Aroclor 1260	ND	500	ng/l	5	03/12/14 02:19	M-04
beta-BHC	ND	25	ng/l	5	03/12/14 02:19	M-04
Chlordane (tech)	ND	500	ng/l	5	03/12/14 02:19	M-04
cis-Nonachlor	ND	25	ng/l	5	03/12/14 02:19	M-04
delta-BHC	ND	25	ng/l	5	03/12/14 02:19	M-04
Dieldrin	ND	25	ng/l	5	03/12/14 02:19	M-04
Endosulfan I	ND	25	ng/l	5	03/12/14 02:19	M-04
Endosulfan II	ND	25	ng/l	5	03/12/14 02:19	M-04
Endosulfan sulfate	ND	25	ng/l	5	03/12/14 02:19	M-04
Endrin	ND	25	ng/l	5	03/12/14 02:19	M-04
Endrin aldehyde	ND	25	ng/l	5	03/12/14 02:19	M-04
gamma-BHC (Lindane)	ND	25	ng/l	5	03/12/14 02:19	M-04
gamma-Chlordane	ND	25	ng/l	5	03/12/14 02:19	M-04
Heptachlor	ND	25	ng/l	5	03/12/14 02:19	M-04
Heptachlor epoxide	ND	25	ng/l	5	03/12/14 02:19	M-04

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Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-03 **LAILG - NGA26 - 1**

Sampled: 02/28/14 09:00 **Sampled By:** Scott Jordan **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Methoxychlor	ND		25	ng/l	5	03/12/14 02:19	M-04
Mirex	ND		25	ng/l	5	03/12/14 02:19	M-04
Toxaphene	ND		2500	ng/l	5	03/12/14 02:19	M-04
trans-Nonachlor	ND		25	ng/l	5	03/12/14 02:19	M-04
Surr: Decachlorobiphenyl	*49 %*	Conc:*49.3*	*0.1-118*	%			*M-04*
Surr: Tetrachloro-meta-xylene	*62 %*	Conc:*61.8*	*12-117*	%			*M-04*

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1 Batch: W4C0565 Prepared: 03/11/14 12:17 Analyst: Rebecca Juea Song

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	**2.4**	1.0	mg/l	10	03/13/14 18:59	

Method: EPA 365.1 Batch: W4C0009 Prepared: 03/01/14 12:40 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	**1.8**	0.050	mg/l	25	03/01/14 14:53	**
o-Phosphate as P, dissolved	**1800**	50	ug/l	25	03/01/14 14:53	**

Method: EPA 365.1 Batch: W4C0397 Prepared: 03/07/14 12:25 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	**2.3**	0.25	mg/l	5	03/17/14 11:39	M-06

Method: EPA 365.1 Batch: W4C0935 Prepared: 03/18/14 09:59 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	**2.1**	0.20	mg/l	2	03/20/14 14:59	M-06

Method: SM 2540C Batch: W4C0327 Prepared: 03/06/14 14:59 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	**590**	10	mg/l	1	03/06/14 16:52	

Method: SM 2540D Batch: W4C0238 Prepared: 03/05/14 16:12 Analyst: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	**49**	5	mg/l	1	03/05/14 17:50	

Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	**158**	0.250	mg/l	1	03/13/14 13:45	

Method: EPA 200.7 Batch: W4C0593 Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	**63.2**	0.100	mg/l	1	03/13/14 13:45	

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Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-03 LAILG - NGA26 - 1

Sampled: 02/28/14 09:00 **Sampled By:** Scott Jordan **Matrix:** Water

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	**56**	0.50	ug/l	1	03/17/14 23:42	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4C0266 Prepared: 03/06/14 08:23 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	03/18/14 03:17	
Bifenthrin	**9.4**		2.0	ng/l	1	03/18/14 03:17	
Cyfluthrin	**20**		2.0	ng/l	1	03/18/14 03:17	
Cypermethrin	ND		2.0	ng/l	1	03/18/14 03:17	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	03/18/14 03:17	
Dichloran	ND		2.0	ng/l	1	03/18/14 03:17	
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	03/18/14 03:17	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	03/18/14 03:17	
L-Cyhalothrin	ND		2.0	ng/l	1	03/18/14 03:17	
Pendimethalin	ND		2.0	ng/l	1	03/18/14 03:17	
Permethrin	ND		5.0	ng/l	1	03/18/14 03:17	
Prallethrin	ND		2.0	ng/l	1	03/18/14 03:17	
Sumithrin	ND		10	ng/l	1	03/18/14 03:17	
Tefluthrin	ND		2.0	ng/l	1	03/18/14 03:17	
Surr: Perylene-d12	*97 %*	Conc:*241*	*2-205*	%			
Surr: Triphenyl phosphate	*174 %*	Conc:*435*	*6-222*	%			

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Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-03RE1 **LAILG - NGA26 - 1**

Sampled: 02/28/14 09:00 **Sampled By:** Scott Jordan **Matrix:** Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2M Batch: W4C0643 Prepared: 03/12/14 12:19 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND		10	ng/l	1	03/17/14 17:30	
Bolstar	ND		10	ng/l	1	03/17/14 17:30	
Chlorpyrifos	ND		10	ng/l	1	03/17/14 17:30	
Coumaphos	ND		10	ng/l	1	03/17/14 17:30	
Demeton-o	ND		10	ng/l	1	03/17/14 17:30	
Demeton-s	ND		10	ng/l	1	03/17/14 17:30	
Diazinon	ND		10	ng/l	1	03/17/14 17:30	
Dichlorvos	ND		10	ng/l	1	03/17/14 17:30	
Dimethoate	ND		10	ng/l	1	03/17/14 17:30	
Disulfoton	ND		10	ng/l	1	03/17/14 17:30	
Ethoprop	ND		10	ng/l	1	03/17/14 17:30	
Ethyl parathion	ND		10	ng/l	1	03/17/14 17:30	
Fensulfothion	ND		10	ng/l	1	03/17/14 17:30	
Fenthion	ND		10	ng/l	1	03/17/14 17:30	
Malathion	**23**		10	ng/l	1	03/17/14 17:30	
Merphos	ND		10	ng/l	1	03/17/14 17:30	
Methyl parathion	ND		10	ng/l	1	03/17/14 17:30	
Mevinphos	ND		10	ng/l	1	03/17/14 17:30	
Naled	ND		10	ng/l	1	03/17/14 17:30	
Phorate	ND		10	ng/l	1	03/17/14 17:30	
Ronnel	ND		10	ng/l	1	03/17/14 17:30	
Stirophos	ND		10	ng/l	1	03/17/14 17:30	
Tokuthion (Prothiofos)	ND		10	ng/l	1	03/17/14 17:30	
Trichloronate	ND		10	ng/l	1	03/17/14 17:30	
Surr: 1,3-Dimethyl-2-nitrobenzene	*99 %*	Conc:*495*	*76-128*	%			
Surr: Triphenyl phosphate	*107 %*	Conc:*537*	*40-163*	%			

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Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-04 **LAILG - NGA124 - 7**

Sampled: 02/28/14 11:20 **Sampled By:** Scott Jordan **Matrix:** Water

Anions by IC, EPA Method 300.0/300.1/326

Method: EPA 300.0 Batch: W4B1338 Prepared: 02/28/14 20:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	**21**	0.50	mg/l	1	03/01/14 00:15	
NO2+NO3 as N	**13**	0.11	mg/l	1	03/01/14 00:15	

Method: EPA 300.0 Batch: W4C0134 Prepared: 03/04/14 10:23 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Sulfate as SO4	**100**	5.0	mg/l	10	03/04/14 19:57	

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	25	ng/l	5	03/12/14 02:50	M-04
2,4'-DDE	ND	25	ng/l	5	03/12/14 02:50	M-04
2,4'-DDT	ND	25	ng/l	5	03/12/14 02:50	M-04
4,4'-DDD	ND	25	ng/l	5	03/12/14 02:50	M-04
4,4'-DDE	ND	25	ng/l	5	03/12/14 02:50	M-04
4,4'-DDT	ND	25	ng/l	5	03/12/14 02:50	M-04
Aldrin	ND	25	ng/l	5	03/12/14 02:50	M-04
alpha-BHC	ND	25	ng/l	5	03/12/14 02:50	M-04
alpha-Chlordane	ND	25	ng/l	5	03/12/14 02:50	M-04
Aroclor 1016	ND	500	ng/l	5	03/12/14 02:50	M-04
Aroclor 1221	ND	500	ng/l	5	03/12/14 02:50	M-04
Aroclor 1232	ND	500	ng/l	5	03/12/14 02:50	M-04
Aroclor 1242	ND	500	ng/l	5	03/12/14 02:50	M-04
Aroclor 1248	ND	500	ng/l	5	03/12/14 02:50	M-04
Aroclor 1254	ND	500	ng/l	5	03/12/14 02:50	M-04
Aroclor 1260	ND	500	ng/l	5	03/12/14 02:50	M-04
beta-BHC	ND	25	ng/l	5	03/12/14 02:50	M-04
Chlordane (tech)	ND	500	ng/l	5	03/12/14 02:50	M-04
cis-Nonachlor	ND	25	ng/l	5	03/12/14 02:50	M-04
delta-BHC	ND	25	ng/l	5	03/12/14 02:50	M-04
Dieldrin	ND	25	ng/l	5	03/12/14 02:50	M-04
Endosulfan I	ND	25	ng/l	5	03/12/14 02:50	M-04
Endosulfan II	ND	25	ng/l	5	03/12/14 02:50	M-04
Endosulfan sulfate	ND	25	ng/l	5	03/12/14 02:50	M-04
Endrin	ND	25	ng/l	5	03/12/14 02:50	M-04
Endrin aldehyde	ND	25	ng/l	5	03/12/14 02:50	M-04
gamma-BHC (Lindane)	ND	25	ng/l	5	03/12/14 02:50	M-04
gamma-Chlordane	ND	25	ng/l	5	03/12/14 02:50	M-04
Heptachlor	ND	25	ng/l	5	03/12/14 02:50	M-04
Heptachlor epoxide	ND	25	ng/l	5	03/12/14 02:50	M-04

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4B28113-04 **LAILG - NGA124 - 7**

Sampled: 02/28/14 11:20 **Sampled By:** Scott Jordan **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Methoxychlor	ND		25	ng/l	5	03/12/14 02:50	M-04
Mirex	ND		25	ng/l	5	03/12/14 02:50	M-04
Toxaphene	ND		2500	ng/l	5	03/12/14 02:50	M-04
trans-Nonachlor	ND		25	ng/l	5	03/12/14 02:50	M-04
Surr: Decachlorobiphenyl	*59 %*	Conc:*59.2*	*0.1-118*	%			*M-04*
Surr: Tetrachloro-meta-xylene	*58 %*	Conc:*58.4*	*12-117*	%			*M-04*

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1 Batch: W4C0565 Prepared: 03/11/14 12:17 Analyst: Rebecca Juea Song

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	**4.5**	0.50	mg/l	5	03/13/14 18:59	

Method: EPA 365.1 Batch: W4C0009 Prepared: 03/01/14 12:40 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	**1.2**	0.020	mg/l	10	03/01/14 14:54	**
o-Phosphate as P, dissolved	**1200**	20	ug/l	10	03/01/14 14:54	**

Method: EPA 365.1 Batch: W4C0397 Prepared: 03/07/14 12:25 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	**2.2**	0.25	mg/l	5	03/17/14 11:41	M-06

Method: EPA 365.1 Batch: W4C0935 Prepared: 03/18/14 09:59 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	**1.5**	0.10	mg/l	1	03/20/14 14:42	M-06

Method: SM 2540C Batch: W4C0327 Prepared: 03/06/14 14:59 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	**420**	10	mg/l	1	03/06/14 16:52	

Method: SM 2540D Batch: W4C0238 Prepared: 03/05/14 16:12 Analyst: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	**160**	5	mg/l	1	03/05/14 17:50	

Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	**125**	0.250	mg/l	1	03/13/14 13:47	

Method: EPA 200.7 Batch: W4C0593 Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	**50.2**	0.100	mg/l	1	03/13/14 13:47	

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4B28113-04 **LAILG - NGA124 - 7**

Sampled: 02/28/14 11:20 **Sampled By:** Scott Jordan **Matrix:** Water

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	**49**	0.50	ug/l	1	03/17/14 23:46	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4C0266 Prepared: 03/06/14 08:23 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		10	ng/l	5	03/18/14 04:04	M-04
Bifenthrin	**3700**		100	ng/l	50	03/18/14 03:41	
Cyfluthrin	ND		10	ng/l	5	03/18/14 04:04	M-04
Cypermethrin	ND		10	ng/l	5	03/18/14 04:04	M-04
Deltamethrin/Tralomethrin	ND		10	ng/l	5	03/18/14 04:04	M-04
Dichloran	ND		10	ng/l	5	03/18/14 04:04	M-04
Fenpropathrin (Danitol)	**170**		10	ng/l	5	03/18/14 04:04	M-04
Fenvalerate/Esfenvalerate	ND		10	ng/l	5	03/18/14 04:04	M-04
L-Cyhalothrin	ND		10	ng/l	5	03/18/14 04:04	M-04
Pendimethalin	ND		10	ng/l	5	03/18/14 04:04	M-04
Permethrin	**46**		25	ng/l	5	03/18/14 04:04	M-04
Prallethrin	ND		10	ng/l	5	03/18/14 04:04	M-04
Sumithrin	ND		50	ng/l	5	03/18/14 04:04	M-04
Tefluthrin	ND		10	ng/l	5	03/18/14 04:04	M-04
Surr: Perylene-d12	*116 %*	Conc:*289*	*2-205*	%			*M-04*
Surr: Triphenyl phosphate	*267 %*	Conc:*667*	*6-222*	%			*M-04, S-GC*

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4B28113-04RE1 **LAILG - NGA124 - 7**

Sampled: 02/28/14 11:20 **Sampled By:** Scott Jordan **Matrix:** Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2M Batch: W4C0643 Prepared: 03/12/14 12:19 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND		10	ng/l	1	03/17/14 17:59	
Bolstar	ND		10	ng/l	1	03/17/14 17:59	
Chlorpyrifos	**17**		10	ng/l	1	03/17/14 17:59	
Coumaphos	ND		10	ng/l	1	03/17/14 17:59	
Demeton-o	ND		10	ng/l	1	03/17/14 17:59	
Demeton-s	ND		10	ng/l	1	03/17/14 17:59	
Diazinon	ND		10	ng/l	1	03/17/14 17:59	
Dichlorvos	ND		10	ng/l	1	03/17/14 17:59	
Dimethoate	ND		10	ng/l	1	03/17/14 17:59	
Disulfoton	ND		10	ng/l	1	03/17/14 17:59	
Ethoprop	ND		10	ng/l	1	03/17/14 17:59	
Ethyl parathion	ND		10	ng/l	1	03/17/14 17:59	
Fensulfothion	ND		10	ng/l	1	03/17/14 17:59	
Fenthion	ND		10	ng/l	1	03/17/14 17:59	
Malathion	**13**		10	ng/l	1	03/17/14 17:59	
Merphos	ND		10	ng/l	1	03/17/14 17:59	
Methyl parathion	ND		10	ng/l	1	03/17/14 17:59	
Mevinphos	ND		10	ng/l	1	03/17/14 17:59	
Naled	ND		10	ng/l	1	03/17/14 17:59	
Phorate	ND		10	ng/l	1	03/17/14 17:59	
Ronnel	ND		10	ng/l	1	03/17/14 17:59	
Stirophos	ND		10	ng/l	1	03/17/14 17:59	
Tokuthion (Prothiofos)	ND		10	ng/l	1	03/17/14 17:59	
Trichloronate	ND		10	ng/l	1	03/17/14 17:59	
Surr: 1,3-Dimethyl-2-nitrobenzene	*97 %*	Conc:*487*	*76-128*	%			
Surr: Triphenyl phosphate	*109 %*	Conc:*547*	*40-163*	%			

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4B28113-05 LAILG - NGA178 - 2

Sampled: 02/28/14 09:55 **Sampled By:** Scott Jordan **Matrix:** Water

Anions by IC, EPA Method 300.0/300.1/326

Method: EPA 300.0 Batch: W4B1338 Prepared: 02/28/14 20:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	**10**	0.11	mg/l	1	03/01/14 00:34	

Method: EPA 300.0 Batch: W4C0134 Prepared: 03/04/14 10:23 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	**120**	5.0	mg/l	10	03/04/14 19:57	
Sulfate as SO4	**370**	5.0	mg/l	10	03/04/14 19:57	

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	50	ng/l	10	03/12/14 03:20	M-04
2,4'-DDE	ND	50	ng/l	10	03/12/14 03:20	M-04
2,4'-DDT	ND	50	ng/l	10	03/12/14 03:20	M-04
4,4'-DDD	ND	50	ng/l	10	03/12/14 03:20	M-04
4,4'-DDE	ND	50	ng/l	10	03/12/14 03:20	M-04
4,4'-DDT	ND	50	ng/l	10	03/12/14 03:20	M-04
Aldrin	ND	50	ng/l	10	03/12/14 03:20	M-04
alpha-BHC	ND	50	ng/l	10	03/12/14 03:20	M-04
alpha-Chlordane	ND	50	ng/l	10	03/12/14 03:20	M-04
Aroclor 1016	ND	1000	ng/l	10	03/12/14 03:20	M-04
Aroclor 1221	ND	1000	ng/l	10	03/12/14 03:20	M-04
Aroclor 1232	ND	1000	ng/l	10	03/12/14 03:20	M-04
Aroclor 1242	ND	1000	ng/l	10	03/12/14 03:20	M-04
Aroclor 1248	ND	1000	ng/l	10	03/12/14 03:20	M-04
Aroclor 1254	ND	1000	ng/l	10	03/12/14 03:20	M-04
Aroclor 1260	ND	1000	ng/l	10	03/12/14 03:20	M-04
beta-BHC	ND	50	ng/l	10	03/12/14 03:20	M-04
Chlordane (tech)	ND	1000	ng/l	10	03/12/14 03:20	M-04
cis-Nonachlor	ND	50	ng/l	10	03/12/14 03:20	M-04
delta-BHC	ND	50	ng/l	10	03/12/14 03:20	M-04
Dieldrin	ND	50	ng/l	10	03/12/14 03:20	M-04
Endosulfan I	ND	50	ng/l	10	03/12/14 03:20	M-04
Endosulfan II	ND	50	ng/l	10	03/12/14 03:20	M-04
Endosulfan sulfate	ND	50	ng/l	10	03/12/14 03:20	M-04
Endrin	ND	50	ng/l	10	03/12/14 03:20	M-04
Endrin aldehyde	ND	50	ng/l	10	03/12/14 03:20	M-04
gamma-BHC (Lindane)	ND	50	ng/l	10	03/12/14 03:20	M-04
gamma-Chlordane	ND	50	ng/l	10	03/12/14 03:20	M-04
Heptachlor	ND	50	ng/l	10	03/12/14 03:20	M-04
Heptachlor epoxide	ND	50	ng/l	10	03/12/14 03:20	M-04

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4B28113-05 **LAILG - NGA178 - 2**

Sampled: 02/28/14 09:55 **Sampled By:** Scott Jordan **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Methoxychlor	ND		50	ng/l	10	03/12/14 03:20	M-04
Mirex	ND		50	ng/l	10	03/12/14 03:20	M-04
Toxaphene	ND		5000	ng/l	10	03/12/14 03:20	M-04
trans-Nonachlor	ND		50	ng/l	10	03/12/14 03:20	M-04
Surr: Decachlorobiphenyl	*62 %*	Conc:*61.7*	*0.1-118*	%			*M-04*
Surr: Tetrachloro-meta-xylene	*94 %*	Conc:*93.8*	*12-117*	%			*M-04*

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1 Batch: W4C0565 Prepared: 03/11/14 12:17 Analyst: Rebecca Juea Song

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	**0.87**	0.10	mg/l	1	03/13/14 18:59	

Method: EPA 365.1 Batch: W4C0009 Prepared: 03/01/14 12:40 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	**2.2**	0.050	mg/l	25	03/01/14 14:58	**
o-Phosphate as P, dissolved	**2200**	50	ug/l	25	03/01/14 14:58	**

Method: EPA 365.1 Batch: W4C0901 Prepared: 03/17/14 16:19 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	**3.6**	0.50	mg/l	1	03/20/14 10:22	

Method: EPA 365.1 Batch: W4C0935 Prepared: 03/18/14 09:59 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	**2.4**	0.50	mg/l	1	03/20/14 14:44	M-06

Method: SM 2540C Batch: W4C0327 Prepared: 03/06/14 14:59 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	**940**	10	mg/l	1	03/06/14 16:52	

Method: SM 2540D Batch: W4C0255 Prepared: 03/05/14 19:19 Analyst: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	**270**	5	mg/l	1	03/05/14 20:50	

Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	**324**	0.250	mg/l	1	03/13/14 13:49	

Method: EPA 200.7 Batch: W4C0593 Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	**130**	0.100	mg/l	1	03/13/14 13:49	

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4B28113-05 **LAILG - NGA178 - 2**

Sampled: 02/28/14 09:55 **Sampled By:** Scott Jordan **Matrix:** Water

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	**30**	0.50	ug/l	1	03/17/14 23:50	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4C0266 Prepared: 03/06/14 08:23 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		20	ng/l	10	03/18/14 04:27	M-04
Bifenthrin	**40**		20	ng/l	10	03/18/14 04:27	M-04
Cyfluthrin	ND		20	ng/l	10	03/18/14 04:27	M-04
Cypermethrin	ND		20	ng/l	10	03/18/14 04:27	M-04
Deltamethrin/Tralomethrin	ND		20	ng/l	10	03/18/14 04:27	M-04
Dichloran	ND		20	ng/l	10	03/18/14 04:27	M-04
Fenpropathrin (Danitol)	ND		20	ng/l	10	03/18/14 04:27	M-04
Fenvalerate/Esfenvalerate	ND		20	ng/l	10	03/18/14 04:27	M-04
L-Cyhalothrin	ND		20	ng/l	10	03/18/14 04:27	M-04
Pendimethalin	ND		20	ng/l	10	03/18/14 04:27	M-04
Permethrin	ND		50	ng/l	10	03/18/14 04:27	M-04
Prallethrin	ND		20	ng/l	10	03/18/14 04:27	M-04
Sumithrin	ND		100	ng/l	10	03/18/14 04:27	M-04
Tefluthrin	ND		20	ng/l	10	03/18/14 04:27	M-04
Surr: Perylene-d12	*126 %*	Conc:*314*	*2-205*	%			*M-04*
Surr: Triphenyl phosphate	*285 %*	Conc:*713*	*6-222*	%			*M-04, S-GC*

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4B28113-05RE1 **LAILG - NGA178 - 2**

Sampled: 02/28/14 09:55 **Sampled By:** Scott Jordan **Matrix:** Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2M Batch: W4C0643 Prepared: 03/12/14 12:19 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND		10	ng/l	1	03/17/14 18:28	
Bolstar	ND		10	ng/l	1	03/17/14 18:28	
Chlorpyrifos	ND		10	ng/l	1	03/17/14 18:28	
Coumaphos	ND		10	ng/l	1	03/17/14 18:28	
Demeton-o	ND		10	ng/l	1	03/17/14 18:28	
Demeton-s	ND		10	ng/l	1	03/17/14 18:28	
Diazinon	ND		10	ng/l	1	03/17/14 18:28	
Dichlorvos	ND		10	ng/l	1	03/17/14 18:28	
Dimethoate	ND		10	ng/l	1	03/17/14 18:28	
Disulfoton	ND		10	ng/l	1	03/17/14 18:28	
Ethoprop	ND		10	ng/l	1	03/17/14 18:28	
Ethyl parathion	ND		10	ng/l	1	03/17/14 18:28	
Fensulfothion	ND		10	ng/l	1	03/17/14 18:28	
Fenthion	ND		10	ng/l	1	03/17/14 18:28	
Malathion	ND		10	ng/l	1	03/17/14 18:28	
Merphos	ND		10	ng/l	1	03/17/14 18:28	
Methyl parathion	ND		10	ng/l	1	03/17/14 18:28	
Mevinphos	ND		10	ng/l	1	03/17/14 18:28	
Naled	ND		10	ng/l	1	03/17/14 18:28	
Phorate	ND		10	ng/l	1	03/17/14 18:28	
Ronnel	ND		10	ng/l	1	03/17/14 18:28	
Stirophos	ND		10	ng/l	1	03/17/14 18:28	
Tokuthion (Prothiofos)	ND		10	ng/l	1	03/17/14 18:28	
Trichloronate	ND		10	ng/l	1	03/17/14 18:28	
Surr: 1,3-Dimethyl-2-nitrobenzene	*106 %*	Conc:*529*	*76-128*	%			
Surr: Triphenyl phosphate	*104 %*	Conc:*522*	*40-163*	%			

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Date Reported: 03/31/14 10:06

4B28113-06 **LAILG - NGA19 - 7**

Sampled: 02/28/14 05:50 **Sampled By:** Scott Jordan **Matrix:** Water

Anions by IC, EPA Method 300.0/300.1/326

Method: EPA 300.0 Batch: W4B1338 Prepared: 02/28/14 20:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	**53**	0.11	mg/l	1	03/01/14 00:53	

Method: EPA 300.0 Batch: W4C0134 Prepared: 03/04/14 10:23 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	**120**	5.0	mg/l	10	03/04/14 19:57	
Sulfate as SO4	**160**	5.0	mg/l	10	03/04/14 19:57	

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	25	ng/l	5	03/12/14 03:51	M-04
2,4'-DDE	ND	25	ng/l	5	03/12/14 03:51	M-04
2,4'-DDT	ND	25	ng/l	5	03/12/14 03:51	M-04
4,4'-DDD	ND	25	ng/l	5	03/12/14 03:51	M-04
4,4'-DDE	ND	25	ng/l	5	03/12/14 03:51	M-04
4,4'-DDT	ND	25	ng/l	5	03/12/14 03:51	M-04
Aldrin	ND	25	ng/l	5	03/12/14 03:51	M-04
alpha-BHC	ND	25	ng/l	5	03/12/14 03:51	M-04
alpha-Chlordane	ND	25	ng/l	5	03/12/14 03:51	M-04
Aroclor 1016	ND	500	ng/l	5	03/12/14 03:51	M-04
Aroclor 1221	ND	500	ng/l	5	03/12/14 03:51	M-04
Aroclor 1232	ND	500	ng/l	5	03/12/14 03:51	M-04
Aroclor 1242	ND	500	ng/l	5	03/12/14 03:51	M-04
Aroclor 1248	ND	500	ng/l	5	03/12/14 03:51	M-04
Aroclor 1254	ND	500	ng/l	5	03/12/14 03:51	M-04
Aroclor 1260	ND	500	ng/l	5	03/12/14 03:51	M-04
beta-BHC	ND	25	ng/l	5	03/12/14 03:51	M-04
Chlordane (tech)	ND	500	ng/l	5	03/12/14 03:51	M-04
cis-Nonachlor	ND	25	ng/l	5	03/12/14 03:51	M-04
delta-BHC	ND	25	ng/l	5	03/12/14 03:51	M-04
Dieldrin	ND	25	ng/l	5	03/12/14 03:51	M-04
Endosulfan I	ND	25	ng/l	5	03/12/14 03:51	M-04
Endosulfan II	ND	25	ng/l	5	03/12/14 03:51	M-04
Endosulfan sulfate	ND	25	ng/l	5	03/12/14 03:51	M-04
Endrin	ND	25	ng/l	5	03/12/14 03:51	M-04
Endrin aldehyde	ND	25	ng/l	5	03/12/14 03:51	M-04
gamma-BHC (Lindane)	ND	25	ng/l	5	03/12/14 03:51	M-04
gamma-Chlordane	ND	25	ng/l	5	03/12/14 03:51	M-04
Heptachlor	ND	25	ng/l	5	03/12/14 03:51	M-04
Heptachlor epoxide	ND	25	ng/l	5	03/12/14 03:51	M-04

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4B28113-06 LAILG - NGA19 - 7

Sampled: 02/28/14 05:50 **Sampled By:** Scott Jordan **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Methoxychlor	ND		25	ng/l	5	03/12/14 03:51	M-04
Mirex	ND		25	ng/l	5	03/12/14 03:51	M-04
Toxaphene	ND		2500	ng/l	5	03/12/14 03:51	M-04
trans-Nonachlor	ND		25	ng/l	5	03/12/14 03:51	M-04
Surr: Decachlorobiphenyl	*55 %*	Conc:*55.0*	*0.1-118*	%			*M-04*
Surr: Tetrachloro-meta-xylene	*61 %*	Conc:*60.9*	*12-117*	%			*M-04*

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1 Batch: W4C0565 Prepared: 03/11/14 12:17 Analyst: Rebecca Juea Song

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	**1.4**	0.20	mg/l	2	03/13/14 18:59	

Method: EPA 365.1 Batch: W4C0009 Prepared: 03/01/14 12:40 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	**2.4**	0.050	mg/l	25	03/01/14 15:00	**
o-Phosphate as P, dissolved	**2400**	50	ug/l	25	03/01/14 15:00	**

Method: EPA 365.1 Batch: W4C0397 Prepared: 03/07/14 12:25 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	**4.7**	0.25	mg/l	1	03/17/14 11:29	M-06

Method: EPA 365.1 Batch: W4C0935 Prepared: 03/18/14 09:59 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	**2.8**	0.25	mg/l	1	03/20/14 14:45	M-06

Method: SM 2540C Batch: W4C0327 Prepared: 03/06/14 14:59 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	**1000**	10	mg/l	1	03/06/14 16:52	

Method: SM 2540D Batch: W4C0238 Prepared: 03/05/14 16:12 Analyst: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	**650**	5	mg/l	1	03/05/14 17:50	

Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	**319**	0.250	mg/l	1	03/13/14 13:51	

Method: EPA 200.7 Batch: W4C0593 Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	**128**	0.100	mg/l	1	03/13/14 13:51	

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4B28113-06 **LAILG - NGA19 - 7**

Sampled: 02/28/14 05:50 **Sampled By:** Scott Jordan **Matrix:** Water

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	**56**	0.50	ug/l	1	03/17/14 23:55	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4C0535 Prepared: 03/11/14 08:44 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	03/20/14 17:21	
Bifenthrin	**2.0**		2.0	ng/l	1	03/20/14 17:21	
Cyfluthrin	ND		2.0	ng/l	1	03/20/14 17:21	
Cypermethrin	ND		2.0	ng/l	1	03/20/14 17:21	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	03/20/14 17:21	
Dichloran	ND		2.0	ng/l	1	03/20/14 17:21	
Fenpropathrin (Danitol)	**28**		2.0	ng/l	1	03/20/14 17:21	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	03/20/14 17:21	
L-Cyhalothrin	ND		2.0	ng/l	1	03/20/14 17:21	
Pendimethalin	ND		2.0	ng/l	1	03/20/14 17:21	
Permethrin	ND		5.0	ng/l	1	03/20/14 17:21	
Prallethrin	ND		2.0	ng/l	1	03/20/14 17:21	
Sumithrin	ND		10	ng/l	1	03/20/14 17:21	
Tefluthrin	ND		2.0	ng/l	1	03/20/14 17:21	
Surr: Perylene-d12	*95 %*	Conc:*238*	*2-205*	%			
Surr: Triphenyl phosphate	*82 %*	Conc:*205*	*6-222*	%			

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4B28113-06RE1 **LAILG - NGA19 - 7**

Sampled: 02/28/14 05:50 **Sampled By:** Scott Jordan **Matrix:** Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2M Batch: W4C0643 Prepared: 03/12/14 12:19 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND		10	ng/l	1	03/17/14 18:57	
Bolstar	ND		10	ng/l	1	03/17/14 18:57	
Chlorpyrifos	**22**		10	ng/l	1	03/17/14 18:57	
Coumaphos	ND		10	ng/l	1	03/17/14 18:57	
Demeton-o	ND		10	ng/l	1	03/17/14 18:57	
Demeton-s	ND		10	ng/l	1	03/17/14 18:57	
Diazinon	ND		10	ng/l	1	03/17/14 18:57	
Dichlorvos	ND		10	ng/l	1	03/17/14 18:57	
Dimethoate	ND		10	ng/l	1	03/17/14 18:57	
Disulfoton	ND		10	ng/l	1	03/17/14 18:57	
Ethoprop	ND		10	ng/l	1	03/17/14 18:57	
Ethyl parathion	ND		10	ng/l	1	03/17/14 18:57	
Fensulfothion	ND		10	ng/l	1	03/17/14 18:57	
Fenthion	ND		10	ng/l	1	03/17/14 18:57	
Malathion	ND		10	ng/l	1	03/17/14 18:57	
Merphos	ND		10	ng/l	1	03/17/14 18:57	
Methyl parathion	ND		10	ng/l	1	03/17/14 18:57	
Mevinphos	ND		10	ng/l	1	03/17/14 18:57	
Naled	ND		10	ng/l	1	03/17/14 18:57	
Phorate	ND		10	ng/l	1	03/17/14 18:57	
Ronnel	ND		10	ng/l	1	03/17/14 18:57	
Stirophos	ND		10	ng/l	1	03/17/14 18:57	
Tokuthion (Prothiofos)	ND		10	ng/l	1	03/17/14 18:57	
Trichloronate	ND		10	ng/l	1	03/17/14 18:57	
Surr: 1,3-Dimethyl-2-nitrobenzene	*103 %*	Conc:*515*	*76-128*	%			
Surr: Triphenyl phosphate	*138 %*	Conc:*688*	*40-163*	%			

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4B28113-07 **LAILG - NGA184 - 3**

Sampled: 02/28/14 07:10 **Sampled By:** Scott Jordan **Matrix:** Water

Anions by IC, EPA Method 300.0/300.1/326

Method: EPA 300.0 Batch: W4B1338 Prepared: 02/28/14 20:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	**2.5**	0.50	mg/l	1	03/01/14 01:11	
NO2+NO3 as N	**0.40**	0.11	mg/l	1	03/01/14 01:11	
Sulfate as SO4	**1.6**	0.50	mg/l	1	03/01/14 01:11	

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	25	ng/l	5	03/12/14 04:21	M-04
2,4'-DDE	ND	25	ng/l	5	03/12/14 04:21	M-04
2,4'-DDT	ND	25	ng/l	5	03/12/14 04:21	M-04
4,4´-DDD	ND	25	ng/l	5	03/12/14 04:21	M-04
4,4´-DDE	ND	25	ng/l	5	03/12/14 04:21	M-04
4,4´-DDT	ND	25	ng/l	5	03/12/14 04:21	M-04
Aldrin	ND	25	ng/l	5	03/12/14 04:21	M-04
alpha-BHC	ND	25	ng/l	5	03/12/14 04:21	M-04
alpha-Chlordane	ND	25	ng/l	5	03/12/14 04:21	M-04
Aroclor 1016	ND	500	ng/l	5	03/12/14 04:21	M-04
Aroclor 1221	ND	500	ng/l	5	03/12/14 04:21	M-04
Aroclor 1232	ND	500	ng/l	5	03/12/14 04:21	M-04
Aroclor 1242	ND	500	ng/l	5	03/12/14 04:21	M-04
Aroclor 1248	ND	500	ng/l	5	03/12/14 04:21	M-04
Aroclor 1254	ND	500	ng/l	5	03/12/14 04:21	M-04
Aroclor 1260	ND	500	ng/l	5	03/12/14 04:21	M-04
beta-BHC	ND	25	ng/l	5	03/12/14 04:21	M-04
Chlordane (tech)	ND	500	ng/l	5	03/12/14 04:21	M-04
cis-Nonachlor	ND	25	ng/l	5	03/12/14 04:21	M-04
delta-BHC	ND	25	ng/l	5	03/12/14 04:21	M-04
Dieldrin	ND	25	ng/l	5	03/12/14 04:21	M-04
Endosulfan I	ND	25	ng/l	5	03/12/14 04:21	M-04
Endosulfan II	ND	25	ng/l	5	03/12/14 04:21	M-04
Endosulfan sulfate	ND	25	ng/l	5	03/12/14 04:21	M-04
Endrin	ND	25	ng/l	5	03/12/14 04:21	M-04
Endrin aldehyde	ND	25	ng/l	5	03/12/14 04:21	M-04
gamma-BHC (Lindane)	ND	25	ng/l	5	03/12/14 04:21	M-04
gamma-Chlordane	ND	25	ng/l	5	03/12/14 04:21	M-04
Heptachlor	ND	25	ng/l	5	03/12/14 04:21	M-04
Heptachlor epoxide	ND	25	ng/l	5	03/12/14 04:21	M-04
Methoxychlor	ND	25	ng/l	5	03/12/14 04:21	M-04
Mirex	ND	25	ng/l	5	03/12/14 04:21	M-04
Toxaphene	ND	2500	ng/l	5	03/12/14 04:21	M-04

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4B28113-07 **LAILG - NGA184 - 3**

Sampled: 02/28/14 07:10 **Sampled By:** Scott Jordan **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
trans-Nonachlor	ND		25	ng/l	5	03/12/14 04:21	M-04
Surr: Decachlorobiphenyl	*65 %*	Conc:*64.8*	*0.1-118*	%			*M-04*
Surr: Tetrachloro-meta-xylene	*74 %*	Conc:*73.6*	*12-117*	%			*M-04*

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1 Batch: W4C0565 Prepared: 03/11/14 12:17 Analyst: Rebecca Juea Song

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	**0.23**	0.10	mg/l	1	03/13/14 18:59	

Method: EPA 365.1 Batch: W4C0009 Prepared: 03/01/14 12:40 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	**0.33**	0.0040	mg/l	2	03/01/14 15:01	**
o-Phosphate as P, dissolved	**330**	4.0	ug/l	2	03/01/14 15:01	**

Method: EPA 365.1 Batch: W4C0397 Prepared: 03/07/14 12:25 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	**0.72**	0.10	mg/l	5	03/17/14 11:44	M-06

Method: EPA 365.1 Batch: W4C0935 Prepared: 03/18/14 09:59 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	**0.44**	0.040	mg/l	2	03/20/14 15:01	M-06

Method: SM 2540C Batch: W4C0327 Prepared: 03/06/14 14:59 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	**41**	10	mg/l	1	03/06/14 16:52	

Method: SM 2540D Batch: W4C0255 Prepared: 03/05/14 19:19 Analyst: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	**160**	5	mg/l	1	03/05/14 20:50	

Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	**13.8**	0.250	mg/l	1	03/13/14 13:53	

Method: EPA 200.7 Batch: W4C0593 Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	**5.54**	0.100	mg/l	1	03/13/14 13:53	

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier

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4B28113-07 **LAILG - NGA184 - 3**

Sampled: 02/28/14 07:10 **Sampled By:** Scott Jordan **Matrix:** Water

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	**7.9**	0.50	ug/l	1	03/17/14 23:59	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4C0535 Prepared: 03/11/14 08:44 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	03/20/14 17:45	
Bifenthrin	**2.5**		2.0	ng/l	1	03/20/14 17:45	
Cyfluthrin	ND		2.0	ng/l	1	03/20/14 17:45	
Cypermethrin	ND		2.0	ng/l	1	03/20/14 17:45	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	03/20/14 17:45	
Dichloran	ND		2.0	ng/l	1	03/20/14 17:45	
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	03/20/14 17:45	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	03/20/14 17:45	
L-Cyhalothrin	ND		2.0	ng/l	1	03/20/14 17:45	
Pendimethalin	ND		2.0	ng/l	1	03/20/14 17:45	
Permethrin	ND		5.0	ng/l	1	03/20/14 17:45	
Prallethrin	ND		2.0	ng/l	1	03/20/14 17:45	
Sumithrin	ND		10	ng/l	1	03/20/14 17:45	
Tefluthrin	ND		2.0	ng/l	1	03/20/14 17:45	
Surr: Perylene-d12	*114 %*	Conc:*284*	*2-205*	%			
Surr: Triphenyl phosphate	*103 %*	Conc:*257*	*6-222*	%			

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4B28113-07RE1 **LAILG - NGA184 - 3**

Sampled: 02/28/14 07:10 **Sampled By:** Scott Jordan **Matrix:** Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2M Batch: W4C0643 Prepared: 03/12/14 12:19 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND		10	ng/l	1	03/17/14 19:26	
Bolstar	ND		10	ng/l	1	03/17/14 19:26	
Chlorpyrifos	ND		10	ng/l	1	03/17/14 19:26	
Coumaphos	ND		10	ng/l	1	03/17/14 19:26	
Demeton-o	ND		10	ng/l	1	03/17/14 19:26	
Demeton-s	ND		10	ng/l	1	03/17/14 19:26	
Diazinon	ND		10	ng/l	1	03/17/14 19:26	
Dichlorvos	ND		10	ng/l	1	03/17/14 19:26	
Dimethoate	ND		10	ng/l	1	03/17/14 19:26	
Disulfoton	ND		10	ng/l	1	03/17/14 19:26	
Ethoprop	ND		10	ng/l	1	03/17/14 19:26	
Ethyl parathion	ND		10	ng/l	1	03/17/14 19:26	
Fensulfothion	ND		10	ng/l	1	03/17/14 19:26	
Fenthion	ND		10	ng/l	1	03/17/14 19:26	
Malathion	ND		10	ng/l	1	03/17/14 19:26	
Merphos	ND		10	ng/l	1	03/17/14 19:26	
Methyl parathion	ND		10	ng/l	1	03/17/14 19:26	
Mevinphos	ND		10	ng/l	1	03/17/14 19:26	
Naled	ND		10	ng/l	1	03/17/14 19:26	
Phorate	ND		10	ng/l	1	03/17/14 19:26	
Ronnel	ND		10	ng/l	1	03/17/14 19:26	
Stirophos	ND		10	ng/l	1	03/17/14 19:26	
Tokuthion (Prothiofos)	ND		10	ng/l	1	03/17/14 19:26	
Trichloronate	ND		10	ng/l	1	03/17/14 19:26	
Surr: 1,3-Dimethyl-2-nitrobenzene	*109 %*	Conc:*545*	*76-128*	%			
Surr: Triphenyl phosphate	*91 %*	Conc:*455*	*40-163*	%			

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Date Reported: 03/31/14 10:06

4B28113-08 LAILG - NGA- DUP

Sampled: 02/28/14 06:05 **Sampled By:** Scott Jordan **Matrix:** Water

Anions by IC, EPA Method 300.0/300.1/326

Method: EPA 300.0 Batch: W4B1338 Prepared: 02/28/14 20:00 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	**51**	0.11	mg/l	1	03/01/14 01:30	

Method: EPA 300.0 Batch: W4C0134 Prepared: 03/04/14 10:23 Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	**120**	5.0	mg/l	10	03/04/14 19:57	
Sulfate as SO4	**170**	5.0	mg/l	10	03/04/14 19:57	

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	25	ng/l	5	03/12/14 04:52	M-04
2,4'-DDE	ND	25	ng/l	5	03/12/14 04:52	M-04
2,4'-DDT	ND	25	ng/l	5	03/12/14 04:52	M-04
4,4´-DDD	ND	25	ng/l	5	03/12/14 04:52	M-04
4,4´-DDE	ND	25	ng/l	5	03/12/14 04:52	M-04
4,4´-DDT	ND	25	ng/l	5	03/12/14 04:52	M-04
Aldrin	ND	25	ng/l	5	03/12/14 04:52	M-04
alpha-BHC	ND	25	ng/l	5	03/12/14 04:52	M-04
alpha-Chlordane	ND	25	ng/l	5	03/12/14 04:52	M-04
Aroclor 1016	ND	500	ng/l	5	03/12/14 04:52	M-04
Aroclor 1221	ND	500	ng/l	5	03/12/14 04:52	M-04
Aroclor 1232	ND	500	ng/l	5	03/12/14 04:52	M-04
Aroclor 1242	ND	500	ng/l	5	03/12/14 04:52	M-04
Aroclor 1248	ND	500	ng/l	5	03/12/14 04:52	M-04
Aroclor 1254	ND	500	ng/l	5	03/12/14 04:52	M-04
Aroclor 1260	ND	500	ng/l	5	03/12/14 04:52	M-04
beta-BHC	ND	25	ng/l	5	03/12/14 04:52	M-04
Chlordane (tech)	ND	500	ng/l	5	03/12/14 04:52	M-04
cis-Nonachlor	ND	25	ng/l	5	03/12/14 04:52	M-04
delta-BHC	ND	25	ng/l	5	03/12/14 04:52	M-04
Dieldrin	ND	25	ng/l	5	03/12/14 04:52	M-04
Endosulfan I	ND	25	ng/l	5	03/12/14 04:52	M-04
Endosulfan II	ND	25	ng/l	5	03/12/14 04:52	M-04
Endosulfan sulfate	ND	25	ng/l	5	03/12/14 04:52	M-04
Endrin	ND	25	ng/l	5	03/12/14 04:52	M-04
Endrin aldehyde	ND	25	ng/l	5	03/12/14 04:52	M-04
gamma-BHC (Lindane)	ND	25	ng/l	5	03/12/14 04:52	M-04
gamma-Chlordane	ND	25	ng/l	5	03/12/14 04:52	M-04
Heptachlor	ND	25	ng/l	5	03/12/14 04:52	M-04
Heptachlor epoxide	ND	25	ng/l	5	03/12/14 04:52	M-04

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230 Dove Ct.
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Date Received: 02/28/14 16:10
Date Reported: 03/31/14 10:06

4B28113-08 LAILG - NGA- DUP

Sampled: 02/28/14 06:05 **Sampled By:** Scott Jordan **Matrix:** Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608 Batch: W4C0005 Prepared: 03/01/14 09:09 Analyst: Maxwell Wang

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Methoxychlor	ND		25	ng/l	5	03/12/14 04:52	M-04
Mirex	ND		25	ng/l	5	03/12/14 04:52	M-04
Toxaphene	ND		2500	ng/l	5	03/12/14 04:52	M-04
trans-Nonachlor	ND		25	ng/l	5	03/12/14 04:52	M-04
Surr: Decachlorobiphenyl	*38 %*	Conc:*38.1*	*0.1-118*	%			*M-04*
Surr: Tetrachloro-meta-xylene	*36 %*	Conc:*35.9*	*12-117*	%			*M-04*

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1 Batch: W4C0565 Prepared: 03/11/14 12:17 Analyst: Rebecca Juea Song

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	**1.4**	0.20	mg/l	2	03/13/14 18:59	

Method: EPA 365.1 Batch: W4C0009 Prepared: 03/01/14 12:40 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	**2.8**	0.050	mg/l	25	03/01/14 15:03	**
o-Phosphate as P, dissolved	**2800**	50	ug/l	25	03/01/14 15:03	**

Method: EPA 365.1 Batch: W4C0397 Prepared: 03/07/14 12:25 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	**5.4**	0.50	mg/l	2	03/17/14 11:45	M-06

Method: EPA 365.1 Batch: W4C0935 Prepared: 03/18/14 09:59 Analyst: Helen T. Le

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	**3.1**	0.25	mg/l	1	03/20/14 14:48	M-06

Method: SM 2540C Batch: W4C0327 Prepared: 03/06/14 14:59 Analyst: Nina Katrina Reyes Aranas

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	**1100**	10	mg/l	1	03/06/14 16:52	

Method: SM 2540D Batch: W4C0255 Prepared: 03/05/14 19:19 Analyst: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	**470**	5	mg/l	1	03/05/14 20:50	

Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	**320**	0.250	mg/l	1	03/13/14 13:56	

Method: EPA 200.7 Batch: W4C0593 Prepared: 03/11/14 16:51 Analyst: Jessie Kristie

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	**128**	0.100	mg/l	1	03/13/14 13:56	

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4B28113-08 LAILG - NGA- DUP

Sampled: 02/28/14 06:05 **Sampled By:** Scott Jordan **Matrix:** Water

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4C0592 Prepared: 03/11/14 16:46 Analyst: Royuan Rosario Lopez

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	**57**		0.50	ug/l	1	03/18/14 00:16	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4C0535 Prepared: 03/11/14 08:44 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	03/20/14 18:08	
Bifenthrin	ND		2.0	ng/l	1	03/20/14 18:08	
Cyfluthrin	ND		2.0	ng/l	1	03/20/14 18:08	
Cypermethrin	ND		2.0	ng/l	1	03/20/14 18:08	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	03/20/14 18:08	
Dichloran	ND		2.0	ng/l	1	03/20/14 18:08	
Fenpropathrin (Danitol)	**32**		2.0	ng/l	1	03/20/14 18:08	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	03/20/14 18:08	
L-Cyhalothrin	ND		2.0	ng/l	1	03/20/14 18:08	
Pendimethalin	ND		2.0	ng/l	1	03/20/14 18:08	
Permethrin	ND		5.0	ng/l	1	03/20/14 18:08	
Prallethrin	ND		2.0	ng/l	1	03/20/14 18:08	
Sumithrin	ND		10	ng/l	1	03/20/14 18:08	
Tefluthrin	ND		2.0	ng/l	1	03/20/14 18:08	
Surr: Perylene-d12	*76 %*	Conc:*189*	*2-205*	%			
Surr: Triphenyl phosphate	*68 %*	Conc:*169*	*6-222*	%			

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4B28113-08RE1 **LAILG - NGA- DUP**

Sampled: 02/28/14 06:05 **Sampled By:** Scott Jordan **Matrix:** Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2M Batch: W4C0643 Prepared: 03/12/14 12:19 Analyst: Chris Samatmanakit

Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND		10	ng/l	1	03/17/14 19:55	
Bolstar	ND		10	ng/l	1	03/17/14 19:55	
Chlorpyrifos	**31**		10	ng/l	1	03/17/14 19:55	
Coumaphos	ND		10	ng/l	1	03/17/14 19:55	
Demeton-o	ND		10	ng/l	1	03/17/14 19:55	
Demeton-s	ND		10	ng/l	1	03/17/14 19:55	
Diazinon	ND		10	ng/l	1	03/17/14 19:55	
Dichlorvos	ND		10	ng/l	1	03/17/14 19:55	
Dimethoate	ND		10	ng/l	1	03/17/14 19:55	
Disulfoton	ND		10	ng/l	1	03/17/14 19:55	
Ethoprop	ND		10	ng/l	1	03/17/14 19:55	
Ethyl parathion	ND		10	ng/l	1	03/17/14 19:55	
Fensulfothion	ND		10	ng/l	1	03/17/14 19:55	
Fenthion	ND		10	ng/l	1	03/17/14 19:55	
Malathion	ND		10	ng/l	1	03/17/14 19:55	
Merphos	ND		10	ng/l	1	03/17/14 19:55	
Methyl parathion	ND		10	ng/l	1	03/17/14 19:55	
Mevinphos	ND		10	ng/l	1	03/17/14 19:55	
Naled	ND		10	ng/l	1	03/17/14 19:55	
Phorate	ND		10	ng/l	1	03/17/14 19:55	
Ronnel	ND		10	ng/l	1	03/17/14 19:55	
Stirophos	ND		10	ng/l	1	03/17/14 19:55	
Tokuthion (Prothiofos)	ND		10	ng/l	1	03/17/14 19:55	
Trichloronate	ND		10	ng/l	1	03/17/14 19:55	
Surr: 1,3-Dimethyl-2-nitrobenzene	*90 %*	Conc:*450*	*76-128*	%			
Surr: Triphenyl phosphate	*135 %*	Conc:*675*	*40-163*	%			

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QUALITY CONTROL SECTION

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Date Reported: 03/31/14 10:06

Anions by IC, EPA Method 300.0/300.1/326 - Quality Control

Batch W4B1338 - EPA 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4B1338-BLK1)				Analyzed: 02/28/14 14:37						
Chloride, Total	ND	0.50	mg/l							
NO2+NO3 as N	ND	0.11	mg/l							
Sulfate as SO4	ND	0.50	mg/l							
Blank (W4B1338-BLK2)				Analyzed: 03/04/14 10:56						
Chloride, Total	ND	0.50	mg/l							
NO2+NO3 as N	ND	0.11	mg/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W4B1338-BS1)				Analyzed: 02/28/14 14:56						
Chloride, Total	3.82	0.50	mg/l	4.00		96	90-110			
NO2+NO3 as N	3.84	0.11	mg/l	3.80		101	90-110			
Sulfate as SO4	7.80	0.50	mg/l	8.00		97	90-110			
LCS (W4B1338-BS2)				Analyzed: 03/04/14 11:15						
Chloride, Total	3.81	0.50	mg/l	4.00		95	90-110			
NO2+NO3 as N	3.62	0.11	mg/l	3.80		95	90-110			
Sulfate as SO4	7.56	0.50	mg/l	8.00		94	90-110			
Matrix Spike (W4B1338-MS1)	**Source: 4B27069-01**			Analyzed: 02/28/14 18:02						
Chloride, Total	206	12	mg/l	100	115	91	76-118			
NO2+NO3 as N	98.4	2.8	mg/l	95.0	4.08	99	84-115			
Sulfate as SO4	409	12	mg/l	200	221	94	78-111			
Matrix Spike (W4B1338-MS2)	**Source: 4B27069-02**			Analyzed: 02/28/14 18:58						
Chloride, Total	135	12	mg/l	100	41.9	93	76-118			
NO2+NO3 as N	95.8	2.8	mg/l	95.0	1.28	99	84-115			
Sulfate as SO4	287	12	mg/l	200	95.7	96	78-111			
Matrix Spike Dup (W4B1338-MSD1)	**Source: 4B27069-01**			Analyzed: 02/28/14 18:20						
Chloride, Total	205	12	mg/l	100	115	90	76-118	0.5	20	
NO2+NO3 as N	101	2.8	mg/l	95.0	4.08	102	84-115	3	20	
Sulfate as SO4	404	12	mg/l	200	221	92	78-111	1	20	
Matrix Spike Dup (W4B1338-MSD2)	**Source: 4B27069-02**			Analyzed: 02/28/14 19:16						
Chloride, Total	138	12	mg/l	100	41.9	96	76-118	2	20	
NO2+NO3 as N	99.1	2.8	mg/l	95.0	1.28	103	84-115	3	20	
Sulfate as SO4	294	12	mg/l	200	95.7	99	78-111	2	20	

Batch W4C0134 - EPA 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0134-BLK1)				Analyzed: 03/04/14 19:57						
Chloride, Total	ND	0.50	mg/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W4C0134-BS1)				Analyzed: 03/04/14 19:57						
Chloride, Total	3.79	0.50	mg/l	4.00		95	90-110			

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Anions by IC, EPA Method 300.0/300.1/326 - Quality Control

Batch W4C0134 - EPA 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W4C0134-BS1)				Analyzed: 03/04/14 19:57						
Sulfate as SO4	7.77	0.50	mg/l	8.00		97	90-110			
Matrix Spike (W4C0134-MS1)	Source: 4B26022-01			Analyzed: 03/04/14 19:57						
Chloride, Total	72.3	5.0	mg/l	40.0	34.6	94	76-118			
Sulfate as SO4	129	5.0	mg/l	80.0	52.0	96	78-111			
Matrix Spike (W4C0134-MS2)	Source: 4C03056-01			Analyzed: 03/04/14 19:57						
Chloride, Total	56.5	5.0	mg/l	40.0	20.3	90	76-118			
Sulfate as SO4	98.1	5.0	mg/l	80.0	20.1	97	78-111			
Matrix Spike Dup (W4C0134-MSD1)	Source: 4B26022-01			Analyzed: 03/04/14 19:57						
Chloride, Total	70.9	5.0	mg/l	40.0	34.6	91	76-118	2	20	
Sulfate as SO4	130	5.0	mg/l	80.0	52.0	98	78-111	1	20	
Matrix Spike Dup (W4C0134-MSD2)	Source: 4C03056-01			Analyzed: 03/04/14 19:57						
Chloride, Total	55.9	5.0	mg/l	40.0	20.3	89	76-118	1	20	
Sulfate as SO4	98.3	5.0	mg/l	80.0	20.1	98	78-111	0.2	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4C0005 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0005-BLK1)				Analyzed: 03/11/14 15:37						
2,4'-DDD	ND	5.0	ng/l							
2,4'-DDE	ND	5.0	ng/l							
2,4'-DDT	ND	5.0	ng/l							
4,4´-DDD	ND	5.0	ng/l							
4,4´-DDE	ND	5.0	ng/l							
4,4´-DDT	ND	5.0	ng/l							
Aldrin	ND	5.0	ng/l							
alpha-BHC	ND	5.0	ng/l							
alpha-Chlordane	ND	5.0	ng/l							
Aroclor 1016	ND	100	ng/l							
Aroclor 1221	ND	100	ng/l							
Aroclor 1232	ND	100	ng/l							
Aroclor 1242	ND	100	ng/l							
Aroclor 1248	ND	100	ng/l							
Aroclor 1254	ND	100	ng/l							
Aroclor 1260	ND	100	ng/l							
beta-BHC	ND	5.0	ng/l							
Chlordane (tech)	ND	100	ng/l							
cis-Nonachlor	ND	5.0	ng/l							
delta-BHC	ND	5.0	ng/l							

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4C0005 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0005-BLK1)				Analyzed: 03/11/14 15:37						
Dieldrin	ND	5.0	ng/l							
Endosulfan I	ND	5.0	ng/l							
Endosulfan II	ND	5.0	ng/l							
Endosulfan sulfate	ND	5.0	ng/l							
Endrin	ND	5.0	ng/l							
Endrin aldehyde	ND	5.0	ng/l							
gamma-BHC (Lindane)	ND	5.0	ng/l							
gamma-Chlordane	ND	5.0	ng/l							
Heptachlor	ND	5.0	ng/l							
Heptachlor epoxide	ND	5.0	ng/l							
Methoxychlor	ND	5.0	ng/l							
Mirex	ND	5.0	ng/l							
Oxychlordane	ND	5.0	ng/l							
Toxaphene	ND	500	ng/l							
trans-Nonachlor	ND	5.0	ng/l							
Surr: Decachlorobiphenyl	*90.6*		*ng/l*	*100*		*91*	*0.1-118*			
Surr: Tetrachloro-meta-xylene	*87.9*		*ng/l*	*100*		*88*	*12-117*			
LCS (W4C0005-BS1)				Analyzed: 03/11/14 16:07						
4,4´-DDD	76.9	5.0	ng/l	100		77	42-133			
4,4´-DDE	83.4	5.0	ng/l	100		83	33-126			
4,4´-DDT	91.1	5.0	ng/l	100		91	35-147			
Aldrin	76.2	5.0	ng/l	100		76	18-117			
alpha-BHC	78.2	5.0	ng/l	100		78	47-119			
beta-BHC	75.4	5.0	ng/l	100		75	53-123			
delta-BHC	87.9	5.0	ng/l	100		88	51-123			
Dieldrin	81.5	5.0	ng/l	100		81	48-123			
Endosulfan I	68.4	5.0	ng/l	100		68	14-131			
Endosulfan II	71.2	5.0	ng/l	100		71	40-121			
Endosulfan sulfate	77.1	5.0	ng/l	100		77	44-140			
Endrin	76.0	5.0	ng/l	100		76	40-143			
Endrin aldehyde	76.9	5.0	ng/l	100		77	18-136			
gamma-BHC (Lindane)	74.5	5.0	ng/l	100		74	49-117			
Heptachlor	82.2	5.0	ng/l	100		82	31-130			
Heptachlor epoxide	77.1	5.0	ng/l	100		77	49-122			
Surr: Decachlorobiphenyl	*85.5*		*ng/l*	*100*		*86*	*0.1-118*			
Surr: Tetrachloro-meta-xylene	*80.5*		*ng/l*	*100*		*80*	*12-117*			
LCS Dup (W4C0005-BSD1)				Analyzed: 03/11/14 16:38						
4,4´-DDD	71.5	5.0	ng/l	100		72	42-133	7	30	
4,4´-DDE	78.6	5.0	ng/l	100		79	33-126	6	30	
4,4´-DDT	85.1	5.0	ng/l	100		85	35-147	7	30	

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4C0005 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W4C0005-BSD1)				Analyzed: 03/11/14 16:38						
Aldrin	73.4	5.0	ng/l	100		73	18-117	4	30	
alpha-BHC	74.9	5.0	ng/l	100		75	47-119	4	30	
beta-BHC	70.8	5.0	ng/l	100		71	53-123	6	30	
delta-BHC	83.2	5.0	ng/l	100		83	51-123	6	30	
Dieldrin	76.0	5.0	ng/l	100		76	48-123	7	30	
Endosulfan I	64.9	5.0	ng/l	100		65	14-131	5	30	
Endosulfan II	66.6	5.0	ng/l	100		67	40-121	7	30	
Endosulfan sulfate	69.3	5.0	ng/l	100		69	44-140	11	30	
Endrin	70.7	5.0	ng/l	100		71	40-143	7	30	
Endrin aldehyde	69.9	5.0	ng/l	100		70	18-136	10	30	
gamma-BHC (Lindane)	63.2	5.0	ng/l	100		63	49-117	16	30	
Heptachlor	80.1	5.0	ng/l	100		80	31-130	3	30	
Heptachlor epoxide	72.1	5.0	ng/l	100		72	49-122	7	30	
Surr: Decachlorobiphenyl	*60.6*		*ng/l*	*100*		*61*	*0.1-118*			
Surr: Tetrachloro-meta-xylene	*74.4*		*ng/l*	*100*		*74*	*12-117*			

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W4C0009 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0009-BLK1)				Analyzed: 03/01/14 14:35						
o-Phosphate as P	ND	0.0020	mg/l							
o-Phosphate as P, dissolved	ND	2.0	ug/l							
LCS (W4C0009-BS1)				Analyzed: 03/01/14 14:37						
o-Phosphate as P	0.0471	0.0020	mg/l	0.0500		94	90-110			
o-Phosphate as P, dissolved	47.1	2.0	ug/l	50.0		94	90-110			
Matrix Spike (W4C0009-MS1)		**Source: 4B28113-02**		Analyzed: 03/01/14 14:41						
o-Phosphate as P	0.0497	0.0020	mg/l	0.0500	0.00070	98	90-110			
o-Phosphate as P, dissolved	49.7	2.0	ug/l	50.0	ND	99	90-110			
Matrix Spike (W4C0009-MS2)		**Source: 4B28113-02**		Analyzed: 03/01/14 15:07						
o-Phosphate as P	0.0505	0.0020	mg/l	0.0500	0.00070	100	90-110			
o-Phosphate as P, dissolved	50.5	2.0	ug/l	50.0	ND	101	90-110			
Matrix Spike Dup (W4C0009-MSD1)		**Source: 4B28113-02**		Analyzed: 03/01/14 14:43						
o-Phosphate as P	0.0497	0.0020	mg/l	0.0500	0.00070	98	90-110	NR	20	
o-Phosphate as P, dissolved	49.7	2.0	ug/l	50.0	ND	99	90-110	NR	20	
Matrix Spike Dup (W4C0009-MSD2)		**Source: 4B28113-02**		Analyzed: 03/01/14 15:09						
o-Phosphate as P	0.0487	0.0020	mg/l	0.0500	0.00070	96	90-110	4	20	
o-Phosphate as P, dissolved	48.7	2.0	ug/l	50.0	ND	97	90-110	4	20	
Batch W4C0084 - EPA 350.1										

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W4C0084 - EPA 350.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0084-BLK1)				Analyzed: 03/04/14 16:04						
Ammonia as N	ND	0.10	mg/l							
LCS (W4C0084-BS1)				Analyzed: 03/04/14 16:04						
Ammonia as N	0.248	0.10	mg/l	0.250		99	90-110			
Matrix Spike (W4C0084-MS1)		**Source: 4B28113-02**		Analyzed: 03/04/14 16:04						
Ammonia as N	0.252	0.10	mg/l	0.250	ND	101	90-110			
Matrix Spike Dup (W4C0084-MSD1)		**Source: 4B28113-02**		Analyzed: 03/04/14 16:04						
Ammonia as N	0.252	0.10	mg/l	0.250	ND	101	90-110	0.05	15	

Batch W4C0238 - SM 2540D

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0238-BLK1)				Analyzed: 03/05/14 17:50						
Total Suspended Solids	ND	5	mg/l							
Duplicate (W4C0238-DUP1)		**Source: 4B28032-01**		Analyzed: 03/05/14 17:50						
Total Suspended Solids	7.00	5	mg/l		7.00			NR	20	
Duplicate (W4C0238-DUP2)		**Source: 4C04099-08**		Analyzed: 03/05/14 17:50						
Total Suspended Solids	41.0	5	mg/l		40.0			2	20	

Batch W4C0255 - SM 2540D

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0255-BLK1)				Analyzed: 03/05/14 20:50						
Total Suspended Solids	ND	5	mg/l							
Duplicate (W4C0255-DUP1)		**Source: 4B28078-01**		Analyzed: 03/05/14 20:50						
Total Suspended Solids	8.00	5	mg/l		8.00			NR	20	
Duplicate (W4C0255-DUP2)		**Source: 4C05046-01**		Analyzed: 03/05/14 20:50						
Total Suspended Solids	37.0	5	mg/l		36.0			3	20	

Batch W4C0327 - SM 2540C

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0327-BLK1)				Analyzed: 03/06/14 16:52						
Total Dissolved Solids	ND	10	mg/l							
LCS (W4C0327-BS1)				Analyzed: 03/06/14 16:52						
Total Dissolved Solids	803	10	mg/l	824		97	96-102			
Duplicate (W4C0327-DUP1)		**Source: 4B28113-05**		Analyzed: 03/06/14 16:52						
Total Dissolved Solids	920	10	mg/l		941			2	10	
Duplicate (W4C0327-DUP2)		**Source: 4B28066-14**		Analyzed: 03/06/14 16:52						
Total Dissolved Solids	1530	10	mg/l		1570			3	10	

Batch W4C0397 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0397-BLK1)				Analyzed: 03/17/14 10:52						

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W4C0397 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0397-BLK1)				Analyzed: 03/17/14 10:52						
Phosphorus as P, Total	ND	0.010	mg/l							
Blank (W4C0397-BLK2)				Analyzed: 03/18/14 14:13						
Phosphorus as P, Total	ND	0.010	mg/l							
LCS (W4C0397-BS1)				Analyzed: 03/17/14 10:58						
Phosphorus as P, Total	0.0507	0.010	mg/l	0.0500		101	90-110			
LCS (W4C0397-BS2)				Analyzed: 03/18/14 14:14						
Phosphorus as P, Total	0.0492	0.010	mg/l	0.0500		98	90-110			
Matrix Spike (W4C0397-MS1)		**Source: 4B25012-01**		Analyzed: 03/17/14 10:56						
Phosphorus as P, Total	0.0598	0.010	mg/l	0.0500	0.0106	98	90-110			
Matrix Spike (W4C0397-MS2)		**Source: 4B25012-02**		Analyzed: 03/17/14 11:02						
Phosphorus as P, Total	0.0605	0.010	mg/l	0.0500	0.00710	107	90-110			
Matrix Spike Dup (W4C0397-MSD1)		**Source: 4B25012-01**		Analyzed: 03/17/14 10:59						
Phosphorus as P, Total	0.0592	0.010	mg/l	0.0500	0.0106	97	90-110	1	20	
Matrix Spike Dup (W4C0397-MSD2)		**Source: 4B25012-02**		Analyzed: 03/17/14 11:04						
Phosphorus as P, Total	0.0574	0.010	mg/l	0.0500	0.00710	101	90-110	5	20	

Batch W4C0565 - EPA 350.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0565-BLK1)				Analyzed: 03/13/14 18:59						
Ammonia as N	ND	0.10	mg/l							
LCS (W4C0565-BS1)				Analyzed: 03/13/14 18:59						
Ammonia as N	0.254	0.10	mg/l	0.250		102	90-110			
Matrix Spike (W4C0565-MS1)		**Source: 4B28113-07**		Analyzed: 03/13/14 18:59						
Ammonia as N	1.56	0.50	mg/l	1.25	0.226	106	90-110			
Matrix Spike Dup (W4C0565-MSD1)		**Source: 4B28113-07**		Analyzed: 03/13/14 18:59						
Ammonia as N	1.56	0.50	mg/l	1.25	0.226	107	90-110	0.6	15	

Batch W4C0901 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0901-BLK1)				Analyzed: 03/20/14 10:18						
Phosphorus as P, Total	ND	0.010	mg/l							
LCS (W4C0901-BS1)				Analyzed: 03/20/14 10:19						
Phosphorus as P, Total	0.0480	0.010	mg/l	0.0500		96	90-110			
Matrix Spike (W4C0901-MS1)		**Source: 4C11050-01RE1**		Analyzed: 03/20/14 10:29						
Phosphorus as P, Total	4.02	1.0	mg/l	0.100	3.82	200	90-110			MS-02
Matrix Spike Dup (W4C0901-MSD1)		**Source: 4C11050-01RE1**		Analyzed: 03/20/14 10:31						
Phosphorus as P, Total	3.84	1.0	mg/l	0.100	3.82	20	90-110	5	20	MS-02

Batch W4C0935 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W4C0935 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0935-BLK1)				Analyzed: 03/20/14 14:26						
Phosphorus, Dissolved	ND	0.010	mg/l							
LCS (W4C0935-BS1)				Analyzed: 03/20/14 14:28						
Phosphorus, Dissolved	0.0489	0.010	mg/l	0.0500		98	90-110			
Duplicate (W4C0935-DUP1)		**Source: 4C03003-01**		Analyzed: 03/20/14 14:38						
Phosphorus, Dissolved	0.115	0.010	mg/l		0.113			2	20	
Matrix Spike (W4C0935-MS1)		**Source: 4B28113-02**		Analyzed: 03/20/14 14:31						
Phosphorus, Dissolved	0.0542	0.010	mg/l	0.0500	0.00156	105	90-110			
Matrix Spike (W4C0935-MS2)		**Source: 4C03003-01**		Analyzed: 03/20/14 14:35						
Phosphorus, Dissolved	0.165	0.010	mg/l	0.0500	0.113	104	90-110			
Matrix Spike Dup (W4C0935-MSD1)		**Source: 4B28113-02**		Analyzed: 03/20/14 14:32						
Phosphorus, Dissolved	0.0516	0.010	mg/l	0.0500	0.00156	100	90-110	5	20	
Matrix Spike Dup (W4C0935-MSD2)		**Source: 4C03003-01**		Analyzed: 03/20/14 14:36						
Phosphorus, Dissolved	0.165	0.010	mg/l	0.0500	0.113	104	90-110	NR	20	

Metals by EPA 200 Series Methods - Quality Control

Batch W4C0592 - EPA 200.8

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0592-BLK1)				Analyzed: 03/17/14 22:00						
Copper, Total	ND	0.50	ug/l							
LCS (W4C0592-BS1)				Analyzed: 03/17/14 22:04						
Copper, Total	47.2	0.50	ug/l	50.0		94	85-115			
Duplicate (W4C0592-DUP1)		**Source: 4B27081-01**		Analyzed: 03/17/14 22:17						
Copper, Total	16.7	0.50	ug/l		17.4			4	30	
Matrix Spike (W4C0592-MS1)		**Source: 4B27081-02**		Analyzed: 03/17/14 22:25						
Copper, Total	63.5	0.50	ug/l	50.0	16.2	94	70-130			
Matrix Spike (W4C0592-MS2)		**Source: 4B28113-07**		Analyzed: 03/18/14 00:03						
Copper, Total	58.3	0.50	ug/l	50.0	7.86	101	70-130			
Matrix Spike Dup (W4C0592-MSD1)		**Source: 4B27081-02**		Analyzed: 03/17/14 22:42						
Copper, Total	63.9	0.50	ug/l	50.0	16.2	95	70-130	0.6	30	
Matrix Spike Dup (W4C0592-MSD2)		**Source: 4B28113-07**		Analyzed: 03/18/14 00:07						
Copper, Total	54.9	0.50	ug/l	50.0	7.86	94	70-130	6	30	

Batch W4C0593 - EPA 200.7

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0593-BLK1)				Analyzed: 03/13/14 13:34						
Calcium, Total	ND	0.100	mg/l							
LCS (W4C0593-BS1)				Analyzed: 03/13/14 13:37						
Calcium, Total	50.2	0.100	mg/l	50.0		100	85-115			

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Metals by EPA 200 Series Methods - Quality Control

Batch W4C0593 - EPA 200.7

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W4C0593-MS1)	**Source: 4B28113-01**			Analyzed: 03/13/14 14:13						
Calcium, Total	50.7	0.100	mg/l	50.0	0.0487	101	70-130			
Matrix Spike (W4C0593-MS2)	**Source: 4C03083-01**			Analyzed: 03/13/14 14:18						
Calcium, Total	64.2	0.100	mg/l	50.0	13.0	103	70-130			
Matrix Spike Dup (W4C0593-MSD1)	**Source: 4B28113-01**			Analyzed: 03/13/14 14:16						
Calcium, Total	50.9	0.100	mg/l	50.0	0.0487	102	70-130	0.6	30	
Matrix Spike Dup (W4C0593-MSD2)	**Source: 4C03083-01**			Analyzed: 03/13/14 14:20						
Calcium, Total	64.7	0.100	mg/l	50.0	13.0	103	70-130	0.7	30	

Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W4C0266 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0266-BLK1)				Analyzed: 03/17/14 15:58						
Allethrin	ND	2.0	ng/l							
Bifenthrin	ND	2.0	ng/l							
Cyfluthrin	ND	2.0	ng/l							
Cypermethrin	ND	2.0	ng/l							
Deltamethrin/Tralomethrin	ND	2.0	ng/l							
Dichloran	ND	2.0	ng/l							
Fenpropathrin (Danitol)	ND	2.0	ng/l							
Fenvalerate/Esfenvalerate	ND	2.0	ng/l							
L-Cyhalothrin	ND	2.0	ng/l							
Pendimethalin	ND	2.0	ng/l							
Permethrin	ND	5.0	ng/l							
Prallethrin	ND	2.0	ng/l							
Sumithrin	ND	10	ng/l							
Tefluthrin	ND	2.0	ng/l							
Surr: Perylene-d12	*200*		*ng/l*	*250*		*80*	*2-205*			
Surr: Triphenyl phosphate	*191*		*ng/l*	*250*		*76*	*6-222*			
LCS (W4C0266-BS1)				Analyzed: 03/17/14 16:22						
Allethrin	38.2	2.0	ng/l	50.0		76	23-149			
Bifenthrin	71.4	2.0	ng/l	50.0		143	26-153			
Cyfluthrin	37.1	2.0	ng/l	50.0		74	3-168			
Cypermethrin	39.2	2.0	ng/l	50.0		78	2-169			
Deltamethrin/Tralomethrin	90.5	2.0	ng/l	50.0		181	0.1-252			
Dichloran	51.1	2.0	ng/l	50.0		102	53-161			
Fenpropathrin (Danitol)	59.6	2.0	ng/l	50.0		119	28-154			
Fenvalerate/Esfenvalerate	43.8	2.0	ng/l	50.0		88	35-133			
L-Cyhalothrin	83.5	2.0	ng/l	50.0		167	9-214			

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Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W4C0266 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W4C0266-BS1)				Analyzed: 03/17/14 16:22						
Pendimethalin	35.8	2.0	ng/l	50.0		72	41-158			
Permethrin	49.6	5.0	ng/l	50.0		99	31-154			
Prallethrin	39.0	2.0	ng/l	50.0		78	28-143			
Sumithrin	56.0	10	ng/l	50.0		112	12-200			
Tefluthrin	44.1	2.0	ng/l	50.0		88	48-161			
Surr: Perylene-d12	*183*		*ng/l*	*250*		*73*	*2-205*			
Surr: Triphenyl phosphate	*162*		*ng/l*	*250*		*65*	*6-222*			
Matrix Spike (W4C0266-MS1)	**Source: 4B27068-02**			Analyzed: 03/17/14 17:08						
Allethrin	85.3	2.0	ng/l	50.0	ND	171	0.1-222			
Bifenthrin	111	2.0	ng/l	50.0	ND	221	22-209			MS-05
Cyfluthrin	58.8	2.0	ng/l	50.0	6.50	105	11-214			
Cypermethrin	57.6	2.0	ng/l	50.0	ND	115	20-206			
Deltamethrin/Tralomethrin	121	2.0	ng/l	50.0	ND	241	0.2-230			MS-05
Dichloran	88.0	2.0	ng/l	50.0	ND	176	29-201			
Fenpropathrin (Danitol)	114	2.0	ng/l	50.0	ND	228	10-233			
Fenvalerate/Esfenvalerate	66.0	2.0	ng/l	50.0	ND	132	32-193			
L-Cyhalothrin	94.8	2.0	ng/l	50.0	ND	190	61-209			
Pendimethalin	65.6	2.0	ng/l	50.0	ND	131	8-203			
Permethrin	76.7	5.0	ng/l	50.0	ND	153	37-209			
Prallethrin	103	2.0	ng/l	50.0	ND	205	11-247			
Sumithrin	192	10	ng/l	50.0	147	90	12-247			
Tefluthrin	38.4	2.0	ng/l	50.0	ND	77	5-220			
Surr: Perylene-d12	*338*		*ng/l*	*250*		*135*	*2-205*			
Surr: Triphenyl phosphate	*368*		*ng/l*	*250*		*147*	*6-222*			
Matrix Spike Dup (W4C0266-MSD1)	**Source: 4B27068-02**			Analyzed: 03/17/14 17:55						
Allethrin	93.0	2.0	ng/l	50.0	ND	186	0.1-222	9	30	
Bifenthrin	95.1	2.0	ng/l	50.0	ND	190	22-209	15	30	
Cyfluthrin	60.5	2.0	ng/l	50.0	6.50	108	11-214	3	30	
Cypermethrin	59.9	2.0	ng/l	50.0	ND	120	20-206	4	30	
Deltamethrin/Tralomethrin	122	2.0	ng/l	50.0	ND	244	0.2-230	1	30	MS-05
Dichloran	88.1	2.0	ng/l	50.0	ND	176	29-201	0.1	30	
Fenpropathrin (Danitol)	113	2.0	ng/l	50.0	ND	226	10-233	1	30	
Fenvalerate/Esfenvalerate	65.0	2.0	ng/l	50.0	ND	130	32-193	2	30	
L-Cyhalothrin	86.7	2.0	ng/l	50.0	ND	173	61-209	9	30	
Pendimethalin	64.6	2.0	ng/l	50.0	ND	129	8-203	2	30	
Permethrin	83.1	5.0	ng/l	50.0	ND	166	37-209	8	30	
Prallethrin	104	2.0	ng/l	50.0	ND	208	11-247	1	30	
Sumithrin	187	10	ng/l	50.0	147	79	12-247	3	30	
Tefluthrin	36.5	2.0	ng/l	50.0	ND	73	5-220	5	30	

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Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W4C0266 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W4C0266-MSD1)	**Source: 4B27068-02**			Analyzed: 03/17/14 17:55						
Surr: Perylene-d12	*419*		*ng/l*	*250*		*168*	*2-205*			
Surr: Triphenyl phosphate	*371*		*ng/l*	*250*		*148*	*6-222*			

Batch W4C0535 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0535-BLK1)				Analyzed: 03/20/14 15:24						
Allethrin	ND	2.0	ng/l							
Bifenthrin	ND	2.0	ng/l							
Cyfluthrin	ND	2.0	ng/l							
Cypermethrin	ND	2.0	ng/l							
Deltamethrin/Tralomethrin	ND	2.0	ng/l							
Dichloran	ND	2.0	ng/l							
Fenpropathrin (Danitol)	ND	2.0	ng/l							
Fenvalerate/Esfenvalerate	ND	2.0	ng/l							
L-Cyhalothrin	ND	2.0	ng/l							
Pendimethalin	ND	2.0	ng/l							
Permethrin	ND	5.0	ng/l							
Prallethrin	ND	2.0	ng/l							
Sumithrin	ND	10	ng/l							
Tefluthrin	ND	2.0	ng/l							
Surr: Perylene-d12	*192*		*ng/l*	*250*		*77*	*2-205*			
Surr: Triphenyl phosphate	*215*		*ng/l*	*250*		*86*	*6-222*			
LCS (W4C0535-BS1)				Analyzed: 03/20/14 15:48						
Allethrin	32.0	2.0	ng/l	50.0		64	23-149			
Bifenthrin	79.6	2.0	ng/l	50.0		159	26-153			BS-03
Cyfluthrin	44.1	2.0	ng/l	50.0		88	3-168			
Cypermethrin	48.5	2.0	ng/l	50.0		97	2-169			
Deltamethrin/Tralomethrin	71.9	2.0	ng/l	50.0		144	0.1-252			
Dichloran	47.2	2.0	ng/l	50.0		94	53-161			
Fenpropathrin (Danitol)	70.0	2.0	ng/l	50.0		140	28-154			
Fenvalerate/Esfenvalerate	42.7	2.0	ng/l	50.0		85	35-133			
L-Cyhalothrin	34.4	2.0	ng/l	50.0		69	9-214			
Pendimethalin	36.8	2.0	ng/l	50.0		74	41-158			
Permethrin	62.8	5.0	ng/l	50.0		126	31-154			
Prallethrin	38.3	2.0	ng/l	50.0		77	28-143			
Sumithrin	67.2	10	ng/l	50.0		134	12-200			
Tefluthrin	35.1	2.0	ng/l	50.0		70	48-161			
Surr: Perylene-d12	*159*		*ng/l*	*250*		*63*	*2-205*			
Surr: Triphenyl phosphate	*173*		*ng/l*	*250*		*69*	*6-222*			
Matrix Spike (W4C0535-MS1)	**Source: 4C04025-01**			Analyzed: 03/20/14 16:11						

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Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W4C0535 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W4C0535-MS1)	**Source: 4C04025-01**			Analyzed: 03/20/14 16:11						
Allethrin	46.7	2.0	ng/l	50.0	ND	93	0.1-222			
Bifenthrin	45.5	2.0	ng/l	50.0	ND	91	22-209			
Cyfluthrin	44.6	2.0	ng/l	50.0	ND	89	11-214			
Cypermethrin	43.6	2.0	ng/l	50.0	ND	87	20-206			
Deltamethrin/Tralomethrin	109	2.0	ng/l	50.0	ND	217	0.2-230			
Dichloran	68.6	2.0	ng/l	50.0	ND	137	29-201			
Fenpropathrin (Danitol)	51.7	2.0	ng/l	50.0	ND	103	10-233			
Fenvalerate/Esfenvalerate	55.4	2.0	ng/l	50.0	ND	111	32-193			
L-Cyhalothrin	18.9	2.0	ng/l	50.0	ND	38	61-209			MS-05
Pendimethalin	70.3	2.0	ng/l	50.0	5.98	129	8-203			
Permethrin	43.1	5.0	ng/l	50.0	ND	86	37-209			
Prallethrin	54.7	2.0	ng/l	50.0	ND	109	11-247			
Sumithrin	52.2	10	ng/l	50.0	ND	104	12-247			
Tefluthrin	52.7	2.0	ng/l	50.0	ND	105	5-220			
Surr: Perylene-d12	*250*		*ng/l*	*250*		*100*	*2-205*			
Surr: Triphenyl phosphate	*192*		*ng/l*	*250*		*77*	*6-222*			
Matrix Spike Dup (W4C0535-MSD1)	**Source: 4C04025-01**			Analyzed: 03/20/14 16:34						
Allethrin	48.1	2.0	ng/l	50.0	ND	96	0.1-222	3	30	
Bifenthrin	41.9	2.0	ng/l	50.0	ND	84	22-209	8	30	
Cyfluthrin	42.6	2.0	ng/l	50.0	ND	85	11-214	5	30	
Cypermethrin	40.6	2.0	ng/l	50.0	ND	81	20-206	7	30	
Deltamethrin/Tralomethrin	99.8	2.0	ng/l	50.0	ND	200	0.2-230	8	30	
Dichloran	68.6	2.0	ng/l	50.0	ND	137	29-201	0.009	30	
Fenpropathrin (Danitol)	50.1	2.0	ng/l	50.0	ND	100	10-233	3	30	
Fenvalerate/Esfenvalerate	52.4	2.0	ng/l	50.0	ND	105	32-193	6	30	
L-Cyhalothrin	17.8	2.0	ng/l	50.0	ND	36	61-209	6	30	MS-05
Pendimethalin	69.2	2.0	ng/l	50.0	5.98	126	8-203	2	30	
Permethrin	44.6	5.0	ng/l	50.0	ND	89	37-209	3	30	
Prallethrin	53.9	2.0	ng/l	50.0	ND	108	11-247	2	30	
Sumithrin	55.3	10	ng/l	50.0	ND	111	12-247	6	30	
Tefluthrin	53.9	2.0	ng/l	50.0	ND	108	5-220	2	30	
Surr: Perylene-d12	*206*		*ng/l*	*250*		*83*	*2-205*			
Surr: Triphenyl phosphate	*192*		*ng/l*	*250*		*77*	*6-222*			

Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4C0643 - EPA 525.2M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0643-BLK1)				Analyzed: 03/17/14 13:22						

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Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4C0643 - EPA 525.2M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4C0643-BLK1)				Analyzed: 03/17/14 13:22						
Azinphos methyl (Guthion)	ND	10	ng/l							
Bolstar	ND	10	ng/l							
Chlorpyrifos	ND	10	ng/l							
Coumaphos	ND	10	ng/l							
Demeton-o	ND	10	ng/l							
Demeton-s	ND	10	ng/l							
Diazinon	ND	10	ng/l							
Dichlorvos	ND	10	ng/l							
Dimethoate	ND	10	ng/l							
Disulfoton	ND	10	ng/l							
Ethoprop	ND	10	ng/l							
Ethyl parathion	ND	10	ng/l							
Fensulfothion	ND	10	ng/l							
Fenthion	ND	10	ng/l							
Malathion	ND	10	ng/l							
Merphos	ND	10	ng/l							
Methyl parathion	ND	10	ng/l							
Mevinphos	ND	10	ng/l							
Naled	ND	10	ng/l							
Phorate	ND	10	ng/l							
Ronnel	ND	10	ng/l							
Stirophos	ND	10	ng/l							
Tokuthion (Prothiofos)	ND	10	ng/l							
Trichloronate	ND	10	ng/l							
Surr: 1,3-Dimethyl-2-nitrobenzene	*481*		*ng/l*	*500*		*96*	*76-128*			
Surr: Triphenyl phosphate	*650*		*ng/l*	*500*		*130*	*40-163*			
LCS (W4C0643-BS1)				Analyzed: 03/17/14 13:51						
Azinphos methyl (Guthion)	73.4	10	ng/l	50.0		147	0.1-188			
Bolstar	28.0	10	ng/l	50.0		56	11-166			
Chlorpyrifos	51.4	10	ng/l	50.0		103	37-169			
Coumaphos	44.1	10	ng/l	50.0		88	0.1-225			
Demeton-o	39.1	10	ng/l	50.0		78	0.1-211			
Demeton-s	39.1	10	ng/l	50.0		78	0.1-213			
Diazinon	32.3	10	ng/l	50.0		65	43-152			
Dichlorvos	54.2	10	ng/l	50.0		108	46-133			
Dimethoate	85.4	10	ng/l	50.0		171	10-234			
Disulfoton	37.5	10	ng/l	50.0		75	0.1-212			
Ethoprop	63.0	10	ng/l	50.0		126	53-163			
Ethyl parathion	48.9	10	ng/l	50.0		98	7-230			

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Date Reported: 03/31/14 10:06

Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4C0643 - EPA 525.2M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W4C0643-BS1)				Analyzed: 03/17/14 13:51						
Fensulfothion	60.9	10	ng/l	50.0		122	0.1-265			
Fenthion	45.8	10	ng/l	50.0		92	20-177			
Malathion	57.3	10	ng/l	50.0		115	14-175			
Merphos	62.2	10	ng/l	50.0		124	28-181			
Methyl parathion	50.0	10	ng/l	50.0		100	0.1-252			
Mevinphos	73.0	10	ng/l	50.0		146	14-202			
Naled	78.4	10	ng/l	50.0		157	0.1-240			
Phorate	27.4	10	ng/l	50.0		55	26-180			
Ronnel	46.6	10	ng/l	50.0		93	34-154			
Stirophos	80.6	10	ng/l	50.0		161	0.1-188			
Tokuthion (Prothiofos)	43.0	10	ng/l	50.0		86	23-159			
Trichloronate	45.7	10	ng/l	50.0		91	34-153			
Surr: 1,3-Dimethyl-2-nitrobenzene	*485*		*ng/l*	*500*		*97*	*76-128*			
Surr: Triphenyl phosphate	*422*		*ng/l*	*500*		*84*	*40-163*			
Matrix Spike (W4C0643-MS1)	**Source: 4C11050-01**			Analyzed: 03/17/14 14:21						
Azinphos methyl (Guthion)	118	10	ng/l	50.0	ND	235	0.1-154			MS-05
Bolstar	44.2	10	ng/l	50.0	ND	88	4-184			
Chlorpyrifos	96.1	10	ng/l	50.0	15.9	160	37-168			
Coumaphos	87.4	10	ng/l	50.0	18.3	138	0.1-203			
Demeton-o	98.1	10	ng/l	50.0	ND	196	0.1-208			
Demeton-s	98.1	10	ng/l	50.0	ND	196	0.1-207			
Diazinon	55.5	10	ng/l	50.0	123	NR	36-153			MS-04
Dichlorvos	182	10	ng/l	50.0	59.6	244	42-137			MS-05
Dimethoate	125	10	ng/l	50.0	ND	249	4-222			MS-05
Disulfoton	65.0	10	ng/l	50.0	ND	130	12-199			
Ethoprop	77.6	10	ng/l	50.0	ND	155	51-167			
Ethyl parathion	98.4	10	ng/l	50.0	ND	197	5-229			
Fensulfothion	151	10	ng/l	50.0	ND	301	0.1-316			
Fenthion	74.5	10	ng/l	50.0	ND	149	23-169			
Malathion	180	10	ng/l	50.0	279	NR	6-184			MS-04
Merphos	251	10	ng/l	50.0	ND	503	3-210			MS-05
Methyl parathion	107	10	ng/l	50.0	ND	214	0.1-249			
Mevinphos	76.0	10	ng/l	50.0	ND	152	25-189			
Naled	176	10	ng/l	50.0	ND	351	0.1-242			MS-05
Phorate	45.4	10	ng/l	50.0	ND	91	31-181			
Ronnel	62.3	10	ng/l	50.0	ND	125	29-153			
Stirophos	132	10	ng/l	50.0	7.95	248	0.1-167			MS-05
Tokuthion (Prothiofos)	73.7	10	ng/l	50.0	ND	147	27-160			
Trichloronate	58.9	10	ng/l	50.0	ND	118	40-150			

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Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4C0643 - EPA 525.2M

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W4C0643-MS1)	**Source: 4C11050-01**			Analyzed: 03/17/14 14:21						
Surr: 1,3-Dimethyl-2-nitrobenzene	*472*		*ng/l*	*500*		*94*	*76-128*			
Surr: Triphenyl phosphate	*505*		*ng/l*	*500*		*101*	*40-163*			
Matrix Spike Dup (W4C0643-MSD1)	**Source: 4C11050-01**			Analyzed: 03/17/14 14:49						
Azinphos methyl (Guthion)	120	10	ng/l	50.0	ND	240	0.1-154	2	30	MS-05
Bolstar	41.9	10	ng/l	50.0	ND	84	4-184	5	30	
Chlorpyrifos	92.4	10	ng/l	50.0	15.9	153	37-168	4	30	
Coumaphos	90.2	10	ng/l	50.0	18.3	144	0.1-203	3	30	
Demeton-o	127	10	ng/l	50.0	ND	254	0.1-208	25	30	MS-05
Demeton-s	127	10	ng/l	50.0	ND	254	0.1-207	25	30	MS-05
Diazinon	64.5	10	ng/l	50.0	123	NR	36-153	15	30	MS-04
Dichlorvos	201	10	ng/l	50.0	59.6	283	42-137	10	30	MS-05
Dimethoate	156	10	ng/l	50.0	ND	312	4-222	22	30	MS-05
Disulfoton	74.5	10	ng/l	50.0	ND	149	12-199	14	30	
Ethoprop	80.6	10	ng/l	50.0	ND	161	51-167	4	30	
Ethyl parathion	112	10	ng/l	50.0	ND	224	5-229	13	30	
Fensulfothion	161	10	ng/l	50.0	ND	321	0.1-316	6	30	MS-05
Fenthion	73.5	10	ng/l	50.0	ND	147	23-169	1	30	
Malathion	189	10	ng/l	50.0	279	NR	6-184	5	30	MS-04
Merphos	146	10	ng/l	50.0	ND	293	3-210	53	30	MS-05
Methyl parathion	125	10	ng/l	50.0	ND	249	0.1-249	15	30	
Mevinphos	82.7	10	ng/l	50.0	ND	165	25-189	8	30	
Naled	170	10	ng/l	50.0	ND	341	0.1-242	3	30	MS-05
Phorate	56.2	10	ng/l	50.0	ND	112	31-181	21	30	
Ronnel	62.6	10	ng/l	50.0	ND	125	29-153	0.5	30	
Stirophos	136	10	ng/l	50.0	7.95	256	0.1-167	3	30	MS-05
Tokuthion (Prothiofos)	59.3	10	ng/l	50.0	ND	119	27-160	22	30	
Trichloronate	53.8	10	ng/l	50.0	ND	108	40-150	9	30	
Surr: 1,3-Dimethyl-2-nitrobenzene	*495*		*ng/l*	*500*		*99*	*76-128*			
Surr: Triphenyl phosphate	*498*		*ng/l*	*500*		*100*	*40-163*			

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Notes and Definitions

S-GC	Surrogate recovery outside of control limits due to a possible matrix effect. The data was accepted based on valid recovery of the remaining surrogate.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
MS-04	Visual evaluation of the sample indicates the RPD or QC spike is above the control limit due to a non-homogeneous sample matrix.
MS-02	The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
M-06	Due to the high concentration of analyte inherent in the sample, sample was diluted prior to preparation. The MDL and MRL were raised due to this dilution.
M-04	Due to the nature of matrix interferences, sample extract was diluted prior to analysis. The MDL and MRL were raised due to the dilution.
BS-03	The recovery of this analyte in the BS/LCS was outside the control limits. The sample result was accepted based on another acceptable BS/LCS and/or MS and MSD that meet BS criteria.
**	The recommended holding time for field filtering is only 15 minutes. The sample was filtered as soon as possible but it was filtered past holding time. However, the sample was analyzed within holding time.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
NR	Not Reportable
Dil	Dilution
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity
MRL	Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

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WL

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CHAIN OF CUSTODY RECORD

STANDARD ~~4B280113~~ 4B28113 AJ 2/28/14

CLIENT NAME:	PROJECT:
PW Environmental	Nursery Growers Association
ADDRESS: 230 Dove Court, Santa Paula, CA 93060	PHONE: 805-525-5563 FAX: 805-525-2896 EMAIL: bryn@pwenvironmental.com
PROJECT MANAGEF: Bryn Home	SAMPLER: Scott Jordan

SPECIAL HANDLING

- [ ] Same Day Rush 150%
- [ ] 24 Hour Rush 100%
- [ ] 48-72 Hour Rush 75%
- [ ] 4 - 5 Day Rush 30%
- [ ] Rush Extractions 50%
- [x] 10 - 15 Business Days
- [x] QA/QC Data Package

Charges will apply for weekends/holidays

Method of Shipment:

COMMENTS

ANALYSES REQUESTED

ID# (For lab Use Only)	DATE SAMPLED	TIME SAMPLED	SMPL TYPE	SAMPLE IDENTIFICATION/SITE LOCATION	# OF CONT.	TDS-SM2540C / TSS-SM2540D	Cl, SO4, NO3+NO2-N - EPA 300.0	Ammonia-N EPA350.1	Copper EPA200.8	Hardness 200.7	OPP low level EPA 525.2	Organo Pest/PCBs low lvl EPA608	Pyrethroid Pest by GC/MS NCI-SIM	Ortho-P and P dissolved EPA365.1	Ortho-P and P total as P EPA365.3
	2/28/14	4:15	AQ	LAILG-NGA-EB	12	X	X	X	X	X	X	X	X	X	X
	2/28/14	14:30	AQ	LAILG-NGA-FB	12	|	|	|	|	|	|	|	|	|	|
	2/28/14	9:00	RW	LAILG-NGA26-1	12	|	|	|	|	|	|	|	|	|	|
	~~2/28/14~~	~~13:25~~	~~RW~~	~~LAILG-NGA31-5~~	~~12~~										
	2/28/14	11:20	RW	LAILG-NGA124-7	12	|	|	|	|	|	|	|	|	|	|
	2/28/14	9:55	RW	LAILG-NGA178-2	12	|	|	|	|	|	|	|	|	|	|
	2/26/14	5:50	RW	LAILG-NGA18-7	12	|	|	|	|	|	|	|	|	|	|
	2/28/14	7:10	RW	LAILG-NGA184-3	12	|	|	|	|	|	|	|	|	|	|
	2/28/14	6:05	RW	LAILG-NGA-DUP	12	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓

RELINQUISHED BY	DATE / TIME	RECEIVED BY	
[signature]	2/28/14 16:10	[signature]	2/28/14 16:10
RELINQUISHED BY	DATE / TIME	RECEIVED BY	
RELINQUISHED BY	DATE / TIME	RECEIVED BY	

SAMPLE CONDITION:

Actual Temperature:	11.4°
Received On Ice	(Y) / N
Preserved	(Y) / N
Evidence Seals Present	Y / (N)
Container Attacked	Y / (N)
Preserved at Lab	Y / N ✓

SAMPLE TYPE CODE:
AQ=Aqueous
NA= Non Aqueous
SL = Sludge
DW = Drinking Water
WW = Waste Water
RW = Rain Water
GW = Ground Water
SO = Soil
SW = Solid Waste
OL = Oil
OT = Other Matrix

PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY OVER UNSCHEDULED RUSH REQUESTS
Client agrees to Terms & Conditions at: www.wecklabs.com

SPECIAL REQUIREMENTS / BILLING INFORMATION