

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

NURSERY GROWERS ASSOCIATION LOS ANGELES COUNTY IRRIGATED LANDS GROUP

May 18, 2016

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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

PacRL Pacific Ridgeline
PP Pyrethroid Pesticides
QA Quality Assurance

QAPP Quality Assurance Project Plan
RPD Relative Percent Difference
TDS Total Dissolved Solids

TIE Toxicity Identification Evaluation
TUc Toxicity concentration in toxicity units

WMA Watershed Management Area
WQBs Water Quality Benchmarks
WQMP Water Quality Management Plan

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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. PacRL 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.

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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, 2014 through May 14, 2015, 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 March 2016, the LAILG is comprised of 189 sites and an estimated 1702 irrigated acres. A complete list of current group members in good standing with the LAILG 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		EASON CTOBER 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			

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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.

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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.

Since the previous AMR, a number of rotating sites have also been lost, but were not replaced in anticipation of preparing a new MRP under the new CWIL. The updated site list with redacted sampling locations 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.

An updated WQMP was submitted to the LARWQCB on August 21, 2015. LAILG will continue to operate under the existing WQMP until enough data is collected to update to a new MRP and WQMP as required by the new CWIL. LAILG will also be operating under the existing MRP until a new MRP is developed, which is anticipated to be approximately one year. It is anticipated that the new CWIL will be approved prior to the start of the new sampling year.

Table 2 - Fixed and Rotating Sampling Locations

NAME NAME	SITE#	# APPROXIMATE GPS LOCATION ADDRESS		ACRES IRRIGATED	CROP TYPE	
			GROUP 1			
Boething Treeland	19	N 34° 09' 51.1"	23475 Long Valley Road	14.60	C	
Farms, Inc.	19	W 118° 38' 20.7"	Woodsland Hills, CA	14.68	General Ornamentals	
Norman's Nursery	125	N 34° 05' 42.3"	8550 E Broadway	7.00	General Ornamentals	
Noman's Nuisery	123	W 118° 04' 53.5"	San Gabriel, CA	7.00	General Offiamentals	
Ultra Greens Nursery	178	N 34° 17' 57.4"	13102 Maclay Street	8.50	General Ornamentals	
Olifa Green's Nursery	170	W 118° 25' 06.5"	Sylmar, CA	8.50	General Offiamentals	
Valley Sod Farms, Inc.	184	N 34° 13' 23.1"	16405 Chase Street	36.00	Sod Farms	
valley sou railis, ilic.	104	W 118° 29' 34.5"	North Hills, CA	30.00	Sou Failis	
			GROUP 2			
Acosta Growers, Inc.	11	N 34° 06' 38.0"	669 S. Azusa Ave	7.50	General Ornamentals	
Acosta Gioweis, inc.	11	W 117° 54' 19.9"	Azusa, CA	7.30	General Ornamentals	
Rainbow Garden	110	N 34° 07' 05.5"	1132 S Grand Avenue	3.75	Retail / Multiple	
Nursery	110	W 117° 52' 19.8"	Glendora, CA	3.73	Retail / Multiple	
Colorama Wholesale	150	N 34° 08' 27.5"	1025 N. Todd Ave.	15.30	Color Plants	
Nursery	130	W 117° 55' 35.9"	Asuza, CA	15.50	Color Figures	
West Covina	189	N 34° 06′ 58.1″	3425 Damien Ave	1.25	General Ornamentals	
Wholesale	109	W 117° 47' 05.1"	La Verne, CA	1.23	General Offiamentals	
			GROUP 3			
Coiner Nursery	31	N 34° 02' 19.1"	285 San Fidel	48.00	General Ornamentals	
Collici Nuiscry	31	W 118° 01' 28.4"	La Puente, CA	40.00	Ocherar Omanichtais	
H&H Nursery	64	N 33° 52' 07.1"	6220 Lakewood Boulevard	2.50	Retail / Multiple	
-	04	W 118° 08' 32.4"	Lakewood, CA	2.30	Retain / Wruttiple	
Centeno's Nursery	81	N 33° 52' 46.9"	6850 Paramount Blvd	3.00	General Ornamentals	
and Landscaping	01	W 118° 09' 20.7"	Long Beach, CA	3.00	General Omanientais	
SY Nursery Inc.	168	N 33° 50' 59.2"	19900 S Pioneer Blvd	4.75	General Ornamentals	
51 Nuiscry IIIc.	100	W 118° 04' 36.0"	Cerritos, CA	4.73	General Offianientals	
			GROUP 4			
ABC Nursery, Inc.	4	N 33° 52' 55.7"	424 E. Gardena Boulevard	11.51	General Ornamentals	
ADC Nuisery, inc.	7	W 118° 16' 06.0"	Gardina, CA	11.51	General Omanientais	
New West Growers	53	N 33° 52' 51.1"	1601 S. Santa Fe Ave	1.70	General Ornamentals	
THEW WEST GIOWEIS	J.J.	W 118° 12' 56.3"	Compton, CA	1.70	General Omanicitals	
T-Y Nursery	176	N 33° 51' 18.7"	Between Flagler/Paulina	7.50	General Ornamentals	
-	1/0	W 118° 23' 10.9"	Redondo Beach, CA	7.50	General Omanicitals	
Church Estate	210	N 34° 01' 10.0"	6415 Busch Drive	2.75	Vineyard	
Vineyards	210	W 118° 49' 05.6"	Malibu, CA	2.13	vineyard	

Table 2 - Rotating Sampling Locations

NAME	SITE #	APPROXIMATE GPS LOCATION	ADDRESS	ACRES IRRIGATED	СКОР ТҮРЕ					
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"	11157 Orcas Avenue Lake Terrace, CA	2.00	General Ornamentals					
		W 118° 22' 06.1"	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	Orehard					
			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	<u>.</u>						
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					

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4.0 SAMPLING EVENTS

During the dry season of the fourth year of the program, which lasted from May 15, 2014 through October 14, 2014, fixed and rotating sampling sites from Group #1 and Group #4 were visited on October 7, 2014 and October 8, 2014, 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 fourth year of the program, which lasted from October 15, 2014 through May 15, 2015, fixed and rotating sampling sites from Group #2 were visited on December 2, 2014, and fixed and rotating sampling sites from Group #3 were visited on May 15, 2015. During the sampling event for Group #2 a total of two of the five sites had sufficient runoff to conduct sampling, and in Group #3 a total of one of the five sites had sufficient runoff.

A total of 72 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.

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Table 3 - Sampling Timeline

		CWIL Order # R4-2005-0080																
		YEAR 1 1 YEAR 2 2					YEA	AR 4										
	Dry S	eason	Wet S	eason	Dry Season		Dry Season		Dry Season V		Ory Season Wet Season Dry Season Wet S		Wet Season		Wet Season	Dry Season	Wet Season	Total
	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event						
	#1	#2	#1	#2	#1	#2	#1	#2	#1	#1	#1	#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																
	Interim Sampling		YEA	R 1		YEAR 2					YEAR 3				YEAR 4			
Event ³		Dry S	eason	Wet S	eason	Dry S	eason	Wet S	eason	Dry S	eason	Wet S	eason	Dry S	eason	Wet S	eason	Total
	March	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	
	2011	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	#1	#2	
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	0	5	0	0	0	2	1	20
Total Number of Sites Visited	4	5	5	5	5	5	5	na	na	5	5	5	na	5	5	5	5	69

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					
рН	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 CaCO ₃)	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 Suite ¹	ng/L	Laboratory					
Organochlorines Suite ²	ng/L	Laboratory					
Toxaphene	ng/L	Laboratory					
Pyrethroids	ng/L	Laboratory					
Toxicity	TU_c^3	Laboratory					
Trash	Observations	Field					

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

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

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 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.

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	a 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(in (hardness)))+(-1.702)]	_
Above Figueroa St.	19, 184	a)	950	300	150	8		CCC=0.960e ^[(0.8545(in (hardness)))+(-1.702)]	_
Rio Hondo above Santa Ana Freeway	125	a)	750	300	150	8	_	CCC=0.960e ^[(0.8545(in (hardness)))+(-1.702)]	_
Pacoima Wash above Pacoima spreading grounds	178	a)	250	30	10	MUN	ı	CCC=0.960e ^[(0.8545(in (hardness)))+(-1.702)]	_
San Gabriel River:									
Between Firestone Blvd. and San Gabriel River Estuary	168, 64	a)			MUN		-	CCC=0.960e ^[(0.8545(in (hardness)))+(-1.702)]	_
Between Ramona and Firestone Blvd.	11, 31, 189, 110	a)	750	300	150	8	_	CCC=0.960e ^[(0.8545(in (hardness)))+(-1.702)]	_
Between Morris Dam and Ramona Blvd.	150	a)	450	100	100	8	_	CCC=0.960e ^[(0.8545(in (hardness)))+(-1.702)]	_
Dominguez Channel	4	a)			MUN		_	CCC=0.960e ^[(0.8545(in (hardness)))+(-1.702)]	_
Santa Monica Bay	176, 210	a)			MUN		_	CCC=0.960e ^[(0.8545(in (hardness)))+(-1.702)]	_
USEPA Municipal Drinking Water Standar	i	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

CONSTITUENT	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

		CAS Number]	Fish	Inver	rtebrates	Nonvascular Plants	Vascular Plants	•	
Pesticides	Footnote		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	_	_	_	I

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.

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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
рН	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.	$6.5 \le pH \le 8.5$ 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.
	No single dissolved oxygen determination shall be less than 5 mg/L, except when natural conditions cause lesser concentrations.	≥ 5 mg/L
Dissolved Oxygen	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.

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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.

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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 34° 09' 51.1" W 118° 38' 2.07"

October 7, 2014, dry season, no 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.

Sampling - Seven 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 10.

Aerial photography of the site is presented on Figure 2.

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Table 10 - Summary of samples collected, NGA #19

								General	Chemistry	(mg/L)					
Site Sample #	Date	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-NGA 19-3	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

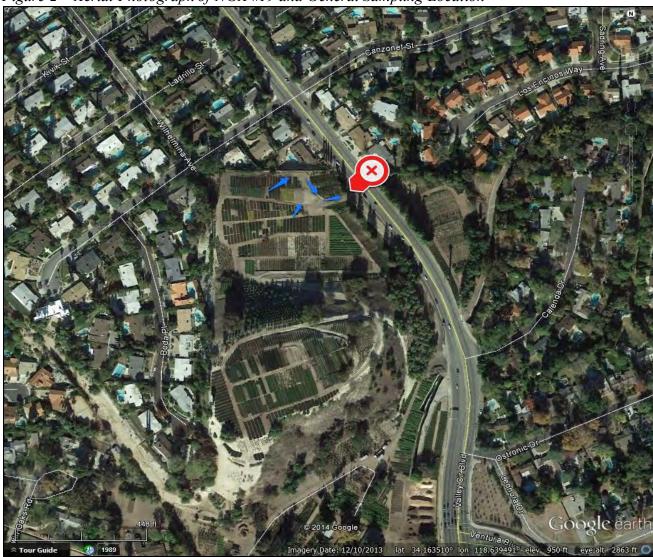
			OC Pes		OP	Pesticides		Pyd Pesticides
			(ng	/L)		(ng/L)		(ng/L)
Site	Sample #	Date	Total DDT	Total				Total sum of
			and	Chlordane	Chlorpyrifos	Diazinon	Malathion	all detected
			Derivatives	Ciliofdane				Pyrethroids
NGA #19	NGA-#19-LAILG-1	8/13/07	nd	nd	nd	nd	nd	0
NGA #19	LAILG-NGA#19-2	12/18/07	nd	2.4	nd	15	2,291.3	1,814
NGA #19	LAILG-NGA 19-3	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

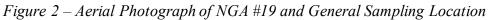
Results above CWIL Limits are presented in BOLD.

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







General Sampling Location



General Surface Flow to Sampling Location

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NGA SITE #124/125

Sampling Group: Group 1 Sampling Frequency - Fixed

Total/Irrigated Acres: 10.4/8.3 Acres

Sample site GPS location: N 34° 05' 56.9" W 118° 04' 56.0"

October 7, 2014, dry season, no 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.

Sampling - Seven 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 11.

Aerial photography of the site is presented on Figure 3.

Table 11 - Summary of samples collected, NGA #124

								Genera	al Chemist	ry (mg/L)					
Site	Sample #	Date	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

				OC Pestic (ng/L		OP Pesticid	Pyd Pesticides (ng/L)	
Site	Sample #	Date	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

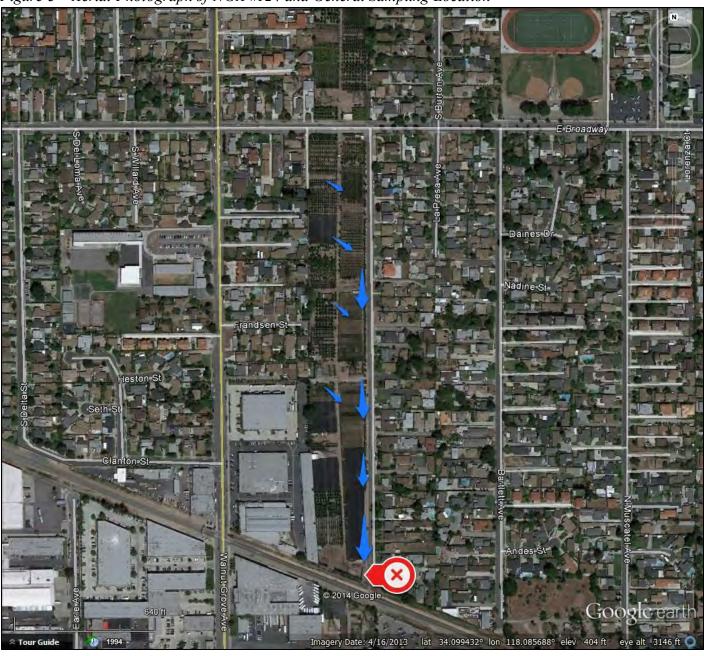
Results above CWIL Limits are presented in **BOLD.**

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

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NGA SITE #178

Sampling Group: Group 1 Sampling Frequency - Fixed

Total/Irrigated Area: 10.0/8.5 Acres

Sample site GPS location: N 34° 17' 57.42" W 118° 25' 06.46"

October 7, 2014, dry season, no 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.

Sampling - Two 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 12.

Aerial photography of the site is presented on Figure 4.

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Table 12 - Summary of samples collected, NGA #178

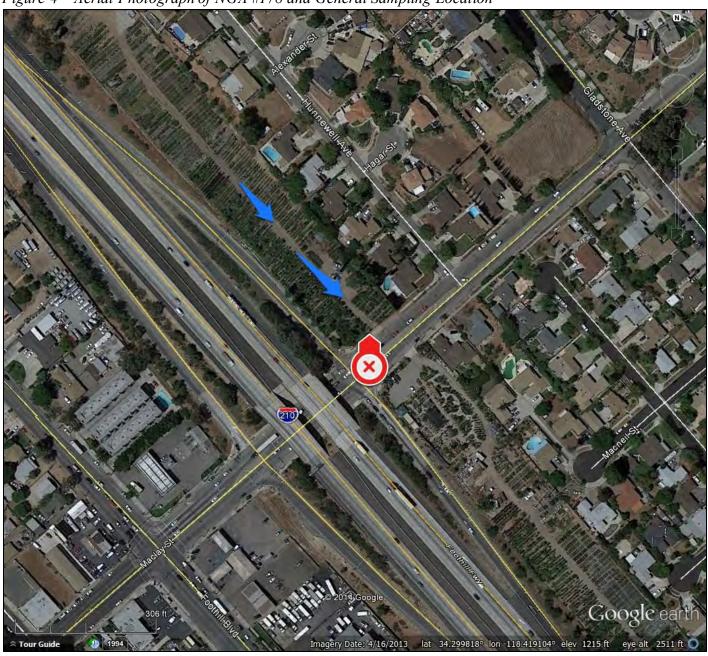
								General	Chemistry	y (mg/L)					
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA # 178	LAILG-NGA 178-1	12/15/08	0.81	85.04	2.4077	12.99	148.27	2.648	462	2.64	2.934	72.7	na	na	na
NGA # 178	LAILG-NGA 178-2	2/28/14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

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

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NGA SITE #184

Sampling Group: Group 1 Sampling Frequency - Fixed

Total/Irrigated Area: 36.0/36.0 Acres

Sample site GPS location: N 34° 13' 29.41" W 118° 29' 22.83"

October 7, 2014, dry season, no 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.

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 13.

Aerial photography of the site is presented on Figure 5.

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Table 13 - Summary of samples collected, NGA #184

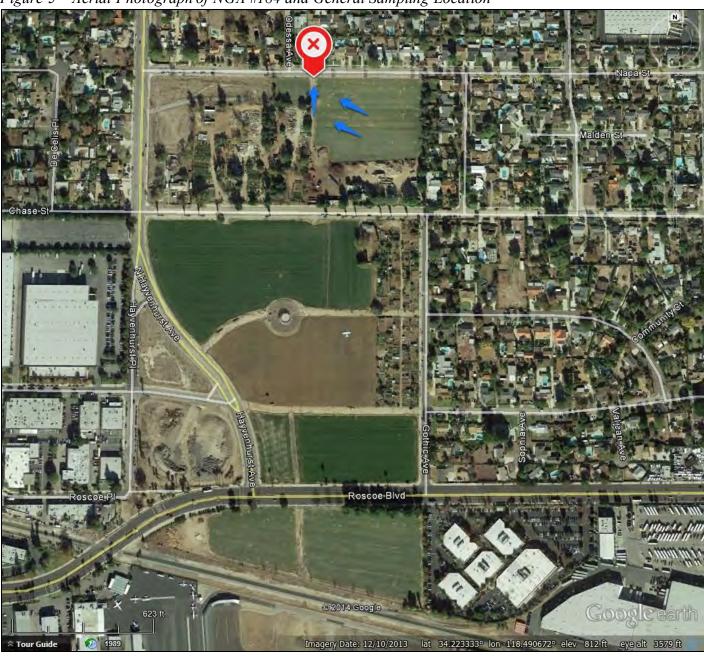
								General	l Chemistr	y (mg/L)					
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #184	LAILG-NGA 184-1	11/26/08	0.46	31.44	0.609	3.12	17.92	0.643	206	0.88	1.3	129.5	na	na	na
NGA #184	LAILG-NGA 184-2	12/15/08	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

			OC Pes		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
Site	Sample #	Date	Total DDT and Derivatives	Total Chlordane	No OP Pesticides	Total sum of all detected Pyrethroids
NGA #184	LAILG-NGA 184-1	11/26/08	nd	nd	Detected	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

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6.1.2 GROUP 2

NGA SITE #11

Sampling Group: Group 2 Sampling Frequency - Fixed

Total/Irrigated Acres: 10/7.5 Acres

Sample site GPS location: N 34° 06' 38.4" W 117° 54' 41.5"

December 2, 2014, wet season, no sample collected



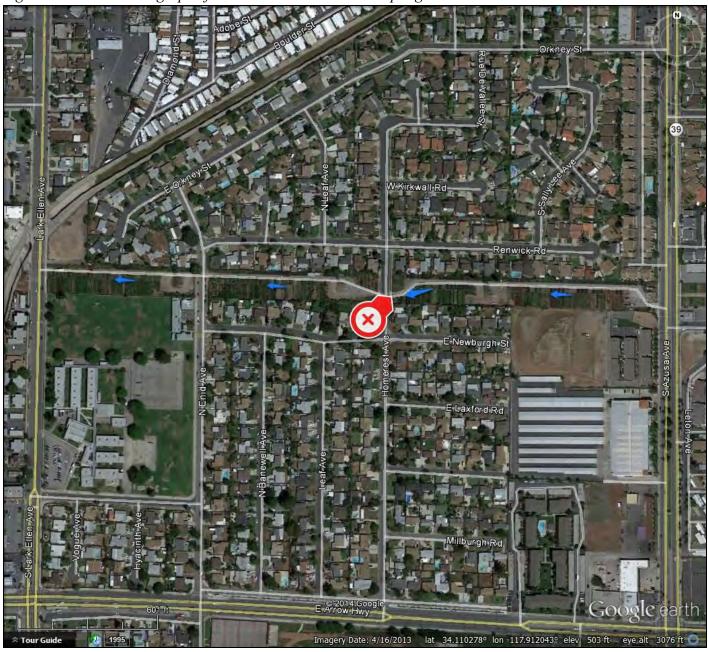
Site Drainage - The topography is relatively flat, and drains west as surface flow. Based on drainage properties and site access, the western gate of the eastern property was chosen as the most likely sampling location. All other gates are also visited during sampling events and checked for runoff.

Sampling - No samples collected to date. This site was visited during the first wet 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 6.

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





General Sampling Location



General Surface Flow to Sampling Location

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NGA SITE #109/110

Sampling Group: Group 2 Sampling Frequency - Fixed

Total/Irrigated Acres: 1.8/1.0 Acres

Sample site GPS location: N 34° 07' 4.8" W 117° 52' 22.8"

December 2, 2014, wet season, no sample collected



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.

Sampling - Two samples collected to date. No samples have been collected since 2008, after BMP improvements were implemented. This site was visited during the first wet season sampling event during this sampling year; no runoff was observed.

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

Aerial photography of the site is presented on Figure 7.

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

							General Che	mistry (mg/L)	1			
Site	Sample #	Date	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

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

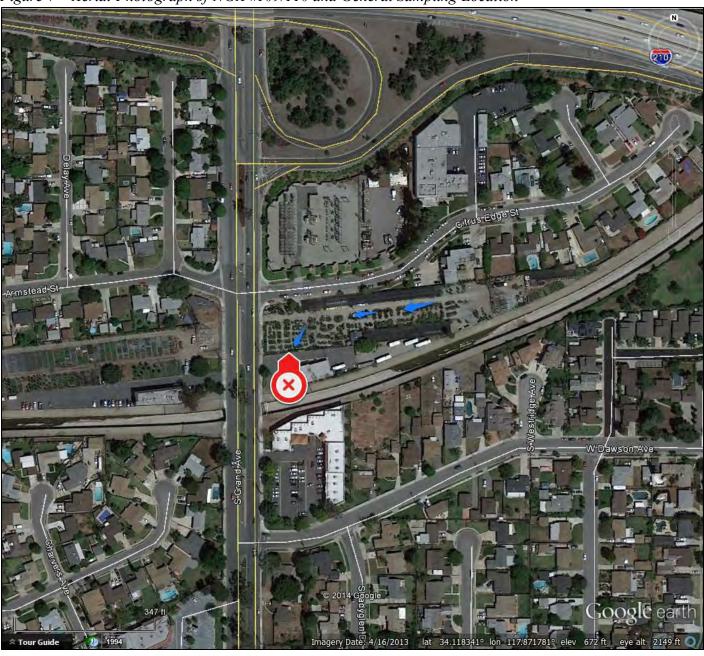
Results above CWIL Limits are presented in **BOLD**.

Constituent not detected

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

nd

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







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NGA SITE #150

Sampling Group: Group 2 Sampling Frequency - Fixed

Total/Irrigated Acres: 26.0/15.3 Acres

Sample site GPS location: N 34° 08'27.3" W 117° 55' 33.8"

December 2, 2014, wet season, sample collected



Site Drainage – The majority of the growing areas of the site drain to the center, where there is a sump pump which catches and re-routs all the irrigation and storm runoff from the site into two collection ponds for reuse. The portion of the property that was formerly the sampling location has been sold to the neighbor, and no longer has any irrigated lands. Based on the new site layout, there are concrete gutters that drain the paved portions of the site where temporary plant storage is located for shipping. The end if the gutter was chosen as the sampling location, prior to comingling with the neighboring property and entering the storm drain.

Sampling - Six samples collected to date. This site was visited during the first wet season sampling event during this sampling year; a sample was collected on December 2, 2014.

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

Updated aerial photography of the site is presented on Figure 8.

Table 15 - Summary of samples collected, NGA #150

								General	l Chemistry	y (mg/L)					
Site	Sample #	Date	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
NGA # 150	LAILG-NGA-150-6	12/2/14	0.41	60	2.4**	13	130	2.6	530	2.5**	3.7	240	179	71.8	0.095

				OC Pestici	des	OP Pesticid	les (ng/L)	Pyd Pesticides (ng/L)
Site	Sample #	Date	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
NGA # 150	LAILG-NGA-150-6	12/2/14	nd	nd	nd	nd	nd	5,370

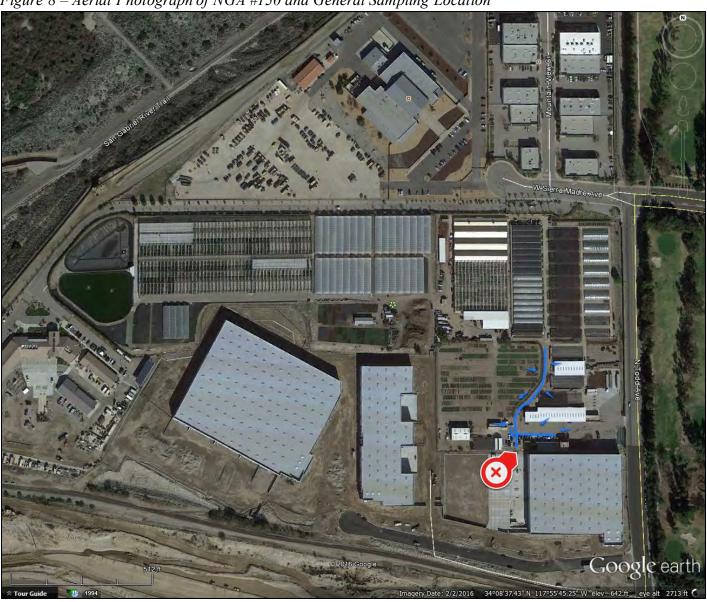
Results above CWIL Limits are presented in **BOLD**.

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







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NGA SITE #189

Sampling Group: Group 2 Sampling Frequency - Fixed

Total/Irrigated Area: 1.5/1.25 Acres

Sample site GPS location: N 34° 06' 59.1" W 117° 47' 03.9"

December 2, 2014, wet season, no sample collected



Site Drainage - The western end of the site drains westward into a grass field that borders the edge of the property. The eastern half drains 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.

Sampling - Two samples collected to date. No samples have been collected since 2008, after BMP improvements were implemented. This site was visited during the first wet season sampling event during this sampling year; no runoff was observed.

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

Aerial photography of the site is presented on Figure 9.

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Table 16 - Summary of samples collected, NGA #189

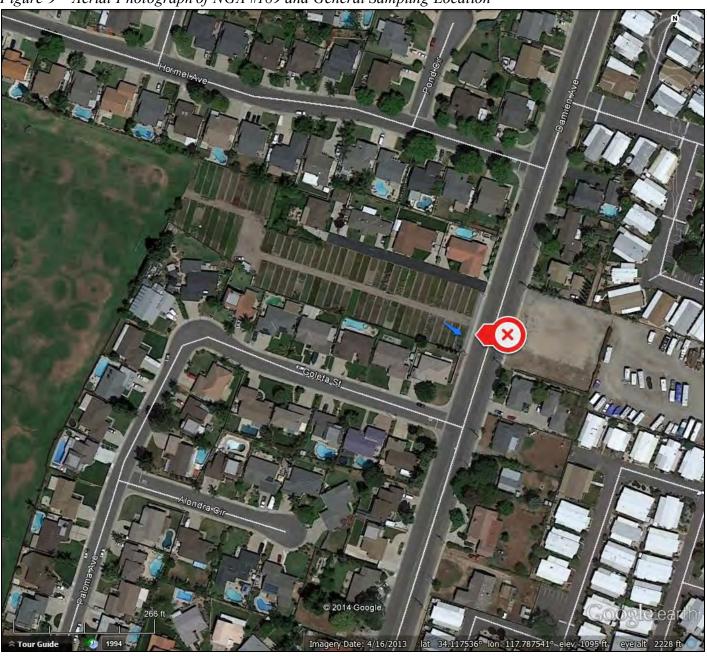
							General Che	mistry (mg/L))			
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS
NGA # 189	LAILG-NGA 189-1	1/4/08	0.59	7.29	0.6851	1.83	26.43	1.33	192	1.8	2.475	20
NGA # 189	LAILG-NGA 189-2	12/15/08	0.54	31.28	0.6795	9.87	41.27	0.813	220	0.99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

			OC Pest (ng/		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
Site	Sample #	Date	Total DDT and Derivatives	Total Chlordane	Malathion	Total sum of all detected Pyrethroids
NGA # 189	LAILG-NGA 189-1	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







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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 33° 3′ 0" W 118° 0′ 14.4"

May 15, 2015, wet season, no sample collected



Site Drainage - The site drains southwest, trough ditches that ultimately enter a catch basin. The site has implemented a number of BMPs, including re-directing runoff from the 605 Freeway away from growing operations at the site. All operations at the site discharge to the main catch basin. Based on site improvements, sampling would only take place if the catch basin overflows and releases water through additional BMPs to the storm drains on the northwest corner of the property.

Sampling - Four samples collected to date. This site was visited during the second wet 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.

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Table 17 - Summary of samples collected, NGA #31

								General	Chemistry	(mg/L)					
Site	Sample #	Date	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

			OC Pe	sticides	OP Pesti	icides	Pyd Pesticides
			(ng	g/L)	(ng/)	L)	(ng/L)
Site	Sample #	Date	Total DDT	T-4-1			Total sum of
			and	Total Chlordane	Chlorpyrifos	Malathion	all detected
			Derivatives	Chlordane			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

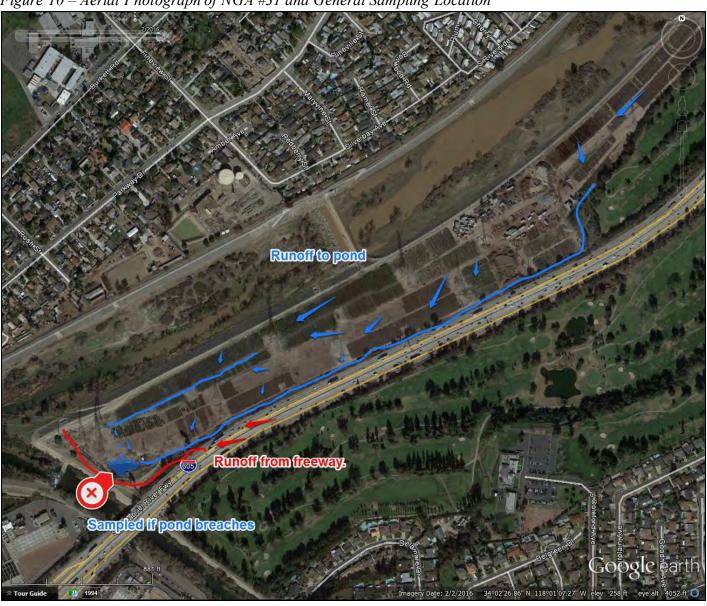
Results above CWIL Limits are presented in BOLD.

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







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NGA SITE #64

Sampling Group: Group 3
Sampling Frequency - Fixed

Total/Irrigated Acres: 5.5/2.5 Acres

Sample site GPS location: N 33° 52' 05.9" W 118° 08' 32.3"

May 15, 2015, wet 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.

Sampling - Three samples collected to date. This site was visited during the second wet 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.

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Table 18 - Summary of samples collected, NGA #64

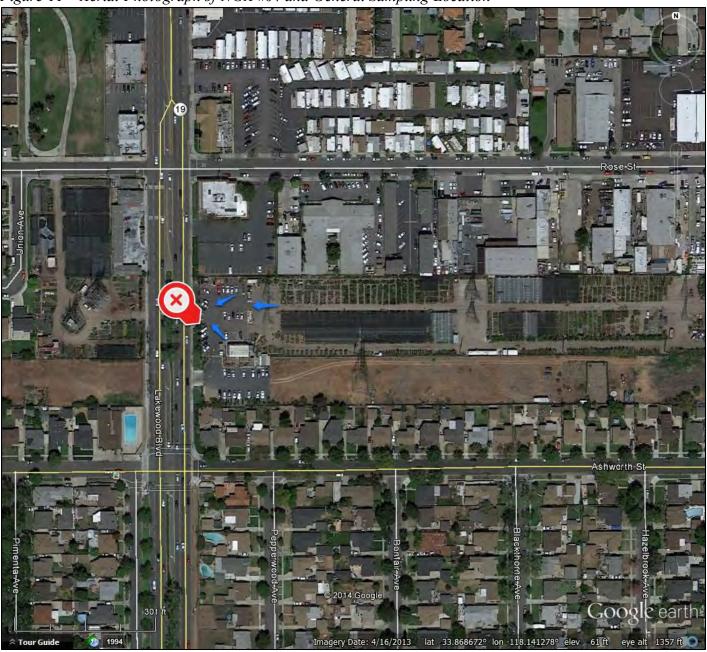
								General	Chemistry	(mg/L)					
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Са	Cu
NGA #64	LAILG-NGA 64-1	1/23/08	0.2	3.82	0.2818	3.83	101.1	0.3	nd	0.46	0.393	76	na	na	na
NGA #64	LAILG-NGA 64-2	12/15/08	1.15	12.38	0.4307	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

			OC Pestic (ng/L		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
Site	Sample #	Date	Total DDT and Derivatives	Toxaphene	No OP Pesticides	Total sum of all detected Pyrethroids
NGA #64	LAILG-NGA 64-1	1/23/08	0	0	Detected	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







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NGA SITE #81

Sampling Group: Group 3
Sampling Frequency - Fixed

Total/Irrigated Acres: 4.7/3.0 Acres

Sample site GPS location: N 33° 52' 46.9" W 118° 09' 20.7"

May 15, 2015, wet season, no sample collected



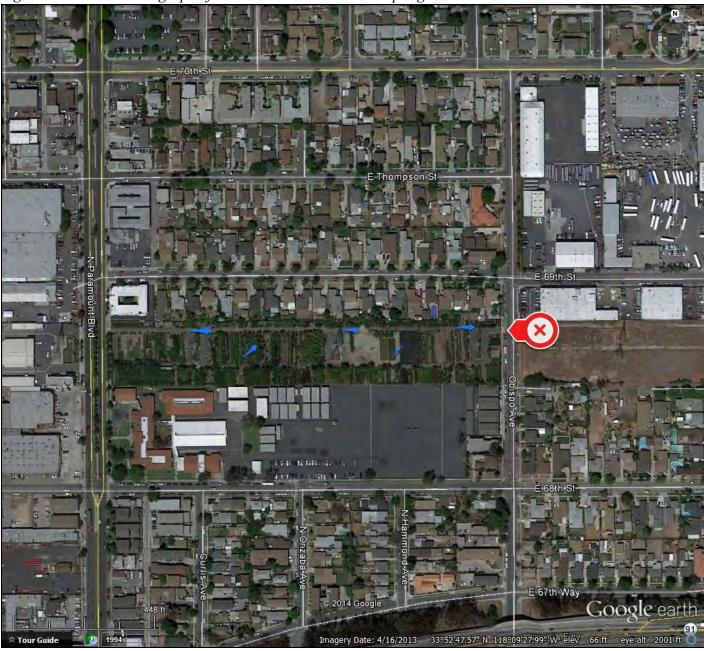
Site Drainage – The site drains to the east as sheet flow towards Obispo Avenue. The site is relatively flat with a small surface gradient.

Sampling - No samples collected to date. This site was visited during the second wet 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



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NGA SITE #168

Sampling Group: Group 3
Sampling Frequency - Fixed

Total/Irrigated Acres: 6.0/4.75 Acres

Sample site GPS location: N 33° 51' 3.2" W 118° 4' 55.2"

May 15, 2015, wet season, 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.

Sampling - Seven samples collected to date. This site was visited during the second wet season sampling event during this sampling year; a sample was collected on May 15, 2015.

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

Aerial photography of the site is presented on Figure 13.

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Table 19 - Summary of samples collected, NGA #168

								General	Chemistry	y (mg/L)					
Site	Sample #	Date	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
NGA #168	LAILG-NGA-168-7	5/15/15	0.18	57	0.36**	11	120	0.44	400	0.36**	0.74	91	134	53.7	0.036

			OC Pestio (ng/L		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
Site	Sample #	Date	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	1,379.1
NGA #168	ILGNGA-#168-2	9/28/07	118	nd	nd	964.0
NGA #168	NGA-#168-LAILG-3	11/30/07	2.7	2.8	8.9	466.1
NGA #168	LAILG-NGA168-4	1/25/08	19.2	nd	nd	187.9
NGA # 168	LAILG-NGA 168-5	12/15/08	11.8	nd	38.9	1,375.9
NGA #168	LAILG-NGA168-6	3/17/12	nd	nd	nd	72
NGA #168	LAILG-NGA-168-7	5/15/15	nd	nd	nd	484.3

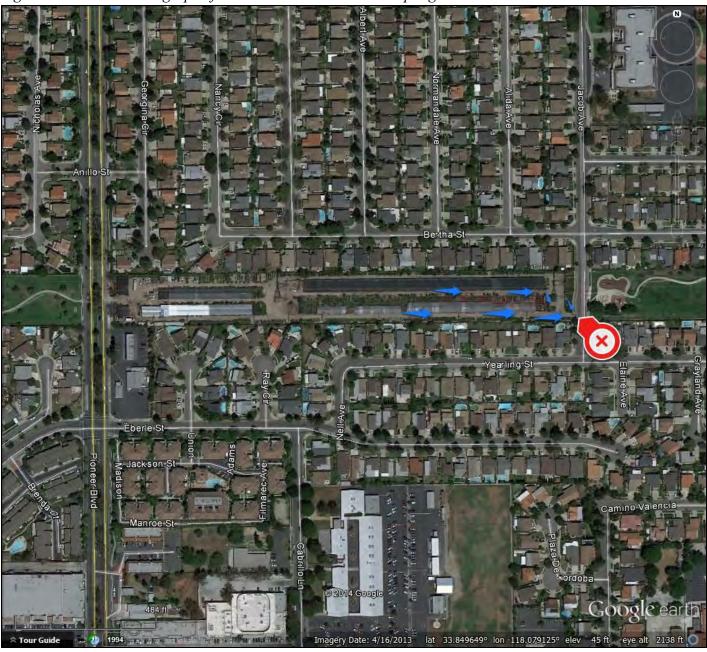
Results above CWIL Limits are presented in BOLD.

 $\begin{array}{ll} mg/L & milligrams \ per \ liter \\ ng/L & nanograms \ per \ liter \end{array}$

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







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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 33° 52' 55.5" W 118° 16' 06.1"

October 8, 2014, 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 first 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.

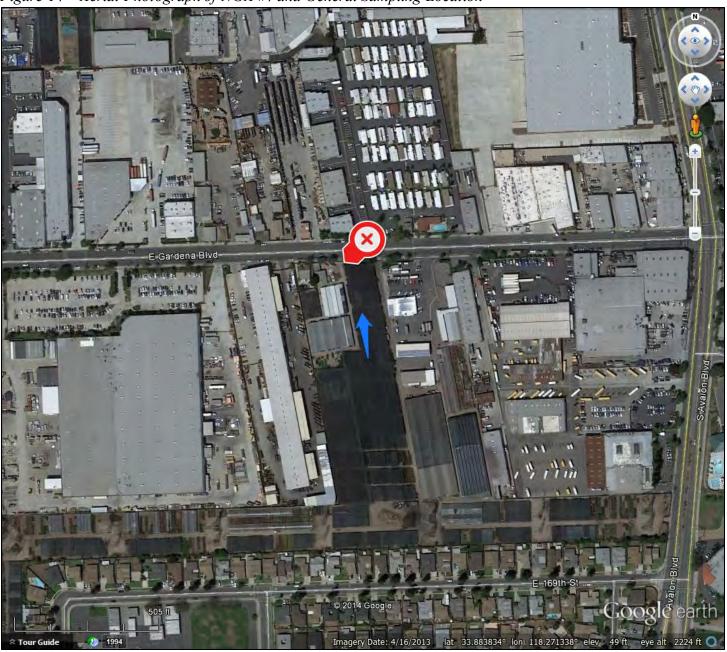
Table 20 - Summary of samples collected, NGA #4

				General Chemistry (mg/L)													
Site	Sample #	Date	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		

				OC Pesticid (ng/L)	es		OP Pes (ng			Pyd Pesticides (ng/L)
Site	Sample #	Date	Dicofol	Total DDT	Total Chlordane	Chlorpyrifos		Dichlorvos	Malathion	Total sum of
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 ab	ove 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







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NGA SITE #53

Sampling Group: Group 4 Sampling Frequency - Fixed

Total/Irrigated Acres: 3.5/1.7 Acres

Sample site GPS location: N 33° 52' 51.1" W 118° 12' 56.3"

October 8, 2014, 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. No samples have been collected since 2008, after BMP improvements were implemented. 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 21.

Aerial photography of the site is presented on Figure 15.

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Table 21 - Summary of samples collected, NGA #53

				General Chemistry (mg/L)											
Site	Sample #	Date	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			

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

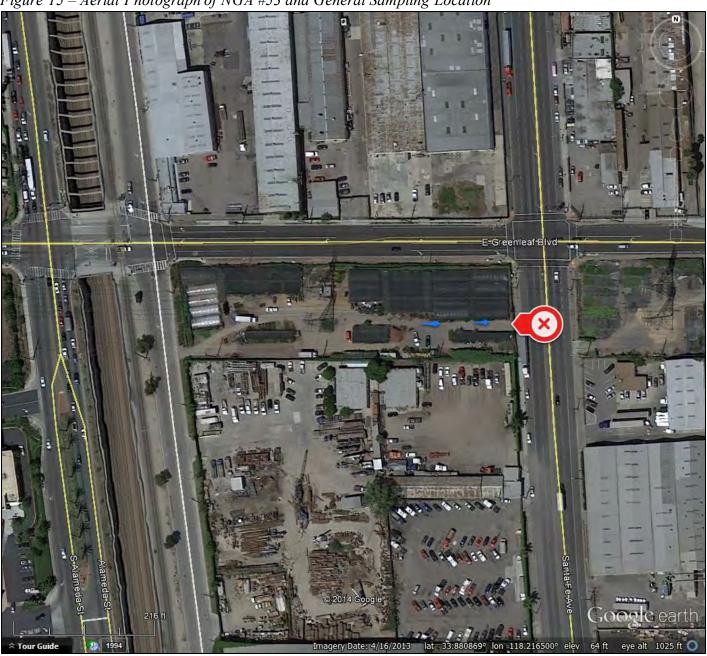
Results above CWIL Limits are presented in BOLD.

 $\begin{array}{ll} mg/L & milligrams \ per \ liter \\ ng/L & nanograms \ per \ liter \end{array}$

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







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NGA SITE #176

Sampling Group: Group 4
Sampling Frequency - Fixed

Total/Irrigated Acres: 12.0/7.5 Acres

Sample site GPS location: N 33° 51' 24.4" W 118° 22' 51.6"

October 8, 2014, 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 first 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.

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Table 22 - Summary of samples collected, NGA #176

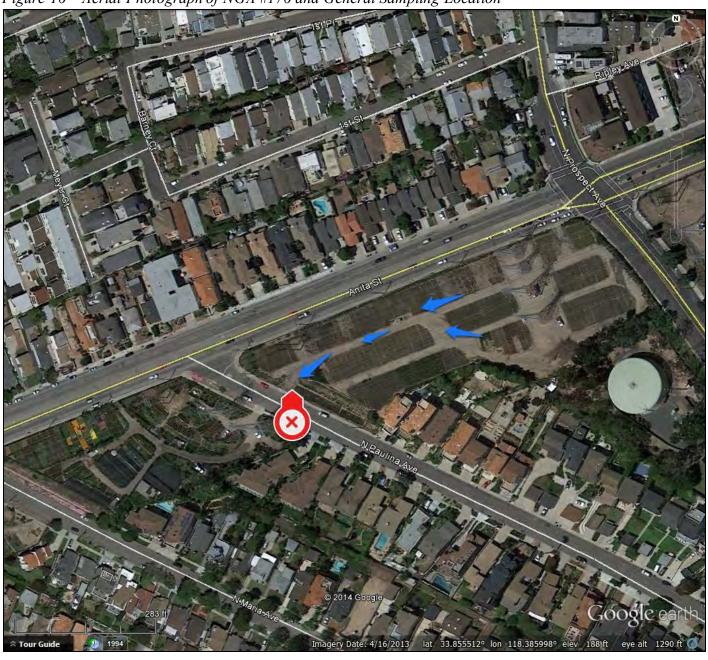
				General Chemistry (mg/L)											
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Са	Cu
NGA #176	NGA-#176-LAILG-1	12/18/07	5.5	56.82	0.7145	3.85	293.12	0.54	680	12.21	3.447	6,168	na	na	na
NGA #176	NGA-#176-LAILG-2	3/25/12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

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







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NGA SITE #210

Sampling Group: Group 4 Sampling Frequency - Fixed

Total/Irrigated Area: 2.0/1.4 Acres

Approximate sample site GPS location: N 34° 01' 11.59" W 118° 49' 10.89"

October 8, 2014, 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 first 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.

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Table 23 - Summary of samples collected, NGA #210

				General Chemistry (mg/L)											
Site	Sample #	Date	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

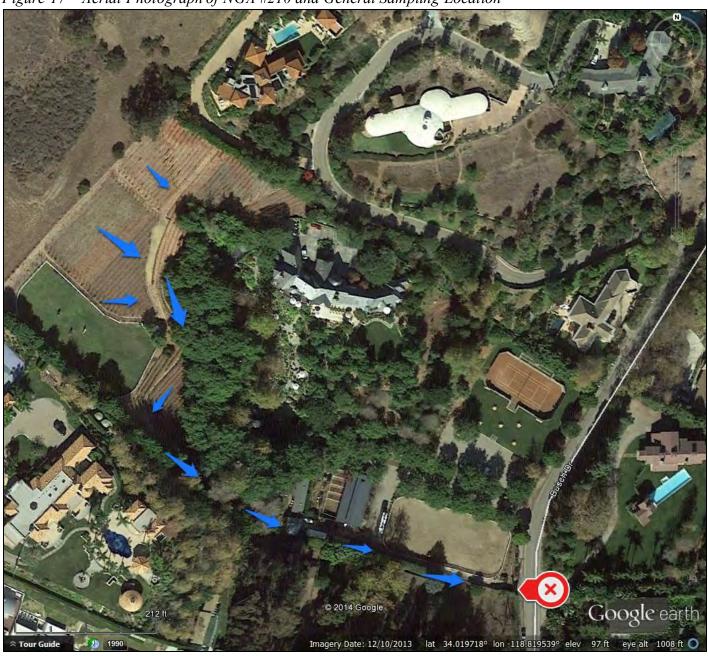
			OC Pesticides	OP Pesticides	Pyd Pesticides
			(ng/L)	(ng/L)	(ng/L)
Site	Sample #	Date	No OP Pesticides Detected	Malathion	Total sum of all detected Pyrethroids
NGA # 210	LAILG-NGA 210-1	11/26/08		56.4	279.8
NGA # 210	LAILG-NGA 210-2	3/25/12		41	82.7

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







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6.2 VISITED REVOLVING SAMPLING SITES

NGA SITE # 158 (Sakaida)

Sampling Group: Group 1 Sampling Frequency - Rotating Total / Irrigated Acres: 7.00 / 6.89

Sample site GPS location: N 34° 06' 49.0" W 118° 04' 55.9"

October 7, 2014, dry season, no sample collected



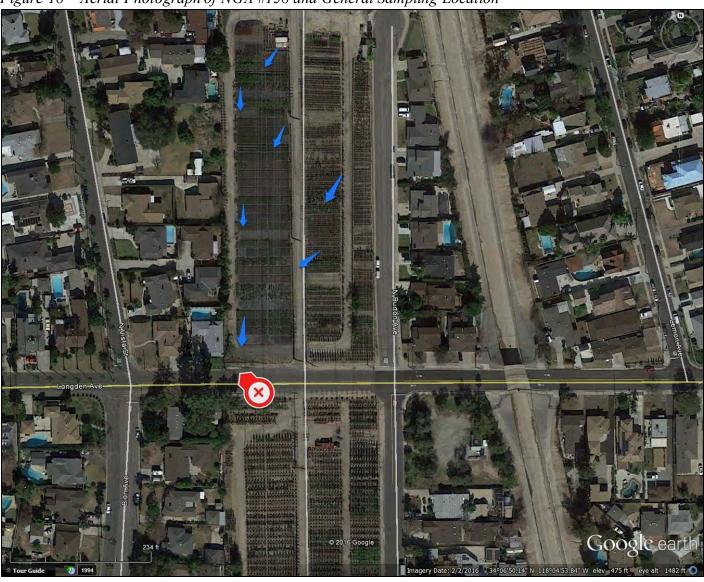
Site Drainage – The topography is relatively flat, and drains as surface flow. Based on drainage properties and site access, the southwestern corner of property to the north of Longden Avenue was chosen as the sampling location.

Sampling – One visit to date with no samples collected. 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 18.

Figure 18 – Aerial Photograph of NGA #158 and General Sampling Location







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NGA SITE # 188 (West Cov Damien)

Sampling Group: Group 2 Sampling Frequency - Rotating

Total / Irrigated Acres: 20.00 / 15.25

Sample site GPS location: N 34° 05' 33.1" W 117° 47' 31.8"

December 2, 2014, wet season, sample collected



Site Drainage – The site drains primarily to the southwest as sheet flow that concentrates and channelizes before releasing at multiple points of the property. Releases drain directly to Puddingstone Reservoir. Based on drainage properties and site access, the primary release point from the southern edge of the property was chosen as a 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 December 2, 2014.

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

Aerial photography of the site is presented on Figure 19.

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Table 24 - Summary of samples collected, NGA #188

								General (Chemistry	(mg/L)					
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #188	LAILG-NGA-188-1	12/2/14	0.31	38	0.56	4.4	110	0.80	330	0.56	2.0	2000	141	56.3	0.036

			OC Pesticides (ng/L)	OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
Site	Sample #	Date	No OC Pesticides	No OP Pesticides	Total sum of all detected Pyrethroids
NGA #188	LAILG-NGA-188-1	12/2/14	Detected	Detected	81

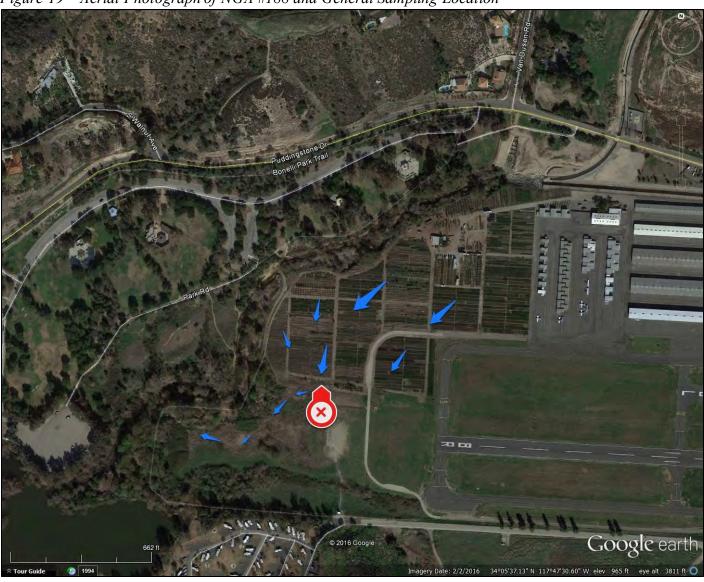
Results above CWIL Limits are presented in **BOLD**.

 $\begin{array}{ll} mg/L & milligrams \ per \ liter \\ ng/L & nanograms \ per \ liter \end{array}$

OC Organochlorinated Pesticide
OP Organophosphorus Pesticide

Pyd Pyrethroid Pesticide
na Constituent not analyzed
nd Constituent not detected

Figure 19 – Aerial Photograph of NGA #188 and General Sampling Location







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NGA SITE # 221 (Malibu Vin)

Sampling Group: Group 4
Sampling Frequency - Rotating
Total / Irrigated Acres: 2.0 / 2.0

Sample site GPS location: N 34° 02' 36.5" W 118° 38' 47.8"

October 8, 2014, dry season, no sample collected

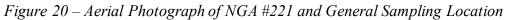


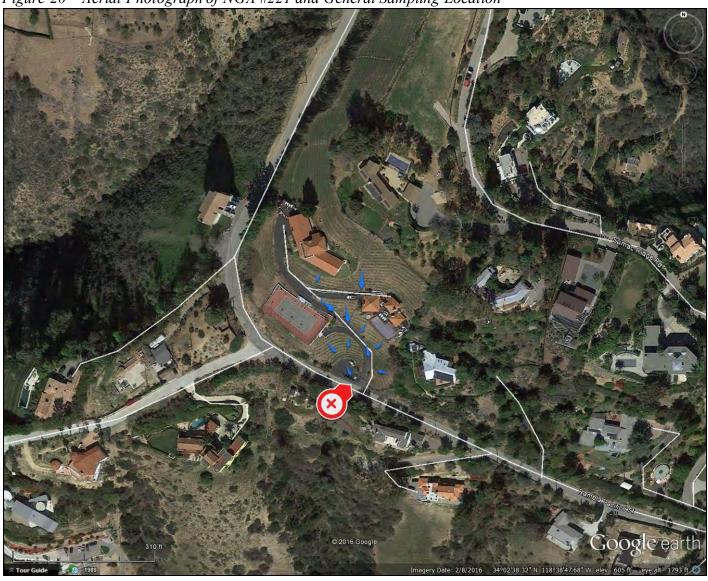
Site Drainage – The site is steeply graded to the south and west, and would run off towards Rambla Pacifico Street via the driveway and surface flow. Based on drainage properties, a storm drain near the bottom of the main asphalt driveway was chosen as the sampling location.

Sampling – One visit to date with no samples collected. 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 20.







General Sampling Location



General Surface Flow to Sampling Location

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NGA SITE # 261 (ABC Rhubarb)

Sampling Group: Group 3
Sampling Frequency - Rotating
Total / Irrigated Acres: 5.83 / 5.00

Sample site GPS location: N 33° 57' 44.3" W 118° 09' 21.0"

May 15, 2015, wet season, no sample collected



Site Drainage – The site drains to the middle of the property, and is unlikely to discharge. Based on drainage properties, the south western most gate was chosen as a potential sampling location if the site flooded.

Sampling – One visit to date with no samples collected. This site was visited during the second wet season sampling event during this sampling year; no runoff was observed. The site is no longer conducting growing activities, and has been removed from the group.

There are no historical sampling results for this site.

There is no aerial map of the site since it has subsequently gone out of operation.

7.0 SUMMARY OF SAMPLING SITE RESULTS

7.1 WATER QUALITY BENCHMARK EXCEENDANCES

A total of 72 samples have been collected since the inception of the program. During this sampling year, a total of three samples were collected over two sampling events.

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 four general chemistry constituents in samples collected at two of the three sites sampled during this sampling year (Year 4 under Order No. R4-2010-0186). Table 25 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 one of the three samples collected this sampling year, and 27 of the 72 total samples (37.5 %) collected throughout the life of the program.

Chloride

Laboratory results did not report Chloride exceedances in any samples collected during this sampling period. Six of the 72 total samples (8.33 %) collected throughout the life of the program have reported exceedances of Chloride.

Sulfate

Laboratory results reported Sulfate exceedances in one of the three samples collected during this sampling period, and ten of the 72 total samples (13.8 %) collected throughout the life of the program.

Nutrients (Nitrate/Ammonia/Phosphorus)

Laboratory results reported Nitrogen as Nitrate exceedances in two of the three samples during this sampling period, and 40 of the 72 total samples (55.5 %) collected throughout the life of the program. Laboratory results did not report Nitrogen as Ammonia exceedances in any samples collected during this sampling period. Four of the 72 total samples (5.56 %) collected throughout the life of the program. WQBs for Phosphate have not been established.

Table 25 - Summary of Water Quality Exceedances, General Chemistry

10010 20			J						R4-2005-008					
		YEA	AR 1				AR 2	ruci #		AR 3	YEA	AR 4		% of
Constituent	Dry S	eason	Wet S	eason	Dry S	eason	Wet S	eason	Dry Season	Wet Season	Dry Season	Wet Season	Total	
	Event	Event	Event	Event	Event		samples							
	#1	#2	#1	#2	#1	#2	#1	#2	#1	#1	#1	#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

							CWIL	Order # R4-2	010-01	86							
	Interim		YEA	AR 1			YEA	AR 2		YE	AR 3		YE	AR 4			۵, ۵
Constituents	Sampling	Dry S	eason	Wet S	eason	Dry S	Season	Wet Season	Dry S	eason	Wet Season	Dry S	Season	Wet S	eason	Total	% of samples
							Event			Event			Event				•
	2011	#1	#2	#1	#2	#1	#2	#1	#1	#2	#1	#1	#2	#1	#2	_	0.00/
Ammonia	0			0	0						0			0	0	0	0.0%
TDS	3			1	1			-			2			1	0	8	40.0%
Sulfate	0			1	1			1			1			1	0	4	20.0%
Chloride	0			0	0						1			0	0	1	5.0%
Nitrogen	2			2	1	-					3	-		1	1	10	50.0%
Total Number of Exceedances	5	0	0	4	3	0	0	0	0	0	7	0	0	3	1	23	
Average # of Exceedances per sample	1.25			1.00	0.75						1.40			1.50	1.00	1.15	
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	5	0	0	2	1	20	

No sample collected

7.1.2 Pesticides

Based on laboratory analytical results, WQBs were exceeded for three pesticides in samples collected at one of the three sites sampled during this sampling year (Year 4 under Order No. R4-2010-0186). Table 26 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 did not report OC Pesticide exceedances in the three samples collected this sampling year. There have been 58 individual constituent exceedances in the 72 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. Exceedances were more prevalent during the previous waiver period (CWIL Order #R4-2005-0080).

OP Pesticides

Laboratory results did not report OP Pesticide exceedances in the three samples collected this sampling year. There have been 25 individual constituent exceedances in the 72 total samples collected throughout the life of the program.

OP pesticides detected over WQBs throughout both waiver periods have been Chlorpyrifos, Diazinon, and Malathion.

Pyrethroids

Laboratory results reported Pyrethroid Pesticide exceedances in one of the three samples collected this sampling year. There have been 91 individual constituent exceedances in the 72 total samples collected throughout the life of the program.

Pyrethroid pesticides detected over WQBs for this sampling year included Bifenthrin, Fenpropathrin (Danitol), and Permethrin.

Table 26 - Summary of Water Quality Exceedances, Pesticides

							er # R4		080					
		YEA	AR 1			YEA	AR 2		YEA	R 3	YEA	AR 4		
Constituent	Dry S	00000	Wat S	oogon	Dry S	00000	Wat S	'aagan	Dry	Wet	Dry	Wet	Total	% of
Constituent									Season		Season	Season	Total	samples
	Event		Event	Event			Event	Event	Event	Event	Event	Event		
	#1	#2	#1	#2	#1	#2	#1	#2	#1	#1	#1	#1		
				Wai	iver Lir	nitatio	ns							
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	
				Aquat	ic Life	Guidel	ines							
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 26 cont.- Summary of Water Quality Exceedances, Pesticides

							CWIL	Order # R4-2	010-018	86							
	Interim		YEA	AR 1			YEA	AR 2		YEA	AR 3		YE	AR 4			
Constituents		Dry Se	eason	Wet S	eason	Dry S	eason	Wet Season	Dry S	eason	Wet Season	Dry S	eason	Wet S	eason	Total	% of samples
	March	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event	Event		samples
	2011	#1	#2	#1	#2	#1	#2	#1	#1	#2	#1	#1	#2	#1	#2		
						Waive	r Limit	ations									
OC Pesticides																	
Clordane	1			0	0						0			0	0	1	5.00%
4,4' DDT	1			0	0						0			0	0	1	5.00%
4,4' DDD	0		-	0	0		-			-	0		-	0	0	0	0.00%
4,4' DDE	1			1	1						0			0	0	3	15.00%
Dieldrin	1			0	0						0			0	0	1	5.00%
Toxaphene	0			0	0						0			0	0	0	0.00%
Waiver, OC Pesticide # of Exceedances	4	0	0	1	1	0	0	0	0	0	0	0	0	0	0	6	
OP Pesticides																	
Chlorpyrifos	3			0	1						1			0	0	5	25.00%
Diazinon	1			0	0						0			0	0	1	5.00%
Waiver, OP Pesticide # of Exceedances	4	0	0	0	1	0	0	0	0	0	1	0	0	0	0	6	
					A	quatic	Life Gı	ıidelines									
OP Pesticides																	
Malathion	1			0	1						0			0	0	2	10.00%
ALB, OP Pesticide # of Exceedances	1			0	1			-			0			0	1	2	
Pyrethroid Pesticides																	
Bifenthrin	0			0	0						1			1	0	2	10.00%
Cyfluthrin	0			0	0						1			0	0	1	5.00%
Cypermethrin	0		-	0	0		-	1			0			0	0	0	0.00%
Fenpropathrin (Danitol)	-		-	ni	ni					-	0		-	1	0	1	5.00%
Deltamethrin	0			1	0						0			0	0	1	5.00%
Lambda-cyhalothrin	0			0	0						0			0	0	0	0.00%
Permethrin	2			0	1						1			1	0	5	25.00%
ALB, Pyrethroid Pesticide # of Exceedances	2			1	1			-			3			3	0	10	
																	ì
Total # of Exceedances	11			2	4						4			3	0	24	
Average # of Exceedances per sample	2.75			0.50	1.00						0.80			1.50	0.00	1.20	
Number of Samples Collected	4	0	0	4	4	0	0	0	0	0	5	0	0	2	1	20	

ni Not included in laboratory analytical suite during this Waiver period

⁻⁻ No samples collected

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7.1.3 Toxicity

Based on laboratory analytical results, toxicity was not significant enough to initiate a TIE in any of the three 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. 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 PacRL, and are available upon request.

7.2 QUALITY ASSURANCE AND QUALITY CONTROL

QA/QC of data collected during Year 4 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 PacRL did not report any concentrations above laboratory MRLs, except for Hardness, TDS, Calcium, and Copper, all near the MDL level. All field monitoring equipment was calibrated prior to each monitoring event, and verified after calibration with midrange standards. Calibration logs are kept on-file at PacRL.

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 (129% RPD) and Total Phosphorous (35% RPD) in the samples collecting from NGA#188. 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.

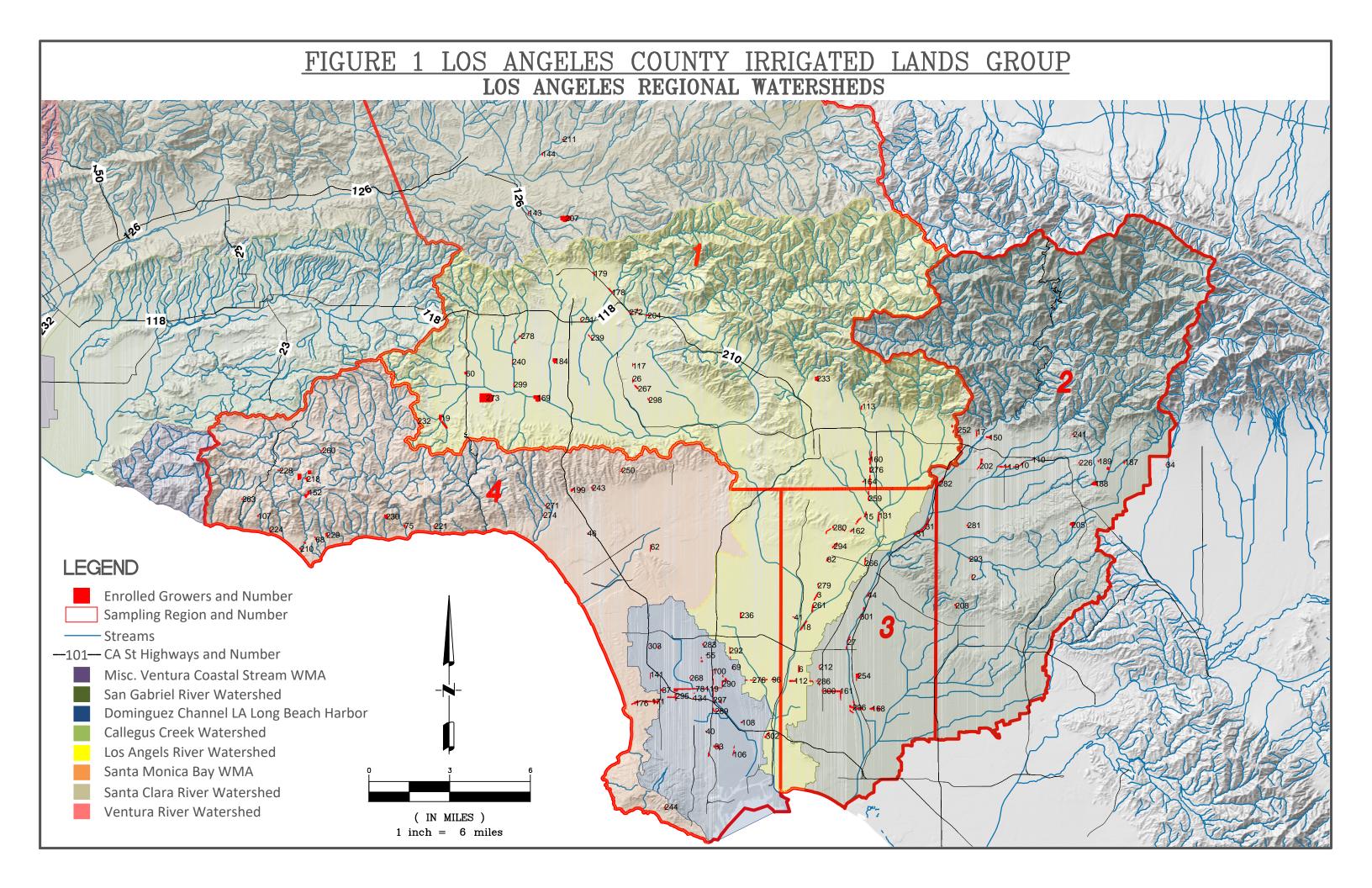
Percent recoveries for bank spike samples, laboratory control samples, and matrix spike samples are used to check the accuracy of samples. Some of these values fell outside the QAQC limits set in the QAPP, however, data was considered valid due to varying reasons, as discussed in the laboratory analytical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

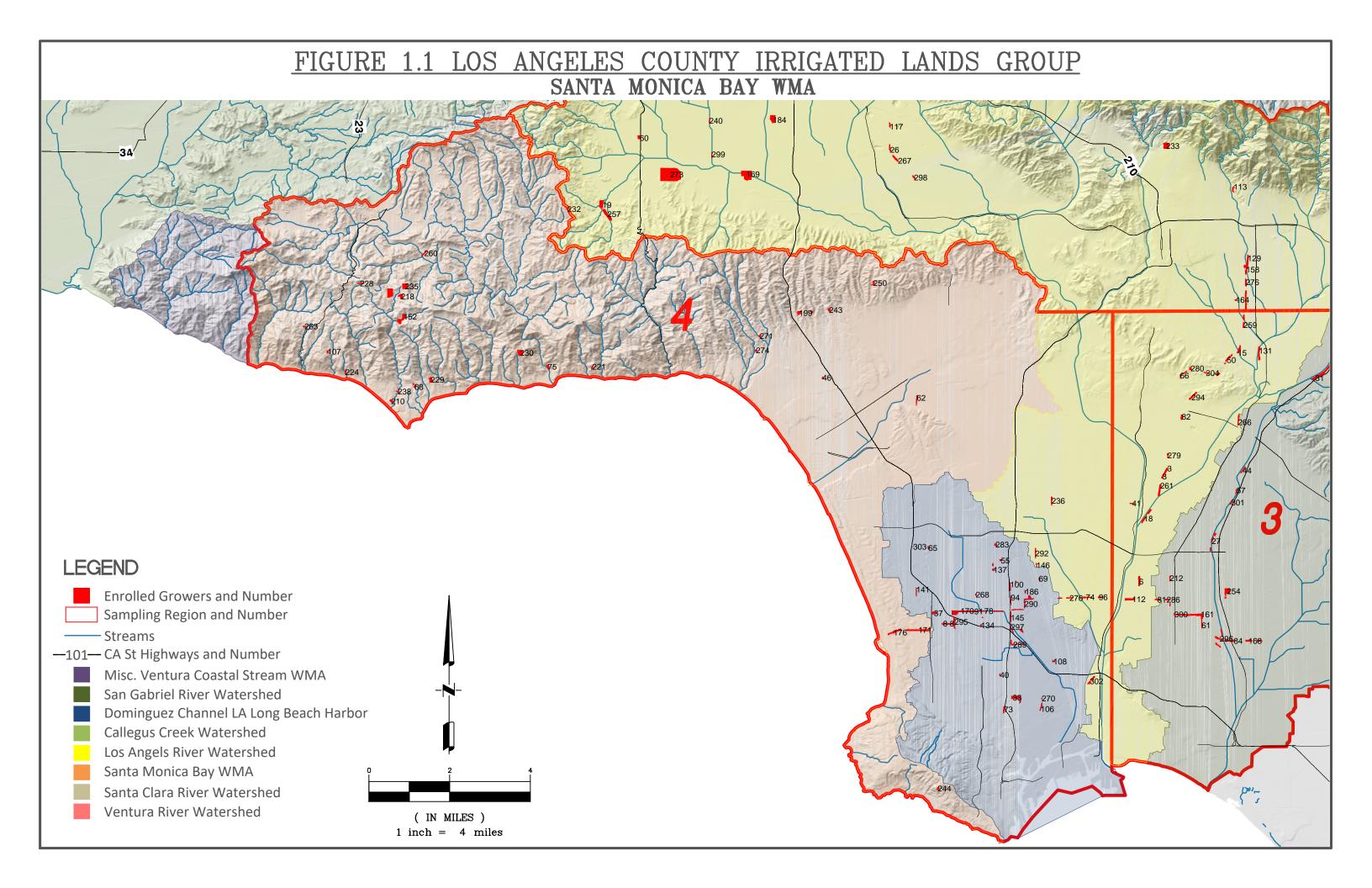
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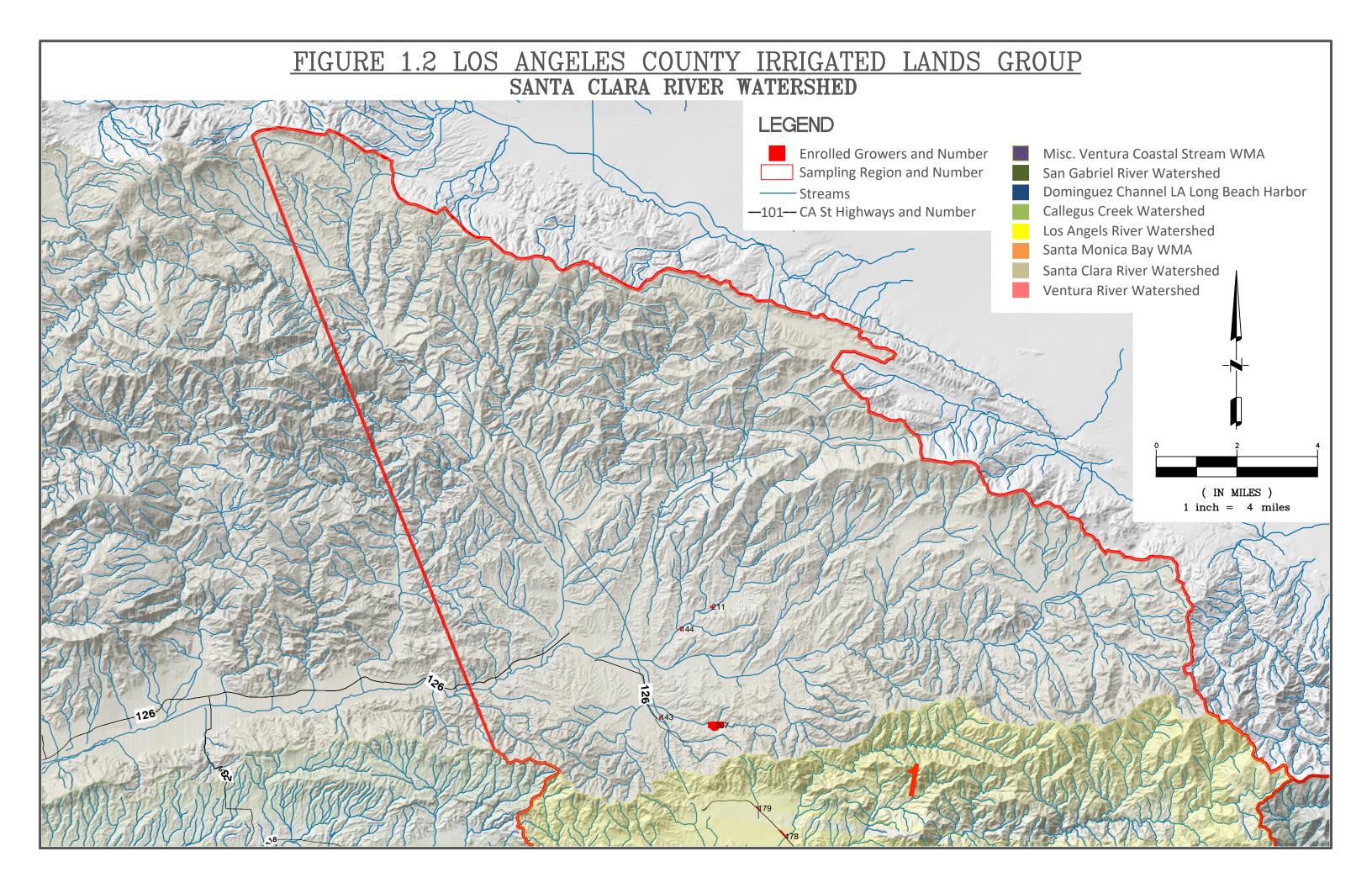
8.0 DISCUSSION / CONCLUSION

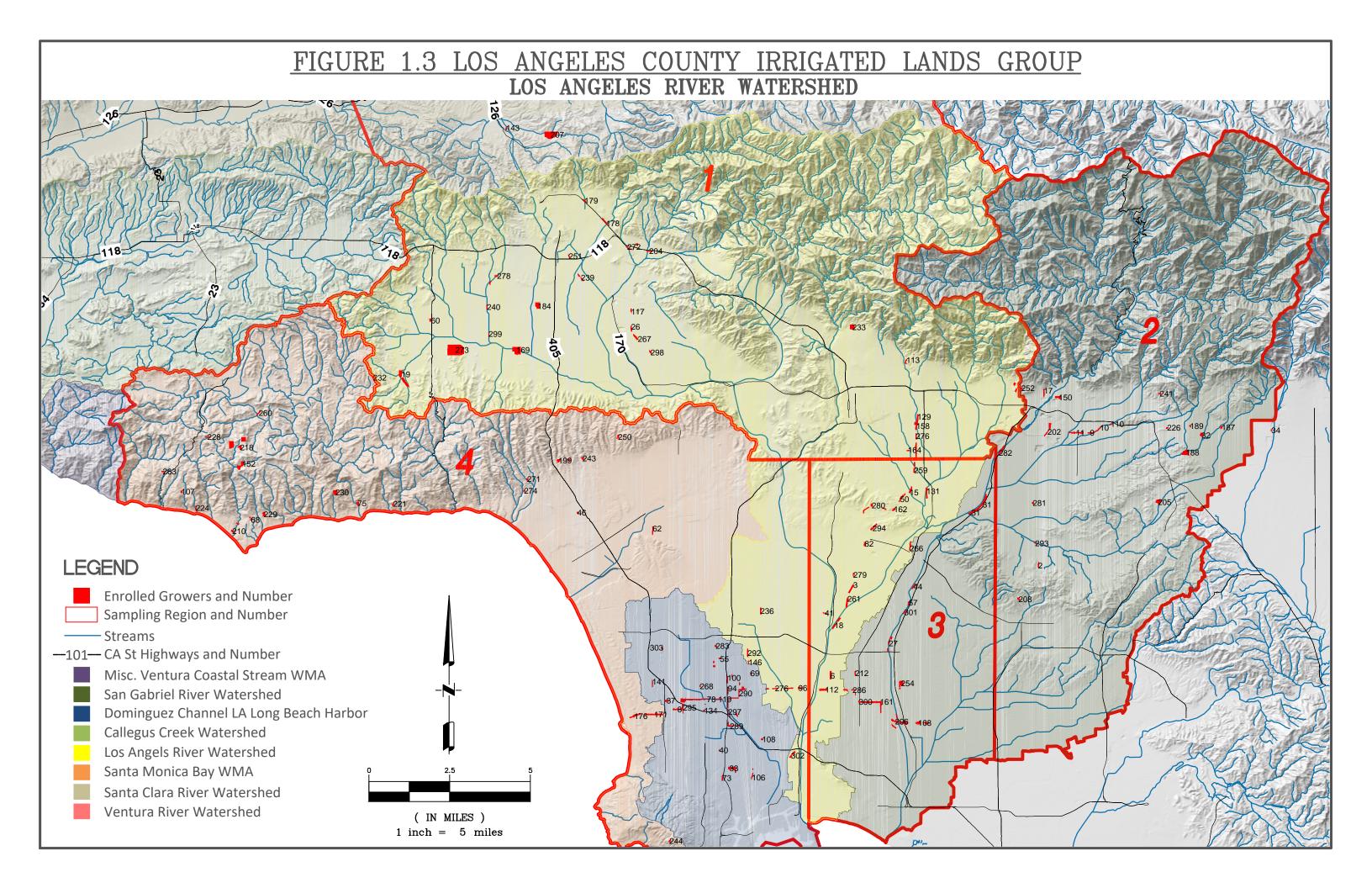
A total of two sampling event were conducted during the dry season and two sampling events were conducted during the wet season during the fourth year of CWIL Order No. R4-2010-0186. No runoff was observed or sampled during the dry season, and three of the ten sites visited were sampled during the wet season.

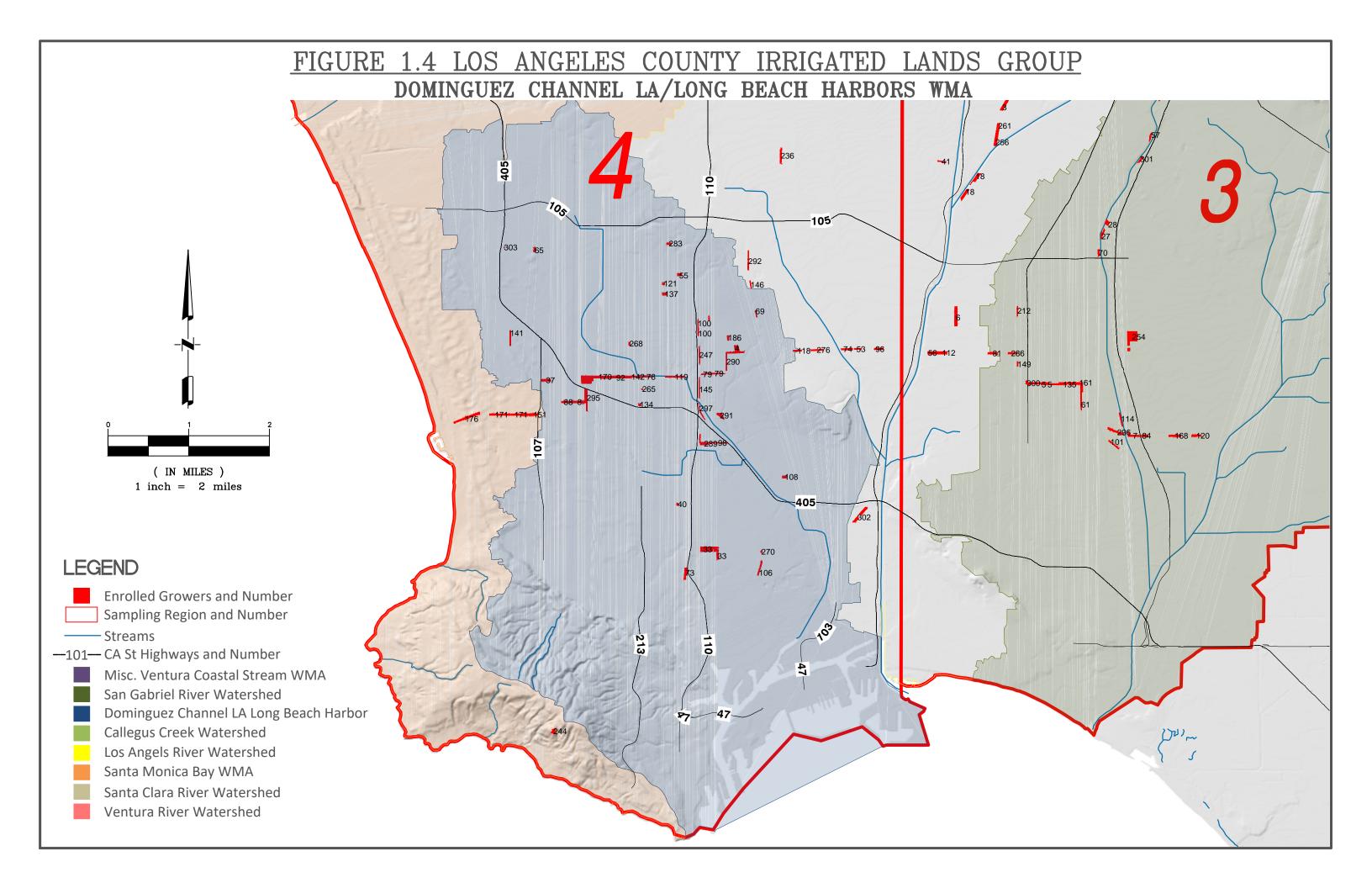
WQB exceedances were observed in the collected samples. In general, nitrogen and TSS that may carry particulate bound pesticides continue to be the primary concern for the monitoring group. The LAILG will continue with the current WQMP and MRP until the new CWIL is released, at which time each document will be updated accordingly.

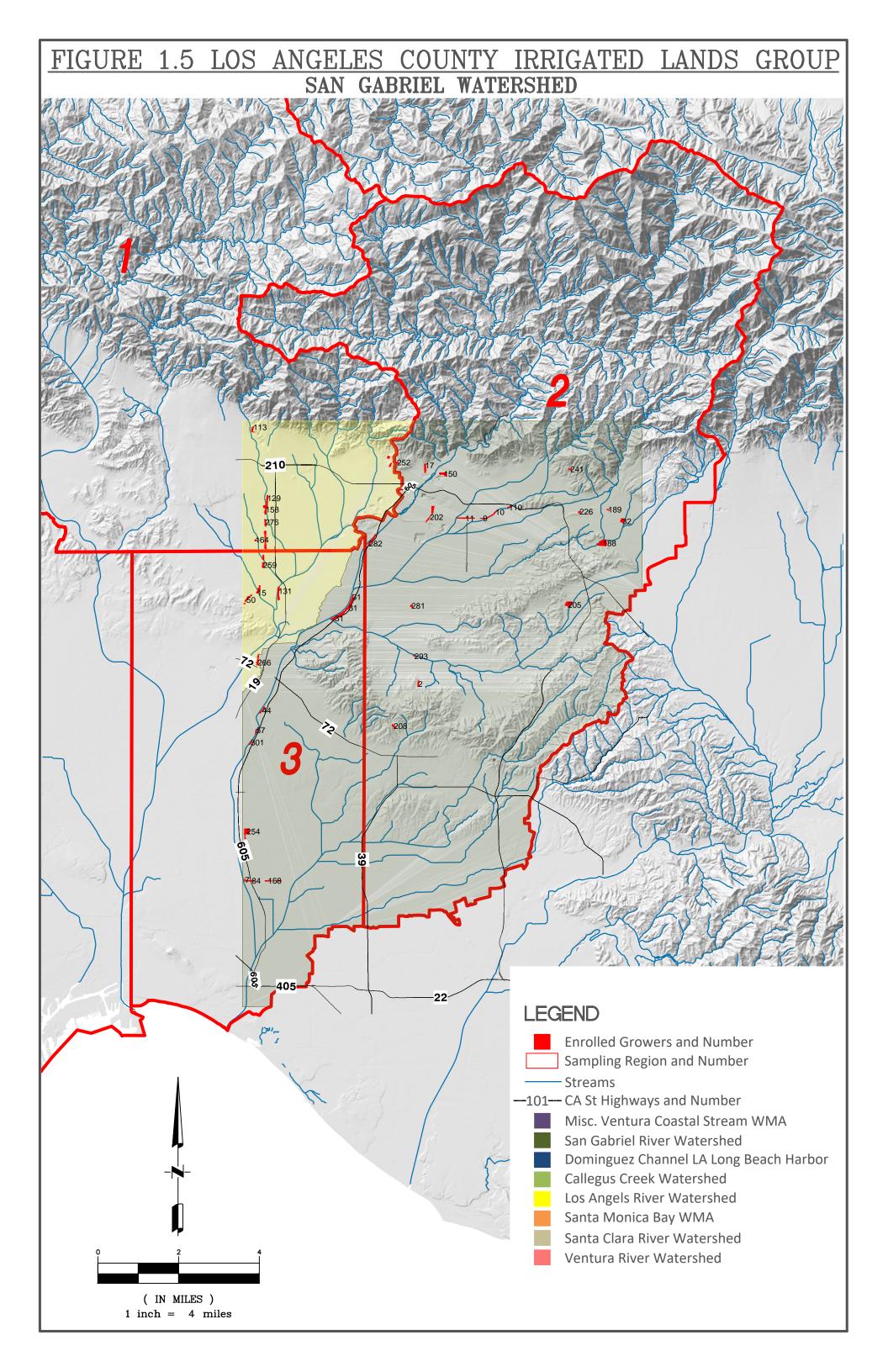












APPENDIX A

UPDATED LIST OF LOS ANGELES COUNTY IRRIGATED LANDS GROUP, AS OF MARCH, 2016

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
2	Ayon Nursery	Adriana Ayon -	8207019801	16448 Haliburton	Hacienda	16448 Haliburton	Hacienda	CA	91745	General	SG	6.00	5.00
	7 tyon runsery	Jesus Ayon	8207019802	Rd	Heights	Rd	Heights	CH	71743	Ornamental	50	0.00	5.00
			6329001800	(000 D 11	D 11	424 F + C 1				G 1			
3	ABC Nursery, Inc.	Eric Yonemura	6329001801	6800 Darwell	Bell	424 East Gardena	Gardena	CA	90248	General	LA	22.21	10.20
			6330019801 6330019800	Avenue	Gardens	Blvd.				Ornamental			
			6126011028										
			6126011029	12.4 F. G. 1		12.1 To 1. C. 1							
4	ABC Nursery, Inc.	Eric Yonemura	6126011035	424 E. Gardena	Gardena	424 East Gardena	Gardena	CA	90248	General	D	19.19	11.51
			6126011036	Boulevard		Blvd.				Ornamental			
			6126011800										
			7168034800										
			7168034801										
			7168034281										
			7168034285 7168034270										
			7168034270			424 East Gardena				General			
5	ABC Nursery, Inc.	Eric Yonemura	7168034289	6221 Clark Avenue	Lakewood	Blvd.	Gardena	CA	90248	Ornamental	SG	6.40	2.70
			7168034278			Divu.				Omamentar			
			7168034272										
			7168034280										
			7168034273										
			7168034274										
			6240008800	7132 Somerset		424 East Gardena				General			
6	ABC Nursery, Inc.	Eric Yonemura	6240008801	Boulevard	Paramount	Blvd.	Gardena	CA	90248	Ornamental	LA	9.52	4.87
			6240008802										
			7049021800 7049021801										
			7049021801			424 East Gardena				General			
7	ABC Nursery, Inc.	Eric Yonemura	7049021802	20200 Studebaker	Cerritos	Blvd.	Gardena	CA	90248	Ornamental	LA	13.84	8.30
			7049021802			Diva.				Omamentar			
			7049021800										
			4089009800,										
			4089016802,										
			4089016800,										
			4089011801,										
			4089011800, 4089010800,										
8	ABC Nursery, Inc.	Eric Yonemura	4089010800,	18601 Yukon	Таштапаа	424 East Gardena	Gardena	CA	90248	General	D	21.97	10.20
0	Abe Nursery, Inc.	Effe i offemura	4089010800	Avenue	Torrance	Blvd.	Gardena	CA	90248	Ornamental	ט	21.97	10.20
			4089011800										
			4089011801										
			4089017800										
			4089016802										
			4089016800										
			8622022270										
9		Eddie Acosta /	8622012271	5359 Citrus Ave	Azusa	18012 E. Alford St.	Azusa	CA	91702	General	SG	3.00	2.25
-		Carlos Acosta	8622013270							Ornamental			
		Eddie Acosta /	8622022006 8630008274					+		General			

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
11	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	8620022270 8620015270 8620015272 8620005271 8620024273 8620024272 8621025271 8621025270 8621015270 8621016272 8620015270 8620015272 8620022270 8620024272	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	A cocto (rowers 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
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	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
24		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	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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
31	Coiner Nursery	James Coiner	8110029800 8110029910 8110029904 8110029905 8110029906 8110029907 811002908 8115002906 8115002906 8115002906 8115002904 8115002904 8115002904 8115001801 8115001908 8115001908	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
33	Color Spot Nurseries, Inc.	Dixon Suzuki	7330007906 7330008902 7330009901 7330009904 7406026913 7330009909 7330009910 7330009907 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	2.60
37	Higo Nursery Lucky Plant Nursery	Daniel Kato Steven Chu	4085026800	17715 Amie Ave	Torrance	1062 Aviation Blvd	Hermosa Beach	CA	90254	General Ornamental	D	3.75	2.50
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	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	Green Leaf Nursery	Fermin Gutierrez	8177001802 8177001801 8177001800 8177001805 8177001804	10490 Washington Blvd	Whittier	PO Box 2215	Pico Rivera	CA	90660	General Ornamental		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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
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		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 1413 Kenneth Rd.	Glendale	CA	91201	General Ornamental	LA	3.50	1.70
54	New West Growers, Inc.	Grace Hernandez		110 West Green Leaf	Compton	#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	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	Specialized Growers	Reuben Valdez	6385005800 6385005801 6385016800 6385016801	8406 Pico Vista Dr.	Pico Rivera					General Ornamental	SG	2.70	1.50
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	10.00
61	My Hoa Farm	Han Luong	7165012282 7165013274	5760 Allington Street	Lakewood	5726 Candor St.	Lakewood	CA	90713	Row Crop	SG	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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
66	Hill Grove Nursery	Raul Mejia	5266018801 5266017802 5266017800 5262028800 5263029800	450 West Almora	Monterey Park	PO Box 92966	City of Industry	CA	91715	General Ornamental		3.50	2.00
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	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
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	_	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		Jose de Jesus Gallo/ Maria Silva	7050005800 7050005801	19805 Gridley Rd	Cerritos	4943 Buffington Rd	El Monte	CA	91732	General Ornamental	SG	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 &	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 Rodrigo Ramirez (New Owner)	7404034900	898 Deloras Drive	Wilmington	898 E Deloras Drive	Carson	CA	90745	General Ornamental	D	3.50	2.50

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
96	·	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	Iguregui Nursery	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	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
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	Multiple	SG	4.36	3.75
113	Magic Growers, Inc.		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
120	Cerritos Nursery, LLC	Norman Ozawa Ken Zhang/Bailey Yang	7056013800	19820 Norwalk Blvd	Cerritos	19820 Norwalk Blvd.	Cerritos	CA	90703	General Ornamental	SG	4.50	4.50
121	Lloyd's	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	•	Nancy Webb Nancy Norman	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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
129	Norman's Nursery, Inc.	Nancy Webb Nancy Norman	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 Nancy Norman	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	•	Nancy Webb Nancy Norman	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	Sempervirens Botanical Company	John Low	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
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		Ron Akiyama	4096005007 4096005800	17609 S. Western Ave.	Torrance	17609 S Western Avenue	Gardena	CA	90247	Cutflower	D	4.00	3.50
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	Richard Green	2809003270	Rosedel Street	Saugus	26191 Bouquet Canyon Rd.	Saugus	CA	91350	General Ornamental	SC	4.00	2.00
145	Centeno's Nursery &	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
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		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 Nursary	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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
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		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	•	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
164	San Gabriel Nursery	Fred Yoshimura/ Mary Swanton	5373028024 5373028025 5373028026 5373028027 5373028028 5373028029 5373028036 5373028010 5373028010 5373028011 5373028012 5373028014 5373028015 5373028016 5373028017 5373028018 5373028019 5373028020 5373028021	632 S San Gabriel Blvd	San Gabriel	632 South San Gabriel Blvd.	San Gabriel	CA	91776	Retail / Multiple	LA	5.00	4.00
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
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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
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	Gomez Growers (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	Vallay Sad Form	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	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 Shelly 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	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
210	Hevadu	Megan Cunha	4469021032	6415 Busch Drive	Malibu	6415 Busch Drive	Malibu	CA	90265	Vineyard	LA	8.00	2.75
211	Rosealina Malta (Barranquilla Nursery)	Rosealina Malta	2812005016	28920 Bouquet Canyon Road	Saugus	28920 Boquet Canyon Road	SAUGUS	CA	91390	General Ornamental	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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
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	Vineyard	Michael McCarty	4451016022 4451016050	3222 Rambla Pacifico	Malibu	3222 Rambla Pacifico	Malibu	CA	90265	Vineyard	LA	2.00	2.00
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		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	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	Malibu)	Charles Schetter Katharina Hahn/Jaime Page	4467003023	5825 Murphy Way	Malibu	5825 Murphy Way	Malibu	CA	90265	Vineyard	LA	0.80	0.50
230		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	•	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
239		Jose Gutierrez	2647023903 2644002905 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
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 Vineward	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	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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
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		Kenny Unger	2615010901	14899 Chatsworth Dr.	North Hills	9816 Burnet Ave	Woodland Hills	CA	91343	General Ornamental	LA	2.00	1.50
253	Landscape Warehouse Nursery & Supply	Brenda	8610001800	2800 Royal Oaks Dr	Duarte	2800 Royal Oaks Dr	Duarte	CA	91010	General Ornamental	SG	2.00	1.25
254		Dan Manassero	7016007906	16500 Studebaker Rd	Cerritos	5408 Alton Pkwy, A- 622	Irvine	CA	92604	Row Crop	SG	4.00	3.00
256	Pro Growers, Inc.	Sal Mora/Juan Perez	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
262		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	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	Tish Lehew Jeff Lotman	4432011045	1805 Melhill Way	Los Angeles	1805 Melhill Way	Los Angeles	CA	90049	Vineyard	SM	0.30	0.30
272	Paramount	Cecilio 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		Larry Kraus- Paul Nieman	2149007902	6201 Winnetka Ave	Woodland Hills	6201 Winnetka Ave	Woodland Hills	CA	91371	Multiple	LA	430.00	200.00

NGA		OPERATOR/		PARCEL			MAILING				rshed	AC	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Water	TOTAL	IRRIGATED
274	Vinevard	Meghan Christiansen Andrea Spencer	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
276	IAI 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	I A beig Niircery	Marlene/Dimas Carbajal Abeja	4089016802	18601 Ermanita Ave.	Torrance	18601 Ermanita Ave.	Torrance	CA	90504	General Ornamental		4.00	3.00
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

NGA		OPERATOR/		PARCEL			MAILING				shed	A	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
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	General Ornamental		5.00	3.00
285	1	Bret Carman/ A/P Steven Rusack	7480043020	1 El Rancho Escondido Rd.	Avalon	1825 Ballard Canyon Rd.	Solvang	CA	93463	Vineyard		4.90	4.90
286	LB Palm Growers/Moon Valley	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	Maria 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	Maria 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	Maria Martinez	7339017014	19202 Main St.	Carson	20300 S. Figueroa St.	Carson	CA	90745	General Ornamental		6.00	1.50
292	MB Landscaping and Nursery	Maria 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/Moon Valley	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		18901 Ermanita Ave	Torrance					General Ornamental		2.00	1.87
296	Gomez Growers (United Plant Growers/Gomez Growers)	Jose Gomez	7048015801 7048015802	5150 Knoxville Ave	Lakewood	3698 Caspian Avenue	Long Beach	CA	90810	Color		3.50	2.00
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		Fidel Montenegro/ Gaby Ruiz	2414003902 2414003901	6200 Vineland Ave	North Hollywood	6200 Vineland Ave	North Hollywood	CA	91606	General Ornamental		5.00	2.00
299	VN Nursery V & N 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	CA	90706	General Ornamental		1.80	1
301	Horizon Nursery	Rafael Rosalez	8007001906 8007001800	9919 Cedardale Dr.	Santa Fe Springs	9919 Cedardale Dr.	Santa Fe Springs	CA	90706	General Ornamental		3.50	2.00

NGA		OPERATOR/		PARCEL			MAILING				shed	AC	CREAGE
#	OWNER/ TENANT	CONTACT	APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP	CROP TYPE	Watershed	TOTAL	IRRIGATED
302	Ramirez Strawberry Ranch	Rigoberto Ramirez	7317015805 7317015806	3511 Santa Fe Ave.	Long Beach	2710 Delta Ave	Long Beach	CA	90810	Row Crop		2.50	2.00
304	Chuy's Nursery	Jesus Martinez	5265001808	1996 S. Orange Ave	Monterey Park	9124 E. Gallatin Rd.	Pico Rivera	CA	90660	General Ornamental		3.00	2.00
305	Le Chene	Juan Alonso	3214043017 3214043027 3214020064 3214020044	117675 Stored Have	Santa Clarita	9124 E. Gallatin Rd.	Pico Rivera	CA	90660	Vinyard		39.00	6.50
306	Mimosa Nursery LA	Colette Guyenne	6351035804 6351035803 6351035807	6270 Allston Street	Los Angeles					General Ornamental		3.30	2.20
307	Hana Star Farms, Inc	Hidehiko kasahara	8174013800 8174004800	6509 Pioneer Blvd	Whittier					Row Crop		5.90	2.80
308	Agua Dulce Winery	Judy Kajama		9640 Sierra Hwy	Agua Dulce	9640 Sierra Hwy	Agua Dulce	CA	91390	Vineyard		75.00	62.00
309	Starline Nursery Company	David Mejia		1233 Vineland Ave	La Puente	PO Box 1000	La Puente	CA	91747	General Ornamental		4.00	3.50
310	Starline Nursery Company	David Mejia		16505 Colima Rd	Hacienda Heights	PO Box 1000	La Puente	CA	91747	General Ornamental		2.50	2.00
311	Sunshine Food &	Kevin Wong			Rosemead	8500 Dorothy St.	Rosemead	CA	91770	General Ornamental		6.50	5.00
312	Valley Crest Tree	Robert Crudup		9500 Foothill Blvd	Sun Valley	3200 West Telegraph Rd.	Fillmore	CA	93015	General Ornamental		1.00	0.50
313		Elias Alvarez		11362 Woodley Ave.	Granada Hills			CA	91344	General Ornamental		6.19	5.00
314	Green Touch Nursery	Oscar Vargas		202 S. Mayo Ave.	Compton	202 S. Mayo Ave.	Compton	CA	90221	General Ornamental		5.00	3.00
315	LA Sanchez Nursery	Eusebio Sanchez		16525 Circle Hill Ln	Hacienda Heights	11159 1/2 Kauffman St.	El Monte	CA	91731	General Ornamental		1.50	1.00
316	Martinez Nursery	Angel Martinez			Lakewood	PO Box 1665	Bellflower	CA	90707	General Ornamental		2.00	1.50
317	Pacific View Nursery	Erik Munoz		29081 Pacific Coast Hwy	Malibu	29081 Pacific Coast Hwy	Malibu	CA	90265	General Ornamental		4.76	4.00
318	Plascencia Nursery	Maria Silva		12920 Ramona Blvd	Baldwin Park	PO Box 1952	Temple City	CA	91760	General Ornamental		5.00	4.00
319	San Antonio Nursery Corp	Rafael Macias		11753 Wicks St.	Sun Valley	11753 Wicks St.	Sun Valley	CA	91352	General Ornamental		16.10	14.00
320		Armando Orozco Torres		12205 Saticoy St	North Hollywood	11321 Runnymede St.	Sun Valley	CA	91352	General Ornamental		5.00	4.00
Mannii	ng In Progress	!	•	<u>!</u>	. , , , , , , , , , , , , , , , , , , ,	!			<u>L</u>			4315.56	1702.46

IP Mapping In Progress

4315.56 1702.46

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 Ana Region)

APPENDIX B

TABULATED DATA, CURRENT AND HISTORICAL SAMPLING RESULTS

LIST OF SITE VISITS AND COLLECTED SAMPLES NURSERY GROWERS ASSOCIATION LOS ANGELES COUNTY IRRIGATED LANDS GROUP

CONDITIONAL WAIVER, BOARD ORDER NO. R4-2010-0186

								CW	IL Order # R	4-2005-0080												CWIL Order # R4-20	0-0186							CONT	INUATION, CWIL
				\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	YEAR 1 1			YEA	AR 2 ²		YE	AR 3	YE	AR 4	Interim		YE	AR 1			YE.	AR 2		YEAR 3				YEAR 4			YEAR 5
	OWNER/TENANT	NGA # PROPERTY ADDRESS	ACREAGE (Irrigated)	Dry Season	We	et Season	Dry	Season	Wet Se	eason	Dry Season	Wet Season	Dry Season	Wet Season	Sampling Event	Dry S	Season	Wet	Season	Dry	Season	Wet Season 6	Dry Season		Wet Season	1	Dry Season	\top	Wet Season	Dry Season	Wet Season
				Event Even #1 #2	nt Event	t Event	Event		Event	Event	Event	Event	Event	Event	March	Event	Event	Event		Event	Event	Event Event	Event Ev	rent Eve	ent Ev			ent E	vent Event	Event Ev	
	Boething Treeland Farms, Inc.	19 23475 Long Valley Road, Woodland Hills	14.68	#1 #2 8/13/07 9/25/0		#2 07 1/5/08	#1 8/12/08	9/23/08	#1 11/26/08	#2 12/15/08	# 1 10/12/09	#1 ns*	#1 8/19/10	#1 ns*	2011 3/23/11	# 1 10/11/11	#2	#1	#2	#1	#2	#1 #2	#1 #	2/28		10/7/	_	2 #	#1 #2	9/30/15	#1
F.	Norman's Nsy-Broadway	124/125 8550 E Broadway, San Gabriel	7.00	8/13/07 9/24/0			8/12/08	9/24/08		12/15/08	10/12/09	ns*	8/18/10	ns*	3/21/11	10/11/11						nv		2/28		10/7/		-		9/30/15	
ROU	Ultra Greens	178 13102 Maclay Street, Sylmar	8.50	Sit	ite not included	d as a sampling	location.			12/15/08	10/12/09	ns*	8/17/10	ns*		10/11/11						nv		2/28		10/7/	/14	+		9/30/15	
Ü	Valley Sod Farms, Inc.	184 16405 Chase Street, North Hills	36.00			l as a sampling			11/26/08	12/15/08	10/12/09	ns*	8/17/10	ns*		10/11/11						nv		2/28	/14	10/7/	/14	+		9/30/15	+
	Acosta Growers Inc.	11 669 S. Azusa Ave., Azusa	7.50						Site not includ	led as a samp	ling location.		<u> </u>	ı	<u> </u>		Rotat	ing Site		8/28/12					n	,	+	12	/2/14	10/	2/15
P 2	M Downard-Rainbow Garden Nursery	110 1132 S Grand Avenue, Glendora	3.75	8/8/07 9/25/0	07 1/4/08	ns ⁴	8/12/08	9/23/08	11/26/08	12/15/08	10/11/09	ns*	8/18/10	ns*			10/12/11			8/28/12					n	,		12	/2/14	10/	2/15
SROU	R Wilson-Colorama Wholesale	150 1025 N. Todd Avenue, Azusa	15.30	8/8/07 9/25/0	07 12/7/07	7 ns ⁴	8/12/08	9/23/08	11/26/08	12/15/08	10/12/09	ns*	8/18/10	ns*	3/21/11		10/12/11			8/28/12					n	,		12	/2/14	10/	2/15
Ū	West Covina Wholesale-Damien	189 3424 Damien Ave, La Verne	1.25	8/8/07 9/25/0	07 1/4/08	ns ⁴	8/12/08	9/23/08	11/26/08	12/15/08	10/12/09	ns*	8/18/10	ns*			10/12/11			8/28/12					n	,		12	/2/14	10/	2/15
	Coiner Nursery	31 285 San Fidel, La Puente	48.00	8/21/07 9/28/0	07 ns ⁴	ns ⁴	8/12/08	9/23/08	11/26/08	12/15/08	10/12/09	ns*	8/18/10	ns*				3/17/12			9/26/12		10/10/13	2/28	14 ⁵		$\overline{}$	\neg	5/15/15		1/15/16
IP 3	H&H Nursery of Lakewood	64 6220 Lakewood Boulevard, Lakewood	2.50	8/21/07 9/28/0	07 1/23/08	8 ns ⁴	8/12/08	9/25/08	11/26/08	12/15/08	10/13/09	ns*	8/17/10	ns*				3/17/12			9/26/12		10/10/13				\top	+	5/15/15		1/15/16
GROU	Centeno's Nursery and Landscaping	81 6850 Paramount Blvd., Long Beach	3.00	1			.11	1	1		1	Site not in	II ncluded as a sampl	ing location.	11	Ш	1			11	ı	1 1	10/10/13				\top	+	5/15/15		1/15/16
•	SY Nursery Inc.	168 19900 S Pioneer Blvd, Cerritos	4.75	8/13/07 9/28/0	07 11/30/0	1/25/08	8/12/08	9/24/08	11/26/08	12/15/08	10/13/09	ns*	8/17/10	ns*				3/17/12			9/26/12		10/10/13				\top	\top	5/15/15	;	1/15/16
	ABC Nursery, Inc.	4 424 E. Gardena Boulevard, Gardena	11.51	8/9/07 9/24/0	07 12/7/07	7 1/23/08	8/13/08	9/24/08	11/26/08	12/15/08	10/12/09	ns*	8/17/10	ns*	3/21/11		i 		3/25/12			1/25/13	10/1	11/13		i	10/	8/14			
P 4	G Hernandez-New Westgrowers	53 1601 S. Santa Fe Ave, Compton	1.70	8/9/07 9/24/0	07 12/18/0	7 1/23/08	8/12/08	9/24/08	11/26/08	12/15/08	10/13/09	ns*	8/17/10	ns*					3/25/12			1/25/13	10/1	11/13			10/	8/14			
GROU	T-Y Nursery	176 Between Paulina/Prospect, Redondo Beach	7.50	8/9/07 9/24/0	07 12/18/0	ns ⁴	8/13/08	9/24/08	11/26/08	12/15/08	10/13/09	ns*	8/17/10	ns*					3/25/12				10/1	11/13			10/	8/14			
	Church Estate Vinyard	210 6415 Busch Drive, Malibu	2.75	Sit	te not included	l as a sampling	location.		11/26/08	12/15/08	10/13/09	ns*	8/19/10	ns*					3/25/12				10/1	11/13			10/5	8/14			
	Canyon Way Nursery	26 11745 Sherman Way, Studio City	4.25						Site not includ	led as a samp	ling location.													2/28	/14						ii
	Color Spot Nurseries, Inc.	33 321 W. Sepulveda Blvd., Carson	18.50						Site not includ	ded as a samp	ling location.												10/1	11/13							
	Carreon Nursery	50 7900 La Merced Road, Rosemead	6.00						Site not includ	ded as a samp	ling location.										9/26/12										
	Live Art Plantscapes, Inc.	105 18809 Plummer St, Northridge	1.80						Site not includ	ded as a samp	ling location.					10/11/11															
SITES	Sakaida Nursery	158 8601 Longden Ave., San Gabriel	6.89						Site not includ	ded as a samp	ling location.																10/1	7/14			
PLE	San Gabriel Nursery & Florist	162 2015 Potrero Grande, Monterey Park	6.00						Site not includ	led as a samp	ling location.							3/17/12					10/10/13								
SAM	Toro Nursery Inc.	170 17585 Crenshaw Blvd, Torrance	15.78						Site not includ	ded as a samp	ling location.								3/25/12			1/25/13									
TING	West Covina Wholesale-Puddingstone	188 1340 Puddingstone Dr., La Verne	15.25						Site not includ	ded as a samp	ling location.																	12	/2/14		
ROTA	Worldwide Exotics	204 11157 Orcas Ave., Lake Terrace	2.00						Site not includ	led as a samp	ling location.																			9/30/15	
-	Lam Farms	212 8600 Jefferson, Paramount	1.00			-			Site not includ	led as a samp	ling location.																				1/15/16
	Malibu Vineyard	221 3222 Rambla Pacifica, Malibu	2.00			-			Site not includ	led as a samp	ling location.															10/8/	14				
	Choji Matsishita	226 724 N. Cataract Av., San Dimas	1.70						Site not includ	led as a samp	ling location.																			10/	2/15
	ABC Rhubarb	261 6208 Clara St., Bell Gardens	5.00						Site not includ	ded as a samp	ling location.																		5/15/15		
S	Acosta Growers Inc.	13 16412 Wedgeworth Dr, Hacienda Hights	4.50	8/8/07 9/24/0	07 12/18/0	ns ⁴	8/13/08	9/24/08	11/26/08	12/15/08	10/12/09	ns*	8/18/10	ns*			10/12/11			8/28/12							Site no	o longer in op	peration.		
SITE	Brothers Nursery, Inc.	20 Cerritos & Newburgh St, Azusa	2.98						Site not includ	ded as a samp	ling location.						10/12/11							Site no longer in operation.							
PLING	Carlos Soto, Jr^	25 600 W. Alondra Blvd, Gardena	3.50	8/9/07 9/24/0	07 ns ⁴	ns ⁴	8/13/08	9/25/08	11/26/08	12/15/08	10/11/09	ns*	8/19/10	ns*					_				Site no longer in operation.								
SAMI	Norman's Nursery-Ramona	122 12500 Ramona Blvd, Baldwin Park	39.93					-	Site not includ	ded as a samp	ling location.			т-				3/17/12			9/26/12						Site no	longer in op	peration.		
UED	Norman's Nsy-Rosemead^	130 475 Rosemead Blvd, S. El Monte	16.56	8/6/07 9/24/0	07 12/7/07	7 1/24/08	8/13/08	9/24/08	11/26/08	12/15/08	10/13/09	ns*	8/19/10	ns*									Site no longer in	Site no longer in operation.							
NIIN	Valley Crest Tree Company ^	182 16202 Yarnell St. and 16222 Filbert St, Sylmar	16.00	8/21/07 9/25/0	07 12/7/07	7 1/24/08													Site	no longer in o	peration.										
OISCO	Valley Sod Farms, Inc. ^	183 6301 Balboa Boulevard, Encino	60.00	8/6/07 9/26/0	07 12/18/0	1/5/08					•	11	11	n-	11				Site	no longer in o	peration.										
ı	Schoelkopf Vineyard^	224 31499 Pacific Coast Highway, Malibu	0.80	Sit	te not included	l as a sampling	location.		11/26/08	12/15/08	10/11/09	ns*	8/19/10	ns*									Site no longer is	n operation.							

- 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.
 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.
 4 Site visited on multiple dates during multiple storms
 5 Sample collected for Council of Watershed Health
 6 Event #1 aborted early due to lack of rain

- Not sampled due to minimal rainfall and/or no runoff observed during sampling event.
- No sampling activities were conducted Not visited, no storm event sufficient to trigger sampling.

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 1

GENERAL CHEMISTRY

NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

								G	eneral Chem	istry					
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #4	LAILG-NGA4-5	3/21/11	0.69	10	0.31 ^{EB}	1.5	8.3	0.52	110	0.31 ^{EB}	2.6	810	62	25	0.230
NGA #124	LAILG-NGA124-6	3/21/11	0.36	9.7	1.8 ^{EB}	6.7	24	1.8	240	1.8 ^{EB}	2.7	620 ^{FD}	61	24	0.045
NGA # 150	LAILG-NGA 150-5	3/21/11	3.7	28	12 ^{EB}	120	60 ^{MS-02}	32	1,200	12 ^{EB}	32	110	300	120	0.031
NGA #19	LAILG-NGA19-6	3/23/11	0.54 ^{MS-01}	110	0.86 ^{EB,MS-01}	55	250	1.1	1,200	0.86 ^{EB,MS-02}	3.4	550	440	180	0.090
Duplicate	LAILG-NGA-DUP	3/21/11	0.35	9.7	1.7 ^{EB}	6.6	24	1.8	220	1.7 ^{EB}	2.3	82	57	23	0.035
Equip Blank	LAILG-NGA-EB	3/21/11	nd	nd	2.0	nd	nd	nd	nd	2.0	nd	nd	0.37	0.15	0.0028
Field Blank	LAILG-NGA- FB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	LAILG-NGA168-6	3/17/12	0.89	82	1.109	35	470	1.7	1,100	1.109	8.4	1200	500	200	0.110
NGA #31	LAILG-NGA31-4	3/17/12	1.1	55	1.0 ⁰⁹	12	160	0.90	520	1.0 ⁰⁹	2.0	81	240	95	0.027
NGA #162	LAILG-NGA162-1	3/17/12	0.16	35	0.96^{09}	5.9	120	0.95	350	0.96 ⁰⁹	1.0	5	140	57	0.014
NGA #64	LAILG-NGA64-3	3/17/12	0.79 ^{FD}	5.8	0.28^{09}	0.70 ^{FD}	8.4	0.32	57	0.28 ⁰⁹	1.5 ^{FD}	500 ^{FD}	51	21	0.047
Duplicate	LAILG-NGA-DUP	3/17/12	0.60	5.4	0.25 ⁰⁹	1.3	8.6	0.27	46	0.25 ⁰⁹	1.1	380	44	18	0.049
Equip Blank	LAILG-NGA-EB	3/17/12	nd	nd	nd ^{O9}	nd	nd	nd	nd	nd ^{O9}	nd	nd	nd	nd	0.00073
Field Blank	LAILG-NGA- FB	3/17/12	nd	nd	nd ^{O9}	nd	nd	nd	nd	nd ^{O9}	nd	nd	nd	nd	0.00050
NGA #4	LAILG-NGA4-6	3/25/12	na*	69	1.1	17	52	1.0	320	1.1	1.4	34 ^{FD}	100 ^{FD}	42 ^{FD}	0.051
NGA #170	LAILG-NGA170-1	3/25/12	0.31	18	0.65	1.6	14	0.60	130	0.65	0.86	100	61	24	0.030
NGA #176	LAILG-NGA176-2	3/25/12	0.30	29	0.99	8.7	43	0.99	220	0.99	2.2	550	80	32	0.066
NGA #210	LAILG-NGA210-2	3/25/12	0.20	110	1.4	0.57	250	1.3	700	1.4	2.8^{MS-02}	86	270	110	0.0060
Duplicate	LAILG-NGA-DUP	3/25/12	2.2 ^P	55	1.1	17	44	1.1	290	1.1	1.3	21	61	25	0.051
Equip Blank	LAILG-NGA-EB	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Field Blank	LAILG-NGA- FB	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	CWIL Limits			•	•	•	•		See Table	7	•		•	•	
	MDL		0.048	0.10	0.00022	0.020	0.10	0.0014	4.0	0.00022	0.0014	5	0.039	0.016	0.00027
	RL		0.10	0.50	0.002	0.11	0.50	0.010	10	0.002	0.010	5	0.25	0.10	0.00050

Concentrations are reported in milligrams per liter (mg/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated by the QA Officer.

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080	O9	This sample was received with the EPA	recommended holding time expired.
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Ammonia not analyzed due to sample collection via peristaltic pump Estimated concentration due to sample collection via peristaltic pump

na*

The spike recovery for this QC sample is outside of the established control limits possibly due to matrix interference. EB Estimated concentration, constituent detected at greater than 10% in equipment blank MS-01

FD Estimated concentration. Field Duplicate RPD >25%. MS-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte

Estimated concentration, constituent detected at greater than 10% in field blank FB inherent in the sample.

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 3

GENERAL CHEMISTRY NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

								Ge	eneral Chem	istry					
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #19	LAILG-NGA19-7	2/28/14	1.4	120	2.400**	53	160	2.8	1,000	2.4**	4.7	650 ^{FD}	319	128	0.056
NGA #26	LAILG-NGA26-1	2/28/14	2.4	73	1.800**	6.4	180	2.1	590	1.8**	2.3	49	158	63.2	0.056
NGA #124	LAILG-NGA124-7	2/28/14	4.5	21	1.200**	13	100	1.5	420	1.2**	2.2	160	125	50.2	0.049
NGA #178	LAILG-NGA178-2	2/28/14	0.87	120	2.200**	10	370	2.4	940	2.2**	3.6	270	324	130	0.030
NGA #184	LAILG-NGA184-3	2/28/14	0.23	2.5	0.330**	0.40	1.6	0.44	41	0.33**	0.72	160	13.8	5.54	0.0079
Duplicate	LAILG-NGA-DUP	2/28/14	1.4	120	2.800**	51	170	3.1	1100	2.8**	5.4	470 ^{FD}	320	128	0.057
Equip Blank	LAILG-NGA-EB	2/28/14	< 0.10	< 0.50	< 0.0020	< 0.11	< 0.50	< 0.010	<10	< 0.0020	< 0.10	<5	< 0.250	< 0.100	< 0.00050
Field Blank	LAILG-NGA- FB	2/28/14	< 0.10	< 0.50	< 0.0020	< 0.11	< 0.50	< 0.010	<10	< 0.0020	< 0.10	<5	< 0.250	< 0.100	< 0.00050
	CWIL Limits	_	_	_	•	•	_	•	See Table	7	•				_
	MRL		0.10	0.50	0.0020	0.11	0.50	0.010	10.0	0.0020	0.10	5	0.250	0.100	0.00050

Concentrations are reported in milligrams per liter (mg/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated by the QA Officer.

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080 ** The recommended holding time for filtering is only 15 minutes. The sample was filtered as soon as possible but was filtered past holding time.

EB Estimated concentration, constituent detected at greater than 10% in equipment blank However, the sample was analyzed within holding time.

FD Estimated concentration. Field Duplicate RPD >25%. MRL Method Reporting Limit

FB Estimated concentration, constituent detected at greater than 10% in field blank

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 4

GENERAL CHEMISTRY NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

								G	eneral Chem	istry					
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #150	LAILG-NGA-150-6	12/2/14	0.41	60	2.4**	13	130	2.6	530	2.5**	3.7	240	179	71.8	0.095
NGA #188	LAILG-NGA-188-1	12/2/14	0.31	38	0.56**	4.4	110	0.80	330	0.56**	2.0 ^{FD}	2000 ^{FD}	141	56.3	0.036
Duplicate	LAILG-NGA-DUP	12/2/14	0.27	35	0.58**	4.4	92	0.64	290	0.60**	1.4	430	126	50.6	0.031
NGA #168	LAILG-NGA-168-7	5/15/15	0.18	57	0.36**	11	120	0.44	400	0.36**	0.74	91	134	53.7	0.036
Equip Blank	LAILG-NGA-EB	12/2/14	< 0.10	2.0	<0.0020**	< 0.100	< 0.50	< 0.010	10	<0.0020**	< 0.010	<5	1.64	0.656	0.0011
Field Blank	LAILG-NGA- FB	12/2/14	< 0.10	< 0.50	<0.0020**	< 0.100	< 0.50	< 0.010	<10.0	<0.0020**	< 0.010	<5	< 0.250	< 0.100	< 0.00050
	CWIL Limits		_	•		•			See Table	7					
	MRL		0.10	0.50	0.0020	0.100	0.50	0.010	10.0	0.0020	0.010	5	0.250	0.100	0.00050

Concentrations are reported in milligrams per liter (mg/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated by the QA Officer.

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080

The recommended holding time for filtering is only 15 minutes. The sample was filtered as soon as possible but was filtered past holding time.

However, the sample was analyzed within holding time.

EB Estimated concentration, constituent detected at greater than 10% in equipment blank

MRL Method Reporting Limit

FD Estimated concentration. Field Duplicate RPD >25%.

FB Estimated concentration, constituent detected at greater than 10% in field blank

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080

GENERAL CHEMISTRY NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

							General (Chemistry				
Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS
NGA #130	NGA-#130-LAILG-1	8/6/07	2.5	58.34	2.2457	50.44	43.04	2.29	1,170	2.05	2.305	6.3
NGA #183	NGA-#183-LAILG-1	8/6/07	0.04^{J}	209.97	0.2336	0.13	177.83	0.23	223	0.23	0.264	11
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
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
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
NGA BLANK	NGA LAILG-BLANK-	8/13/07	0.04^{J}	nd	nd	nd	nd	nd	32	nd	nd	nd
NGA FBLI	NGA-LAILG-FBLI	8/21/07	0.01^{J}	nd	nd	0.016^{J}	nd	nd	nd	nd	nd	nd
NGA EQBLI	NGA-LAILG-EQBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #150	NGA-#150-LAILG	9/25/07	52.4	95.9	26.84	355.6	87	22.5	2279	23	24	57
NGA #183	ILG-#183	9/26/07	13.5 ^B	51.63	1.4457 ^B	11.35 ^B	57.38 ^B	1.64 ^B	317 ^B	2.24 ^B	0.858 ^B	28.7 ^B
GA #183-DU	ILGNGA-#Dup	9/26/07	29 ^B	55.3	4.193 ^B	26.77 ^B	89.17 ^B	4.29 ^B	434 ^B	5.66 ^B	4.488 ^B	20 ^B
NGA #EQUIF	ILGNGA-#Equip	9/26/07	nd	nd	nd	nd	nd	nd	5	nd	nd	nd
NGA #FIELD	ILGNGA-#FIELD-2	9/28/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168-2	ILGNGA-#168-2	9/28/07	2.2	172.52	1.582 ^C	8.91	340.14 ^E	2.15	1,297	3.51	5.379	504
NGA #168	NGA-#168-LAILG-3	11/30/07	0.48	101.43	2.1635	30.81	245.04 ^E	2.67	951	3.13	3.548	nd
NGA #182	NGA #182-LAILG-1	12/7/07	0.4	60.71	1.7533	19.85	159.87 ^F	1.52	456	1.41	1.554	20.3
GA #182-DU	NGA-Duplicate	12/7/07	0.42	59.2	1.8269	19.71	118.48 ^F	1.51	552	1.56	1.523	20.7
NGA #4	NGA #4-LAILG-1	12/7/07	0.48	20.64	1.1355	4.03	20.39 ^F	0.8	186	0.77	0.829	58
NGA #130	NGA #130-LAILG-2	12/7/07	0.3	162.95	1.0247	26.16	190 ^F	0.91	830	0.74	0.94	51
NGA #150	NGA #150-LAILG-2	12/7/07	2.9	27.34	14.0243	80.89	56.59 ^F	9.43	780	8.89	9.445	40
NGA #124	NGA-#124-LAILG-2	12/7/07	4.6	33.03	3.9247	45.41	59.24 ^F	2.9	550	2.76	3.168	90
NGA #EQUIF	NGA-equip blank	12/7/07	nd	nd	nd	nd	1.13	nd	nd	nd	nd	nd
NGA #FIELD	Field Blank-2	12/18/07	nd	nd	nd	nd	nd	nd	6	nd	nd	nd
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
NGA #183	LAILG-NGA#183-3	12/18/07	1.95	28.41	2.344	11.37	41.11	2.78	292	3.14	3.561	92
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
NGA #13	LAILG-NGA#13-1	12/18/07	1.6	5.46	0.2033	1.72	32.27	0.49	32	1.44	2.878	944
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
	CWIL Limits						See Ta	able X				
	MDL		0.01	0.01	0.0075	0.01	0.01	0.016	0.1	0.01	0.016	0.5
	RL		0.05	0.05	0.01	0.05	0.05	0.05	5	0.01	0.05	5

Concentrations are reported in milligrams per liter (mg/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference

Conditional waiver for irrigated lands, order #R4-2005-0080 Estimated concentration, since RPD of duplicate is >25% C

Estimated concentrations, since KFD if uplicate is 223%

Procedural blank Matrix Spike recovery out of limits

ESTIMATED CONCENTRATION, matrix spike does not meet acceptance criteria

Sulfate detected in lab blank, at 1.09 mg/L.

Estimated concentrations, results above MDL but less than RL

E F J

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080

GENERAL CHEMISTRY NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

Simple Sample Date Ammonia Chloride Diss Ortho Nitrale Sulfate Total Dates Total Ortho Total Phose TSS NGA #180 LAILG-NGA110-1 14/408 0.41 10.65 1.3052 2.36 18.822 1.74 162 1.81 2.033 2.4 NGA #187 LAILG-NGA19-3 1/508 0.12 157.52 0.2125 0.44 451.78 0.96 1.33 12.6 1.173 84 NGA #182 LAILG-NGA19-3 1/508 1.55 28.3 0.9814 28.340 57.68 1.66 378 1.66 2.228 4.04 NGA #182 LAILG-NGA124-3 1/508 0.73 5.82 1.0874 1.4 6.36 0.23 10.6 1.29 1.729 510 NGA #18 LAILG-NGA124-3 1/508 0.31 2.19 0.6423 0.76 1.492 0.82 0.82 0.6 0.20 1.29 1.729 510 NGA #18 LAILG-NGA142-3 1/2308 0.24 1.45 0.1891 0.6 3.87 0.15 145 0.08 1.29 1.729 510 NGA #36 LAILG-NGA142-3 1/2308 0.31 2.19 0.6423 0.76 14.92 0.82 0.68 0.68 1.993 516 NGA #36 LAILG-NGA164-1 1/2308 0.20 3.82 0.2818 3.83 101.1 0.3 nd 0.46 0.058 1.993 516 NGA #38 LAILG-NGA164-1 1/2308 0.10 0.10 0.685 1.194 1.42 0.76 2.18 0.81 0.25 0.34 0.18 0.18 0.80 0.18								General (Chemistry				
NGA #110 LAILG-NGA110-1 14/08 0.41 10.65 1.3052 2.36 18.22 1.74 162 1.81 2.033 24	Site	Sample #	Date	Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate		TDS	Total Ortho	Total Phos	TSS
NGA #189 LAILG-NGAI89-1 14/08 0.59 7.29 0.6851 1.83 2.643 1.33 192 1.8 2.475 2.9 NGA #194 LAILG-NGAI9-3 1/5/08 0.12 157.52 0.2125 0.44 451.78 0.96 1,030 1.26 1.173 84 NGA #183 LAILG-NGAI8-3 1/5/08 0.73 5.52 1.0574 1.4 6.36 0.23 106 1.29 1.729 510 NGA #184 LAILG-NGAI8-3 1/5/08 0.73 5.52 1.0574 1.4 6.36 0.23 106 1.29 1.729 510 NGA #18 LAILG-NGAI8-3 1/5/08 0.31 2.19 0.6425 0.76 14.92 0.82 nd 0.68 1.931 516 NGA #3 LAILG-NGA6-1 1/23/08 0.20 3.82 0.2818 3.83 101.1 0.3 nd 0.46 0.393 76 NGA #3 LAILG-NGA6-1 1/23/08 0.20 3.82 0.2818 3.83 101.1 0.3 nd 0.46 0.393 76 NGA #3 LAILG-NGA6-1 1/23/08 0.20 3.82 0.2818 3.83 101.1 0.3 nd 0.46 0.393 76 NGA #3 LAILG-NGA6-1 1/23/08 0.20 3.82 0.2818 3.83 101.1 0.3 nd 0.46 0.393 76 NGA #3 LAILG-NGA6-1 1/23/08 0.20 3.82 0.2818 3.83 101.1 0.3 nd 0.46 0.393 76 NGA #3 LAILG-NGA6-1 1/23/08 0.30 1.5 5.812 0.264 3.64 107.65 0.26 3.83 0.27 0.314 16 NGA #3 LAILG-NGA18-2 1/24/08 0.17 ⁵⁴⁴ 7.39 0.6085 1.91 ⁵⁴⁵ 14.22 0.76 2.18 0.81 0.825 64 NGA #3 LAILG-NGA16-4 1/25/08 0.38 0.59 3.053 14.58 11.74 3.07 592 5.45 2.363 1126.7 NGA #4 LAILG-NGA -3 8/13/08 0.68 350.11 11.520 200.18 21.952 60.7 ⁶⁹ 2.238 13.05 3.113 3.71 ⁶⁹ NGA #3 LAILG-NGA -3 8/13/08 0.68 350.11 11.562 200.18 21.952 60.7 ⁶⁹ 2.238 13.05 3.173 3.71 ⁶⁹ NGA #3 LAILG-NGA -109 9.23/08 0.13 ⁷⁹ 82.3 ^{78.108} 2.69 ¹⁰⁹ 1.73 314.33 1.47 ²¹ 602 2.24 ⁴¹ 1.18 ^{13.409} 1.62 Duplicate LAILG-NGA -10P 9.23/08 0.13 ⁷⁹ 82.3 ^{78.108} 2.69 ¹⁰⁹ 1.74 3.143 3.147 ²¹ 602 2.14 ⁶⁰ 0.883 ⁷⁰⁻¹⁰ 1.72 1.507 0.694 1.25 1.350 0.694 1.25 1.350 0.76 0.60 0.21 0.883 ⁷⁰⁻¹⁰	NGA #110	LAH G NGA 110 1	1/4/09										
NGA #19													
NGA #124 LAILG-NGA124-3 1/508 1.5.5 28.3 0.9814 28.34° 57.68 1.66 378 1.66 2.228 40 NGA #183 LAILG-NGA183-4 1/508 0.73 5.82 1.0874 1.4 6.36 0.23 106 1.29 1.729 510 NGA #4 LAILG-NGA42-2 1/2308 0.24 1.45 0.1891 0.6 3.87 0.15 1.45 0.26 1.848 27 NGA #3 LAILG-NGA53-2 1/2308 0.31 2.19 0.6425 0.76 14.92 0.82 md 0.68 1.993 516 NGA 646 LAILG-NGA64-1 1/2308 0.20 3.82 0.2818 3.83 101.1 0.3 md 0.46 0.393 76 NGA 646 LAILG-NGA64-1 1/2308 0.15 58.12 0.264 3.40 107.65 0.26 3.83 0.27 0.314 16 NGA #182 LAILG-NGA64-1 1/2508 0.15 58.12 0.264 3.04 107.65 0.26 3.83 0.27 0.314 16 NGA #182 LAILG-NGA182-2 1/2408 0.17** 7.39 0.6085 1.91** 1.422 0.76 2.18 0.81 0.825 64 NGA #184 LAILG-NGA168-4 1/2508 0.38 65.9 3.033 14.58 117.44 3.07 892 5.45 2.363 112.67 NGA #19 LAILG-NGA18-3 8/1308 0.68 350.11 11.5262 20.18 21.952 69.76° 2.228 13.05 31.713 371** Duplicate LAILG-NGA-DUP 8/1308 0.68 350.11 11.5262 20.18 21.952 69.76° 2.228 13.05 31.713 371** NGA #31 LAILG-NGA-11-1 9/2308 0.37** 82.3************************************													
NGA #183 LAILG-NGA183-4 175/08 0.73 5.82 1.0874 1.4 6.36 0.23 106 1.29 1.729 510 NGA #3 LAILG-NGA4-2 1723/08 0.24 1.45 0.1891 0.6 3.87 0.15 1.45 0.26 1.848 27 NGA #53 LAILG-NGA5-2 1723/08 0.21 2.19 0.6425 0.76 14.92 0.82 nd 0.68 1.993 516 NGA #64 LAILG-NGA64-1 123/08 0.20 3.82 0.2818 3.83 101.1 0.3 nd 0.46 0.393 76 NGA #130 LAILG-NGA161-2 1724/08 0.15 58.12 0.264 3.64 107.65 0.26 3.83 0.27 0.314 16 NGA #182 LAILG-NGA182-2 1724/08 0.15 58.12 0.264 3.64 107.65 0.26 2.18 0.81 0.825 64 NGA #182 LAILG-NGA188-4 125/08 0.03*** 7.39 0.6088 1.91*** 14.22 0.76 218 0.81 0.825 64 NGA #184 LAILG-NGA 18-4 125/08 0.03*** 1.0403 1.1877 12.65 107.33 1.75 834 1.86 15.494 213 NGA #14 LAILG-NGA 4-3 8/1208 0.03*** 1.0403 1.1877 12.65 107.33 1.75 834 1.86 1.5494 213 NGA #15 LAILG-NGA-DUP 8/1308 0.71 397.47 9.0404 212 25.22 34.87** 2.350 12 2.6483 787** NGA #19 LAILG-NGA-DUP 9/2308 0.37** 82.37*** 82.37*** 17.34 3.193 1.42** 60.2 2.34** 1.81** 162 Duplicate LAILG-NGA-DUP 9/2308 0.37** 82.37*** 82.37*** 17.34 3.1393 1.42** 1.60 2.24** 1.81** 162 NGA #19 LAILG-NGA 19-5 11/2608 0.36 0.11** 15.50 1.50** 1.50** 1.84** 60.6 2.10** 0.883** 1.3 127 NGA #19 LAILG-NGA 19-5 11/2608 0.36 0.11** 15.50 1.80** 1.80** 1.86** 60.2 2.34** 1.81** 1.62 NGA #19 LAILG-NGA 19-5 11/2608 0.36 0.11** 15.50** 1.80** 1.80** 1.80** 60.2 2.34** 1.81** 1.62 NGA #10 LAILG-NGA 13-1 11/2608 0.46 3.1.44 0.609 3.12 17.92 0.643 2.06** 0.88 1.3 129.5 NGA #13 LAILG-NGA 13-2 11/2608 0.48 3.2.51 0.616 3.1 1.86** 0.40** 1.86** 0.40** 0.40** 0.40** 0.40** 0.40** 0.40** 0.40** 0.40** 0.40** 0.40** 0.40** 0.40** 0.40** 0													
NGA #4													
NGA #53	-												
NGA #64													
NGA #130	-												
NGA #182													
NGA #168 LAILG-NGA168-4 1/25/08 0.38 6.59 3.053 14.58 117.44 3.07 592 5.45 2.363 112.67 NGA #4 LAILG-NGA 19-4 81/206 0.03 ⁸⁸ 104.03 1.1877 12.66 107.03 1.75 834 1.86 15.494 213 NGA #4 LAILG-NGA 4-3 81/308 0.68 35.011 11.5262 200.18 21.952 69.7 ⁸⁹ 2.238 13.05 31.713 371 ⁸⁹ Duplicate LAILG-NGA-DUP 8/13/08 0.71 397.47 9.0404 212 252.22 34.87 ⁸⁹ 2.350 12 26.483 787 ⁸⁹ NGA #4 LAILG-NGA 31-1 9/23/08 0.13 ⁸⁹ 82.13 ⁸¹⁻¹⁰⁰ 15.62 ¹¹⁻¹⁰⁰ 17.3 134.93 1.472 ¹¹ 602 2.34 ¹¹ 1813 ¹¹⁻¹⁰⁰ 162 Duplicate LAILG-NGA 31-1 9/23/08 0.37 ⁸⁹ 82.37 ⁸¹⁻¹⁰⁰ 2.629 ¹¹⁻¹⁰⁰ 17.3 134.93 1.472 ¹¹ 602 2.34 ¹¹ 1813 ¹¹⁻¹⁰⁰ 162 Duplicate LAILG-NGA 19-5 11/26/08 0.37 ¹¹⁰ 82.13 ⁸¹⁻¹⁰⁰ 15.577 26.94 126.35 1.356 748 4.69 4.884 4.995 NGA #19 LAILG-NGA 19-5 11/26/08 0.46 31.44 0.609 3.12 17.92 0.643 2.06 ⁸⁹ 0.88 1.3 129.5 NGA #184 LAILG-NGA 18-1 11/26/08 0.46 31.44 0.609 3.12 17.92 0.643 2.06 ⁸⁹ 0.88 1.3 129.5 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 NGA #131 LAILG-NGA 13-2 11/26/08 0.48 37.78 2.595 28.36 84.22 2.975 568 2.53 3.297 117 NGA #130 LAILG-NGA 150-3 11/26/08 0.68 95.81 0.228 9.17 18.82 0.652 14.69 0.86 1.94 3.35 NGA #150 LAILG-NGA 150-3 11/26/08 0.85 21.99 1.1712 5.31 5.195 1.338 166 ⁸⁸ 1.38 1.641 1.685 NGA #150 LAILG-NGA 150-4 11/26/08 0.85 21.99 1.1712 5.31 5.195 1.338 166 ⁸⁸ 0.86 2.47,8 ³⁴⁴ 3.35 NGA #150 LAILG-NGA 150-4 11/26/08 0.85 21.99 1.1712 5.31 5.195 1.338 166 ⁸⁸ 0.44 3.769 48.046 45.5 NGA #150 LAILG-NGA 150-4 11/26/08 0.85 21.99 1.1712 5.31 5.195 1.338 166 ⁸⁸ 0.66 2.76 6.12 0.76 0.76 0.76 0.76 0.76 0.77 0.76 0.77 0.76 0.77 0.76 0													
NGA # 19													
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Duplicate LAILG-NGA-DUP 8/13/08 0.71 397.47 9.0404 212 252.22 34.87 70 2,350 12 26.483 787 78 NGA #31 LAILG-NGA 31-1 9/23/08 0.13 82.13 15.05 17.3 134.93 1.472 602 2.34 1.81 1.81 1.62 1.81 1.84 1.84 626 2.10 602 2.34 1.81 1.81 1.84 1.84 612 1.84 1.84 612													-
NGA # 31													
Duplicate LAILG-NGA-DUP 9/23/08 0.37 ^{EB.7B} 26.29 ^{H.FD} 19.64 136.19 ^{M.4} 1.84 ^H 626 2.10 ^H 0.883 1.37 NGA # 19	-												
NGA # 19													
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 NGA # 184 LAILG-NGA 184-1 11/26/08 0.46 31.44 0.609 3.12 17.92 0.643 206 ^{FB} 0.88 1.3 129.5 Duplicate LAILG-NGA-DUP 11/26/08 0.48 32.51 0.616 3.1 18.68 0.65 214 ^{FB} 0.86 1.297 128 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 NGA # 31 LAILG-NGA 31-2 11/26/08 0.76 6.12 0.474 3.6 14.84 0.497 104 ^{FB} 1.63 1.94 353 NGA # 130 LAILG-NGA 130-4 11/26/08 0.68 95.81 0.228 9.17 14.76 258.65 49.896 2.446 37.69 48.048 45.5 NGA # 130 LAILG-NGA 150-3 11/26/08 0.85 21.99 1.1712 5.31 51.95 1.338 166 ^{FB} 1.38 1.641 168.5 NGA # 150 LAILG-NGA 150-4 12/15/08 15.75 47.27 26.0911 268.53 125.27 ^{M4} 24.938 ^{M4} 1704 ^{EB} 2.94 24.75 ^{M4} 333.5 NGA # 124 LAILG-NGA 150-4 12/15/08 1.68 26.51 24.4087 40.43 45.28 21.115 424 ^{EB} 3.66 2.706 115.5 NGA # 189 LAILG-NGA 189-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA # 130 LAILG-NGA 189-2 12/15/08 0.34 32.859 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 130 LAILG-NGA 189-2 12/15/08 0.34 32.859 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 130 LAILG-NGA 184-2 12/15/08 0.34 36.98 3.0228 12.14 57.58 2.148 364 ^{EB} 2.64 2.944 1.079 NGA # 130 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.60 2.94 1.079 NGA # 130 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1.079 NGA # 130 LAILG-NGA 184-2 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 184-2 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7													
NGA #184 LAILG-NGA 184-1 11/26/08 0.46 31.44 0.609 3.12 17.92 0.643 206 ^{TB} 0.88 1.3 129.5 Duplicate LAILG-NGA-DUP 11/26/08 0.48 32.51 0.616 3.1 18.68 0.65 214 ^{TB} 0.86 12.97 128 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 NGA #31 LAILG-NGA 31-2 11/26/08 0.76 6.12 0.474 3.6 14.84 0.497 104 ^{TB} 1.63 1.94 353 NGA #130 LAILG-NGA 130-4 11/26/08 0.68 95.81 0.228 9.17 183.82 0.652 616 0.8 1.046 97 NGA #130 LAILG-NGA 150-3 11/26/08 0.85 21.99 1.1712 5.31 51.95 1.338 166 ^{TB} 1.38 1.641 168.5 NGA #150 LAILG-NGA 150-4 12/15/08 0.85 21.99 1.1712 5.31 51.95 1.338 166 ^{TB} 1.38 1.641 168.5 NGA #150 LAILG-NGA 150-4 12/15/08 15.75 47.27 26.0911 268.53 125.27 ^{Md} 24.935 ^{Md} 1704 ^{EB} 2.94 24.75 ^{Md} 333.5 NGA #124 LAILG-NGA 124-5 12/15/08 1.68 26.51 24.4087 40.43 45.28 21.115 424 ^{EB} 3.66 2.706 115.5 NGA #189 LAILG-NGA 110-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA #10 LAILG-NGA 110-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA #130 LAILG-NGA 184-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA #130 LAILG-NGA 180-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA #131 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1.079 NGA #130 LAILG-NGA 178-1 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1.079 NGA #131 LAILG-NGA 178-1 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA #178 LAILG-NGA 178-1 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA #188 LAILG-NGA 168-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA #188 LAILG-NGA 168-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA #188 LAILG-NGA 168-5 12/15/08 0.52 8.67 ^{EB} 0.0382 2.7 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 2.36 2.944 49.3 NGA #188 LAILG-NGA 64-2 12/15/08 0.52 8.67 ^{EB} 0.0382 2.7 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 2.36 2.33 2.231 2.95 NGA #188 LAILG-NGA 44 1													
Duplicate LAILG-NGA-DUP 11/26/08 0.48 32.51 0.616 3.1 18.68 0.65 214FB 0.86 1.297 128													
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 NGA # 31 LAILG-NGA 31-2 11/26/08 0.76 6.12 0.474 3.6 14.84 0.497 104 ^{FB} 1.63 1.94 353 NGA # 130 LAILG-NGA 130-4 11/26/08 0.68 95.81 0.228 9.17 183.82 0.652 616 0.8 1.046 97 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 NGA # 150 LAILG-NGA 25-1 11/26/08 0.85 21.99 1.1712 5.31 51.95 1.338 166 ^{FB} 1.38 1.641 168.5 NGA # 150 LAILG-NGA 25-1 11/26/08 0.85 21.99 1.1712 5.31 51.95 1.338 166 ^{FB} 1.38 1.641 168.5 NGA # 150 LAILG-NGA 150-4 12/15/08 1.5.75 47.27 26.0911 268.53 125.27 ^{M4} 24.935 ^{M4} 1704 ^{EB} 2.94 24.75 ^{M4} 333.5 NGA # 124 LAILG-NGA 150-4 12/15/08 1.68 26.51 24.4087 40.43 45.28 21.115 424 ^{EB} 3.66 2.706 115.5 NGA # 189 LAILG-NGA 180-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 180 LAILG-NGA 130-5 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 178 LAILG-NGA 178-1 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.79 102.32 2.3169 14.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA 168-5 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 168 LAILG-NGA 4-4 12/15/08 0.52 86.7 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 4-4 12/15/08 0.52 86.7 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 2.95 CWIL Limits MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0.016 0 0.01 0.016 0.5													
NGA # 31 LAILG-NGA 31-2 11/26/08 0.76 6.12 0.474 3.6 14.84 0.497 104 ^{FB} 1.63 1.94 353 NGA # 130 LAILG-NGA 130-4 11/26/08 0.68 95.81 0.228 9.17 183.82 0.652 616 0.8 1.046 97 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 NGA # 150 LAILG-NGA 25-1 11/26/08 0.85 21.99 1.1712 5.31 51.95 1.338 166 ^{FB} 1.38 1.641 168.5 NGA # 150 LAILG-NGA 150-4 12/15/08 15.75 47.27 26.0911 268.53 125.27 ^{M4} 24.935 ^{M4} 1704 ^{EB} 2.94 224.75 ^{M4} 333.5 NGA # 124 LAILG-NGA 189-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 131 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 130 LAILG-NGA 184-2 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 18-1 12/15/08 0.81 85.04 2.407 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA-DUP 12/15/08 0.52 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 144 LAILG-NGA 4-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits MDL 0.01 0.01 0.007 0.007 0.001 0.007 0.01 0.01	-												
NGA # 130 LAILG-NGA 130-4 11/26/08 0.68 95.81 0.228 9.17 183.82 0.652 616 0.8 1.046 97 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 NGA # 25 LAILG-NGA 25-1 11/26/08 0.85 21.99 1.1712 5.31 51.95 1.338 166 ^{FB} 1.38 1.641 168.5 NGA # 150 LAILG-NGA 150-4 12/15/08 15.75 47.27 26.0911 268.53 125.27 ^{M4} 24.935 ^{M4} 1704 ^{EB} 2.94 24.75 ^{M4} 333.5 NGA # 124 LAILG-NGA 124-5 12/15/08 1.68 26.51 24.4087 40.43 45.28 21.115 424 ^{EB} 3.66 2.706 115.5 NGA # 189 LAILG-NGA 189-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 31 LAILG-NGA 31-3 12/15/08 4.32 36.98 3.0228 12.14 57.58 2.148 364 ^{EB} 2.87 3.155 85.5 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 130 LAILG-NGA 130-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA 178-1 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 168 LAILG-NGA 64-2 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 4 LAILG-NGA 64-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 2.95 CWIL Limits MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0.01 0.016 0.001													
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 NGA # 25 LAILG-NGA 25-1 11/26/08 0.85 21.99 1.1712 5.31 51.95 1.338 166FB 1.38 1.641 168.5 NGA # 150 LAILG-NGA 150-4 12/15/08 15.75 47.27 26.0911 268.53 125.27 M4 24.935 M4 1704 EB 2.94 24.75 M4 333.5 NGA # 124 LAILG-NGA 124-5 12/15/08 1.68 26.51 24.4087 40.43 45.28 21.115 424 EB 3.66 2.706 115.5 NGA # 189 LAILG-NGA 189-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 EB 0.99 1.261 111.3 NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 EB 1.6 1.868 93 NGA # 31 LAILG-NGA 31-3 12/15/08 4.32 36.98 3.0228 12.14 57.58 2.148 364 EB 2.87 3.155 85.5 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 EB 2.16 2.94 1,079 NGA # 130 LAILG-NGA 178-1 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 EB 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 EB 2.64 2.934 72.7 PD DUDICATE LAILG-NGA 64-2 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 168 LAILG-NGA 168-5 12/15/08 0.52 8.67 EB 1.0382 2.7 15.23 0.158 238 EB 2.33 2.231 295 CWIL Limits MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0.016 0 0.01 0.016 0.55													
NGA # 25 LAILG-NGA 25-1 11/26/08 0.85 21.99 1.1712 5.31 51.95 1.338 166 ^{FB} 1.38 1.641 168.5 NGA # 150 LAILG-NGA 150-4 12/15/08 15.75 47.27 26.0911 268.53 125.27 ^{M4} 24.935 ^{M4} 1704 ^{EB} 2.94 24.75 ^{M4} 333.5 NGA # 124 LAILG-NGA 124-5 12/15/08 1.68 26.51 24.4087 40.43 45.28 21.115 424 ^{EB} 3.66 2.706 115.5 NGA # 189 LAILG-NGA 189-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 31 LAILG-NGA 31-3 12/15/08 4.32 36.98 3.0228 12.14 57.58 2.148 364 ^{EB} 2.87 3.155 85.5 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1.079 NGA # 130 LAILG-NGA 178-1 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{FD} Duplicate LAILG-NGA 64-2 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 168 LAILG-NGA 168-5 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 1.1712 1.1714 1.1714 1.1714 1.1714 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1712 1.1715 1.1715 1.1715 1.1712 1.1715 1.171					95.81		9.17			616	0.8	1.046	
NGA # 150 LAILG-NGA 150-4 12/15/08 15.75 47.27 26.0911 268.53 125.27 ^{M4} 24.935 ^{M4} 1704 ^{EB} 2.94 24.75 ^{M4} 333.5 NGA # 124 LAILG-NGA 124-5 12/15/08 1.68 26.51 24.4087 40.43 45.28 21.115 424 ^{EB} 3.66 2.706 115.5 NGA # 189 LAILG-NGA 189-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 31 LAILG-NGA 31-3 12/15/08 4.32 36.98 3.0228 12.14 57.58 2.148 364 ^{EB} 2.87 3.155 85.5 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 0.47 0.512 59.7 NGA # 130 LAILG-NGA 130-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA 64-2 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X	NGA # 150		11/26/08		65.92	31.579					37.69		45.5
NGA # 124 LAILG-NGA 124-5 12/15/08 1.68 26.51 24.4087 40.43 45.28 21.115 424 ^{EB} 3.66 2.706 115.5 NGA # 189 LAILG-NGA 189-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 31 LAILG-NGA 31-3 12/15/08 4.32 36.98 3.0228 12.14 57.58 2.148 364 ^{EB} 2.87 3.155 85.5 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 130 LAILG-NGA 130-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA-DUP 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 64 LAILG-NGA 64-2 12/15/08 1.15 12.38 ^{EB} 0.4307 5.39 35.34 0.49 232 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.5	NGA # 25	LAILG-NGA 25-1	11/26/08	0.85	21.99	1.1712	5.31						168.5
NGA # 189 LAILG-NGA 189-2 12/15/08 0.54 31.28 0.6795 9.87 41.27 0.813 220 ^{EB} 0.99 1.261 111.3 NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 31 LAILG-NGA 31-3 12/15/08 4.32 36.98 3.0228 12.14 57.58 2.148 364 ^{EB} 2.87 3.155 85.5 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 130 LAILG-NGA 130-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA-DUP 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 168 LAILG-NGA 64-2 12/15/08 1.15 12.38 ^{EB} 0.4307 5.39 35.34 0.49 232 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.5	NGA # 150	LAILG-NGA 150-4	12/15/08	15.75	47.27	26.0911	268.53	125.27 ^{M4}	24.935 ^{M4}		2.94	24.75 ^{M4}	333.5
NGA # 110 LAILG-NGA 110-2 12/15/08 0.31 28.59 1.186 8.48 50.87 1.469 328 ^{EB} 1.6 1.868 93 NGA # 31 LAILG-NGA 31-3 12/15/08 4.32 36.98 3.0228 12.14 57.58 2.148 364 ^{EB} 2.87 3.155 85.5 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 130 LAILG-NGA 130-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA-DUP 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 64 LAILG-NGA 64-2 12/15/08 1.15 12.38 ^{EB} 0.4307 5.39 35.34 0.49 232 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.55	NGA # 124	LAILG-NGA 124-5	12/15/08	1.68	26.51	24.4087	40.43	45.28	21.115		3.66	2.706	115.5
NGA # 31 LAILG-NGA 31-3 12/15/08 4.32 36.98 3.0228 12.14 57.58 2.148 364 ^{EB} 2.87 3.155 85.5 NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 130 LAILG-NGA 130-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA-DUP 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 64 LAILG-NGA 64-2 12/15/08 1.15 12.38 ^{EB} 0.4307 5.39 35.34 0.49 232 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 4 LAILG-NGA 4-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.55	NGA # 189	LAILG-NGA 189-2	12/15/08	0.54	31.28	0.6795	9.87	41.27	0.813	220 ^{EB}	0.99	1.261	111.3
NGA # 184 LAILG-NGA 184-2 12/15/08 0.64 27.46 0.7339 4.41 33.57 0.502 240 ^{EB} 2.16 2.94 1,079 NGA # 130 LAILG-NGA 130-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA-DUP 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 64 LAILG-NGA 64-2 12/15/08 1.15 12.38 ^{EB} 0.4307 5.39 35.34 0.49 232 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 4 LAILG-NGA 4-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X	NGA # 110	LAILG-NGA 110-2	12/15/08	0.31	28.59	1.186	8.48	50.87	1.469		1.6	1.868	93
NGA # 130 LAILG-NGA 130-5 12/15/08 0.52 46.43 0.4392 11.81 67.8 0.481 258 ^{EB} 0.47 0.512 59.7 NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 ^{EB} 2.64 2.934 72.7 ^{ED} Duplicate LAILG-NGA-DUP 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 64 LAILG-NGA 64-2 12/15/08 1.15 12.38 ^{EB} 0.4307 5.39 35.34 0.49 232 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 4 LAILG-NGA 4-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.5	NGA # 31	LAILG-NGA 31-3	12/15/08	4.32	36.98	3.0228	12.14	57.58	2.148		2.87	3.155	85.5
NGA # 178 LAILG-NGA 178-1 12/15/08 0.81 85.04 2.4077 12.99 148.27 2.648 462 EB 2.64 2.934 72.7 FD Duplicate LAILG-NGA-DUP 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 64 LAILG-NGA 64-2 12/15/08 1.15 12.38 EB 0.4307 5.39 35.34 0.49 232 EB 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 EB 2.24 2.386 236 NGA # 4 LAILG-NGA 4-4 12/15/08 0.52 8.67 EB 1.0382 2.7 15.23 0.158 238 EB 2.33 2.231 295 CWIL Limits See Table X	NGA # 184	LAILG-NGA 184-2	12/15/08	0.64	27.46	0.7339	4.41	33.57	0.502		2.16	2.94	1,079
Duplicate LAILG-NGA-DUP 12/15/08 0.79 102.32 2.3169 14.99 173.96 2.604 588 2.62 2.944 49.3 NGA # 64 LAILG-NGA 64-2 12/15/08 1.15 12.38 ^{EB} 0.4307 5.39 35.34 0.49 232 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 4 LAILG-NGA 4-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X	NGA # 130	LAILG-NGA 130-5	12/15/08	0.52	46.43	0.4392	11.81	67.8	0.481	258 ^{EB}	0.47	0.512	
NGA # 64 LAILG-NGA 64-2 12/15/08 1.15 12.38 ^{EB} 0.4307 5.39 35.34 0.49 232 ^{EB} 0.71 0.868 112 NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 4 LAILG-NGA 4-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.5	NGA # 178	LAILG-NGA 178-1	12/15/08	0.81	85.04	2.4077	12.99	148.27	2.648	462 ^{EB}	2.64	2.934	72.7 ^{FD}
NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 4 LAILG-NGA 4-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.5	Duplicate	LAILG-NGA-DUP	12/15/08	0.79		2.3169	14.99	173.96	2.604		2.62	2.944	49.3
NGA # 168 LAILG-NGA 168-5 12/15/08 0.25 53.4 1.4434 15.33 130.75 1.568 492 ^{EB} 2.24 2.386 236 NGA # 4 LAILG-NGA 4-4 12/15/08 0.52 8.67 ^{EB} 1.0382 2.7 15.23 0.158 238 ^{EB} 2.33 2.231 295 CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.5	NGA # 64	LAILG-NGA 64-2	12/15/08	1.15	12.38 ^{EB}	0.4307	5.39	35.34	0.49		0.71	0.868	112
CWIL Limits See Table X MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.5	NGA # 168	LAILG-NGA 168-5	12/15/08	0.25		1.4434	15.33	130.75	1.568		2.24	2.386	236
MDL 0.01 0.01 0.0075 0.01 0.01 0.016 0 0.01 0.016 0.5	NGA # 4	LAILG-NGA 4-4	12/15/08	0.52	8.67 ^{EB}	1.0382	2.7	15.23	0.158	238 ^{EB}	2.33	2.231	295
		CWIL Limits						See Ta	able X				
RL 0.05 0.05 0.01 0.05 0.05 5 0.01 0.05 5		MDL		0.01	0.01	0.0075	0.01	0.01	0.016	0	0.01	0.016	0.5
		RL		0.05	0.05	0.01	0.05	0.05	0.05	5	0.01	0.05	5

Concentrations are reported in milligrams per liter (mg/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference Conditional waiver for irrigated lands, order #R4-2005-0080 Spike or surrogate compound recovery was out of control due to matrix interference. Estimated concentration. Field Duplicate RPD > 25%.

The associated method blank spike or surrogate compound was in control and therefore the sample data was reported without further clarification. EB Estimated concentration. Field Duplicate RPD >25%.
Estimated concentration, constituent detected at greater than 10% in field blank FD

FB Sample received and /or analyzed past the recommended holding time. Q1 Η М3 Detection of the analyte was difficult due to matrix interference.

Spike recovery and RPD control limits do not apply resulting from the parameter

concentration in the sample exceeding the spike concentration.

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 4 CHLORINATED PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

											Chlorinated	Pesticides							
Site	Sample #	Date	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 Sulfate	Endosulphan-I	Endosulfan-II
NGA #150	LAILG-NGA-150-6	12/2/14	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	< 50	<50	<50	<50
NGA #188	LAILG-NGA-188-1	12/2/14	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0
Duplicate	LAILG-NGA-DUP	12/2/14	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0	<5.0
NGA #168	LAILG-NGA-168-7	5/15/15	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Equip Blank	LAILG-NGA-EB	12/2/14	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Field Blank	LAILG-NGA- FB	12/2/14	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0	< 5.0	<5.0	<5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0
	WQB		nl	0.59	nl	0.84	0.59	0.59	0.13	3.9	14	nl	19	nl	nl	0.14	110,000	110,000	110,000
	MRL		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Concentrations are reported in nanograms per liter (ng/L). Results above WQB are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080 M-04 Visual evaluation of the sample indicates the RPD or QC spike is above the control limit due to a non-homogeneous sample matrix

WQB MRL Water Quality Benchmarks Method Reporting Limits

not listed

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 3 CHLORINATED PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

											Chlorinated	Pesticides							
Site	Sample #	Date	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 Sulfate	Endosulphan-I	Endosulfan-II
NGA #19	LAILG-NGA19-7	2/28/14	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
NGA #26	LAILG-NGA26-1	2/28/14	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
NGA #124	LAILG-NGA124-7	2/28/14	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
NGA #178	LAILG-NGA178-2	2/28/14	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
NGA #184	LAILG-NGA184-3	2/28/14	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Duplicate	LAILG-NGA-DUP	2/28/14	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
Equip Blank	LAILG-NGA-EB	2/28/14	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Field Blank	LAILG-NGA- FB	2/28/14	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	< 5.0	<5.0	< 5.0	<5.0	<5.0	< 5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0
	WQB		nl	0.59	nl	0.84	0.59	0.59	0.13	3.9	14	nl	19	nl	nl	0.14	110,000	110,000	110,000
	MRL		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Concentrations are reported in nanograms per liter (ng/L). Results above WQB are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated

Conditional waiver for irrigated lands, order #R4-2005-0080 Water Quality Benchmarks Method Reporting Limits CWIL

Visual evaluation of the sample indicates the RPD or QC spike is above the control limit due to a non-homogeneous sample matrix

WQB MRL

not listed

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

											Chlorinated	Pesticides							
Site	Sample #	Date	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 Sulfate	Endosulphan-I	Endosulfan-II
NGA #4	LAILG-NGA4-5	3/21/11	nd	nd	nd	nd	17	21	nd	nd	nd	nd	nd	13	18	nd	nd	nd	nd
NGA #124	LAILG-NGA124-6	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	33 ^{FD}	nd	nd	nd
NGA # 150	LAILG-NGA 150-5	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #19	LAILG-NGA19-6	3/23/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	22	nd	nd	nd
Equip Blank	LAILG-NGA-EB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Field Blank	LAILG-NGA- FB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	LAILG-NGA168-6	3/17/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BSL}	nd
NGA #31	LAILG-NGA31-4	3/17/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BSL}	nd
NGA #162	LAILG-NGA162-1	3/17/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BSL}	nd
NGA #64	LAILG-NGA64-3	3/17/12	nd	nd	nd	nd	28 ^{FD}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BSL}	nd
Duplicate	LAILG-NGA-DUP	3/17/12	nd	nd	nd	nd	51	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BSL}	nd
Equip Blank	LAILG-NGA-EB	3/17/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BSL}	nd
Field Blank	LAILG-NGA- FB	3/17/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BSL}	nd
NGA #4	LAILG-NGA4-6	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #170	LAILG-NGA170-1	3/25/12	nd	nd	nd	nd	9.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #176	LAILG-NGA176-2	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #210	LAILG-NGA210-2	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Equip Blank	LAILG-NGA-EB	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Field Blank	LAILG-NGA- FB	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	CWIL Limits		nl	0.59	nl	0.84	0.59	0.59	nl	nl	nl	nl	nl	nl	nl	0.14	nl	nl	nl
	MDL		5.0	5.0	5.0	5.0	2.5	3.1	1.5	1.8	3.1	2.5	2.1	5.0	5.0	2.1	5.0	1.7	1.9
	RL		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated concentration.

CWIL	Conditional waiver for irrigated lands, order #R4-2005-0080	S4	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect.
FD	Estimated concentration. Field Duplicate RPD >25%.		
J	Estimated concentrations, results above MDL but less than RL	SGC	Surrogate recovery outside of control limits due to a possible matrix effect. The data was accepted based on valid recovery of the remaining surrogate.
MDL	Method Detection Limits		
RI.	Reporting Limits	BS-I	The recovery of this analyte in the BS/LCS was below the control limit. Sample result is suspect

nd not detected nl not listed

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080

CHLORINATED PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

											Chlorinated	Pesticides							
Site	Sample #	Date	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	cis-Nonachlor	DCPA	Dicofol	Dieldrin
NGA #110	LAILG-NGA110-1	1/4/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #189	LAILG-NGA189-1	1/4/08	nd	nd	nd	nd	22.5	nd	nd	nd	nd	nd	nd	nd	6	nd	nd	nd	nd
NGA #19	LAILG-NGA19-3	1/5/08	nd	nd	nd	nd	nd	5.6	nd	nd	nd	nd	nd	2.3 ^J	nd	nd	nd	nd	nd
NGA #124	LAILG-NGA124-3	1/5/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183	LAILG-NGA183-4	1/5/08	nd	nd	nd	12	26.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #4	LAILG-NGA4-2	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #53	LAILG-NGA53-2	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #64	LAILG-NGA64-1	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #130	LAILG-NGA130-3	1/24/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #182	LAILG-NGA182-2	1/24/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	LAILG-NGA168-4	1/25/08	nd	nd	nd	nd	19.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 19	LAILG-NGA19-4	8/12/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.0 ^J	2.1 ^J	nd	nd	nd	nd
NGA # 4	LAILG-NGA 4-3	8/13/08	nd	nd ^{M4}	nd	nd	nd	nd	nd	nd	nd ^{M4}	nd	nd	9.2 ^{Q2,FD}	9.8 ^{M4,Q2,FD}	12.7 ^{Q2,FD}	nd	485.7 ^{Q1,Q2,FD}	nd ^{M4}
Duplicate	LAILG-NGA-DUP	8/13/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	29.8 ^{FD}	41.3 ^{FD}	44.3 ^{FD}	nd	1064.3 FD	nd
NGA # 31	LAILG-NGA 31-1	9/23/08	nd	nd	nd	nd	13.5	nd	nd	nd	nd	nd	nd	nd	7.6 ^{FD}	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	9/23/08	nd	nd	nd	nd	13.6	nd	nd	nd	nd	nd	nd	nd	11.6 ^{FD}	nd	nd	nd	nd
NGA # 19	LAILG-NGA 19-5	11/26/08	nd	nd	nd	nd	24.7 ^{Q6}	nd	nd	nd	nd	nd	nd	7.5 ^{J,Q3}	6.1	nd	nd	nd	nd
NGA # 210	LAILG-NGA 210-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 184	LAILG-NGA 184-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 124	LAILG-NGA 124-4	11/26/08	nd	nd	nd	nd	19.3	nd	nd	nd	nd	nd	nd	3.7 ^J	2.8 ^J	nd	nd	nd	nd
NGA # 31	LAILG-NGA 31-2	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7.8	6.3	nd	nd	nd	nd
NGA # 130	LAILG-NGA 130-4	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	6.7 ^J	nd	nd
NGA # 150	LAILG-NGA 150-3	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 25	LAILG-NGA 25-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	5.6	4.9 ^J	1.0 ^J	nd	nd	nd
NGA # 150	LAILG-NGA 150-4	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 124	LAILG-NGA 124-5	12/15/08	nd	nd	nd	10.4	nd	nd	nd	nd	nd	nd	nd	5.5	4.2 ^J	nd	6.3 ^J	nd	nd
NGA # 189	LAILG-NGA 189-2	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 110	LAILG-NGA 110-2	12/15/08	nd	nd	nd	6.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 31	LAILG-NGA 31-3	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 184	LAILG-NGA 184-2	12/15/08	nd	nd	nd	nd	22	nd	nd	nd	nd	nd	nd	nd	4.2 ^J	nd	nd	nd	nd
NGA # 130	LAILG-NGA 130-5	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 178	LAILG-NGA 178-1	12/15/08	nd	nd ^{M4}	nd ^{M4}	nd ^{M4}	25.3 ^{FD}	nd ^{M4}	nd	nd	nd ^{M4}	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	12/15/08	nd	nd	nd	nd	nd ^{FD}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 64	LAILG-NGA 64-2	12/15/08	nd	nd	nd	nd	43.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 168	LAILG-NGA 168-5	12/15/08	nd	nd	nd	nd	11.8	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 4	LAILG-NGA 4-4	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	35.1	34.2	6.5	nd	nd	nd
	CWIL Limits		nl	nl	nl	0.59	0.59	0.83	0.13	3.9	14	nl	19	a)	a)	a)	nl	nl	0.14
	MDL	_	1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	50	1
	RL		5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	100	5

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated.

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080 M4 Spike or surrogate compound recovery was out of control due to matrix interference. The associated method blank spike or 92 surrogate compound was in control and therefore the sample data was reported without further clarification.

Head to matrix interference. The associated method blank spike or 92 surrogate compound was in control and therefore the sample data was reported without further clarification.

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Head to matrix interference The associated method blank spike or 92 surrogate compound was in control and therefore the sample data was reported

routine laboratory practices.

RPD values are not accurate and not applicable because the results for R1 and/or R2 are lower than ten times the MDL.

CRG's Quality Assurance Program Document allows for 5% of the target compounds greater than ten times the MDL to be outside the specified acceptance limits for precision and/or accuracy. This is often due to random error and cannot be attributed to a spe

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080 CHLORINATED PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

											Chlorinated	Pesticides							
Site	Sample #	Date	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	cis-Nonachlor	DCPA	Dicofol	Dieldrin
NGA #130	NGA-#130-LAILG-1	8/6/07	nd	nd	nd	22.8	34.7	16.1	nd	nd	nd	nd	nd	nd	nd	nd	nd	68.3 ^J	nd
NGA #183	NGA-#183-LAILG-1	8/6/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #19	NGA-#19-LAILG-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #124	NGA-#124-LAILG-1	8/13/07	nd	nd	nd	22.5	15.3	13.7	nd	nd	nd	nd	nd	nd	nd	12.1	nd	nd	nd
NGA #168	NGA-#168-LAILG-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA BLANK	NGA LAILG-BLANK-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA FBLI	NGA-LAILG-FBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA EQBLI	NGA-LAILG-EQBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #150	NGA-#150-LAILG	9/25/07	nd	nd	nd	nd	nd	nd^{D}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183	ILG-#183	9/26/07	25 ^B	nd	31.8 ^B	90.3 ^B	113.8 ^B	51.1 ^{B,D}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183-DUP	ILGNGA-#Dup	9/26/07	nd ^B	nd	nd ^B	64.5 ^B	70.2 ^B	nd ^{B,D}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #EQUIP	ILGNGA-#Equip	9/26/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #FIELD	ILGNGA-#FIELD-2	9/28/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168-2	ILGNGA-#168-2	9/28/07	nd	nd	17.3	16.7	nd	84 ^D	nd	nd	nd	nd	nd	nd	nd	nd	nd	52 ^J	nd
NGA #168	NGA-#168-LAILG-3	11/30/07	nd	nd	nd	nd	2.7 ^J	nd^{C}	nd	nd	nd	nd	nd	1.4 ^J	1.4 ^J	1.1 ^J	nd	nd	nd
NGA #182	NGA #182-LAILG-1	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #182-DUP	NGA-Duplicate	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #4	NGA #4-LAILG-1	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #130	NGA #130-LAILG-2	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #150	NGA #150-LAILG-2	12/7/07	nd	nd	nd	nd	nd	nd	35.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #124	NGA-#124-LAILG-2	12/7/07	nd	nd	nd	6.0	22.1	9.3	nd	nd	nd	nd	nd	1.1 ^J	3.0 ^J	nd	nd	63.7 ^J	nd
NGA #EQUIP	NGA-equip blank	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #FIELD	Field Blank-2	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #176	LAILG-NGA#176-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183	LAILG-NGA#183-3	12/18/07	36.8	5.7	20.6	224.8	344.4	73.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	51.5 ^J	nd
NGA #19	LAILG-NGA#19-2	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #13	LAILG-NGA#13-1	12/18/07	nd	nd	nd	nd	32.7	nd	nd	nd	nd	nd	nd	18	19.2	19.6	nd	nd	nd
NGA #53	LAILG-NGA#53-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	CWIL Limits		nl	nl	nl	0.59	0.59	0.83	0.13	3.9	14	nl	19	a)	a)	a)	nl	nl	0.14
	MDL		1	1	1	1	1	1	1	1	1	1	1	1	1	1	5	50	1
	RL		5	5	5	5	5	5	5	5	5	5	5	5	5	5	10	100	5

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated.

CWIL	Conditional waiver for irrigated lands, order #R4-2005-0080	MDL	Method Detection Limits
A	Component of total chlordane, see total chlordane for CWIL limitations	RL	Reporting Limits
В	Estimated concentration, RPD of duplicate sample >25%	nd	not detected
C	Procedural blank Matrix Spike recovery out of limits	nl	not listed
D	Procedural blank Matrix Spike Duplicate RPD out of limits	na	not analyzed
J	Estimated concentrations, results above MDL but less than RL		

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 4 CHLORINATED PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

								Chlorinated	Pesticides						Sample
Site	Sample #	Date	Aroclor XXXX, Sum of	Endrin	Endrin Aldehyde	Chlordane (tech)	Heptachlor	Heptachlor Epoxide	Methoxychlor	Mirex	Toxaphene	trans- Nonachlor	cis-Nonachlor	Total Chlordane	Notes
NGA #150	LAILG-NGA-150-6	12/2/14	<1000	<50	<50	<1000	<50	<50	<50	< 50	<5000	<50	<50	<50	M-04
NGA #188	LAILG-NGA-188-1	12/2/14	<100	< 5.0	<5.0	<100	<5.0	<5.0	<5.0	<5.0	< 500	<5.0	<5.0	<5.0	
Duplicate	LAILG-NGA-DUP	12/2/14	<100	<5.0	<5.0	<100	<5.0	< 5.0	<5.0	< 5.0	< 500	<5.0	<5.0	<5.0	
NGA #168	LAILG-NGA-168-7	5/15/15	< 500	<25	<25	< 500	<25	<25	<25	<25	<2500	<25	<25	<25	M-04
Equip Blank	LAILG-NGA-EB	12/2/14	<100	<5.0	<5.0	<100	<5.0	<5.0	<5.0	<5.0	<500	<5.0	<5.0	<5.0	
Field Blank	LAILG-NGA- FB	12/2/14	<100	<5.0	<5.0	<100	<5.0	< 5.0	<5.0	< 5.0	<500	< 5.0	<5.0	<5.0	
	CWIL Limits	·	nl	760	760	nl	0.21	0.1	nl	nl	0.75	nl	nl	0.59	
	MRL		100	5.0	5.0	100	5.0	5.0	5.0	5.0	500	5	5.0	5.0	

Concentrations are reported in nanograms per liter (ng/L). Results above WQB are presented in BOLD . Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated

Conditional waiver for irrigated lands, order #R4-2005-0080 Water Quality Benchmarks CWIL M-04 Due to the nature of marix interfrenences, sample extract was diluted prior to analysis. The MDL and MRL were raised due to the dilution.

WQB MRL Method Reporting Limits

not listed

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 3 CHLORINATED PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

								Chlorinated 1	Pesticides						Sample
Site	Sample #	Date	Aroclor XXXX, Sum of	Endrin	Endrin Aldehyde	Chlordane (tech)	Heptachlor	Heptachlor Epoxide	Methoxychlor	Mirex	Toxaphene	trans- Nonachlor	cis-Nonachlor	Total Chlordane	Notes
NGA #19	LAILG-NGA19-7	2/28/14	<500	<25	<25	<500	<25	<25	<25	<25	<2500	<25	<25	<25	M-04
NGA #26	LAILG-NGA26-1	2/28/14	< 500	<25	<25	< 500	<25	<25	<25	<25	<2500	<25	<25	<25	M-04
NGA #124	LAILG-NGA124-7	2/28/14	< 500	<25	<25	<500	<25	<25	<25	<25	<2500	<25	<25	<25	M-04
NGA #178	LAILG-NGA178-2	2/28/14	<500	<25	<25	<500	<25	<25	<25	<25	<2500	<25	<25	<25	M-04
NGA #184	LAILG-NGA184-3	2/28/14	< 500	<25	<25	< 500	<25	<25	<25	<25	<2500	<25	<25	<25	M-04
Duplicate	LAILG-NGA-DUP	2/28/14	< 500	<25	<25	< 500	<25	<25	<25	<25	<2500	<25	<25	<25	M-04
Equip Blank	LAILG-NGA-EB	2/28/14	<100	<5.0	<5.0	<100	< 5.0	<5.0	<5.0	< 5.0	<500	<5.0	<5.0	<5.0	
Field Blank	LAILG-NGA- FB	2/28/14	<100	< 5.0	<5.0	<100	< 5.0	< 5.0	< 5.0	<5.0	< 500	<5.0	<5.0	<5.0	
_	CWIL Limits		nl	760	760	nl	0.21	0.1	nl	nl	0.75	nl	nl	0.59	
	MRL		100	5.0	5.0	100	5.0	5.0	5.0	5.0	500	5	5.0	5.0	

Concentrations are reported in nanograms per liter (ng/L). Results above WQB are presented in BOLD . Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated

Conditional waiver for irrigated lands, order #R4-2005-0080 Water Quality Benchmarks Method Reporting Limits

Visual evaluation of the sample indicates the RPD or QC spike is above the control limit due to a non-homogeneous sample matrix

CWIL WQB MRL

not listed

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

							Chlorina	ited Pesticides					
Site	Sample #	Date	Aroclor XXXX, Sum of	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Mirex	Toxaphene	trans- Nonachlor	Total Chlordane
NGA #4	LAILG-NGA#4-2	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	8.6	39.6
NGA #124	LAILG-NGA#124-3	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 150	LAILG-NGA 150-3	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #19	LAILG-NGA#19-2	3/23/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Equip Blank	LAILG-NGA-EB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Field Blank	LAILG-NGA- FB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	LAILG-NGA168-6	3/17/12	nd	nd	nd	nd ^{S4}	nd	nd	nd	nd	nd	nd	nd
NGA #31	LAILG-NGA31-4	3/17/12	nd	nd	nd	nd ^{S4}	nd	nd	nd	nd	nd	nd	nd
NGA #162	LAILG-NGA162-1	3/17/12	nd	nd	nd	nd ^{S4}	nd	nd	nd	nd	nd	nd	nd
NGA #64	LAILG-NGA64-3	3/17/12	nd	nd	nd	nd ^{S4}	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	3/17/12	nd	nd	nd	nd ^{S4}	nd	nd	nd	nd	nd	nd	nd
Equip Blank	LAILG-NGA-EB	3/17/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Field Blank	LAILG-NGA- FB	3/17/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #4	LAILG-NGA4-6	3/25/12	nd	nd	nd	nd ^{SGC}	nd	nd	nd	nd	nd	nd	nd
NGA #170	LAILG-NGA170-1	3/25/12	nd	nd	nd	nd ^{SGC}	nd	nd	nd	nd	nd	nd	nd
NGA #176	LAILG-NGA176-2	3/25/12	nd	nd	nd	nd ^{SGC}	nd	nd	nd	nd	nd	nd	nd
NGA #210	LAILG-NGA210-2	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	3/25/12	nd	nd	nd	nd ^{S4}	nd	nd	nd	nd	nd	nd	nd
Equip Blank	LAILG-NGA-EB	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Field Blank	LAILG-NGA- FB	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	CWIL Limits		nl	nl	nl	nl	nl	nl	nl	nl	0.75	nl	0.59
	MDL		40	2.8	3.0	2.0	1.7	1.9	5.0	5.0	120	5.0	5.0
	RL		100	5.0	5.0	20.0	5.0	5.0	5.0	5.0	500	5.0	5.0

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated.

CWIL MDL Conditional waiver for irrigated lands, order #R4-2005-0080 Method Detection Limits Estimated concentrations, results above MDL but less than RL S4 The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect. SGC Surrogate recovery outside of control limits due to a possible matrix effect . The data was accepted based on valid recovery of the remaining surrogate.

RL Reporting Limits not detected BS-L

The recovery of this analyte in the BS/LCS was below the control limit. Sample result is suspect. not listed

nl FD Estimated concentration. Field Duplicate RPD >25%.

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080

CHLORINATED PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

Site	Sample #	Date	Endosulfan Sulfate	Endosulphan-I	Endosulfan-II	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Kepone	Mirex	Oxychlordane	Perthane	Toxaphene	trans- Nonachlor	Total Chlordane
NGA #110	LAILG-NGA#110-1	1/4/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #189	LAILG-NGA#189-1	1/4/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8.9	14.9
NGA #19	LAILG-NGA#19-2	1/5/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	14	16.3
NGA #124	LAILG-NGA#124-3	1/5/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	17.1	17.1
NGA #183	LAILG-NGA#183-4	1/5/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #4	LAILG-NGA#4-2	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #53	LAILG-NGA#53-2	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #64	LAILG-NGA#64-1	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #130	LAILG-NGA#130-3	1/24/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #182	LAILG-NGA#182-2	1/24/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	LAILG-NGA#168-4	1/25/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 19	LAILG-NGA19-4	8/12/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.3 ^J	4.4 ^J
NGA # 4	LAILG-NGA 4-3	8/13/08	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd	nd ^{M4}	nd	nd	nd	nd ^{M4}	nd ^{M4}	nd	7.1 ^{M4,Q2,FD}	38.8
Duplicate	LAILG-NGA-DUP	8/13/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	27 ^{FD}	124.4
NGA # 31	LAILG-NGA 31-1	9/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7.6	15.2
Duplicate	LAILG-NGA-DUP	9/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8.5	20.1
NGA # 19	LAILG-NGA 19-5	11/26/08	nd	nd	nd	nd	nd	339.4 ^{Q3}	nd	nd	nd	nd	nd	nd	nd	nd	6.6 ^{J,Q3}	20.2 ^J
NGA # 210	LAILG-NGA 210-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 184	LAILG-NGA 184-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 124	LAILG-NGA 124-4	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	1.7 ^J	8.2 ^J
NGA # 31	LAILG-NGA 31-2	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	3.8 ^J	17.9 ^J
NGA # 130	LAILG-NGA 130-4	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 150	LAILG-NGA 150-3	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 25	LAILG-NGA 25-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{Q6}	nd	nd	nd	nd	nd	4.7 ^J	16.2 ^J
NGA # 150	LAILG-NGA 150-4	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 124	LAILG-NGA 124-5	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	3.9 ^J	13.6 ^J
NGA # 189	LAILG-NGA 189-2	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 110	LAILG-NGA 110-2	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 31	LAILG-NGA 31-3	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 184	LAILG-NGA 184-2	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	4.2 ^J
NGA # 130	LAILG-NGA 130-5	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 178	LAILG-NGA 178-1	12/15/08	nd	nd ^{M4}	nd ^{M4}	nd	nd	nd	nd	nd	nd ^{M4}	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 64	LAILG-NGA 64-2	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	666	nd	nd
NGA # 168	LAILG-NGA 168-5	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 4	LAILG-NGA 4-4	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	23.7	99.5
	CWIL Limits		nl	5.6	5.6	36	nl	nl	0.21	0.1	nl	nl	nl	a)	nl	25	a)	0.57
	MDL		1	1	1	1	1	1	1	1	1	1	1	1	5	10	1	1
	RL		5	5	5	5	5	5	5	5	5	5	5	5	10	50	5	5

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated concentrations.

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080 Spike or surrogate compound recovery was out of control due to matrix interference. The associated method blank spike or surrogate Method Detection Limits
Estimated concentrations, results above MDL but less than RL MDL compound was in control and therefore the sample data was reported without further clarification. RL Reporting Limits Q2 not detected not listed

Estimated concentration. Field Duplicate RPD >25%.

nl FD

The sample RPD was out of control. Sample is heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices.

RPD values are not accurate and not applicable because the results for R1 and/or R2 are lower than ten times the MDL.

Q3

Q6

CRG's Quality Assurance Program Document allows for 5% of the target compounds greater than ten times the MDL to be outside the specified acceptance limits for precision and/or accuracy. This is often due to random error and cannot be attributed to a spe

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080 CHLORINATED PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

Site	Sample #	Date	Endosulfan Sulfate	Endosulphan-I	Endosulfan-II	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Kepone	Mirex	Oxychlordane	Perthane	Toxaphene	trans- Nonachlor	Total Chlordane
NGA #130	NGA-#130-LAILG-1	8/6/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd	nd	nd	nd	nd
NGA #183	NGA-#183-LAILG-1	8/6/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd	nd	nd	nd	nd
NGA #19	NGA-#19-LAILG-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd	nd	nd	nd	nd
NGA #124	NGA-#124-LAILG-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd	nd	nd	21.9	34
NGA #168	NGA-#168-LAILG-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd	nd	nd	nd	nd
NGA BLANK	NGA LAILG-BLANK-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA FBLI	NGA-LAILG-FBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA EQBLI	NGA-LAILG-EQBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #150	NGA-#150-LAILG	9/25/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd^{D}	nd	nd	nd	nd
NGA #183	ILG-#183	9/26/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd^{D}	nd	nd	nd	nd
NGA #183-DUP	ILGNGA-#Dup	9/26/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd^D	nd	nd	nd	nd
NGA #EQUIP	ILGNGA-#Equip	9/26/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #FIELD	ILGNGA-#FIELD-2	9/28/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168-2	ILGNGA-#168-2	9/28/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	nd	nd^{D}	nd	nd	nd	nd
NGA #168	NGA-#168-LAILG-3	11/30/07	nd	nd	nd	nd	nd	nd	nd	nd	nd^{C}	nd	nd	nd	nd	nd	1.7 ^J	5.6 ^J
NGA #182	NGA #182-LAILG-1	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #182-DUP	NGA-Duplicate	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #4	NGA #4-LAILG-1	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #130	NGA #130-LAILG-2	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #150	NGA #150-LAILG-2	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #124	NGA-#124-LAILG-2	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	7.3	11.4
NGA #EQUIP	NGA-equip blank	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #FIELD	Field Blank-2	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #176	LAILG-NGA#176-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd^{C}	nd	nd	nd	nd	nd	nd
NGA #183	LAILG-NGA#183-3	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd^{C}	nd	nd	nd	nd	nd	nd
NGA #19	LAILG-NGA#19-2	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd^{C}	nd	nd	nd	nd	2.4 ^J	2.4 ^J
NGA #13	LAILG-NGA#13-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd^{C}	nd	nd	nd	nd	54.1	110.9
NGA #53	LAILG-NGA#53-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd^{C}	nd	nd	nd	nd	nd	nd
	CWIL Limits		nl	5.6	5.6	36	nl	nl	0.21	0.1	nl	nl	nl	a)	nl	25	a)	0.57
	MDL		1	1	1	1	1	1	1	1	1	1	1	1	5	10	1	1
	RL		5	5	5	5	5	5	5	5	5	5	5	5	10	50	5	5

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated.

CWIL	Conditional waiver for irrigated lands, order #R4-2005-0080	MDL	Method Detection Limits
A	Component of total chlordane, see total chlordane for CWIL limitations	RL	Reporting Limits
В	Estimated concentration, RPD of duplicate sample >25%	nd	not detected
C	Procedural blank Matrix Spike recovery out of limits	nl	not listed
D	Procedural blank Matrix Spike Duplicate RPD out of limits	na	not analyzed
J	Estimated concentrations, results above MDL but less than RL		

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 4 ORGANOPHOSPHORUS PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

													Orga	nophosphorus	Pesticides											Sample
Site	Sample #	Date	Azinphos methyl	Bolstar	Chlorpyrifos	Coumaphos	Demeton-o	Demeton-s	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethoprop	Ethyl parathion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl Parathion	Mevinphos	Naled	Phorate Ronnel	Stirophos	Tokuthion	Trichloronate	
NGA #150	LAILG-NGA-150-6	12/2/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 <10	<10	<10	<10	
NGA #188	LAILG-NGA-188-1	12/2/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 <10	<10	<10	<10	
Duplicate	LAILG-NGA-DUP	12/2/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 <10	<10	<10	<10	
NGA #168	LAILG-NGA-168-7	5/15/15	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 <10	<10	<10	<10	
Equip Blank	LAILG-NGA-EB	12/2/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 <10	<10	<10	<10	
Field Blank	LAILG-NGA- FB	12/2/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10 <10	<10	<10	<10	
	WQB		80	nl	25	37	nl	nl	100	35	21,500	1,950	22,000	nl	nl	2,600	295	nl	485	nl	70	300 nl	nl	nl	nl	i
	MRL		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.0 10	10	10	10	

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits or ALB guidelines are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be

Conditional waiver for irrigated lands, order #R4-2005-0080 Method Detection Limits

CWIL MRL

WQB ! Water Quality Benchmarks
Estimated concentration. Field Duplicate RPD >25%.

not listed not detected

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 3 ORGANOPHOSPHORUS PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

													Org	anophosphorus P	'esticides												Sample
Site	Sample #	Date	Azinphos methyl	Bolstar	Chlorpyrifos	Coumaphos	Demeton-o	Demeton-s	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethoprop	Ethyl parathion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl Parathion	Mevinphos	Naled	Phorate	Ronnel	Stirophos	Tokuthion	Trichloronate	
NGA #19	LAILG-NGA19-7	2/28/14	<10	<10	22!	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1
NGA #26	LAILG-NGA26-1	2/28/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	23	<10	<10	<10	<10	<10	<10	<10	<10	<10	ı
NGA #124	LAILG-NGA124-7	2/28/14	<10	<10	17	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	13	<10	<10	<10	<10	<10	<10	<10	<10	<10	1
NGA #178	LAILG-NGA178-2	2/28/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	i
NGA #184	LAILG-NGA184-3	2/28/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	i
Duplicate	LAILG-NGA-DUP	2/28/14	<10	<10	31!	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	i
Equip Blank	LAILG-NGA-EB	2/28/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	1
Field Blank	LAILG-NGA- FB	2/28/14	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
_	WQB	•	80	nl	25	37	nl	nl	100	35	21,500	1,950	22,000	nl	nl	2,600	295	nl	485	nl	70	300	nl	nl	nl	nl	
_	MRL	·	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.0	10	10	10	10	

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits or ALB guidelines are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be

Conditional waiver for irrigated lands, order #R4-2005-0080 Method Detection Limits Water Quality Benchmarks Estimated concentration. Field Duplicate RPD >25%. not listed

CWIL MRL WQB

not detected

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 1 ORGANOPHOSPHORUS PESTICIDES NURSERY GROWERS ASSOCIATION

LOS ANGELES IRRIGATED LANDS GROUP

													Orga	nophosphorus I	Pesticides											•	Sample
Site	Sample #	Date	Azinphos methyl	Bolstar	Chlorpyrifos	Coumaphos	Demeton-o	Demeton-s	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethoprop	Ethyl parathion	Fensulfothion	Fenthion	Malathion	Merphos	Methyl Parathion	Mevinphos	Naled	Phorate	Ronnel	Stirophos	Tokuthion	Trichloronate	
NGA #4	LAILG-NGA4-5	3/21/11	nd	nd	11000 ^{E1}	nd	nd ^{Q-02}	nd ^{Q-02}	1000 ^{E1}	nd	nd ^{MS-05}	nd ^{Q-02}	nd	nd	nd	nd	7300 ^{E1}	nd	nd	nd	nd	nd	nd	nd	nd	nd	S4
NGA #124	LAILG-NGA124-6	3/21/11	nd	nd	10	nd	nd ^{Q-02}	nd ^{Q-02}	nd	nd	nd ^{MS-05}	nd ^{Q-02}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
NGA # 150	LAILG-NGA 150-5	3/21/11	nd	nd	33	nd	nd ^{Q-02}	nd ^{Q-02}	nd	nd	nd ^{MS-05}	nd ^{Q-02}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
NGA #19	LAILG-NGA19-6	3/23/11	nd ^{MS-05,BS-L}	nd ^{MS-05}	25	nd	nd	nd	nd	nd	nd ^{MS-05}	nd ^{BS-03}	nd	nd	nd ^{MS-05}	nd ^{BS-03}	nd	nd ^{Q-08}	nd	nd	nd ^{MS-05}	nd	nd	nd	nd	nd	
Duplicate	LAILG-NGA-DUP	3/21/11	nd	nd	11	nd	nd ^{Q-02}	nd ^{Q-02}	nd	nd	nd ^{MS-05}	nd ^{Q-02}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
Equip Blank	LAILG-NGA-EB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	j
Field Blank	LAILG-NGA- FB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
NGA #168	LAILG-NGA168-6	3/17/12	nd ^{BS-03}	nd	nd	nd ^{Q-08,A-01}	nd	nd	nd	nd	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd ^{Q-08}	nd	nd	nd	nd	nd	
NGA #31	LAILG-NGA31-4	3/17/12	nd ^{BS-03}	nd	nd	nd ^{Q-08,A-01}	nd	nd	nd	nd	nd	nd	nd	nd^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd ^{Q-08}	nd	nd	nd	nd	nd	
NGA #162	LAILG-NGA162-1	3/17/12	nd ^{BS-03}	nd	nd	nd ^{Q-08,A-01}	nd	nd	nd	nd	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd ^{Q-08}	nd	nd	nd	nd	nd	
NGA #64	LAILG-NGA64-3	3/17/12	nd ^{BS-03}	nd	nd	nd	nd	nd	nd	nd	nd ^{MS-05}	nd	nd	nd	nd ^{MS-05}	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BS-03}	nd	nd	
Duplicate	LAILG-NGA-DUP	3/17/12	nd ^{BS-03}	nd	nd	nd ^{Q-08,A-01}	nd	nd	nd	nd	nd	nd	nd	nd^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd ^{Q-08}	nd	nd	nd	nd	nd	1
Equip Blank	LAILG-NGA-EB	3/17/12	nd ^{BS-03}	nd	nd	nd ^{Q-08,A-01}	nd	nd	nd	nd	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd ^{Q-08}	nd	nd	nd	nd	nd	
Field Blank	LAILG-NGA- FB	3/17/12	nd ^{BS-03}	nd	nd	nd ^{Q-08,A-01}	nd	nd	nd	nd	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd ^{Q-08}	nd	nd	nd	nd	nd	
NGA #4	LAILG-NGA4-6	3/25/12	nd ^{BS-03}	nd	44,000	nd ^{BS-03}	nd ^{BS-03}	nd ^{BS-03}	nd ^{Q-12}	nd	nd ^{MS-05}	nd	nd	nd	nd ^{Q-08,BS-03}	nd	2,100 ^{Q-08,A-01a}	nd ^{Q-08}	nd ^{BS-03}	nd	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd	nd	
NGA #170	LAILG-NGA170-1	3/25/12	nd ^{MS-05,BS-L}	nd	nd	nd ^{BS-03}	nd	nd	nd	nd	nd ^{MS-05}	nd	nd	nd ^{MS-05}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd ^{MS-05}	nd	nd ^{Q-08,A-01}	nd	nd	14 ^{BS-03}	nd	nd	
NGA #176	LAILG-NGA176-2	3/25/12	nd ^{MS-05,BS-L}	nd	nd	nd ^{BS-03}	nd	nd	nd	nd	nd ^{MS-05}	nd	nd	nd ^{MS-05}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd ^{MS-05}	nd	$nd^{Q\text{-}08,A\text{-}01}$	nd	nd	nd ^{BS-03}	nd	nd	
NGA #210	LAILG-NGA210-2	3/25/12	nd ^{MS-05,BS-L}	nd	nd	nd ^{BS-03}	nd	nd	nd	nd	nd ^{MS-05}	nd	nd	nd ^{MS-05}	nd ^{Q-08}	nd	41	nd ^{Q-08}	nd ^{MS-05}	nd	$nd^{Q\text{-}08,A\text{-}01}$	nd	nd	nd ^{BS-03}	nd	nd	
Duplicate	LAILG-NGA-DUP	3/25/12	nd ^{BS-03}	nd	42,000	nd ^{BS-03}	nd ^{BS-03}	nd ^{BS-03}	nd ^{Q-12}	nd	nd ^{MS-05}	nd	nd	nd	nd ^{Q-08,BS-03}	nd	2,000 ^{Q-08,A-01a}	nd ^{Q-08}	nd ^{BS-03}	nd	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd	nd	<u> </u>
Equip Blank	LAILG-NGA-EB	3/25/12	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd ^{BS-03}	nd ^{BS-03}	nd ^{Q-12}	nd	nd ^{MS-05}	nd	nd	nd	nd ^{Q-08,BS-03}	nd	nd ^{Q-08,A-01a}	nd ^{Q-08}	nd ^{BS-03}	nd	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd	nd	j
Field Blank	LAILG-NGA- FB	3/25/12	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd ^{BS-03}	nd ^{BS-03}	nd ^{Q-12}	nd	nd ^{MS-05}	nd	nd	nd	nd ^{Q-08,BS-03}	nd	nd ^{Q-08,A-01a}	nd ^{Q-08}	nd ^{BS-03}	nd	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd	nd	1
	CWIL Limits	-	nl	nl	25	nl	nl	nl	100	nl	nl ⁽¹⁾	nl ⁽¹⁾	nl ⁽¹⁾	nl	nl	nl	nl ⁽¹⁾	nl	nl ⁽¹⁾	nl	nl	nl ⁽¹⁾	nl	nl	nl	nl	
	MDL	<u> </u>	5.5	4.6	6.9	5.1	10	10	5.2	2.9	6.2	10	6.7	5.4	2.9	3.8	7.6	5.8	6.3	4.2	7.6	3.0	4.1	3.1	7.8	6.7	
	RL		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits or ALB guidelines are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be

 $Although \ no \ discharge \ limits \ were \ set \ in \ the \ CWIL, \ the \ US \ EPA \ has \ set \ an \ aquatic \ life \ benchmark \ for \ this \ constituent. \ See \ Table \ 7$

not detected

Con	entrations are reported in nanograms per inter (ng/L). Results above CWIL Limits of ALB guidelines are presented in BOLD. Footnotes in BOLD in	cate estimated concentration. An other footnotes are for reference purposes; data was not deemed to be	
		E1 The concentration indicated for this analyte is an estimated value above the calibration range.	
CW	L Conditional waiver for irrigated lands, order #R4-2005-0080	S4 The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect	
MD	Method Detection Limits	Q-08 High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit	
RL	Reporting Limits	A-01 High bias in MS and MSD. However, Il-ccv has an acceptable recovery. The batch was accepted since all samples were ND for this ar	nalyte
TTP.	m fr . Tr mr mm and and		

Reporting Limits Estimated concentration. Field Duplicate RPD >25%. A-01a

not listed

High bias in MS and MSD.However, II-cev has an acceptable recovery. The batch was accepted since all samples were ND for this analyte

Low recovery in BS and high recoveries in both MS/MSD.However, LL-cev has an acceptable recovery. The batch was accepted since samples were either ND or yielded very high results.

The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.

Low recovery of this analyte in the QC sample. The analysis of the low level standard produced acceptable recovery indicating that the sample result might be accurately reported as non-detect.

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. The recovery of this analyte in the BS/LCS was below the control limit. Sample result is suspect

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 Q-12 Q-02

BS-L BS-03

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080 ORGANOPHOSPHORUS PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

											Orga	nophosphorus l	Pesticides								
Site	Sample #	Date	Bolstar	Chlorpyrifos	Demeton	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethoprop	Fenchlorphos	Fensulfothion	Fenthion	Malathion	Merphos	Methyl Parathion	Mevinphos	Phorate	Tetrachlorvin phos	Tokuthion	Trichloronate
NGA #110	LAILG-NGA110-1	1/4/08	nd	88.5	nd	534.8	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #189	LAILG-NGA189-1	1/4/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #19	LAILG-NGA19-3	1/5/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #124	LAILG-NGA124-3	1/5/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183	LAILG-NGA183-4	1/5/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #4	LAILG-NGA4-2	1/23/08	nd	153.8	nd	2,212.1	nd	nd	nd	nd	nd	nd	nd	15,453.2	nd	nd	nd	nd	nd	nd	nd
NGA #53	LAILG-NGA53-2	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #64	LAILG-NGA64-1	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #130	LAILG-NGA130-3	1/24/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #182	LAILG-NGA182-2	1/24/08	nd	nd	nd	nd	nd	13.3	nd	nd	nd	nd	nd	19.9	nd	nd	nd	nd	nd	nd	nd
NGA #168	LAILG-NGA168-4	1/25/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 19	LAILG-NGA19-4	8/12/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 4	LAILG-NGA 4-3	8/13/08	$\mathrm{nd}^{\mathrm{M4}}$	nd ^{M4}	$\mathrm{nd}^{\mathrm{M4}}$	6,058.9 ^{Q1,Q2,F1}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	1,148,630 ^{Q1}	nd ^{M4}	nd ^{M4}	$\mathrm{nd}^{\mathrm{M4}}$	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}
Duplicate	LAILG-NGA-DUP	8/13/08	nd	nd	nd	13586.8 ^{FD}	nd	nd	nd	nd	nd	nd	nd	1,117,145	nd	nd	nd	nd	nd	nd	nd
NGA # 31	LAILG-NGA 31-1	9/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	9/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 19	LAILG-NGA 19-5	11/26/08	nd	130.1	nd	32.6	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 210	LAILG-NGA 210-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	56.4	nd	nd	nd	nd	nd	nd	nd
NGA # 184	LAILG-NGA 184-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
Duplicate	LAILG-NGA-DUP	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 124	LAILG-NGA 124-4	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 31	LAILG-NGA 31-2	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 130	LAILG-NGA 130-4	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 150	LAILG-NGA 150-3	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 25	LAILG-NGA 25-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 150	LAILG-NGA 150-4	12/15/08	nd	90.2	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 124	LAILG-NGA 124-5	12/15/08	nd	21	nd	98.5	nd	nd	nd	nd	nd	nd	nd	85.3	nd	nd	nd	nd	nd	nd	nd
NGA # 189	LAILG-NGA 189-2	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	26.9	nd	nd	nd	nd	nd	nd	nd
NGA # 110	LAILG-NGA 110-2	12/15/08	nd	nd	nd	79.8	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 31	LAILG-NGA 31-3	12/15/08	nd	44.5	nd	nd	nd	nd	nd	nd	nd	nd	nd	3,433.9	nd	nd	nd	nd	nd	nd	nd
NGA # 184	LAILG-NGA 184-2	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 130	LAILG-NGA 130-5	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	85.2	nd	nd	nd	nd	nd	nd	nd
NGA # 178	LAILG-NGA 178-1	12/15/08	nd	nd	nd	nd	nd	nd	nd ^{M4}	nd	nd	nd ^{M4}	nd	nd	nd	nd	nd	nd	nd ^{M4}	nd	nd
Duplicate	LAILG-NGA-DUP	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 64	LAILG-NGA 64-2	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 168	LAILG-NGA 168-5	12/15/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	38.9	nd	nd	nd	nd	nd	nd	nd
NGA # 4	LAILG-NGA 4-4	12/15/08	nd	590.9	nd	859	nd	nd	nd	nd	nd	nd	nd	102,357.2	nd	nd	nd	nd	nd	nd	nd
	CWIL Limits		nl	25	nl	100	nl	nl ⁽¹⁾	nl ⁽¹⁾	nl ⁽¹⁾	nl	nl	nl	nl ⁽¹⁾	nl	nl ⁽¹⁾	nl	nl ⁽¹⁾	nl	nl	nl
	MDL		2	1	1	2	3	3	1	1	2	1	2	3	1	1	8	6	2	3	1
	RL		4	2	2	4	6	6	2	2	4	2	4	6	2	2	16	12	4	6	2

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits or ALB guidelines are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be

CWIL MDL Conditional waiver for irrigated lands, order #R4-2005-0080 Method Detection Limits M4 Spike or surrogate compound recovery was out of control due to matrix interference. The associated method blank spike or Q1 Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration. surrogate compound was in control and therefore the sample data was reported without further clarification.

The sample RPD was out of control. Sample is heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices.

RL FD nl nd (1) Reporting Limits
Estimated concentration. Field Duplicate RPD >25%.

Inclinated Contentiation. Field Dispirate KFD 22376. not listed not detected not detected Although no discharge limits were set in the CWIL, the US EPA has set an aquatic life benchmark for this constituent. See Table 7

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080 ORGANOPHOSPHORUS PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

											Org	anophosphorus I	Pesticides								
Site	Sample #	Date	Bolstar	Chlorpyrifos	Demeton	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethoprop	Fenchlorphos	Fensulfothion	Fenthion	Malathion	Merphos	Methyl Parathion	Mevinphos	Phorate	Tetrachlorvin phos	Tokuthion	Trichloronate
NGA #130	NGA-#130-LAILG-1	8/6/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183	NGA-#183-LAILG-1	8/6/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #19	NGA-#19-LAILG-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #124	NGA-#124-LAILG-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	NGA-#168-LAILG-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA BLANK	IGA LAILG-BLANK-	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA FBLI	NGA-LAILG-FBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA EQBLI	NGA-LAILG-EQBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #150	NGA-#150-LAILG	9/25/07	nd	nd	nd	nd	nd	nd	nd^{D}	nd	nd	nd	nd	nd^D	nd	nd	nd	nd^{D}	nd	nd	nd
NGA #183	ILG-#183	9/26/07	nd	nd	nd	nd	nd	nd	nd^{D}	nd	nd	nd	nd	nd^D	nd	nd	nd	nd^{D}	nd	nd	nd
IGA #183-DUI	ILGNGA-#Dup	9/26/07	nd	nd	nd	nd	nd	nd	nd^{D}	nd	nd	nd	nd	nd^{D}	nd	nd	nd	nd^{D}	nd	nd	nd
NGA #EQUIP	ILGNGA-#Equip	9/26/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #FIELD	ILGNGA-#FIELD-2	9/28/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168-2	ILGNGA-#168-2	9/28/07	nd	nd	nd	nd	nd	nd	nd^{D}	nd	nd	nd	nd	nd^{D}	nd	nd	nd	nd^{D}	nd	nd	nd
NGA #168	NGA-#168-LAILG-3	11/30/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	8.9	nd	nd	nd	nd	nd	nd	nd
NGA #182	NGA #182-LAILG-1	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
IGA #182-DUI	NGA-Duplicate	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #4	NGA #4-LAILG-1	12/7/07	nd	1,122.6	nd	175.2	11.3	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #130	NGA #130-LAILG-2	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #150	NGA #150-LAILG-2	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #124	NGA-#124-LAILG-2	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #EQUIP	NGA-equip blank	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #FIELD	Field Blank-2	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #176	NGA-#176-LAILG-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183	LAILG-NGA#183-3	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #19	LAILG-NGA#19-2	12/18/07	nd	nd	nd	15	nd	nd	nd	nd	nd	nd	nd	2,291.3	nd	nd	nd	nd	nd	nd	nd
NGA #13	LAILG-NGA#13-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #53	LAILG-NGA#53-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
	CWIL Limits		nl	25	nl	100	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl
	MDL		2	1	1	2	3	3	1	1	2	1	2	3	1	1	8	6	2	3	1
	RL		4	2	2	4	6	6	2	2	4	2	4	6	2	2	16	12	4	6	2

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estim

CWIL D Conditional waiver for irrigated lands, order #R4-2005-0080 Procedural blank Matrix Spike Duplicate RPD out of limits not listed

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 4 PYRETHROID PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

									Pyrethroid	Pesticides							
Site	Sample #	Date	Allethrin	Bifenthrin	Cyfluthrin	Cypermethrin	Deltamethrin /Tralomethrin	Dichloran	Fenpopathrin (Danitol)	Fenvalerate /Esfenvalerate	L-Cyhalothrin	Pendimethalin	Permethrin	Prallethrin	Sumithrin	Telfluthrin	Sample Notes
NGA #150	LAILG-NGA-150-6	12/2/14	<2.0	4000	<2.0	<2.0	<2.0	<2.0	370	<2.0	<2.0	<2.0	1000	<2.0	<10	<2.0	
NGA #188	LAILG-NGA-188-1	12/2/14	<2.0	51	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	30	<2.0	<2.0	<10	<2.0	
Duplicate	LAILG-NGA-DUP	12/2/14	<2.0	41	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	30	<2.0	<2.0	<10	<2.0	
NGA #168	LAILG-NGA-168-7	5/15/15	<2.0	22	<2.0	<2.0	<2.0	2.3	<2.0	<2.0	<2.0	460	< 5.0	<2.0	<10	<2.0	
Equip Blank	LAILG-NGA-EB	12/2/14	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	<2.0	<10	<2.0	
Field Blank	LAILG-NGA- FB	12/2/14	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<10	<2.0	
	WQB		1,050	800	12.5	210	55	nl	265	25	3.5	140,000	10.6	3,100	2,200	35	
	MRL		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	5.0	2.0	10	2.0	

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated.

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080 M-04 Visual evaluation of the sample indicates the RPD or QC spike is above the control limit due to a non-homogeneous sample matrix
WQB Water Quality Benchmark
not listed 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.

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 3 PYRETHROID PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

									Pyrethroid	Pesticides							
Site	Sample #	Date	Allethrin	Bifenthrin	Cyfluthrin	Cypermethrin	Deltamethrin /Tralomethrin	Dichloran	Fenpopathrin (Danitol)	Fenvalerate /Esfenvalerate	L-Cyhalothrin	Pendimethalin	Permethrin	Prallethrin	Sumithrin	Telfluthrin	Sample Notes
NGA #19	LAILG-NGA19-7	2/28/14	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	28	<2.0	<2.0	<2.0	<5.0	<2.0	<10	<2.0	
NGA #26	LAILG-NGA26-1	2/28/14	<2.0	9.4	20	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	<2.0	<10	<2.0	į į
NGA #124	LAILG-NGA124-7	2/28/14	<10	3,700	<10	<10	<10	<10	170	<10	<10	<10	46	<10	<50	<10	M-04, S-GC
NGA #178	LAILG-NGA178-2	2/28/14	<20	40	<20	<20	<20	<20	<20	<20	<20	<20	< 50	<20	<100	<20	M-04, S-GC
NGA #184	LAILG-NGA184-3	2/28/14	<2.0	2.5	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	<2.0	<10	<2.0	
Duplicate	LAILG-NGA-DUP	2/28/14	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	32	<2.0	<2.0	<2.0	< 5.0	<2.0	<10	<2.0	
Equip Blank	LAILG-NGA-EB	2/28/14	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	<2.0	<10	<2.0	S-GC
Field Blank	LAILG-NGA- FB	2/28/14	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	< 5.0	<2.0	<10	<2.0	S-GC
	WQB		1,050	800	12.5	210	55	nl	265	25	3.5	140,000	10.6	3,100	2,200	35	
	MRL		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	5.0	2.0	10	2.0	

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated.

CWIL	Conditional waiver for irrigated lands, order #R4-2005-0080	M-04	Visual evaluation of the sample indicates the RPD or QC spike is above the control limit due to a non-homogeneous sample matrix
WQB	Water Quality Benchmark	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.

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

									Pyrethroid I	Pesticides							Sample
Site	Sample #	Date	Allethrin	Bifenthrin	Cyfluthrin	Cypermethrin	Deltamethrin	Dichloran	Esfenvalerate	Fenvalerate	L-Cyhalothrin	Pendimethalin	Permethrin	Prallethrin	Sumithrin	Telfluthrin	Notes
NGA #4	LAILG-NGA4-5	3/21/11	nd	22	nd	nd	nd	nd	nd	nd	nd	3.3	1600 ^{E1}	nd	nd	nd	S4
NGA #124	LAILG-NGA124-6	3/21/11	nd	88	nd	78 ^{FD}	nd	nd	nd	nd	nd	3.8	nd	nd	nd	nd	
NGA # 150	LAILG-NGA 150-5	3/21/11	nd	480 ^{E1}	nd	nd	nd	nd	nd	nd	nd	nd	48	nd	nd	nd	
NGA #19	LAILG-NGA19-6	3/23/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	29	nd	nd	nd	nd	
Duplicate	LAILG-NGA-DUP	3/21/11	nd	74	nd	57	nd	nd	nd	nd	nd	3.7	nd	nd	nd	nd	
Equip Blank	LAILG-NGA-EB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
Field Blank	LAILG-NGA- FB	3/21/11	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
NGA #168	LAILG-NGA168-6	3/17/12	nd	54	nd	nd	nd	nd ^{BS-03}	nd	nd	nd	18	nd	nd	nd	nd	S4
NGA #31	LAILG-NGA31-4	3/17/12	nd	2.9	nd	nd	nd	nd ^{BS-03}	nd	nd	nd	33	nd	nd	nd	nd	S4
NGA #162	LAILG-NGA162-1	3/17/12	nd	11	nd	nd	230	nd ^{BS-03}	nd	nd	nd	23	nd	nd	nd	nd	S4
NGA #64	LAILG-NGA64-3	3/17/12	nd	nd	nd	nd	nd	nd ^{BS-03}	nd	nd	nd	22	nd	nd	nd	nd	S4
Duplicate	LAILG-NGA-DUP	3/17/12	nd	nd	nd	nd	nd	nd ^{BS-03}	nd	nd	nd	20	nd	nd	nd	nd	S4
Equip Blank	LAILG-NGA-EB	3/17/12	nd	nd	nd	nd	nd	nd ^{BS-03}	nd	nd	nd	nd	nd	nd	nd	nd	
Field Blank	LAILG-NGA- FB	3/17/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	S4
NGA #4	LAILG-NGA4-6	3/25/12	nd ^{BS-03}	9.7	nd	nd	nd	nd	nd	nd	nd	nd ^{FD,BS-03}	100 ^{FD}	nd	nd	nd ^{BS-03}	S4
NGA #170	LAILG-NGA170-1	3/25/12	nd ^{BS-03}	5.8	nd	nd	nd	nd	nd	nd	nd	11 ^{BS-03}	nd ^{BS-03}	nd	nd	nd ^{BS-03}	S4
NGA #176	LAILG-NGA176-2	3/25/12	nd ^{BS-03}	270	nd	nd	nd	nd	nd	nd	nd	35 ^{BS-03}	nd ^{BS-03}	nd	nd	nd ^{BS-03}	S4
NGA #210	LAILG-NGA210-2	3/25/12	nd ^{BS-03}	nd	nd	nd	nd	80	nd	nd	nd	2.7 ^{BS-03}	nd ^{BS-03}	nd	nd	nd ^{BS-03}	S4
Duplicate	LAILG-NGA-DUP	3/25/12	nd ^{BS-03}	12	nd	nd	nd	nd	nd	nd	nd	47 ^{BS-03}	130 ^{BS-03}	nd	nd	nd ^{BS-03}	S4
Equip Blank	LAILG-NGA-EB	3/25/12	nd ^{BS-03}	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BS-03}	nd ^{BS-03}	nd	nd	nd ^{BS-03}	S4
Field Blank	LAILG-NGA- FB	3/25/12	nd ^{BS-03}	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BS-03}	nd ^{BS-03}	40	nd	nd ^{BS-03}	S4
	CWIL Limits		nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl (1)	nl	nl	nl	
	MDL		0.85	0.79	0.83	0.66	1.9	0.80	0.98	0.98	1.2	0.50	5.0	0.92	2.4	0.93	
	RL		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	5.0	2.0	10	2.0	

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated.

CWIL	Conditional waiver for irrigated lands, order #R4-2005-0080	E1	The concentration indicated for this analyte is an estimated value above the calibration range.
FD	Estimated concentration. Field Duplicate RPD >25%.	S4	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect
nl	not listed	Q-12	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on the percent recoveries and/or other acceptable QC data.
nd	not detected		
(1)	Although no discharge limits were set in the CWIL, the US EPA has set an aquatic life benchmark	BS-L	The recovery of this analyte in the BS/LCS was below the control limit. Sample result is suspect.
	for this constituent. See Table 8.	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.
		A-01a	Low recovery in BS and high recoveries in both MS/MSD. However, LL-ccy has an accentable recovery. The batch was accepted since samples were either ND or yielded very high results.

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080 PYRETHROID PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

								P	yrethroid Pesticio	des					
Site	Sample #	Date	Allethrin	Bifenthrin	Cyfluthrin	Cypermethrin	Danitol	Deltamethrin	Esfenvalerate	Fenvalerate	Fluvalinate	L-Cyhalothrin	Permethrin	Prallethrin	Resmethrin
NGA #110	LAILG-NGA110-1	1/4/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #189	LAILG-NGA189-1	1/4/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #19	LAILG-NGA19-3	1/5/08	nd	nd	nd	nd	6.8	nd	nd	nd	nd	nd	nd	nd	nd
NGA #124	LAILG-NGA124-3	1/5/08	nd	581.5	38	nd	1,207.20	66.4	nd	nd	5.5	nd	nd	nd	nd
NGA #183	LAILG-NGA183-4	1/5/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #4	LAILG-NGA4-2	1/23/08	nd	nd	15.8	nd	1,178.40	157.1	nd	nd	13.6	24.5	nd	nd	nd
NGA #53	LAILG-NGA53-2	1/23/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #64	LAILG-NGA64-1	1/23/08	nd	30.2	15.1	nd	2.1	nd	nd	nd	nd	nd	nd	nd	nd
NGA #130	LAILG-NGA130-3	1/24/08	nd	143.4	4.2	nd	33.2	nd	nd	nd	3.8	nd	nd	nd	nd
NGA #182	LAILG-NGA182-2	1/24/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	LAILG-NGA168-4	1/25/08	nd	187.9	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA # 19	LAILG-NGA19-4	8/12/08	nd	nd	nd	nd	82	nd	nd	nd	9.8	nd	nd	nd	nd
NGA # 4	LAILG-NGA 4-3	8/13/08	nd ^{M4}	43.8 ^{M4,Q2,FD}	nd ^{FD}	nd ^{M4}	23,704.6 ^{Q1,Q2,FD}	147.3 ^{M4,Q2,FD}	nd ^{M4}	nd	2,488.1 Q1,FD	10.6 ^{Q2,FD}	359.3 ^{Q1,Q2,FD}	nd^{M4}	nd ^{M4}
Duplicate	LAILG-NGA-DUP	8/13/08	nd	306.5 ^{FD}	4.9 ^{FD}	nd	77368.5 ^{FD}	306.9 ^{FD}	nd	nd	1519.6 ^{FD}	37.5 ^{FD}	1,376.0 ^{FD}	nd	nd
NGA # 31	LAILG-NGA 31-1	9/23/08	nd	nd	4.3	nd	71.9	nd	nd	nd	nd	2.4 ^{EB}	nd	nd	nd
Duplicate	LAILG-NGA-DUP	9/23/08	nd	nd	4.9	nd	63.6	nd	nd	nd	nd	2.6 ^{EB}	nd	nd	nd
NGA # 19	LAILG-NGA 19-5	11/26/08	nd ^{M4}	34.9 ^{M4}	34.4 ^{M4}	nd ^{M4}	1,813.4 ^{M4}	nd ^{M4}	3.3 ^{M4,Q3}	3.3 ^{J,M4,Q3,EB}	274.4 ^{M4}	10.2 ^{M4,FB}	62.3 ^{M4,Q3}	nd	nd ^{M4}
NGA # 210	LAILG-NGA 210-1	11/26/08	nd	134.5	15.6	23.3	92.9	nd	1.8 ^J	4.1 ^{EB}	nd	7.6 ^{FB}	nd	nd	nd
NGA # 184	LAILG-NGA 184-1	11/26/08	nd	nd	nd	nd	nd	nd	nd	nd	nd	3.1 ^{FB}	nd	nd	nd
Duplicate	LAILG-NGA-DUP	11/26/08	nd	nd	nd	nd	nd	nd	2.0	0.9 ^{EB}	nd	6.0 ^{FB}	nd	nd	nd
NGA # 124	LAILG-NGA 124-4	11/26/08	nd	4,420.1	650.2	nd	121.6	26.6	0.9^{J}	1.0 ^{J,EB}	2,309.8	5.9 ^{FB}	nd	nd	nd
NGA # 31	LAILG-NGA 31-2	11/26/08	nd	33.9	23.6	nd	382.1	nd	nd	4.3 ^{EB}	nd	16.3 ^{FB}	nd	nd	nd
NGA # 130	LAILG-NGA 130-4	11/26/08	nd	407.5	nd	nd	180.5	nd	nd	1.5 ^{J,EB}	70.0	2.1 ^{FB}	1,096.2	nd	nd
NGA # 150	LAILG-NGA 150-3	11/26/08	nd	8,031.3	nd	nd	nd	nd	3.2	6.4	2,238.7	10.9 ^{FB}	780.0	nd	nd
NGA # 25	LAILG-NGA 25-1	11/26/08	nd	nd	30.1	12.3	0.7 ^{J,EB}	nd	nd	nd	nd	89.6 ^{FB}	nd	nd	nd
NGA # 150	LAILG-NGA 150-4	12/15/08	nd	82,902.4	66.3	51.9	34.1	nd	8.4	9.3	6,642.4	nd	2,116.6	nd	nd
NGA # 124	LAILG-NGA 124-5	12/15/08	nd	17,280.2	220.1	nd	346.4	95.7	0.5 ^J	1.4 ^{J,EB}	1,234.8	3.9 ^{EB,FB}	98.3	nd	nd
NGA # 189	LAILG-NGA 189-2	12/15/08	nd	nd	nd	nd	0.7 ^J	nd	nd	1.0 ^{J,EB}	4.4 ^{EB,FB}	nd	nd	nd	nd
NGA # 110	LAILG-NGA 110-2	12/15/08	nd	55.2	nd	nd	nd	nd	nd	0.5 ^{J,EB}	11.5 ^{EB,FB}	nd	nd	nd	nd
NGA # 31	LAILG-NGA 31-3	12/15/08	nd	nd	nd	nd	48.5	nd	nd	0.9 ^{J,EB}	nd	3.2 ^{EB,FB}	nd	nd	nd
NGA # 184	LAILG-NGA 184-2	12/15/08	nd	26.2	nd	nd	nd	nd	0.5 ^J	2.0 ^{EB}	nd	2.0 ^{EB,FB}	nd	nd	nd
NGA # 130	LAILG-NGA 130-5	12/15/08	nd	101.8	nd	nd	35.6	nd	nd	nd	28.8	nd	210.7	nd	nd
NGA # 178	LAILG-NGA 178-1	12/15/08	nd	nd ^{Q3}	nd	nd	1.4 ^J	nd ^{Q3}	0.8 ^J	1.0 ^{J,EB}	nd ^{Q3}	1.7 ^{J,EB,FB}	nd	nd ^{M4}	nd ^{M4}
Duplicate	LAILG-NGA-DUP	12/15/08	nd	nd	nd	nd	1.1 ^J	nd	0.6 ^J	1 J,EB	3.0 ^{EB,FB}	nd	nd	nd	nd
NGA # 64	LAILG-NGA 64-2	12/15/08	nd	81.3	nd	nd	26.9	nd	1.8 ^J	nd	nd	nd	nd	nd	nd
NGA # 168	LAILG-NGA 168-5	12/15/08	nd	1,333.2	31.9	nd	0.8^{J}	nd	nd	nd	9.3 ^{EB,FB}	0.7 ^{J,EB,FB}	nd	nd	nd
NGA # 4	LAILG-NGA 4-4	12/15/08	nd	311.5	133.6	133.6	93,137.5	452.3	3.6	nd	1,547	44.5	824.4	nd	nd
	CWIL Limits		nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl (1)	nl	nl
	MDL		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5	0.5	5
	RL		2	2	2	2	2	2	2	2	2.0	2	25	2	25

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estimated.

Spike or surrogate compound recovery was out of control due to matrix interference. The associated method blank spike or surrogate compound was in control and therefore the sample data CWIL Conditional waiver for irrigated lands, order #R4-2005-0080 was reported without further clarification. Estimated concentration, constituent detected at greater than 10% in equipment blank Estimated concentration. Field Duplicate RPD >25%. Q1 Q2 Q3 Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration.

The sample RPD was out of control. Sample is heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices.

RPD values are not accurate and not applicable because the results for R1 and/or R2 are lower than ten times the MDL. EB FD

not listed not detected

Estimated concentration, results above MDL but below RL

(1) Although no discharge limits were set in the CWIL, the US EPA has set an aquatic life benchmark for this constituent. See Table 7.

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080 PYRETHROID PESTICIDES NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

								F	Pyrethroid Pestici	des					
Site	Sample #	Date	Allethrin	Bifenthrin	Cyfluthrin	Cypermethrin	Danitol	Deltamethrin	Esfenvalerate	Fenvalerate	Fluvalinate	L-Cyhalothrin	Permethrin	Prallethrin	Resmethrin
NGA #130	NGA-#130-LAILG-1	8/6/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183	NGA-#183-LAILG-1	8/6/07	nd	21 ^J	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #19	NGA-#19-LAILG-1	8/13/07	nd	13.7 ^J	24.2 ^J	nd	465.5	nd	nd	nd	5 ^J	nd	444.9	nd	nd
NGA #124	NGA-#124-LAILG-1	8/13/07	nd	62.2	nd	nd	74.7	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	NGA-#168-LAILG-1	8/13/07	nd	1348.2	19.8 ^J	nd	nd	nd	nd	nd	nd	11.1 ^J	nd	nd	nd
NGA BLANK	NGA LAILG-BLANK-1	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA FBLI	NGA-LAILG-FBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA EQBLI	NGA-LAILG-EQBLI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #150	NGA-#150-LAILG	9/25/07	nd	19,426.6	153.4	nd	nd	nd	nd	nd	515.2	nd	5,208.8	nd	nd
NGA #183	ILG-#183	9/26/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #183-DUP	ILGNGA-#Dup	9/26/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #EQUIP	ILGNGA-#Equip	9/26/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #FIELD	ILGNGA-#FIELD-2	9/28/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168-2	ILGNGA-#168-2	9/28/07	nd	964	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #168	NGA-#168-LAILG-3	11/30/07	nd	nd	1.4 ^J	1.6 ^J	463.1	nd	nd	nd	nd	nd	nd	nd	na
NGA #182	NGA #182-LAILG-1	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na
NGA #182-DUP	NGA-Duplicate	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na
NGA #4	NGA #4-LAILG-1	12/7/07	nd	10.7	30.6	nd	1,940.5	69	nd	nd	1.6 ^J	55.1	nd	nd	na
NGA #130	NGA #130-LAILG-2	12/7/07	nd	944.6	14.2	nd	73.5	nd	nd	nd	33.5	nd	327.3	nd	na
NGA #150	NGA #150-LAILG-2	12/7/07	nd	1,566.7	nd	nd	nd	nd	nd	nd	17.9	nd	237.8	nd	na
NGA #124	NGA-#124-LAILG-2	12/7/07	nd	3,083.4	183.8	nd	150.5	180.3	nd	nd	32.3	3.1	70.9	nd	na
NGA #EQUIP	NGA-equip blank	12/7/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #FIELD	Field Blank-2	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA #176	NGA-#176-LAILG-1	12/18/07	nd	870.5	nd	nd	3.4	nd	nd	nd	nd	nd	nd	nd	na
NGA #183	LAILG-NGA#183-3	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na
NGA #19	LAILG-NGA#19-2	12/18/07	nd	nd	11.5	nd	449.5	nd	nd	nd	6.6	nd	1,346.4	nd	na
NGA #13	LAILG-NGA#13-1	12/18/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	na
NGA #53	LAILG-NGA#53-1	12/18/07	nd	8	nd	nd	nd	nd	nd	nd	nd	nd	nd	3.5	na
	CWIL Limits		nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl
	MDL		0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
	RL		2	2	2	2	2	2	2	2	2	2	2	2	2

Concentrations are reported in nanograms per liter (ng/L). Results above CWIL Limits are presented in BOLD. Footnotes in BOLD indicate estimated concentration. All other footnotes are for reference purposes; data was not deemed to be qualified as estim

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080
na not analyzed
J Estimated concentration, results above MDL but below RL

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 4

TOXICITY RESULTS NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

			Ceriod	aphnia	Fathead N	Minnow	Selenastrum		TIE		
Site	Sample #	Date	Survival	Reproduction	Survival	Growth	Growth	Date	Result		
NGA #150	LAILG-NGA-150-6	12/2/14	100.00%	P	100.00%	N	Y		No TIE, IC50 > 50% for Selenastrum (>100%)		
NGA #188	LAILG-NGA-188-1	12/2/14	100.00%	N	100.00%	N	N				
NGA #168	LAILG-NGA-168-7	5/15/15	100.00%	N	100.00%	N	N				

N

significantly different from control group no significant diffence between control group partial toxicity. Toxicity high enough to exhibit effects, but not significant enough to initiate a successful TIE (Typically needs a TUc of greater than 2 not required

NR

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 3 TOXICITY RESULTS

NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

		_	Ceriod	aphnia	Fathead N	Minnow	Selenastrum		TIE		
Site	Sample #	Date	Survival	Reproduction	Survival	Growth	Growth	Date	Result		
NGA #19	LAILG-NGA19-7	2/28/14	100.00%	N	100.00%	N	Y		No TIE, IC50 > 50% for Selenastrum (87.03%)		
NGA #26	LAILG-NGA26-1	2/28/14	100.00%	N	100.00%	N	N				
NGA #124	LAILG-NGA124-7	2/28/14	100.00%	N	100.00%	N	Y		No TIE, IC50 > 50% for Selenastrum (>100%)		
NGA #178	LAILG-NGA178-2	2/28/14	100.00%	N	100.00%	N	Y		No TIE, IC50 > 50% for Selenastrum (97.98%)		
NGA #184	LAILG-NGA184-3	2/28/14	100.00%	N	100.00%	N	Y		No TIE, IC50 > 50% for Selenastrum (>100%)		

significantly different from control group no significant diffence between control group partial toxicity. Toxicity high enough to exhibit effects, but not significant enough to initiate a successful TIE (Typically needs a TUc of greater than 2 not required

NR

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 1 TOXICITY RESULTS

NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

		_	Ceriod	laphnia	Fathead N	Minnow	Selenastrum		TIE	
Site	Sample #	Date	Survival	Reproduction	Survival	Growth	Growth	Date	Result	
NGA #4	LAILG-NGA4-5	3/21/11	0.00%	Y	15.00%	Y	Y	3/27/12	Non-polar organics and organophosphates	
NGA #124	LAILG-NGA124-6	3/21/11	90.00%	N	100.00%	N	N			
NGA # 150	LAILG-NGA 150-5	3/21/11	100.00%	N	100.00%	N	Y	3/27/12	Organophosphates	
NGA #19	LAILG-NGA19-6	3/23/11	100.00%	Y	0.00%	Y	Y	3/27/12	TIE was initiated, did not show an observed effect	
NGA #168	LAILG-NGA168-6	3/17/12	100.00%	N	95.00%	N	N			
NGA #31	LAILG-NGA31-4	3/17/12	70.00%	Y	90.00%	N	Y	3/24/12	Non-polar organic compounds and metals	
NGA #162	LAILG-NGA162-1	3/17/12	100.00%	N	96.67%	N	N			
NGA #64	LAILG-NGA64-3	3/17/12	90.00%	N	100.00%	N	N			

significantly different from control group
no significant diffence between control group
partial toxicity. Toxicity high enough to exhibit effects, but not significant enough to initiate a successful TIE (Typically needs a TUc of greater than 2 N P

NR

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080 TOXICITY RESULTS

NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

			Ceriod	laphnia	Fathead N	Minnow	Selenastrum		TIE
Site	Sample #	Date	Survival	Reproduction	Survival	Growth	Growth	Date	Result
NGA #110	LAILG-NGA110-1	1/4/08	90.00%	N	80.00%	N	N		
NGA #189	LAILG-NGA189-1	1/4/08	100.00%	N	91.67%	N	Y		
NGA #19	LAILG-NGA19-3	1/5/08	TI	E initiated based in	results from sample	e LAILG-NGA#	19-2	1/8/08	TIE was initiated, did not show an observed effect
NGA #124	LAILG-NGA124-3	1/5/08	TIE	initiated based in a	results from sample	NGA #124-LA	LG-2	1/8/08	TIE was initiated, did not show an observed effect
NGA #4	LAILG-NGA4-2	1/23/08	TI	E initiated based in	results from sampl	e NGA #4-LAII	.G-1	1/24/08	Non-polar organic compounds
NGA #53	LAILG-NGA53-2	1/23/08	TII	E initiated based in	results from sample	NGA #53-LAI	LG-1	1/24/08	TIE was initiated, did not show an observed effect
NGA #64	LAILG-NGA64-1	1/23/08	100.00%	Y	91.67%	N	N		
NGA #182	LAILG-NGA182-2	1/23/08	TIE	initiated based in a	results from sample	NGA #182-LA	LG-1	1/24/08	TIE was initiated, did not show an observed effect
NGA #19	LAILG-NGA 19-4	8/12/08	90.00%	N	NF	}	NR		
NGA # 4	LAILG-NGA 4-3	8/13/08	0.00%	Y	NF	₹	NR	8/26/08	Non-polar organics and particulate-bound toxicants
NGA # 31	LAILG-NGA 31-1	9/23/08	20.00%	Y	NF	\	NR		
NGA # 19	LAILG-NGA19-5	11/26/08	70.00%	Y	NF	{	NR		
NGA # 210	LAILG-NGA 210-1	11/26/08	90.00%	P	98.33%	N	N		
NGA # 184	LAILG-NGA 184-1	11/26/08	80.00%	P	100.00%	N	N		
NGA # 124	LAILG-NGA 124-4	11/26/08	0.00%	Y	NF	}	NR	12/9/08	Volatile compounds
NGA #31	LAILG-NGA 31-2	11/26/08	80.00%	N	98.33%	N	P		
NGA # 130	LAILG-NGA 130-4	11/26/08	N	IR.	NF	}	N		
NGA # 150	LAILG-NGA 150-3	11/26/08	N	IR.	NF	}	P		
NGA # 25	LAILG-NGA 25-1	11/26/08	80.00%	Y	100.00%	N	N		
NGA # 124	LAILG-NGA 124-5	12/15/08	0.00%	Y	NF	₹	NR	12/16/08	TIE was initiated, did not show an observed effect
NGA # 189	LAILG-NGA 189-2	12/15/08	N	IR.	NF	t	Y	1/15/09	Particulate Bound toxicants and OP compounds
NGA # 110	LAILG-NGA 110-2	12/15/08	90.00%	N	NR NR		NR		
NGA # 178	LAILG-NGA 178-1	12/15/08	100.00%	N	100.00% N		N	_	
NGA # 64	LAILG-NGA 64-2	12/15/08	90.00%	P	NR		NR		
NGA # 168	LAILG-NGA 168-5	12/15/08	90.00%	P	NF	2	NR		
NGA # 4	LAILG-NGA 4-4	12/15/08	0.00%	Y	NF	₹	NR	12/16/08	Metals,copper,cadmium,zink,manganese,lead,and nickle

significantly different from control group
no significant diffence between control group
partial toxicity. Toxicity high enough to exhibit effects, but not significant enough to initiate a successful TIE (Typically needs a TUc of greater than 2

SUMMARY OF HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080 TOXICITY RESULTS

NURSERY GROWERS ASSOCIATION LOS ANGELES IRRIGATED LANDS GROUP

			Ceriod	laphnia	Fathead N	Minnow	Selenastrum		TIE
Site	Sample #	Date	Survival	Reproduction	Survival	Growth	Growth	Date	Result
NGA #130	NGA-#130-LAILG-1	8/6/07	100.00%	N	93.33%	N	Y		ns
NGA #183	NGA-#183-LAILG-1	8/6/07	100.00%	N	93.33%	N	N		
NGA #19	NGA-#19-LAILG-1	8/13/07	80.00%	N	98.30%	N	N		
NGA #124	NGA-#124-LAILG-1	8/13/07	100.00%	N	98.30%	N	N		
NGA #168	NGA-#168-LAILG-1	8/13/07	0.00%	Y	98.30%	N	Y	9/28/08	100% survival
NGA #150	NGA-#150-LAILG	9/25/07	0.00%	Y	98.33%	N	Y		ns
NGA #168	NGA-#168-LAILG-3	11/30/07	100.00%	N	100.00%	N	N		
NGA #182	NGA #182-LAILG-1	12/7/07	0.00%	Y	98.33%	N	Y		ns
NGA #4	NGA #4-LAILG-1	12/7/07	0.00%	Y	40.00%	Y	Y		ns
NGA #130	NGA #130-LAILG-2	12/7/07	100.00%	N	98.33%	N	N		
NGA #150	NGA #150-LAILG-2	12/7/07	100.00%	N	98.33%	N	Y		ns
NGA #124	NGA-#124-LAILG-2	12/7/07	0.00%	Y	100.00%	N	Y		ns
NGA #176	NGA-#176-LAILG-1	12/18/07	100.00%	N	100.00%	N	N		
NGA #183	LAILG-NGA#183-3	12/18/07	100.00%	N	100.00%	N	N		
NGA #19	LAILG-NGA#19-2	12/18/07	50.00%	Y	100.00%	N	N		ns
NGA #13	LAILG-NGA#13-1	12/18/07	10.00%	Y	21.67%	Y	N		ns
NGA #53	LAILG-NGA#53-1	12/18/07	100.00%	N	81.67%	N	N		

Y Significantly different from control group N No significant diffence between control group ns not enough runoff for follow up sample

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 (°C)	рН	E.C. (uS)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
				10:40		0.01	11.0	9.81	43	na*	85
NGA #4	LAILG-NGA#4-5	3/21/11	Bucket	10:44	0.1250	0.01	11.1	9.64	25	na*	181
				10:50		0.01	11.2	9.29	25	na*	197
				8:00		9	10.4	7.89	292	na*	54.9
NGA #124	LAILG-NGA#124-6	3/21/11	Bucket	8:05	nm	11	10.5	7.82	282	na*	49.7
				8:10		13	10.5	7.87	268	na*	16.8
				10:47		4	15.4	6.70	1170	na*	34.7
NGA #150	LAILG-NGA#150-5	3/21/11	Bucket	10:49	0.0185	4	16.0	6.61	1127	na*	33.7
				10:50		5	15.9	6.59	1163	na*	38.0
				16:58		nm	13.9	8.88	1.32	na*	999
NGA #19	LAILG-NGA#19-6	3/23/11	Grab	17:00	nm	nm	14.2	8.83	1.05	na*	999
				17:02		nm	12.6	8.87	1.19	na*	999
				14:30		0.88	13.83	7.73	99.9	9.33	220
NGA #31	LAILG-NGA#31-4	3/17/12	Grab	14:34	0.6042	0.84	13.63	7.75	99.9	8.77	174
				14:38		0.94	13.44	7.95	98.6	8.51	181
				9:50		1.3	14.7	5.5	14.3	10.48	352
NGA #64	LAILG-NGA#64-3	3/17/12	Grab	9:53	0.0833	1.2	14.5	4.9	9.4	10.58	623
				9:58		1.3	14.5	5.2	4.2	10.43	179
				13:00		nm	13.37	6.94	66.2	10.67	3.3
NGA #162	LAILG-NGA#162-1	3/17/12	Grab	13:02	nm	nm	13.42	7.24	65.9	10.33	1.6
				13:05		nm	13.32	7.46	66.1	9.93	1.2
				11:15		0.71	13.78	6.1	84.5	10.68	>800
NGA #168	LAILG-NGA#168-6	3/17/12	Grab	11:18	0.0556	0.52	13.83	6.8	85.9	10.05	>800
				11:21		0.71	13.77	7.1	82.2	9.62	>800
				12:50	N. d	4- 1 4	16.21	5.63	43.7	8.52	44.9
NGA #4	LAILG-NGA#4-6	3/25/12	Pump	12:52	No flow measuremen restrictio		16.31	5.74	39.3	8.58	35.7
				12:54	restrictio	1112	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

 $ft/s \hspace{1cm} feet \hspace{0.1cm} per \hspace{0.1cm} second \hspace{1cm} mg/L \hspace{1cm} milligrams \hspace{0.1cm} per \hspace{0.1cm} liter \hspace{1cm}$

°C degrees celcius NTU Nephelometric Turbidity Units

uS microsiemens

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

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 (°C)	рН	E.C. (uS)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
				14:35		nm	13.81	6.18	25.8	10.59	512
NGA #170	LAILG-NGA#170-1	3/25/12	Grab	14:37	nm	nm	13.98	6.32	22.1	10.23	452
				14:40		nm	13.73	6.27	19.8	10.31	446
				15:15		nm	13.17	6.49	39.7	10.69	>800
NGA #176	LAILG-NGA#176-2	3/25/12	Grab	15:17	nm	nm	13.16	6.63	38.4	10.41	>800
				15:21		nm	12.73	6.44	40.2	10.69	>800
				17:45		nm	13.21	7.22	0.129	10.55	5.8
NGA #210	LAILG-NGA#210-2	3/25/12	Grab	17:47	nm	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

mg/L NTU ft/s feet per second milligrams per liter

°C degrees celcius Nephelometric Turbidity Units

microsiemens nm not monitored

SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 3 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 (°C)	рН	E.C. (uS)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
				6:11		nm	12.4	7.92	1114	9.08	815
NGA #19	LAILG-NGA19-7	2/28/14	Bucket	6:12	nm	nm	12.3	7.98	1152	9.52	820
				6:13		nm	12.4	7.87	1112	9.61	810
				9:01		nm	14.8	7.77	1081	7.84	212
NGA #26	LAILG-NGA26-1	2/28/14	Bucket	9:02	nm	nm	14.7	7.82	1057	7.95	225
				9:03		nm	14.7	7.83	1072	7.88	220
				11:22		nm	14.7	7.65	894	9.10	475
NGA #124	LAILG-NGA124-7	2/28/14	Bucket	11:23	nm	nm	14.6	7.50	910	9.01	450
				11:24		nm	14.7	7.51	915	8.80	482
				10:00		nm	15.0	7.88	928	10.15	468
NGA #178	LAILG-NGA178-2	2/28/14	Bucket	10:01	nm	nm	14.9	7.92	952	10.28	472
				10:02		nm	15.0	7.81	943	10.21	490
				7:10		nm	14.7	8.01	1213	8.11	512
NGA #184	LAILG-NGA184-3	2/28/14	Bucket	7:11	nm	nm	14.6	8.10	1219	8.23	552
				7:12		nm	14.6	7.93	1242	8.15	495

* 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

 $ft/s \hspace{1cm} feet \hspace{0.1cm} per \hspace{0.1cm} second \hspace{1cm} mg/L \hspace{1cm} milligrams \hspace{0.1cm} per \hspace{0.1cm} liter \hspace{1cm}$

°C degrees celcius NTU Nephelometric Turbidity Units

uS microsiemens

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

APPENDIX C

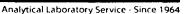
LABORATORY ANALYTICAL RESULTS AND CHAIN OF CUSTODY DOCUMENTATION

Weck Laboratories, Inc.

CHAIN OF CUSTODY RECORD

STANDARD

Charges will apply for weekends/holidays SAMPLE TYPE CODE DW = Drinking Water AQ=Aqueous NA= Non Aqueous SL = Sludge GW = Ground Water WW = Waste Water OL = Oil OT = Other Matrix SW = Solid Waste RW = Rain Water 10 - 15 Business Days Same Day Rush 150% 48-72 Hour Rush 75% Rush Extractions 50% QA/QC Data Package 24 Hour Rush 100% 4 - 5 Day Rush 30% SO = Soil SPECIAL HANDLING z za Oz) Method of Shipment: SAMPLE CONDITION: Actual Temperature: G, 6 LDD Evidence Seals Presen Container Attacked Preserved at Lab 6.336A93 9 es listot 9 bas 9-odhC Received On Ice ANALYSES REQUESTED S.SSS A93 level wol 99C 7.00S ssenbash > 8.00SA93 raggo(SPECIAL REQUIREMENTS / BILLING INFORMATION 1.03EA93 N-BinommA 0.00E AŠE - N-SÓN+EON DS-SM2540C / TSS-SM2540D 0 #OF CONT. bryn@pwenvironmental.com RECEIVED RECEIVED BY SAMPLE IDENTIFICATION/SITE LOCATION 40|LAILG1-NGA-ES KWLA11.G-NGA150-6 KN11A116-NSA188-Nursery Growers Association 805-525-5563 805-525-2896 1251 Tel 626-336-2139 ◆ Fax 626-336-2634 ◆ www.wecklabs.com Scott Jordan www.wecklabs.com SAMPLER DATE / TIME DATE / TIME PHONE: **EMAIL:** FAX: PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY 4859 East Clark Avenue: Industry: CA 91745 SMPL 54:11/11/2/21 2:00 8:8 SAMPLED HWE. OVER UNSCHEDULED RUSH REQUESTS Client agrees to Terms & Conditions at: 12/2/19 12/2/10 SAMPLED DATE Santa Paula, CA 93060 RELINGUISHED BY RELINQUISHED BY PROJECT MANAGE PW Environmental 230 Dove Court (For lab Use Only) CLIENT NAME: **Bryn Home ∄**





CERTIFICATE OF ANALYSIS

Client:

PW Environmental

230 Dove Ct.

Santa Paula CA, 93060

Report Date:

01/07/15 15:09

Received Date:

12/02/14 15:25

Turn Around:

Normal

Client Project:

Nursery Growers Association

Phone:

(805) 525-5563

Fax:

(805) 525-2896

Work Order(s):

Attention: Bryn Home

4L02094

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 12/02/14 15:25 with the Chain of Custody document. The samples were received in good condition, at 9.6 °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











PW Environmental 230 Dove Ct.

Santa Paula CA, 93060

Analytical Laboratory Service - Since 1964

Date Received:

12/02/14 15:25 01/07/15 15:09

Date Reported:

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
LAILG-NGA-EB	Scott Jordan		4L02094-01	Water	12/02/14 05:00
LAILG-NGA-150-6	Scott Jordan		4L02094-02	Water	12/02/14 08:00
LAILG-NGA-188-1	Scott Jordan		4L02094-03	Water	12/02/14 13:55
LAILG-NGA-DUP	Scott Jordan		4L02094-04	Water	12/02/14 00:00
LAILG-NGA-FB	Scott Jordan		4L02094-05	Water	12/02/14 11:45

ANALYSES

Anions by IC, EPA Method 9056

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

Analytical Laboratory Service - Since 1964

Date Received:

12/02/14 15:25

Date Reported:

01/07/15 15:09

4L02094-01

LAILG-NGA-EB

Sampled: 12/02/14 05:00 Sampled By: Scott Jordan Matrix: Water

Anions by IC, EPA Method 9056

Method: EPA 300.0	Batch: W4L0288	Prepared: 12/04/14 1	1:30			Analyst: Alice T. Lee
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	2.0	0.50	mg/l	1	12/04/14 12:19	
Sulfate as SO4	ND	0.50	mg/l	1	12/04/14 12:19	

Chiorinated Pesticides and/or PCBs

2.4*DDD 2.4*DDD 2.4*DDE ND 5.0 ng/l 1 12/12/14 17:40 2.4*DDT ND 5.0 ng/l 1 12/12/14 17:40 4.4*DDT ND 5.0 ng/l 1 12/12/14 17:40 4.4*DDD ND 5.0 ng/l 1 12/12/14 17:40 4.4*DDD ND 5.0 ng/l 1 12/12/14 17:40 4.4*DDE ND 5.0 ng/l 1 12/12/14 17:40 4.4*DDT ND 5.0 ng/l 1 12/12/14 17:40 4.4*DDT ND 5.0 ng/l 1 12/12/14 17:40 Aldrin ND 5.0 ng/l 1 12/12/14 17:40 Arodor 1016 ND 100 ng/l 1 12/12/14 17:40 Arodor 1221 ND 100 ng/l 1 12/12/14 17:40 Arodor 1232 ND 100 ng/l 1 12/12/14 17:40 Arodor 1248 ND 100 ng/l 1 12/12/14 17:40 Arodor 1246 ND 100 ng/l 1 12/12/14 17:40 Arodor 1256 ND 100 ng/l 1 12/12/14 17:40 Arodor 1268 ND 100 ng/l 1 12/12/14 17:40 Arodor 1268 ND 100 ng/l 1 12/12/14 17:40 Deta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Deta-BHC Deta-BHC Deta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Deta-BHC Deta-BHC Deta-BHC Deta-BHC Deta-BHC Deta-BHC Deta-BHC	Method: EPA 608	Batch: W4L0182	Prepared: 12/03/14 0	9:50	Analyst: Maxwell Wang		
2,4-DDE ND 5.0 ng/l 1 12/12/14 17:40 2,4-DDT ND 5.0 ng/l 1 12/12/14 17:40 4,4'-DDE ND 5.0 ng/l 1 12/12/14 17:40 4,4'-DDT ND 5.0 ng/l 1 12/12/14 17:40 Aldrin ND 5.0 ng/l 1 12/12/14 17:40 alpha-Chlordane ND 100 ng/l 1 12/12/14 17:40 Arcodor 1016 ND 100 ng/l 1 12/12/14 17:40 Arcodor 1221 ND 100 ng/l 1 12/12/14 17:40 Arcodor 1242 ND 100 ng/l 1 12/12/14 17:40 Arcodor 1248 ND 100 ng/l 1	Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4*DDT ND 5.0 ng/l 1 12/12/14 17:40 4,4*DDD ND 5.0 ng/l 1 12/12/14 17:40 4,4*DDT ND 5.0 ng/l 1 12/12/14 17:40 4,4*DDT ND 5.0 ng/l 1 12/12/14 17:40 Aldrin ND 5.0 ng/l 1 12/12/14 17:40 Aldrin ND 5.0 ng/l 1 12/12/14 17:40 Algha-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Arodor 1016 ND 100 ng/l 1 12/12/14 17:40 Arodor 1221 ND 100 ng/l 1 12/12/14 17:40 Arodor 1232 ND 100 ng/l 1 12/12/14 17:40 Arodor 1242 ND 100 ng/l 1 12/12/14 17:40 Arodor 1254 ND 100 ng/l 1 12/12/14 17:40 Arodor 1260 ND 100 ng/l 1	2,4'-DDD	ND	5.0	ng/l	1	12/12/14 17:40	
4,4'-DDD ND 5.0 ng/l 1 12/12/14 17:40 4,4'-DDE ND 5.0 ng/l 1 12/12/14 17:40 4,4'-DDT ND 5.0 ng/l 1 12/12/14 17:40 Aldrin ND 5.0 ng/l 1 12/12/14 17:40 Aldrin ND 5.0 ng/l 1 12/12/14 17:40 alpha-BHC ND 5.0 ng/l 1 12/12/14 17:40 alpha-Chlordane ND 100 ng/l 1 12/12/14 17:40 Arcolor 121 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1221 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1242 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1248 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1254 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1260 ND 100 ng/l 1 12/12/14 17:40 Beta-BHC ND 5.0 ng/l	2,4'-DDE	ND	5.0	ng/l	1	12/12/14 17:40	
4.4'-DDE ND 5.0 ng/l 1 12/12/14 17:40 4.4'-DDT ND 5.0 ng/l 1 12/12/14 17:40 Aldrin ND 5.0 ng/l 1 12/12/14 17:40 alpha-BHC ND 5.0 ng/l 1 12/12/14 17:40 alpha-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Aroclor 1016 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1221 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1232 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1242 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1243 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1254 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 5.0 ng/l 1 12/12/14 17:40 beta-BHC ND 5.0 ng/l<	2,4'-DDT	ND	5.0	ng/l	1	12/12/14 17:40	
4.4°-DDT ND 5.0 ng/l 1 12/12/14 17:40 Aldrin ND 5.0 ng/l 1 12/12/14 17:40 alpha-BHC ND 5.0 ng/l 1 12/12/14 17:40 alpha-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Arcolor 1016 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1221 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1232 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1242 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1254 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1254 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1260 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1260 ND 100 ng/l 1 12/12/14 17:40 beta-BHC ND 5.0 ng/l 1 12/12/14 17:40 clas-Banchior ND 5.0	4,4'-DDD	ND	5.0	ng/l	1	12/12/14 17:40	
Aldrin ND 5.0 ng/l 1 12/12/14 17:40 alpha-BHC ND 5.0 ng/l 1 12/12/14 17:40 alpha-BHC ND 5.0 ng/l 1 12/12/14 17:40 alpha-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 alpha-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Aroclor 1016 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1021 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1221 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1232 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1242 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1242 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1242 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1248 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1254 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 Beta-BHC ND 5.0	4,4'-DDE	ND	5.0	ng/l	1	12/12/14 17:40	
alpha-BHC ND 5.0 ng/l 1 12/12/14 17:40 alpha-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Arcolor 1016 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1221 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1232 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1242 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1248 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1254 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1260 ND 100 ng/l 1 12/12/14 17:40 beta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 Cibl-BHC ND 5.0 ng/l 1 12/12/14 17:40 Dieldrin ND 5.0 ng/l	4,4'-DDT	ND	5.0	ng/l	1	12/12/14 17:40	
alpha-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Arcolor 1016 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1221 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1232 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1242 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1248 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1254 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1260 ND 100 ng/l 1 12/12/14 17:40 Arcolor 1260 ND 5.0 ng/l 1 12/12/14 17:40 beta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 delta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan I ND 5.0	Aldrin	ND	5.0	ng/l	1	12/12/14 17:40	
Aroclor 1016 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1221 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1232 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1242 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1248 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1254 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 beta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND	alpha-BHC	ND	5.0	ng/i	1	12/12/14 17:40	
Aroclor 1221 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1232 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1242 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1248 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1254 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 Cis-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40 delta-BHC ND 5.0 ng/	alpha-Chlordane	ND	5.0	ng/i	1	12/12/14 17:40	
Aroclor 1232 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1242 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1248 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1254 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 beta-BHC ND 100 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 100 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 cis-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40 cis-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40 cis-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan I ND 5.0 <td>Arodor 1016</td> <td>ND</td> <td>100</td> <td>ng/l</td> <td>1</td> <td>12/12/14 17:40</td> <td></td>	Arodor 1016	ND	100	ng/l	1	12/12/14 17:40	
Aroclor 1242 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1248 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1254 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 beta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 100 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND <	Arodor 1221	ND	100	ng/l	1	12/12/14 17:40	
Aroclor 1248 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1254 ND 100 ng/l 1 12/12/14 17:40 Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 beta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 100 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 5.0 ng/l 1 12/12/14 17:40 delta-BHC ND 5.0 ng/l 1 12/12/14 17:40 delta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan II ND 5.0 ng/l 1 12/12/14 17:40 Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-Chlordane ND 5.0<	Arodor 1232	ND	100	ng/l	1	12/12/14 17:40	
Aroclor 1254 Aroclor 1260 ND	Arodor 1242	ND	100	ng/l	1	12/12/14 17:40	
Aroclor 1260 ND 100 ng/l 1 12/12/14 17:40 beta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 100 ng/l 1 12/12/14 17:40 cis-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40 delta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Dieldrin ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan I ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate <td>Arodor 1248</td> <td>ND</td> <td>100</td> <td>ng/l</td> <td>1</td> <td>12/12/14 17:40</td> <td></td>	Arodor 1248	ND	100	ng/l	1	12/12/14 17:40	
beta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Chlordane (tech) ND 100 ng/l 1 12/12/14 17:40 cis-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40 delta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Dieldrin ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan I ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND 5.0 ng/l 1 12/12/14 17:40 Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5	Arodor 1254	ND	100	ng/l	1	12/12/14 17:40	
Chlordane (tech) ND 100 ng/l 1 12/12/14 17:40 cis-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40 delta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Dieldrin ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan I ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND 5.0 ng/l 1 12/12/14 17:40 Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND <td< td=""><td>Arodor 1260</td><td>ND</td><td>100</td><td>ng/i</td><td>1</td><td>12/12/14 17:40</td><td></td></td<>	Arodor 1260	ND	100	ng/i	1	12/12/14 17:40	
cis-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40 delta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Dieldrin ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan I ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND 5.0 ng/l 1 12/12/14 17:40 Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 gamma-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0	beta-BHC	ND	5.0	ng/i	1	12/12/14 17:40	
delta-BHC ND 5.0 ng/l 1 12/12/14 17:40 Dieldrin ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan I ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND 5.0 ng/l 1 12/12/14 17:40 Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 gamma-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0	Chlordane (tech)	ND	100	ng/i	1	12/12/14 17:40	
Dieldrin ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan I ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan III ND 5.0 ng/l 1 12/12/14 17:40 Endosulfan sulfate ND 5.0 ng/l 1 12/12/14 17:40 Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 gamma-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 5.0 ng/l 1 12/12/14 17:40	cis-Nonachlor	ND	5.0	ng/i	1	12/12/14 17:40	
Endosulfan I Endosulfan II Endosulfan II Endosulfan II Endosulfan Sulfate ND 5.0 ng/I 1 12/12/14 17:40 Endosulfan sulfate ND 5.0 ng/I 1 12/12/14 17:40 Endrin Endrin Endrin Endrin Sulfate ND 5.0 ng/I 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/I 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/I 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/I 1 12/12/14 17:40 Heptachlor Heptachlor ND 5.0 ng/I 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/I 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/I 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/I 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/I 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/I 1 12/12/14 17:40 Mirex ND 5.0 ng/I 1 12/12/14 17:40	delta-BHC	ND	5.0	ng/i	1	12/12/14 17:40	
Endosulfan II	Dieldrin	ND	5.0	ng/i	1	12/12/14 17:40	
Endosulfan sulfate ND 5.0 ng/l 1 12/12/14 17:40 Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 gamma-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 500 ng/l 1 12/12/14 17:40	Endosulfan I	ND	5.0	ng/l	1	12/12/14 17:40	
Endrin ND 5.0 ng/l 1 12/12/14 17:40 Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 gamma-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 500 ng/l 1 12/12/14 17:40	Endosulfan II	ND	5.0	ng/l	1	12/12/14 17:40	
Endrin aldehyde ND 5.0 ng/l 1 12/12/14 17:40 gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 gamma-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 5.0 ng/l 1 12/12/14 17:40	Endosulfan sulfate	ND	5.0	ng/l	1	12/12/14 17:40	
gamma-BHC (Lindane) ND 5.0 ng/l 1 12/12/14 17:40 gamma-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 500 ng/l 1 12/12/14 17:40	Endrin	ND	5.0	ng/l	1	12/12/14 17:40	
gamma-Chlordane ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 500 ng/l 1 12/12/14 17:40	Endrin aldehyde	ND	5.0	ng/l	1	12/12/14 17:40	
Heptachlor ND 5.0 ng/l 1 12/12/14 17:40 Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 500 ng/l 1 12/12/14 17:40	gamma-BHC (Lindane)	ND	5.0	ng/i	1	12/12/14 17:40	
Heptachlor epoxide ND 5.0 ng/l 1 12/12/14 17:40 Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 500 ng/l 1 12/12/14 17:40	gamma-Chlordane	ND	5.0	ng/l	1	12/12/14 17:40	
Methoxychlor ND 5.0 ng/l 1 12/12/14 17:40 Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 500 ng/l 1 12/12/14 17:40	Heptachlor	ND	5.0	ng/l	1	12/12/14 17:40	
Mirex ND 5.0 ng/l 1 12/12/14 17:40 Toxaphene ND 500 ng/l 1 12/12/14 17:40	Heptachlor epoxide	ND	5.0	ng/i	1	12/12/14 17:40	
Toxaphene ND 500 ng/l 1 12/12/14 17:40	Methoxychlor	ND	5.0	ng/l	1	12/12/14 17:40	
	Mirex	ND	5.0	ng/i	1	12/12/14 17:40	
	Toxaphene	ND	500	ng/l	1	12/12/14 17:40	
trans-Nonachlor ND 5.0 ng/l 1 12/12/14 17:40	trans-Nonachlor	ND	5.0	ng/l	1	12/12/14 17:40	



Analytical Laboratory Service - Since 1964

PW Environmental 230 Dove Ct. Santa Paula CA, 93060 Date Received:

12/02/14 15:25

Date Reported:

01/07/15 15:09

4L02094-01

LAILG-NGA-EB

Sampled: 12/02/14 05:00

Sampled By: Scott Jordan

Matrix: Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W4L0182	atch: W4L0182 Prepared:				Analyst: Maxwell Wang		
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier	
Surr: Decachlorobiphenyl	60 %	Conc:59.9	0.1-118	%	_			
Surr: Tetrachioro-meta-xviene	68 %	Conc:68.1	12-117	%				

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1	Batch; W4L0527	Prepared: 12/09/14 1	0:49	Analyst: Rebecca Juea		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	ND	0.10	mg/l	1	12/12/14 19:17	
Method: EPA 353.2	Batch: W4L0208	Prepared: 12/03/14 1	2:54		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	ND	100	ug/l	1	12/03/14 15:24	<u> </u>
Method: EPA 365.1	Batch: W4L0241	Prepared: 12/03/14 2	2:42		Analyst: Nina Katrin	a Reyes Aranas
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	ND	0.0020	mg/l	1	12/03/14 23:38	**
o-Phosphate as P, dissolved	ND	2.0	ug/l	1	12/04/14 11:35	**
Method: EPA 365.1	Batch: W4L0658	Prepared: 12/10/14 15:54			Analyst: Marilyn B Chris	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	ND	0.010	mg/l	1	12/18/14 19:33	• • • • • • • • • • • • • • • • • • • •
Method: EPA 365.1	Batch: W4L0660	Prepared: 12/10/14 16:03			Analyst: Marilyn B Chri	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	ND	0.010	mg/l	1	12/15/14 15:24	
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 1	0:32		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	10	10	mg/l	1	12/04/14 12:15	
Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 1	1:45		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	ND	5	mg/i	1	12/03/14 20:15	·

Metals by E	EPA 200 Series Methods	•			
Batch: [CALC]	Prepared: 12/04/14 0	9:16	Analyst: Jessie Kristie		
Result	MRL	Units	Dil	Analyzed	Qualifier
1.64	0.250	mg/l	1	12/05/14 11:17	
Batch: W4L0253	Prepared: 12/04/14 09	9:16		Analy	st: Jessie Kristie
Result	MRL	Units	Dil	Analyzed	Qualifier
0.656	0.100	mg/l	1	12/05/14 11:17	
	Batch: [CALC] Result 1.64 Batch: W4L0253 Result	Batch: [CALC] Prepared: 12/04/14 0 Result MRL 1.64 0.250 Batch: W4L0253 Prepared: 12/04/14 0 Result MRL	Result MRL Units 1.64 0.250 mg/l Batch: W4L0253 Prepared: 12/04/14 09:16 Result MRL Units	Batch: [CALC] Prepared: 12/04/14 09:16 Result MRL Units Dil 1.64 0.250 mg/l 1	Batch: [CALC] Prepared: 12/04/14 09:16 Analyzed Result MRL Units Dil Analyzed 1.64 0.250 mg/l 1 12/05/14 11:17 Batch: W4L0253 Prepared: 12/04/14 09:16 Analyzed Result MRL Units Dil Analyzed

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4L02094-01

LAILG-NGA-EB

Sampled: 12/02/14 05:00

Sampled By: Scott Jordan

Matrix: Water

Metals by EPA 200 Series Methods

Method: EPA 200.8	Batch: W4L0255	Batch: W4L0255 Prepared: 12/04/14 09:25				ian Rosario Lopez
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	1.1	0.50	ug/l	1	12/08/14 15:07	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM	Batch: W4L0557	Prepare	Prepared: 12/09/14 13:26			Analyst: Chris Samatmana		
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier	
Allethrin	ND		2.0	ng/l	1	12/16/14 14:52	- /	
Bifenthrin	ND		2.0	ng/l	1	12/16/14 14:52		
Cyfluthrin	ND		2.0	ng/i	1	12/16/14 14:52		
Cypermethrin	ND		2.0	ng/l	1	12/16/14 14:52		
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	12/16/14 14:52		
Dichloran	ND		2.0	ng/l	1	12/16/14 14:52		
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	12/16/14 14:52		
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	12/16/14 14:52		
L-Cyhalothrin	ND		2.0	ng/l	1	12/16/14 14:52		
Pendimethalin	ND		2.0	ng/l	1	12/16/14 14:52		
Permethrin	ND		5.0	ng/l	1	12/16/14 14:52		
Prallethrin	ND		2.0	ng/l	1	12/16/14 14:52		
Sumithrin	ND		10	ng/i	1	12/16/14 14:52		
Tefluthrin	ND		2.0	ng/l	1	12/16/14 14:52		
Surr: Perylene-d12	115 %	Conc:288	2-205	%				
Surr: Triphenyl phosphate	138 %	Conc:344	6-222	%				

Semivolatile Organic Compounds by GC/MS

		Barno combounds by c						
Method: EPA 525.2	Batch: W4L0243	Prepared: 12/04/14 0	Prepared: 12/04/14 07:08			Analyst: Chris Samatmanakit		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier		
Azinphos methyl (Guthion)	ND	10	ng/i	1	12/05/14 11:44			
Bolstar	ND	10	ng/i	1	12/05/14 11:44			
Chlorpyrifos	ND	10	ng/l	1	12/05/14 11:44			
Coumaphos	ND	10	ng/l	1	12/05/14 11:44			
Demeton-o	ND	10	ng/l	1	12/05/14 11:44			
Demeton-s	ND	10	ng/l	1	12/05/14 11:44			
Diazinon	ND	10	ng/l	1	12/05/14 11:44			
Dichlorvos	ND	10	ng/l	1	12/05/14 11:44			
Dimethoate	ND	10	ng/l	1	12/05/14 11:44			
Disulfoton	ND	10	ng/l	1	12/05/14 11:44			
Ethoprop	ND	10	ng/l	1	12/05/14 11:44			
Ethyl parathion	ND	10	ng/l	1	12/05/14 11:44			
Fensulfothion	ND	10	ng/i	1	12/05/14 11:44			
Fenthion	ND	10	ng/l	1	12/05/14 11:44			



PW Environmental 230 Dove Ct. Santa Paula CA, 93060

Sampled: 12/02/14 05:00

Date Received:

Date Reported:

12/02/14 15:25 01/07/15 15:09

4L02094-01

Sampled By: Scott Jordan

LAILG-NGA-EB

Matrix: Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2	Batch: W4L0243	Prepare	Prepared: 12/04/14 07:08			Analyst: Chris Samatmanakit		
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier	
Malathion	ND		10	ng/l	1	12/05/14 11:44		
Merphos	ND		10	ng/l	1	12/05/14 11:44		
Methyl parathion	ND		10	ng/l	1	12/05/14 11:44		
Mevinphos	ND		10	ng/l	1	12/05/14 11:44		
Naled	ND		10	ng/l	1	12/05/14 11:44		
Phorate	, ND		10	ng/l	1	12/05/14 11:44		
Ronnel	ND		10	ng/l	1	12/05/14 11:44		
Stirophos	ND		10	ng/l	1	12/05/14 11:44		
Tokuthion (Prothiofos)	ND		10	ng/l	1	12/05/14 11:44		
Trichloronate	ND		10	ng/l	1	12/05/14 11:44		
Surr: 1,3-Dimethyl-2-nitrobenzene	91 %	Conc:456	76-128	%				
Surr: Triphenyl phosphate	115 %	Conc:573	40-163	%				



PW Environmental 230 Dove Ct. Santa Paula CA, 93060 Date Received:

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4L02094-02

LAILG-NGA-150-8

Sampled: 12/02/14 08:00

Sampled By: Scott Jordan

Matrix: Water

Qualifier

Anions by IC, EPA Method 9056

Method: EPA 300.0

Batch: W4L0288

Prepared: 12/04/14 11:30

Analyst: Alice T. Lee

Analyte
Chloride, Total
Sulfate as SO4

Result 60 130 MRL Units
2.5 mg/l
2.5 mg/l

Dil Analyzed
5 12/04/14 12:33

12/04/14 12:33 12/04/14 12:33

5

Chlorinated Pesticides and/or PCBs

Method: EPA 608

Batch: W4L0182

Prepared: 12/03/14 09:50

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	50	ng/l	10	12/12/14 18:11	M-04
2,4'-DDE	ND	50	ng/l	10	12/12/14 18:11	M-04
2,4'-DDT	ND	50	ng/l	10	12/12/14 18:11	M-04
4,4'-DDD	ND	50	ng/l	10	12/12/14 18:11	M-04
4,4'-DDE	ND	50	ng/l	10	12/12/14 18:11	M-04
4,4'-DDT	ND	50	ng/l	10	12/12/14 18:11	M-04
Aldrin	ND	50	ng/l	10	12/12/14 18:11	M-04
alpha-BHC	ND	50	ng/l	10	12/12/14 18:11	M-04
alpha-Chiordane	ND	50	ng/l	10	12/12/14 18:11	M-04
Arodor 1016	ND	1000	ng/l	10	12/12/14 18:11	M-04
Arodor 1221	ND	1000	ng/l	10	12/12/14 18:11	M-04
Arodor 1232	ND	1000	ng/l	10	12/12/14 18:11	M-04
Arodor 1242	ND	1000	ng/l	10	12/12/14 18:11	M-04
Arodor 1248	ND	1000	ng/l	10	12/12/14 18:11	M-04
Arodor 1254	ND	1000	ng/l	10	12/12/14 18:11	M-04
Arodor 1260	ND	1000	ng/l	10	12/12/14 18:11	M-04
beta-BHC	ND	50	ng/l	10	12/12/14 18:11	M-04
Chlordane (tech)	ND	1000	ng/l	10	12/12/14 18:11	M-04
cis-Nonachlor	ND	50	ng/l	10	12/12/14 18:11	M-04
delta-BHC	ND	50	ng/l	10	12/12/14 18:11	M-04
Dieldrin	ND	50	ng/l	10	12/12/14 18:11	M-04
Endosulfan I	ND	50	ng/l	10	12/12/14 18:11	M-04
Endosulfan II	ND	50	ng/l	10	12/12/14 18:11	M-04
Endosulfan sulfate	ND	50	ng/l	10	12/12/14 18:11	M-04
Endrin	ND	50	ng/l	10	12/12/14 18:11	M-04
Endrin aldehyde	ND	50	ng/l	10	12/12/14 18:11	M-04
gamma-BHC (Lindane)	ND	50	ng/l	10	12/12/14 18:11	M-04
gamma-Chlordane	ND	50	ng/l	10	12/12/14 18:11	M-04
Heptachlor	ND	50	ng/l	10	12/12/14 18:11	M-04
Heptachlor epoxide	ND	50	ng/l	10	12/12/14 18:11	M-04
Methoxychlor	ND	50	ng/l	10	12/12/14 18:11	M-04
Mirex	ND	50	ng/l	10	12/12/14 18:11	M-04
Toxaphene	ND	5000	ng/l	10	12/12/14 18:11	M-04
trans-Nonachlor	ND	50	ng/l	10	12/12/14 18:11	M-04



PW Environmental 230 Dove Ct.

Santa Paula CA, 93060

Analytical Laboratory Service - Since 1964

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4L02094-02

LAILG-NGA-150-8

Sampled: 12/02/14 08:00

Sampled By: Scott Jordan

Matrix: Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W4L0182	Prepared: 12/03/14 09:50				Analyst: Maxwell Wang		
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier	
Surr: Decachlorobiphenyl	73 %	Conc:72.8	0.1-118	%			M-04	
Surr: Tetrachioro-meta-xviene	123 %	Conc: 123	12-117	%			M-04 S-11	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1	Batch: W4L0527	Prepared: 12/09/14 1	10:49		Analyst: Reb	ecca Juea Song
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	0.41	0.10	mg/l	1	12/12/14 19:17	
Method: EPA 353.2	Batch: W4L0208	Prepared: 12/03/14 1	Prepared: 12/03/14 12:54		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	13000	200	ug/l	2	12/03/14 15:26	
Method: EPA 365.1	Batch: W4L0241	Prepared: 12/03/14 2	22:42		Analyst: Nina Katrin	a Reyes Aranas
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	2.5	0.050	mg/l	25	12/04/14 11:47	**
o-Phosphate as P, dissolved	2400	50	ug/l	25	12/04/14 12:00	••
Method: EPA 365.1	Batch: W4L0658	Prepared: 12/10/14 15:54			Analyst: Marilyn B Christial	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	3.7	0.50	mg/l	1	12/18/14 19:01	M-06
Method: EPA 365.1	Batch: W4L0660	Prepared: 12/10/14 1	6:03		Analyst: Ma	irilyn B Christian
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	2.6	0.20	mg/l	2	12/15/14 15:48	M-06
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 1	0:32		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	530	10	mg/l	1	12/04/14 12:15	<u></u>
Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 11:45			Analyst: Angela J Whittin	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	240	5	mg/l	1	12/03/14 20:15	

	Metals by E	EPA 200 Series Method	8			
Method: EPA 200.7	Batch: [CALC]	Analyst: Jessie Kristie				
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	179	0.250	mg/l	1	12/05/14 11:20	
Method: EPA 200.7	Batch: W4L0253	Prepared: 12/04/14 09:16			Analyst: Jessie Kristie	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	71.8	0.100	mg/l	1	12/05/14 11:20	

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4L02094-02

LAILG-NGA-150-6

Sampled: 12/02/14 08:00

Sampled By: Scott Jordan

Matrix: Water

Metals by EPA 200 Series Methods

Method: EPA 200.8

Surr: Triphenyl phosphate

Batch: W4L0255

Prepared: 12/04/14 09:25

Analyst: Royuan Rosario Lopez

Analyte Copper, Total Result 95

191 %

MRL 0.50 Units Dil ug/l

Analyzed 12/08/14 15:29 Qualifier

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM	Batch: W4L0557	L0557 Prepared: 12/09/14 13:26				Analyst: Chris	s Samatmanakit
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	12/16/14 23:29	
Bifenthrin	4000		40	ng/l	20	12/16/14 22:56	
Cyfluthrin	ND		2.0	ng/l	1	12/16/14 23:29	
Cypermethrin	ND		2.0	ng/l	1	12/16/14 23:29	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	12/16/14 23:29	
Dichloran	ND		2.0	ng/l	1	12/16/14 23:29	
Fenpropathrin (Danitol)	370		40	ng/l	20	12/16/14 22:56	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	12/16/14 23:29	
L-Cyhalothrin	ND		2.0	ng/I	1	12/16/14 23:29	
Pendimethalin	ND		2.0	ng/l	1	12/16/14 23:29	
Permethrin	1000		100	ng/l	20	12/16/14 22:56	
Prallethrin	ND		2.0	ng/l	1	12/16/14 23:29	
Sumithrin	ND		10	ng/l	1	12/16/14 23:29	
Tefluthrin	ND		2.0	ng/l	1	12/16/14 23:29	
Surr: Perylene-d12	122 %	Conc:305	2-205	%			

Semivolatile Organic Compounds by GC/MS

6-222

Conc:478

Method: EPA 525.2	Batch: W4L0243	Prepared: 12/04/14 0	Prepared: 12/04/14 07:08			Analyst: Chris Samatmanakit		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier		
Azinphos methyl (Guthion)	ND	10	ng/l	1	12/05/14 12:10			
Bolstar	ND	10	ng/l	1	12/05/14 12:10			
Chlorpyrifos	ND	10	ng/l	1	12/05/14 12:10			
Coumaphos	ND	10	ng/l	1	12/05/14 12:10			
Demeton-o	ND	10	ng/l	1	12/05/14 12:10			
Demeton-s	ND	10	ng/l	1	12/05/14 12:10			
Diazinon	ND	10	ng/l	1	12/05/14 12:10			
Dichlorvos	ND	10	ng/l	1	12/05/14 12:10			
Dimethoate	ND	10	ng/l	1	12/05/14 12:10			
Disulfotori	ND	10	ng/l	1	12/05/14 12:10			
Ethoprop	ND	10	ng/l	1	12/05/14 12:10			
Ethyl parathion	ND	10	ng/l	1	12/05/14 12:10			
Fensulfothion	ND	10	ng/l	1	12/05/14 12:10			
Fenthion	ND	10	ng/l	1	12/05/14 12:10			



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Matrix: Water

Date Reported:

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4L02094-02

LAILG-NGA-150-6

Sampled: 12/02/14 08:00

Sampled By: Scott Jordan

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2	Batch: W4L0243	Prepare	Prepared: 12/04/14 07:08			Analyst: Chris Samatmanakit		
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier	
Malathion	ND		10	ng/l	1	12/05/14 12:10		
Merphos	ND		10	ng/l	1	12/05/14 12:10		
Methyl parathion	ND		10	ng/l	1	12/05/14 12:10		
Mevinphos	ND		10	ng/l	1	12/05/14 12:10		
Naled	ND		10	ng/l	1	12/05/14 12:10		
Phorate	ND		10	ng/l	1	12/05/14 12:10		
Ronnel	ND		10	ng/l	1	12/05/14 12:10		
Stirophos	ND		10	ng/l	1	12/05/14 12:10		
Tokuthion (Prothiofos)	ND		10	ng/l	1	12/05/14 12:10		
Trichloronate	ND		10	ng/l	1	12/05/14 12:10		
Surr: 1,3-Dimethyl-2-nitrobenzene	96 %	Conc:480	76-128	%				
Surr: Triphenyl phosphate	137 %	Conc:687	40-163	%				



PW Environmental 230 Dove Ct. Santa Paula CA, 93060 Date Received:

12/02/14 15:25

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4L02094-03

LAILG-NGA-188-1

Sampled: 12/02/14 13:55

Sampled By: Scott Jordan

Matrix: Water

Anions by IC, EPA Method 9056

Method: EPA 300.0	Batch: W4L0288	Prepared: 12/04/14 1	Prepared: 12/04/14 11:30			Analyst: Alice T. Lee		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier		
Chloride, Total	38	1.2	mg/l	2.5	12/04/14 12:48			
Sulfate as SO4	110	1.2	mg/l	2.5	12/04/14 12:48			

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W4L0182	Prepared: 12/03/14 0	9:50		Analyst: Maxwell Wang	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	5.0	ng/l	1	12/12/14 18:41	
2,4'-DDE	ND	5.0	ng/l	1	12/12/14 18:41	
2,4'-DDT	ND	5.0	ng/l	1	12/12/14 18:41	
4,4'-DDD	ND	5.0	ng/l	1	12/12/14 18:41	
4,4'-DDE	ND	5.0	ng/I	1	12/12/14 18:41	
4,4'-DDT	ND	5.0	ng/l	1	12/12/14 18:41	
Aldrin	ND	5.0	ng/l	1	12/12/14 18:41	
alpha-BHC	ND	5.0	ng/l	1	12/12/14 18:41	
alpha-Chlordane	ND	5.0	ng/l	1	12/12/14 18:41	
Arodor 1016	ND	100	ng/l	1	12/12/14 18:41	
Arodor 1221	ND	100	ng/l	1	12/12/14 18:41	
Arodor 1232	ND	100	ng/l	1	12/12/14 18:41	
Arodor 1242	ND	100	ng/l	1	12/12/14 18:41	
Arodor 1248	ND	100	ng/i	1	12/12/14 18:41	
Arodor 1254	ND	100	ng/i	1	12/12/14 18:41	
Arodor 1260	ND	100	ng/l	1	12/12/14 18:41	
beta-BHC	ND	5.0	ng/l	1	12/12/14 18:41	
Chlordane (tech)	ND	100	ng/l	1	12/12/14 18:41	
cis-Nonachlor	ND	5.0	ng/l	1	12/12/14 18:41	
delta-BHC	ND	5.0	ng/l	1	12/12/14 18:41	
Dieldrin	· ND	5.0	ng/l	1	12/12/14 18:41	
Endosulfan I	ND	5.0	ng/l	1	12/12/14 18:41	
Endosulfan II	ND	5.0	ng/l	1	12/12/14 18:41	
Endosulfan sulfate	ND	5.0	ng/l	1	12/12/14 18:41	
Endrin	ND	5.0	ng/l	1	12/12/14 18:41	
Endrin aldehyde	ND	5.0	ng/l	1 -	12/12/14 18:41	
gamma-BHC (Lindane)	ND	5.0	ng/l	1	12/12/14 18:41	
gamma-Chlordane	ND	5.0	ng/l	1	12/12/14 18:41	
Heptachlor	ND	5.0	ng/l	1	12/12/14 18:41	
Heptachlor epoxide	ND	5.0	ng/l	1	12/12/14 18:41	
Methoxychlor	ND	5.0	ng/l	1	12/12/14 18:41	
Mirex	ND	5.0	ng/l	1	12/12/14 18:41	
Toxaphene	ND	500	ng/l	1	12/12/14 18:41	
trans-Nonachlor	ND	5.0	ng/l	1	12/12/14 18:41	



PW Environmental 230 Dove Ct.

Santa Paula CA, 93060

Sampled: 12/02/14 13:55

Analytical Laboratory Service - Since 1964

Date Received:

12/02/14 15:25

Date Reported:

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4L02094-03 LAILG-NGA-188-1

Sampled By: Scott Jordan

Matrix: Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W4L0182	Batch: W4L0182 Prepared: 1		d: 12/03/14 09:50			Analyst: Maxwell Wang		
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier		
Surr: Decachlorobiphenyl	72 %	Conc:71.5	0.1-118	%					
Surr: Tetrachioro-meta-xviene	40 %	Conc:40.2	12-117	%					

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1	Batch: W4L0527	Prepared: 12/09/14 1	0:49		Analyst: Rebecca Juea Song		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
Ammonia as N	0.31	0.10	mg/l	1	12/12/14 19:17		
Method: EPA 353.2	Batch: W4L0208	Prepared: 12/03/14 1	12:54		Analyst: Ange	ela J Whittington	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
NO2+NO3 #8 N	4400	100	ug/l	1	12/03/14 15:28		
Method: EPA 365.1	Batch: W4L0241	Prepared: 12/03/14 22:42			Analyst: Nina Katrin	a Reyes Aranas	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
o-Phosphate as P	0.56	0.010	mg/l	5	12/03/14 23:41	**	
o-Phosphate as P, dissolved	560	10	ug/l	5	12/04/14 12:01		
Method: EPA 365.1	Batch: W4L0658	Prepared: 12/10/14 15:54			Analyst: Ma	nilyn B Christian	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
Phosphorus as P, Total	2.0	0.50	mg/l	1	12/18/14 19:03	M-06	
Method: EPA 365.1	Batch: W4L0660	Prepared: 12/10/14 1	6:03		Analyst: Marilyn B Christian		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
Phosphorus, Dissolved	0.80	0.050	mg/l	1	12/15/14 15:30	M-06	
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 1	0:32		Analyst: Ange	ela J Whittington	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
Total Dissolved Solids	330	10	mg/l	1	12/04/14 12:15		
Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 11:45			Analyst: Ange	Analyst: Angela J Whittington	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
Total Suspended Solids	2000	5	mg/l	1	12/03/14 20:15		

	Metals by E	EPA 200 Series Methods	3				
Method: EPA 200.7	Batch: [CALC]	Prepared: 12/04/14 09	9:16		Analy	st: Jessie Kristie	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
Calcium Hardness as CaCO3	141	0.250	mg/l	1	12/05/14 11:22		
Method: EPA 200.7	Batch: W4L0253	Prepared: 12/04/14 09:16			Analyst: Jessie Kristie		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
Calcium, Total	56.3	0.100	mg/l	1	12/05/14 11:22		

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PW Environmental 230 Dove Ct. Santa Paula CA, 93060 Date Received:

12/02/14 15:25

Date Reported:

01/07/15 15:09

4L02094-03

LAILG-NGA-188-1

Sampled: 12/02/14 13:55

Sampled By: Scott Jordan

Matrix: Water

Metals by EPA 200 Series Methods

Method: EPA 200.8	Batch: W4L0255	Prepared: 12/04/14 09:25			Analyst: Royuan Rosario Lo			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier		
Copper, Total	36	0.50	ug/l	1	12/08/14 15:33			

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM	Batch: W4L0557	Batch: W4L0557 Prepared: 12/09/14 13		3:26		Analyst: Chris Samatmanakit	
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	12/16/14 15:25	
Bifenthrin	51		2.0	ng/l	1	12/16/14 15:25	
Cyfluthrin	ND		2.0	ng/l	1	12/16/14 15:25	
Cypermethrin	ND		2.0	ng/l	1	12/16/14 15:25	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	12/16/14 15:25	
Dichloran	ND		2.0	ng/l	1	12/16/14 15:25	
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	12/16/14 15:25	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	12/16/14 15:25	
L-Cyhalothrin	ND		2.0	ng/l	1	12/16/14 15:25	
Pendimethalin	30		2.0	ng/l	1	12/16/14 15:25	
Permethrin	ND		5.0	ng/l	1	12/16/14 15:25	
Prallethrin	ND		2.0	ng/l	1	12/16/14 15:25	
Sumithrin	ND		10	ng/l	1	12/16/14 15:25	
Tefluthrin	ND		2.0	ng/l	1	12/16/14 15:25	
Surr: Perylene-d12	125 %	Conc:313	2-205	%			
Surr: Triphenyl phosphete	139 %	Conc:349	6-222	%			

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2 Batch: W4L0243 Prepared: 12/04/14 07:08 Analyst: Chris Samatma							
Batch: W4LU243	Prepared: 12/04/14 07:08			Analyst: Chris Samatmanakit			
Result	MRL	Units	Dil	Analyzed	Qualifier		
ND	10	ng/l	1	12/05/14 12:35	,		
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
ND	10	ng/l	1	12/05/14 12:35			
	Batch: W4L0243 Result ND	Batch: W4L0243 Prepared: 12/04/14 0	Batch: W4L0243 Prepared: 12/04/14 07:08 Result MRL Units ND 10 ng/l ND 10 ng/l	Result MRL Units Dil	Batch: W4L0243 Prepared: 12/04/14 07:08 Analyst: Christ Result MRL Units Dil Analyst: Christ ND 10 ng/l 1 12/05/14 12:35 ND 10		

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12/02/14 15:25

Date Reported:

01/07/15 15:09

4L02094-03

LAILG-NGA-188-1

Sampled: 12/02/14 13:55

Sampled By: Scott Jordan

Matrix: Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2	Batch: W4L0243	Batch: W4L0243 Prepared:		7:08		Analyst: Chris Samatmanakit	
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Malathion	ND		10	ng/l	1	12/05/14 12:35	
Merphos	ND		10	ng/l	1	12/05/14 12:35	
Methyl parathion	ND		10	ng/l	1	12/05/14 12:35	
Mevinphos	ND		10	ng/l	1	12/05/14 12:35	
Naled	ND		10	ng/l	1	12/05/14 12:35	
Phorate	ND		10	ng/l	1	12/05/14 12:35	
Ronnel	ND		10	ng/l	1	12/05/14 12:35	
Stirophos	ND		10	ng/l	1	12/05/14 12:35	
Tokuthion (Prothiofos)	ND		10	ng/l	1	12/05/14 12:35	
Trichloronate	ND		10	ng/l	1	12/05/14 12:35	
Surr: 1,3-Dimethyl-2-nitrobenzene	92 %	Conc:459	76-128	%			
Surr: Triphenyl phosphate	345 %	Conc: 1730	40-163	%			S-GC



PW Environmental 230 Dove Ct. Santa Paula CA, 93060 Date Received:

12/02/14 15:25

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4L02094-04

LAILG-NGA-DUP

Sampled: 12/02/14 00:00

Sampled By: Scott Jordan

Matrix: Water

Anions by IC, EPA Method 9056

Method: EPA 300.0	Batch: W4L0288	Batch: W4L0288 Prepared: 12/04/14 11:30			Analyst: Alice T. Lee				
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier			
Chloride, Total	35	1.2	mg/l	2.5	12/04/14 13:03				
Sulfate as SO4	92	1.2	mg/l	2.5	12/04/14 13:03				

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W4L0182	Prepared: 12/03/14 0	9:50	Analyst: Maxwell Wang		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	5.0	ng/l	1	12/12/14 19:12	
2,4'-DDE	ND	5.0	ng/l	1	12/12/14 19:12	
2,4'-DDT	ND	5.0	ng/l	1	12/12/14 19:12	
4,4'-DDD	ND	5.0	ng/l	1	12/12/14 19:12	
4,4´-DDE	ND	5.0	ng/l	1	12/12/14 19:12	
4,4'-DDT	ND	5.0	ng/l	1	12/12/14 19:12	
Aldrin	ND	5.0	ng/l	1	12/12/14 19:12	
alpha-BHC	ND	5.0	ng/l	1	12/12/14 19:12	
alpha-Chlordane	ND	5.0	ng/l	1	12/12/14 19:12	
Arodor 1016	ND	100	ng/l	1	12/12/14 19:12	
Arodor 1221	ND	100	ng/l	1	12/12/14 19:12	
Arodor 1232	ND	100	ng/l	1	12/12/14 19:12	
Arodor 1242	ND	100	ng/l	1	12/12/14 19:12	
Arodor 1248	ND	100	ng/l	1	12/12/14 19:12	
Arodor 1254	ND	100	ng/l	1	12/12/14 19:12	
Arodor 1260	ND	100	ng/l	1	12/12/14 19:12	
beta-BHC	ND	5.0	ng/l	1	12/12/14 19:12	
Chlordane (tech)	ND	100	ng/l	1	12/12/14 19:12	
cis-Nonachlor	ND	5.0	ng/l	1	12/12/14 19:12	
delta-BHC	ND	5.0	ng/l	1	12/12/14 19:12	
Dieldrin	ND	5.0	ng/l	1	12/12/14 19:12	
Endosulfan I	ND	5.0	ng/l	1	12/12/14 19:12	
Endosulfan II	ND	5.0	ng/l	1	12/12/14 19:12	
Endosulfan sulfate	ND	5.0	ng/l	1	12/12/14 19:12	
Endrin	ND	5.0	ng/l	1	12/12/14 19:12	
Endrin aldehyde	ND	5.0	ng/l	1	12/12/14 19:12	
gamma-BHC (Liridane)	ND	5.0	ng/l	1	12/12/14 19:12	
gamma-Chlordane	ND	5.0	ng/l	1	12/12/14 19:12	
Heptachlor	ND	5.0	ng/l	1	12/12/14 19:12	
Heptachlor epoxide	ND	5.0	ng/l	1	12/12/14 19:12	
Methoxychlor	ND	5.0	ng/l	1	12/12/14 19:12	
Mirex	ND	5.0	ng/l	1	12/12/14 19:12	
Toxaphene	ND	500	ng/l	1	12/12/14 19:12	
trans-Nonachlor	ND	5.0	ng/l	1	12/12/14 19:12	



PW Environmental 230 Dove Ct. Santa Paula CA, 93060 Date Received:

12/02/14 15:25

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4L02094-04

LAILG-NGA-DUP

Sampled: 12/02/14 00:00

Sampled By: Scott Jordan

Chlorinated Pesticides and/or PCRs

Matrix: Water

	Ciliorinated	resucides and/or robs
othod: EDA 609	Patch: \//41.0182	Propaged: 12/03/14 00:5

Method: EPA 608	Batch: W4L0182	Prepared: 12/03/14 09:50			Analyst: Maxwell Wang		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	

 Surr: Decachlorobiphenyl
 93 %
 Conc:92.5
 0.1-118
 %

 Surr: Tetrachloro-meta-xylene
 48 %
 Conc:48.5
 12-117
 %

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1	Batch: W4L0527	Prepared: 12/09/14 10:49			Analyst: Reb	ecca Juea Song
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	0.27	0.10	mg/l	1	12/12/14 19:17	
Method: EPA 353.2	Batch: W4L0208	Prepared: 12/03/14 1	Prepared: 12/03/14 12:54		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	4400	100	ug/l	1	12/03/14 15:30	
Method: EPA 365.1	Batch: W4L0241	Prepared: 12/03/14 22:42			Analyst: Nina Katrin	a Reyes Aranas
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	0.60	0.010	mg/l	5	12/03/14 23:42	**
o-Phosphate as P, dissolved	580	10	ug/l	5	12/04/14 12:03	**
Method: EPA 365.1	Batch: W4L0658	Prepared: 12/10/14 15:54			Analyst: Marilyn B Christian	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	1.4	0.50	mg/l	1	12/18/14 19:04	M-06
Method: EPA 365.1	Batch: W4L0660	Prepared: 12/10/14 1	6:03		Analyst: Marilyn B Christian	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	0.64	0.050	mg/l	1	12/15/14 15:31	M-06
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 1	0:32		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	290	10	mg/l	1	12/04/14 12:15	
Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 11:45			Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	430	5	mg/l	1	12/03/14 20:15	

Metals by EPA 200 Series Methods

			-			
Method: EPA 200.7	Batch: [CALC]	Prepared: 12/04/14 0	9:16	Analyst: Jessie Kristie		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	126	0.250	mg/l	1	12/05/14 11:25	·
Method: EPA 200.7	Batch: W4L0253	Prepared: 12/04/14 09:16			Analyst: Jessie Kristie	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	50.6	0.100	mg/l	1	12/05/14 11:25	

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4L02094-04

LAILG-NGA-DUP

Sampled: 12/02/14 00:00

Sampled By: Scott Jordan

Matrix: Water

Qualifier

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W4L0255 Prepared: 12/04/14 09:25

Analyst: Royuan Rosario Lopez

Analyte Result Copper, Total

MRL Units Dil Analyzed 0.50 ug/l 12/08/14 15:37

Pyrethroid Pesticides by GC/MS SIM

	Fyreunon	a resucides o	y Goring G	TAL			
Method: GC/MS NCI-SIM	d: 12/09/14 1	3:26		Analyst: Chris	Analyst: Chris Samatmanakit		
Analyte	Result		MRL Units		Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	12/16/14 15:58	
Bifenthrin	41		2.0	ng/l	1	12/16/14 15:58	
Cyfluthrin	ND		2.0	ng/l	1	12/16/14 15:58	
Cypermethrin	ND		2.0	ng/l	1	12/16/14 15:58	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	12/16/14 15:58	
Dichloran	ND		2.0	ng/l	1	12/16/14 15:58	
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	12/16/14 15:58	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	12/16/14 15:58	
L-Cyhalothrin	ND		2.0	ng/l	1	12/16/14 15:58	
Pendimethalin	30		2.0	ng/l	1	12/16/14 15:58	
Permethrin	ND		5.0	ng/l	1	12/16/14 15:58	
Prallethrin	ND		2.0	ng/l	1	12/16/14 15:58	
Sumithrin	ND		10	ng/l	1	12/16/14 15:58	
Tefluthrin	ND		2.0	ng/l	1	12/16/14 15:58	
Surr: Perylene-d12	125 %	Conc:312	2-205	%			
Surr: Triphenyl phosphate	151 %	Conc:377	6-222	%			

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2	Batch: W4L0243	.0243 Prepared: 12/04/14 07:08			Analyst: Chris	s Samatmanakit
Analyte	Result	MRL	Units	Dif	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND	10	ng/l	1	12/05/14 13:02	
Bolstar	ND	10	ng/l	1	12/05/14 13:02	
Chlorpyrifos	ND	10	ng/l	1	12/05/14 13:02	
Coumaphos	ND	10	ng/l	1	12/05/14 13:02	
Demeton-o	ND	10	ng/l	1	12/05/14 13:02	
Demeton-s	ND	10	ng/l	1	12/05/14 13:02	
Diazinon	ND	10	ng/l	1	12/05/14 13:02	
Dichlorvos	ND	10	ng/l	1	12/05/14 13:02	
Dimethoate	ND	10	ng/l	1	12/05/14 13:02	
Disulfoton	ND	10	ng/l	1	12/05/14 13:02	
Ethoprop	ND	10	ng/l	1	12/05/14 13:02	
Ethyl parathion	ND	10	ng/l	1	12/05/14 13:02	
Fensulfothion	ND	10	ng/l	1	12/05/14 13:02	
Fenthion	ND	10	ng/l	1	12/05/14 13:02	

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Sampled: 12/02/14 00:00

Date Received:

12/02/14 15:25

Date Reported:

01/07/15 15:09

4L02094-04

LAILG-NGA-DUP

Sampled By: Scott Jordan

Matrix: Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2	Batch: W4L0243	Batch: W4L0243 Prepared: 1:		7:08		Analyst: Chris Samatmanakit	
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Malathion	ND		10	ng/l	1	12/05/14 13:02	
Merphos	ND		10	ng/l	1	12/05/14 13:02	
Methyl parathion	ND		10	ng/l	1	12/05/14 13:02	
Mevinphos	ND		10	ng/l	1	12/05/14 13:02	
Naled	ND		10	ng/l	1	12/05/14 13:02	
Phorate	ND		10	ng/l	1	12/05/14 13:02	
Ronnel	ND		10	ng/l	1	12/05/14 13:02	
Stirophos	ND		10	ng/l	1	12/05/14 13:02	
Tokuthion (Prothiofos)	ND		10	ng/l	1	12/05/14 13:02	
Trichloronate	ND		10	ng/l	1	12/05/14 13:02	
Surr: 1,3-Dimethyl-2-nitrobenzene	89 %	Conc:443	76-128	%			
Surr: Triphenyl phosphate	325 %	Conc: 1620	40-163	%			S-GC



PW Environmental 230 Dove Ct.

Santa Paula CA, 93060

Sampled: 12/02/14 11:45

Analytical Laboratory Service - Since 1964

Date Received:

12/02/14 15:25

Date Reported:

01/07/15 15:09

4L02094-05

LAILG-NGA-FB

Sampled By: Scott Jordan

Anions by IC. EPA Method 9056

Matrix: Water

	7 till olio Dy 10, 21 7 till olio 0 0000				
Method: EPA 300.0	Batch: W4L0288	Prepared: 12/04/14 11:3			

Method: EPA 300.0	Batch: W4L0288	tch: W4L0288 Prepared: 12/04/14 11:30			ed: 12/04/14 11:30 Analyst:				
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier			
Chloride, Total	ND	0.50	mg/l	1	12/04/14 13:17				
Sulfate as SO4	ND	0.50	mg/l	1	12/04/14 13:17				

Chlorinated Pesticides and/or PCBs

Method: EPA 608	hod: EPA 608 Batch: W4L0182 Prepared: 12/03/14 09:50			Analyst	: Maxwell Wang	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	5.0	ng/l	1	12/12/14 19:43	
2,4'-DDE	ND	5.0	ng/l	1	12/12/14 19:43	
2,4'-DDT	ND	5.0	ng/l	1	12/12/14 19:43	
4,4'-DDD	ND	5.0	ng/l	1	12/12/14 19:43	
4,4'-DDE	ND	5.0	ng/l	1	12/12/14 19:43	
4,4'-DDT	ND	5.0	ng/l	1	12/12/14 19:43	
Aldrin	ND	5.0	ng/l	1	12/12/14 19:43	
alpha-BHC	ND	5.0	ng/l	1	12/12/14 19:43	
alpha-Chlordane	ND	5.0	ng/l	1	12/12/14 19:43	
Arodor 1016	ND	100	ng/l	1	12/12/14 19:43	
Arodor 1221	ND	100	ng/l	1	12/12/14 19:43	
Arodor 1232	ND	100	ng/l	1	12/12/14 19:43	
Arodor 1242	ND	100	ng/l	1	12/12/14 19:43	
Arodor 1248	ND	100	ng/l	1	12/12/14 19:43	
Aroclor 1254	ND	100	ng/l	1	12/12/14 19:43	
Arodor 1260	ND	100	ng/l	1	12/12/14 19:43	
beta-BHC	ND	5.0	ng/l	1	12/12/14 19:43	
Chlordane (tech)	ND	100	ng/l	1	12/12/14 19:43	
cis-Nonachlor	ND	5.0	ng/l	1	12/12/14 19:43	
delta-BHC	ND	5.0	ng/l	1	12/12/14 19:43	
Dieldrin	ND	5.0	ng/l	1	12/12/14 19:43	
Endosulfan I	ND	5.0	ng/l	1	12/12/14 19:43	
Endosulfan II	ND	5.0	ng/l	1	12/12/14 19:43	
Endosulfan sulfate	ND	5.0	ng/l	1	12/12/14 19:43	
Endrin	ND	5.0	ng/l	1	12/12/14 19:43	
Endrin aldehyde	ND	5.0	ng/l	1	12/12/14 19:43	
gamma-BHC (Lindane)	ND	5.0	ng/i	1	12/12/14 19:43	
gamma-Chlordane	ND	5.0	ng/l	1	12/12/14 19:43	
Heptachlor	ND	5.0	ng/l	1	12/12/14 19:43	
Heptachlor epoxide	ND	5.0	ng/l	1	12/12/14 19:43	
Methoxychlor	ND	5.0	ng/l	1	12/12/14 19:43	
Mirex	ND	5.0	ng/l	1	12/12/14 19:43	
Toxaphene	ND	500	ng/l	1	12/12/14 19:43	
trans-Nonachlor	ND	5.0	ng/l	1	12/12/14 19:43	



PW Environmental 230 Dove Ct. Santa Paula CA, 93060 **Date Received:**

12/02/14 15:25

Date Reported:

01/07/15 15:09

4L02094-05

LAILG-NGA-FB

Sampled: 12/02/14 11:45

Sampled By: Scott Jordan

Matrix: Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W4L0182 Prepared: 12/03/14			9:50		Analyst: Maxwell Wang	
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Surr: Decachlorobiphenyl	52 %	Conc:51.6	0.1-118	%	•		
Surr: Tetrachloro-meta-xylene	77 %	Conc:76.8	12-117	%			

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1	Batch: W4L0527	Prepared: 12/09/14 1	Analyst: Rebecca Ju		ecca Juea Song	
Analyte	Result	MRL	Units	Dif	Analyzed	Qualifier
Ammonia as N	ND	0.10	mg/l	1	12/12/14 19:17	
Method: EPA 353.2	Batch: W4L0208	Prepared: 12/03/14 1	2:54		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	ND	100	ug/l	1	12/03/14 15:32	
Method: EPA 365.1	Batch: W4L0241	Prepared: 12/03/14 2	2:42		Analyst: Nina Katrin	a Reyes Aranas
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	ND	0.0020	mg/l	1	12/03/14 23:34	**
o-Phosphate as P, dissolved	ND	2.0	ug/l	1	12/04/14 11:54	**
Method: EPA 365.1	Batch: W4L0658	Prepared: 12/10/14 15:54			Analyst: Marilyn B Christiar	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	ND	0.010	mg/l	1	12/18/14 19:06	
Method: EPA 365.1	Batch: W4L0660	Prepared: 12/10/14 1	6:03		Analyst: Marilyn B Christian	
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	ND	0.010	mg/l	1	12/15/14 15:32	
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 1	0:32		Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	ND	10	mg/l	1	12/04/14 12:15	··· -
Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 11:45			Analyst: Ange	ela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	ND	5	mg/l	1	12/03/14 20:15	

	Metals by E	:PA 200 Series Methods	В			
Method: EPA 200.7	Batch: [CALC]	Prepared: 12/11/14 0	8:43		Analy	st: Jessie Kristie
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	ND	0.250	mg/l	1	12/11/14 12:19	
Method: EPA 200.7	Batch: W4L0701	Prepared: 12/11/14 0	8:43		Analy	st: Jessie Kristie
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	ND	0.100	mg/l	1	12/11/14 12:19	

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4L02094-05

LAILG-NGA-FB

Sampled: 12/02/14 11:45

Sampled By: Scott Jordan

Matrix: Water

Metals by EPA 200 Series Methods

Method: EPA 200.8

Batch: W4L0255

Prepared: 12/04/14 09:25

Analyst: Royuan Rosario Lopez

Analyte Copper, Total Result

MRL Units 0.50 ug/l

Dil Analyzed 12/08/14 15:55 Qualifier

ND

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM	Batch: W4L0557	Batch: W4L0557 Prepared: 12/0		3:26		Analyst: Chris Samatmanakit		
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier	
Allethrin	ND		2.0	ng/l	1	12/16/14 16:30		
Bifenthrin	ND		2.0	ng/l	1	12/16/14 16:30		
Cyfluthrin	ND		2.0	ng/l	1	12/16/14 16:30		
Cypermethrin	ND		2.0	ng/l	1	12/16/14 16:30		
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	12/16/14 16:30		
Dichloran	ND		2.0	ng/l	1	12/16/14 16:30		
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	12/16/14 16:30		
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	12/16/14 16:30		
L-Cyhalothrin	ND		2.0	ng/l	1	12/16/14 16:30		
Pendimethalin	ND		2.0	ng/l	1	12/16/14 16:30		
Permethrin	ND		5.0	ng/l	1	12/16/14 16:30		
Prallethrin	ND		2.0	ng/l	1	12/16/14 16:30		
Sumithrin	ND		10	ng/l	1	12/16/14 16:30		
Tefluthrin	ND		2.0	ng/l	1	12/16/14 16:30		
Surr: Perylene-d12	117 %	Conc:293	2-205	%				
Surr: Triphenyl phosphate	144 %	Conc:360	6-222	%				

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2	Batch: W4L0243	Prepared: 12/04/14 0	7:08		Analyst: Chris Samatmanakit			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier		
Aziriphos methyl (Guthion)	ND	10	ng/l	1	12/05/14 13:27			
Bolstar	ND	10	ng/l	1	12/05/14 13:27			
Chlorpyrifos	ND	10	ng/l	1	12/05/14 13:27			
Coumaphos	ND	10	ng/l	1	12/05/14 13:27			
Demeton-o	ND	10	ng/l	1	12/05/14 13:27			
Demeton-s	ND	10	ng/l	1	12/05/14 13:27			
Diazinon	ND	10	ng/l	1	12/05/14 13:27			
Dichlorvos	ND	10	ng/l	1	12/05/14 13:27			
Dimethoate	ND	10	ng/l	1	12/05/14 13:27			
Disulfoton	ND	10	ng/l	1	12/05/14 13:27			
Ethoprop	ND	10	ng/l	1	12/05/14 13:27			
Ethyl parathion	ND	10	ng/l	1	12/05/14 13:27			
Fensulfothion	ND	10	ng/l	1	12/05/14 13:27			
Fenthion	ND	10	ng/l	1	12/05/14 13:27			



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4L02094-05

LAILG-NGA-FB

Sampled: 12/02/14 11:45

Sampled By: Scott Jordan

Matrix: Water

Semivolatile Organic Compounds by GC/MS

		8	ounce of e	· · · · · · ·					
Method: EPA 525.2	Batch: W4L0243	Prepare	d: 12/04/14 0	7:08		Analyst: Chris Samatmanakit			
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier		
Malathion	ND		10	rıg/l	1	12/05/14 13:27			
Merphos	ND		10	ng/l	1	12/05/14 13:27			
Methyl parathion	ND		10	ng/l	1	12/05/14 13:27			
Mevinphos	ND		10	ng/l	1	12/05/14 13:27			
Naled	ND		10	ng/l	1	12/05/14 13:27			
Phorate	ND		10	ng/l	1	12/05/14 13:27			
Ronnel	ND		10	ng/l	1	12/05/14 13:27			
Stirophos	ND		10	ng/l	1	12/05/14 13:27			
Tokuthion (Prothiofos)	ND		10	ng/l	1	12/05/14 13:27			
Trichloronate	ND		10	ng/l	1	12/05/14 13:27			
Surr: 1,3-Dimethyl-2-nitrobenzene	85 %	Conc:424	76-128	%					
Sum: Triphenyl phosphate	111 %	Conc:555	40-163	%					



Analytical Laboratory Service - Since 1964

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QUALITY CONTROL SECTION



Analytical Laboratory Service - Since 1964

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Anions by IC, EPA Method 9056 - Quality Control

Batch W4L0288 - EPA 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0288-BLK1)				Analyzed:	12/04/14	11:50				
Chloride, Total	ND	0.50	mg/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W4L0288-BS1)				Analyzed: 1	12/04/14	12:04				
Chloride, Total	3.89	0.50	mg/l	4.00		97	90-110			
Sulfate as SO4	8.38	0.50	mg/l	8.00		105	90-110			
Duplicate (W4L0288-DUP1)	Source	: 4L03064-01		Analyzed: 1	12/04/14	13:32				
Chloride, Total	9.29	2.5	mg/l		10.3			10	20	•
Sulfate as SO4	16.9	2.5	mg/l		17.2			2	20	
Matrix Spike (W4L0288-MS1)	Source	: 4L03064-01		Analyzed: 1	12/04/14	14:02				
Chloride, Total	29.9	2.5	mg/l	20.0	10.3	98	76-118			
Sulfate as SO4	57.8	2.5	mg/l	40.0	17.2	102	78-111			
Matrix Spike (W4L0288-MS2)	Source	: 4L03069-02		Analyzed: 1	12/04/14	15:31				
Chloride, Total	576	25	mg/l	200	366	105	76-118			
Sulfate as SO4	626	25	mg/l	400	184	110	78-111			
Matrix Spike Dup (W4L0288-MSD1)	Source	: 4L03064-01		Analyzed: 1	12/04/14	14:17				
Chloride, Total	30.3	2.5	mg/l	20.0	10.3	100	76-118	1	20	
Sulfate as SO4	58.4	2.5	mg/l	40.0	17.2	103	78-111	1	20	
Matrix Spike Dup (W4L0288-MSD2)	Source	: 4L03069-02		Analyzed: 1	12/04/14	15:46				
Chloride, Total	565	25	mg/l	200	366	99	76-118	2	20	· · ·
Sulfate as SO4	614	25	mg/l	400	184	107	78-111	2	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4L0182 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Deta Qualifiers
Blank (W4L0182-BLK1)			, ,	Analyzed:	12/12/14	15:07				
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							
Arodor 1016	ND	100	ng/l							
Arodor 1221	ND	100	ng/l							
Arodor 1232	ND	100	ng/l							
Arodor 1242	ND	100	ng/l							

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4L0182 - EPA 608

Analyte	Result	MRL	Units	Spike <u>Lev</u> el	Source Result	%REC	% REC	RPD	RPD Limit	Date Qualifiers
Blank (W4L0182-BLK1)			·	Analyzed:	12/12/14	15:07				
Arodor 1248	ND	100	ng/l				-			
Arodor 1254	ND	100	ng/l							
Arodor 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							
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							
Toxaphene	ND	500	ng/l							
trans-Nonachlor	ND	5.0	ng/l							
Surr: Decachiorobiphenyl	86.7		ng/l	100		87	0.1-118			
Surr: Tetrachioro-meta-xylene	77.0		ng/l	100		77	12-117			
LCS (W4L0182-BS1)				Analyzed:	12/12/14	15:38			. 	
4,4'-DDD	68.4	5.0	ng/l	100		68	42-133			
4,4´-DDE	67.6	5.0	ng/l	100		68	33-126			
4,4'-DDT	66.8	5.0	ng/l	100		67	35-147			
Aldrin	61.9	5.0	ng/l	100		62	18-117			
alpha-BHC	64.7	5.0	ng/l	100		65	47-119			
beta-BHC	70.6	5.0	ng/l	100		71	53-123			
delta-BHC	73.4	5.0	ng/l	100		73	51-123			
Dieldrin	66.5	5.0	ng/l	100		67	48-123			
Endosulfan I	59.8	5.0	ng/l	100		60	14-131			
Endosulfan II	65.0	5.0	ng/l	100		65	40-121			
Endosulfan sulfate	73.2	5.0	ng/l	100		73	44-140			
Endrin	68.1	5.0	ng/l	100		68	40-143			
Endrin aldehyde	59.1	5.0	ng/l	100		59	18-136			
gamma-BHC (Lindane)	67.1	5.0	ng/l	100		67	49-117			
Heptachlor	64.4	5.0	ng/l	100		64	31-130			

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4L0182 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W4L0182-BS1)				Analyzed:	12/12/14	15:38			-	
Heptachlor epoxide	66.9	5.0	ng/l	100		67	49-122			
Surr: Decachlorobiphenyl	73.3		ng/l	100		73	0.1-118			
Surr: Tetrachloro-meta-xylene	63.2		ng/l	100		63	12-117			
Matrix Spike (W4L0182-MS1)	Sourc	e: 4L02137-01		Analyzed:	12/12/14	16:39				
4,4'-DDD	66.1	5.0	ng/i	100	ND	66	23-124			
4,4'-DDE	73.0	5.0	ng/l	100	ND	73	30-114			
4,4'-DDT	64.6	5.0	ng/l	100	ND	65	11-151			
Aldrin	58.2	5.0	ng/l	100	ND	58	18-110			
alpha-BHC	66.2	5.0	ng/l	100	ND	66	43-114			
beta-BHC	69.6	5.0	ng/l	100	ND	70	24-135			
delta-BHC	71.4	5.0	ng/l	100	ND	71	37-122			
Dieldrin	90.8	5.0	ng/l	100	ND	91	27-132			
Endosulfan I	52.4	5.0	ng/l	100	ND	52	0.1-140			
Endosulfan II	62.7	5.0	ng/l	100	ND	63	17-122			
Endosulfan sulfate	82.7	5.0	ng/l	100	ND	83	37-131			
Endrin	78.7	5.0	ng/l	100	ND	79	42-144			
Endrin aldehyde	52.3	5.0	ng/l	100	ND	52	11-113			
gamma-BHC (Lindane)	79.8	5.0	ng/l	100	ND	80	33-112			
Heptachlor	62.9	5.0	ng/l	100	ND	63	28-131			
Heptachlor epoxide	63.3	5.0	ng/l	100	ND	63	36-117			
Surr: Decachlorobiphenyl	71.0		ng/l	100		71	0.1-118			
Surr: Tetrachloro-meta-xylene	66.7		ng/l	100		67	12-117			
fatrix Spike Dup (W4L0182-MSD1)		e: 4L02137-01	_	Analyzed:	12/12/14	16:08				
4,4'-DDD	38.3	5.0	ng/l	100	ND	38	23-124	53	30	MS-0
4,4'-DDE	38.1	5.0	ng/l	100	ND	38	30-114	63	30	MS-0
4,4'-DDT	38.7	5.0	ng/l	100	ND	39	11-151	50	30	MS-0
Aldrin	35.7	5.0	ng/l	100	ND	36	18-110	48	30	MS-0
alpha-BHC	38.2	5.0	ng/i	100	ND	38	43-114	54	30	MS-0
beta-BHC	39.1	5.0	ng/l	100	ND	39	24-135	56	30	MS-0
delta-BHC	41.3	5.0	ng/l	100	ND	41	37-122	54	30	MS-0
Dieldrin	43.5	5.0	ng/l	100	ND	43	27-132	70	30	MS-0
Endosulfan I	31.7	5.0	ng/l	100	ND	32	0.1-140	49	30	MS-0
Endosulfan II	37.2	5.0	ng/l	100	ND	37	17-122	51	30	MS-0
Endosulfan sulfate	49.4	5.0	ng/l	100	ND	49	37-131	51	30	MS-05
Endrin	45.9	5.0	ng/l	100	ND	46	42-144	53	30	MS-0
Endrin aldehyde	28.0	5.0	ng/l	100	ND	28	11-113	60	30	MS-0
gamma-BHC (Lindane)	44.5	5.0	ng/l	100	ND	44	33-112	57	30	MS-05
Heptachlor	38.5	5.0	ng/l	100	ND	38	28-131	48	30	MS-05
Heptachlor epoxide	37.4	5.0	ng/l	100	ND	37	36-117	51	30	MS-05

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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4L0182 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result %REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W4L0182-MSD1)	Source	: 4L02137-01	,	Analyzed:	12/12/14 16:08				
Surr: Decachlorobiphenyl	45.0		ng/l	100	45	0.1-118			
Surr: Tetrachloro-meta-xylene	38.3		ng/l	100	38	12-117			

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W4L0198 - SM 2540D

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0198-BLK1)				Analyzed:	12/03/14	20:15				
Total Suspended Solids	ND	5	mg/l							•
Duplicate (W4L0198-DUP1)	Source	e: 4L01052-02		Analyzed:	12/03/14	20:15				
Total Suspended Solids	25.0	5	mg/i		22.0	•		13	20	
Duplicate (W4L0198-DUP2)	Source	e: 4L02094-05		Analyzed:	12/03/14	20:15				
Total Suspended Solids	1.00	5	mg/l		1.00			NR	20	
Batch W4L0208 - EPA 353.2										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC	RPD	RPD Limit	Date Qualifiers
Blank (W4L0208-BLK1)				Analyzed:	12/03/14	15:07				
NO2+NO3 as N	ND	100	ug/l							-
LCS (W4L0208-BS1)				Analyzed:	12/03/14	15:09				
NO2+NO3 as N	1060	100	ug/l	1000		106	90-110			
Matrix Spike (W4L0208-MS1)	Sourc	e: 4L03012-02		Analyzed:	12/03/14	15:14				
NO2+NO3 as N	2200	100	ug/l	2000	149	102	90-110			
Matrix Spike (W4L0208-MS2)	Source	e: 4L03012-03		Analyzed:	12/03/14	15:20				
NO2+NO3 as N	2050	100	ug/l	2000	71.0	99	90-110			
Matrix Spike Dup (W4L0208-MSD1)	Source	e: 4L03012-02		Analyzed:	12/03/14	15:16				
NO2+NO3 as N	2150	100	ug/l	2000	149	100	90-110	2	20	
Matrix Spike Dup (W4L0208-MSD2)	Source	e: 4L03012-03		Analyzed:	12/03/14	15:22				
NO2+NO3 as N	2040	100	ug/l	2000	71.0	98	90-110	0.7	20	
Batch W4L0241 - EPA 365.1										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0241-BLK1)				Analyzed:	12/03/14	23:31				
o-Phosphate as P	ND	0.0020	mg/l			•				
o-Phosphate as P, dissolved	ND	2.0	ug/l							
Blank (W4L0241-BLK2)				Analyzed:	12/04/14	11:35				
o-Phosphate as P	ND	0.0020	mg/l							
o-Phosphate as P, dissolved	ND	2.0	ug/l							
LC8 (W4L0241-B\$1)	_			Analyzed:	12/03/14	23:32				
o-Phosphate as P	0.0496	0.0020	mg/l	0.0500		99	90-110			



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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W4L0241 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC <u>Limits</u>	RPD	RPD Limit	Data Qualifiers
LCS (W4L0241-BS1)				Analyzed:	12/03/14	23:32				
o-Phosphate as P, dissolved	49.6	2.0	ug/l	50.0		99	90-110			
LCS (W4L0241-BS2)				Analyzed:	12/04/14	11:43				
o-Phosphate as P	0.0494	0.0020	mg/l	0.0500		99	90-110			
o-Phosphate as P, dissolved	49.4	2.0	ug/l	50.0		99	90-110			
Matrix Spike (W4L0241-MS1)	Sourc	e: 4L02094-05		Analyzed:	12/03/14	23:44				
o-Phosphate as P	0.0535	0.0020	mg/l	0.0500	ND	107	90-110			
o-Phosphate as P, dissolved	53.7	2.0	ug/l	50.0	ND	107	90-110			
Matrix Spike Dup (W4L0241-MSD1)	Sourc	e: 4L02094-05		Analyzed:	12/03/14	23:45				
o-Phosphate as P	0.0535	0.0020	mg/l	0.0500	ND	107	90-110	NR	20	
o-Phosphate as P, dissolved	51.8	2.0	ug/l	50.0	ND	104	90-110	4	20	
Batch W4L0262 - SM 2540C										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0262-BLK1)				Analyzed:	12/04/14	12:15				
Total Dissolved Solids	ND	10	mg/l							
LCS (W4L0262-BS1)				Analyzed:	12/04/14	12:15				
Total Dissolved Solids	819	10	mg/i	824		99	96-102			
Dupilcate (W4L0262-DUP1)	Sourc	e: 4L02094-02		Analyzed:	12/04/14	12:15				
Total Dissolved Solids	525	10	mg/i		530			0.9	10	
Duplicate (W4L0262-DUP2)	Sourc	e: 4L02097-01		Analyzed:	12/04/14	12:15				
Total Dissolved Solids	412	10	mg/l		407			1	10	
Batch W4L0527 - EPA 350.1										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0527-BLK1)				Analyzed:	12/12/14	19:17				
Ammonia as N	ND	0.10	mg/i							
LCS (W4L0527-BS1)				Analyzed:	12/12/14	19:17				
Ammonia as N	0.269	0.10	mg/l	0.250	•	108	90-110			
Matrix Spike (W4L0527-MS1)	Sourc	e: 4L02091-01		Analyzed:	12/12/14	19:17				
Ammonia as N	1.99	0.50	mg/l	1.25	0.657	106	90-110			
Matrix Spike Dup (W4L0527-MSD1)	Sourc	e: 4L02091-01		Analyzed:	12/12/14	19:17				
Ammonia as N	1.99	0.50	mg/l	1.25	0.657	107	90-110	0.3	15	
Batch W4L0658 - EPA 365.1										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0558-BLK1)				Analyzed:	12/18/14	18:48				
Phosphorus as P, Total	ND	0.010	mg/i						-	
LC3 (W4L0658-BS1)				Analyzed:	12/18/14	18:50				
Phosphorus as P, Total	0.0502	0.010	mg/l	0.0500		100	90-110			
Duplicate (W4L0658-DUP1)	Source	e: 4L02094-05		Analyzed:	12/18/14	19:07				

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Duplicate (W4L0658-DUP1)	Sourc	e: 4L02094-05		Analyzed: 1	12/18/14 1	19:07				
Phosphorus as P, Total	0.00214	0.010	mg/l		0.00217			1	20	
Matrix Spike (W4L0658-MS1)	Sourc	e: 4L03064-01		Analyzed: 1	12/18/14 1	18:53				
Phosphorus as P, Total	0.990	0.050	mg/l	0.250	0.740	100	90-110			
Matrix Spike (W4L0658-MS2)	Source	e: 4L04059-01		Analyzed: 1	12/18/14 1	18:57				
Phosphorus as P, Total	0.390	0.020	mg/l	0.100	0.270	120	90-110			MS-02
Matrix Spike Dup (W4L0658-MSD1)	Sourc	e: 4L03064-01		Analyzed: 1	12/18/14 1	18:54				
Phosphorus as P, Total	0.990	0.050	mg/l	0.250	0.740	100	90-110	NR	20	
Matrix Spike Dup (W4L0658-MSD2)	Source	e: 4L04059-01		Analyzed: 1	12/18/14 1	18:58				
Phosphorus as P, Total	0.386	0.020	mg/l	0.100	0.270	116	90-110	1	20	MS-02
Batch W4L0660 - EPA 365.1										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0660-BLK1)				Analyzed: 1	12/15/14 1	15:21				
Phosphorus, Dissolved	ND	0.010	mg/l							
LCS (W4L0660-BS1)				Analyzed: 1	12/15/14 1	15:22				
Phosphorus, Dissolved	0.0495	0.010	mg/l	0.0500		99	90-110			
Matrix Spike (W4L0660-MS1)	Sourc	e: 4L02094-01		Analyzed: 1	12/15/14 1	15:25				
Phosphorus, Dissolved	0.0509	0.010	mg/l	0.0500	0.00147	99	90-110			•
Matrix Spike (W4L0660-MS2)	Sourc	e: 4L02094-05		Analyzed: 1	12/15/14 1	15:34				
Phosphorus, Dissolved	0.0488	0.010	mg/l	0.0500	ND	98	90-110			
Matrix Spike Dup (W4L0660-MSD1)	Sourc	e: 4L02094-01		Analyzed: 1	12/15/14 1	15:27				
Phosphorus, Dissolved	0.0501	0.010	mg/l	0.0500	0.00147	97	90-110	2	20	
	0	e: 4L02094-05		Analyzed: 1	12/45/44	E-2E				
Matrix Spike Dup (W4L0660-MSD2)	Sourc	:e: 4LU2U84-U5		Allalyzeu.	12/13/14	0.33				

Metals by EPA 200 Series Methods - Quality Control

Batch	W4L0253	- EPA 200.7

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Ļi <u>mit</u>	Data Qualifiers
Blank (W4L0253-BLK1)				Analyzed:	12/05/14	11:12				
Calcium, Total	ND	0.100	mg/l							
LCS (W4L0253-BS1)				Analyzed:	12/05/14	11:09				
Calcium, Total	49.8	0.100	mg/l	50.2		99	85-115			
Matrix Spike (W4L0253-MS1)	Sourc	e: 4L02116-05		Analyzed:	12/05/14	12:11				
Calcium, Total	57.2	0.100	mg/l	50.2	9.47	95	70-130			-
Matrix Spike (W4L0253-MS2)	Sourc	e: 4L03011-04		Analyzed:	12/05/14	12:17				
Calcium, Total	54.0	0.100	mg/l	50.2	4.04	99	70-130	-		
Matrix Spike Dup (W4L0253-MSD1)	Sourc	e: 4L02116-05		Analyzed:	12/05/14	12:14				
Calcium, Total	58.8	0.100	mg/l	50.2	9.47	98	70-130	3	30	

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W4L0253-MSD2)	Sourc	e: 4L03011-04		Analyzed:	12/05/14	12:19				
Calcium, Total	55.0	0.100	mg/l	50.2	4.04	101	70-130	2	30	
Batch W4L0255 - EPA 200.8				_						
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0255-BLK1)				Analyzed:	12/08/14	13:52				
Copper, Total	ND	0.50	ug/l							
LCS (W4L0255-BS1)				Analyzed:	12/08/14	13:43				
Copper, Total	52.5	0.50	ug/l	50.0		105	85-115			
Matrix Spike (W4L0255-MS1)	Sourc	e: 4L02094-01		Analyzed:	12/08/14	15:11				
Copper, Total	53.2	0.50	ug/l	50.0	1.13	104	70-130			
Matrix Spike (W4L0255-MS2)	Source	e: 4L03108-01		Analyzed:	12/08/14	14:49				
Copper, Total	54.1	0.50	ug/l	50.0	3.52	101	70-130			
Matrix Spike Dup (W4L0255-MSD1)	Source	e: 4L02094-01		Analyzed:	12/08/14	15:16				
Copper, Total	53.4	0.50	ug/l	50.0	1.13	105	70-130	0.3	30	
Matrix Spike Dup (W4L0255-MSD2)	Source	e: 4L03108-01		Analyzed:	12/08/14	14:54				
Copper, Total	53.0	0.50	ug/l	50.0	3.52	99	70-130	2	30	
Batch W4L0701 - EPA 200.7			_							
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0701-BLK1)				Analyzed:	12/11/14 1	12:17				
Calcium, Total	ND	0.100	mg/l							
LCS (W4L0701-BS1)				Analyzed:	12/11/14 1	12:22				
Calcium, Total	47.8	0.100	mg/l	50.2		95	85-115			
Matrix Spike (W4L0701-MS1)	Source	e: 4L09049-01		Analyzed:	12/11/14 1	13:21				
Calcium, Total	109	0.100	mg/l	50.2	59.9	97	70-130	**		
Matrix Spike (W4L0701-MS2)	Source	e: 4L09049-02		Analyzed:	12/11/14 1	13:27				
Calcium, Total	109	0.100	mg/l	50.2	60.0	97	70-130			
Matrix Spike Dup (W4L0701-MSD1)	Source	o: 4L09049-01		Analyzed:	12/11/14 1	3:24				
Calcium, Total	109	0.100	mg/l	50.2	59.9	99	70-130	0.8	30	
Matrix Spike Dup (W4L0701-MSD2)	Source	: 4L09049-02	-	Analyzed:	12/11/14 1	3:29				
Calcium, Total	112	0.100	mg/l	50.2	60.0	103	70-130	3	30	

Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W4L0557 - GC/MS NCI-SIM								
Analyte	Result	MRL	Units	Spike Source Level Result %REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0557-BLK1)			A	vnalyzed: 12/16/14 12:31				
Allethrin	ND	2.0	ng/l					
Bifenthrin	ND	2.0	ng/l					

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Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W4L0557 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Dat Qualifiers
Blank (W4L0557-BLK1)				Analyzed:	12/16/14 1	12:31				
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	177		ng∕l	250		71	2-205			
Surr: Triphenyl phosphate	187		ng/l	250		75	6-222			
.CS (W4L0557-BS1)			,	Analyzed: 1	12/16/14 1	3:04		_		
Allethrin	42.9	2.0	ng/l	50.0		86	23-149			
Bifenthrin	46.4	2.0	ng/l	50.0		93	26-153			
Cyfluthrin	32.1	2.0	ng/l	50.0		64	3-168			
Cypermethrin	39.8	2.0	ng/l	50.0		80	2-169			
Deltamethrin/Tralomethrin	27.1	2.0	ng/l	50.0		54	0.1-252			
Dichloran	39.6	2.0	ng/l	50.0		79	53-161			
Fenpropathrin (Danitol)	41.3	2.0	ng/l	50.0		83	28-154			
Fenvalerate/Esfenvalerate	40.0	2.0	ng/l	50.0		80	35-133			
L-Cyhalothrin	25.0	2.0	ng/l	50.0		50	9-214			
Pendimethalin	45.0	2.0	ng/l	50.0		90	41-158			
Permethrin	49.2	5.0	ng/l	50.0		98	31-154			
Prallethrin	39.3	2.0	ng/l	50.0		79	28-143			
Sumithrin	39.1	10	ng/l	50.0		78	12-200			
Tefluthrin	37.4	2.0	ng/l	50.0		75	48-161			
Surr: Perylene-d12	213		ng/l	250		85	2-205			
Surr: Triphenyl phosphete .CS Dup (W4L0567-BSD1)	255		ng∕l /	250 Analyzed: 1	12/16/14 1	102 3:36	6-222			
Allethrin	39.9	2.0	ng/l	50.0		80	23-149	7	30	
Bifenthrin	45.6	2.0	ng/l	50.0		91	26-153	2	30	
Cyfluthrin	33.0	2.0	ng/l	50.0		66	3-168	3	30	
Cypermethrin	40.0	2.0	ng/l	50.0		80	2-169	0.4	30	
Deltamethrin/Tralomethrin	27.6	2.0	ng/l	50.0		55	0.1-252	2	30	
Dichloran	35.7	2.0	ng/l	50.0		71	53-161	10	30	
Fenpropathrin (Danitol)	42.8	2.0	ng/l	50.0		86	28-154	4	30	
Fenvalerate/Esfenvalerate	41.9	2.0	ng/l	50.0		84	35-133	5	30	

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Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W4L0557 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result %RE	C % REC	RPD	RPD Limit	Data Qualifiers
LCS Dup (W4L0557-BSD1)			Α	nalyzed:	12/16/14 13:36				
L-Cyhalothrin	25.4	2.0	ng/l	50.0	51	9-214	2	30	
Pendimethalin	44.4	2.0	ng/l	50.0	89	41-158	1	30	
Permethrin	48.9	5.0	ng/l	50.0	98	31-154	0.5	30	
Prallethrin	38.8	2.0	ng/l	50.0	78	28-143	1	30	
Sumithrin	38.4	10	ng/l	50.0	77	12-200	2	30	
Tefluthrin	35.3	2.0	ng/l	50.0	71	48-161	6	30	
Surr: Perylene-d12	209		ng/l	250	84	2-205			
Surr: Tripheny/ phosphate	252		ng/l	250	101	6-222			

Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4L0243 - EPA 525.2

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0243-BLK1)			A	nalyzed: 1	12/05/14	09:42				
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	456		ng/l	500		91	76-128			

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Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4L0243 - EPA 525.2

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC	RPD	RPD Limit	Date Qualifiers
Blank (W4L0243-BLK1)			,	Analyzed:	12/05/14	09:42				
Surr: Triphenyl phosphate	587		ng/l	500		117	40-163			
LCS (W4L0243-BS1)			/	Analyzed: 1	2/05/14	10:06				
Azinphos methyl (Guthion)	28.5	10	ng/l	50.0		57	0.1-188			
Bolstar	37.0	10	ng/l	50.0		74	11-166			
Chlorpyrifos	52.4	10	ng/l	50.0		105	37-169			
Coumaphos	37.0	10	ng/l	50.0		74	0.1-225			
Demeton-o	38.6	10	ng/l	50.0		77	0.1-211			
Demeton-s	38.6	10	ng/i	50.0		77	0.1-213			
Diazinon	35.8	10	ng/l	50.0		72	43-152			
Dichlorvos	50.5	10	ng/l	50.0		101	46-133			
Dimethoate	40.1	10	ng/l	50.0		80	10-234			
Disulfoton	47.1	10	ng/l	50.0		94	0.1-212			
Ethoprop	46.6	10	ng/l	50.0		93	53-163			
Ethyl parathion	42.9	10	ng/l	50.0		86	7-230			
Fensulfothion	44.4	10	ng/l	50.0		89	0.1-265			
Fenthion	45.8	10	ng/l	50.0		92	20-177			
Malathion	49.8	10	ng/l	50.0		100	14-175			
Merphos	43.9	10	ng/l	50.0		88	28-181			
Methyl parathion	41.9	10	ng/l	50.0		84	0.1-252			
Mevinphos	35.3	10	ng/l	50.0		71	14-202			
Naled	20.3	10	ng/l	50.0		41	0.1-240			
Phorate	46.1	10	ng/l	50.0		92	26-180			
Ronnel	45.5	10	ng/l	50.0		91	34-154			
Stirophos	36.5	10	ng/l	50.0		73	0.1-188			
Tokuthion (Prothiofos)	45.9	10	ng/l	50.0		92	23-159			
Trichloronate	46.8	10	ng/l	50.0		94	34-153			
Surr: 1,3-Dimethyl-2-nitrobenzene	460		ng/l	500		92	76-128			
Surr: Triphenyl phosphate	582		ng/l	500		116	40-163			
Matrix Spike (W4L0243-MS1)	Source	e: 4L03064-01	,	Analyzed: 1	12/05/14	10:31				
Azinphos methyl (Guthion)	101	10	ng/l	50.0	ND	202	0.1-154			MS-0
Bolstar	56.8	10	ng/l	50.0	ND	114	4-184			
Chlorpyrifos	83.9	10	ng/l	50.0	14.6	139	37-168			
Coumaphos	72.5	10	ng/l	50.0	ND	145	0.1-203			
Demeton-o	59.3	10	ng/l	50.0	ND	119	0.1-208			
Demeton-s	59.3	10	ng/i	50.0	ND	119	0.1-207			
Diazinon	49.2	10	ng/l	50.0	ND	98	36-153			
Dichlorvos	67.5	10	ng/l	50.0	10.9	113	42-137			
Dimethoate	85.3	10	ng/l	50.0	ND	171	4-222			
Disulfoton	76.8	10	ng/l	50.0	ND	154	12-199			

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Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4L0243 - EPA 525.2

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Dat Qualifiers
Matrix Spike (W4L0243-MS1)	Sourc	e: 4L03064-01		Analyzed:	12/05/14	10:31				
Ethoprop	66.8	10	ng/l	50.0	ND	134	51-167			
Ethyl parathion	91.9	10	ng/l	50.0	ND	184	5-229			
Fensulfothion	96.4	10	ng/l	50.0	ND	193	0.1-316			
Fenthion	76.5	10	ng/l	50.0	ND	153	23-169			
Malathion	348	10	ng/l	50.0	283	130	6-184			
Merphos	74.3	10	ng/l	50.0	ND	149	3-210			
Methyl parathion	99.4	10	ng/l	50.0	ND	199	0.1-249			
Mevinphos	83.9	10	ng/t	50.0	ND	168	25-189			
Naled	97.8	10	ng/l	50.0	ND	196	0.1-242			
Phorate	66.4	10	ng/l	50.0	ND	133	31-181			
Ronnel	68.0	10	ng/l	50.0	ND	136	29-153			
Stirophos	78.7	10	ng/l	50.0	3.45	151	0.1-167			
Tokuthion (Prothiofos)	58.9	10	ng/l	50.0	ND	118	27-160			
Trichloronate	64.2	10	ng/i	50.0	ND	128	40-150			
Surr: 1,3-Dimethyl-2-nitrobenzene	423		ng/l	500		85	76-128			
Surr: Triphenyl phosphate	969		ng/l	500		194	40-163			S-MS
Matrix Spike Dup (W4L0243-MSD1)	Sourc	e: 4L03064-01		Analyzed: 1	2/05/14	10:55				
Azinphos methyl (Guthion)	99.2	10	ng/l	50.0	ND	198	0.1-154	2	30	MS-0
Bolstar	58.9	10	ng/l	50.0	ND	118	4-184	4	30	
Chlorpyrifos	75.4	10	ng/l	50.0	14.6	122	37-168	11	30	
Coumaphos	72.0	10	ng/l	50.0	ND	144	0.1-203	0.7	30	
Demeton-o	51.8	10	ng/l	50.0	ND	104	0.1-208	14	30	
Demeton-s	51.8	10	ng/l	50.0	ND	104	0.1-207	14	30	
Diazinon	33.8	10	ng/l	50.0	ND	68	36-153	37	30	MS-0
Dichlorvos	67.7	10	ng/l	50.0	10.9	114	42-137	0.2	30	
Dimethoate	46.7	10	ng/l	50.0	ND	93	4-222	58	30	MS-0
Disulfoton	70.6	10	ng/l	50.0	ND	141	12-199	9	30	
Ethoprop	66.7	10	ng/l	50.0	ND	133	51-167	0.1	30	
Ethyl parathion	92.5	10	ng/l	50.0	ND	185	5-229	0.6	30	
Fensulfothion	91.8	10	ng/l	50.0	ND	184	0.1-316	5	30	
Fenthion	68.5	10	ng/l	50.0	ND	137	23-169	11	30	
Malathion	319	10	ng/l	50.0	283	72	6-184	9	30	
Merphos	77.4	10	ng/l	50.0	ND	155	3-210	4	30	
Methyl parathion	93.5	10	ng/l	50.0	ND	187	0.1-249	6	30	
Mevinphos	79.5	10	ng/l	50.0	ND	159	25-189	5	30	
Naled	107	10	ng/l	50.0	ND	215	0.1-242	9	30	
Phorate	63.3	10	ng/l	50.0	ND	127	31-181	5	30	
Ronnel	61.8	10	ng/l	50.0	ND	124	29-153	9	30	
Stirophos	82.3	10	ng/l	50.0	3.45	158	0.1-167	5	30	

Page 34 of 36

Analytical Laboratory Service - Since 1964

Date Received:

12/02/14 15:25

Date Reported:

01/07/15 15:09

Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4L0243 - EPA 525.2

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W4L0243-MSD1)		e: 4L03064-01		nalyzed: 1	2/05/14	10:55				
Tokuthion (Prothiofos)	60.9	10	ng/l	50.0	ND	122	27-160	3	30	•
Trichloronate	57.0	10	ng/l	50.0	ND	114	40-150	12	30	
Surr: 1,3-Dimethyl-2-nitrobenzene	424		ng/l	500		85	76-128			
Surr. Triphenyl phosphate	1010		ng/l	500		201	40-163			S-MS1

Method Reporting Limit

MRL

Analytical Laboratory Service - Since 1964

PW Environmental 230 Dove Ct. Santa Paula CA, 93060 **Date Received:** 12/02/14 15:25 **Date Reported:** 01/07/15 15:09

Notes and Definitions

S-MS1	Surrogate recovery outside of acceptance window confirmed as matrix effect by analysis of MS/MSD on this sample.
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.
S-11	Surrogate recovery outside of control limits. 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-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.
**	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
DII	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

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.

ENVIRONMENTAL 230 DOVE COURT • SANTA PAULA, CA 93060

CHAIN OF CUSTODY RECORD

(805) 525-5563 • FAX (805) 525-28	196	Lab: ABC	AN/	ALYSIS REQUESTED	
PROJECT NAME: LOS Augeles Irrigated Lau PROJECT ADDRESS: NUISERY Growers As	de Group sociation		8260B es 8260B	dubia Ta	410-703) 72-HR STD
PROJECT MANAGER: Bryn Home SAMPLER NAME (PRINT): Scott Jordan P.O. # 1384-	PO	HCI N 15M F	FULL VOCs w/Oxygenates Dissolved Lead 6010 Total Lead 6020 Metals: CAM 17 PP13	20158 208 208 208 308 308 308 308 308 308 308 308 308 3	Fixed Gas TPHG/BIEK/MTBE (Carb 410-T03) Lab Filter TAT: RUSH 24-HR 48-HR 72-HR 6 Other LYL' etc' by Other LYL' etc'
SAMPLE SAMPLE DEPTH DATE	TIME SAMPLE SAMPLE MATRIX	Pres (ce (Dry) TPH-G 8015M TPH-D 8015M TPH-O 8015M TPH-Char, 8015	FULL VOCs w/C Dissolved Lead Total Lead 6020 Metals: CAM 17	Methanol 8015. Ethanol 82608 Gescal Go Retheod Se levac	Fixed Gas Albert Lab Filter Cab Subsequence (ABLB) Albert Lab Filter Cab Subsequence (ABLB) Albert Lab Filter Cab Subsequence (ABLB) Albert Lab Fixed Gas Al
LAILG-NGA150-6 NA 12/2/19	18:00 Hz0 2 13:55 1 1				Stowates Runoff
			T		150-6-188-1
	Antero			hlorine (mg/L) =	
OK BY BRIN HOME 12-3-	14 00				40.1 ~ (0.)
			N	H3 (mg/L) =	0-0 - 0-0
RELINQUISHED BY: (signature)	RECEIVED BY: (signature) RECEIVED BY:			DATE /2/3/14/	TIME 20
RELINOUISHED BY: (signature)	(signature)	- other	_	(2-374)	1201
EDF-COELT San	ed MRLs to: Diego S.B. (unty VCEHD FPI		Lahontan RWQCB	Central San Bernardi Coast County RWOCB FD	no KCEHD OCHCA Kern Orange County County



December 30, 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-NGA150-6

DATE RECEIVED:

3 Dec -14

ABC LAB. NO.:

PWE1214.036

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

Report Date:

30 Dec-14 10:03 (p 1 of 2)

Test Code:

PWE1214.036fml | 15-9813-9094

							001 00001			- 00.0 000
Fathead Minne	ow 7-d Larval Surviva	l and Growt	h Test				Aquatic	Bioassay & 0	Consulting	Labs, Inc.
Batch ID:	10-0145-7354	Test Type:	Growth-Surviva	ıl (7d)		Α	nalyst:			
Start Date:	03 Dec-14 14:55	Protocol:	EPA/821/R-02-	013 (2002)		D	iluent: La	boratory Wate	er	
Ending Date:	10 Dec-14 14:25	Species:	Pimephales pro	omelas		В	Brine: No	t Applicable		
Duration:	6d 23h	Source:	Aquatic Biosyst	tems, CO	Age:		\ge:			_
Sample ID:	11-1374-7457	Code:	PWE1214.036f	fml		C	Client: PV	V Environmer	ntal	
Sample Date:	02 Dec-14 08:00	Material:	Sample Water			P	Project: Lo	s Angeles Irri	gated Land	s Group
Receive Date:	03 Dec-14 10:55	Source:	Bioassay Repo	rt						
Sample Age:	31h (8.2 °C)	Station:	LAILG-NGA150	0-6						
Comparison S	Summary									
Analysis ID	Endpoint	NOE	L LOEL	TOEL	PMSD	TU	Method			
05-9167-8964	7d Survival Rate	100	>100	NA	NA	1	Wilcoxo	n Rank Sum T	Two-Sample	e Test
16-7632-0097	Mean Dry Biomass-m	g 100	>100	NA	9.9%	1	Equal Va	ariance t Two	-Sample Te	est
Point Estimate	e Summary									
Analysis ID	Endpoint	Level	l %	95% LCL	95% UCL	TU	Method			
04-0255-1158	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Ir	terpolation (I	CPIN)	
		EC10	>100	N/A	N/A	<1		·		
		EC15	>100	N/A	N/A	<1				
		EC20		N/A	N/A	<1				
		EC25		N/A	N/A	<1				
		EC40		N/A	N/A	<1				
		EC50		N/A	N/A	<1				
13-1412-4479	Mean Dry Biomass-m		>100	N/A	N/A	<1	Linear Ir	terpolation (I	CPIN)	
		IC10		N/A	N/A	<1			,	
		IC15		N/A	N/A	<1				
		IC20		N/A	N/A	<1				
		IC25		N/A	N/A	<1				
		IC40		N/A	N/A	<1				
		1C50		N/A	N/A	<1				
Test Acceptat	nility									
Analysis ID	Endpoint	Attrib	oute	Test Stat	TAC Lim	its	Overlap	Decision		
04-0255-1158	•		rol Resp	1	0.8 - NL		Yes		cceptability	Criteria
	7d Survival Rate		rol Resp	1	0.8 - NL		Yes		cceptability	
	Mean Dry Biomass-m		rol Resp	0.376	0.25 - NL		Yes		cceptability	
	Mean Dry Biomass-m	•	rol Resp	0.376	0.25 - NL		Yes		cceptability	
	Mean Dry Biomass-m	_	•	0.09899	0.12 - 0.3		Yes		ceptability (
	•	ig Fivio		0.03033	0.12 - 0.3		163	Delow Ac	Coptability	Officia
7d Survival R	ate Summary Control Type Cou	nt Mear	n 95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effec
C-% 0	Negative Control 4	1	1	1	1	1	0	0	0.0%	0.0%
100	4	1	1	1	1	1	0	0	0.0%	0.0%
Mean Dry Bio	mass-mg Summary					-				
C-%	Control Type Cou	nt Mear	n 95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effec
0	Negative Control 4	0.376		0.4268	0.3353	0.413	3 0.01596	0.03191	8.49%	0.0%
100	4	0.378	82 0.3444	0.4119	0.3607	0.408		0.0212	5.61%	-0.58%
7d Survival R	ate Detail				_					
C-%	Control Type Rep	1 Rep	2 Rep 3	Rep 4						
0	Negative Control 1	1	1	1						
100	1	1	* 1	1						
Mean Dry Bio	mass-mg Detail		1111							
C-%	Control Type Rep	1 Rep	2 Rep 3	Rep 4						
0	Negative Control 0.37			0.3353						
100	0.37			0.3607						
.50	0.07	J. 701	. 5.555							000

Analyst: ____ QA: \$\frac{\frac{1}{455}}{}\$

CETIS Summary Report

Report Date:

30 Dec-14 10:03 (p 2 of 2)

Test Code:

PWE1214.036fml | 15-9813-9094

Fathead	Minnow 7-d Larval Su	ırvival ar	Aquatic Bioassay & Consulting Labs, Inc.			
7d Survi	val Rate Binomials					-
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Negative Control	15/15	15/15	15/15	15/15	
100		15/15	15/15	15/15	15/15	

Report Date:

30 Dec-14 10:03 (p 1 of 3)

Test Code:

PWE1214.036fml | 15-9813-9094

Fathead Minn	now 7-d Larval Su	ırvival a	nd Growt	h Tes	t					Aquatic	Bioassay &	Consultin	g Labs, Inc.	
Analysis ID: Analyzed:	05-9167-8964 30 Dec-14 10:03		ndpoint: nalysis:		urvival Rate		nple)		CETIS Version: CETISv1.8.7 Official Results: Yes				
•	11-1374-7457 : 02 Dec-14 08:00 : 03 Dec-14 10:55 31h (8.2 °C)) N	ode: laterial: ource: tation:	Sam Bioa	1214.036fr ple Water ssay Repor G-NGA150	t				Client: PW Environmental Project: Los Angeles Irrigated Lands Gro				
Data Transfor	rm	Zeta	Alt H	avi	Trials	Seed				Test Res	sult			
Angular (Corre		NA	C > T		NA	NA					7d survival ra	te		
Wilcoxon Rai	nk Sum Two-Sam	ple Tes	t											
Control	vs C-%	•	Test	Stat	Critical	Ties	DF	P-Value	P-Type	Decisio	n(a:5%)			
Negative Cont	trol 100	•	18		NA	1	6	1.0000	Exact	Non-Sig	nificant Effec	t		
ANOVA Table)													
Source	Sum Squa	res	Mean	Squa	are	DF		F Stat	P-Value	Decisio	n(a:5%)			
Between	0		0			1		65540	<0.0001	Significa	nt Effect			
Error	0		0			6								
Total	0					7								
7d Survival R	Rate Summary													
C-%	Control Type	Count	Mean	1	95% LCL	95% U	CL	Median	Min	Max	Std Err	CV%	%Effect	
0	Negative Control	4	1		1	1		1	1	1	0	0.0%	0.0%	
100		4	1		1	1		1	1	1	0	0.0%	0.0%	
Angular (Cor	rected) Transforn	ned Sur	nmary											
C-%	Control Type	Count	Mear	1	95% LCL	95% U	CL	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%	
100		4	1.441		1.441	1.442		1.441	1.441	1.441	0	0.0%	0.0%	
7d Survival R	Rate Detail													
C-%	Control Type	Rep 1	Rep :	2	Rep 3	Rep 4								
0	Negative Contro	1	1		1	1								
100		1	1		1	1								
Angular (Cor	rected) Transforr	ned Det	ail											
C-%	Control Type	Rep 1	Rep	2	Rep 3	Rep 4								
0	Negative Contro	1.441	1.441	1	1.441	1.441					· · · · · · · · · · · · · · · · · · ·			
100		1.441	1.441	l	1.441	1.441								
	Rate Binomials	1.441	1.441	<u> </u>	1.441	1.441		81.4-17.4					· · · · · · · · · · · · · · · · · · ·	
	Rate Binomials Control Type	1.441 Rep 1	1.441 Rep		1.441 Rep 3	1.441 Rep 4		54 ± 17.4						

Analyst:_____QA:____

100

15/15

15/15

15/15

15/15

Report Date:

30 Dec-14 10:03 (p 2 of 3)

Test Code:

PWE1214.036fml | 15-9813-9094

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

05-9167-8964

30 Dec-14 10:03

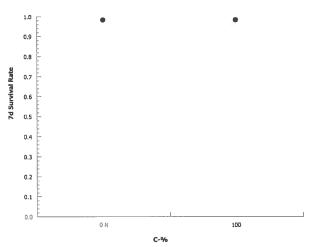
Endpoint: 7d Survival Rate Analysis:

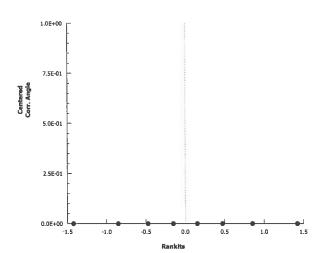
Nonparametric-Two Sample

CETIS Version: Official Results: Yes

CETISv1.8.7







Report Date:

30 Dec-14 10:03 (p 3 of 3)

Test Code:

PWE1214.036fml | 15-9813-9094

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	16-7632-0097	Endpoint:	Mean Dry Biomass-mg	CETIS Version:	CETISv1.8.7
Analyzed:	30 Dec-14 10:03	Analysis:	Parametric-Two Sample	Official Results:	Yes

Sample ID: 11-1374-7457 Code: PWE1214.036fml Client: PW Environmental

Sample Date: 02 Dec-14 08:00 Material: Sample Water Project: Los Angeles Irrigated Lands Group

Receive Date: 03 Dec-14 10:55 Source: Bioassay Report Sample Age: 31h (8.2 °C) Station: LAILG-NGA150-6

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD Test Result
Untransformed	NA	C > T	NA	NA	9.9% Passes mean dry biomass-mg

Equal Variance t Two-Sample Test

Control vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(a:5%)
Negative Control	100	-0.1131	1.943	0.037	6	0.5432	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(a:5%)
Between	9.388884E-06	9.388884E-06	1	0.01279	0.9136	Non-Significant Effect
Error	0.004402999	0.0007338331	6			
Total	0.004412387		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	2.267	47.47	0.5190	Equal Variances
Variances	Mod Levene Equality of Variance	0.2058	13.75	0.6660	Equal Variances
Variances	Levene Equality of Variance	0.1705	13.75	0.6940	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9543	0.6451	0.7547	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.2077	0.3313	0.4562	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.2926	3.878	0.6343	Normal Distribution

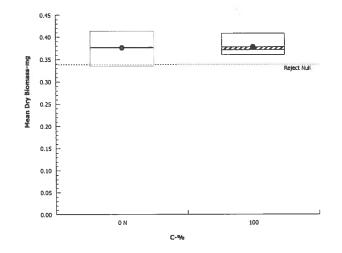
Mean Dry Biomass-mg Summary

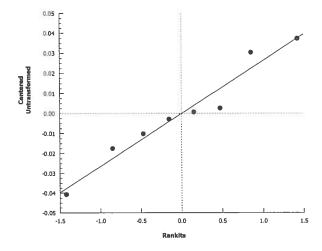
C-%	Control Type Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control 4	0.376	0.3252	0.4268	0.3777	0.3353	0.4133	0.01596	8.49%	0.0%
100	4	0.3782	0.3444	0.4119	0.3717	0.3607	0.4087	0.0106	5.61%	-0.58%

Mean Dry Biomass-mg Detail

	•	•			
C-%		Control Type Rep 1	Rep 2	Rep 3	Rep 4
0		Negative Control 0.3787	0.3767	0.4133	0.3353
100		0.3753	0.4087	0.368	0.3607

Graphics





Report Date:

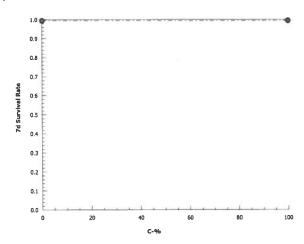
30 Dec-14 10:03 (p 1 of 2)

Test Code:

PWE1214.036fml | 15-9813-9094

									Test (Code:	PWE1214	.036fml	15-9813-9094
Fathea	d Minne	ow 7-d Larval Su	rvival a	nd Grow	th Test					Aquatio	Bioassay &	Consult	ing Labs, Inc.
Analysi	is ID:	04-0255-1158	Е	ndpoint:	7d Survival Ra	te			CETIS	S Versio	n: CETISv1	8.7	
Analyz	ed:	30 Dec-14 10:03	3 A	nalysis:	Linear Interpol	ation (ICPIN)			Offici	al Resul	ts: Yes		
Sample	D:	11-1374-7457	C	ode:	PWE1214.036	ifml			Clien	t: P	W Environmer	ital	-,
Sample	Date:	02 Dec-14 08:00) I V	flaterial:	Sample Water				Proje	ct: L	os Angeles Irri	gated La	ands Group
Receiv	e Date:	03 Dec-14 10:55	s S	ource:	Bioassay Repo	ort							
Sample	e Age:	31h (8.2 °C)	S	station:	LAILG-NGA15	0-6							
Linear	Interpo	lation Options											
X Trans	sform	Y Transform	s	eed	Resamples	Exp 95%	CL	Method					
Linear		Linear	0)	280	Yes		Two-Point	Interpo	olation			
Point E	Stimate	es											
Level	%	95% LCL	95% U	CL 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 Sur	vival R	ate Summary				Calcu	lated	Variate(A/	В)				
C-%	C	Control Type	Count	Mea	n Min	Max	Std	Err Sto	Dev	CV%	%Effect	Α	В
0	N	legative Control	4	1	1	1	0	0		0.0%	0.0%	60	60
100			4	1	1	1	0	0		0.0%	0.0%	60	60
7d Sur	vival R	ate Detail											
C-%	C	Control Type	Rep 1	Rep	2 Rep 3	Rep 4							
0	N	legative Control	1	1	1	1							
100			1	1	1	1							
7d Sur	vival R	ate Binomials											-
C-%		Control Type	Rep 1	Rep	2 Rep 3	Rep 4							
0		Negative Control	15/15	15/1	5 15/15	15/15							
100			15/15	15/1	5 15/15	15/15							

Graphics



Report Date:

30 Dec-14 10:03 (p 2 of 2)

Test Code:

PWE1214.036fml | 15-9813-9094

										1030	Joue.	1 4	VL 12 17.	QOOMIN	13-3013-30
Fathea	d Minno	ow 7-d Larval Su	ırviva	l and	Growt	h Test					Aquatic	Bioas	say & C	onsultir	ng Labs, In
Analysi	s ID:	13-1412-4479		Endp	oint:	Mean Dry Biom	ass-mg			CETI	S Version	: C	ETISv1.	8.7	
Analyze	ed:	30 Dec-14 10:0	3	Analy	/sis:	Linear Interpola	ation (ICPIN)			Offic	al Result	s: Y	es		
Sample	D:	11-1374-7457		Code):	PWE1214.036	ml			Clien	t: PV	V Env	ironmen	tai	
Sample	Date:	02 Dec-14 08:00	0	Mate	rial:	Sample Water				Proje	ct: Lo:	s Ang	eles Irrig	ated Lar	ds Group
Receive	e Date:	03 Dec-14 10:5	5	Sour	ce:	Bioassay Repo	rt								
Sample	Age:	31h (8.2 °C)		Stati	on:	LAILG-NGA15	0-6								
Linear	Interpo	lation Options											_	-	
X Trans	sform	Y Transform		Seed	l	Resamples	Exp 95%	CL M	ethod						
Linear		Linear		2086	526	280	Yes	T	wo-Poin	t Interpo	olation				
Point E	stimate	es													
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 [Ory Bio	nass-mg Summ	ary				Cal	culated	Variate						
C-%	С	ontrol Type	Cou	nt	Mear	n Min	Max	Std E	r St	d Dev	CV%		Effect		
0	N	egative Control	4		0.376	0.3353	0.4133	0.0159	96 0.0	3191	8.49%	0.	0%		
100			4		0.378	32 0.3607	0.4087	0.0106	0.0	212	5.61%	-0	.58%		

Rep 3

0.4133

0.368

Rep 2

0.3767

0.4087

Rep 4

0.3353

0.3607

Graphics

C-%

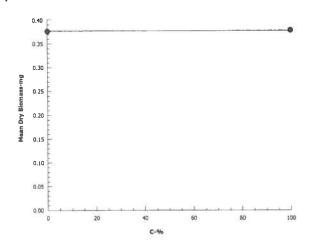
100

0

Mean Dry Biomass-mg Detail

Control Type

Negative Control



Rep 1

0.3787

0.3753

CETIS Measurement Report

Report Date:

30 Dec-14 10:03 (p 1 of 2)

Test Code:

PWE1214.036fml | 15-9813-9094

Fathead Minn	now 7-d Larval S	urviva	and Growt	h Test				Aquatio	: Bioassay &	Consultin	g Labs, Inc.
Batch ID: Start Date: Ending Date: Duration:	10-0145-7354 03 Dec-14 14:5 10 Dec-14 14:2 6d 23h		Test Type: Protocol: Species: Source:	EPA/821/R-02- Pimephales pro	Growth-Survival (7d) EPA/821/R-02-013 (2002) Pimephales promelas Aquatic Biosystems, CO				Laboratory Water Not Applicable		
Sample ID:	11-1374-7457		Code:	PWE1214.036	fml			Client: P	W Environme	ental	
Sample Date:	: 02 Dec-14 08:0	0	Material:	Sample Water				Project: Lo	os Angeles Irr	rigated Lan	ds Group
	: 03 Dec-14 10:5	5	Source:	Bioassay Repo							
Sample Age:	31h (8.2 °C)		Station:	LAILG-NGA15	0-6						
Alkalinity (Ca	CO3)-mg/L										
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	68.63	68.19	69.06	68	69	0.183	0.5175	0.75%	0
100		8	108	108	108	108	108	0	0	0.0%	0
Overall		16	88.31			68	108				0 (0%)
Conductivity-	-µmhos										
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	336.3	334.3	338.2	333	340	0.8183	2.315	0.69%	0
100		8	900.3	837.6	962.9	791	985	26.5	74.94	8.33%	0
Overall		16	618.3			333	985				0 (0%)
Dissolved Ox	kygen-mg/L										
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.738	7.459	8.016	7.5	8.5	0.1179	0.3335	4.31%	0
100		8	6.838	6.407	7.268	5.9	7.3	0.1822	0.5153	7.54%	0
Overall		16	7.288			5.9	8.5				0 (0%)
Hardness (Ca	aCO3)-mg/L										
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	90	90	90	90	90	0	0	0.0%	0
100		8	267	267	267	267	267	0	0	0.0%	0
Overall		16	178.5			90	267				0 (0%)
pH-Units											
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr		7.763	7.539	7.986	7.3	8.1	0.09437	0.2669	3.44%	0
100	-	8	7.288	6.902	7.673	6.5	8	0.163	0.4612	6.33%	0
Overall		16	7.525			6.5	8.1				0 (0%)
Temperature	e-°C										
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	24.01	23.98	24.04	24	24.1	0.01249	0.03531	0.15%	0
100		8	24.06	23.96	24.16	24	24.3	0.04199	0.1188	0.49%	0
Overall		16	24.04			24	24.3				0 (0%)

Report Date:

30 Dec-14 10:03 (p 2 of 2)

Test Code: PWE1214.036fml | 15-9813-9094

							16	at Code.	1 44 12 14.0001111 10-30 10-3034
Fathead Mi	nnow 7-d Larval S	urvival a	nd Growth	Test				Aquatio	Bioassay & Consulting Labs, Inc.
Alkalinity (CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	69	69	69	69	69	68	68	68
100		108	108	108	108	108	108	108	108
Conductivi	ty-µmhos								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	340	336	334	335	336	333	338	338
100		931	791	968	980	985	863	834	850
Dissolved (Oxygen-mg/L								• • • • • • • • • • • • • • • • • • •
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.5	7.5	7.6	7.5	7.7	7.8	7.8	8.5
100		7.2	5.9	7.2	7.2	7.3	6.3	6.6	7
Hardness (CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	90	90	90	90	90	90	90	90
100		267	267	267	267	267	267	267	267
pH-Units									
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	8.1	7.8	7.6	7.7	8	7.6	8	7.3
100		8	7.4	7.5	7.4	7.5	6.8	6.5	7.2
Temperatu	re-°C								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24	24.1	24	24	24	24	24	24
100		24	24.2	24	24	24	24.3	24	24



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-NGA150-6

DATE RECEIVED:

3 Dec -14

ABC LAB. NO.:

PWE1214.036

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 = 25.00 %

IC50 = 50.00 %

Yours very truly,

Scott Johnson

Laboratory Director

Report Date:

, 30 Dec-14 10:08 (p 1 of 2)

Test Code: PWE1214.036cer | 10-7784-2683

Ceriodaphnia	7-d Survival and	Reprodu	ction Te	est				Aquatic B	ioassay & C	onsulting l	Labs, Inc.
Batch ID:	02-2078-0717	Tes	t Type:	Reproduction	-Survival (7d)		Ana	lyst:			
Start Date:	03 Dec-14 14:55		tocol:		2-013 (2002)		Dilu	ent: Lab	oratory Wate	r	
Ending Date:	10 Dec-14 14:25	Spe	ecies:	Ceriodaphnia	dubia		Brin	e: Not	Applicable		
Ouration:	6d 23h	Şoı	ırce:	Aquatic Bios	ystems, CO		Age	ə:			
Sample ID:	07-3783-4766	Co	de:	PWE1214.03	36cer		Clie	ient: PW Environmental			
Sample Date:	02 Dec-14 13:55	Mat	terial:	Sample Water	er		Proj	ect: Los	Angeles Irrig	jated Lands	Group
Receive Date:	03 Dec-14 10:55	Sou	urce:	Bioassay Re	port						
Sample Age:	25h (8.2 °C)	Sta	tion:	LAILG-NGA	50-6						
Comparison S	Summary										
Analysis ID	Endpoint		NOEL		TOEL	PMSD	TU	Method			
13-6780-2235	7d Survival Rate		100	>100	NA	NA	1	Fisher Ex			
09-8580-2891	Reproduction		<100	100	NA	23.8%	>1	Wilcoxon	Rank Sum T	wo-Sample	Test
Point Estimate	e Summary										
Analysis ID	Endpoint		Level		95% LCL	95% UCL	TU	Method			
)2-6199-2610	7d Survival Rate		EC5	50	16.67	N/A	2	Linear Int	erpolation (IC	CPIN)	
			EC10		33.33	N/A	1				
			EC15		N/A	N/A	<1				
			EC20		N/A	N/A	<1				
			EC25		N/A	N/A	<1				
			EC40		N/A	N/A	<1				
			EC50		N/A	N/A	<1				
12-9569-7159	Reproduction		IC5	5	5	5	20	Linear Int	erpolation (IC	CPIN)	
			IC10	10	10	10	10				
			IC15	15	15	15	6.667				
			IC20	20	20	20	5				
			IC25	25	25	25	4				
			IC40 IC50	40 50	40 50	40 50	2.5 2				
			1030				<u> </u>				

•	•		A 44mil	auta.	Toot Stat	TAC Lim	ite	Overlan	Decision		
Analysis ID	Endpoint	.	Attrit			TAC Lim	its	Overlap	Decision Passes A	cceptability	Criteria
Analysis ID 02-6199-2610	Endpoint 7d Survival Rate		Conti	rol Resp	1	0.8 - NL	its	Yes	Passes A	cceptability	
Analysis ID 02-6199-2610 13-6780-2235	Endpoint 7d Survival Rate 7d Survival Rate		Cont	rol Resp rol Resp	1	0.8 - NL 0.8 - NL	its	Yes Yes	Passes A	cceptability	Criteria
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891	Endpoint 7d Survival Rate 7d Survival Rate Reproduction		Conti Conti Conti	rol Resp rol Resp rol Resp	1 1 17.2	0.8 - NL 0.8 - NL 15 - NL	its	Yes Yes Yes	Passes A Passes A Passes A	cceptability	Criteria Criteria
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction		Conti Conti Conti	rol Resp rol Resp rol Resp rol Resp	1	0.8 - NL 0.8 - NL		Yes Yes	Passes Ad Passes Ad Passes Ad Passes Ad	cceptability	Criteria Criteria Criteria
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction		Contr Contr Contr	rol Resp rol Resp rol Resp rol Resp	1 1 17.2 17.2	0.8 - NL 0.8 - NL 15 - NL 15 - NL		Yes Yes Yes Yes	Passes Ad Passes Ad Passes Ad Passes Ad	cceptability cceptability cceptability	Criteria Criteria Criteria
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction		Contr Contr Contr	rol Resp rol Resp rol Resp rol Resp D	1 1 17.2 17.2 0.2385	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4		Yes Yes Yes Yes	Passes Ad Passes Ad Passes Ad Passes Ad	cceptability cceptability cceptability	Criteria Criteria Criteria
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction	Count	Contr Contr Contr PMS	rol Resp rol Resp rol Resp rol Resp D	1 1 17.2 17.2 0.2385	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	7	Yes Yes Yes Yes Yes	Passes A Passes A Passes A Passes A	cceptability cceptability cceptability cceptability	Criteria Criteria Criteria Criteria
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type	Count	Contr Contr Contr Contr PMS	rol Resp rol Resp rol Resp rol Resp D	1 17.2 17.2 0.2385 CL 95% UCL	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	7 Max	Yes Yes Yes Yes Yes Yes Yes	Passes A Passes A Passes A Passes A Std Dev	cceptability cceptability cceptability cceptability cceptability	Criteria Criteria Criteria Criteria **Effec
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type Negative Control	Count 10	Contr Contr Contr PMS	rol Resp rol Resp rol Resp rol Resp D n 95% Le	1 17.2 17.2 0.2385 CL 95% UCL	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	7 Max 1	Yes Yes Yes Yes Yes Yes Yes O	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev	cceptability ccept	Criteria Criteria Criteria Criteria MEffec 0.0%
09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type Negative Control	Count 10	Contr Contr Contr PMS	rol Resp rol Resp rol Resp rol Resp D 95% L 1 0.6738	1 17.2 17.2 0.2385 CL 95% UCL 1	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1	7 Max 1	Yes Yes Yes Yes Yes Yes Yes O	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev	cceptability cceptability cceptability cceptability cceptability cceptability cceptability cceptability 0.0% 35.14%	Criteria Criteria Criteria Criteria WEffec 0.0% 10.0%
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type Negative Control	Count 10 10 Count	Contr Contr Contr Contr PMS Mean 1 0.9	rol Resp rol Resp rol Resp rol Resp D n 95% Le 1 0.6738	1 17.2 17.2 0.2385 CL 95% UCL 1	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1	7 Max 1 1	Yes Yes Yes Yes Yes Yes Yos Std Err 0 0.1	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162	cceptability cceptability cceptability cceptability cceptability cceptability cceptability 35.14%	Criteria Criteria Criteria Criteria Criteria WEffec 0.0% 10.0%
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type Negative Control Summary Control Type	Count 10 10 Count	Control Control Control Control PMS Mean 1 0.9	rol Resp rol Resp rol Resp rol Resp D n 95% Le 1 0.6738	1 17.2 17.2 0.2385 CL 95% UCL 1 1	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1	7 Max 1 1	Yes Yes Yes Yes Yes Yes O 0.1	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162	cceptability cceptability cceptability cceptability cceptability cceptability cceptability cceptability 0.0% 35.14%	Criteria Criteria Criteria Criteria WEffec 0.0% 10.0%
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0 100	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Reproduction ate Summary Control Type Negative Control Summary Control Type Negative Control	Count 10 10 Count 10	Control Contro	rol Resp rol Resp rol Resp rol Resp D n 95% L 1 0.6738 n 95% L	1 17.2 17.2 0.2385 CL 95% UCL 1 1 1 CL 95% UCL 22.55	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 0	7 Max 1 1 1 Max 32	Yes Yes Yes Yes Yes Yes O 0.1 Std Err 2.365	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162	cceptability cceptability cceptability cceptability cceptability cceptability cceptability cceptability 0.0% 35.14%	Criteria Criteria Criteria Criteria **Effect 0.0% 10.0% **Effect 0.0%
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Reteroduction Reproduction	Count 10 10 Count 10 10 10 Rep 1	Control Contro	rol Resp rol Resp rol Resp rol Resp D	1 17.2 17.2 0.2385 CL 95% UCL 1 1 1 CL 95% UCL 22.55 0	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 0 Min 11 0	Max 1 1 Max 32 0	Yes Yes Yes Yes Yes Yes O 0.1 Std Err 2.365 0 Rep 7	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162 Std Dev 7.48 0	cceptability ccept	Criteria Criteria Criteria Criteria %Effec 0.0% 10.0% %Effec 0.0% 100.0%
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type Negative Control Summary Control Type Negative Control Reproduction	Count 10 10 10 Count 10 10 11	Control Contro	rol Resp rol Resp rol Resp rol Resp D n 95% L 1 0.6738 n 95% L 11.85 0	1 17.2 17.2 0.2385 CL 95% UCL 1 1 1 CL 95% UCL 22.55 0	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 0 Rep 5	Max 1 1 1 Max 32 0 Rep 6	Yes Yes Yes Yes Yes Yes O 0.1 Std Err 2.365 0 Rep 7	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162 Std Dev 7.48 0	cceptability ccept	Criteria Criteria Criteria Criteria %Effec 0.0% 10.0% %Effec 0.0% 100.0% Rep 10
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Reteroduction Reproduction	Count 10 10 Count 10 10 10 Rep 1	Control Contro	rol Resp rol Resp rol Resp rol Resp D	1 17.2 17.2 0.2385 CL 95% UCL 1 1 1 CL 95% UCL 22.55 0	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 0 Min 11 0	Max 1 1 Max 32 0	Yes Yes Yes Yes Yes Yes O 0.1 Std Err 2.365 0 Rep 7	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162 Std Dev 7.48 0	cceptability ccept	Criteria Criteria Criteria Criteria %Effect 0.0% 10.0% %Effect 0.0% 100.0%
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-% 0 100 7d Survival R	Endpoint 7d Survival Rate 7d Survival Rate Reproduction R	Count 10 10 10 Count 10 10 11	Control Contro	rol Resp rol Resp rol Resp rol Resp D n 95% L 1 0.6738 n 95% L 11.85 0	1 17.2 17.2 0.2385 CL 95% UCL 1 1 1 CL 95% UCL 22.55 0	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 0 Rep 5	Max 1 1 1 Max 32 0 Rep 6	Yes Yes Yes Yes Yes Yes O 0.1 Std Err 2.365 0 Rep 7	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162 Std Dev 7.48 0	cceptability ccept	Criteria Criteria Criteria Criteria %Effect 0.0% 10.0% %Effect 0.0% 100.0% Rep 10
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate 7d Survival Rate Reproduction Reproducti	Count 10 10 10 Count 10 10 10 Rep 1	Control Contro	rol Resp rol Resp rol Resp rol Resp D n 95% L 1 0.6738 n 95% L 11.85 0 2 Rep 3	1 17.2 17.2 0.2385 CL 95% UCL 1 1 1 CL 95% UCL 22.55 0 Rep 4 1	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 0 Rep 5 1 1 Rep 5	Max 1 1 Max 32 0 Rep 6 1 1	Yes Yes Yes Yes Yes Yes Yes Std Err 0 0.1 Std Err 2.365 0 Rep 7 1 1	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162 Std Dev 7.48 0 Rep 8	cceptability ccept	Criteria Criteria Criteria Criteria %Effec 0.0% 10.0% %Effec 100.0% Rep 10
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-% 0 100 Reproduction Reproduction Reproduction Reproduction Reproduction	Endpoint 7d Survival Rate 7d Survival Rate Reproduction	Count 10 10 10 Count 10 10 10 Rep 1	Control Contro	rol Resp rol Resp rol Resp rol Resp D	1 17.2 17.2 17.2 0.2385 CL 95% UCL 1 1 1 CL 95% UCL 22.55 0 Rep 4 1 1 Rep 4 20	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 0 Rep 5 1 1 Rep 5	7 Max 1 1 Max 32 0 Rep 6 1 1	Yes Yes Yes Yes Yes Yes Yes Yes Std Err 0 0.1 Std Err 2.365 0 Rep 7 1 1	Passes Ar Passes Ar Passes Ar Passes Ar Passes Ar Passes Ar O 0.3162 Std Dev 7.48 0 Rep 8	cceptability ccept	Criteria Criteria Criteria Criteria %Effec 0.0% 10.0% %Effec 0.0% 100.0% Rep 10 1 1 Rep 10 16
Analysis ID 02-6199-2610 13-6780-2235 09-8580-2891 12-9569-7159 09-8580-2891 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-% 0 100 Reproduction C-% 0 100 Reproduction C-%	Endpoint 7d Survival Rate 7d Survival Rate 7d Survival Rate Reproduction Reproducti	Count 10 10 10 Count 10 10 10 Rep 1	Control Contro	rol Resp rol Resp rol Resp rol Resp D n 95% L 1 0.6738 n 95% L 11.85 0 2 Rep 3	1 17.2 17.2 0.2385 CL 95% UCL 1 1 1 CL 95% UCL 22.55 0 Rep 4 1	0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 0 Rep 5 1 1 Rep 5	Max 1 1 Max 32 0 Rep 6 1 1	Yes Yes Yes Yes Yes Yes Yes Std Err 0 0.1 Std Err 2.365 0 Rep 7 1 1	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0.3162 Std Dev 7.48 0 Rep 8	cceptability ccept	Criteria Criteria Criteria Criteria %Effec 0.0% 10.0% %Effec 100.0% Rep 10

CETIS Summary Report

Report Date:

30 Dec-14 10:08 (p 2 of 2)

Test Code:

PWE1214.036cer | 10-7784-2683

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	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
100		0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Report Date:

30 Dec-14 10:08 (p 1 of 1)

Test Code:

PWE1214.036cer | 10-7784-2683

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	09-8580-2891	Endpoint:	Reproduction	CETIS Version:	CETISv1.8.7
	A 4 4 6 6 6 6		Management of True Commis	Official Passelfes	Voc

Analysis: Official Results: Analyzed: 30 Dec-14 10:08 Nonparametric-Two Sample

PWE1214.036cer Client: PW Environmental Code: Sample ID: 07-3783-4766

Los Angeles Irrigated Lands Group Sample Date: 02 Dec-14 13:55 Project: Material: Sample Water Bioassay Report Receive Date: 03 Dec-14 10:55 Source:

Station: LAILG-NGA150-6 Sample Age: 25h (8.2 °C)

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Intransformed	NA	C > T	NA	NA	23.8%	Fails reproduction

Wilcoxon Rank Sum Two-Sample Test

Control vs	C-%	Test Stat	Critical	Ties	DF P-Value	P-Type	Decision(a:5%)
Negative Control	100*	55	NA	0	18 <0.0001	Exact	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value_	Decision(α:5%)
Between	1479.2	1479.2	1	52.87	<0.0001	Significant Effect
Error	503.6	27.97778	18			
Total	1982.8		19			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(a:1%)
Variances	Mod Levene Equality of Variance	9.653	8.285	0.0061	Unequal Variances
Variances	Levene Equality of Variance	18.88	8.285	0.0004	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.774	0.866	0.0004	Non-normal Distribution
Distribution	Kolmogorov-Smirnov D	0.3	0.2235	<0.0001	Non-normal Distribution
Distribution	D'Agostino Skewness	2.776	2.576	0.0055	Non-normal Distribution
Distribution	D'Agostino Kurtosis	2.306	2.576	0.0211	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	13.03	9.21	0.0015	Non-normal Distribution
Distribution	Anderson-Darling A2 Normality	2.168	3.878	<0.0001	Non-normal Distribution

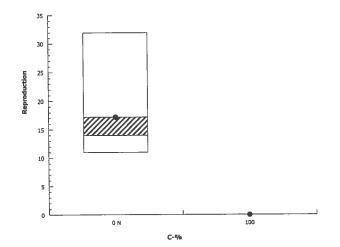
Reproduction Summary

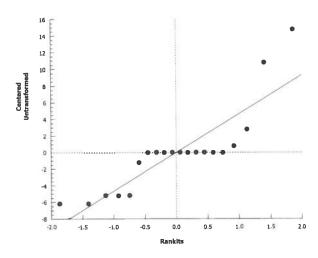
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contro	10	17.2	11.85	22.55	14	11	32	2.365	43.49%	0.0%
100		10	0	0	0	0	0	0	0		100.0%

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	32	18	28	20	12	12	11	12	11	16
100		0	0	0	0	0	0	0	0	0	0

Graphics





CETIS™ v1.8.7.11

Report Date:

30 Dec-14 10:08 (p 1 of 2)

Test Code:

PWE1214.036cer | 10-7784-2683

Ceriodaphnia	7-d	Survival	and	Reproduction Te	est
--------------	-----	----------	-----	-----------------	-----

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

02-6199-2610

30 Dec-14 10:08

Analysis:

Endpoint: 7d Survival Rate Linear Interpolation (ICPIN)

CETISv1.8.7 CETIS Version:

Official Results: Yes

Sample ID:

07-3783-4766

Code:

PWE1214.036cer

Client:

PW Environmental

Receive Date: 03 Dec-14 10:55

Sample Date: 02 Dec-14 13:55

Material:

Sample Water Bioassay Report Project:

Los Angeles Irrigated Lands Group

Sample Age: 25h (8.2 °C)

Source: Station:

LAILG-NGA150-6

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	50	16.67	N/A	2	NA	6
EC10	100	33.33	N/A	1	NA	3
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

7d Surviv	al Rate Summary				Cal	culated Varia	ite(A/B)				
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В
0	Negative Control	10	1	1	1	0	0	0.0%	0.0%	10	10
100	_	10	0.9	0	1	0.1	0.3162	35.14%	10.0%	9	10

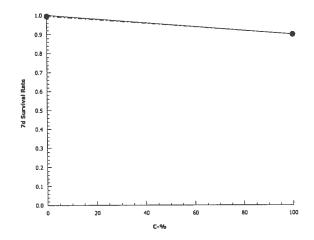
7d Survival Rate Detail

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		0	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		0/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1

Graphics



Report Date:

30 Dec-14 10:08 (p 2 of 2)

Test Code:

PWE1214.036cer | 10-7784-2683

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

Analysis ID: 12-9569-7159

30 Dec-14 10:08

Endpoint: Reproduction

Analysis: Linear Interpolation (ICPIN) **CETIS Version:**

CETISv1.8.7

Official Results: Yes

Sample ID:

Analyzed:

07-3783-4766

Code:

PWE1214.036cer

Client:

PW Environmental

Sample Date: 02 Dec-14 13:55

Material:

Sample Water Bioassay Report Project:

Los Angeles Irrigated Lands Group

Receive Date: 03 Dec-14 10:55

Sample Age: 25h (8.2 °C)

Source: Station: LAILG-NGA150-6

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1352717	280	Yes	Two-Point Interpolation

Point Es	stimates
----------	----------

Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL
IC5	5	5	5	20	20	20
IC10	10	10	10	10	10	10
IC15	15	15	15	6.667	6.667	6.667
IC20	20	20	20	5	5	5
IC25	25	25	25	4	4	4
IC40	40	40	40	2.5	2.5	2.5
IC50	50	50	50	2	2	2

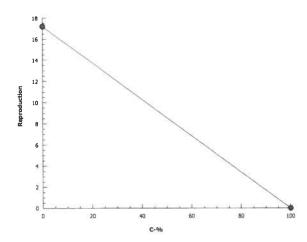
Reproduct	tion Summary
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Reprodu	ction Summary		Calculated Variate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	17.2	11	32	2.365	7.48	43.49%	0.0%
100		10	0	0	0	0	0		100.0%

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	32	18	28	20	12	12	11	12	11	16
100		0	0	0	0	0	0	0	0	0	0

Graphics



Report Date:

30 Dec-14 10:08 (p 1 of 1)

Test Code:

PWE1214.036cer | 10-7784-2683

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Passes 7d survival rate

Analysis ID: Analyzed:

13-6780-2235

30 Dec-14 10:08 Analysis:

7d Survival Rate **Endpoint:**

Single 2x2 Contingency Table

Seed

NA

CETIS Version: CETISv1.8.7

Official Results: Yes

Sample ID:

07-3783-4766

Code:

PWE1214.036cer

Client:

PW Environmental

Sample Date: 02 Dec-14 13:55

Material:

Sample Water

Project:

Los Angeles Irrigated Lands Group

Receive Date: 03 Dec-14 10:55 Sample Age: 25h (8.2 °C)

Data Transform

Source: Station:

Zeta

Bioassay Report LAILG-NGA150-6

Trials

NA

Test Result

Untransformed **Fisher Exact Test**

C-% Test Stat P-Value P-Type Decision(a:5%) Control vs

0.5000 Non-Significant Effect **Negative Control** 100 0.5 Exact

Alt Hyp

C > T

Data Summary

C-% NR R NR+R **Prop NR** Prop R %Effect **Control Type** 0.0% 10 10 0 **Negative Contr** 0 0 1 10 0.9 0.1 10.0% 100 1

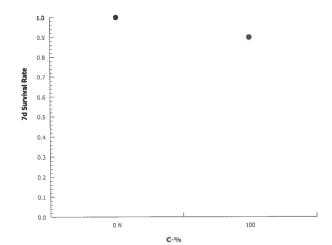
7d Survival Rate Detail

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

Graphics



CETIS™ v1.8.7.11

CETIS Measurement Report

Report Date:

30 Dec-14 10:08 (p 1 of 2)

Test Code:

PWE1214.036cer | 10-7784-2683

-										-	
Ceriodaphnia	7-d Survival and	d Repi	oduction Te	est 				Aquat	tic Bioassay &	Consulting	g Labs, Inc.
Batch ID: Start Date: Ending Date: Duration:	02-2078-0717 03 Dec-14 14:5 10 Dec-14 14:2 6d 23h		Test Type: Protocol: Species: Source:	Reproduction-S EPA/821/R-02- Ceriodaphnia o Aquatic Biosys	-013 (2002) Iubia				Laboratory Wa Not Applicable	ter	
Sample ID:	07-3783-4766		Code:	PWE1214.036	cer			Client:	PW Environme	ntal	
Sample Date:	02 Dec-14 13:5	5	Material:	Sample Water				Project:	Los Angeles Irr	igated Land	ds Group
	: 03 Dec-14 10:5	5	Source:	Bioassay Repo							
Sample Age:	25h (8.2 °C)		Station:	LAILG-NGA15	0-6 						
Alkalinity (Ca	CO3)-mg/L										
C-%	Control Type	Coun		95% LCL	95% UCL	Min	Max	Std Er		CV%	QA Count
0	Negative Contr	8	68.63	68.19	69.06	68	69	0.183	0.5175	0.75%	0
100		3	108	108	108	108	108	0	0	0.0%	0 (09()
Overall		11	88.31			68	108				0 (0%)
Conductivity-											
C-%	Control Type	Coun		95% LCL	95% UCL	Min	Max	Std Er		CV%	QA Count
0	Negative Contr	8	336.3	334.3	338.2	333	340	0.8183		0.69%	0
100 Overall		11	930 633.1	834.3	1026	891 333	968 968	22.23	38.51	4.14%	0 (0%)
			000.1								0 (070)
Dissolved Ox C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Count
0	Negative Contr	8	7.738	7.459	8.016	7.5	8.5	0.1179		4.31%	0
100		3	6.767	4.902	8.631	5.9	7.2	0.4333		11.09%	0
Overall		11	7.252			5.9	8.5				0 (0%)
Hardness (Ca	aCO3)-mg/L										
C-%	Control Type	Cour	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Count
0	Negative Contr	8	90	90	90	90	90	0	0	0.0%	0
100		3	267	267	267	267	267	0	0	0.0%	0
Overall		11	178.5			90	267				0 (0%)
pH-Units											
C-%	Control Type	Cour	nt Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Coun
0	Negative Contr	8	7.763		7.986	7.3	8.1	0.094		3.44%	0
100		3	7.633		8.432	7.4	8	0.185	6 0.3215	4.21%	0
Overall		11	7.698			7.3	8.1				0 (0%)
Temperature	-°C										
C-%	Control Type	Cour					Max			CV%	QA Coun
0	Negative Contr		24.01		24.04	24	24.1			0.15%	0
100		3	24.07		24.35	24	24.2		64 0.1154	0.48%	0 (00()
Overall		11	24.04			24	24.2				0 (0%)

CETIS Measurement Report

 Report Date:
 30 Dec-14 10:08 (p 2 of 2)

 Test Code:
 PWE1214.036cer | 10-7784-2683

Ceriodaphn	nia 7-d Survival and	d Reprod	Aquation	Aquatic Bioassay & Consulting Labs, Inc.					
Alkalinity (0	CaCO3)-mg/L				<u> </u>				
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	69	69	69	69	69	68	68	68
100		108	108	108					
Conductivi	ty-µmhos								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	340	336	334	335	336	333	338	338
100		931	891	968					
Dissolved (Oxygen-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.5	7.5	7.6	7.5	7.7	7.8	7.8	8.5
100		7.2	5.9	7.2					
Hardness (CaCO3)-mg/L	-							
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	90	90	90	90	90	90	90	90
100		267	267	267					
pH-Units				-					
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	8.1	7.8	7.6	7.7	8	7.6	8	7.3
100		8	7.4	7.5					
Temperatu	re-°C								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24	24.1	24	24	24	24	24	24
100		24	24.2	24					



December 30, 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-NGA150-6

DATE RECEIVED:

3 Dec -14

ABC LAB. NO.:

PWE1214.036

CHRONIC SELENASTRUM ALGAE GROWTH BIOASSAY

NOEC = <100.00 %

TUc = >1.00

IC25 = >100.00 %

IC50 = >100.00%

Yours very truly,

Scott Johnson

Laboratory Director

JCETIS Summary Report

Report Date:

16 Dec-14 08:44 (p 1 of 1)

Test Code: PWE1214.036sel | 01-0344-7978

							les	it Code:	PVVE1214.	036sei 01	-0344-797
Selenastrum G	Browth Test							Aquatic B	ioassay & C	onsulting	Labs, Inc.
Batch ID:	12-4253-0679	Test	Type:	Cell Growth			Ana	alyst:			
Start Date:	04 Dec-14 12:25	Proto	-	EPA/821/R-02-0	13 (2002)		Dili	uent: Lab	oratory Wate	r	
Ending Date:	08 Dec-14 11:30	Spec	ies:	Selenastrum ca	oricornutum		Bri	ne: Not	Applicable		
Duration:	95h	Sour		Aquatic Biosyste			Age	e :			
Sample ID:	04-5464-1883	Code	:	PWE1214.036s	el		Cli	ent: PW	Environment	tal	
Sample Date:	02 Dec-14 08:00	Mate	rial:	Sample Water			Pro	ject: Los	Angeles Irrig	ated Lands	s Group
Receive Date:	03 Dec-14 10:55	Sour	ce:	Bioassay Repor	t						
Sample Age:	52h (8.2 °C)	Statio	on:	LAILG-NGA150	-6						
Comparison S	Summary					-					
Analysis ID	Endpoint		NOEL	LOEL	TOEL	PMSD	TU	Method			
03-1365-6575	Cell Density		<100	100	NA	2.0%	>1	Equal Var	iance t Two-	Sample Te	st
Point Estimate	e Summary										
Analysis ID	Endpoint		Level	%	95% LCL	95% UCL	TU	Method			
09-3598-6310	Cell Density		IC5	86.11	58.84	N/A	1.161	Linear Int	erpolation (IC	PIN)	
			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 Acceptat	oility										
Analysis ID	Endpoint		Attrib	ute	Test Stat	TAC Limi	its	Overlap	Decision		
03-1365-6575	Cell Density		Contro	ol CV	0.01892	NL - 0.2		Yes	Passes Ad	cceptability	Criteria
09-3598-6310	Cell Density		Contro	ol CV	0.01892	NL - 0.2		Yes	Passes Ad	cceptability	Criteria
03-1365-6575	Cell Density		Contro	ol Resp	1.26E+6	1.00E+6 -	NL	Yes	Passes Ad	cceptability	Criteria
09-3598-6310	Cell Density		Contro	ol Resp	1.26E+6	1.00E+6 -	NL	Yes		cceptability	
03-1365-6575	Cell Density		PMSD		0.01995	0.091 - 0.2	29	Yes	Below Acc	ceptability (Oriteria
Cell Density S	Summary										
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effec
0	Negative Control	4	1.2621		1.299E+6	1.230E+6	1.281E-				0.0%
100		4	1.188	E+6 1.172E+6	1.204E+6	1.176E+6	1.197E-	+6 5.039E+3	3 1.008E+4	0.85%	5.81%
Cell Density D	Detail										
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4		_				
0	Negative Control	1.256E+6	1.230	E+6 1.279E+6	1.281E+6						
				4 404- 0	4.40=5.0						

1.176E+6 1.196E+6 1.184E+6 1.197E+6

100

Report Date:

16 Dec-14 08:44 (p 1 of 1)

Test Code:

PWE1214.036sel | 01-0344-7978

Selenastrum Growth Test	Aquatic Bioassay & Consulting Labs, Inc.

CETIS Version: CETISv1.8.7

Analysis ID: Analyzed:

03-1365-6575 16 Dec-14 8:44

Cell Density Endpoint: Parametric-Two Sample Analysis:

Alt Hyp

C > T

Official Results:

Sample ID:

04-5464-1883

Code:

PWE1214.036sel

Client:

Yes PW Environmental

Sample Date: 02 Dec-14 08:00

Data Transform

Untransformed

Material: Source:

Sample Water Bioassay Report Project:

PMSD

2.0%

Los Angeles Irrigated Lands Group

Receive Date: 03 Dec-14 10:55 Sample Age: 52h (8.2 °C)

Station:

Zeta

NA

LAILG-NGA150-6 **Trials**

NA

Test Result

Fails cell density

Foual	Variance	ŧ	Two-Sample Test
Equui	V di la lioc	-	1 WO Campic Tool

Control	vs	C-%	Test Stat	Critical	MSD DF	P-Value	P-Type	Decision(a:5%)
Negative Control	l	100*	5.655	1.943	25170 6	0.0007	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	10731120000	10731120000	1	31.97	0.0013	Significant Effect
Error	2013750000	335625000	6			
Total	12744880000		7			

Seed

NA

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	5.608	47.47	0.1906	Equal Variances
Variances	Mod Levene Equality of Variance	2.384	13.75	0.1735	Equal Variances
Variances	Levene Equality of Variance	3.385	13.75	0.1154	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9371	0.6451	0.5831	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1761	0.3313	0.8350	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.2877	3.878	0.6493	Normal Distribution

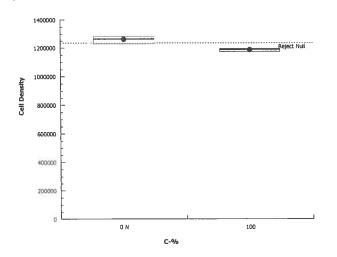
Cell Density Summary

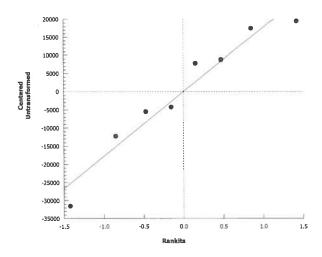
C-%	Control Type Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control 4	1.262E+6	1.224E+6	1.299E+6	1268000	1.230E+6	1.281E+6	1.193E+4	1.89%	0.0%
100	4	1.188E+6	1.172E+6	1.204E+6	1190000	1.176E+6	1.197E+6	5.039E+3	0.85%	5.81%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.256E+6	1.230E+6	1.279E+6	1.281E+6
100		1.176E+6	1.196E+6	1.184E+6	1.197E+6

Graphics





Selenastrum Growth Test

Report Date:

16 Dec-14 08:44 (p 1 of 1)

Test Code:

PWE1214.036sel | 01-0344-7978

Aquatic	Bioassay	&	Consulting	Labs,	inc.
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Analysis ID: Analyzed:

09-3598-6310 16 Dec-14 8:44

Cell Density Endpoint:

Linear Interpolation (ICPIN)

CETIS Version: CETISv1.8.7

Official Results: Yes

Sample ID:

04-5464-1883

Code:

PWE1214.036sel

Client:

PW Environmental

Sample Date: 02 Dec-14 08:00 Receive Date: 03 Dec-14 10:55

Material: Source:

Analysis:

Sample Water Bioassay Report Project:

Los Angeles Irrigated Lands Group

Sample Age: 52h (8.2 °C)

Station:

LAILG-NGA150-6

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	86.11	58.84	N/A	1.161	NA	1.7
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

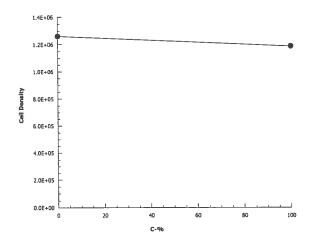
Cell Dens	ity Summary				Cai	cuiateu vai	iate		
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.262E+6	1.230E+6	1.281E+6	1.193E+4	2.387E+4	1.89%	0.0%
100		4	1.188E+6	1.176E+6	1.197E+6	5.039E+3	1.008E+4	0.85%	5.81%

Calculated Varieta

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.256E+6	1.230E+6	1.279E+6	1.281E+6
100		1.176E+6	1.196E+6	1.184E+6	1.197E+6

Graphics



✓ CETIS Measurement Report

Report Date:

16 Dec-14 08:44 (p 1 of 2)

Test Code:

PWE1214.036sel | 01-0344-7978

Selenastrum (Growth Test							Aquati	c Bioassay &	Consultin	g Labs, Inc.
Batch ID: Start Date: Ending Date: Duration:	12-4253-0679 04 Dec-14 12:2 08 Dec-14 11:3 95h		Test Type: Protocol: Species: Source:	Cell Growth EPA/821/R-02- Selenastrum co Aquatic Biosys	apricornutun	n	Dil	ine: N	aboratory Wat	er	
-	04-5464-1883 02 Dec-14 08:0 03 Dec-14 10:5 52h (8.2 °C)		Code: Material: Source: Station:	PWE1214.036 Sample Water Bioassay Repo	ort				PW Environme Los Angeles Irr		ds Group
Alkalinity (Ca	CO3)-mg/L						-				
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0 100 Overall	Negative Contr	1 1 2	60 120 90			60 120 60	60 120 120	0	0 0	0.0% 0.0%	0 0 0 (0%)
							120				- (0,0)
Conductivity- C-%	µmnos Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std En	r Std Dev	CV%	QA Count
0	Negative Contr	5	419.6	410.5	428.7	414	432	3.265	7.301	1.74%	0
100	Negative Conti	5	945.6	927.9	963.3	935	970	6.361	14.22	1.5%	0
Overall		10	682.6	021.0		414	970				0 (0%)
Hardness (Ca	ıCO3)-mg/L		-					-			
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count
0	Negative Contr	1	96			96	96	0	0	0.0%	0
100	•	1	265			265	265	0	0	0.0%	0
Overall		2	180.5			96	265				0 (0%)
pH-Units					"						
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count
0	Negative Contr	5	7.88	7.696	8.064	7.7	8.1	0.0663	3 0.1483	1.88%	0
100		5	7.82	7.537	8.103	7.6	8.2	0.102	0.228	2.92%	0
Overall		10	7.85			7.6	8.2				0 (0%)
Temperature	-°C										
C-%	Control Type	Cour	t Mean	95% LCL	95% UCL	Min	Max	Std Er		CV%	QA Count
0	Negative Contr	5	24.56	24.39	24.73	24.5	24.8	0.0600	0.1342	0.55%	0
100		5	24.56	24.39	24.73	24.5	24.8	0.0600	0.1342	0.55%	0
Overall		10	24.56			24.5	24.8				0 (0%)

← CETIS Measurement Report

Report Date:

16 Dec-14 08:44 (p 2 of 2)

Test Code: PWE1214.036sel | 01-0344-7978

Selenastrui	n Growth Test						Aquatic Bioassay & Consulting Labs, Inc.
Alkalinity (CaCO3)-mg/L						
C-%	Control Type	1					
0	Negative Contr	60					
100		120					
Conductivi	ty-µmhos						
C-%	Control Type	1	2	3	4	5	
0	Negative Contr	414	415	417	420	432	
100		935	936	944	943	970	
Hardness (CaCO3)-mg/L						
C-%	Control Type	1					
0	Negative Contr	96					
100		265					
pH-Units							
C-%	Control Type	1	2	3	4	5	
0	Negative Contr	7.7	7.9	7.9	7.8	8.1	
100		7.6	7.7	7.8	7.8	8.2	
Temperatu	re-°C						
C-%	Control Type	1	2	3	4	5	
0	Negative Contr	24.8	24.5	24.5	24.5	24.5	
100		24.8	24.5	24.5	24.5	24.5	



December 30, 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-NGA188-1

DATE RECEIVED:

3 Dec -14

ABC LAB. NO.:

PWE1214.037

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 %

1030

>100.00 %

Yours very truly,

Scott Johnson

Laboratory Director

Report Date:

30 Dec-14 10:16 (p 1 of 2)

Test Code:

PWE1214.037fml | 13-4985-9434

athead Minno	ow 7-d Larval Survi	val and (Growt	h Test				Aquatic E	Bioassay & C	Consulting	Labs, Inc.
Batch ID:	10-0145-7354	Test	Туре:	Growth-Surviv	/al (7d)		Ar	nalyst:			
Start Date:	03 Dec-14 14:55	Proto	coi:	EPA/821/R-02	2-013 (2002)		Di	luent: Lab	oratory Wate	er	
Ending Date:	10 Dec-14 14:25	Spec	ies:	Pimephales p	romelas		Bı	rine: Not	Applicable		
Ouration:	6d 23h	Sour	ce:	Aquatic Biosy	stems, CO		Ag	ge:			
Sample ID:	14-2399-8730	Code	:	PWE1214.03	7fml		CI		Environmen		
Sample Date:	02 Dec-14 13:55	Mate	rial:	Sample Wate	r		Pr	oject: Los	Angeles Irrig	gated Land:	s Group
Receive Date:	03 Dec-14 10:55	Sour	ce:	Bioassay Rep	ort						
Sample Age:	25h (8.2 °C)	Statio	on:	LAILG-NGA1	88-1						
Comparison S	Summary	-		-				- "			
Analysis ID	Endpoint		NOEL	LOEL	TOEL	PMSD	TU	Method			
17-9952-6406	7d Survival Rate		100	>100	NA	5.84%	1	•	riance t Two-	-	
12-8810-9697	Mean Dry Biomass	-mg	100	>100	NA	11.0%	1	Equal Va	riance t Two-	-Sample Te	st
Point Estimate	e Summary										
Analysis ID	Endpoint		Level		95% LCL	95% UCL		Method			
10-7461-0870	7d Survival Rate		EC5	100	20	N/A	1	Linear Inf	erpolation (I	CPIN)	
			EC10		N/A	N/A	<1				
			EC15		N/A	N/A	<1				
			EC20		N/A	N/A	<1				
			EC25		N/A	N/A	<1				
			EC40	>100	N/A	N/A	<1				
			EC50	>100	N/A	N/A	<1				
07-2338-4101	Mean Dry Biomass	s-mg	IC5	>100	N/A	N/A	<1	Linear In	terpolation (I	CPIN)	
			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 Acceptat	bility										
Analysis ID	Endpoint		Attril			TAC Lim	its	Overlap	Decision		0.111-
	7d Survival Rate			rol Resp	1	0.8 - NL		Yes		cceptability	
	7d Survival Rate			rol Resp	1	0.8 - NL		Yes		cceptability	
	Mean Dry Biomass	_		rol Resp	0.376	0.25 - NL		Yes		cceptability	
	Mean Dry Biomass			rol Resp	0.376	0.25 - NL		Yes		cceptability	
12-8810-9697	Mean Dry Biomass	s-mg	PMS	D	0.1099	0.12 - 0.3	i	Yes	Below Ac	ceptability	Griteria
7d Survival R	ate Summary										
C-%		ount	Mean				Max	Std Err 0	Std Dev 0	CV% 0.0%	%Effect 0.0%
0 100	Negative Control 4		1 0.95	1 0.8484	1 1	1 0.8667	1 1	0.03191	0.06383	6.72%	5.0%
	mass-mg Summar		3.33		· · · · · · · · · · · · · · · · · · ·		•				
C-%		ount	Mea	n 95% LC	L 95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effec
0	Negative Control 4		0.37		0.4268	0.3353	0.4133		0.03191	8.49%	0.0%
100	Negative Control 4		0.40		0.4200	0.3333	0.442	0.01407		6.93%	-8.02%
7d Survival R	Rate Detail				 						
C-%		Rep 1	Rep	2 Rep 3	Rep 4						
0	Negative Control 1	<u> </u>	1	1	1						
100	-	.8667	0.93		1						
	omass-mg Detail										
C-%	_	Rep 1	Rep	2 Rep 3	Rep 4						
0	Negative Control 0		0.37		0.3353						
-	•).442	0.37								
100	O	·T-	0.71	0.0070	0.0171					1 0 = 8	PA-
000-055-186-3	;				CETIS™ v1	.8.7.11			Analyst:	m,	2A: 175

CETIS Summary Report

Report Date:

30 Dec-14 10:16 (p 2 of 2)

Test Code:

PWE1214.037fml | 13-4985-9434

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

7d	Survival	Rate	Binomials
----	----------	------	------------------

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	15/15	15/15	15/15
100		13/15	14/15	15/15	15/15

్ట్ ETIS Analytical Report

Report Date: 30 Dec-14 10:16 (p 1 of 3)
Test Code: PWE1214.037fml | 13-4985-9434

Aquatic Bioassay & Consulting Labs. Inc.

Fathead Minn	ow 7-d Larval Su	rvival and	Growth Tes		Aquatic Bioassay & Consulting Labs, Inc.						
Analysis ID: Analyzed:	17-9952-6406 30 Dec-14 10:16			Survival Rate ametric-Two				S Version: ial Results		8.7	
Sample ID:	14-2399-8730	Code	e: PWI	E1214.037fr	ml		Clier	nt: PW	Environmen	tal	
Sample Date:	02 Dec-14 13:55	Mate	erial: Sam	ple Water			Proje	ect: Los	Angeles Irrig	gated Land	s Group
Receive Date:	: 03 Dec-14 10:55	Sou	rce: Bioa	issay Repor	t						
Sample Age:	25h (8.2 °C)	Stati	ion: LAIL	-G-NGA188	-1						
Data Transfor	rm	Zeta	Alt Hyp	Trials	Seed		PMSD	Test Res	ult		
Angular (Corre	ected)	NA	C > T	NA	NA		5.84%	Passes 7	d survival rat	е	
Equal Variand	ce t Two-Sample 1	Test				:					
Control	vs C-%		Test Stat	Critical	MSD DF	P-Value	P-Type	Decision	(a:5%)		
Negative Cont	trol 100	***	1.595	1.943	0.115 6	0.0809	CDF	Non-Sign	ificant Effect		
ANOVA Table	•				- 10 - 7-11						
Source	Sum Squai	res	Mean Squ	are	DF	F Stat	P-Value	Decision	(a:5%)		
Between	0.01767464		0.0176746	4	1	2.544	0.1619	Non-Sign	ificant Effect		
Error	0.04169257	7	0.0069487	61	6			_			
Total	0.0593672				7	-					
Distributional	l Tests										
Attribute	Test			Test Stat	Critical	P-Value	Decision	(α:1%)			
Variances	Mod Lever	ne Equality	of Variance	11.15	13.75	0.0156	Equal Var	riances			
Variances	Levene Eq			16.72	13.75	0.0064	Unequal \	/ariances			
Distribution	Shapiro-W	-		0.8612	0.6451	0.1235	Normal D	istribution			
Distribution	Kolmogoro		-	0.25	0.3313	0.1599	Normal D	istribution			
Distribution	Anderson-			0.6739	3.878	0.0786	Normal D	istribution			
7d Survival R	Rate Summary										
C-%	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%
100	•	4	0.95	0.8484	1	0.9667	0.8667	1	0.03191	6.72%	5.0%
Angular (Cor	rected) Transform	ned Summ	ıary	· · · · · · · · · · · · · · · · · · ·					_		
C-%	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%
100		4	1.347	1.16	1.535	1.375	1.197	1.441	0.05894	8.75%	6.52%
7d Survival F	Rate Detail										
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Negative Control		1	1	1						
100	140gative Control	0.8667	0.9333	1	1						
	rrected) Transforn										
	Control Type		Rep 2	Rep 3	Rep 4						
C-% 0	Negative Control	Rep 1	1.441	1.441	1.441				·	<u> </u>	
100	Hegalive Contion	1.197	1.31	1.441	1.441						
	Rate Binomials										
		Bon 4	Bor 2	Don 2	Don 4						
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Negative Control		15/15	15/15	15/15						
100		13/15	14/15	15/15	15/15						

Report Date:

30 Dec-14 10:16 (p 2 of 3)

Test Code:

PWE1214.037fml | 13-4985-9434

Fathead Minnow 7-d	Larval	Survival	and	Growth	Test
--------------------	--------	----------	-----	--------	------

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

17-9952-6406

30 Dec-14 10:16

Endpoint: 7d Survival Rate Analysis:

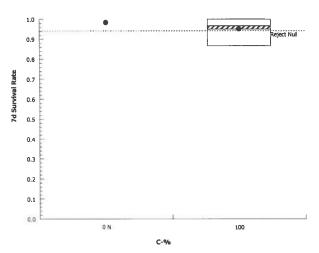
Parametric-Two Sample

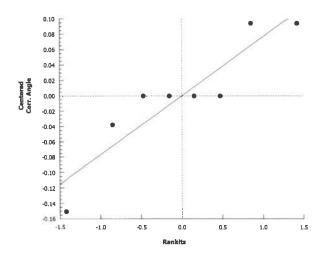
CETIS Version:

CETISv1.8.7

Official Results: Yes

Graphics





Report Date:

30 Dec-14 10:16 (p 3 of 3)

Test Code:

PWE1214.037fml | 13-4985-9434

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:	12-8810-9697	Endpoint:	Mean Dry Biomass-mg	CETIS Version:	CETISv1.8.7
Analyzed:	30 Dec-14 10:16	Analysis:	Parametric-Two Sample	Official Results:	Yes

Sample ID: 14-2399-8730 Code: PWE1214.037fml Client: PW Environmental
Sample Date: 02 Dec-14 13:55 Material: Sample Water Project: Los Angeles Irrigated Lands Group

Sample Date: 02 Dec-14 13:55 Material: Sample Water Project:

Receive Date: 03 Dec-14 10:55 Source: Bioassay Report

Sample Age: 25h (8.2 °C) Station: LAILG-NGA188-1

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	11.0%	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	-1.418	1.943	0.041	6	0.8970	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(a:5%)
Between	0.001820054	0.001820054	1	2.011	0.2059	Non-Significant Effect
Error	0.005429666	0.0009049443	6			
Total	0.00724972		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.287	47.47	0.8408	Equal Variances
Variances	Mod Levene Equality of Variance	0.0001493	13.75	0.9906	Equal Variances
Variances	Levene Equality of Variance	0.0001551	13.75	0.9905	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9269	0.6451	0.4879	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1858	0.3313	0.7047	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.3393	3.878	0.5035	Normal Distribution

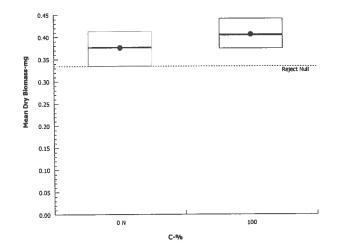
Mean Dry Biomass-mg Summary

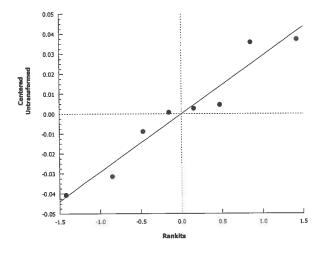
C-%	Control Type Con	unt Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control 4	0.376	0.3252	0.4268	0.3777	0.3353	0.4133	0.01596	8.49%	0.0%
100	4	0.4062	0.3614	0.4509	0.404	0.3747	0.442	0.01407	6.93%	-8.02%

Mean Dry Biomass-mg Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.3787	0.3767	0.4133	0.3353
100		0.442	0.4107	0.3973	0.3747

Graphics







Report Date:

30 Dec-14 10:16 (p 1 of 2)

Test Code:

PWE1214.037fml | 13-4985-9434

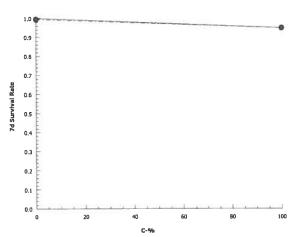
											Test (Code:	P	WE1214	.03/tml	13-4985-
Fathea	d Minn	ow 7-d Larval Su	ırviva	l and	Growt	h Test						Aquatic	Bioa	ssay & (Consult	ing Labs,
Analysi	is ID:	10-7461-0870		Endp	oint:	7d Survival	Rate				CETIS	S Version	n: (CETISv1	.8.7	
Analyz	ed:	30 Dec-14 10:10	6	Anal	ysis:	Linear Inter	rpolati	on (ICPIN)			Offici	al Resul	ts: \	⁄es		
Sample	∍ ID:	14-2399-8730		Code	e:	PWE1214.	037fm	1			Clien	t: P	W En	vironmer	ıtal	
Sample	Date:	02 Dec-14 13:55	5	Mate	rial:	Sample Wa	ater				Proje	ct: Lo	os Ang	geles Irri	gated La	ands Group
-		03 Dec-14 10:55		Sour	ce:	Bioassay R	Report									
Sample	e Age:	25h (8.2 °C)		Stati	on:	LAILG-NG	A188-	1								
Linear	Interpo	lation Options														
X Trans	sform	Y Transform		Seed	I	Resample	S	Exp 95% C	L Me	thod						
Linear		Linear		0		280		Yes	Tw	o-Point	Interpo	olation				
Point E	Stimate	es														
Level	%	95% LCL	95%	UCL	TU	95% l	_CL	95% UCL								
EC5	100	20	N/A		1	NA		5								
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 Sur	vival R	ate Summary						Calcula	ated Var	iate(A/	В)					
C-%	C	Control Type	Cou	nt	Mear	n Min		Max	Std Err	Std	Dev	CV%	9/	Effect	Α	В
0	N	Negative Control	4		1	1		1	0	0		0.0%	0	.0%	60	60
100			4		0.95	0.866	7	1	0.03191	0.0	6383	6.72%	5	.0%	57	60
7d Sur	vival R	ate Detail	,													
C-%	(Control Type	Rep	1	Rep	2 Rep 3	3	Rep 4								
0	N	Negative Control	1		1	1		1								
100			0.86	67	0.933	33 1		1								
7d Sur	vival R	ate Binomials														
C-%		Control Type	Rep	1	Rep	2 Rep	3	Rep 4								
0		Negative Contro	I 15/1	5	15/15	5 15/15	i	15/15								

15/15

15/15

Graphics

100



13/15

14/15

Report Date:

30 Dec-14 10:16 (p 2 of 2)

Test Code:

PWE1214.037fml | 13-4985-9434

Fathead Minn	ow 7-d Larval Survi	val and Growl	h Test	Aqı	uatic Bioassay & Consulting Labs, Inc.
Analysis ID: Analyzed:	07-2338-4101 30 Dec-14 10:16	Endpoint: Analysis:	Mean Dry Biomass-mg Linear Interpolation (ICPIN)	CETIS Ve Official Re	rsion: CETISv1.8.7 esults: Yes
Sample ID:	14-2399-8730	Code:	PWE1214.037fml	Client:	PW Environmental
Sample Date:	02 Dec-14 13:55	Material:	Sample Water	Project:	Los Angeles Irrigated Lands Group
Receive Date:	03 Dec-14 10:55	Source:	Bioassay Report		
Sample Age:	25h (8.2 °C)	Station:	LAILG-NGA188-1		

Linear Interpolation Options

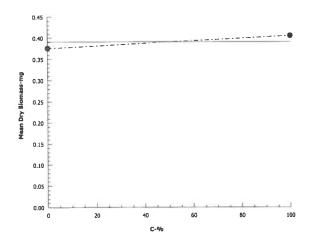
X Trans	sform	Y Transform	Seed	l	Resamples	Exp 95% CL	Method	
Linear		Linear	1778	42	280	Yes	Two-Point Interpolation	
Point E	stimates	3						
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL		
105	> 400	AL/A	NI/A	-1	NΙΔ	NΙΔ		

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 Dr	y Biomass-mg Summ	alculated Va	riate						
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.376	0.3353	0.4133	0.01596	0.03191	8.49%	0.0%
100	•	4	0.4062	0.3747	0.442	0.01407	0.02813	6.93%	-8.02%

Mean Dr	y Biomass-mg Detail				
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.3787	0.3767	0.4133	0.3353
100		0.442	0.4107	0.3973	0.3747

Graphics



CETIS Measurement Report

Report Date:

30 Dec-14 10:16 (p 1 of 2)

Test Code:

PWE1214.037fml | 13-4985-9434

							. oot oods.			0 1000 0 10
ow 7-d Larval S	urvival	and Growt	h Test				Aqua	tic Bioassay	& Consulting	g Labs, Inc.
10-0145-7354 Test Type: 03 Dec-14 14:55 Protocol: 10 Dec-14 14:25 Species: 6d 23h Source:			EPA/821/R-02-013 (2002) Pimephales promelas					•		
14-2399-8730 Code: 02 Dec-14 13:55 Material: : 03 Dec-14 10:55 Source:		PWE1214.037fml Sample Water Bioassay Report				Client: PW Environmental Project: Los Angeles Irrigated Lands Group				
CO3)-mg/L										
Control Type	Count	. Mean	95% LCL	95% UCL	Min	Max	Std E	r Std Dev	CV%	QA Coun
Negative Contr	8	68.63	68.19	69.06	68	69	0.183	0.5175	0.75%	0
	8	44	44	44	44	44	0	0	0.0%	0
	16	56.31			44	69				0 (0%)
µmhos										
Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std E	r Std Dev	CV%	QA Cour
Negative Contr	8	336.5	334.5	338.5	333	340	0.8452	2.39	0.71%	0
	8	407.3	359.3	455.2	266	436	20.28	57.35	14.08%	0
	16	371.9			266	436				0 (0%)
ygen-mg/L										
Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Cour
Negative Contr	8	7.738	7.459	8.016	7.5	8.5	0.117	0.3335	4.31%	0
	8	7.45	6.881	8.019	6.2	8.6	0.240	0.6803	9.13%	0
	16	7.594			6.2	8.6				0 (0%)
CO3)-mg/L										
Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Cour
Negative Contr	8	90	90	90	90	90	0	0	0.0%	0
			99	99			0	0	0.0%	0
	16	94.5			90	99				0 (0%)
Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Cour
Negative Contr	8	7.763	7.539	7.986	7.3	8.1	0.094	37 0.2669	3.44%	0
_			0.070	7.721	6.6	8.1	0.157	0.444	6.04%	0
	8	7.35	6.979	1.121						
	16	7.35 7.556	6.979	1.121	6.6	8.1				0 (0%)
-°C			6.979	7.721						0 (0%)
Control Type	16 Coun	7.556		95% UCL	6.6		Std E	rr Std Dev		
	16 Coun	7.556			6.6	8.1	0.012	49 0.03531	CV%	0 (0%) QA Coun 0 0
	10-0145-7354 03 Dec-14 14:2 6d 23h 14-2399-8730 02 Dec-14 13:5 03 Dec-14 10:5 25h (8.2 °C) CO3)-mg/L Control Type Negative Contr ygen-mg/L Control Type Negative Contr	10-0145-7354 03 Dec-14 14:25 6d 23h 14-2399-8730 02 Dec-14 13:55 03 Dec-14 10:55 25h (8.2 °C) CO3)-mg/L Control Type Count Negative Contr 8 8 16 µmhos Control Type Count Negative Contr 8 8 16 ygen-mg/L Control Type Count Negative Contr 8 8 16 ygen-mg/L Control Type Count Negative Contr 8 8 16 CO3)-mg/L Control Type Count Negative Contr 8 8 8 16 COntrol Type Count Negative Contr 8 8 8 16 COntrol Type Count Negative Contr 8 8 8 16 COntrol Type Count Negative Contr 8 8 8 16	10-0145-7354 Test Type: 03 Dec-14 14:55 Protocol: 10 Dec-14 14:25 Species: 6d 23h Source: 14-2399-8730 Code: 02 Dec-14 10:55 Source: 25h (8.2 °C) Station: CO3)-mg/L Control Type Count Mean Negative Contr 8 68.63	O3 Dec-14 14:55	Test Type: Growth-Survival (7d)	10-0145-7354	10-0145-7354	Test Type: Growth-Survival (7d)	Test Type: Growth-Survival (7d)	Test Type: Growth-Survival (7d)

Report Date:

30 Dec-14 10:16 (p 2 of 2)

Test Code: PWE1214.037fml | 13-4985-9434

Fathead Mi	nnow 7-d Larval S	Aquatic Bioassay & Consulting Labs, Inc							
Alkalinity (CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	69	69	69	69	69	68	68	68
100		44	44	44	44	44	44	44	44
Conductivi	ty-µmhos								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	340	336	334	335	338	333	338	338
100		425	421	427	435	436	421	266	427
Dissolved	Oxygen-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.5	7.5	7.6	7.5	7.7	7.8	7.8	8.5
100		8.6	7.5	7.9	7.4	7.2	6.2	7.2	7.6
Hardness	CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	90	90	90	90	90	90	90	90
100		99	99	99	99	99	99	99	99
pH-Units									
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	8.1	7.8	7.6	7.7	8	7.6	8	7.3
100		8.1	7.5	7.4	7.4	7.5	6.9	6.6	7.4
Temperatu	ıre-°C								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24	24.1	24	24	24	24	24	24
100		24	24.3	24	24	24	24	24	24



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-NGA188-1

DATE RECEIVED:

3 Dec -14

ABC LAB. NO.:

PWE1214.037

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

 Report Date:
 30 Dec-14 10:34 (p 1 of 2)

 Test Code:
 PWE1214.037cer | 08-3644-0158

Ceriodaphnia i	7-d Survival and	Reproduct	ion Te	est				Aqu	atic Bi	oassay & C	onsulting l	Labs, Inc.
Batch ID:	17-9747-2628	Test	Type:	Reproduction-Su	ırvival (7d)			Analyst:				
Start Date:	03 Dec-14 14:55		Protocol: EPA/821/R-02-0				!	Diluent:	Labo	ratory Water	r	
Ending Date:	10 Dec-14 14:25	Spec		Ceriodaphnia dubia				Brine: Not Applicable				
Duration:	6d 23h	Sour		Aquatic Biosyste				Age:				
Sample ID:	03-7380-4237	Code		PWE1214.037cer Clie			Client:	PW E	Environment	al		
•	03-7360-4237 02 Dec-14 13:55	Mate		Sample Water	51			Project:		Angeles Irrig		Group
	02 Dec-14 13:55 03 Dec-14 10:55			Bioassay Report	•			. 10,000.	200,	mgoloo mig		J. J. J.
		Sour		LAILG-NGA188								
Sample Age:		Station	011.		· · · · · · · · · · · · · · · · · · ·							
Comparison S					T051	DHOD	711	88-4	المصما			
Analysis ID	Endpoint		NOEL		TOEL	PMSD	TŲ	Met				
10-4510-8813	7d Survival Rate		100	>100	NA	NA	1			ct Test	S I	
18-6202-5288	Reproduction		100	>100	NA	36.1%	1	Equ	al Vari	ance t Two-	Sample Tes	it
Point Estimate	e Summary											
Analysis ID	Endpoint		Level	%	95% LCL	95% UCL	TU	Met				
17-3391-6106 7d Survival Rate		EC5	>100	N/A	N/A	<1	Line	ar Inte	rpolation (IC	PIN)		
			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					
19-2708-8918	Reproduction		IC5	>100	N/A	N/A	<1	Line	ear Inte	erpolation (IC	PIN)	
			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					
			1040	- 100	IN/A	IN/A	\ 1					
			IC50		N/A	N/A	<1		_	·		_
Test Acceptal	oility	· · · · · · · · · · · · · · · · · · ·							_	-		
•	Endpoint		IC50	>100 bute	N/A Test Stat	N/A	<1		erlap	Decision		
•	Endpoint		Attril	>100 bute rol Resp	N/A Test Stat	N/A TAC Limit 0.8 - NL	<1	Yes	3	Passes Ad	cceptability	
Analysis ID 10-4510-8813 17-3391-6106	Endpoint 7d Survival Rate 7d Survival Rate		Attril Cont Cont	>100 bute rol Resp rol Resp	N/A Test Stat 1 1	N/A TAC Limi 0.8 - NL 0.8 - NL	<1	Yes Yes	3	Passes Ad	ceptability	Criteria
Analysis ID 10-4510-8813 17-3391-6106	Endpoint 7d Survival Rate		Attril Cont Cont	>100 bute rol Resp rol Resp rol Resp	N/A Test Stat 1 1 17.2	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL	<1	Yes Yes Yes	3	Passes Ad Passes Ad Passes Ad	cceptability	Criteria Criteria
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction		Attril Cont Cont Cont Cont	>100 bute rol Resp rol Resp rol Resp rol Resp rol Resp	N/A Test Stat 1 1 17.2 17.2	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL	<1 its	Yes Yes Yes	5 5 5	Passes Ad Passes Ad Passes Ad Passes Ad	cceptability cceptability cceptability	Criteria Criteria Criteria
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918	Endpoint 7d Survival Rate 7d Survival Rate Reproduction		Attril Cont Cont	>100 bute rol Resp rol Resp rol Resp rol Resp rol Resp	N/A Test Stat 1 1 17.2	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL	<1 its	Yes Yes Yes	5 5 5	Passes Ad Passes Ad Passes Ad Passes Ad	cceptability	Criteria Criteria Criteria
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction		Attril Cont Cont Cont Cont	>100 bute rol Resp rol Resp rol Resp rol Resp rol Resp	N/A Test Stat 1 1 17.2 17.2	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL	<1 its	Yes Yes Yes	5 5 5	Passes Ad Passes Ad Passes Ad Passes Ad	cceptability cceptability cceptability cceptability	Criteria Criteria Criteria Criteria
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Reproduction Cate Summary Control Type	Count	Attril Cont Cont Cont Cont PMS	>100 bute rol Resp rol Resp rol Resp D n 95% LCL	N/A Test Stat 1 1 17.2 17.2 0.3613	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	<1 its	Yes Yes Yes Yes	5 5 5	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad	cceptability cceptability cceptability cceptability	Criteria Criteria Criteria Criteria %Effect
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction	Count 10	Attril Cont Cont Cont PMS Mean	>100 bute rol Resp rol Resp rol Resp D n 95% LCL	N/A Test Stat 1 17.2 17.2 0.3613 95% UCL 1	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	<1 7 Max	Yes Yes Yes Yes Yes Yes	5 5 5	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad	cceptability cceptability cceptability cceptability cceptability cceptability cceptability cceptability 0.0%	Criteria Criteria Criteria Criteria Criteria **Effect** 0.0%
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type Negative Control	Count	Attril Cont Cont Cont Cont PMS	>100 bute rol Resp rol Resp rol Resp D n 95% LCL	N/A Test Stat 1 1 17.2 17.2 0.3613	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	<1 its	Yes Yes Yes Yes	5 5 5	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad	cceptability cceptability cceptability cceptability	Criteria Criteria Criteria Criteria %Effect
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproduction	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Control Type Negative Control Summary	Count 10 10	Attril Cont Cont Cont PMS Mean 1	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1	N/A Test Stat 1 17.2 17.2 0.3613 95% UCL 1 1	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	7 Max	Yes Yes Yes Yes Yes O	is i	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev	cceptability cceptability cceptability cceptability cceptability cceptability cceptability 0.0%	Criteria Criteria Criteria Criteria WEffect 0.0% 0.0%
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproduction C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type Negative Control Summary Control Type	Count 10 10 Count	Attril Cont Cont Cont PMS Mean 1	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1	Test Stat 1 17.2 17.2 0.3613 95% UCL 1 1	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	7 Max	Yes Yes Yes Yes Yes O O	Err	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev	cceptability cceptability cceptability cceptability cceptability cceptability cceptability 0.0% 0.0% 0.0%	Criteria Criteria Criteria Criteria **Effect 0.0% 0.0% **Effect
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproductior C-% 0	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Control Type Negative Control Summary	Count 10 10 Count 10	Attril Cont Cont Cont PMS Mean 1 1 Mean 17.2	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 1 1 1 1.85	Test Stat 1 17.2 17.2 0.3613 95% UCL 1 95% UCL 22.55	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	<1 7 Max 1 1 1 Max 32	Yes Yes Yes Yes Yes Yes Yes X Std 0 0 0	Err 65	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0	cceptability ccept	Criteria Criteria Criteria Criteria **Effect 0.0% 0.0% **Effect 0.0%
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproductior C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction ate Summary Control Type Negative Control Summary Control Type	Count 10 10 Count	Attril Cont Cont Cont PMS Mean 1	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1	Test Stat 1 17.2 17.2 0.3613 95% UCL 1 1	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	7 Max	Yes Yes Yes Yes Yes O O	Err 65	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev	cceptability cceptability cceptability cceptability cceptability cceptability cceptability 0.0% 0.0% 0.0%	Criteria Criteria Criteria Criteria **Effect 0.0% 0.0% **Effect 0.0%
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproductior C-% 0	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Reproduction Attention Control Type Negative Control Summary Control Type Negative Control	Count 10 10 Count 10	Attril Cont Cont Cont PMS Mean 1 1 Mean 17.2	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 1 1 1 1.85	Test Stat 1 17.2 17.2 0.3613 95% UCL 1 95% UCL 22.55	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4	<1 7 Max 1 1 1 Max 32	Yes Yes Yes Yes Yes Yes Yes X Std 0 0 0	Err 65	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0	cceptability ccept	Criteria Criteria Criteria WEffect 0.0% 0.0% WEffect 0.0% -45.35%
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Reteroduction Reproduction Reproduction Reproduction Reteroduction Retero	Count 10 10 10 10 10 Rep 1	Attril Cont Cont Cont PMS Mean 1 1 1 Rea 17.2 25	>100 bute rol Resp rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 1 2 Rep 3	N/A Test Stat 1 17.2 17.2 0.3613 95% UCL 1 1 95% UCL 22.55 31.09	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 115 - NL 0.13 - 0.47 Min 1 1 Min 11 5	<1 Max 1 1 1 Max 32 33 Rep	Yes Yes Yes Yes Yes Yes Yes 2 Std 0 0 0 Stc 2.3 2.6	I Err 65	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0 Std Dev 7.48 8.511	cceptability ccept	Criteria Criteria Criteria Criteria **Effect 0.0% 0.0% **Effect 0.0% -45.35% Rep 10
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproductior C-% 0 100 7d Survival R	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Reproduction Reproduction Reproduction Reproduction Sate Summary Control Type Negative Control Summary Control Type Negative Control Reproduction Reproduction Reprod	Count 10 10 10 10 10 Rep 1	Attril Cont Cont Cont PMS Mean 1 1 Mean 17.2 25	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	N/A Test Stat 1 17.2 17.2 0.3613 95% UCL 1 1 95% UCL 22.55 31.09	Min 11 Min 11 Rep 5 1	7 Max 1 1 1	Yes Yes Yes Yes Yes Yes Yes Yes 2.3 2.6 6 Re 1	I Err 65	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0 Std Dev 7.48 8.511	cceptability ccept	Criteria Criteria Criteria Criteria %Effect 0.0% 0.0% %Effect 0.0% -45.35% Rep 10
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction Reproduction Reproduction Reteroduction Reproduction Reproduction Reproduction Reteroduction Retero	Count 10 10 10 10 10 Rep 1	Attril Cont Cont Cont PMS Mean 1 1 1 Rea 17.2 25	>100 bute rol Resp rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 1 2 Rep 3	N/A Test Stat 1 17.2 17.2 0.3613 95% UCL 1 1 95% UCL 22.55 31.09	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 115 - NL 0.13 - 0.47 Min 1 1 Min 11 5	<1 Max 1 1 1 Max 32 33 Rep	Yes Yes Yes Yes Yes Yes Yes 2 Std 0 0 0 Stc 2.3 2.6	I Err 65	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0 Std Dev 7.48 8.511	cceptability ccept	Criteria Criteria Criteria Criteria **Effect* 0.0% 0.0% **Effect* 0.0% -45.35% Rep 10
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproductior C-% 0 100 7d Survival R C-% 0	Endpoint 7d Survival Rate 7d Survival Rate Reproduction	Count 10 10 10 10 Rep 1 1	Attril Cont Cont Cont PMS Mean 1 1 Mean 17.2 25	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 n 95% LCL 11.85 18.91 2 Rep 3 1	N/A Test Stat 1 1 17.2 17.2 0.3613 95% UCL 1 1 1 95% UCL 22.55 31.09 Rep 4 1	Min 11 Min 11 Rep 5 1	7 Max 1 1 1	Yes Yes Yes Yes Yes Yes Yes Yes 2.3 2.6 6 Re 1	I Err 65	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0 Std Dev 7.48 8.511	cceptability ccept	Criteria Criteria Criteria Criteria %Effect 0.0% 0.0% %Effect 0.0% -45.35% Rep 10
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-% 0 100 7d Survival R C-%	Endpoint 7d Survival Rate 7d Survival Rate Reproduction	Count 10 10 10 10 Rep 1 1	Attril Cont Cont Cont PMS Mean 1 1 Mean 17.2 25	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 1 2 Rep 3 1 1	N/A Test Stat 1 1 17.2 17.2 0.3613 95% UCL 1 1 1 95% UCL 22.55 31.09 Rep 4 1	Min 11 Min 11 Rep 5 1	7 Max 1 1 1	Yes Yes Yes Yes Yes Yes Yes Yes 2.3 2.6 6 Re 1	I Err 65	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0 Std Dev 7.48 8.511	cceptability ccept	Criteria Criteria Criteria Criteria %Effect 0.0% 0.0% %Effect 0.0% -45.35% Rep 10 1 1
Analysis ID 10-4510-8813 17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-% 0 100 Reproduction C-% 0 100 Reproduction C-% 0 100 Reproduction C-% 0	Endpoint 7d Survival Rate 7d Survival Rate Reproduction	Count 10 10 10 Rep 1 1 1 1 Rep 1	Attril Cont Cont Cont PMS Mean 1 1 Mean 17.2 25 Rep 1	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 1 2 Rep 3 1 1	N/A Test Stat 1 17.2 17.2 0.3613 95% UCL 1 1 95% UCL 22.55 31.09 Rep 4 1 1	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 0.13 - 0.4 Min 1 1 Rep 5 1 1	7 Max 1 1 1 Rep 1 1	Yes Yes Yes Yes Yes Yes Yes Yes 2.3 2.6 6 Re 1	I Err 65 92	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad O O O Std Dev 7.48 8.511	cceptability ccept	Criteria Criteria Criteria WEffect 0.0% 0.0% %Effect 0.0% -45.35% Rep 10 1
17-3391-6106 18-6202-5288 19-2708-8918 18-6202-5288 7d Survival R C-% 0 100 Reproduction C-% 0 100 7d Survival R C-% 0 100 Reproduction C-% 0 100 Reproduction	Endpoint 7d Survival Rate 7d Survival Rate Reproduction	Count 10 10 10 Rep 1 1 1 1 Rep 1	Attril Cont Cont Cont PMS Mean 1 1 Mean 17.2 25 Rep 1 1 Rep	>100 bute rol Resp rol Resp rol Resp D n 95% LCL 1 1 1 1 2 Rep 3 1 1 2 Rep 3	N/A Test Stat 1 17.2 17.2 0.3613 95% UCL 1 1 95% UCL 22.55 31.09 Rep 4 1 1	N/A TAC Limi 0.8 - NL 0.8 - NL 15 - NL 15 - NL 115 - NL 0.13 - 0.41 Min 1 1 Rep 5	7 Max 1 1 1 Max 32 33 Rep 1 1	Yes Yes Yes Yes Yes Yes Yes Yes 2.3 2.6 6 Re 1 1	I Err 65 92	Passes Ad Passes Ad Passes Ad Passes Ad Passes Ad Std Dev 0 0 Std Dev 7.48 8.511	cceptability ccept	Criteria Criteria Criteria Criteria %Effect 0.0% 0.0% %Effect 0.0% -45.35% Rep 10 1 1

CETIS Summary Report

Report Date:

30 Dec-14 10:34 (p 2 of 2)

Test Code:

PWE1214.037cer | 08-3644-0158

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

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

Report Date:

30 Dec-14 10:34 (p 1 of 2)

Test Code:

PWE1214.037cer | 08-3644-0158

Ceriodaphnia	7-d Survival and	d Reprodu	ction Test					Aquatic E	Bioassay & (Consulting	Labs, Inc	
Analysis ID:	18-6202-5288			production			CETIS Version: CETISv1.8.7					
Analyzed:	30 Dec-14 10:3	0 Dec-14 10:34 Analysis: Para			Sample		Official Results: Yes					
Sample ID:	03-7380-4237			VE1214.037c	er		Clien	it: PW	Environmen	ntal		
Sample Date:	e: 02 Dec-14 13:55 Material: Sam			imple Water			Proje	ect: Los	Angeles Irri	gated Lands	s Group	
Receive Date:	03 Dec-14 10:5	5 Sο ι	ırce: Bi	oassay Repor	t							
Sample Age:	25h (8.2 °C)	Sta	tion: LA	NLG-NGA188	-1							
Data Transfor	rm	Zeta	Alt Hyp	Trials	Seed		PMSD	Test Res	ult			
Untransformed	d	NA	C > T	NA	NA		36.1%	Passes re	eproduction			
Equal Variand	ce t Two-Sample	Test										
Control	vs C-%		Test Sta	t Critical	MSD DF	P-Value	P-Type	Decision	<u> </u>			
Negative Cont	trol 100		-2.177	1.734	6.214 18	0.9785	CDF	Non-Sign	ificant Effect			
ANOVA Table)											
Source	Sum Squa	ares	Mean So	quare	DF	F Stat	P-Value	Decision	(α:5%)			
Between	304.2	-	304.2		1	4.738	0.0431	Significar	nt Effect			
Error	1155.6		64.2		18							
Total	1459.8				19							
Distributiona	l Tests			-								
Attribute	Test			Test Stat	Critical	P-Value	Decision((α:1%)				
Variances	Variance	Ratio F		1.295	6.541	0.7067	Equal Var	iances				
Variances	Mod Leve	ene Equalit	y of Variand	ce 0.00571	8.285	0.9406	Equal Var					
Variances	Levene E	quality of \	/ariance	0.005069	8.285	0.9440	Equal Variances					
Distribution	Shapiro-\	Nilk W Nor	mality	0.959	0.866	0.5244	Normal Distribution					
Distribution	Kolmogo	rov-Smirno	v D	0.1347	0.2235	0.4526	Normal Distribution					
Distribution	D'Agostir	no Skewne:	ss	0.83	2.576	0.4065	Normal D	istribution				
Distribution	D'Agostir	no Kurtosis		1.22	2.576	0.2225	Normal D	istribution				
Distribution	D'Agostino-Pearson K2 Omnibus		us 2.177	9.21	0.3367	Normal Distribution						
Distribution	Andersor	n-Darling A	2 Normality	0.3634	3.878	0.4449	Normal D	istribution				
Reproduction	n Summary				· · · · · · · · · · · · · · · · · · ·							
				95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect	
C-%	Control Type	Count	Mean	95 /6 LCL	95 /6 UCL	median		TOTAL	Otto Ell	0170		
C-%	Control Type Negative Control		17.2	11.85	22.55	14 26.5	11	32 33	2.365 2.692	43.49% 34.05%	0.0%	

Rep 3

28

33

Rep 2

18

29

Rep 4

20

23

Rep 5

12

27

Analyst: QA:

Rep 8

12

32

Rep 6

12

5

Rep 7

11

24

Rep 9

11

33

Rep 10

16

18

Reproduction Detail

C-%

100

0

Control Type

Negative Control 32

Rep 1

26

Report Date:

30 Dec-14 10:34 (p 2 of 2)

Test Code:

PWE1214.037cer | 08-3644-0158

Ceriodaphnia 7-d Survival and Reproduction Test

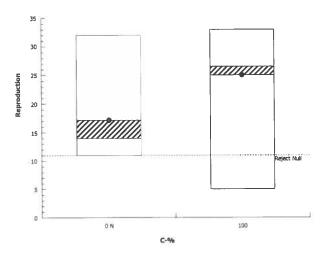
Aquatic Bioassay & Consulting Labs, Inc.

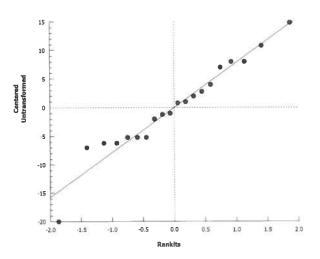
Analysis ID: Analyzed:

18-6202-5288 30 Dec-14 10:34 Endpoint: Reproduction

Analysis: Parametric-Two Sample **CETIS Version:** Official Results:

CETISv1.8.7





Report Date:

30 Dec-14 10:34 (p 1 of 2)

Test Code:

PWE1214.037cer | 08-3644-0158

Ceriodaphnia	7-d	Survival	and	Reproduction Tes	t
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Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

17-3391-6106

30 Dec-14 10:34

7d Survival Rate Endpoint:

CETIS Version: Official Results:

CETISv1.8.7

Analysis:

Linear Interpolation (ICPIN)

Client:

PW Environmental

Sample ID: Sample Date: 02 Dec-14 13:55

Point Estimates

EC50

03-7380-4237

Code: Material: PWE1214.037cer Sample Water

NA

Project:

Los Angeles Irrigated Lands Group

Receive Date: 03 Dec-14 10:55 Sample Age: 25h (8.2 °C)

Source: Station: Bioassay Report LAILG-NGA188-1

Linear Interpolation Options

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

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

N/A

<1

7d Survi	val Rate Summary		Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В
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

NA

7d Survival Rate Detail

>100

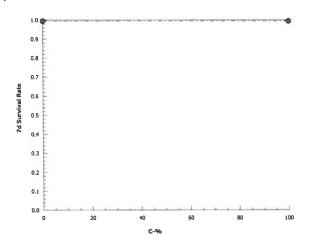
N/A

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 Contro	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™ v1.8.7.11

Report Date:

30 Dec-14 10:34 (p 2 of 2)

Test Code:

PWE1214.037cer | 08-3644-0158

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:

19-2708-8918

Endpoint: Analysis:

Reproduction Linear Interpolation (ICPIN) **CETIS Version:** Official Results: Yes

CETISv1.8.7

Analyzed:

30 Dec-14 10:34

PWE1214.037cer

Client:

PW Environmental

Sample ID: Sample Date: 02 Dec-14 13:55

03-7380-4237

Code: Material:

Sample Water

Project:

Los Angeles Irrigated Lands Group

Receive Date: 03 Dec-14 10:55 Sample Age: 25h (8.2 °C)

Source: Station: Bioassay Report LAILG-NGA188-1

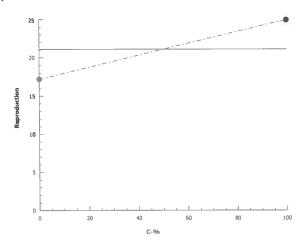
Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	102231	280	Yes	Two-Point Interpolation

Point E	stimates					
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCI
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

Reprodu	ection Summary	Calculated Variate							
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	17.2	11	32	2.365	7.48	43.49%	0.0%
100		10	25	5	33	2.692	8.511	34.05%	-45.35%

Reprodu	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	32	18	28	20	12	12	11	12	11	16	
100		26	29	33	23	27	5	24	32	33	18	



Report Date:

30 Dec-14 10:34 (p 1 of 1)

Test Code:

PWE1214.037cer | 08-3644-0158

C	eriod	laphni	a i	7-d	Survival	and	Reprod	luction	Test
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Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

10-4510-8813

Endpoint: Analysis:

Alt Hyp

C > T

7d Survival Rate

Single 2x2 Contingency Table

CETIS Version: Official Results:

Test Result

Passes 7d survival rate

CETISv1.8.7

Sample ID:

30 Dec-14 10:34

Zeta

Code:

PWE1214.037cer

Client:

PW Environmental

Sample Date: 02 Dec-14 13:55

03-7380-4237

Material:

Sample Water

NA

Receive Date: 03 Dec-14 10:55

Source:

Bioassay Report

Project:

Los Angeles Irrigated Lands Group

Sample Age: 25h (8.2 °C)

Station:

LAILG-NGA188-1 **Trials**

Untransformed
Fisher Exact Test

Data Transform

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

Seed

NA

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%

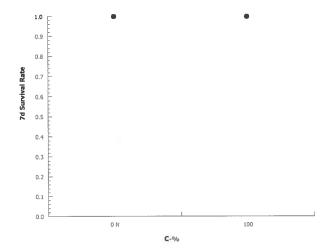
7d Survival Rate Detail

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™ v1.8.7.11

CETIS Measurement Report

Report Date:

30 Dec-14 10:34 (p 1 of 2)

Test Code:

PWE1214.037cer | 08-3644-0158

Ceriodaphnia	7-d Survival an	d Rep	oduction Te	est				Aqua	tic Bioassay 8	& Consulting	g Labs, Inc.
Batch ID: Start Date: Ending Date: Duration:	17-9747-2628 03 Dec-14 14:5 10 Dec-14 14:2 6d 23h		Test Type: Protocol: Species: Source:	Reproduction-S EPA/821/R-02- Ceriodaphnia o Aquatic Biosys	·013 (2002) Iubia			Analyst: Diluent: Brine: Age:	Laboratory Wa		
Sample ID:	03-7380-4237		Code:	PWE1214.037	cer			Client:	PW Environm	ental	
Sample Date:	02 Dec-14 13:5	5	Material:	Sample Water				Project:	Los Angeles I	rrigated Land	ds Group
Receive Date:	03 Dec-14 10:5	5	Source:	Bioassay Repo	ort						
Sample Age:	25h (8.2 °C)		Station:	LAILG-NGA18	B-1						
Alkalinity (Ca	CO3)-mg/L										
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Count
0	Negative Contr	8	68.63	68.19	69.06	68	69	0.183	0.5175	0.75%	0
100		8	44	44	44	44	44	0	0	0.0%	0
Overall		16	56.31			44	69				0 (0%)
Conductivity-	µmhos										
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Count
0	Negative Contr	8	336.5	334.5	338.5	333	340	0.845	2 2.39	0.71%	0
100	_	8	407.3	359.3	455.2	266	436	20.28	57.35	14.08%	0
Overall		16	371.9			266	436				0 (0%)
Dissolved Ox	ygen-mg/L										
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Count
0	Negative Contr	8	7.738	7.459	8.016	7.5	8.5	0.117	9 0.3335	4.31%	0
100		8	7.45	6.881	8.019	6.2	8.6	0.240	5 0.6803	9.13%	0
Overall		16	7.594			6.2	8.6				0 (0%)
Hardness (Ca	CO3)-mg/L										
C-%	Control Type	Cour	t Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Count
0	Negative Contr	8	90	90	90	90	90	0	0	0.0%	0
100		8	99	99	99	99	99	0	0	0.0%	0
Overall		16	94.5			90	99				0 (0%)
pH-Units											
C-%	Control Type	Cour	nt Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Count
0	Negative Contr	8	7.763	7.539	7.986	7.3	8.1	0.094	37 0.2669	3.44%	0
100		8	7.35	6.979	7.721	6.6	8.1	0.157	0.444	6.04%	0
Overall		16	7.556			6.6	8.1				0 (0%)
Temperature-	.°C										
C-%	Control Type	Cour	nt Mean	95% LCL	95% UCL	Min	Max	Std E	rr Std Dev	CV%	QA Count
0	Negative Contr	8	24.01	23.98	24.04	24	24.1		49 0.03531	0.15%	0
100		8	24.04		24.13	24	24.3		51 0.1061	0.44%	0
Overall		16	24.03			24	24.3				0 (0%)

Analyst: QA:

CETIS Measurement Report

Report Date:

30 Dec-14 10:34 (p 2 of 2)

Test Code: PWE1214.037cer | 08-3644-0158

								3t 00uc.	1 112 12 1 1:001 001 00 00 1 1 0 100
Ceriodaph	nia 7-d Survival and	Reprod	luction Test					Aquatio	Bioassay & Consulting Labs, Inc.
Alkalinity (CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	69	69	69	69	69	68	68	68
100		44	44	44	44	44	44	44	44
Conductiv	ity-µmhos								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	340	336	334	335	338	333	338	338
100		425	421	427	435	436	421	266	427
Dissolved	Oxygen-mg/L		-						
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.5	7.5	7.6	7.5	7.7	7.8	7.8	8.5
100		8.6	7.5	7.9	7.4	7.2	6.2	7.2	7.6
Hardness	(CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	90	90	90	90	90	90	90	90
100		99	99	99	99	99	99	99	99
pH-Units			-						
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	8.1	7.8	7.6	7.7	8	7.6	8	7.3
100		8.1	7.5	7.4	7.4	7.5	6.9	6.6	7.4
Temperat	ure-°C						-	_	
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24	24.1	24	24	24	24	24	24
100		24	24.3	24	24	24	24	24	24



December 30, 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-NGA188-1

DATE RECEIVED:

3 Dec -14

ABC LAB. NO.:

PWE1214.037

CHRONIC SELENASTRUM ALGAE GROWTH BIOASSAY

NOEC = 100.00 %

TUc = 1.00

IC25 = >100.00 %

IC50 = >100.00 %

Yours very truly,

Scott Johnson

Laboratory Director

Report Date:

16 Dec-14 08:52 (p 1 of 1)

Test Code:

PWE1214.037sei | 04-7212-6508

	•						Test	: Code:	PWE1214.	037sel 04	1-7212-650
Selenastrum G	Growth Test							Aquatic Bi	oassay & C	onsulting	Labs, Inc
Batch ID:	08-9961-5917	Test	Type: Ce	ell Growth			Ana	lyst:			
Start Date:	04 Dec-14 12:26	Proto	-	A/821/R-02-0	13 (2002)		Dilu	ent: Labo	ratory Wate	г	
Ending Date:	08 Dec-14 11:40	Spec	ies: Se	lenastrum ca	pricornutum		Brir	e: Not A	Applicable		
Duration:	95h	Sour	ce: Aq	uatic Biosyste	ems, CO		Age	•			
Sample ID:	05-6093-8487	Code	: PV	VE1214.037s	 el		Clie	nt: PW I	Environment	tal	
	02 Dec-14 13:55	Mate		mple Water			Pro	ect: Los	Angeles Irrig	ated Land	s Group
	03 Dec-14 10:55			oassay Repor	t						
Sample Age:		Statio		ILG-NGA188							
Comparison S	ummary							·			
Analysis ID	Endpoint		NOEL	LOEL	TOEL	PMSD	TU	Method			
00-9305-3413	Cell Density		100	>100	NA	8.86%	1	Equal Vari	ance t Two-	Sample Te	st
Point Estimate	e Summary										
Analysis ID	Endpoint		Level	%	95% LCL	95% UCL	TU	Method			
06-7715-0900	Cell Density		IC5	>100	N/A	N/A	<1	Linear Inte	rpolation (IC	PIN)	
			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 Acceptat	oility										
Analysis ID	Endpoint		Attribute	•	Test Stat	TAC Limi	ts	Overlap	Decision		
00-9305-3413	Cell Density		Control C	CV	0.02005	NL - 0.2		Yes	Passes Ad		
06-7715-0900	Cell Density		Control (CV	0.02005	NL - 0.2		Yes		ceptability	
00-9305-3413	Cell Density		Control F	Resp	1.26E+6	1.00E+6 -	NL	Yes		cceptability	
06-7715-0900	Cell Density		Control F	Resp	1.26E+6	1.00E+6 -	NL	Yes		cceptability	
00-9305-3413	Cell Density		PMSD		0.08855	0.091 - 0.2	29	Yes	Below Acc	eptability (Oriteria
Cell Density S	Summary										
C-%	Control Type	Count	Mean	95% LCL	95% UCL		Max	Std Err	Std Dev	CV%	%Effec
0	Negative Control	4	1.263E+		1.303E+6	1.230E+6	1.286E+				0.0%
100		4	1.260E+	6 1.082E+6	1.439E+6	1.158E+6	1.375E+	6 5.613E+4	1.123E+5	8.91%	0.2%
Cell Density I	Detail										
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Negative Control	1.256E+6	1.230E+	6 1.279E+6	1.286E+6						

1.338E+6 1.170E+6 1.158E+6 1.375E+6

100

Report Date:

16 Dec-14 08:52 (p 1 of 1)

Test Code:

PWE1214.037sel | 04-7212-6508

Aquatic Bioassay & Consu	ıltıng	Labs,	Inc.
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Selenastrum Growth Test

00-9305-3413

Endpoint: Cell Density

Parametric-Two Sample

CETIS Version:

Official Results:

CETISv1.8.7 Yes

Analysis ID: Analyzed:

16 Dec-14 8:51

Analysis:

PWE1214.037sel

Client:

PW Environmental

Sample ID: Sample Date: 02 Dec-14 13:55

05-6093-8487

Code: Material:

Sample Water

Project:

Los Angeles Irrigated Lands Group

Receive Date: 03 Dec-14 10:55 Sample Age: 47h (8.2 °C)

Source: Station:

Bioassay Report LAILG-NGA188-1

Data Transform Zeta Alt Hyp Trials C > T NA Untransformed NA

Test Result PMSD 8.86% Passes cell density

Equal Variance t Two-Sample Test

Critical DF P-Value P-Type Decision(a:5%) Control C-% **Test Stat** MSD 1.943 1E+05 6 0.4834 CDF Non-Significant Effect **Negative Control** 100 0.04345

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(a:5%)
Between	12500000	12500000	1	0.001887	0.9668	Non-Significant Effect
Error	39735500000	6622583000	6			
Total	39748000000		7			

Seed

NA

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(a:1%)
Variances	Variance Ratio F	19.67	47.47	0.0356	Equal Variances
Variances	Mod Levene Equality of Variance	51.43	13.75	0.0004	Unequal Variances
Variances	Levene Equality of Variance	62.76	13.75	0.0002	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.9623	0.6451	0.8316	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1345	0.3313	1.0000	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.1987	3.878	0.9312	Normal Distribution

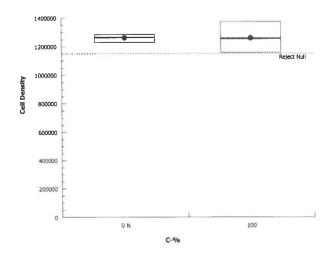
Cell Density Summary

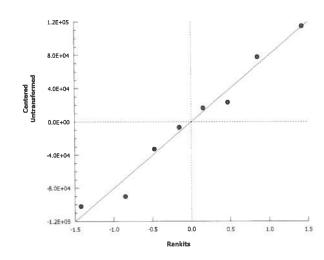
C-%	Control Type Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control 4	1.263E+6	1.222E+6	1.303E+6	1268000	1.230E+6	1.286E+6	1.266E+4	2.01%	0.0%
100	4	1.260E+6	1.082E+6	1.439E+6	1254000	1.158E+6	1.375E+6	5.613E+4	8.91%	0.2%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Negative Control	1.256E+6	1.230E+6	1.279E+6	1.286E+6	
100		1.338E+6	1.170E+6	1.158E+6	1.375E+6	

Graphics





Analyst:

Report Date:

16 Dec-14 08:52 (p 1 of 1)

Test Code:

PWE1214.037sel | 04-7212-6508

Selenastrum Growth Test	Aquatic Bioassay & Consulting Labs, Inc

Analysis ID: Analyzed:

Sample ID:

06-7715-0900 16 Dec-14 8:51 Endpoint: Cell Density

Linear Interpolation (ICPIN)

CETIS Version: Official Results:

CETISv1.8.7

05-6093-8487

Code:

PWE1214.037sel

LAILG-NGA188-1

Client:

PW Environmental

Sample Date: 02 Dec-14 13:55 Receive Date: 03 Dec-14 10:55

Material: Source:

Station:

Analysis:

Sample Water **Bioassay Report** Project:

Los Angeles Irrigated Lands Group

Sample Age: 47h (8.2 °C) **Linear Interpolation Options**

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

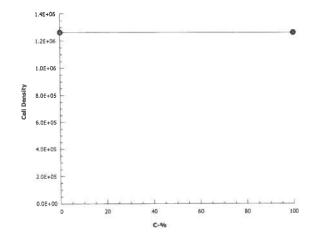
Point Estimates

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				Cal	culated Var	iate		
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.263E+6	1.230E+6	1.286E+6	1.266E+4	2.532E+4	2.01%	0.0%
100		4	1.260E+6	1.158E+6	1.375E+6	5.613E+4	1.123E+5	8.91%	0.2%

Cell Density Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.256E+6	1.230E+6	1.279E+6	1.286E+6
100		1.338E+6	1.170E+6	1.158E+6	1.375E+6



CETIS Measurement Report

Report Date:

16 Dec-14 08:52 (p 1 of 2)

Test Code:

PWE1214.037sel | 04-7212-6508

Selenastrum (Growth Test							Aquati	c Bioassay &	Consultin	g Labs, Inc.
Batch ID: Start Date: Ending Date: Duration:	08-9961-5917 04 Dec-14 12:2 08 Dec-14 11:4 95h	6 I	Test Type: Protocol: Species: Source:	Cell Growth EPA/821/R-02- Selenastrum co Aquatic Biosys	apricornutur	n	Dil	ne:	aboratory Wat	er	
-	05-6093-8487 02 Dec-14 13:5 03 Dec-14 10:5 47h (8.2 °C)	5 5	Code: Material: Source: Station:	PWE1214.037 Sample Water Bioassay Repo	ort				PW Environme Los Angeles Irr		ds Group
Alkalinity (Ca	CO3)-mg/l										
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Eri	Std Dev	CV%	QA Count
0	Negative Contr		60			60	60	0	0	0.0%	0
100		1	59			59	59	0	0	0.0%	0
Overall		2	59.5			59	60				0 (0%)
Conductivity-	µmhos										
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std En	r Std Dev	CV%	QA Coun
0	Negative Contr	5	420.2	411.3	429.1	414	432	3.2	7.155	1.7%	0
100		5	510.8	500.1	521.5	498	518	3.839	8.585	1.68%_	0
Overall		10	465.5			414	518				0 (0%)
Hardness (Ca	CO3)-mg/L										
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Coun
0	Negative Contr	1	96			96	96	0	0	0.0%	0
100		1	132			132	132	0	0	0.0%	0
Overall		2	114			96	132				0 (0%)
pH-Units	•						-				
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Coun
0	Negative Contr	5	7.88	7.696	8.064	7.7	8.1	0.0663	3 0.1483	1.88%	0
100		5	7.84	7.729	7.951	7.8	8	0.04	0.08945	1.14%	0
Overall		10	7.86			7.7	8.1				0 (0%)
Temperature	-°C										
C-%	Control Type	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Coun
0	Negative Contr	5	24.56	24.39	24.73	24.5	24.8	0.0600	0.1342	0.55%	0
100		5	24.56	24.39	24.73	24.5	24.8	0.0600	0.1342	0.55%	0
Overall		10	24.56			24.5	24.8				0 (0%)

CETIS Measurement Report

Report Date:

16 Dec-14 08:52 (p 2 of 2)

Test Code:

PWE1214.037sel | 04-7212-6508

passay & Consulting Labs, Inc



CHRONIC FATHEAD MINNOW SURVIVAL AND GROWTH BIOASSAY

DATE:

3 December 2014

STANDARD TOXICANT: Copper Chloride

ENDPOINT:

SURVIVAL

NOEC =

38.00 ug/l

EC25 =

61.70 ug/l

EC50 =

118.00 ug/l

ENDPOINT:

GROWTH

NOEC =

38.00 ug/l

IC25 =

37.62 ug/l

IC50 =

75.96 ug/l

Yours very truly,

Scott Johnson

Laboratory Director

CETIS Summary Report

Report Date:

29 Dec-14 10:09 (p 1 of 2) FML120314 | 04-7153-1004

Test Code: Aquatic Bioassay & Consulting Labs, Inc. Fathead Minnow 7-d Larval Survival and Growth Test Test Type: Growth-Survival (7d) Analyst: 05-2128-8231 Batch ID: Diluent: **Laboratory Water** EPA/821/R-02-013 (2002) Protocol: 03 Dec-14 14:45 Start Date: Not Applicable Brine: Pimephales promelas **Ending Date:** 10 Dec-14 14:00 Species: Age: Aquatic Biosystems, CO 6d 23h Source: **Duration:** Client: ABC Labs Code: FML120314f 04-2446-4971 Sample ID: **REF TOX** Copper chloride Project: Sample Date: 03 Dec-14 14:45 Material: Source: Reference Toxicant Receive Date: **REF TOX** Station: Sample Age: NA **Comparison Summary** TU Method **PMSD** NOEL LOEL **TOEL** Analysis ID **Endpoint** Steel Many-One Rank Sum Test 13.6% 75 53.39 7d Survival Rate 38 00-1830-5347 **Dunnett Multiple Comparison Test** 25.1% 53.39 Mean Dry Biomass-mg 38 75 10-1333-8874 **Point Estimate Summary** Method 95% UCL TU 95% LCL Level µg/L Analysis ID **Endpoint** Linear Interpolation (ICPIN) 48.11 03-7140-5322 7d Survival Rate EC5 31.15 21.38 **EC10** 41.01 25.12 55.78 47.91 30.65 68.28 **EC15** 41.21 88.4 **EC20** 54.8 47.46 98.58 EC25 61.7 55.24 N/A EC40 90 118 67.68 N/A **EC50** Linear Interpolation (ICPIN) 12.02 26.79 22.72 IC5 02-0535-0060 Mean Dry Biomass-mg 17.65 34.59 26.45 IC10 22.03 42.68 30.17 IC15 50.88 33.9 25.42 IC20 37.62 59.75 28.57 **IC25** 97.03 40.87 IC40 60.19 118.8 IC50 75.96 54.43 **Test Acceptability** Decision **TAC Limits** Overlap **Test Stat Attribute** Endpoint Analysis ID Passes Acceptability Criteria Yes 0.8 - NL Control Resp 0.9833 00-1830-5347 7d Survival Rate Passes Acceptability Criteria Yes Control Resp 0.9833 0.8 - NL 03-7140-5322 7d Survival Rate Passes Acceptability Criteria 0.25 - NL Yes 0.3787 Control Resp Mean Dry Biomass-mg 02-0535-0060 Yes Passes Acceptability Criteria 0.25 - NL Control Resp 0.3787 Mean Dry Biomass-mg 10-1333-8874 Yes Passes Acceptability Criteria 0.2512 0.12 - 0.3**PMSD** 10-1333-8874 Mean Dry Biomass-mg 7d Survival Rate Summary %Effect CV% 95% UCL Min Max Std Err Std Dev 95% LCL Mean C-µg/L **Control Type** Count 3.39% 0.0% 0.9333 1 0.01667 0.03333 0.9833 0.9303 1 Negative Control 4 0 0 0.0% -1.7% 0 1 1 1 4 1 10 0.0% -1.7% 0 0 1 1 4 1 19 6.78% 0.04194 0.08389 9.15% 0.8 1 1 4 0.9167 0.7832 38 33.9% 0.08333 0.1667 25.64% 0.4667 0.8667 0.9152 4 0.65 0.3848 75 61.02% 59.19% 0.2269 0.6667 0.1134 0.2 0.7444 0.3833 0.02229 150 Mean Dry Biomass-mg Summary CV% %Effect Std Err Std Dev Min Max 95% UCL 95% LCL Count Mean C-µg/L **Control Type** 23.54% 0.0% 0.08916 0.04458 0.2853 0.4947 0.2368 0.5205 0.3787 0 Negative Control 4 -26.01% 7.46% 0.03562 0.4993 0.01781 0.4247 0.5338 0.4772 0.4205 10 -16.11% 5.83% 0.4653 0.01283 0.02565 0.4153 0.3989 0.4805 0.4397 4 19

Analyst: QA: AS

14.83%

29.06%

47.97%

0.04771

0.06316

0.05092

0.02386

0.03158

0.02546

0.3847

0.3047

0.1727

15.05%

42.61%

71.96%

0.3976

0.3178

0.1872

0.272

0.1553

0.05267

0.2457

0.1168

0.02513

0.3217

0.2173

0.1062

4

4

4

38

75

150

CETIS Summary Report

Report Date: Test Code: 29 Dec-14 10:09 (p 2 of 2) FML120314 | 04-7153-1004

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	1	0.9333	1
10		1	1	1	1
19		1	1	1	1
38		1	0.9333	0.8	0.9333
75		0.8667	0.4667	0.6667	0.6
150		0.6667	0.2	0.4667	0.2

Mean Dry Biomass-mg Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.2853	0.4947	0.394	0.3407
10		0.4993	0.4993	0.4853	0.4247
19		0.458	0.42	0.4653	0.4153
38		0.3273	0.3847	0.3027	0.272
75		0.3047	0.1553	0.214	0.1953
150		0.1727	0.08533	0.114	0.05267

7d Survival Rate Binomials

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	15/15	15/15	14/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		15/15	14/15	12/15	14/15
75		13/15	7/15	10/15	9/15
150		10/15	3/15	7/15	3/15

Analyst: ____QA:___

Report Date:

29 Dec-14 10:09 (p 1 of 4)

Test Code:

FML120314 | 04-7153-1004

Fathead Minn	ow 7-d Larval Survival and Growth Test						Aquatic Bioassay & Consulting Labs, Inc.					
Analysis ID:	00-1830-5347			urvival Rate		. Т.			S Version: ial Results		3.7	
Analyzed:	29 Dec-14 10:08	Ana	lysis: Nonp	parametric-C	ontroi v	SII	eaunents					
Sample ID:	04-2446-4971	Cod	de: FML	120314f				Clier		C Labs		
Sample Date:	03 Dec-14 14:45	Mat	terial: Copp	oer chloride				Proje	ect: RE	F TOX		
Receive Date:		Sou	ırce: Refe	rence Toxic	ant							
Sample Age:	NA	Sta	tion: REF	TOX								
Data Transfor	***	Zeta	Ait Hyp	Trials	Seed			PMSD	NOEL	LOEL	TOEL	TU
Angular (Corre	ected)	NA	C > T	NA	NA			13.6%	38	75 	53.39	
Steel Many-O	ne Rank Sum Tes	it										
Control	vs C-µg/L		Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision			
Negative Cont	rol 10		20	10	1	6	0.9516	Asymp	_	ificant Effect		
_	19		20	10	1	6	0.9516	Asymp	_	ificant Effect		
	38		13.5	10	2	6	0.2853	Asymp	_	ificant Effect		
	75*		10	10	0	6	0.0417	Asymp	Significar			
	150*		10	10	0	6	0.0417	Asymp	Significar	nt Effect		
ANOVA Table												
Source	Sum Squa	res	Mean Squ	are	DF		F Stat	P-Value	Decision			
Between	2.100407		0.4200814		5		21.78	<0.0001	Significa	nt Effect		
Error	0.3471767		0.0192876		18							
Total	2.447584				23							
Distributiona	l Tests											
Attribute	Test			Test Stat	Critica	ıl	P-Value	Decision	(a:1%)			
Variances	Mod Lever	ne Equalit	y of Variance	3.783	4.248		0.0162	Equal Va	riances			
Variances	Levene Ed	•	-	4.985	4.248		0.0049	Unequal	Variances			
Distribution	Shapiro-W			0.8793	0.884		0.0081	Non-norn	nal Distribut	tion		
Distribution	Kolmogoro			0.25	0.2056	;	0.0004	Non-normal Distribution				
Distribution	D'Agostino	Skewne	ss	0.9099	2.576		0.3629	Normal Distribution				
Distribution	D'Agostino			1.16	2.576		0.2459	Normal Distribution				
Distribution			K2 Omnibus	2.174	9.21		0.3372	Normal Distribution				
Distribution	Anderson	-Darling A	2 Normality	1.538	3.878		<0.0001	Non-norr	nal Distribu	tion		
7d Survival F	Rate Summary											
C-µg/L	Control Type	Count	Mean	95% LCL	95% U	ICL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	1 4	0.9833	0.9303	1		1	0.9333	1	0.01667	3.39%	0.0%
10		4	1	1	1		1	1	1	0	0.0%	-1.7%
19		4	1	1	1		1	1	1	0	0.0%	-1.7%
38		4	0.9167	0.7832	1		0.9333	8.0	1	0.04194	9.15%	6.78%
75		4	0.65	0.3848	0.9152		0.6333	0.4667	0.8667	0.08333	25.64%	33.9%
150		4	0.3833	0.02229	0.744	4	0.3333	0.2	0.6667	0.1134	59.19%	61.02%
Angular (Co	rrected) Transfort	med Sum	mary									
C-µg/L	Control Type	Count	Mean	95% LCL	95% L	JCL	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%
10	-	4	1.441	1.441	1.442		1.441	1.441	1.441	0	0.0%	-2.34%
19		4	1.441	1.441	1.442		1.441	1.441	1.441	0	0.0%	-2.34%
38		4	1.292	1.072	1.511		1.31	1.107	1.441	0.06898	10.68%	8.27%
75		4	0.9476	0.6509	1.244		0.9207	0.752	1.197	0.09322 0.12	19.68%	32.72% 53.23%
			0.6587	0.2768	1.041		0.6078	0.4636	0.9553		36.44%	

Report Date:

29 Dec-14 10:09 (p 2 of 4)

Test Code:

FML120314 | 04-7153-1004

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

00-1830-5347 29 Dec-14 10:08 Endpoint: 7d Survival Rate Analysis:

Nonparametric-Control vs Treatments

CETIS Version: Official Results: Yes

CETISv1.8.7

7d Survival Rate Deta

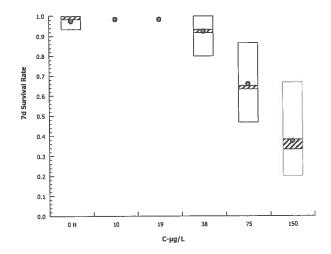
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Negative Control	1	1	0.9333	1	
10		1	1 "	1	1	
19		1	1	1	1	
38		1	0.9333	0.8	0.9333	
75		0.8667	0.4667	0.6667	0.6	
150		0.6667	0.2	0.4667	0.2	

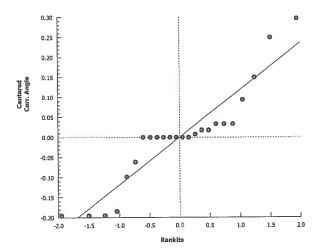
Angular (Corrected) Transformed Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Negative Control	1.441	1.441	1.31	1.441	
10		1.441	1.441	1.441	1.441	
19		1.441	1.441	1.441	1.441	
38		1.441	1.31	1.107	1.31	
75		1.197	0.752	0.9553	0.8861	
150		0.9553	0.4636	0.752	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	14/15	15/15	
10		15/15	15/15	15/15	15/15	
19		15/15	15/15	15/15	15/15	
38		15/15	14/15	12/15	14/15	
75		13/15	7/15	10/15	9/15	
150		10/15	3/15	7/15	3/15	





Report Date: **Test Code:**

29 Dec-14 10:09 (p 3 of 4) FML120314 | 04-7153-1004

Aquatic Bioassay & Consulting Labs, Inc.

TOEL

53.39

TU

Analysis ID:

10-1333-8874

Fathead Minnow 7-d Larval Survival and Growth Test

Endpoint: Analysis:

Mean Dry Biomass-mg

CETIS Version:

CETISv1.8.7

Analyzed:

29 Dec-14 10:08

Code:

Parametric-Control vs Treatments

Client:

Official Results:

LOEL

75

Sample ID:

04-2446-4971

Material:

Copper chloride

ABC Labs

Receive Date:

Sample Date: 03 Dec-14 14:45

Source:

Reference Toxicant

Trials

NA

FML120314f

Project:

NOEL

38

REF TOX

Sample Age: NA

Data Transform

Untransformed

Station:

Zeta

NA

REF TOX

Alt Hyp

C > T

PMSD

25.1%

Dunnett	Multiple	Comparison	Test

Control vs	C-µg/L	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(a:5%)
Negative Control	10	-2.493	2.407	0.095	6	0.9998	CDF	Non-Significant Effect
•	19	-1.544	2.407	0.095	6	0.9964	CDF	Non-Significant Effect
	38	1.443	2.407	0.095	6	0.2469	CDF	Non-Significant Effect
	75*	4.083	2.407	0.095	6	0.0015	CDF	Significant Effect
	150*	6.897	2.407	0.095	6	<0.0001	CDF	Significant Effect

Seed

NA

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.3946399	0.07892799	5	25.28	<0.0001	Significant Effect
Error	0.05620066	0.003122259	18			
Total	0.4508406		23			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.728	15.09	0.4500	Equal Variances
Variances	Mod Levene Equality of Variance	0.9268	4.248	0.4866	Equal Variances
Variances	Levene Equality of Variance	1.059	4.248	0.4148	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9702	0.884	0.6723	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1351	0.2056	0.3050	Normal Distribution
Distribution	D'Agostino Skewness	1.076	2.576	0.2819	Normal Distribution
Distribution	D'Agostino Kurtosis	0.5282	2.576	0.5974	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	1.437	9.21	0.4875	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.3688	3.878	0.4325	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	0.3787	0.2368	0.5205	0.3673	0.2853	0.4947	0.04458	23.54%	0.0%
10	· ·	4	0.4772	0.4205	0.5338	0.4923	0.4247	0.4993	0.01781	7.46%	-26.01%
19		4	0.4397	0.3989	0.4805	0.439	0.4153	0.4653	0.01283	5.83%	-16.11%
38		4	0.3217	0.2457	0.3976	0.315	0.272	0.3847	0.02386	14.83%	15.05%
75		4	0.2173	0.1168	0.3178	0.2047	0.1553	0.3047	0.03158	29.06%	42.61%
150		4	0.1062	0.02513	0.1872	0.09967	0.05267	0.1727	0.02546	47.97%	71.96%

Mean Dry Biomass-mg Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.2853	0.4947	0.394	0.3407
10		0.4993	0.4993	0.4853	0.4247
19		0.458	0.42	0.4653	0.4153
38		0.3273	0.3847	0.3027	0.272
75		0.3047	0.1553	0.214	0.1953
150		0.1727	0.08533	0.114	0.05267

Report Date: Test Code: 29 Dec-14 10:09 (p 4 of 4) FML120314 | 04-7153-1004

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed: 10-1333-8874 29 Dec-14 10:08 Endpoint: Analysis:

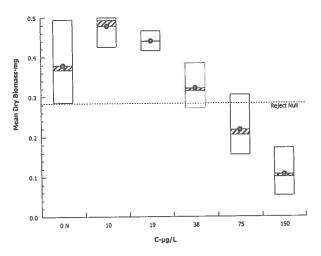
Endpoint: Mean Dry Biomass-mg

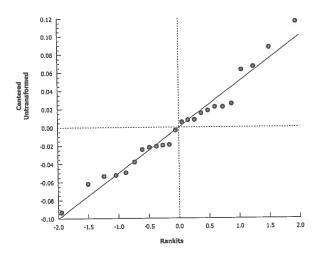
Parametric-Control vs Treatments

CETIS Version: C
Official Results: Y

CETISv1.8.7

Yes





Report Date:

29 Dec-14 10:09 (p 1 of 3)

Test Code:

FML120314 | 04-7153-1004

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

Analysis ID:

03-7140-5322

Endpoint: 7d Survival Rate

CETIS Version:

CETISv1.8.7

Analyzed:

29 Dec-14 10:08

Analysis:

Linear Interpolation (ICPIN)

Official Results: Yes

Sample ID:

04-2446-4971

Code: Material: FML120314f Copper chloride Client:

ABC Labs

Receive Date:

Sample Date: 03 Dec-14 14:45

Reference Toxicant

Project:

REF TOX

Sample Age: NA

Source:

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	31.15	21.38	48.11
EC10	41.01	25.12	55.78
EC15	47.91	30.65	68.28
EC20	54.8	41.21	88.4
EC25	61.7	47.46	98.58
EC40	90	55.24	N/A
EC50	118	67.68	N/A

7d Surviv	val Rate Summary C					alculated Variate(A/B)					
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В
0	Negative Control	4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60
10		4	1	1	1	0	0	0.0%	-1.7%	60	60
19		4	1	1	1	0	0	0.0%	-1.7%	60	60
38		4	0.9167	0.8	1	0.04194	0.08389	9.15%	6.78%	55	60
75		4	0.65	0.4667	0.8667	0.08333	0.1667	25.64%	33.9%	39	60
150		4	0.3833	0.2	0.6667	0.1134	0.2269	59.19%	61.02%	23	60

7d Survival Rate Detail

C-μg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Negative Control	1	1	0.9333	1	
10		1	1	1	1	
19		1	1	1	1	
38		1	0.9333	8.0	0.9333	
75		0.8667	0.4667	0.6667	0.6	
150		0.6667	0.2	0.4667	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	14/15	15/15
10		15/15	15/15	15/15	15/15
19		15/15	15/15	15/15	15/15
38		15/15	14/15	12/15	14/15
75		13/15	7/15	10/15	9/15
150		10/15	3/15	7/15	3/15

CETIS™ v1.8.7.11

Report Date:

29 Dec-14 10:09 (p 2 of 3)

Test Code:

FML120314 | 04-7153-1004

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

03-7140-5322

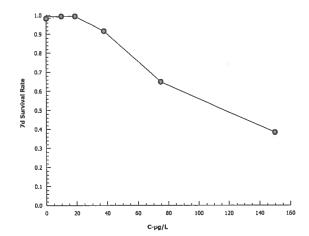
29 Dec-14 10:08

Endpoint: 7d Survival Rate

Analysis: Linear Interpolation (ICPIN)

CETISv1.8.7 **CETIS Version:**

Official Results: Yes



Report Date:

29 Dec-14 10:09 (p 3 of 3)

Test Code:

FML120314 | 04-7153-1004

Fathead N	Vlinno	ow 7-d Larval Su	ırvival and Growt	h Test			Aqı	ıatic Bi	oassay & Consulting Labs, Inc.
Analysis I Analyzed:		02-0535-0060 29 Dec-14 10:08	Endpoint: Analysis:	•				rsion: esults:	CETISv1.8.7 Yes
Sample ID	D:	04-2446-4971	Code:	FML120314f			Client:	ABC	Labs
Sample D	ate:	03 Dec-14 14:45	Material:	Copper chlorid	le		Project:	REF	TOX
Receive D	Date:		Source:	Reference Tox	dicant				
Sample A	ge:	NA	Station:	REF TOX					
Linear Int	erpol	ation Options				-			
X Transfo	orm	Y Transform	Seed	Resamples	Exp 95% CL	Method			
Linear		Linear	667422	280	Yes	Two-Point	Interpolatio	n	
Point Esti	imate	es							
Level µ	ug/L	95% LCL	95% UCL						
IC5 2	22.72	12.02	26.79						
IC10 2	26.45	17.65	34.59						
IC15 3	30.17	22.03	42.68						
IC20 3	33.9	25.42	50.88						

Mean Dry	Biomass-mg Summ	nary	5.4	Calculated Variate						
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	
0	Negative Control	4	0.3787	0.2853	0.4947	0.04458	0.08916	23.54%	0.0%	
10		4	0.4772	0.4247	0.4993	0.01781	0.03562	7.46%	-26.01%	
19		4	0.4397	0.4153	0.4653	0.01283	0.02565	5.83%	-16.11%	
38		4	0.3217	0.272	0.3847	0.02386	0.04771	14.83%	15.05%	
75		4	0.2173	0.1553	0.3047	0.03158	0.06316	29.06%	42.61%	
150		4	0.1062	0.05267	0.1727	0.02546	0.05092	47.97%	71.96%	

Mean Dry Biomass-mg Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.2853	0.4947	0.394	0.3407
10		0.4993	0.4993	0.4853	0.4247
19		0.458	0.42	0.4653	0.4153
38		0.3273	0.3847	0.3027	0.272
75		0.3047	0.1553	0.214	0.1953
150		0.1727	0.08533	0.114	0.05267

Graphics

IC25

IC40

IC50

37.62

60.19

75.96

28.57

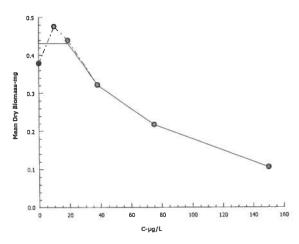
40.87

54.43

59.75

97.03

118.8



Analyst: QA:

CETIS Measurement Report

Report Date:

29 Dec-14 10:09 (p 1 of 2)

Test Code:

FML120314 | 04-7153-1004

Fathead Minn	ow 7-d Larval S	I and Growt		Aquatic Bioassay & Consulting Labs, Inc.							
Batch ID: Start Date: Ending Date: Duration:	05-2128-8231 03 Dec-14 14:4 10 Dec-14 14:0 6d 23h		Test Type: Protocol: Species: Source:	EPA/821/R-02- Pimephales pro	Growth-Survival (7d) EPA/821/R-02-013 (2002) Pimephales promelas Aquatic Biosystems, CO				_aboratory Wat Not Applicable	er	
Sample ID: Sample Date: Receive Date:	04-2446-4971 03 Dec-14 14:4	15	Code: Material: Source:		FML120314f Copper chloride Reference Toxicant						
Sample Age:			Station:	REF TOX	icant						
Alkalinity (Ca	CO3)-mg/L		-								
C-µg/L	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std En	r Std Dev	CV%	QA Count
0	Negative Contr	8	68.63	68.19	69.06	68	69	0.183	0.5175	0.75%	0
150	•	8	78	78	78	78	78	0	0	0.0%	0
Overall		16	73.31			68	78				0 (0%)
Conductivity-	µmhos										
C-µg/L	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std En	r Std Dev	CV%	QA Count
0	Negative Contr	8	336.5	334.5	338.5	333	340	0.8452	2.39	0.71%	0
10	-	8	340.9	333.6	348.1	330	352	3.073	8.692	2.55%	0
19		8	328.9	323.1	334.7	312	333	2.453	6.937	2.11%	0
38		8	327.3	319.4	335.1	304	331	3.326	9.407	2.88%	0
75		8	328.5	323.8	333.2	315	332	1.982	5.606	1.71%	0
150		8	325.3	318	332.5	310	332	3.046	8.615	2.65%	0
Overall		48	331.2			304	352				0 (0%)
Dissolved Ox	ygen-mg/L										
C-µg/L	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count
0	Negative Contr	8	7.738	7.459	8.016	7.5	8.5	0.1179	0.3335	4.31%	0
10		8	7.975	7.607	8.343	7.5	8.6	0.1556	0.44	5.52%	0
19		8	8.125	7.64	8.61	7.5	9.3	0.2051	0.58	7.14%	0
38		8	8.163	7.613	8.712	7.5	9.6	0.2322	0.6567	8.05%	0
75		8	8.213	7.675	8.75	7.5	9.6	0.2271	0.6424	7.82%	0
150		8	8.137	7.622	8.653	7.5	9.4	0.2179	0.6163	7.57%	0
Overall	·	48	8.058			7.5	9.6				0 (0%)
Hardness (Ca	CO3)-mg/L										
C-µg/L	Control Type	Cour	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count
0	Negative Contr	8	90	90	90	90	90	0	0	0.0%	0
150		8	99	99	99	99	99	0	0	0.0%	0
Overall		16	94.5			90	99				0 (0%)
pH-Units											
C-µg/L	Control Type	Cour					Max	Std Er		CV%	QA Count
0	Negative Contr		7.763		7.986	7.3	8.1	0.0943		3.44%	0
10		8	7.788		7.974	7.5	8.2	0.0789		2.87%	0
19		8	7.725	7.507	7.943	7.4	8.2	0.0921		3.37%	0
38		8	7.65	7.46	7.84	7.4	8.1	0.0801		2.96%	0
75		8	7.613		7.815	7.3	8.1	0.0854		3.17%	0
150		8	7.563	7.326	7.799	7.2	8.1	0.0998	9 0.2825	3.74%	0 (0)()
Overall		48	7.683			7.2	8.2				0 (0%)

Analyst:_____ QA:___

Report Date: Test Code: 29 Dec-14 10:09 (p 2 of 2) FML120314 | 04-7153-1004

Fathead Minnow 7-d Larval Survival and Growth Test Aquatic Bioassay & Consulting Labs, Inc. Temperature-°C 95% UCL CV% C-µg/L **Control Type** Count Mean 95% LCL Min Max Std Err Std Dev **QA Count** 0 24.08 24 24.15 24 24.2 **Negative Contr** 8 0.03131 0.08857 0.37% 0 10 24.08 24 24.15 24 24.2 0.03131 0.08857 0.37% 0 8 19 8 24.06 24.12 24.2 0.02628 0.07432 0.31% 0 24 24 38 0 8 0.07553 0.31% 24.05 23.99 24.11 24 24.2 0.0267 75 8 24.03 23.99 24.06 24 24.1 0.01634 0.04623 0.19% 0 150 8 24.03 23.99 24.06 24 24.1 0.01634 0.04623 0.19% 0 Overall 24 0 (0%) 48 24.05 24.2 Alkalinity (CaCO3)-mg/L C-µg/L **Control Type** 1 2 3 4 5 6 7 8 0 68 **Negative Contr** 69 69 69 69 69 68 68 150 78 78 78 78 78 78 78 78 Conductivity-µmhos 7 C-µg/L **Control Type** 1 2 3 4 5 6 8 340 0 336 334 335 338 333 338 338 **Negative Contr** 10 333 331 350 345 346 330 352 340 19 330 331 332 333 333 330 312 330 38 330 331 331 330 330 331 304 331 75 332 331 331 331 329 331 315 328 150 331 330 332 331 319 332 310 317 Dissolved Oxygen-mg/L C-µg/L **Control Type** 1 2 3 4 5 6 7 8 0 **Negative Contr** 7.5 7.5 7.6 7.5 7.7 7.8 7.8 8.5 10 7.7 7.6 8.3 7.5 7.6 8 8.6 8.5 19 7.9 7.9 8.3 7.5 7.5 8.3 8.3 9.3 38 7.9 8 8 8.4 7.6 7.5 8.3 9.6 7.9 75 8 8.4 7.7 7.5 8.3 8.3 9.6 150 7.8 7.7 8.3 7.7 7.5 8.2 8.5 9.4 Hardness (CaCO3)-mg/L 7 C-µg/L **Control Type** 1 2 3 4 5 6 8 0 Negative Contr 90 90 90 90 90 90 90 90 99 99 150 99 99 99 99 99 99 pH-Units C-µg/L **Control Type** 1 2 3 4 5 6 7 8 0 8.1 7.7 8 7.3 **Negative Contr** 7.8 7.6 8 7.6 10 8.2 7.7 7.8 7.7 7.8 7.5 8 7.6 19 8.2 7.6 7.7 7.7 7.7 7.4 8 7.5 38 8.1 7.6 7.6 7.7 7.4 7.8 7.4 7.6 75 8.1 7.5 7.6 7.5 7.6 7.5 7.8 7.3 7.8 7.2 150 8.1 7.5 7.5 7.5 7.6 7.3 Temperature-°C C-µg/L **Control Type** 2 3 4 5 6 7 8 0 **Negative Contr** 24.1 24 24 24.2 24 24.2 24.1 24 10 24.1 24 24 24.2 24 24.2 24.1 24 24 24 24.2 24.1 24 19 24.1 24 24.1 38 24.1 24 24.1 24 24.2 24 24 24 75 24.1 24 24 24.1 24 24 24 24 150 24.1 24 24 24.1 24 24 24 24

Analyst: QA:



CHRONIC CERIODAPHNIA SURVIVAL AND REPRODUCTION BIOASSAY

DATE:

4 December - 2014

STANDARD TOXICANT: Copper Chloride

ENDPOINT:

SURVIVAL

NOEC =

30.00 ug/l

EC25 =

20.26 ug/l

EC50 =

30.63 ug/l

ENDPOINT:

REPRODUCTION

NOEC =

3.00 ug/l

IC25 =

4.14 ug/l

IC50 =

10.00 ug/l

Yours very truly,

Scott Johnson

Laboratory Director

CETIS Summary Report

Report Date: Test Code: 29 Dec-14 09:57 (p 1 of 2) CER120414 | 19-1751-8351

Aquatic Bioassay & Consulting Labs, Inc. Ceriodaphnia 7-d Survival and Reproduction Test Test Type: Reproduction-Survival (7d) Analyst: 04-3152-5006 Batch ID: Laboratory Water Diluent: EPA/821/R-02-013 (2002) Protocol: 04 Dec-14 15:00 Start Date: Brine: Not Applicable Ceriodaphnia dubia Species: Ending Date: 11 Dec-14 13:20 Age: Aquatic Biosystems, CO **Duration:** 6d 22h Source: Client: Internal Lab CER120414 11-1556-0619 Code: Sample ID: Project: Copper chloride Sample Date: 04 Dec-14 15:00 Material: Receive Date: Source: Reference Toxicant Station: **REF TOX** Sample Age: NA **Comparison Summary** Method TU **PMSD NOEL** LOEL **TOEL Endpoint** Analysis ID Fisher Exact/Bonferroni-Holm Test 30 50 38.73 NA 00-6967-7996 7d Survival Rate **Dunnett Multiple Comparison Test** 5 3.873 23.3% 18-3272-9495 Reproduction 3 **Point Estimate Summary** Method 95% LCL 95% UCL TU **Endpoint** Level μg/L Analysis ID Linear Interpolation (ICPIN) 17-8344-9027 7d Survival Rate EC5 12.05 11.25 15.57 EC10 14.11 12.5 21.14 16.16 13.75 26.71 **EC15** 15 30.67 EC20 18.21 20.26 16.25 32.19 EC25 EC40 26.42 20 36.57 30.63 22.5 39.29 EC50 Linear Interpolation (ICPIN) 0.7539 3.297 IC5 3.167 15-1730-2976 Reproduction 1.508 3.593 IC10 3.41 2.262 3.89 **IC15** 3.653 IC20 3.896 3.01 4.2 4.509 IC25 4.139 3.411 12.21 4.381 IC40 4.868 IC50 10 4.94 18.67 **Test Acceptability TAC Limits** Overlap Decision **Test Stat Attribute** Analysis ID **Endpoint** Yes Passes Acceptability Criteria 0.9 0.8 - NL Control Resp 00-6967-7996 7d Survival Rate Passes Acceptability Criteria 0.9 0.8 - NL Yes Control Resp 7d Survival Rate 17-8344-9027 Passes Acceptability Criteria 15 - NL Yes 19.2 Control Resp 15-1730-2976 Reproduction Yes Passes Acceptability Criteria 15 - NL 19.2 Reproduction Control Resp 18-3272-9495 Passes Acceptability Criteria Yes 0.2326 0.13 - 0.47**PMSD** 18-3272-9495 Reproduction 7d Survival Rate Summary Min Max Std Err Std Dev CV% %Effect 95% UCL 95% LCL C-µg/L **Control Type** Count Mean 0.1 0.3162 35.14% 0.0% 0 1 0.6738 1 Negative Control 10 0.9 0 0 0.0% -11.11% 0 1 1 1 10 1 1 3 0 0 0.0% -11.11% 1 1 5 10 1 1 1 0 0 0.0% -11.11% 1 1 1 10 1 1 10 105.4% 44.44% 0.1667 0.527 0 1 0.5 0.123 0.877 30 10 316.2% 88.89% 0.3162 0 1 0.3262 10 0.1 0 50 **Reproduction Summary** CV% %Effect Std Err Std Dev Min Max 95% LCL 95% UCL **Control Type** Count Mean C-µg/L 0.0% 4.709 24.53% 28 1.489 22.57 11 Negative Control 10 19.2 15.83 0 1.56% 5.685 30.08% 30 1.798 9 18.9 14.83 22.97 3 10 2.404 21.85% 42.71% 0.7601 9.28 12.72 8 16 10 11 5 43.98% 50.0% 4.222 6.58 12.62 4 20 1.335 9.6 10 10 76.04% 1.688 5.337 116.0% 8.418 0 12 10 4.6 0.7818 30 211.6% 93.23% 7 0.8699 2.751 n -0.6678 3.268 10 1.3 50

Analyst: QA: 1755

CETIS Summary Report

Report Date:

29 Dec-14 09:57 (p 2 of 2)

Test Code: CER120414 | 19-1751-8351

Ceriodaphnia 7-d Surv	val and F	Reproduction	Test
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Ceriodaphnia 7-d Survival and Reproduction Test	Aquatic Bioassay & Consulting Labs, Inc.
710 1.1D-4 D-43	

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	0	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		0	0	1	0	1	1	1	1	0	0
50		0	0	0	1	0	0	0	0	0	0

Reproduction Detail Rep 10 Rep 8 Rep 9 Rep 4 Rep 5 Rep 6 Rep 7 Control Type Rep 3 C-µg/L Rep 1 Rep 2 Negative Control 24

7d Surviva	I 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	0/1	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		0/1	0/1	1/1	0/1	1/1	1/1	1/1	1/1	0/1	0/1
50		0/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1	0/1	0/1

Report Date:

29 Dec-14 09:57 (p 1 of 2)

Test Code:

CER120414 | 19-1751-8351

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

Analysis ID: Analyzed:

18-3272-9495 19 Dec-14 12:37 Endpoint: Analysis:

Reproduction Parametric-Control vs Treatments

NΑ

CETISv1.8.7 CETIS Version:

Official Results: Yes

Sample ID:

11-1556-0619

Code:

Zeta

NA

CER120414

Client:

Internal Lab

Sample Date: 04 Dec-14 15:00

Material: Source:

Copper chloride Reference Toxicant

NA

Project:

Receive Date:

Data Transform

Untransformed

Sample Age: NA

Station:

Alt

C > T

REF TOX

Нур	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU	
- T	NA	NA	23.3%	3	5	3.873		

Dunnett Multiple Comparison Test

Control vs	C-µg/L	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(a:5%)
Negative Control	3	0.1538	2.289	4.466	18	0.7836	CDF	Non-Significant Effect
	5*	4.204	2.289	4.466	18	0.0002	CDF	Significant Effect
	10*	4.921	2.289	4.466	18	<0.0001	CDF	Significant Effect
	30*	7.485	2.289	4.466	18	<0.0001	CDF	Significant Effect
	50*	9.176	2.289	4.466	18	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(a:5%)
Between	2663.333	532.6667	5	28	<0.0001	Significant Effect
Error	1027.4	19.02593	54			
Total	3690.733		59			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(a:1%)
Variances	Bartlett Equality of Variance	9.423	15.09	0.0933	Equal Variances
Variances	Mod Levene Equality of Variance	2	3.377	0.0933	Equal Variances
Variances	Levene Equality of Variance	2.29	3.377	0.0584	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9579	0.9459	0.0370	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1333	0.1331	0.0098	Non-normal Distribution
Distribution	D'Agostino Skewness	1.84	2.576	0.0657	Normal Distribution
Distribution	D'Agostino Kurtosis	1.13	2.576	0.2586	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	4.663	9.21	0.0971	Normal Distribution
Distribution	Anderson-Darling A2 Normality	1.165	3.878	0.0048	Non-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	19.2	15.83	22.57	18.5	11	28	1.489	24.53%	0.0%
3		10	18.9	14.83	22.97	18.5	9	30	1.798	30.08%	1.56%
5		10	11	9.28	12.72	11	8	16	0.7601	21.85%	42.71%
10		10	9.6	6.58	12.62	8.5	4	20	1.335	43.98%	50.0%
30		10	4.6	0.7818	8.418	2	0	12	1.688	116.0%	76.04%
50		10	1.3	-0.6678	3.268	0	0	7	0.8699	211.6%	93.23%

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	24	20	19	18	11	16	22	18	16	28
3	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	17	21	15	9	23	20	15	17	22	30
5		11	12	11	16	8	9	11	13	11	8
10		12	8	10	9	20	7	10	4	8	8
30		0	0	12	0	10	4	8	12	0	0
50		0	0	0	6	7	0	0	0	0	0

Report Date: Test Code: 29 Dec-14 09:57 (p 2 of 2) CER120414 | 19-1751-8351

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

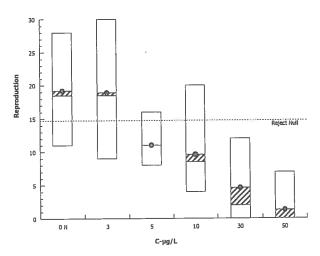
18-3272-9495 19 Dec-14 12:37 Endpoint: Reproduction

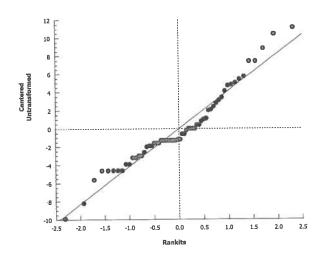
Analysis: Parametric-Control vs Treatments

CETIS Version: CE

CETISv1.8.7

Official Results: Yes





Report Date: Test Code:

29 Dec-14 09:57 (p 1 of 3) CER120414 | 19-1751-8351

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

Analysis ID: Analyzed:

17-8344-9027 19 Dec-14 12:37 Endpoint: 7d Survival Rate Analysis:

Linear Interpolation (ICPIN)

CETISv1.8.7 CETIS Version:

Official Results: Yes

Sample ID: 11-1556-0619 Code: Material: CER120414

Internal Lab

Client:

Sample Date: 04 Dec-14 15:00 Receive Date:

Source:

Copper chloride Reference Toxicant Project:

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% UC
EC5	12.05	11.25	15.57
EC10	14.11	12.5	21.14
EC15	16.16	13.75	26.71
EC20	18.21	15	30.67
EC25	20.26	16.25	32.19
EC40	26.42	20	36.57
EC50	30.63	22.5	39.29

7d Survival Rate Summary											
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В
0	Negative Control	10	0.9	0	1	0.1	0.3162	35.14%	0.0%	9	10
3	•	10	1	1	1	0	0	0.0%	-11.11%	10	10
5		10	1	1	1	0	0	0.0%	-11.11%	10	10

•	recgulare control	10	0.0	•	•					-	
3		10	1	1	1	0	0	0.0%	-11.11%	10	10
5		10	1	1	1	0	0	0.0%	-11.11%	10	10
10		10	1	1	1	0	0	0.0%	-11.11%	10	10
30		10	0.5	0	1	0.1667	0.527	105.4%	44.44%	5	10
50		10	0.1	0	1	0.1	0.3162	316.2%	88.89%	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	0	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		0	0	1	0	1	1	1	1	0	0
50		0	0	0	1	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	0/1	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		0/1	0/1	1/1	0/1	1/1	1/1	1/1	1/1	0/1	0/1
50		0/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1	0/1	0/1

CETIS™ v1.8.7.11

Report Date: Test Code: 29 Dec-14 09:57 (p 2 of 3) CER120414 | 19-1751-8351

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

17-8344-9027

19 Dec-14 12:37

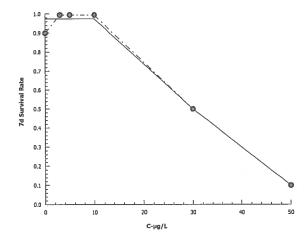
Endpoint: 7d Survival Rate

Analysis: Line

Linear Interpolation (ICPIN)

CETIS Version: CETISv1.8.7

Official Results: Yes



Report Date:

29 Dec-14 09:57 (p 3 of 3)

Test Code:

CER120414 | 19-1751-8351

Ceriodaphnia	7-d Surviv	al and	Reproduction	Test
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Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

15-1730-2976 19 Dec-14 12:37 Endpoint: Analysis:

Reproduction Linear Interpolation (ICPIN)

CETISv1.8.7 CETIS Version:

Official Results: Yes

Sample ID:

11-1556-0619

Code:

CER120414

Client:

Sample Date: 04 Dec-14 15:00

Material:

Copper chloride

Project:

Internal Lab

Receive Date: Sample Age: NA

Source: Station:

Reference Toxicant **REF TOX**

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	774004	280	Yes	Two-Point Interpolation

Point Estimates

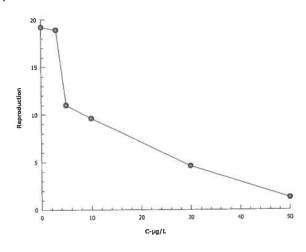
Level	μg/L	95% LCL	95% UCL
IC5	3.167	0.7539	3.297
IC10	3.41	1.508	3.593
IC15	3.653	2.262	3.89
IC20	3.896	3.01	4.2
IC25	4.139	3.411	4.509
IC40	4.868	4.381	12.21
IC50	10	4.94	18.67

Reproduc	tion Summary				(Calculated Va	ariate		
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	19.2	11	28	1.489	4.709	24.53%	0.0%
3		10	18.9	9	30	1.798	5.685	30.08%	1.56%
5		10	11	8	16	0.7601	2.404	21.85%	42.71%
10		10	9.6	4	20	1.335	4.222	43.98%	50.0%
30		10	4.6	0	12	1.688	5.337	116.0%	76.04%
50		10	1.3	0	7	0.8699	2.751	211.6%	93.23%

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	24	20	19	18	11	16	22	18	16	28
3		17	21	15	9	23	20	15	17	22	30
5		11	12	11	16	8	9	11	13	11	8
10		12	8	10	9	20	7	10	4	8	8
30		0	0	12	0	10	4	8	12	0	0
50		0	0	0	6	7	0	0	0	0	0

Graphics



CETIS™ v1.8.7.11

Report Date:

29 Dec-14 09:57 (p 1 of 2)

Test Code:

CER120414 | 19-1751-8351

Ceriodaphnia 7-d Surviva	I and Reproduction Test
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Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID:

00-6967-7996

Endpoint: 7d Survival Rate Analysis:

STP 2x2 Contingency Tables

CETIS Version:

CETISv1.8.7

Analyzed:

19 Dec-14 12:37

Code:

Official Results: Yes

Sample ID:

11-1556-0619

Zeta

CER120414

Client:

Internal Lab

Sample Date: 04 Dec-14 15:00

Material:

Copper chloride

Trials

NA

Project:

Receive Date:

Data Transform

Untransformed

Sample Age: NA

Source:

Reference Toxicant

Station: **REF TOX**

> Alt Hyp C > T

N	IOEL.	LOEL	TOEL	TU
3	30	50	38.73	

Fisher Exact/Bonferroni-Holm Test

Control vs	C-µg/L	Test Stat	P-Value	P-Type	Decision(a: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	0.07043	0.2817	Exact	Non-Significant Effect
	50	0.0005467	0.0027	Exact	Significant Effect

Seed

NA

Data Summary

C-µg/L	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect
0	Negative Contr	9	1	10	0.9	0.1	0.0%
3	· ·	10	0	10	1	0	-11.11%
5		10	0	10	1	0	-11.11%
10		10	0	10	1	0	-11.11%
30		5	5	10	0.5	0.5	44.44%
50		1	9	10	0.1	0.9	88.89%

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	0	1	1	1	1	1
3	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		0	0	1	0	1	1	1	1	0	0
50		0	0	0	1	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	0/1	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		0/1	0/1	1/1	0/1	1/1	1/1	1/1	1/1	0/1	0/1
50		0/1	0/1	0/1	1/1	0/1	0/1	0/1	0/1	0/1	0/1

Report Date:

29 Dec-14 09:57 (p 2 of 2)

Test Code:

CER120414 | 19-1751-8351

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

00-6967-7996

19 Dec-14 12:37

Endpoint: 7d Survival Rate

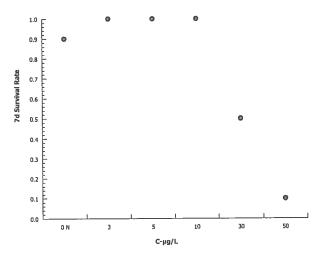
Analysis:

STP 2x2 Contingency Tables

CETIS Version:

CETISv1.8.7

Official Results: Yes



CETIS Measurement Report

Report Date:

29 Dec-14 09:57 (p 1 of 2)

Test Code:

CER120414 | 19-1751-8351

Ceriodaphnia 7-d Survival and Reproduction Test								Aquatic Bioassay & Consulting Labs, Inc.				
Batch ID: Start Date: Ending Date: Duration:	04-3152-5006 04 Dec-14 15:00 11 Dec-14 13:20 6d 22h		Test Type: Protocol: Species: Source:	Reproduction-Survival (7d) EPA/821/R-02-013 (2002) Ceriodaphnia dubia Aquatic Biosystems, CO			E	Analyst: Diluent: Laboratory Water Brine: Not Applicable Age:				
Sample ID: Sample Date: Receive Date	mple Date: 04 Dec-14 15:00		Code: Material: Source:	_ ''				Client: Internal Lab Project:				
Sample Age:	NA		Station:	REF TOX								
Alkalinity (Ca	CO3)-mg/L											
C-µg/L	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	68.5	68.05	68.95	68	69	0.189	0.5345	0.78%	0	
50		8	62	62	62	62	62	0	0	0.0%	0	
Overall		16	65.25			62	69				0 (0%)	
Conductivity-	-µmhos			· · · ·								
C-µg/L	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	338.6	332.5	344.8	333	356	2.591	7.328	2.16%	0	
3		8	337.8	329.9	345.6	322	347	3.304	9.347	2.77%	0	
5		8	331.5	329.4	333.6	326	334	0.9063	2.563	0.77%	0	
10		8	337.3	329.1	345.4	323	352	3.463	9.794	2.9%	0	
30		8	331.3	327.9	334.6	326	336	1.424	4.027	1.22%	0	
50		8	332.5	327.9	337.1	320	338	1.964	5.555	1.67%	0	
Overall		48	334.8			320	356				0 (0%)	
Dissolved Ox	rygen-mg/L				11			· · ·				
C-µg/L	Control Type	Cour	it Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	7.813	7.543	8.082	7.5	8.3	0.1141	0.3227	4.13%	0	
3	_	8	7.688	7.229	8.146	6.4	8.1	0.1941	0.5489	7.14%	0	
5		8	7.888	7.484	8.291	6.9	8.3	0.1705	0.4824	6.12%	0	
10		8	7.95	7.579	8.321	7.2	8.5	0.157	0.444	5.59%	0	
30		8	7.9	7.545	8.255	7.2	8.5	0.15	0.4243	5.37%	0	
50		8	7.775	7.402	8.148	7	8.4	0.1578	0.4464	5.74%	0	
Overall		48	7.835	-		6.4	8.5				0 (0%)	
Hardness (Ca	aCO3)-mg/L											
C-µg/L	Control Type	Cour	nt Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	90	90	90	90	90	0	0	0.0%	0	
50		8	82	82	82	82	82	0	0	0.0%	0	
Overall		16	86			82	90				0 (0%)	
pH-Units				<u> </u>								
C-µg/L	Control Type	Cour	nt Mean	95% LCL			Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	7.75	7.595	7.905	7.5	8	0.06547		2.39%	0	
3		8	7.325		7.778	6.2	7.8	0.1916	0.5418	7.4%	0	
5		8	7.325		7.778	6.2	7.8	0.1916	0.5418	7.4%	0	
10		8	7.388		7.723	6.6	7.8	0.142	0.4016	5.44%	0	
30		8	7.388		7.72	6.6	7.7	0.1407	0.398	5.39%	0	
50		8	7.275		7.581	6.6	7.6	0.1292	0.3655	5.02%	0 (20()	
Overall		48	7.408			6.2	8				0 (0%)	

Report Date: Test Code: 29 Dec-14 09:57 (p 2 of 2) CER120414 | 19-1751-8351

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 Std Err Std Dev CV% Max **QA Count** 0 **Negative Contr** 8 24.16 23.81 24.51 24 25.2 0.1487 0.4207 1.74% 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 0.15% 0 0.03531 Overall 48 24.04 24 25.2 0 (0%) Alkalinity (CaCO3)-mg/L C-µg/L **Control Type** 1 2 3 4 5 6 8 7 0 **Negative Contr** 69 69 69 69 68 68 68 68 50 62 62 62 62 62 62 62 62 Conductivity-µmhos C-µg/L Control Type 1 2 3 4 5 6 7 8 0 **Negative Contr** 336 334 335 338 333 338 339 356 3 346 347 345 345 334 334 322 329 5 326 330 331 332 333 333 333 334 10 323 338 351 352 334 333 332 335 30 332 326 326 328 333 334 335 336 50 334 333 335 330 336 334 320 338 Dissolved Oxygen-mg/L C-µg/L **Control Type** 1 2 3 4 5 6 7 8 0 Negative Contr 7.5 7.6 7.5 7.7 7.8 7.8 8.3 8.3 3 8.1 8 7.7 7.7 7.7 8.1 7.8 6.4 5 8.3 7.7 8.2 8.2 7.6 8.3 7.9 6.9 10 8.2 8.5 7.7 7.5 8.3 8.2 8 7.2 30 8.3 8.5 7.7 7.5 8 8.1 7.9 7.2 50 8.2 8.4 7.7 7.5 7.5 8 7.9 7 Hardness (CaCO3)-mg/L C-µg/L **Control Type** 3 5 2 4 6 7 8 0 **Negative Contr** 90 90 90 90 90 90 90 90 50 82 82 82 82 82 82 82 82 pH-Units C-µg/L Control Type 1 2 3 4 5 6 7 8 0 **Negative Contr** 7.8 7.6 7.7 8 7.6 8 7.5 7.8 3 7.8 7.3 7.8 7.8 7 6.2 7.3 7.4 5 7.8 7 7.3 7.8 7.8 6.2 7.3 7.4 10 6.6 7.6 7.7 7.4 7.8 7.6 7 7.4 30 7.7 7.4 7.7 7.7 7 6.6 7.4 7.6 50 7.6 7.4 7.6 7 7 6.6 7.5 7.5 Temperature-°C C-µg/L **Control Type** 2 1 3 4 5 6 7 8 0 Negative Contr 24 25.2 24 24 24.1 24 24 24 3 24 24 24 24 24.1 24 24 24 5 24 24 24 24 24.1 24 24 24 10 24 24 24 24 24.1 24 24 24 30 24 24 24 24 24.1 24 24 24 50 24 24 24 24 24.1 24 24 24

Analyst:____QA:____



CHRONIC SELENASTRUM GROWTH BIOASSAY

DATE:

4 December - 2014

STANDARD TOXICANT: Cadmium Chloride

NOEC =

80.00 ug/l

IC25 =

99.96 ug/l

IC50 =

130.30 ug/l

Yours very truly,

Scott Johnson

Laboratory Director

Report Date:

19 Dec-14 09:29 (p 1 of 1) SEL120414 | 00-4450-7895

Test Code:	SEL12041

							100	,, , , , , , , , , , , , , , , , , , ,				
Selenastrum (Growth Test							Aquat	ic Bio	oassay & Co	nsulting	Labs, Inc.
Batch ID: Start Date: Ending Date: Duration:	05-9141-0513 04 Dec-14 12:27 08 Dec-14 12:10 96h	Test 1 Proto Speci Source	i es: Se	II Growth A/821/R-02-0 lenastrum cap uatic Biosyste	oricornutum		Dil	ne:		atory Water		
Sample ID: Sample Date: Receive Date: Sample Age:		Code Mater Sourc Static	rial: Ca ce: Re	L120414s dmium chlorio ference Toxio F TOX				ent: oject:	Intern	al Lab		
Comparison S	Summary											
Analysis ID	Endpoint		NOEL	LOEL	TOEL	PMSD	TU	Metho	od			
15-1215-5961			80	140	105.8	7.9%		Dunne	ett Mu	ıltiple Comp	arison Tes	t
Point Estimate	e Summarv											
Analysis ID	Endpoint		Level	μg/L	95% LCL	95% UCL	TU	Metho	od			
05-0013-4451	Cell Density		IC5	63.37	51.18	90.53				rpolation (IC	PIN)	*
00-0010-4401	Och Bellony		IC10	81.75	65.35	88.6					·	
			IC15	87.82	80.02	94.08						
			IC20	93.89	86.93	99.78						
			IC25	99.96	93.52	105.4						
			IC40	118.2	113.3	122.6						
			IC50	130.3	126	134.1						
Test Acceptat	oility											
Analysis ID	Endpoint		Attribute)	Test Stat	TAC Limi	its	Over	ар	Decision		
05-0013-4451	Cell Density		Control C	CV	0.02005	NL - 0.2		Yes		Passes Ac		
15-1215-5961	Cell Density		Control (CV	0.02005	NL - 0.2		Yes		Passes Ac		
05-0013-4451	Cell Density		Control F	•	1.26E+6	1.00E+6 -		Yes		Passes Ac		
15-1215-5961	Cell Density		Control F	Resp	1.26E+6	1.00E+6 -		Yes		Passes Ac		
15-1215-5961	Cell Density		PMSD		0.07896	0.091 - 0.2	29	Yes		Below Acc	eptability C	riteria
Cell Density S	Summary											
C-μg/L	Control Type	Count	Mean	95% LCL	95% UCL		Max	Std E		Std Dev	CV%	%Effect
0	Negative Control		1.263E+		1.303E+6							0.0%
20		4	1.315E+									-4.14% 11.21%
40		4		6 1.230E+6						1.096E+5		-11.21% 3.88%
80		4		6 1.130E+6 5 5.105E+5								55.83%
140		4		5 5.105E+5 5 1.357E+5								87.25%
180		4	1.010E+	0 1.35/E+5	1.003E+3	1.330E+3	1.760E		,L FJ	1.000E14	3.07 70	37.2070
Cell Density I					B 1							
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4							
0	Negative Control											
20				6 1.393E+6								
				n 1438-+6	1.3485+6							
40		1.541E+6										
80		1.168E+6	1.276E+	6 1.173E+6	1.238E+6							
		1.168E+6 5.860E+5	1.276E+ 5.670E+		1.238E+6 5.620E+5							

Analyst: QA:

Report Date:

19 Dec-14 09:29 (p 1 of 2)

Test Code:

SEL120414 | 00-4450-7895

Selenastrum (Growth Test							Aquatic Bio	oassay & C	onsulting	Labs, Inc.
Analysis ID: Analyzed:	15-1215-5961 19 Dec-14 9:29	Endp Analy		Density metric-Cont	rol vs Treati	ments	CETIS Version: CETISv1.8.7 Official Results: Yes				
Sample ID:	03-5807-2018	Code	: SEL	120414s			Client	: Intern	al Lab		
Sample Date:	04 Dec-14 12:27	Mate	rial: Cadr	mium chlorid	de		Projec	et:			
Receive Date:	;	Source	ce: Refe	rence Toxic	ant						
Sample Age:	NA	Statio	on: REF	TOX							
Data Transfor	·m	Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Untransformed	ŀ	NA	C > T	NA	NA		7.9%	80	140	105.8	
Dunnett Multi	ple Comparison	Гest									
Control	vs C-μg/L		Test Stat	Critical	MSD DF	P-Value	P-Type	Decision(d	:5%)		
Negative Cont	rol 20		-1.261	2.407	99710 6	0.9917	CDF	Non-Signifi	cant Effect		
-	40		-3.416	2.407	99710 6	1.0000	CDF	Non-Signifi	cant Effect		
	80		1.183	2.407	99710 6	0.3440	CDF	Non-Signifi			
	140*		17.02	2.407	99710 6	<0.0001	CDF	Significant	Effect		
	180*		26.6	2.407	99710 6	<0.0001	CDF	Significant	Effect		
ANOVA Table)										
Source	Sum Squar	res	Mean Squ		DF	F Stat	P-Value	Decision(c		_	
Between	5.102629E-	⊦12	1.020526E	+12	5	297.4	< 0.0001	Significant	Effect		
Error	617750000	00	343194400	0	18						
Total	5.164404E-	+12	12		23						
Distributiona	l Tests										
Attribute	Test			Test Stat	Critical	P-Value	Decision(a:1%)			<u></u>
Variances	Bartlett Eq	uality of Va	riance	11.82	15.09	0.0374	Equal Vari	ances			
Variances	Mod Lever	ne Equality	of Variance	3.217	4.248	0.0300	Equal Variances				
Variances	Levene Ed	uality of Va	riance	3.457	4.248	0.0230	Equal Variances				
Distribution	Shapiro-W	ilk W Norm	ality	0.9652	0.884	0.5513	Normal Distribution				
Distribution	Kolmogoro	ov-Smirnov	D	0.1325	0.2056	0.3348	Normal Distribution				
Distribution	D'Agostino	Skewness		0.7165	2.576	0.4737	Normal Distribution				
Distribution	D'Agostino	Kurtosis		1.531	2.576	0.1257	Normal Di	stribution			
Distribution	D'Agostino	-Pearson K	(2 Omnibus	2.858	9.21	0.2395	Normal Distribution				
Distribution	Anderson-	Darling A2	Normality	0.4621	3.878	0.2623	Normal Di	stribution			
Cell Density	Summary										
C-μg/L		Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4			1.303E+6			1.286E+6			0.0%
20		4			1.416E+6			1.393E+6			-4.14%
40		4			1.579E+6			1.541E+6			-11.21%
80		4			1.297E+6			1.276E+6			3.88%
140		4			6.050E+5			5.860E+5			55.83%
180		4	1.610E+5	1.357E+5	1.863E+5	164500	1.390E+5	1.760E+5	7.948E+3	9.87%	87.25%
Cell Density	Detail										
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Negative Control			1.279E+6							
20		1.237E+6	1.313E+6	1.393E+6	1.317E+6						
40		1.541E+6	1.290E+6								
40											
80		1.168E+6	1.276E+6	1.173E+6	1.238E+6						
			1.276E+6 5.670E+5								

Analyst:____QA:___

Report Date:

19 Dec-14 09:29 (p 2 of 2)

Test Code:

SEL120414 | 00-4450-7895

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed: 15-1215-5961 19 Dec-14 9:29

-5961 E

Endpoint: Cell Density

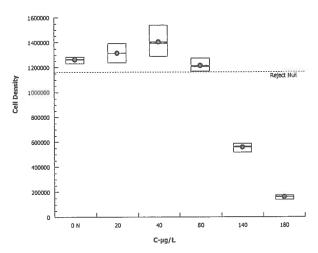
Analysis: Parametric-Control vs Treatments

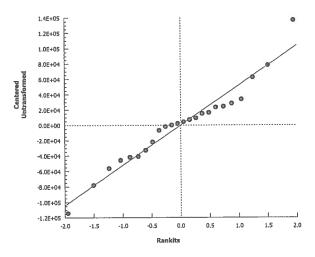
CETIS Version: Official Results:

CETISv1.8.7

Yes

Graphics





Report Date:

19 Dec-14 09:29 (p 1 of 1)

Test Code:

SEL120414 | 00-4450-7895

Selenastrum (Growth Test			Aqua			atic Bi	tic Bioassay & Consulting Labs, Inc.		
Analysis ID: Analyzed:	05-0013-4451 19 Dec-14 9:29	Endpoint: Analysis:	Cell Density Linear Interpol	lation (ICPIN)		CETIS Vers		CETISv1.8.7 Yes		
Receive Date:		Code: Material: Source: Station:	SEL120414s Cadmium chlo Reference Tox REF TOX			Client: Project:	Interr	nal Lab		
Linear Interpo	lation Options									
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method					
Linear	Linear	0	280	Yes	Two-Point I	Interpolation				

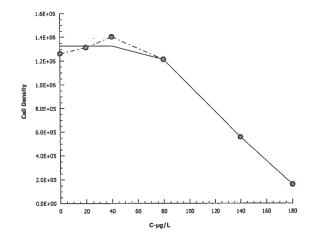
Level	μg/L	95% LCL	95% UCL	 	
IC5	63.37	51.18	90.53		
IC10	81.75	65.35	88.6		
IC15	87.82	80.02	94.08		
IC20	93.89	86.93	99.78		
IC25	99.96	93.52	105.4		
IC40	118.2	113.3	122.6		
IC50	130.3	126	134.1		

Cell Density Summary		Calculated Variate							
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.263E+6	1.230E+6	1.286E+6	1.266E+4	2.532E+4	2.01%	0.0%
20		4	1.315E+6	1.237E+6	1.393E+6	3.185E+4	6.371E+4	4.85%	-4.14%
40		4	1.404E+6	1.290E+6	1.541E+6	5.482E+4	1.096E+5	7.81%	-11.21%
80		4	1.214E+6	1.168E+6	1.276E+6	2.617E+4	5.233E+4	4.31%	3.88%
140		4	5.578E+5	5.160E+5	5.860E+5	1.485E+4	2.969E+4	5.32%	55.83%
180		4	1.610E+5	1.390E+5	1.760E+5	7.948E+3	1.590E+4	9.87%	87.25%

Cell Density Detail

C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.256E+6	1.230E+6	1.279E+6	1.286E+6
20		1.237E+6	1.313E+6	1.393E+6	1.317E+6
40		1.541E+6	1.290E+6	1.438E+6	1.348E+6
80		1.168E+6	1.276E+6	1.173E+6	1.238E+6
140		5.860E+5	5.670E+5	5.160E+5	5.620E+5
180		1.760E+5	1.680E+5	1.610E+5	1.390E+5

Graphics



Analyst: QA:

CETIS Measurement Report

Report Date: Test Code:

19 Dec-14 09:29 (p 1 of 2) SEL120414 | 00-4450-7895

Selenastrum	Growth Test			-				Aquatic I	Bioassay &	Consultin	g Labs, Inc.	
Batch ID:	05-9141-0513		Test Type:	Cell Growth			An	alyst:				
Start Date:	04 Dec-14 12:2		Protocol:	EPA/821/R-02-	013 (2002)			Diluent: Laboratory Water				
Ending Date:			Species:	Selenastrum capricornutum Brine:					Applicable			
Duration:	96h		Source:	Aquatic Biosys	•	•	Ag					
Sample ID:	03-5807-2018		Code:	SEL120414s			Cli	ent: Inte	rnal Lab		···	
•	04 Dec-14 12:2		Material:	Cadmium chlor	ide		Pro	oject:				
Receive Date:			Source:	Reference Tox			• • • •	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
Sample Age:			Station:	REF TOX	ioai it							
Alkalinity (Ca	CO3)-mg/L											
C-μg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun	
0	Negative Contr	1	60			60	60	0	0	0.0%	0	
20		1	70			70	70	0	0	0.0%	0	
40		1	71			71	71	0	0	0.0%	0	
80		1	78			78	78	0	0	0.0%	0	
140		1	65			65	65	0	0	0.0%	0	
180		1	66			66	66	0	0	0.0%	0	
Overall		6	68.33			60	78		-		0 (0%)	
Conductivity-	-µmhos				-	-						
C-μg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun	
0	Negative Contr	5	420.2	411.3	429.1	414	432	3.2	7.155	1.7%	0	
20		5	420.8	409.4	432.2	414	437	4.116	9.203	2.19%	0	
40		5	407.8	403	412.6	404	414	1.744	3.899	0.96%	0	
80		5	389.4	363.6	415.2	353	405	9.288	20.77	5.33%	0	
140		5	378	371.1	384.9	370	384	2.47	5.523	1.46%	0	
180		5	349.4	343	355.8	344	357	2.315	5.177	1.48%	0	
Overall		30	394.3			344	437				0 (0%)	
Hardness (Ca	aCO3)-mg/L									-		
C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Cour	
0	Negative Contr	1	96			96	96	0	0	0.0%	0	
20	J	1	99			99	99	0	0	0.0%	0	
40		1	100			100	100	0	0	0.0%	0	
80		1	99			99	99	0	0	0.0%	0	
140		1	90			90	90	0	0	0.0%	0	
		1	87			87	87	0	0	0.0%	0	
180 Overall		6	95.17			87	100			0.070	0 (0%)	
pH-Units			_									
C-µg/L	Control Type	Count	: Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Cour	
0	Negative Contr	5	7.86	7.672	8.048	7.7	8.1	0.06782	0.1517	1.93%	0	
20	*	5	7.84	7.729	7.951	7.8	8	0.04	0.08945	1.14%	0	
40		5	7.86	7.749	7.971	7.8	8	0.04	0.08944	1.14%	0	
80		5	7.86	7.749	7.971	7.8	8	0.04	0.08944	1.14%	0	
140		5	7.86	7.749	7.971	7.8	8	0.04	0.08944	1.14%	0	
180		5	7.84	7.698	7.982	7.7	8	0.05099	0.114	1.45%	0	
Overall		30	7.853			7.7	8.1				0 (0%)	
Temperature			· -			······						
	Control Type	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Cou	
C-µg/L	Negative Contr		24.56		24.73	24.5	24.8	0.06001	0.1342	0.55%	0	
C-μg/L					24.73	24.5	24.8	0.06001	0.1342	0.55%	0	
0	regative conti	5	24.56					0.06001				
0 20	Negative conti	5 5	24.56 24.56		24.73	24.5	24.0	0.00001	0.1342	0.55%	0	
0 20 40	Negative Conti	5	24.56	24.39	24.73 24.73	24.5 24.5	24.8 24.8		0.1342 0.1342	0.55% 0.55%		
0 20 40 80	Negative conti	5 5	24.56 24.56	24.39 24.39	24.73	24.5	24.8	0.06001	0.1342	0.55%	0	
0 20 40 80 140	Negative Cont	5 5 5	24.56 24.56 24.56	24.39 24.39 24.39	24.73 24.73	24.5 24.5	24.8 24.8	0.06001 0.06001	0.1342 0.1342	0.55% 0.55%	0	
0 20 40 80	Negative contr	5 5	24.56 24.56	24.39 24.39 24.39 24.39	24.73	24.5	24.8	0.06001	0.1342	0.55%	0	

CETIS Measurement Report

Report Date:

19 Dec-14 09:29 (p 2 of 2)

CENSW	ieasurement r	cehori					Test Code:	SEL120414 00-4450-7895
Selenastru	ım Growth Test						Aquatic Bio	passay & Consulting Labs, Inc.
Alkalinity (CaCO3)-mg/L							
C-µg/L	Control Type	1						
0	Negative Contr	60						
20		70						
40		71						
80		78						
140		65						
180		66						
Conductiv	ity-µmhos							
C-µg/L	Control Type	1	2	3	4	5		
0	Negative Contr	414	415	420	420	432		
20		418	414	417	418	437		
40		408	404	408	405	414		
80		399	394	396	353	405		
140		381	375	380	370	384		
180		352	346	348	344	357		
Hardness	(CaCO3)-mg/L							
C-µg/L	Control Type	1						
0	Negative Contr	96						
20		99						
40		100						
80		99						
140		90						
180		87						
pH-Units								
C-µg/L	Control Type	1	2	3	4	5		
0	Negative Contr	7.7	7.9	7.8	7.8	8.1		
20		7.8	7.8	7.8	7.8	8		
40		7.9	7.8	7.8	7.8	8		
80		7.9	7.8	7.8	7.8	8		
140		7.9	7.8	7.8	7.8	8		
180		7.9	7.7	7.8	7.8	8		
Temperatu	ıre-°C						·	
C-µg/L	Control Type	1	2	3	4	5		
0	Negative Contr	24.8	24.5	24.5	24.5	24.5		
20		24.8	24.5	24.5	24.5	24.5		

40

80

140

180

24.8

24.8

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SAMPLE TYPE CODE DW = Drinking Water Charges will apply for weekends/holiday GW = Ground Water AQ=Aqueous NA= Non Aqueous WW = Waste Water SW = Solid Waste OL = Oil OT = Other Matrix RW = Rain Water Same Day Rush 150% 10 - 15 Business Days St. = Sludge 48-72 Hour Rush 75% Rush Extractions 50% QA/QC Data Package 24 Hour Rush 100% 4 - 5 Day Rush 30% SPECIAL HANDLING SO = Soil CHAIN OF CUSTODY RECORD ું ŏ Method of Shipment: SAMPLE CONDITION: 12.3C L B B Preserved Evidence Seals Present Container Attacked Actual Temperature: E.33EA93 9 se listot 9 bris 9-orthC reserved at Lab Received On Ica STANDARD SEISONO Citho-P and P dissolved EPA365.1 Yrethroid Pest by GC/MS NCI-SIM ANALYSES REQUEST S.5S.5 A93 level wol 990 aumalimen Slishs 14,13 Hardness 200.7 8.00SA93 reggoC SPECIAL REQUIREMENTS / BILLING INFORMATION 1.02EA93 N-sinommA NO3+NÒ2-N - EPA 300.0 ds-smr540č / tas-smr540d Weck Laboratories, Inc. Analytical Laboratory Services - Since 1964 # OF CONT. bryn@pwenvironmental.com RECEIVED BY RECEIVED BY RECEIVED BY SAMPLE IDENTIFICATION/SITE LOCATION 162-NSA-1600 **Nursery Growers Association** 805-525-5563 805-525-2896 Tel 626-336-2139 ♦ Fax 626-336-2634 ♦ www.wecklabs.com Scott Jordan 915115 SAMPLER www.wecklabs.com PROJECT PHONE: DATE / TIME DATE / TIME DATE / TIME EMAIL: FAX: 14859 East Clark Avenue: Industry: CA 91745 PRESCHEDULED RUSH ANALYSES WILL TAKE PRIORITY SMPL 8:1 SAMPLED TIME OVER UNSCHEDULED RUSH REQUESTS Client agrees to Terms & Conditions at: PACKEL PROYECIME JUST. SAMPLED DATE Santa Paula, CA 93060 RELINACIJSHED BY RELINQUISHED BY RELINOUISHED BY PROJECT MANAGER PW Eavironmental 230 Dove Court (For lab Use Only) CLIENT NAME: **Bryn Home** ADDRESS





CERTIFICATE OF ANALYSIS

Client:

Pacific Ridgeline Inc.

230 Dove Ct.

Santa Paula CA, 93060

Report Date:

06/15/15 09:20

Received Date:

05/15/15 14:13

Turn Around:

Normal

Client Project:

Nursery Growers Association

Attention: Bryn Home

Phone: (

(805) 525-5563

Fax:

(805) 525-2896

Work Order(s):

5E15070

NELAC #4047-002 ORELAP 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 05/15/15 14:13 with the Chain of Custody document. The samples were received in good condition, at 12.3 °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











Analytical Laboratory Service - Since 1964

Date Received:

05/15/15 14:13

Date Reported:

06/15/15 09:20

ANALYTICAL REPORT FOR SAMPLES

 Sample ID
 Sampled by:
 Lab ID
 Matrix
 Date Sampled

 LAILG-NGA-168-7
 Scott Jordan
 5E15070-01
 Water
 05/15/15 11:00

ANALYSES

Anions by IC, EPA Method 300.0
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



Pacific Ridgeline Inc. 230 Dove Ct. Santa Paula CA, 93060

Date Received:

Analyzed

05/15/15 14:13

Date Reported:

06/15/15 09:20

5E15070-01

LAILG-NGA-168-7

Sampled: 05/15/15 11:00

Sampled By: Scott Jordan

Matrix: Water

Anions by IC, EPA Method 300.0

Method: EPA 300.0

Batch: W5E0838

Prepared: 05/15/15 15:00

Analyst: Alice T Lee

Analyte

Qualifier

Chloride, Total Sulfate as SO4 Result 57

120

MRL 5.0 5.0

Units

mg/l 10 05/15/15 18:55 mg/l 10 05/15/15 18:55

Dil

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W5E1115	Prepared: 05/20/15 0	7:58		Analyst: Paolo Lorenzo A Ramirez		
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
2,4'-DDD	ND	25	ng/l	5	06/04/15 22:39	M-04	
2,4'-DDE	ND	25	ng/l	5	06/04/15 22:39	M-04	
2,4'-DDT	ND	25	ng/l	5	06/04/15 22:39	M-04	
4,4'-DDD	ND	25	ng/l	5	06/04/15 22:39	M-04	
4,4´-DDE	ND	25	ng/l	5	06/04/15 22:39	M-04	
4,4'-DDT	ND	25	ng/l	5	06/04/15 22:39	M-04	
Aldrin	ND	25	ng/l	5	06/04/15 22:39	M-04	
alpha-BHC	ND	25	ng/l	5	06/04/15 22:39	M-04	
alpha-Chlordane	ND	25	ng/l	5	06/04/15 22:39	M-04	
Aroclor 1016	ND	500	ng/l	5	06/04/15 22:39	M-04	
Aroclor 1221	ND	500	ng/l	5	06/04/15 22:39	M-04	
Aroclor 1232	ND	500	ng/l	5	06/04/15 22:39	M-04	
Aroclor 1242	ND	500	ng/l	5	06/04/15 22:39	M-04	
Aroclor 1248	ND	500	ng/l	5	06/04/15 22:39	M-04	
Aroclor 1254	ND	500	ng/l	5	06/04/15 22:39	M-04	
Aroclor 1260	ND	500	ng/l	5	06/04/15 22:39	M-04	
beta-BHC	ND	25	ng/l	5	06/04/15 22:39	M-04	
Chlordane (tech)	ND	500	ng/l	5	06/04/15 22:39	M-04	
cis-Nonachlor	ND	25	ng/l	5	06/04/15 22:39	M-04	
delta-BHC	ND	25	ng/l	5	06/04/15 22:39	M-04	
Dieldrin	ND	25	ng/l	5	06/04/15 22:39	M-04	
Endosulfan i	ND	25	ng/l	5	06/04/15 22:39	M-04	
Endosulfan II	ND	25	ng/l	5	06/04/15 22:39	M-04	
Endosulfan sulfate	ND	25	ng/l	5	06/04/15 22:39	M-04	
Endrin	ND	25	ng/l	5	06/04/15 22:39	M-04	
Endrin aldehyde	ND	25	ng/l	5	06/04/15 22:39	M-04	
gamma-BHC (Lindane)	ND	25	ng/l	5	06/04/15 22:39	M-04	
gamma-Chlordane	ND	25	ng/l	5	06/04/15 22:39	M-04	
Heptachlor	ND	25	ng/l	5	06/04/15 22:39	M-04	
Heptachlor epoxide	ND	25	ng/l	5	06/04/15 22:39	M-04	
Methoxychlor	ND	25	ng/l	5	06/04/15 22:39	M-04	
Mirex	ND	25	ng/l	5	06/04/15 22:39	M-04	
Toxaphene	ND	2500	ng/l	5	06/04/15 22:39	M-04	
trans-Nonachlor	ND	25	ng/l	5	06/04/15 22:39	M-04	



Pacific Ridgeline Inc. 230 Dove Ct. Santa Paula CA, 93060

Sampled: 05/15/15 11:00

Date Received:

05/15/15 14:13

Date Reported:

06/15/15 09:20

5E15070-01 LAILG-NGA-168-7

Sampled By: Scott Jordan

Matrix: Water

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W5E1115	Prepare	d: 05/20/15 07	7:58		Analyst: Paolo Lor	enzo A Ramirez
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Surr: Decachlorobiphenyl	92 %	Conc:92.0	0.1-118	%			M-04
Surr: Tetrachloro-meta-xylene	90 %	Conc:89.6	12-117	%			M-04

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Method: EPA 350.1	Batch: W5E0919	Prepared: 05/18/15 0	8:20		Analyst: I	Rebecca Juea Song
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Ammonia as N	0.18	0.10	mg/l	1	05/18/15 16:34	
Method: EPA 353.2	Batch: W5E0926	Prepared: 05/18/15 0	9:05		Analyst: A	Angela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	11000	100	ug/l	1	05/18/15 11:39	
Method: EPA 365.1	Batch: W5E0880	Prepared: 05/15/15 1	6:41		Analyst:	: Marilyn B Christian
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	0.36	0.010	mg/l	5	05/15/15 21:19	
o-Phosphate as P, dissolved	360	10	ug/l	5	05/15/15 21:21	*
Method: EPA 365.1	Batch: W5E1338	Prepared: 05/22/15 1	6:24			Analyst: Lin Chai
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus as P, Total	0.74	0.050	mg/l	1	05/28/15 11:28	M-06
Method: EPA 365.1	Batch: W5E1340	Prepared: 05/22/15 1	6:43			Analyst: Lin Chai
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	0.44	0.050	mg/l	5	05/28/15 12:34	
Method: SM 2540C	Batch: W5E1208	Prepared: 05/21/15 0	8:21		Analyst: A	Angela J Whittington
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	400	10	mg/l	1	05/21/15 16:55	
Method: SM 2540D	Batch: W5E1225	Prepared: 05/21/15 1	0:17			Analyst: Lin Chai
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	91	5	mg/l	1	05/21/15 14:27	

Metals by EPA 200 Series Methods

	inicials by t	LFA 200 Series Medious	•			
Method: EPA 200.7	Batch: [CALC]	Prepared: 05/19/15 1	0:32		Analys	st: Jessie Kristie
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	134	0.250	mg/l	1	05/20/15 11:04	
Method: EPA 200,7	Batch: W5E1025	Prepared: 05/19/15 1	0:32		Analys	st: Jessie Kristie
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	53.7	0.100	ma/l	1	05/20/15 11:04	



Pacific Ridgeline Inc. 230 Dove Ct. Santa Paula CA, 93060

Date Received:

05/15/15 14:13

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06/15/15 09:20

5E15070-01

LAILG-NGA-168-7

Sampled: 05/15/15 11:00

Sampled By: Scott Jordan

Matrix: Water

Metals by EPA 200 Series Methods

Method: EPA 200.8	Batch: W5E1026	Prepared: 05/19/15 10	0:40		Analyst: Royu	ıan Rosario Lopez
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	36	0.50	ug/l	1	05/20/15 16:15	

Pyrethroid Pesticides by GC/MS SIM

	. ,		,	•••			
Method: GC/MS NCI-SIM	Batch: W5E1327	Prepare	d: 05/22/15 1	3:37			Analyst: Eric F Cull
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Allethrin	ND		2.0	ng/l	1	06/11/15 03:45	
Bifenthrin	22		2.0	ng/l	1	06/11/15 03:45	
Cyfluthrin	ND		2.0	ng/l	1	06/11/15 03:45	
Cypermethrin	ND		2.0	ng/l	1	06/11/15 03:45	
Deltamethrin/Tralomethrin	ND		2.0	ng/l	1	06/11/15 03:45	
Dichloran	2.3		2.0	ng/l	1	06/11/15 03:45	
Fenpropathrin (Danitol)	ND		2.0	ng/l	1	06/11/15 03:45	
Fenvalerate/Esfenvalerate	ND		2.0	ng/l	1	06/11/15 03:45	
L-Cyhalothrin	ND		2.0	ng/l	1	06/11/15 03:45	
Pendimethalin	460		10	ng/l	5	06/11/15 21:24	
Permethrin	ND		5.0	ng/l	1	06/11/15 03:45	
Prallethrin	ND		2.0	ng/l	1	06/11/15 03:45	
Sumithrin (Phenothrin)	ND		10	ng/l	1	06/11/15 03:45	
Tefluthrin	ND		2.0	ng/l	1	06/11/15 03:45	
Surr: Perylene-d12	115 %	Conc:288	2-205	%			
Surr: Triphenyl phosphate	65 %	Conc:163	6-222	%			

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2	Batch: W5E1199	Prepared: 05/21/15 0	8:04			Analyst: Eric F Cull
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND	10	ng/l	1	06/09/15 03:39	
Bolstar	ND	10	ng/l	1	06/09/15 03:39	
Chlorpyrifos	ND	10	ng/l	1	06/09/15 03:39	
Coumaphos	ND	10	ng/l	1	06/09/15 03:39	
Demeton-o	ND	10	ng/l	1	06/09/15 03:39	
Demeton-s	ND	10	ng/l	1	06/09/15 03:39	
Diazinon	ND	10	ng/l	1	06/09/15 03:39	
Dichlorvos	ND	10	ng/l	1	06/09/15 03:39	
Dimethoate	ND	10	ng/l	1	06/09/15 03:39	
Disulfoton	ND	10	ng/l	1	06/09/15 03:39	
Ethoprop	ND	10	ng/l	1	06/09/15 03:39	
Ethyl parathion	ND	10	ng/l	1	06/09/15 03:39	
Fensulfothion	ND	10	ng/l	1	06/09/15 03:39	
Fenthion	ND	10	ng/l	1	06/09/15 03:39	



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5E15070-01

LAILG-NGA-168-7

Sampled: 05/15/15 11:00 Sampled By: Scott Jordan

Matrix: Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2	Batch: W5E1199	Prepare	d: 05/21/15 0	8:04			Analyst: Eric F Cull
Analyte	Result		MRL	Units	Dil	Analyzed	Qualifier
Malathion	ND		10	ng/l	1	06/09/15 03:39	
Merphos	ND		10	ng/l	1	06/09/15 03:39	
Methyl parathion	ND		10	ng/l	1	06/09/15 03:39	
Mevinphos	ND		10	ng/l	1	06/09/15 03:39	
Naled	ND		10	ng/l	1	06/09/15 03:39	
Phorate	ND		10	ng/l	1	06/09/15 03:39	
Ronnel	ND		10	ng/l	1	06/09/15 03:39	
Stirophos	ND		10	ng/l	1	06/09/15 03:39	
Tokuthion (Prothiofos)	ND		10	ng/l	1	06/09/15 03:39	
Trichloronate	ND		10	ng/l	1	06/09/15 03:39	
Surr: 1,3-Dimethyl-2-nitrobenzene	89 %	Conc:447	76-128	%			
Surr: Triphenyl phosphate	144 %	Conc:720	40-163	%			



Analytical Laboratory Service - Since 1964

Date Received: 05/15/15 14:13 **Date Reported:** 06/15/15 09:20

QUALITY CONTROL SECTION



Analytical Laboratory Service - Since 1964

Date Received:

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Date Reported:

06/15/15 09:20

Anions by IC, EPA Method 300.0 - Quality Control

Batch W5E0838 - EPA 300.0

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E0838-BLK1)				Analyzed:	05/15/15	12:02				
Chloride, Total	ND	0.50	mg/l				-10000		VALUE AND ADDRESS OF THE PARTY	
Sulfate as SO4	ND	0.50	mg/l							
LCS (W5E0838-BS1)				Analyzed:	05/15/15	12:21				
Chloride, Total	3.95	0.50	mg/l	4.00	olifficial Fullahi sur-	99	90-110			
Sulfate as SO4	8.03	0.50	mg/l	8.00		100	90-110			
Duplicate (W5E0838-DUP1)	Source	e: 5E14074-01		Analyzed:	05/15/15	15:53				
Chloride, Total	882	25	mg/l	7,7,7,7,0	872			1	20	
Sulfate as SO4	471	25	mg/i		447			5	20	
Matrix Spike (W5E0838-MS1)	Source	e: 5E14074-01		Analyzed: (05/15/15	20:30				
Chloride, Total	1260	50	mg/l	400	872	97	76-118			
Sulfate as SO4	1260	50	mg/l	800	447	102	78-111			
Matrix Spike (W5E0838-MS2)	Source	e: 5E15086-01		Analyzed: (05/15/15	21:08				
Chloride, Total	77.8	5.0	mg/l	40.0	39.3	96	76-118		***************************************	
Sulfate as SO4	147	5.0	mg/l	80.0	61.9	107	78-111			
Matrix Spike Dup (W5E0838-MSD1)	Source	e: 5E14074-01		Analyzed: (05/15/15	20:49				
Chloride, Total	1280	50	mg/l	400	872	102	76-118	2	20	
Sulfate as SO4	1260	50	mg/l	800	447	102	78-111	0.1	20	
Matrix Spike Dup (W5E0838-MSD2)	Source	e: 5E15086-01		Analyzed: (05/15/15	21:26				
Chloride, Total	77.2	5.0	mg/l	40.0	39.3	95	76-118	0.7	20	
Sulfate as SO4	148	5.0	mg/l	80.0	61.9	108	78-111	0.5	20	

Chlorinated Pesticides and/or PCBs - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1115-BLK1)			A	nalyzed: (06/04/15	18:03				
2,4'-DDD	ND	5.0	ng/l				A ==			WW MILE
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							



Analytical Laboratory Service - Since 1964

Date Received: 05/15/15 14:13 **Date Reported:** 06/15/15 09:20

Chlorinated Pesticides and/or PCBs - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1115-BLK1)			A	nalyzed: (06/04/15	18:03				
Aroclor 1248	ND	100	ng/l							7. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
Aroclor 1254	ND	100	ng/l							
Aroclor 1260	ND	100	ng/l							
beta-BHC	ND	5.0	ng/l							
Chlordane (tech)	ND	100	ng/i							
cis-Nonachlor	ND	5.0	ng/l							
delta-BHC	ND	5.0	ng/l							
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							
Toxaphene	ND	500	ng/l							
trans-Nonachlor	ND	5.0	ng/l							
Surr: Decachlorobiphenyl	96.4		ng/l	100		96	0.1-118			
Surr: Tetrachloro-meta-xylene	88.3		ng/l	100		88	12-117			
LCS (W5E1115-BS1)	***************************************	******	Α	nalyzed: (06/04/15 1	18:34				
4,4´-DDD	92.3	5.0	ng/l	100		92	42-133			
4,4'-DDE	94.3	5.0	ng/l	100		94	33-126			
4,4'-DDT	103	5.0	ng/l	100		103	35-147			
Aldrin	82.7	5.0	ng/l	100		83	18-117			
alpha-BHC	90.0	5.0	ng/l	100		90	47-119			
beta-BHC	108	5.0	ng/l	100		108	53-123			
delta-BHC	110	5.0	ng/l	100		110	51-123			
Dieldrin	93.1	5.0	ng/l	100		93	48-123			
Endosulfan I	76.6	5.0	ng/l	100		77	14-131			
Endosulfan II	81.6	5.0	ng/l	100		82	40-121			
Endosulfan sulfate	96.3	5.0	ng/l	100		96	44-140			
Endrin	93.7	5.0	ng/l	100		94	40-143			
Endrin aldehyde	97.0	5.0	ng/l	100		97	18-136			
gamma-BHC (Lindane)	91.5	5.0	ng/l	100		92	49-117			
Heptachlor	86.4	5.0	ng/l	100		86	31-130			



Analytical Laboratory Service - Since 1964

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Chlorinated Pesticides and/or PCBs - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W5E1115-BS1)		TO SEE BANK		Analyzed: (06/04/15	18:34				
Heptachlor epoxide	92.0	5.0	ng/l	100		92	49-122			
Surr: Decachlorobiphenyl	107		ng/l	100		107	0.1-118			
Surr: Tetrachloro-meta-xylene	79.4		ng/l	100		79	12-117			
Matrix Spike (W5E1115-MS1)	Sourc	e: 5E14095-01		Analyzed: (06/04/15	19:05				
4,4'-DDD	88.1	10	ng/l	100	ND	88	23-124			M-04
4,4´-DDE	88.1	10	ng/l	100	ND	88	30-114			M-04
4,4'-DDT	96.4	10	ng/l	100	ND	96	11-151			M-04
Aldrin	80.0	10	ng/i	100	ND	80	18-110			M-04
alpha-BHC	86.6	10	ng/l	100	ND	87	43-114			M-04
beta-BHC	98.6	10	ng/l	100	ND	99	24-135			M-04
delta-BHC	102	10	ng/l	100	ND	102	37-122			M-04
Dieldrin	87.0	10	ng/l	100	ND	87	27-132			M-04
Endosulfan I	75.0	10	ng/l	100	ND	75	0.1-140			M-04
Endosulfan II	80.5	10	ng/l	100	ND	80	17-122			M-04
Endosulfan sulfate	87.7	10	ng/l	100	ND	88	37-131			M-04
Endrin	95.1	10	ng/l	100	ND	95	42-144			M-04
Endrin aldehyde	90.7	10	ng/l	100	ND	91	11-113			M-0
gamma-BHC (Lindane)	87.2	10	ng/l	100	ND	87	33-112			M-04
Heptachlor	83.1	10	ng/l	100	ND	83	28-131			M-04
Heptachlor epoxide	87.0	10	ng/l	100	ND	87	36-117			M-04
Surr: Decachlorobiphenyl	101		ng/l	100		101	0.1-118			M-04
Surr: Tetrachloro-meta-xylene	72.5		ng/l	100		73	12-117			M-04
Matrix Spike (W5E1115-MS2)	Sourc	e: 5E15110-02		Analyzed: 0	06/04/15 2	20:06				
4,4´-DDD	91.3	25	ng/l	100	ND	91	23-124			M-04
4,4´-DDE	87.4	25	ng/l	100	ND	87	30-114			M-04
4,4´-DDT	90.9	25	ng/l	100	ND	91	11-151			M-04
Aldrin	83.3	25	ng/l	100	ND	83	18-110			M-04
alpha-BHC	90.6	25	ng/l	100	ND	91	43-114			M-04
beta-BHC	103	25	ng/l	100	ND	103	24-135			M-04
delta-BHC	105	25	ng/l	100	ND	105	37-122			M-04
Dieldrin	88.3	25	ng/l	100	ND	88	27-132			M-04
Endosulfan I	83.0	25	ng/l	100	ND	83	0.1-140			M-04
Endosulfan II	81.9	25	ng/l	100	ND	82	17-122			M-04
Endosulfan sulfate	92.6	25	ng/l	100	ND	93	37-131			M-04
Endrin	94.8	25	ng/l	100	ND	95	42-144			M-04
Endrin aldehyde	96.4	25	ng/l	100	ND	96	11-113			M-04
gamma-BHC (Lindane)	91.1	25	ng/l	100	ND	91	33-112			M-04
Heptachlor	87.4	25	ng/l	100	ND	87	28-131			M-04
Heptachlor epoxide	89.4	25	ng/l	100	ND	89	36-117			M-04



Analytical Laboratory Service - Since 1964

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Chlorinated Pesticides and/or PCBs - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Dat Qualifiers
Matrix Spike (W5E1115-MS2)	Source	e: 5E15110-02		Analyzed: (06/04/15	20:06				
Surr: Decachlorobiphenyl	100		ng/l	100		100	0.1-118			M-0-
Surr: Tetrachloro-meta-xylene	79.7		ng/l	100		80	12-117			M-0-
Matrix Spike Dup (W5E1115-MSD1)		e: 5E14095-01		Analyzed: (06/04/15	19:35				
4,4'-DDD	78.0	10	ng/l	100	ND	78	23-124	12	30	M-04
4,4'-DDE	80.0	10	ng/l	100	ND	80	30-114	10	30	M-04
4,4'-DDT	84.2	10	ng/i	100	ND	84	11-151	14	30	M-04
Aldrin	71.8	10	ng/l	100	ND	72	18-110	11	30	M-04
alpha-BHC	77.7	10	ng/i	100	ND	78	43-114	11	30	M-04
beta-BHC	83.8	10	ng/l	100	ND	84	24-135	16	30	M-04
delta-BHC	86.7	10	ng/l	100	ND	87	37-122	16	30	M-04
Dieldrin	79.2	10	ng/l	100	ND	79	27-132	9	30	M-04
Endosulfan I	67.3	10	ng/l	100	ND	67	0.1-140	11	30	M-04
Endosulfan II	70.3	10	ng/l	100	ND	70	17-122	14	30	M-04
Endosulfan sulfate	73.6	10	ng/l	100	ND	74	37-131	18	30	M-04
Endrin	84.3	10	ng/l	100	ND	84	42-144	12	30	M-04
Endrin aldehyde	75.2	10	ng/l	100	ND	75	11-113	19	30	M-04
gamma-BHC (Lindane)	81.5	10	ng/l	100	ND	81	33-112	7	30	M-04
Heptachlor	75.3	10	ng/l	100	ND	75	28-131	10	30	M-04
Heptachlor epoxide	78.4	10	ng/l	100	ND	78	36-117	10	30	M-04
Surr: Decachlorobiphenyl	87.0		ng/l	100		87	0.1-118			M-04
Surr: Tetrachloro-meta-xylene	62.3		ng/l	100		62	12-117			M-04
Matrix Spike Dup (W5E1115-MSD2)	Source	e: 5E15110-02		Analyzed: (06/04/15					
4,4'-DDD	105	25	ng/l	100	ND	105	23-124	14	30	M-04
4,4'-DDE	105	25	ng/i	100	ND	105	30-114	18	30	M-04
4,4'-DDT	107	25	ng/l	100	ND	107	11-151	17	30	M-04
Aldrin	97.1	25	ng/l	100	ND	97	18-110	15	30	M-04
alpha-BHC	105	25	ng/l	100	ND	105	43-114	15	30	M-04
beta-BHC	121	25	ng/l	100	ND	121	24-135	16	30	M-04
delta-BHC	119	25	ng/l	100	ND	119	37-122	12	30	M-04
Dieldrin	105	25	ng/l	100	ND	105	27-132	17	30	M-04
Endosulfan I	99.6	25	ng/l	100	ND	100	0.1-140	18	30	M-04
Endosulfan II	95.5	25	ng/l	100	ND	95	17-122	15	30	M-04
Endosulfan sulfate	112	25	ng/l	100	ND	112	37-131	19	30	M-04
Endrin	111	25	ng/l	100	ND	111	42-144	15	30	M-04
Endrin aldehyde	114	25	ng/l	100	ND	114	11-113	16	30	M-04, MS-05
gamma-BHC (Lindane)	106	25	ng/l	100	ND	106	33-112	15	30	M-04
Heptachlor	101	25	ng/l	100	ND	101	28-131	15	30	M-04
Heptachlor epoxide	107	25	ng/l	100	ND	107	36-117	18	30	M-04
Surr: Decachlorobiphenyl	117		ng/l	100		117	0.1-118	-		M-04

Analytical Laboratory Service - Since 1964

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05/15/15 14:13

Date Reported:

06/15/15 09:20

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W5E1115 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W5E1115-MSD2)	Source	e: 5E15110-02	Α	nalyzed: (06/04/15	20:37				
Surr: Tetrachloro-meta-xylene	89.0		ng/l	100	7.1.1.1.1	89	12-117			M-04

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W5E0880 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E0880-BLK1)				Analyzed: (05/15/15	21:11				4
o-Phosphate as P	ND	0.0020	mg/l			***************************************				
o-Phosphate as P, dissolved	ND	2.0	ug/l							
LCS (W5E0880-BS1)				Analyzed: 0	05/15/15	21:12				
o-Phosphate as P	0.0520	0.0020	mg/l	0.0500		104	90-110			
o-Phosphate as P, dissolved	52.0	2.0	ug/l	50.0		104	90-110			
Matrix Spike (W5E0880-MS1)	Sourc	e: 5E15070-01		Analyzed: 0	05/15/15	21:22				
o-Phosphate as P	0.407	0.010	mg/l	0.0500	0.360	94	90-110	# 15 TO 1 CO A C	-	
Matrix Spike Dup (W5E0880-MSD1)	Sourc	e: 5E15070-01		Analyzed: 0	05/15/15	21:24				
o-Phosphate as P	0.420	0.010	mg/l	0.0500	0.360	119	90-110	3	20	MS-02
Batch W5E0919 - EPA 350.1										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E0919-BLK1)				Analyzed: 0)5/18/15	16:34				
Ammonia as N	ND	0.10	mg/l							
LCS (W5E0919-BS1)				Analyzed: 0)5/18/15	16:34	99			
Ammonia as N	0.252	0.10	mg/l	0.250		101	90-110			
Matrix Spike (W5E0919-MS1)	Sourc	e: 5E15110-02		Analyzed: 0	05/18/15	16:34				
Ammonia as N	0.263	0.10	mg/l	0.250	ND	105	90-110	Y*8M 85 55 55 65 51 65 wholes set to be		
Matrix Spike Dup (W5E0919-MSD1)	Sourc	e: 5E15110-02		Analyzed: 0	05/18/15	16:34				
Ammonia as N	0.262	0.10	mg/l	0.250	ND	105	90-110	0.3	15	
Batch W5E0926 - EPA 353.2										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E0926-BLK1)				Analyzed: 0	05/18/15	11:07				
NO2+NO3 as N	ND	100	ug/l							
LCS (W5E0926-BS1)				Analyzed: 0	05/18/15	11:09				
NO2+NO3 as N	944	100	ug/l	1000		94	90-110			
Duplicate (W5E0926-DUP1)	Sourc	e: 5E08028-01		Analyzed: 0	05/18/15	11:18				
NO2+NO3 as N	5850	100	ug/l		5800			0.8	20	
Matrix Spike (W5E0926-MS1)	Sourc	e: 5E08028-01		Analyzed: 0	05/18/15	12:42				
NO2+NO3 as N	7840	100	ug/l	2000	5800	102	90-110	977464 4-2-84		
Matrix Spike (W5E0926-MS2)	Sourc	e: 5E15110-02		Analyzed: 0	05/18/15	11:27				

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W5E0926 - EPA 353.2

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5E0926-MS2)	Sourc	e: 5E15110-02		Analyzed: (05/18/15	11:27		TO THE WORLD SEEL COMMISSION OF THE PERSON O		
NO2+NO3 as N	2140	100	ug/l	2000	289	93	90-110			
Matrix Spike Dup (W5E0926-MSD1)	Source	e: 5E08028-01		Analyzed: (05/18/15	12:44				
NO2+NO3 as N	8030	100	ug/l	2000	5800	111	90-110	2	20	MS-02
Matrix Spike Dup (W5E0926-MSD2)	Source	e: 5E15110-02		Analyzed: (05/18/15	11:29				
NO2+NO3 as N	2170	100	ug/l	2000	289	94	90-110	1	20	
Batch W5E1208 - SM 2540C										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1208-BLK1)				Analyzed: (05/21/15	16:55				7,000
Total Dissolved Solids	ND	10	mg/l							
LCS (W5E1208-BS1)				Analyzed: (05/21/15	16:55				
Total Dissolved Solids	831	10	mg/l	824		101	96-102			
Duplicate (W5E1208-DUP1)	Source	e: 5E15079-01		Analyzed: (05/21/15	16:55				
Total Dissolved Solids	11800	10	mg/l		11200			5	10	70778-0-6-
Duplicate (W5E1208-DUP2)	Source	e: 5E15088-01		Analyzed: (05/21/15	16:55				
Total Dissolved Solids	1300	10	mg/l		1320			2	10	
Batch W5E1225 - SM 2540D										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1225-BLK1)				Analyzed: (05/21/15	14:27				
Total Suspended Solids	ND	5	mg/l							
Duplicate (W5E1225-DUP1)	Source	e: 5E15003-01		Analyzed: (05/21/15	14:27				
Total Suspended Solids	124	5	mg/l	W	120			3	20	
Duplicate (W5E1225-DUP2)	Source	e: 5E15009-01		Analyzed: (05/21/15	14:27				
Total Suspended Solids	11.0	5	mg/l		11.0			NR	20	
Batch W5E1338 - EPA 365.1										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1338-BLK1)				Analyzed: (05/28/15	11:01	***			
Phosphorus as P, Total	ND	0.010	mg/l							
LCS (W5E1338-BS1)				Analyzed: (05/28/15	11:02				
Phosphorus as P, Total	0.0514	0.010	mg/l	0.0500		103	90-110			
Duplicate (W5E1338-DUP1)	Source	e: 5E14073-01F	RE1	Analyzed: (05/28/15	11:14				
Phosphorus as P, Total	0.0322	0.010	mg/l		0.0305			5	20	
Matrix Spike (W5E1338-MS1)	Source	e: 5E14074-01		Analyzed: 0	05/28/15	11:45				
Phosphorus as P, Total	0.286	0.020	mg/l	0.0500	0.234	104	90-110			
Matrix Spike (W5E1338-MS2)	Source	e: 5E15110-02		Analyzed: 0	05/28/15	11:09				
Phosphorus as P, Total	0.130	0.020	mg/l	0.100	0.0248	105	90-110			
Matrix Spike Dup (W5E1338-MSD1)	Source	e: 5E14074-01		Analyzed: 0	05/28/15	11:47				
Phosphorus as P, Total	0.280	0.020	mg/l	0.0500	0.234	92	90-110	2	20	



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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Batch W5E1338 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W5E1338-MSD2)	Sourc	e: 5E15110-02		Analyzed: (05/28/15	11:11				
Phosphorus as P, Total	0.131	0.020	mg/l	0.100	0.0248	106	90-110	0.9	20	
Batch W5E1340 - EPA 365.1										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1340-BLK1)				Analyzed: (05/28/15	11:52				
Phosphorus, Dissolved	ND	0.010	mg/l			V	F114 445 - F115 1-2			
LCS (W5E1340-BS1)				Analyzed: (05/28/15	11:54				
Phosphorus, Dissolved	0.0506	0.010	mg/l	0.0500		101	90-110			
Duplicate (W5E1340-DUP1)	Sourc	e: 5E14073-01F	RE1	Analyzed: (05/28/15	12:05				
Phosphorus, Dissolved	0.0420	0.010	mg/l		0.0412			2	20	
Matrix Spike (W5E1340-MS1)	Sourc	e: 5E14074-01		Analyzed: (05/28/15	11:57				
Phosphorus, Dissolved	0.188	0.010	mg/l	0.0500	0.138	100	90-110		W-6 - Helium	
Matrix Spike (W5E1340-MS2)	Sourc	e: 5E15110-02		Analyzed: (05/28/15	12:01				
Phosphorus, Dissolved	0.0578	0.010	mg/l	0.0500	0.00510	105	90-110	7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 - 7 -		
Matrix Spike Dup (W5E1340-MSD1)	Sourc	e: 5E14074-01		Analyzed: (05/28/15	11:58				
Phosphorus, Dissolved	0.190	0.010	mg/l	0.0500	0.138	104	90-110	1	20	THE PARTY OF THE SAME OF
Matrix Spike Dup (W5E1340-MSD2)	Sourc	e: 5E15110-02		Analyzed: (05/28/15	12:03				
Phosphorus, Dissolved	0.0575	0.010	mg/l	0.0500	0.00510	105	90-110	0.5	20	

Metals by EPA 200 Series Methods - Quality Control

Batch W5E1025 - EPA 200.7

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1025-BLK1)				Analyzed: (05/20/15	10:53				
Calcium, Total	ND	0.100	mg/l							777979
LCS (W5E1025-BS1)				Analyzed: (05/20/15	10:56				
Calcium, Total	51.6	0.100	mg/l	50.2		103	85-115			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Matrix Spike (W5E1025-MS1)	Sourc	e: 5E15070-01		Analyzed: (05/20/15	11:15				
Calcium, Total	106	0.100	mg/l	50.2	53.7	104	70-130			111111111111111111111111111111111111111
Matrix Spike Dup (W5E1025-MSD1)	Sourc	e: 5E15070-01		Analyzed: (05/20/15	11:18				
Calcium, Total	106	0.100	mg/l	50.2	53.7	104	70-130	0.2	30	
Batch W5E1026 - EPA 200.8										
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1026-BLK1)				Analyzed: (05/20/15	15:53				
Copper, Total	ND	0.50	ug/l	-						
LCS (W5E1026-BS1)				Analyzed: (05/20/15	15:58				
Copper, Total	48.1	0.50	ug/l	50.0		96	85-115			
Matrix Spike (W5E1026-MS1)	Sourc	e: 5E13096-02		Analyzed: (05/20/15	16:33				

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Metals by EPA 200 Series Methods - Quality Control

Batch W5E1026 - EPA 200.8

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5E1026-MS1)	Source	e: 5E13096-02	F	Analyzed: (05/20/15	16:33				
Copper, Total	48.9	0.50	ug/l	50.0	1.64	95	70-130	5		
Matrix Spike Dup (W5E1026-MSD1)	Source	e: 5E13096-02	A	Analyzed: (05/20/15	16:37				
Copper, Total	49.4	0.50	ug/l	50.0	1.64	95	70-130	1	30	

Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W5E1327 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1327-BLK1)			A	Analyzed:	06/10/15	19:06				
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/i							
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 (Phenothrin)	ND	10	ng/l							
Tefluthrin	ND	2.0	ng/l							
Surr: Perylene-d12	246		ng/l	250		98	2-205			
Surr: Triphenyl phosphate	302		ng/l	250		121	6-222			
Blank (W5E1327-BLK2)		- Annual Control of the Control of t	<i>F</i>	Analyzed: (06/11/15	19:47				
Pendimethalin	ND	2.0	ng/l							QC-2
Surr: Perylene-d12	423		ng/l	250		169	2-205			QC-2
Surr: Triphenyl phosphate	178		ng/l	250		71	6-222			QC-2
LCS (W5E1327-BS1)				Analyzed: (06/10/15					
Allethrin	58.6	2.0	ng/l	50.0		117	23-149			
Bifenthrin	60.1	2.0	ng/l	50.0		120	26-153			
Cyfluthrin	66.2	2.0	ng/l	50.0		132	3-168			
Cypermethrin	66.5	2.0	ng/l	50.0		133	2-169			
Deltamethrin/Tralomethrin	47.8	2.0	ng/l	50.0		96	0.1-252			
Dichloran	47.9	2.0	ng/l	50.0		96	53-161			
Fenpropathrin (Danitol)	57.7	2.0	ng/l	50.0		115	28-154			
Fenvalerate/Esfenvalerate	56.4	2.0	ng/l	50.0		113	35-133			
L-Cyhalothrin	48.7	2.0	ng/l	50.0		97	9-214			

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Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W5E1327 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W5E1327-BS1)				Analyzed: (06/10/15	19:38				
Pendimethalin	58.9	2.0	ng/l	50.0		118	41-158		Mr. d	
Permethrin	62.4	5.0	ng/l	50.0		125	31-154			
Prallethrin	58.6	2.0	ng/l	50.0		117	28-143			
Sumithrin (Phenothrin)	56.5	10	ng/l	50.0		113	12-200			
Tefluthrin	46.6	2.0	ng/l	50.0		93	48-161			
Surr: Perylene-d12	243		ng/l	250		97	2-205			
Surr: Triphenyl phosphate LCS (W5E1327-BS2)	333		ng/l	250 Analyzed: (06/11/15	<i>133</i> 20:19	6-222			
Pendimethalin	58.2	2.0	ng/l	50.0		116	41-158			QC-2
Surr: Perylene-d12	432		ng/l	250		173	2-205			QC-
Surr: Triphenyl phosphate	193		ng/l	250		77	6-222			QC-
Matrix Spike (W5E1327-MS1)	Sourc	e: 5E14095-01		Analyzed: (06/10/15	20:11				
Allethrin	87.3	2.0	ng/l	50.0	ND	175	0.1-222			
Bifenthrin	84.1	2.0	ng/l	50.0	7.05	154	22-209			
Cyfluthrin	168	2.0	ng/l	50.0	5.41	325	11-214			MS-05
Cypermethrin	161	2.0	ng/l	50.0	15.9	289	20-206			MS-05
Deltamethrin/Tralomethrin	121	2.0	ng/l	50.0	ND	243	0.2-230			MS-05
Dichloran	100	2.0	ng/l	50.0	1.25	198	29-201			
Fenpropathrin (Danitol)	79.4	2.0	ng/l	50.0	ND	159	10-233			
Fenvalerate/Esfenvalerate	154	2.0	ng/l	50.0	ND	308	32-193			MS-05
L-Cyhalothrin	89.0	2.0	ng/l	50.0	4.31	169	61-209			
Pendimethalin	109	2.0	ng/l	50.0	2.51	212	8-203			MS-05
Permethrin	133	5.0	ng/l	50.0	ND	266	37-209			MS-05
Prallethrin	117	2.0	ng/l	50.0	ND	234	11-247			
Sumithrin (Phenothrin)	128	10	ng/l	50.0	ND	257	12-247			MS-05
Tefluthrin	61.9	2.0	ng/l	50.0	ND	124	5-220			
Surr: Perylene-d12	380		ng/l	250		152	2-205			
Surr: Triphenyl phosphate	257		ng/l	250		103	6-222			
Matrix Spike Dup (W5E1327-MSD1)		e: 5E14095-01		Analyzed: (06/10/15	20:43				·····
Allethrin	97.5	2.0	ng/l	50.0	ND	195	0.1-222	11	30	
Bifenthrin	89.8	2.0	ng/l	50.0	7.05	165	22-209	7	30	
Cyfluthrin	182	2.0	ng/l	50.0	5.41	352	11-214	8	30	MS-05
Cypermethrin	176	2.0	ng/l	50.0	15.9	320	20-206	9	30	MS-05
Deltamethrin/Tralomethrin	135	2.0	ng/l	50.0	ND	269	0.2-230	10	30	MS-05
Dichloran	88.1	2.0	ng/l	50.0	1.25	174	29-201	13	30	
Fenpropathrin (Danitol)	82.7	2.0	ng/l	50.0	ND	165	10-233	4	30	
Fenvalerate/Esfenvalerate	165	2.0	ng/l	50.0	ND	330	32-193	7	30	MS-05
L-Cyhalothrin	96.0	2.0	ng/l	50.0	4.31	183	61-209	8	30	
Pendimethalin	107	2.0	ng/l	50.0	2.51	208	8-203	2	30	MS-05
Permethrin	143	5.0	ng/l	50.0	ND	286	37-209	7	30	MS-05

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Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W5E1327 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W5E1327-MSD1)	Source	e: 5E14095-01	Δ	nalyzed: (06/10/15	20:43				
Prallethrin	113	2.0	ng/i	50.0	ND	226	11-247	4	30	
Sumithrin (Phenothrin)	145	10	ng/l	50.0	ND	291	12-247	12	30	MS-05
Tefluthrin	59.6	2.0	ng/l	50.0	ND	119	5-220	4	30	
Surr: Perylene-d12	447		ng/l	250		179	2-205			
Surr: Triphenyl phosphate	259		ng/l	250		104	6-222			

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1199-BLK1)				Analyzed:		21:31	Enno			Qualiford
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	458		ng/l	500		92	76-128			
Surr: Triphenyl phosphate	567		ng/l	500		113	40-163			
LCS (W5E1199-BS1)	4800			Analyzed:	06/08/15	21:55		71-7-4-8-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4-4		7 1980 Marie VIII - Males I W
Azinphos methyl (Guthion)	85.8	10	ng/l	50.0		172	0.1-188			

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Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W5E1199-BS1)			P	Analyzed: (21:55	III - III talii alka siin kalika ka k			4
Bolstar	50.1	10	ng/l	50.0		100	11-166	***************************************	***************************************	
Chlorpyrifos	56.8	10	ng/l	50.0		114	37-169			
Coumaphos	67.7	10	ng/l	50.0		135	0.1-225			
Demeton-o	42.7	10	ng/i	50.0		85	0.1-211			
Demeton-s	58.3	10	ng/l	50.0		117	0.1-213			
Diazinon	52.6	10	ng/l	50.0		105	43-152			
Dichlorvos	55.6	10	ng/l	50.0		111	46-133			
Dimethoate	54.2	10	ng/l	50.0		108	10-234			
Disulfoton	54.5	10	ng/l	50.0		109	0.1-212			
Ethoprop	65.5	10	ng/l	50.0		131	53-163			
Ethyl parathion	58.1	10	ng/i	50.0		116	7-230			
Fensulfothion	96.3	10	ng/l	50.0		193	0.1-265			
Fenthion	66.6	10	ng/l	50.0		133	20-177			
Malathion	56.4	10	ng/l	50.0		113	14-175			
Merphos	89.3	10	ng/l	50.0		179	28-181			
Methyl parathion	73.8	10	ng/l	50.0		148	0.1-252			
Mevinphos	64.4	10	ng/l	50.0		129	14-202			
Naled	91.3	10	ng/l	50.0		183	0.1-240			
Phorate	56.2	10	ng/l	50.0		112	26-180			
Ronnel	59.5	10	ng/l	50.0		119	34-154			
Stirophos	69.1	10	ng/l	50.0		138	0.1-188			
Tokuthion (Prothiofos)	53.3	10	ng/l	50.0		107	23-159			
Trichloronate	56.4	10	ng/l	50.0		113	34-153			
Surr: 1,3-Dimethyl-2-nitrobenzene	450		ng/l	500		90	76-128			
Surr: Triphenyl phosphate	589		ng/l	500		118	40-163			
Matrix Spike (W5E1199-MS1)		e: 5E14095-02		Analyzed: (
Azinphos methyl (Guthion)	72.7	10	ng/l	50.0	ND	145	0.1-154			
Bolstar	45.3	10	ng/l	50.0	ND	91	4-184			
Chlorpyrifos	63.7	10	ng/l	50.0	ND	127	37-168			
Coumaphos	63.1	10	ng/l	50.0	ND	126	0.1-203			
Demeton-o	45.9	10	ng/l	50.0	ND	92	0.1-208			
Demeton-s	62.5	10	ng/l	50.0	ND	125	0.1-207			
Diazinon	57.1	10	ng/l	50.0	ND	114	36-153			
Dichlorvos	56.1	10	ng/l	50.0	ND	112	42-137			
Dimethoate	63.4	10	ng/l	50.0	ND	127	4-222			
Disulfoton	55.9	10	ng/l	50.0	ND	112	12-199			
Ethoprop	68.6	10	ng/l	50.0	ND	137	51-167			
Ethyl parathion	72.4	10	ng/l	50.0	ND	145	5-229			
Fensulfothion	92.3	10	ng/l	50.0	ND	185	0.1-316			

Analytical Laboratory Service - Since 1964

Date Received:

05/15/15 14:13

Date Reported:

06/15/15 09:20

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5E1199-MS1)	Sourc	e: 5E14095-02	P	Analyzed: (06/08/15 2	22:20				
Fenthion	72.3	10	ng/l	50.0	ND	145	23-169			***************************************
Malathion	65.0	10	ng/l	50.0	ND	130	6-184			
Merphos	75.5	10	ng/l	50.0	ND	151	3-210			
Methyl parathion	86.6	10	ng/l	50.0	ND	173	0.1-249			
Mevinphos	63.5	10	ng/l	50.0	ND	127	25-189			
Naled	103	10	ng/l	50.0	ND	206	0.1-242			
Phorate	59.8	10	ng/l	50.0	ND	120	31-181			
Ronnel	64.0	10	ng/l	50.0	ND	128	29-153			
Stirophos	68.2	10	ng/l	50.0	ND	136	0.1-167			
Tokuthion (Prothiofos)	46.7	10	ng/l	50.0	ND	93	27-160			
Trichloronate	60.1	10	ng/l	50.0	ND	120	40-150			
Surr: 1,3-Dimethyl-2-nitrobenzene	470		ng/l	500		94	76-128			
Surr: Triphenyl phosphate	542		ng/l	500		108	40-163			
Matrix Spike Dup (W5E1199-MSD1)		e: 5E14095-02		Analyzed: (PP PRINC - 114-4444	22:45				
Azinphos methyl (Guthion)	71.2	10	ng/l	50.0	ND	142	0.1-154	2	30	
Bolstar	43.8	10	ng/l	50.0	ND	88	4-184	3	30	
Chlorpyrifos	62.9	10	ng/l	50.0	ND	126	37-168	1	30	
Coumaphos	65.0	10	ng/l	50.0	ND	130	0.1-203	3	30	
Demeton-o	36.2	10	ng/l	50.0	ND	72	0.1-208	24	30	
Demeton-s	58.3	10	ng/l	50.0	ND	117	0.1-207	7	30	
Diazinon	41.9	10	ng/l	50.0	ND	84	36-153	31	30	MS-05
Dichlorvos	53.0	10	ng/l	50.0	ND	106	42-137	6	30	
Dimethoate	50.6	10	ng/l	50.0	ND	101	4-222	22	30	
Disulfoton	52.1	10	ng/l	50.0	ND	104	12-199	7	30	
Ethoprop	66.2	10	ng/l	50.0	ND	132	51-167	4	30	
Ethyl parathion	62.4	10	ng/l	50.0	ND	125	5-229	15	30	
Fensulfothion	89.9	10	ng/i	50.0	ND	180	0.1-316	3	30	
Fenthion	69.8	10	ng/l	50.0	ND	140	23-169	3	30	
Malathion	60.1	10	ng/l	50.0	ND	120	6-184	8	30	
Merphos	78.9	10	ng/l	50.0	ND	158	3-210	4	30	
Methyl parathion	74.9	10	ng/l	50.0	ND	150	0.1-249	15	30	
Mevinphos	60.8	10	ng/l	50.0	ND	122	25-189	4	30	
Naled	101	10	ng/l	50.0	ND	201	0.1-242	2	30	
Phorate	57.5	10	ng/l	50.0	ND	115	31-181	4	30	
Ronnel	62.6	10	ng/l	50.0	ND	125	29-153	2	30	
Stirophos	67.5	10	ng/l	50.0	ND	135	0.1-167	1	30	
Tokuthion (Prothiofos)	47.6	10	ng/l	50.0	ND	95	27-160	2	30	
Trichloronate	59.0	10	ng/l	50.0	ND	118	40-150	2	30	
Surr: 1,3-Dimethyl-2-nitrobenzene	458		ng/l	500		92	76-128			



Analytical Laboratory Service - Since 1964

Date Received: 05/15/15 14:13 **Date Reported:** 06/15/15 09:20

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W5E1199-MSD1)	Sourc	e: 5E14095-02	Α	nalyzed: (06/08/15	22:45				
Surr: Triphenyl phosphate	582		ng/l	500		116	40-163			

Pacific Ridgeline Inc. 230 Dove Ct. Santa Paula CA, 93060

QC-2

Date Received:

05/15/15 14:13

Date Reported: 06/15/15 09:20

Notes and Definitions

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-02 The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte

This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.

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.

The recommended holding time for this analysis is only 15 minutes. The sample was analyzed as soon as it was possible but it was received and analyzed past 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

Percent Recovery % Rec

Sub Subcontracted analysis, original report available upon request

MDL Method Detection Limit

Minimum Detectable Activity MDA

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.

Pacific Ridgeline, Inc

CHAIN OF CUSTODY RECORD

	ing, ling,	ر	Cat								Y is Y
	PID Reading Odor, Staining Other TAT, etc.	400	to the						58		OCHCA Orange County
	OTS 9H-ST 9H-84 9H-PS 17AT	10	302						\dot{o}	9:30	۵ د ځ
te constituent and the con	TPHG/BTEX/MTBE (Carb 410-T03)			-					TIME (IIIVIE	KCEHD Kern County
	Fixed Gas										Jino
STED	Flash Point 1010								5		San Bernardino County FD
REQUESTED	Ethod Minnow The	Š							19/	5/19/18	San E
S RE(Lection of the Tal	Ź			4	-			2		itral ast OCB
ANALYSIS	Ethanol 8260B Methanol 8015B				0,0	307	ω 		DATE	Z H	Central Coast RWOCB
AN	Total Lead 6020				Y Manada V Manada		and design of the second				tan CB
	Diszolved Lead 6010					ng/L)			Account Control of the Control of th		Lahontan RWOCB
	TPH-Char, 8015M FC				(i)) a	50				Si
8	M2108 O-H9T				5 50-14 5-14	Iorin	<u> </u>				Los Angeles RWQCB
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Lab:	Press: Ice Uper 11:59										S.B. CO FPD
										1	S.E
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									REC (sig	Sign Sign Sign Sign Sign Sign Sign Sign	Required MRLs to: San Diego County
090	DATE	3/15/15							\cap		Requir San Cc
CA 93(18 SS 9 # \frac{\pi}{\pi}							7			
a Paula,	ES TRIZE FRONSES	№						$\perp \mid \perp$	1 1/1	$\langle n \rangle$	U ÚŠTCF EDF-COELT
rt, Sante	Selection of the select	68-1		(1)						1	/ D USTCF
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230 D	E: Los Angele RESS: NWSSCY (AGER: BCM FT Jaraban SAMPLE LOCATION	1 A11/9- N/3/168-7	5						19/		its:
	AME: DDRES ANAG	IAIL							ED BY:		ommer Sminary d
	PROJECT NAME: LOS Angeles Irrigated Lands GR PROJECT ADDRESS: Nursecy (Fransess Association PROJECT MANAGER: Bry Howe SAMPLER NAME SAMPLER NAME SAMPLE SAMPLELOCATION DEPTH DATE TIME SAMP								RELINOUISHED BY: (signature)	RELINOUISHED BY: (signature)	Method of shipment: additional comments: Kitch Kanana Comments Kanana Co
	PRO.	1							RELIN (signa	RELIN (signa	K Get



June 11, 2015

Mr. Bryn Home Pacific Ridgeline, Inc. 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:

Pacific Ridgeline, Inc.

SAMPLE I.D.:

LAILG-NGA168-7

DATE RECEIVED:

19 May -15

ABC LAB. NO.:

PRI0515.222

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

Report Date:

10 Jun-15 14:33 (p 1 of 2)

Test Code:

PRI0515.222fml | 15-0849-4568

Fathead Minn	ow 7-d Larval Surviv	al and Gr	owth	n Test				Aqua	atic B	ioassay & (Consulting	Labs, Inc.
Batch ID:	13-3729-4277	Test Ty	pe:	Growth-Survival	(7d)			Analyst:				
Start Date:	19 May-15 15:36	Protoc	ol:	EPA/821/R-02-0	013 (2002)			Diluent:	Lab	oratory Wate	er	
Ending Date:	26 May-15 13:40	Specie	s:	Pimephales pro	melas			Brine:	Not	Applicable		
Duration:	6d 22h	Source	:	Aquatic Biosyst	ems, CO			Age:				
Sample ID:	17-2407-4701	Code:		PRI0515.222fm	l			Client:	Pac	ific Ridgeline	e, Inc.	
Sample Date:	15 May-15 11:00	Materia	al:	Sample Water				Project:	Los	Angeles Irrig	gated Lands	s Group
·*	19 May-15 09:30	Source	:	Bioassay Repor	t			-			-	•
Sample Age:	4d 5h (6 °C)	Station	:	LAILG-NGA168	-7							ŕ
Comparison S	Summary							····		· , · · · · · · · · · · · · · · · · · ·		
Analysis ID	Endpoint	N	OEL	LOEL	TOEL	PMSD	TU	Meth	od			
20-1839-5646	7d Survival Rate	1:	00	>100	NA	3.43%	1	Wilco	oxon	Rank Sum T	wo-Sample	Test
03-5507-5630	Mean Dry Biomass-n	ng 1	00	>100	NA	16.4%	1			iance t Two-	•	
Point Estimate	e Summary	***************************************									***************************************	
Analysis ID	Endpoint	L	evel	%	95% LCL	95% UCL	TU	Meth	od			
00-0812-0486	7d Survival Rate	Е	C5	>100	N/A	N/A	<1	Linea	ar Inte	erpolation (IC	CPIN)	
		Е	C10	>100	N/A	N/A	<1				•	
			C15	>100	N/A	N/A	<1					
			C20	>100	N/A	N/A	<1					
			C25	>100	N/A	N/A	<1					
			C40	>100	N/A	N/A	<1					
			C50	>100	N/A	N/A	<1					
24 4245 2022	Maan Dry Piemess n		25	>100	N/A	N/A	<1	Lino	ar Inte	arnolation (I	CDINI)	
21-1245-3032	Mean Dry Biomass-r	•	210 210					LITTE	31 11110	erpolation (IC	SPIN)	
				>100	N/A	N/A	<1					
			215	>100	N/A	N/A	<1					/
			220	>100	N/A	N/A	<1					
			225	>100	N/A	N/A	<1					
			C40	>100	N/A	N/A	<1					
		IC	C50	>100	N/A	N/A	<1				······	
Test Acceptab	oility											
Analysis ID	Endpoint		ttrib		Test Stat	TAC Limi	its	Ove	rlap	Decision		
00-0812-0486	7d Survival Rate	С	ontro	ol Resp	0.9833	0.8 - NL		Yes			cceptability	
20-1839-5646	7d Survival Rate	С	ontro	ol Resp	0.9833	0.8 - N L		Yes			cceptability	
03-5507-5630	Mean Dry Biomass-r	ng C	ontro	ol Resp	0.293	0.25 - NL		Yes		Passes A	cceptability	Criteria
21-1245-3032	Mean Dry Biomass-r	ng C	ontro	ol Resp	0.293	0.25 - NL		Yes		Passes A	cceptability	Criteria
03-5507-5630	Mean Dry Biomass-r	ng P	MSD)	0.1637	0.12 - 0.3		Yes		Passes A	cceptability	Criteria
7d Survival Ra	ate Summary											
C-%	Control Type Cou		lean	95% LCL	95% UCL		Max	Std		Std Dev	CV%	%Effect
0	Negative Control 4	0	.983	3 0.9303	1	0.9333	1	0.01	667	0.03333	3.39%	0.0%
100	4	1		1	1	1	1	0		0	0.0%	-1.7%
Mean Dry Bio	mass-mg Summary											,
	Control Type Cou		lean				Max			Std Dev	CV%	%Effect
0	Negative Control 4		.293	0.2303	0.3557	0.2713	0.35			0.03943	13.46%	0.0%
100	4	0	.384	8 0.3376 	0.4321	0.358	0.42	33 0.01	484	0.02969	7.71%	-31.34%
7d Survival R	ate Detail											
C-%	Control Type Rep		ep 2	Rep 3	Rep 4							
0	Negative Control 0.93	333 1		1	1							
100	1	1		1	1							
Mean Dry Bio	mass-mg Detail											
C-%	Control Type Rep	1 R	Rep 2	Rep 3	Rep 4							
0	Negative Control 0.2		.271		0.352					***************************************		
100	0.39		.365		0.358							
	0.0	-			-							

CETIS Summary Report

Report Date:

10 Jun-15 14:33 (p 2 of 2)

Test Code: PRI0515.222fml | 15-0849-4568

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

7d Surviva	l Rate B	inomials
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C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	14/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15

Report Date:

10 Jun-15 14:33 (p 1 of 3)

Test Code:

PRI0515.222fml | 15-0849-4568

Eathead Min	now 7-d Larval Sເ	unvival and	Grouth To	-t				Aquatio	Pionesau P	Concultin	g Labs, Inc.
										Consultin	g Labs, inc.
Analysis ID: Analyzed:	20-1839-5646 10 Jun-15 14:33	-	point: 7d 9 ysis: Non	Survival Rati parametric-		е		S Version		.8.7	
Data Transfo	rm	Zeta	Alt Hyp	Trials	Seed		PMSD	Test Res	ult		
Angular (Corr	ected)	NA	C > T	NA	NA		3.43%	Passes 7	'd survival ra	te	
Wilcoxon Ra	nk Sum Two-Sam	ple Test									
Control	vs C-%		Test Stat	Critical	Ties DF	P-Value	P-Type	Decision	n(a:5%)		
Negative Con			20	NA	1 6	1.0000	Exact		ificant Effec	t	
ANOVA Table	9										
Source	Sum Squa	res	Mean Squ	are	DF	F Stat	P-Value	Decision	n(a:5%)		7
Between	0.0021680	01	0.0021680	01	1	1	0.3559	Non-Sigr	nificant Effec		
Error	0.013008		0.0021680	01	6						
Total	0.015176				7						
Distributiona	l Tests										
Attribute	Test			Test Stat	Critical	P-Value	Decision((α:1%)			
Variances			of Variance	1	13.75	0.3559	Equal Var	iances			
Variances		quality of Va		9	13.75	0.0240	Equal Var				
Distribution		lik W Norm	-	0.7065	0.6451	0.0027		al Distribut			
Distribution	•	ov-Smirnov		0.375	0.3313	0.0015		al Distribut			
Distribution	Anderson-	-Darling A2	Normality	1.162	3.878	0.0049	Non-norm	al Distribut	ion		
7d Survival F	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	1	1	1	1	1	1	0	0.0%	-1.7%
Angular (Cor	rected) Transforn	ned Summ	ary								
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	1.441	1.441	1.442	1.441	1.441	1.441	0	0.0%	-2.34%
7d Survival F	Rate Detail										
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Negative Control	0.9333	1	1	1						
100		1	1	1	1						
Angular (Cor	rected) Transforn	ned Detail									
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Negative Control	1.31	1.441	1.441	1.441						
100		1.441	1.441	1.441	1.441						
7d Survival F	Rate Binomials										
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Negative Control		15/15	15/15	15/15						*
100		15/15	15/15	15/15	15/15						
- -		· -		· - · · -	· · -						

Analyst: QA:

Report Date:

10 Jun-15 14:33 (p 2 of 3)

Test Code:

PRI0515.222fml | 15-0849-4568

Fathead Minnow 7-d Larval Survival and Growth Test Aquatic Bioassay & Consulting Labs, Inc. Analysis ID: 20-1839-5646 Endpoint: 7d Survival Rate **CETIS Version:** CETISv1.8.7 Analyzed: 10 Jun-15 14:33 Analysis: Nonparametric-Two Sample Official Results: Yes Graphics 1.0 annilanno 0.04 0.9 0.02 0.00 0.7 0.6 -0.04 -0.06 0.3 -0.08 -0.10 0.1 -0.12 L -1.5 0.0 0 N -1.0 C-% Rankits

Report Date:

10 Jun-15 14:33 (p 3 of 3)

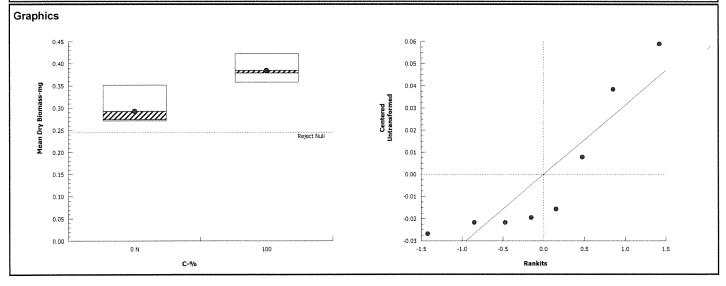
Test Code:

PRI0515.222fml | 15-0849-4568

Fathead Minnow 7-	d Larval Survival a	and Growth Tes	it				Aquatic Bioassay & Consulting Labs, Inc,
		•	n Dry Bioma	•			S Version: CETISv1.8.7 ial Results: Yes
Data Transform	Zeta	Alt Hyp	Trials	Seed		PMSD	Test Result
Untransformed	NA	C > T	NA	NA		16.4%	Passes mean dry biomass-mg
Equal Variance t Tv	vo-Sample Test						
Control vs	C-%	Test Stat	Critical	MSD DF	P-Value	P-Type	Decision(α:5%)
Negative Control	100	-3.721	1.943	0.048 6	0.9951	CDF	Non-Significant Effect
ANOVA Table							
Source	Sum Squares	Mean Squa	are	DF	F Stat	P-Value	Decision(α:5%)
Between	0.01686672	0.01686672	2	1	13.85	0.0098	Significant Effect
Error	0.007309225	0.00121820	04	6	_		
Total	0.02417594			7			
Distributional Tests	6						
Attribute	Test		Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F		1.765	47.47	0.6524	Equal Var	iances
Variances	Mod Levene Equa	lity of Variance	0.005608	13.75	0.9427	Equal Var	iances
Variances	Levene Equality o	f Variance	0.2863	13.75	0.6119	Equal Var	iances
Distribution	Shapiro-Wilk W N	ormality	0.7975	0.6451	0.0269	Normal Di	stribution
Distribution	Kolmogorov-Smirr	nov D	0.3111	0.3313	0.0218	Normal Di	stribution
Distribution	Anderson-Darling	A2 Normality	0.8598	3.878	0.0271	Normal Di	stribution

Mean Dry Bio	mass-mg Summa	ary									
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	0.293	0.2303	0.3557	0.2743	0.2713	0.352	0.01972	13.46%	0.0%
100		4	0.3848	0.3376	0.4321	0.379	0.358	0.4233	0.01484	7.71%	-31.34%

Mean Dry Bi	omass-mg Detail				
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.2713	0.2713	0.2773	0.352
100		0.3927	0.3653	0.4233	0.358



Report Date:

10 Jun-15 14:33 (p 1 of 2)

Test Code:

PRI0515.222fml | 15-0849-4568

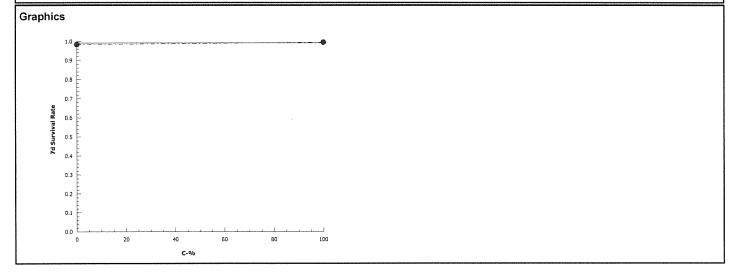
Fathead Minn	now 7-d Larval Survi	val and Growt	h Test	Aquatic Bi	oassay & Consulting Labs, Inc.
Analysis ID:	00-0812-0486	Endpoint:	7d Survival Rate	CETIS Version:	CETISv1.8.7
Analyzed:	10 Jun-15 14:33	Analysis:	Linear Interpolation (ICPIN)	Official Results:	Yes

Linear	Interpola	tion Options						
X Trans	sform	Y Transform	Seed	i	Resamples	Exp 95% CL	Method	
Linear		Linear	0		280	Yes	Two-Point Interpolation	
Point E	stimates							
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		
74 6	vival Date	Summon				Calaulata	Vorinto(A/D)	

7d Surviv	/al Rate Summary		Calculated Variate(A/B)								
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В
0	Negative Control	4	0.9833	0.9333	1	0.01667	0.03333	3.39%	0.0%	59	60
100		4	1	1	1	0	0	0.0%	-1.7%	60	60

7d Survival	7d Survival Rate Detail											
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4							
0	Negative Control	0.9333	1	1	1							
100		1	1	1	1							

7d Survival	Rate Binomials				
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	14/15	15/15	15/15	15/15
100		15/15	15/15	15/15	15/15



Linear Interpolation Options

Report Date:

10 Jun-15 14:33 (p 2 of 2)

Test Code:

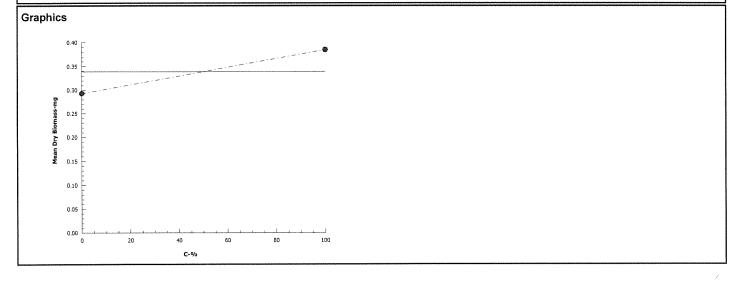
PRI0515.222fml | 15-0849-4568

Fathead Minr	now 7-d Larval Surviv	val and Growt	h Test	Aquatic Bi	oassay & Consulting Labs, Inc.
Analysis ID:	21-1245-3032	Endpoint:	Mean Dry Biomass-mg	CETIS Version:	CETISv1.8.7
Analyzed:	10 Jun-15 14:33	Analysis:	Linear Interpolation (ICPIN)	Official Results:	Yes

X Trans	sform	Y Transform	Seed	i	Resamples	Exp 95% CL	Method
Linear		Linear	1793	000	280	Yes	Two-Point Interpolation
Point E	stimates	3					
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	
Moon	Im Piam	isee-ma Siimm	20/			Calcula	ted Variate

Mean Dry B	Biomass-mg Summ	ary			MA 2000000000000000000000000000000000000				
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.293	0.2713	0.352	0.01972	0.03943	13.46%	0.0%
100		4	0.3848	0.358	0.4233	0.01484	0.02969	7.71%	-31.34%

Mean Dry	Biomass-mg Detail				
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.2713	0.2713	0.2773	0.352
100		0.3927	0.3653	0.4233	0.358



CETIS Measurement Report

Report Date:

10 Jun-15 14:33 (p 1 of 2)

Test Code:

PRI0515.222fml | 15-0849-4568

Fathead Minn	ow 7-d Larval S	urviva	l and Growt	h Test				Aquati	c Bioassay &	Consulting	g Labs, Inc.	
Batch ID: Start Date: Ending Date: Duration:	13-3729-4277 19 May-15 15:3 26 May-15 13:4 6d 22h		Test Type: Protocol: Species: Source:	EPA/821/R-02-013 (2002) Pimephales promelas				Analyst: Diluent: Laboratory Water Brine: Not Applicable Age:				
Sample ID:	17-2407-4701		Code:	PRI0515.222fml				Client: P	acific Ridgelii	ne, Inc.		
Sample Date:	15 May-15 11:0	00	Material:	Sample Water				Project: L	os Angeles Ir	rigated Land	ds Group	
	: 19 May-15 09:3	30	Source:	Bioassay Repo								
Sample Age:	4d 5h (6 °C)		Station:	LAILG-NGA16	8-7 							
Alkalinity (Ca	CO3)-mg/L											
C-%	Control Type	Coun		95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	61	61	61	61	61	0	0	0.0%	0	
100		8	80	80	80	80	80	0	0	0.0%	0 (00()	
Overall		16	70.5			61	80				0 (0%)	
Conductivity-	•											
C-%	Control Type	Coun		95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr		335.4	326.7	344	327	359	3.664	10.36	3.09%	0	
100		8	618.9	609.8	628	609	642	3.857	10.91	1.76%	0 / 2	
Overall		16	477.1			327	642				0 (0%)	
Dissolved Ox		0		050/ 1 01	050/ 1101	B.S.L.		Ot d 15	Otal Davi	O) (0)	04.04	
C-%	Control Type	Coun		95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
100	Negative Contr	8 8	8.15 8.113	7.639 7.408	8.661 8.817	7.7 7.1	9.5 10	0.2163 0.2979	0.6118 0.8425	7.51% 10.39%	0	
Overall		16	8.131	1.400	0.017	7.1	10	0.2010	0.0420	10.0070	0 (0%)	
Hardness (Ca	CO3)-ma/L											
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	90	90	90	90	90	0	0	0.0%	0	
100	.	8	201	201	201	201	201	0	0	0.0%	0	
Overall		16	145.5			90	201				0 (0%)	
pH-Units												
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	8.075	7.978	8.172	7.9	8.2	0.04119	0.1165	1.44%	0	
100		8	7.838	7.683	7.992	7.7	8.2	0.06529	0.1847	2.36%	0	
Overall		16	7.956			7.7	8.2				0 (0%)	
Temperature-	°C											
C-%	Control Type	Cour	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	24.55	24.05	25.05	24	25.4	0.213	0.6024	2.45%	0	
100		8	24.66	24.04	25.28	24	26	0.2625	0.7425	3.01%	0	
Overall		16	24.61			24	26				0 (0%)	

CETIS Measurement Report

Report Date:

10 Jun-15 14:33 (p 2 of 2)

Test Code:

PRI0515.222fml | 15-0849-4568

Fathead Mi	nnow 7-d Larval S	urvival a	Aquatio	Bioassay & Consulting Labs, Inc.					
Alkalinity (CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	61	61	61	61	61	61	61	61
100		80	80	80	80	80	80	80	80
Conductivi	ty-µmhos								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	359	338	330	329	330	332	327	338
100		642	619	609	609	617	625	611	619
Dissolved (Oxygen-mg/L					***************************************			
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.7	8.6	9.5	7.8	7.9	7.8	7.9	8
100		8.3	8.2	10	7.9	7.8	7.8	7.8	7.1
Hardness (CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	90	90	90	90	90	90	90	90
100		201	201	201	201	201	201	201	201
pH-Units									
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	8.1	7.9	8.1	8.2	8.1	8.1	8.2	7.9
100		7.7	7.7	7.7	7.8	7.9	8	8.2	7.7
Temperatu	re-°C								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24	25	25	25	24	24	24	25.4
100		24	26	25	24.5	24.4	24	24	25.4



June 11, 2015

Mr. Bryn Home Pacific Ridgeline, Inc. 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:

Pacific Ridgeline, Inc.

SAMPLE I.D.:

LAILG-NGA168-7

DATE RECEIVED:

19 May -15

ABC LAB. NO.:

PRI0515.222

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

CETIS Sum	ımary Repoi	rt						Report Date Test Code:				7 (p 1 of 2) -6380-4051	
Ceriodaphnia	7-d Survival and	Reproduc	tion Te	est	, , , , , , , , , , , , , , , , , , , 	·					Consulting		
Batch ID:	12-8088-6861	Test	Туре:	Reproduction-S	Survival (7d)			Analyst:					
Start Date:	19 May-15 15:36	Prot	ocol:	EPA/821/R-02	-013 (2002)			Diluent:	Labo	ratory Wate	r		
Ending Date:	26 May-15 13:40	Spec	cies:	Ceriodaphnia o	lubia			Brine:	Not A	Applicable		,	
Duration:	6d 22h	Soul	ce:	Aquatic Biosys	tems, CO			Age:					
Sample ID:	10-1824-0185	Code	ə:	PRI0515.222c				Client:	Pacif	ic Ridgeline	, Inc.		
Sample Date:	15 May-15 11:00) Mate	rial:	Sample Water				Project:	Los A	Angeles Irrig	gated Lands	Group	
Receive Date:	19 May-15 09:30) Soul	ce:	Bioassay Repo	ort								
Sample Age:	4d 5h (6 °C)	Stati	on:	LAILG-NGA16	8-7								
Comparison S	Summary												
Analysis ID	Endpoint		NOEL	LOEL	TOEL	PMSD	TU	Meth					
05-8175-6164	7d Survival Rate	;	100	>100	NA	NA	1			ct Test			
16-8143-9850	Reproduction		100	>100	NA 	33.0%	1	Equa	I Varia	ance t Two-	Sample Tes	st 	
Point Estimate	e Summary												
Analysis ID	Endpoint		Level		95% LCL	95% UCL		Meth					
18-6158-9701	7d Survival Rate	:	EC5	50	16.67	N/A	2	Linea	ar Inte	rpolation (IC	CPIN)		
			EC10		33.33	N/A	1						
			EC15		N/A	N/A	<1						
			EC20		N/A	N/A	<1						
			EC25		N/A	N/A	<1					,	
			EC40		N/A	N/A	<1					· ·	
			EC50		N/A	N/A	<1						
17-8922-9501	Reproduction		IC5	>100	N/A	N/A	<1	Linea	ar Inte	rpolation (IC	CPIN)		
			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 IC50	>100 >100	N/A N/A	N/A N/A	<1 <1						
Test Acceptab		···			IN/A	IN/24						·	
rest Acceptat Analysis ID	Endpoint		Attrib	oute	Test Stat	TAC Lim	its	Ove	rlap	Decision			
05-8175-6164		<u></u>		ol Resp	1	0.8 - NL		Yes			ceptability	Criteria	
18-6158-9701	7d Survival Rate			ol Resp	1	0.8 - NL		Yes			cceptability		
16-8143-9850	Reproduction	•		ol Resp	21.1	15 - NL		Yes			cceptability		
17-8922-9501	Reproduction			ol Resp	21.1	15 - NL		Yes			ceptability		
16-8143-9850	•		PMSI		0.3296	0.13 - 0.4	7	Yes			cceptability		
7d Survival R	ate Summary											* * * * *	
C-%	Control Type	Count	Mean			Min	Max		Err	Std Dev	CV%	%Effect	
0	Negative Control		1	1 0 6739	1 1	1 0	1 1	0 0.1		0 0.3162	0.0% 35.14%	0.0% 10.0%	
100		10	0.9	0.6738	····			0.1		0.3102	35.14 /8	10.076	
Reproduction	_			270/ 1 01	0.00/ 1101			0.11	_	0115	0) (0)	0/555	
C-%	Control Type	Count	Mean		25.48	Min 10	Ma : 33	x Std 1.93		Std Dev 6.118	CV% 29.0%	%Effect 0.0%	
0 100	Negative Control	10	21.1 22.4	16.72 14.45	30.35	10	42	3.51		11.11	49.59%	-6.16%	
7d Survival R	ata Datail												
7u Survivai K C-%	Control Type	Rep 1	Rep 2	2 Rep 3	Rep 4	Rep 5	Rep	o 6 Rep	7	Rep 8	Rep 9	Rep 10	
0	Negative Control		1	1	1	1	1	1		1	1	1	
100	.1394.110	1	1	1	1	0	1	1		1	1	1	
Reproduction	Detail												
Reproduction	Detail Control Type	Rep 1	Rep 2	2 Rep 3	Rep 4	Rep 5	Re	o 6 Rep	7	Rep 8	Rep 9	Rep 10	
•			Rep 27	2 Rep 3	Rep 4	Rep 5	Re _l	6 Rep	7	Rep 8	Rep 9 19	Rep 10	

CETIS™ v1.8.7.11

CETIS Summary Report

Report Date:

10 Jun-15 14:27 (p 2 of 2)

Test Code:

PRI0515.222cer | 00-6380-4051

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

7d Surviv	al 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	0/1	1/1	1/1	1/1	1/1	1/1

Analyst: QA:

CETIS™ v1.8.7.11

Report Date:

10 Jun-15 14:27 (p 1 of 1)

est Code:

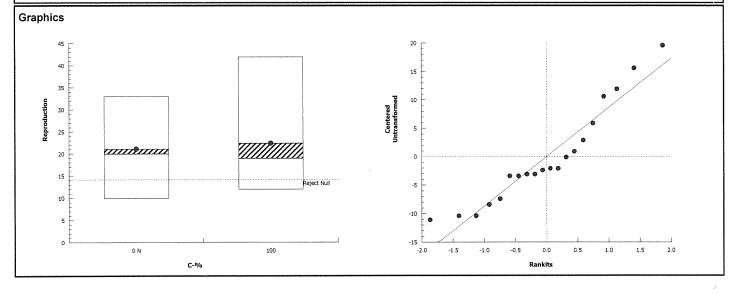
PRI0515 222cer I 00-6380-4051

		<u>-</u>							Test	Code:	PRI0515.222cer 00-6380-4051
Ceriodaphnia	7-d S	urvival an	d Rep	roduction Test						Aquatic Bio	assay & Consulting Labs, Inc.
Analysis ID: Analyzed:		143-9850 un-15 8:52			roduction ametric-Two	Sample	a				CETISv1.8.7 Yes
		411 10 0.02							PMSD	Test Result	
Data Transformed			Zeta NA	Alt Hyp C > T	Trials NA	Seed NA		•••••	33.0%	Passes repr	***************************************
Equal Varianc	e t Tv	vo-Sample	Test								
Control	vs	C-%		Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(a:	5%)
Negative Contr	ol	100		-0.3242	1.734	6.954	18	0.6252	CDF	Non-Signific	ant Effect
ANOVA Table						***************************************					
Source		Sum Squa	ares	Mean Squ	are	DF		F Stat	P-Value	Decision(α:	5%)
Between		8.45		8.45		1		0.1051	0.7495	Non-Signific	ant Effect
Error		1447.3		80.40556		18					
Total		1455.75				19					
Distributional	Test	5									
Attribute		Test			Test Stat	Critica	al	P-Value	Decision	(α:1%)	
Variances		Variance	Ratio	F	3.296	6.541		0.0903	Equal Var	iances	2
Variances		Mod Leve	ene Eq	uality of Variance	1.643	8.285		0.2162	Equal Var	iances	
Variances		Levene E	quality	of Variance	5	8.285		0.0382	Equal Var	iances	

Distributional Tests	•				
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	3.296	6.541	0.0903	Equal Variances
Variances	Mod Levene Equality of Variance	1.643	8.285	0.2162	Equal Variances
Variances	Levene Equality of Variance	5	8.285	0.0382	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9123	0.866	0.0707	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1951	0.2235	0.0446	Normal Distribution
Distribution	D'Agostino Skewness	1.667	2.576	0.0955	Normal Distribution
Distribution	D'Agostino Kurtosis	0.2812	2.576	0.7785	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	2.859	9.21	0.2394	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.7806	3.878	0.0424	Normal Distribution

Reproduct	ion Summary										
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	10	21.1	16.72	25.48	20	10	33	1.935	29.0%	0.0%
100		10	22.4	14.45	30.35	19	12	42	3.513	49.59%	-6.16%

Reproduction	n 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	18	27	10	33	22	24	18	21	19	19
100		19	38	12	42	12	20	15	33	19	14



Report Date:

10 Jun-15 14:27 (p 1 of 2)

Test Code:

PRI0515.222cer | 00-6380-4051

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: Analyzed:

18-6158-9701 09 Jun-15 8:52

Analysis:

Endpoint: 7d Survival Rate

Linear Interpolation (ICPIN)

CETIS Version: CETISv1.8.7

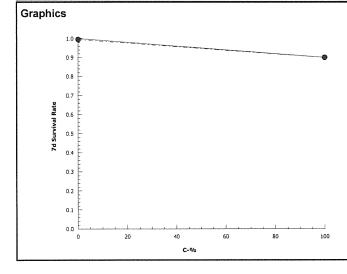
Official	Results:	Yes
Oniciai	nesuits.	100

X Trans	sform	Y Transform	Seed	i	Resamples	Exp 95% CL	Method	
Linear		Linear	0		280	Yes	Two-Point Interpolation	
Point E	stimates							
Level	%	95% LCL	95% UCL	TU	95% LCL	95% UCL		
EC5	50	16.67	N/A	2	NA	6		
EC10	100	33.33	N/A	1	NA	3		
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				Cal	culated Varia	ite(A/B)				
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В
0	Negative Control	10	1	1	1	0	0	0.0%	0.0%	10	10
100		10	0.9	0	1	0.1	0.3162	35.14%	10.0%	9	10

7d Survi	val 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	0	1	1	1	1	1

7d Survival R	ate 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	0/1	1/1	1/1	1/1	1/1	1/1



Report Date:

10 Jun-15 14:27 (p 2 of 2)

Test Code:

PRI0515.222cer | 00-6380-4051

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 17-8922-9501 Endpoint: Reproduction

Analyzed: 09 Jun-15 8:52 Analysis: Linear Interpolation (ICPIN)

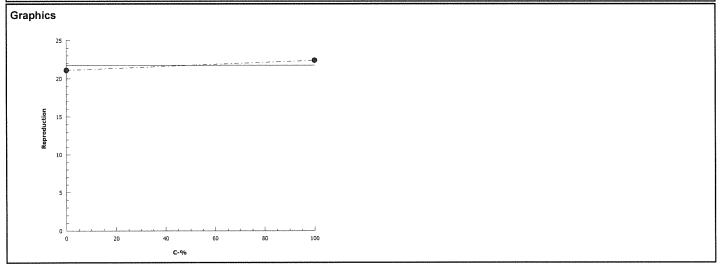
CETIS Version: CETISv1.8.7

Official Results: Yes

Linear	Interpola	tion Options						
X Trans	sform	Y Transform	Seed	d	Resamples	Exp 95% CL	Method	
Linear		Linear	1346	526	280	Yes	Two-Point Interpolation	
Point E	stimates	S						
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		

Reprodu	ction Summary				(Calculated Va	ıriate		
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	21.1	10	33	1.935	6.118	29.0%	0.0%
100		10	22.4	12	42	3.513	11.11	49.59%	-6.16%

Reproduct	ion 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	18	27	10	33	22	24	18	21	19	19
100		19	38	12	42	12	20	15	33	19	14



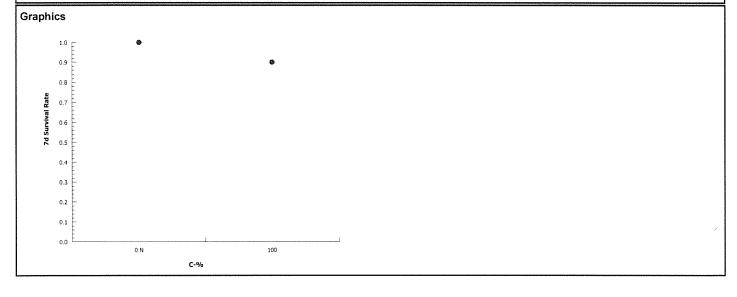
Report Date:

10 Jun-15 14:27 (p 1 of 1)

Test Code:

PRI0515.222cer | 00-6380-4051

							1036	Code.	11110011	J.EEECCI O	J-0300-403 i
Ceriodaphni	a 7-d Survival and	l Repr	oduction Test					Aquatic E	Bioassay &	Consulting	J Labs, Inc.
Analysis ID:	05-8175-6164		Endpoint: 7d S	Survival Rat	te		CET	S Version:	CETISv	1.8.7	
Analyzed:	09 Jun-15 8:52		Analysis: Sing	gle 2x2 Con	itingency Ta	ble	Offic	ial Results	: Yes		7
Data Transfo	orm	Zeta	Alt Hyp	Trials	Seed			Test Resi	ult		
Untransforme	ed		C > T	NA	NA			Passes 7	d survival r	ate	
Fisher Exact	: Test										
Control	vs C-%		Test Stat	P-Value	P-Type	Decision	(a:5%)				
Negative Cor	ntrol 100		0.5	0.5000	Exact	Non-Sign	ificant Effec				
Data Summa	ıry										
C-%	Control Type	NR	R	NR + R	Prop NR	Prop R	%Effect				
0	Negative Contr	10	0	10	1	0	0.0%				
100		9	1	10	0.9	0.1	10.0%				
7d Survival	Rate Detail										
C-%	Control Type	Rep '	l 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	0	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	0/1	1/1	1/1	1/1	1/1	1/1
1	regative control										



Analyst:____QA:____

, CETIS Measurement Report

Report Date:

10 Jun-15 14:27 (p 1 of 2)

Test Code:

PRI0515.222cer | 00-6380-4051

Ceriodaphnia	7-d Survival an	ıd Repi	roduction To	est				Aquati	c Bioassay &	Consultin	g Labs, Inc.	
Batch ID: Start Date: Ending Date: Duration:	12-8088-6861 19 May-15 15:3 26 May-15 13:4 6d 22h		Test Type: Protocol: Species: Source:	Reproduction- EPA/821/R-02 Ceriodaphnia of Aquatic Biosys	-013 (2002) dubia	,		Analyst: Diluent: Laboratory Water Brine: Not Applicable Age:				
Sample ID:	10-1824-0185		Code:	PRI0515.222c				Client: F	acific Ridgelir	ne, Inc.		
Sample Date:	15 May-15 11:0	00	Material:	Sample Water				Project: L	os Angeles Iri	rigated Land	ds Group	
Receive Date:	: 19 May-15 09:3	30	Source:	Bioassay Repo	ort							
Sample Age:	4d 5h (6 °C)		Station:	LAILG-NGA16	8-7							
Alkalinity (Ca	CO3)-mg/L											
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun	
0	Negative Contr	8	61	61	61	61	61	0	0	0.0%	0	
100		8	80	80	80	80	80	0	0	0.0%	0	
Overall		16	70.5			61	80				0 (0%)	
Conductivity-	µmhos											
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun	
0	Negative Contr	8	335.4	326.7	344	327	359	3.664	10.36	3.09%	0	
100		8	618.9	609.8	628	609	642	3.857	10.91	1.76%	0	
Overall		16	477.1			327	642				0 (0%)	
Dissolved Ox	ygen-mg/L											
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun	
0	Negative Contr	8	8.15	7.639	8.661	7.7	9.5	0.2163	0.6118	7.51%	0	
100		8	8.113	7.408	8.817	7.1	10	0.2979	0.8425	10.39%	0	
Overall		16	8.131			7.1	10				0 (0%)	
Hardness (Ca	CO3)-mg/L											
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun	
0	Negative Contr	8	90	90	90	90	90	0	0	0.0%	0	
100		8	201	201	201	201	201	0	0	0.0%	0	
Overall		16	145.5			90	201				0 (0%)	
pH-Units											/	
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun	
0	Negative Contr	8	8.075	7.978	8.172	7.9	8.2	0.04119	0.1165	1.44%	0	
100		8	7.838	7.683	7.992	7.7	8.2	0.06529	0.1847	2.36%	0	
Overall		16	7.956			7.7	8.2				0 (0%)	
Temperature-	·°C		-									
C-%	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun	
0	Negative Contr	8	24.55	24.05	25.05	24	25.4	0.213	0.6024	2.45%	0	
100		8	24.66	24.04	25.28	24	26	0.2625	0.7425	3.01%	0	
Overall		16	24.61			24	26				0 (0%)	

CETIS Measurement Report

Report Date:

10 Jun-15 14:27 (p 2 of 2)

Test Code:

PRI0515.222cer | 00-6380-4051

Ceriodaphi	nia 7-d Survival an	d Reprod	duction Tes	t				Aquatio	Bioassay & Consulting Labs, Inc.
Alkalinity (CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	61	61	61	61	61	61	61	61
100		80	80	80	80	80	80	80	80
Conductivi	ty-µmhos								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	359	338	330	329	330	332	327	338
100		642	619	609	609	617	625	611	619
Dissolved	Oxygen-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	7.7	8.6	9.5	7.8	7.9	7.8	7.9	8
100		8.3	8.2	10	7.9	7.8	7.8	7.8	7.1
Hardness (CaCO3)-mg/L								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	90	90	90	90	90	90	90	90
100		201	201	201	201	201	201	201	201
pH-Units								•	
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	8.1	7.9	8.1	8.2	8.1	8.1	8.2	7.9
100		7.7	7.7	7.7	7.8	7.9	8	8.2	7.7
Temperatu	re-°C								
C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	24	25	25	25	24	24	24	25.4
100		24	26	25	24.5	24.4	24	24	25.4



June 11, 2015

Mr. Bryn Home Pacific Ridgeline, Inc. 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:

Pacific Ridgeline, Inc.

SAMPLE I.D.:

LAILG-NGA168-7

DATE RECEIVED:

19 May -15

ABC LAB. NO.:

PRI0515.222

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

Report Date:

04 Jun-15 15:38 (p 1 of 1)

Test Code:

PRI0515.222sel | 15-6379-3588

									20.			0 00.0 000
Selenastrum (Growth Test							Ad	quatic B	ioassay & C	Consulting	Labs, Inc
Batch ID:	02-3949-3759	Test	Type:	Cell Growth				Analyst:				
Start Date:	19 May-15 11:30	Prote	ocol:	EPA/821/R-02-6	013 (2002)		1	Diluent:	Labo	ratory Wate	r	
Ending Date:	23 May-15 11:00	Spec	ies:	Selenastrum ca	pricornutum	1	1	Brine:	Not /	Applicable		
Duration:	96h	Sour	ce:	Aquatic Biosyst	ems, CO			Age:				
Sample ID:	18-0420-2352	Code		PRI0515.222s			(Client:	Paci	fic Ridgeline	, Inc.	
Sample Date:	15 May-15 11:00) Mate	rial:	Sample Water			1	Project:	Los	Angeles Irrig	gated Land	s Group
Receive Date:	19 May-15 09:30	Sour	ce:	Bioassay Repor	rt							
Sample Age:	4d 0h (6 °C)	Stati	on:	LAILG-NGA168	3-7							
Comparison S	Summary											
Analysis ID	Endpoint		NOEL	LOEL	TOEL	PMSD	TU	M	ethod			
16-5927-8179	Cell Density		100	>100	NA	4.18%	1	E	qual Vari	ance t Two-	Sample Te	st
Point Estimate	e Summary											
Analysis ID	Endpoint		Level	%	95% LCL	95% UCL	TU	М	ethod			
01-7791-9875	Cell Density		IC5	>100	N/A	N/A	<1	Li	near Inte	rpolation (IC	CPIN)	
			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 Acceptat	oility											
Analysis ID	Endpoint		Attrib	ute	Test Stat	TAC Limi	its	0	verlap	Decision		
01-7791-9875	Cell Density		Contro	ol CV	0.006985	NL - 0.2		Y	es	Passes Ad	ceptability	Criteria
16-5927-8179	Cell Density		Contro	ol CV	0.006985	NL - 0.2		Y	es		ceptability	
01-7791-9875	Cell Density		Contro	ol Resp	1.69E+6	1.00E+6 -	NL ,	. Y	es	Passes Ad	cceptability	Criteria
16-5927-8179	Cell Density		Contro	ol Resp	1.69E+6	1.00E+6 -	NL	Y	es	Passes Ad	ceptability	Criteria
16-5927-8179	Cell Density		PMSD)	0.04176	0.091 - 0.2	29	Υ	es	Below Acc	eptability (Oriteria
Cell Density S	Summary											
C-%	Control Type	Count	Mean	95% LCL	95% UCL		Max	S	td Err	Std Dev	CV%	%Effec
0	Negative Control	4	1.692	E+6 1.673E+6	1.711E+6	1.681E+6	1.707	7E+6 5.	907E+3	1.181E+4	0.7%	0.0%
100		4	1.833	E+6 1.719E+6	1.947E+6	1.752E+6	1.920	DE+6 3.	587E+4	7.175E+4	3.91%	-8.36%
Cell Density D	Detail											
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4							
0	Negative Control	1.695E+6	1.684	E+6 1.707E+6	1.681E+6							
			4 0 =		4.0055							

1.752E+6 1.856E+6 1.920E+6 1.805E+6

100

Report Date:

04 Jun-15 15:38 (p 1 of 1)

	arytical repo						Test	Code:	PRI0515	.222sel 1	5-6379-358
Selenastrum	Growth Test							Aquatic B	ioassay & (Consultin	g Labs, Inc
Analysis ID: Analyzed:	16-5927-8179 04 Jun-15 15:38		point: Cell lysis: Para	Density ametric-Two	Sample			S Version: ial Results:	CETISv1. Yes	8.7	
Data Transfo	rm	Zeta	Alt Hyp	Trials	Seed		PMSD	Test Resu	ılt		
Untransforme	d	NA	C > T	NA	NA		4.18%	Passes ce			
Equal Varian	ce t Two-Sample	Test									
Control	vs C-%		Test Stat	Critical	MSD DF	P-Value	P-Type	Decision(a:5%)		
Negative Con			-3.892	1.943	70650 6	0.9960	CDF		icant Effect		***************************************
ANOVA Table	9										
Source	Sum Squa	ıres	Mean Squ	are	DF	F Stat	P-Value	Decision(a:5%)		
Between	400445000		400445000		1	15.15	0.0081	Significant			
Error	158615000	000	264358300	00	6			•			
Total	559060000	000		THE PARTY NAMED AND ADDRESS OF	7						
Distributiona	l Tests										
Attribute	Test			Test Stat	Critical	P-Value	Decision(α:1%)			
Variances	Variance I	Ratio F		36.88	47.47	0.0144	Equal Vari		*** ** *** * * ** *********************		
Variances	Mod Leve	ne Equality	of Variance	6.94	13.75	0.0388	Equal Vari	ances			
Variances		quality of Va		7.04	13.75	0.0379	Equal Vari	ances			
Distribution		Vilk W Norm	-	0.9531	0.6451	0.7427	Normal Dis	stribution			
Distribution	_	ov-Smirnov		0.1914	0.3313	0.6355	Normal Dis	stribution			
Distribution	Anderson-	-Darling A2	Normality	0.3418	3.878	0.4970	Normal Dis	stribution			
Cell Density S	Summary										
C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control			1.673E+6		1690000	1.681E+6	1.707E+6	5.909E+3		0.0%
100		4	1.833E+6	1.719E+6	1.947E+6	1831000	1.752E+6	1.920E+6	3.587E+4	3.91%	-8.36%
Cell Density I	Detail										
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4						
0	Negative Control	1.695E+6	1.684E+6	1.707E+6	1.681E+6						
100		1.752E+6	1.856E+6	1.920E+6	1.805E+6						
Graphics										***************************************	
2000000	r					1.0E+05 F		:			
						8.0E+04		i			•
1				Reject Null		6.0E+04					/
1509000	-					4.0E+04					
ensit	-				tered	a form				6	
Cell Density	Ī				Centered	2,0E+04				~	
1000000	- -					3 0.0E+00			<u> </u>		
	<u>.</u>					-2.0E+04	_	•/			
	- -					-4.0E+04	•/				
500000	-					-					
	•					-6.0E+04					
	-					-8.0E+04	•				

-1.0

~û 5

0.0

Rankits

0.5

C-%

Report Date:

04 Jun-15 15:38 (p 1 of 1)

Test Code:

PRI0515.222sel | 15-6379-3588

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

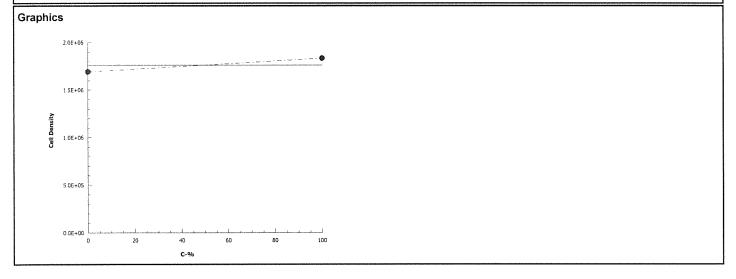
Analysis ID: 01-7791-9875 Endpoint: Cell Density CETIS Version: CETISv1.8.7

Analyzed: 04 Jun-15 15:38 Analysis: Linear Interpolation (ICPIN) Official Results: Yes

Linear	Interpola	tion Options					
X Trans	sform	Y Transform	Seed	i	Resamples	Exp 95% CL	Method
Linear		Linear	0		280	Yes	Two-Point Interpolation
Point E	stimates						
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 Dens	sity Summary				Cal	culated Var	riate		A ACADA AND THE STATE OF THE ST
C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.692E+6	1.681E+6	1.707E+6	5.909E+3	1.182E+4	0.7%	0.0%
100		4	1.833E+6	1.752E+6	1.920E+6	3.587E+4	7.175E+4	3.91%	-8.36%

Cell Densi	ity Detail				
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.695E+6	1.684E+6	1.707E+6	1.681E+6
100		1.752E+6	1.856E+6	1.920E+6	1.805E+6



*CETIS Measurement Report

Report Date:

04 Jun-15 15:38 (p 1 of 2)

Test Code:

PRI0515.222sel | 15-6379-3588

Start Date: 19 May-15 11:30		
Sample Date: 15 May-15 11:00 Material: Sample Water Sample Water Project: Los Angeles III Receive Date: 19 May-15 09:30 Source: Bioassay Report	ne Inc	
Receive Date: 19 May-15 09:30 Source: Sample Age: 4d 0h (6 °C) Source: Station: LAILG-NGA168-7 Alkalinity (CaCO3)-mg/L C-% Control Type Countrol Type Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 1 70 70 70 0 0 100 1 89 89 89 0 0 Overall 2 79.5 70 89 Conductivity-µmhos C-% Control Type Countrol Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 5 419.8 417.6 422 418 422 0.8 1.789 100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679 2.074 4.637	,	
Sample Age: 4d 0h (6 °C) Station: LAILG-NGA168-7 Alkalinity (CaCO3)-mg/L C-% Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 1 70 70 70 0 0 100 1 89 89 89 0 0 Overall 2 79.5 70 89 Conductivity-µmhos C-% Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 5 419.8 417.6 422 418 422 0.8 1.789 100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679 2.074 4.637	rigated Lar	nds Group
Alkalinity (CaCO3)-mg/L C-%		
C-% Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Control 1 70 70 70 0 0 0 100 1 89 89 89 0		
O Negative Control 1 70 70 70 0 0 100 1 89 89 89 0 0 Overall 2 79.5 70 89 Conductivity-μmhos C-% Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 5 419.8 417.6 422 418 422 0.8 1.789 100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679		
100 1 89 89 89 0 0 0 Overall 2 79.5 70 89 Conductivity-μmhos C-% Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 5 419.8 417.6 422 418 422 0.8 1.789 100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679	CV%	QA Count
Conductivity-µmhos Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 5 419.8 417.6 422 418 422 0.8 1.789 100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679	0.0%	0
Conductivity-μmhos C-% Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 5 419.8 417.6 422 418 422 0.8 1.789 100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679	0.0%	0
C-% Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev 0 Negative Contr 5 419.8 417.6 422 418 422 0.8 1.789 100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679		0 (0%)
0 Negative Contr 5 419.8 417.6 422 418 422 0.8 1.789 100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679		
100 5 675 669.2 680.8 668 679 2.074 4.637 Overall 10 547.4 418 679	CV%	QA Count
Overall 10 547.4 418 679	0.43%	0
	0.69%	0
Hardness (CaCO3)-mg/L		0 (0%)
C-% Control Type Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev	CV%	QA Count
0 Negative Contr 1 99 99 99 0 0	0.0%	0
100 1 184 184 0 0	0.0%	0
Overall 2 141.5 99 184		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 7.8 7.568 8.032 7.6 8 0.08367 0.1871	2.4%	0
100 5 7.88 7.824 7.936 7.8 7.9 0.01999 0.04471	0.57%	0
Overall 10 7.84 7.6 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 5 24.66 24.37 24.95 24.5 25 0.103 0.2302	0.93%	0
100 5 24.66 24.37 24.95 24.5 25 0.103 0.2302	0.93%	0
Overall 10 24.66 24.5 25		0 (0%)

Analyst:____QA:___

CETIS Measurement Report

Report Date:

04 Jun-15 15:38 (p 2 of 2)

Test Code:

PRI0515.222sel | 15-6379-3588

Selenastru	m Growth Test						Aquatic Bioassay & Consulting Labs, Inc.
Alkalinity (0	CaCO3)-mg/L						
C-%	Control Type	1					
0	Negative Contr	70					
100		89					
Conductivi	ty-µmhos						
C-%	Control Type	1	2	3	4	5	
0	Negative Contr	418	420	418	421	422	
100		676	679	668	673	679	
Hardness (CaCO3)-mg/L						
C-%	Control Type	1					
0	Negative Contr	99					
100		184					
pH-Units							
C-%	Control Type	1	2	3	4	5	
0	Negative Contr	7.6	7.7	7.7	8	8	
100		7.9	7.8	7.9	7.9	7.9	
Temperatu	re-°C						
C-%	Control Type	1	2	3	4	5	
0	Negative Contr	25	24.8	24.5	24.5	24.5	
100		25	24.8	24.5	24.5	24.5	



CHRONIC FATHEAD MINNOW SURVIVAL AND GROWTH BIOASSAY

DATE:

19 May 2015

STANDARD TOXICANT:

Copper Chloride

ENDPOINT:

SURVIVAL

NOEC =

19.00 ug/l

EC25 =

68.83 ug/l

EC50 =

102.10 ug/l

ENDPOINT:

GROWTH

NOEC =

19.00 ug/l

IC25 =

34.27 ug/l

IC50 =

61.12 ug/l

Yours very truly,

Scott Johnson

Laboratory Director

CETIS Summary Report

Report Date:

10 Jun-15 14:25 (p 1 of 2)

Test Code: FML051915 | 17-2539-1994

								est coue.		1 IVIL	001810 17	-2000-100
Fathead Minn	ow 7-d Larval Sur	vival and G	rowth	Test				Aquat	tic Bi	oassay & C	Consulting	Labs, Inc
Batch ID:	02-5679-1191	Test Ty	/pe: 0		(7d)	······································	P	\nalyst:				
Start Date:	19 May-15 17:15	Protoc		EPA/821/R-02-0					Labo	ratory Wate	r	
Ending Date:	26 May-15 15:15	Specie		Pimephales pro			Е			Applicable		
Duration:	6d 22h	Source		Aquatic Biosyste				\ge:		1-1-1-1-1-1		
Sample ID:	08-4364-6620	Code:	F				C	Client:	ABC	Labs		
•	19 May-15 17:15	Materia	al: C	Copper chloride			F	Project:	REF	TOX		
Receive Date:		Source		Reference Toxio	ant			•				
Sample Age:		Station		REF TOX								
Comparison S	Summary											
Analysis ID	Endpoint	N	IOEL	LOEL	TOEL	PMSD	TU	Metho	od			
13-7810-2889	7d Survival Rate	1	9	38	26.87	8.96%		Steel	Many	/-One Rank	Sum Test	
14-7442-1965	Mean Dry Biomas	ss-mg 1	9	38	26.87	11.8%		Dunne	ett Mı	ultiple Comp	oarison Tes	t
Point Estimate	e Summary								~			
Analysis ID	Endpoint	<u> </u>	evel	μg/L	95% LCL	95% UCL	TU	Metho	od			
)7-8743-7656	7d Survival Rate		C5	28.5	13.3	36.1		Linea	r Inte	rpolation (IC	PIN)	
		E	C10	41.08	31.08	49.31						
		E	C15	50.33	40.47	77.96						
		E	C20	59.58	46.86	89.7						
		E	C25	68.83	53.33	92.34						
		E	C40	89.58	75.72	106.3						
		E	C50	102.1	87.17	116						
12-2364-4544	Mean Dry Biomas	ss-mg (25	19.13	13.18	23.42		Linea	r Inte	rpolation (IC	PIN)	**************************************
		10	210	22.92	18.79	27.84					•	
		10	C15	26.7	22.31	32.61						
		10	220	30.49	26.12	38.32						
			225	34.27	29.22	43.93						
			C40	49.6	40.56	58.2						
			C50	61.12	50.9	74.25						
Test Acceptab	nility											
Analysis ID	Endpoint	А	ttribut	te	Test Stat	TAC Limi	its	Overl	ap	Decision		
07-8743-7656	7d Survival Rate		ontrol		1	0.8 - NL		Yes			ceptability	Criteria
13-7810-2889	7d Survival Rate		ontrol	•	1	0.8 - NL		Yes			ceptability	
	Mean Dry Biomas		ontrol	•	0.2943	0.25 - NL		Yes			ceptability	
14-7442-1965	Mean Dry Biomas	-	ontrol	•	0.2943	0.25 - NL		Yes		Passes Ac		
14-7442-1965	Mean Dry Biomas		MSD	Коор	0.1179	0.12 - 0.3		Yes			eptability C	
7d Survival Ra	· · · · · · · · · · · · · · · · · · ·			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,								
	_	Count N	lean	95% LCL	95% UCL	Min	Max	Std E	rr	Std Dev	CV%	%Effect
	Negative Control			1	1	1	1	0		0	0.0%	0.0%
10	-	4 1		1	1	1	1	0		0	0.0%	0.0%
19			.9833	0.9303	1	0.9333	1	0.016	67	0.03333	3.39%	1.67%
38			.9167	0.8636	0.9697	0.8667	0.933			0.03333	3.64%	8.33%
75			.7167	0.498	0.9354	0.6	0.866			0.1374	19.18%	28.33%
150			.1167	0	0.2978	0	0.266			0.1139	97.59%	88.33%
Mean Dry Bior	mass-mg Summa	ry										
-	_	-	lean	95% LCL	95% UCL	Min	Max	Std E	rr	Std Dev	CV%	%Effect
	Negative Control		.2943	0.2716	0.3171	0.2767	0.308			0.01428	4.85%	0.0%
10	-		.383	0.348	0.418	0.3573	0.41	0.011		0.02201	5.75%	-30.12%
19			.3223	0.3099	0.3347	0.312	0.330			0.007784	2.42%	-9.51%
38			.2373	0.2002	0.2744	0.2153	0.27	0.003		0.02331	9.82%	19.37%
75			.1285	0.2002	0.1816	0.2133	0.162			0.02331	25.96%	56.34%
75 150			.01083			0.00733	0.102			0.003333	86.79%	96.32%
100	•	- , U	.01083	-0.004128	0.02079	U	U.UZ I	JJ U.UU4	101	0.009403	00.1970	50.32%

Report Date:

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Test Code:

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Fathead	Winnow	7-d	Larval	Survival	and	Growth	Tes

C-μg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	
0	Negative Contro	l 1	1	1	1	
10		1	1	1	1	
19		0.9333	1	1	1	
38		0.9333	0.9333	0.9333	0.8667	
75		0.8	0.8667	0.6	0.6	
150		0.2667	0	0.1333	0.06667	

C-μg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.2893	0.3087	0.2767	0.3027
10		0.41	0.3573	0.388	0.3767
19		0.312	0.3247	0.322	0.3307
38		0.27	0.2287	0.2353	0.2153
75		0.162	0.1167	0.08733	0.148
150		0.01533	0	0.006667	0.02133

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		14/15	15/15	15/15	15/15
38		14/15	14/15	14/15	13/15
75		12/15	13/15	9/15	9/15
150		4/15	0/15	2/15	1/15

Report Date:

10 Jun-15 14:24 (p 1 of 4)

Test Code:

FML051915 | 17-2539-1994

Fathead Minr	now 7-d Larval	Survival a	and Growth Tes	st				Aquatic B	ioassay & C	Consulting	Labs, Inc.
Analysis ID: Analyzed:	13-7810-2889 10 Jun-15 14		indpoint: 7d S inalysis: Non		e ·Control vs T	reatments		S Version: ial Results:	CETISv1. Yes	8.7	
Data Transfor	rm	Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Angular (Corre	ected)	NA	C > T	NA	NA		8.96%	19	38	26.87	
Steel Many-0	ne Rank Sum	Test									
Control	vs C-μg/L		Test Stat	Critical	Ties DF	P-Value	P-Type	Decision(α:5%)		
Negative Cont			18	10	1 6	0.8333	Asymp	Non-Signi	ficant Effect	***************************************	
	19		16	10	1 6	0.6105	Asymp	Non-Signit	ficant Effect		
	38*		10	10	0 6	0.0417	Asymp	Significant			,
	75*		10	10	0 6	0.0417	Asymp	Significant			
	150*		10	10	0 6	0.0417	Asymp	Significant	Effect		
ANOVA Table	9										
Source	Sum Sq	uares	Mean Squ	are	DF	F Stat	P-Value	Decision(α:5%)		
Between	3.79448	4	0.7588968		5	72.14	<0.0001	Significant	Effect		
Error	0.18936		0.0105201	2	18						
Total	3.98384	6			23						
Distributiona	I Tests										
Attribute	Test			Test Stat		P-Value	Decision(·			
Variances		•	ility of Variance		4.248	0.0035	Unequal \				
Variances		Equality o		7.979	4.248	0.0004	Unequal \				
Distribution	,	-Wilk W N	•	0.9162	0.884	0.0482	Normal Di				
Distribution	•	orov-Smirr		0.25	0.2056	0.0004		al Distributio	on		
Distribution		tino Skewn		0.3451	2.576	0.7300	Normal Di				
Distribution Distribution	-	tino Kurtos	on K2 Omnibus	1.311	2.576 9.21	0.1900 0.3991	Normal Di Normal Di				
Distribution	_		A2 Normality	1.211	3.878	0.0036		al Distributio	nn		4
	Rate Summary	on Duning	,		0.010	0.000					,
C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0-μg/L	Negative Cont		1	1	1	1	1	1	0	0.0%	0.0%
10	Negative cont	4	1	1	1	1	1	1	0	0.0%	0.0%
19		4	0.9833	0.9303	1	1	0.9333	1	0.01667	3.39%	1.67%
38		4	0.9167	0.8636	0.9697	0.9333	0.8667	0.9333	0.01667	3.64%	8.33%
75		4	0.7167	0.498	0.9354	0.7	0.6	0.8667	0.06872	19.18%	28.33%
150		4	0.1167	0	0.2978	0.1	0	0.2667	0.05693	97.59%	88.33%
Angular (Cor	rected) Transfo	ormed Sur	nmary								n de la companya del la companya de la companya del la companya de
C-μg/L	Control Type	Count	-	95% LCL	95% UCL	Median	Min	Wax	Std Err	CV%	%Effect
0	Negative Cont		1.441	1.441	1.442	1.441	1.441	1.441	0	0.0%	0.0%
10	J	4	1.441	1.441	1.442	1.441	1.441	1.441	0	0.0%	0.0%
19		4	1.408	1.304	1.513	1.441	1.31	1.441	0.03292	4.68%	2.28%
38		4	1.281	1.192	1.371	1.31	1.197	1.31	0.02816	4.4%	11.09%
75		4	1.019	0.7678	1.27	0.9966	0.8861	1.197	0.07895	15.49%	29.3%
150		4	0.3268	0.04804	0.6055	0.3175	0.1295	0.5426	0.08758	53.61%	77.33%
7d Survival R	Rate Detail										
C-µg/L	Control Type		Rep 2	Rep 3	Rep 4						
0	Negative Cont	trol 1	1	1	1						
10		1	1	1	1						
19		0.9333	1	1	1						
38		0.9333		0.9333	0.8667						
38 75 150			0.8667	0.9333 0.6 0.1333	0.8667 0.6 0.06667						

Report Date:

10 Jun-15 14:24 (p 2 of 4)

Test Code:

FMI 051915 | 17-2539-1994

						Test Code:	FML051915 17-2539-1994
Fathead Mini	าow 7-d Larval Sเ	ırvival and	Growth Te	st		Aquatic Bi	oassay & Consulting Labs, Inc.
Analysis ID: Analyzed:	13-7810-2889 10 Jun-15 14:24		point: 7d S lysis: Non		ite c-Control vs Treatments	CETIS Version: Official Results:	CETISv1.8.7 Yes
Angular (Cor	rected) Transform	ned Detail		ESTANDARIO STATEMATOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE CONTRACTOR DE C			оби до на при
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		1.31	1.441	1.441	1.441		
38		1.31	1.31	1.31	1.197		
75		1.107	1.197	0.8861	0.8861		
150		0.5426	0.1295	0.3738	0.2612		
7d Survival F	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		14/15	15/15	15/15	15/15		
38		14/15	14/15	14/15	13/15		
75		12/15	13/15	9/15	9/15		
150		4/15	0/15	2/15	1/15		
Graphics				OMMORPHISTON AND AND AND AND AND AND AND AND AND AN			
7.0 c.9 c.	• •	rigo Z			0.25		

0,00 -0.05 -0.10

-0.15

-0.20 -0.25 -0.25

-1.5

-1.0

-0.5

0.0

Rankits

0.5

1.0

1.5

2.0

0.6

0.2

0.1

10

C-µg/L

Report Date:

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Test Code:

FML051915 | 17-2539-1994

MATERIA DE LA COMPANSIONA DEL COMPANSIONA DE LA COMPANSIONA DE LA COMPANSIONA DEL COMPANSIONA DE LA CO	mmmm						lest	Code:	FIVIL	J51915 1 <i>i</i>	7-2539-1994
Fathead Min	now 7-d Larval S	urvival and	I Growth Te	st	·		***************************************	Aquatic B	ioassay & (Consulting	Labs, Inc.
Analysis ID: Analyzed:	14-7442-1965 10 Jun-15 14:2		lpoint: Mea lysis: Par	in Dry Biom ametric-Con	_	tments		IS Version: ial Results:	CETISv1. Yes	8.7	
Data Transfo	orm	Zeta	Alt Hyp	Trials	Seed	ingelige Description in the Control of the Control	PMSD	NOEL	LOEL	TOEL	TU
Untransforme	ed	NA	C > T	NA	NA		11.8%	19	38	26.87	· · · · · · · · · · · · · · · · · · ·
Dunnett Mult	tiple Comparison	Test						TO SHAP TO THE PARTY OF THE PAR			
Control	vs C-µg/L		Test Stat	Critical	MSD DF	P-Value	P-Type	Decision(α:5%)		
Negative Con	trol 10		-6.151	2.407	0.035 6	1.0000	CDF	Non-Signif	icant Effect		
	19		-1.943	2.407	0.035 6	0.9989	CDF	Non-Signif	icant Effect		
	38*		3.955	2.407	0.035 6	0.0020	CDF	Significant	Effect		
	75*		11.51	2.407	0.035 6	<0.0001	CDF	Significant	Effect		
	150*		19.67	2.407	0.035 6	<0.0001	CDF	Significant	Effect		
ANOVA Table	е										······································
Source	Sum Squa	ires	Mean Squ	are	DF	F Stat	P-Value	Decision(α:5%)		
Between	0.3778442		0.0755688	3	5	181.9	<0.0001	Significant	Effect		
Error	0.0074793	35	0.0004155	186	18						,
Total	0.3853235				23						
Distributiona	ıl Tests								C-TATTO-12-00-00-00-00-00-00-00-00-00-00-00-00-00		
Attribute	Test			Test Stat	Critical	P-Value	Decision((α:1%)			
Variances	Bartlett Ed	quality of Va	ariance	7.378	15.09	0.1940	Equal Var	riances			
Variances	Mod Leve	ne Equality	of Variance	2.015	4.248	0.1251	Equal Var	iances			
Variances	Levene E	quality of V	ariance	2.419	4.248	0.0762	Equal Var	iances			
Distribution	Shapiro-V	Vilk W Norn	nality	0.9822	0.884	0.9322	Normal Di	istribution			
Distribution	Kolmogor	ov-Smirnov	D	0.08918	0.2056	1.0000	Normal Di	istribution			
Distribution	D'Agostin	o Skewnes	S	0.05348	2.576	0.9574	Normal Di	istribution			
Distribution	D'Agostin	o Kurtosis		0.4718	2.576	0.6370	Normal Di	istribution			
Distribution	D'Agostin	o-Pearson l	K2 Omnibus	0.2255	9.21	0.8934	Normal Di	istribution			
Distribution	Anderson	-Darling A2	Normality	0.1977	3.878	0.9338	Normal Di	istribution			
Mean Dry Bio	omass-mg Summ	ary									***************************************
C-μg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Мах	Std Err	CV%	%Effect
0	Negative Contro	4	0.2943	0.2716	0.3171	0.296	0.2767	0.3087	0.007141	4.85%	0.0%
10		4	0.383	0.348	0.418	0.3823	0.3573	0.41	0.011	5.75%	-30.12%
19		4	0.3223	0.3099	0.3347	0.3233	0.312	0.3307	0.003892	2.42%	-9.51%
38		4	0.2373	0.2002	0.2744	0.232	0.2153	0.27	0.01166	9.82%	19.37%
75		4	0.1285	0.07543	0.1816	0.1323	0.08733	0.162	0.01668	25.96%	56.34%
150		4	0.01083	-0.004128	0.02579	0.011	0	0.02133	0.004701	86.79%	96.32%
Mean Dry Bio	omass-mg Detail										W Colorador Colo
C-μg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4					Nillan	
0	Negative Contro		0.3087	0.2767	0.3027						
10		0.41	0.3573	0.388	0.3767						
19		0.312	0.3247	0.322	0.3307						
38		0.27	0.2287	0.2353	0.2153						
75		0.162	0.1167	0.08733	0.148						
150		0.01533	0	0.006667	0.02133						

Analyst: QA:

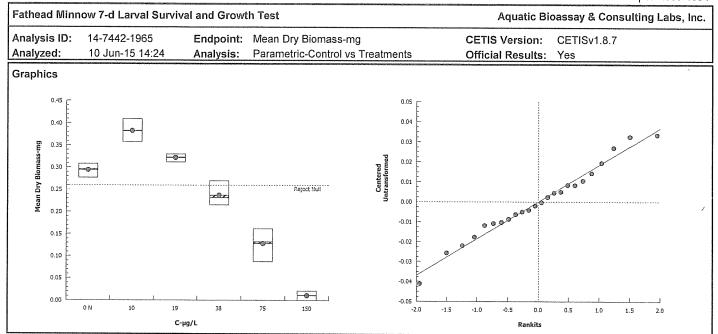
CETIS™ v1.8.7.11

Report Date:

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Test Code:

FML051915 | 17-2539-1994



Report Date:

10 Jun-15 14:25 (p 1 of 3)

Test Code:

FML051915 | 17-2539-1994

Fathead Minn	ow 7-d Larval Survi	al and Growt	Aquatic Bioassay & Consulting Labs, Inc.				
Analysis ID:	07-8743-7656	Endpoint:	7d Survival Rate	CETIS Version:	CETISv1.8.7		
Analyzed:	10 Jun-15 14:24	Analysis:	Linear Interpolation (ICPIN)	Official Results:	Yes		

Linear	Interpola	ation Options					
X Trans	sform	Y Transform	Seed	Resamples	Exp 95% CL	Method	
Linear		Linear	0	280	Yes	Two-Point Interpolation	THE PROPERTY OF THE PARTY OF TH
Point E	stimates	;					
Level	μg/L	95% LCL	95% UCL				
EC5	28.5	13.3	36.1				
EC10	41.08	31.08	49.31				
EC15	50.33	40 47	77 96				

C-µg/L	Con	trol Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В	
7d Surv	vival Rate	Summary				Cal	culated Varia						
EC50	102.1	87.17	116	2×4+4-9-7-5-11-11-11-11-11-11-11-11-11-11-11-11-1			-11-446-44-44-44-4-4-4-4-4-4-4-4-4-4-4-4		***************************************		***************************************		
EC40	89.58	75.72	106.3										
EC25	68.83	53.33	92.34										
EC20	59.58	46.86	89.7										
EC15	50.33	40.47	77.96										
EC10	41.08	31.08	49.31										
1	20.0	10.0	00.1										

7d Surviva	al Rate Summary		Calculated Variate(A/B)								
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В
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	0.9833	0.9333	1	0.01667	0.03333	3.39%	1.67%	59	60
38		4	0.9167	0.8667	0.9333	0.01667	0.03333	3.64%	8.33%	55	60
75		4	0.7167	0.6	0.8667	0.06872	0.1374	19.18%	28.33%	43	60
150		4	0.1167	0	0.2667	0.05693	0.1139	97.59%	88.33%	7	60

7d Surviv	al 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		0.9333	1	1	1	
38		0.9333	0.9333	0.9333	0.8667	
75		8.0	0.8667	0.6	0.6	
150		0.2667	0	0.1333	0.06667	

7d Surviva	al 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		14/15	15/15	15/15	15/15	
38		14/15	14/15	14/15	13/15	
75		12/15	13/15	9/15	9/15	
150		4/15	0/15	2/15	1/15	

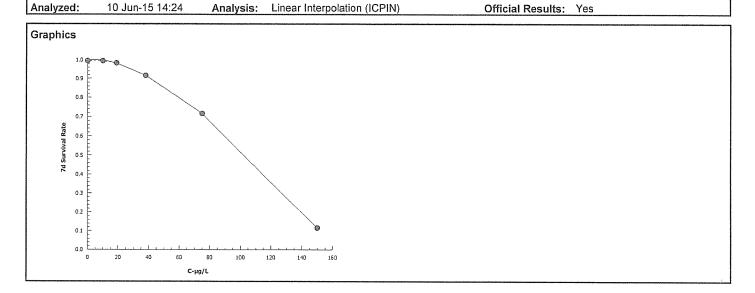
Report Date:

10 Jun-15 14:25 (p 2 of 3)

Test Code:

FML051915 | 17-2539-1994

Fathead Minr	now 7-d Larval Survi	val and Growt	h Test	Aquatic Bioassay & Consulting Labs, Inc					
Analysis ID:	07-8743-7656	Endpoint:	7d Survival Rate	CETIS Version:	CETISv1.8.7	,			
Analyzed:	10 Jun-15 14:24	Analysis:	Linear Interpolation (ICPIN)	Official Results:	Yes				



Report Date:

10 Jun-15 14:25 (p 3 of 3)

Test Code:

FML051915 | 17-2539-1994

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 12-2364-4544

Endpoint: Mean Dry Biomass-mg

Analyzed: 10 Jun-15 14:24

Analysis: Linear Interpolation (ICPIN)

Aquatic Bioassay & Consulting Labs, Inc.

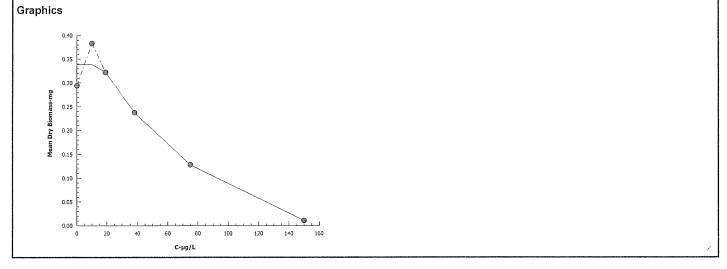
CETIS Version: CETISv1.8.7

Official Results: Yes

Linear	Interpola	tion Options					
X Tran	sform	Y Transform	Seed .	Resamples	Exp 95% CL	Method	
Linear		Linear	1681533	280	Yes	Two-Point Interpolation	
Point E	stimates						
Level	μg/L	95% LCL	95% UCL				
IC5	19.13	13.18	23.42				
IC10	22.92	18.79	27.84				
IC15	26.7	22.31	32.61				
IC20	30.49	26.12	38.32				
IC25	34.27	29.22	43.93				/
IC40	49.6	40.56	58.2				
IC50	61.12	50.9	74.25				

Mean Dry E	Biomass-mg Summ	ary			Ca	Iculated Vai	riate		
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.2943	0.2767	0.3087	0.007141	0.01428	4.85%	0.0%
10		4	0.383	0.3573	0.41	0.011	0.02201	5.75%	-30.12%
19		4	0.3223	0.312	0.3307	0.003892	0.007784	2.42%	-9.51%
38		4	0.2373	0.2153	0.27	0.01166	0.02331	9.82%	19.37%
75		4	0.1285	0.08733	0.162	0.01668	0.03335	25.96%	56.34%
150		4	0.01083	0	0.02133	0.004701	0.009403	86.79%	96.32%

Biomass-mg Detail				
Control Type	Rep 1	Rep 2	Rep 3	Rep 4
Negative Control	0.2893	0.3087	0.2767	0.3027
	0.41	0.3573	0.388	0.3767
	0.312	0.3247	0.322	0.3307
	0.27	0.2287	0.2353	0.2153
	0.162	0.1167	0.08733	0.148
	0.01533	0	0.006667	0.02133
	Control Type	Control Type Rep 1 Negative Control 0.2893 0.41 0.312 0.27 0.162	Control Type Rep 1 Rep 2 Negative Control 0.2893 0.3087 0.41 0.3573 0.312 0.3247 0.27 0.2287 0.162 0.1167	Control Type Rep 1 Rep 2 Rep 3 Negative Control 0.2893 0.3087 0.2767 0.41 0.3573 0.388 0.312 0.3247 0.322 0.27 0.2287 0.2353 0.162 0.1167 0.08733



CETIS Measurement Report

Report Date:

10 Jun-15 14:25 (p 1 of 2)

Test Code:

FML051915 | 17-2539-1994

								rest Code.	1 101	L031313 1	7-2000-1004
Fathead Minn	ow 7-d Larval S	urviva	I and Growt	h Test				Aquat	ic Bioassay &	Consulting	g Labs, Inc.
Batch ID: Start Date: Ending Date: Duration:	02-5679-1191 19 May-15 17: 26 May-15 15: 6d 22h		Test Type: Protocol: Species: Source:	Growth-Surviva EPA/821/R-02 Pimephales pr Aquatic Biosys	-013 (2002) omelas				Laboratory Wa Not Applicable		
Sample ID:	08-4364-6620		Code:	FML051915f				Client: ABC Labs			
Sample Date:	19 May-15 17:	15	Material:	Copper chlorid	е			Project:	REF TOX		
Receive Date:	:		Source:	Reference Tox	icant						
Sample Age:	NA		Station:	REF TOX							/
Alkalinity (Ca	CO3)-mg/L										
C-µg/L	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count
0	Negative Contr	8	61	61	61	61	61	0	0	0.0%	0
150		8	84	84	84	84	84	0	0	0.0%	0
Overall		16	72.5			61	84				0 (0%)
Conductivity-	μmhos										
C-µg/L	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count
0	Negative Contr	8	335.4	326.7	344	327	359	3.664	10.36	3.09%	0
10		8	336.9	332.2	341.6	328	343	1.986	5.617	1.67%	0
19		8	333	329.1	336.9	326	339	1.648	4.66	1.4%	0
38		8	330.5	325.4	335.6	320	337	2.146	6.071	1.84%	0
75		8	331.9	327.8	336	326	339	1.726	4.883	1.47%	0
150		8	332.1	327.8	336.4	325	339	1.817	5.139	1.55%	0
Overall		48	333.3			320	359				0 (0%)
Dissolved Ox											
C-µg/L	Control Type	Coun		95% LCL	95% UCL	Min	Max	Std Er		CV%	QA Count
0	Negative Contr		8.15	7.639	8.661	7.7	9.5	0.2163		7.51%	0
10		8	8.15	7.319	8.981	7	10.1	0.3515		12.2%	0
19		8	8.313	7.589	9.036	7.7	10.1	0.3061		10.42%	0
38		8	8.35	7.618	9.082	7.7	10	0.3094		10.48%	0
75 150		8 8	8.388 8.425	7.633 7.632	9.142 9.218	7.7 7.7	10.1 10.3	0.3193 0.3353		10.77% 11.26%	0 0
Overall		48	8.296	7.032	3.210	7	10.3	0.000	0.3403	11.2076	0 (0%)
Hardness (Ca	CO3)-ma/L		0.200								O (070)
C-µg/L	Control Type	Coun	it Mean	95% LCL	95% UCL	Min	Max	Std Er	r Std Dev	CV%	QA Count
0	Negative Contr		90	90	90	90	90	0	0	0.0%	0
150	-	8	107	107	107	107	107	0	0	0.0%	0
Overall		16	98.5			90	107				0 (0%)
pH-Units											
C-μg/L	Control Type	Coun		95% LCL	95% UCL		Мах			CV%	QA Count
0	Negative Contr		8.075	7.978	8.172	7.9	8.2	0.0411		1.44%	0
10		8	8.063	7.963	8.162	7.9	8.2	0.0419		1.47%	0
19		8	8.063	8.019	8.106	8	8.1	0.0183		0.64%	0 ,
38		8	8.038	7.994	8.081	8	8.1	0.0183		0.64%	0
75		8	8.05	8.005	8.095	8	8.1	0.0189		0.66%	0
150		8	8.063	8.019	8.106	8	8.1	0.0183	0.05177	0.64%	0 (00()
Overall		48	8.058			7.9	8.2				0 (0%)

Report Date: Test Code: 10 Jun-15 14:25 (p 2 of 2) FML051915 | 17-2539-1994

Fathead Minnow 7-d Larval Survival and Growth Test Aquatic Bioassay & Consulting Labs, Inc. Temperature-°C **QA** Count Std Dev CV% C-µg/L **Control Type** Count Mean 95% LCL 95% UCL Min Max Std Err 0 Negative Contr 8 24.2 23.79 24.61 24 25.4 0.1732 0.4899 2.02% 0 8 23.81 24.62 24 25.4 0.1716 0.4853 2.0% 0 24.21 10 25.4 0.1719 2.01% 0 19 8 24.23 23.82 24.63 24 0.4862 8 25.4 0.1719 0.4862 2.01% 0 38 24.23 23.82 24.63 24 25.4 0.4862 2.01% 0 75 8 24.63 24 0.1719 24.23 23.82 0.4862 0 0.1719 2.01% 150 8 24.23 23.82 24.63 24 25.4 0 (0%) Overall 48 24.22 24 25.4 Alkalinity (CaCO3)-mg/L C-µg/L 8 **Control Type** 1 2 3 5 6 61 61 61 61 61 61 61 0 Negative Contr 61 150 84 84 84 84 84 84 84 84 Conductivity-umhos C-µg/L **Control Type** 1 2 3 4 5 6 7 8 359 330 329 330 332 327 338 0 **Negative Contr** 338 336 339 329 340 342 343 328 338 10 19 329 337 326 332 338 339 330 333 326 332 335 337 320 331 38 326 337 75 326 339 326 334 335 336 328 331 335 336 328 150 326 339 325 335 333 Dissolved Oxygen-mg/L **Control Type** 1 2 3 4 5 6 7 8 C-µg/L 7.7 9.5 7.8 7.9 7.8 7.9 8 0 **Negative Contr** 8.6 7 7.8 7.8 7.8 7.7 10 7.8 9.2 10.1 19 7.7 9 10.1 8.5 7.7 7.7 7.7 8.1 38 7.7 9.3 10 8.5 7.7 7.7 7.7 8.2 7.7 75 7.7 9.3 10.1 8.6 7.7 7.7 8.3 9.3 10.3 8.6 7.8 7.7 7.7 8.3 150 7.7 Hardness (CaCO3)-mg/L 5 6 7 8 C-µg/L **Control Type** 2 3 4 0 90 90 90 90 90 90 90 Negative Contr 90 150 107 107 107 107 107 107 107 107 pH-Units C-µg/L 1 2 3 4 5 6 7 8 **Control Type** 8.2 7.9 0 **Negative Contr** 8.1 7.9 8.1 8.2 8.1 8.1 8.2 7.9 8.2 8 8.1 8.1 7.9 8.1 10 8 8 8.1 8.1 8.1 8 19 8.1 8.1 8.1 8 8 8.1 8.1 8 8 8 38 8 8 8 8 8.1 8.1 75 8.1 8.1 8.1 8 8 8.1 8.1 8 8.1 150 8.1 Temperature-°C 6 7 8 2 3 4 5 C-µg/L **Control Type** 1 24 24 25.4 24 24 24 24.2 24 **Negative Contr** 0 24.1 24 25.4 10 24 24 24 24.2 24 24.1 24 25.4 19 24 24 24 24.3 24

Analyst: QA:

24.3

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150

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CHRONIC CERIODAPHNIA SURVIVAL AND REPRODUCTION BIOASSAY

DATE:

5 May - 2015

STANDARD TOXICANT: Copper Chloride

ENDPOINT:

SURVIVAL

NOEC =

10.00 ug/l

EC25 =

15.71 ug/l

EC50 =

22.38 ug/l

ENDPOINT:

REPRODUCTION

NOEC =

10.00 ug/l

IC25 =

16.06 ug/l

IC50 =

22.12 ug/l

Yours very truly,

Scott Johnson

Laboratory Director

CETIS Summary Report

Report Date: Test Code: 22 May-15 13:44 (p 1 of 2) CER050515 | 13-4562-5216

Ceriodaphnia 7-d Survival and Reproduction Test Aquatic Bioassay & Consulting Labs, Inc. Test Type: Reproduction-Survival (7d) 11-4798-6754 Analyst: Batch ID: EPA/821/R-02-013 (2002) Diluent: Laboratory Water Start Date: 05 May-15 11:29 Protocol: 12 May-15 10:00 Species: Ceriodaphnia dubia Brine: Not Applicable Ending Date: **Duration:** 6d 23h Source: Aquatic Biosystems, CO Age: Sample ID: 13-6921-7118 Code: CER050515c Client: Internal Lab Sample Date: 05 May-15 11:29 Material: Copper chloride Project: Source: Reference Toxicant Receive Date: Station: Sample Age: NA REF TOX Comparison Summary TOEL **PMSD** TU Method Analysis ID Endpoint NOEL LOEL 10 30 17.32 NA Fisher Exact/Bonferroni-Holm Test 18-4360-1609 7d Survival Rate 20-1482-2036 Reproduction 10 30 17.32 41.5% **Dunnett Multiple Comparison Test Point Estimate Summary** Analysis ID **Endpoint** 95% LCL 95% UCL TU Method Level μg/L Linear Interpolation (ICPIN) 01-4885-9422 7d Survival Rate EC5 10.38 1.5 11.84 EC10 11.71 6 13.68 7 15.53 EC15 13.05 EC20 14.38 8 17.37 EC25 15.71 8.75 19.21 EC40 19.71 14 25.11 EC50 22.38 18 29.17 13-1268-4519 Reproduction 6.515 11.54 Linear Interpolation (ICPIN) IC5 11.21 IC10 12.42 8.029 13.09 IC15 13.63 9.544 14.63 IC20 14.85 11.05 16.18 16.06 IC25 12.55 17.77 IC40 19.69 16.81 22,42 IC50 22.12 19.29 25.63 **Test Acceptability** TAC Limits Analysis ID **Endpoint** Attribute Test Stat Overlap Decision 01-4885-9422 7d Survival Rate Control Resp 0.9 0.8 - NL Yes Passes Acceptability Criteria 18-4360-1609 7d Survival Rate Control Resp 0.9 0.8 - NL Yes Passes Acceptability Criteria 15 - NL Passes Acceptability Criteria 13-1268-4519 Reproduction Control Resp 18.5 Yes 20-1482-2036 Reproduction Control Resp 18.5 15 - NL Yes Passes Acceptability Criteria **PMSD** 0.415 0.13 - 0.47Yes Passes Acceptability Criteria 20-1482-2036 Reproduction 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 0.9 0.6738 0 1 0.10.3162 35.14% 0.0% 1 3 0.9 0.6738 0 0.1 0.3162 35.14% 0.0% 10 1 1 n 0.0% -11.11% 5 10 1 1 1 1 1 0 0.6738 0 0.1 0.3162 35.14% 0.0% 10 10 0.9 1 1 0.5016 0 1 0.1333 0.4216 210.8% 77.78% 10 0.2 O 30 0 0 100.0% 0 0 50 10 0 0 0 Reproduction Summary Control Type C-µg/L Count Mean 95% LCL 95% UCL Min Max Std Err Std Dev CV% %Effect Negative Control 10 14.61 22.39 12 31 1.721 5.442 29.41% 0.0% 0 18.5 10.05 49.25% -10.27% 3 10 20.4 13.21 27.59 0 33 3.177 39 1.91 6.042 19.81% -64.86% 5 10 30.5 26.18 34.82 21 29.88 38 2.377 7.517 30.68% -32.43% 19.12 12 10 10 24.5 77.84% 0 21 2.734 8.647 210.9% 30 10 4.1 -2.08610.29 0 0 0 0 100.0% 50 10 0 0 0

Ceriodaphnia 7-d Survival and Reproduction Test

Report Date:

22 May-15 13:44 (p 2 of 2) CER050515 | 13-4562-5216

Test Code:

Aquatic	Bioassay	8	Consulting	Labs, li	nc.
riquatio	- ioucouy		Concaring	, ii	

7d Surviva	I 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	0	1	1	1	1	1	1
3		1	1	1	1	1	1	0	1	1	1
5		1	1	1	1	1	1	1	1	1	1
10		1	1	1	1	1	1	1	1	0	1
30		0	0	0	0	0	1	0	0	0	1
50		0	0	0	0	0	0	0	0	0	0
Reproduct	tion 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
^	N. C. C.		4.6	40	4-7	4.0	00	2	40	40	

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	31	15	16	17	16	22	17	12	16	23
3		33	14	17	17	28	22	0	33	15	25
5		39	23	35	28	34	21	31	27	29	38
10		38	29	30	26	26	23	12	23	14	24
30		0	0	0	0	0	21	0	0	0	20
50		0	0	0	0	0	0	0	0	0	0

7d Surviv	al 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	0/1	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	0/1	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	0/1	1/1
30		0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	1/1
50		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1

Report Date:

22 May-15 13:44 (p 1 of 2)

Test Code:

CER050515 | 13-4562-5216

Ceriodaphnia	7-d S	urvival and	Reproduc	tion Test	enemá e con la discome con con evenda en circum cido con inc				Aquatic B	ioassay & C	onsulting	Labs, Inc.
Analysis ID: Analyzed:		482-2036 //ay-15 13:44		point: Rep lysis: Para		trol vs Treat	ments		S Version: ial Results:	CETISv1. Yes	8.7	
Data Transfor	m		Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU
Untransformed	<u> </u>		NA	C > T	NA	NA	***************************************	41.5%	10	30	17.32	
Dunnett Multi	ple C	omparison	Test									
Control	vs	C-µg/L		Test Stat	Critical	MSD DF	P-Value	P-Type	Decision(α:5%)		
Negative Cont	rol	3		-0.55	2.222	7.677 18	0.9310	CDF	Non-Signi	icant Effect		
		5		-3.474	2.222	7.677 18	1.0000	CDF	Non-Signit	ficant Effect		
		10		-1.737	2.222	7.677 18	0.9977	CDF	Non-Signi	ficant Effect		
		30*		4.169	2.222	7.677 18	0.0003	CDF	Significant	Effect		
ANOVA Table											-//taxametra-a-alt-alto-feetdocara-a-a	
Source		Sum Squa	res	Mean Squ	are	DF	F Stat	P-Value	Decision(α:5%)		
Between		3849.2		962.3		4	16.13	<0.0001	Significant	Effect		
Error		2684.8		59.66222		45						
Total		6534				49					**************************************	
Distributional	Test	5									· · · · · · · · · · · · · · · · · · ·	
Attribute		Test			Test Stat	Critical	P-Value	Decision	(α:1%)			
Variances		Bartlett Ec	uality of Va	ariance	4.265	13.28	0.3713	Equal Var	riances			
Variances	Mod Levene Equality of Variance			0.8273	3.767	0.5148	Equal Var	iances				
Variances	Levene Equality of Variance			0.9998	3.767	0.4176	Equal Var	iances				
Distribution		Shapiro-W	/ilk W Norm	nality	0.9513	0.9367	0.0384	Normal D	istribution			
Distribution		Kolmogoro	ov-Smirnov	D	0.1603	0.1453	0.0025	Non-norm	al Distributio	on		
Distribution		D'Agostino	Skewness	5	0.8095	2.576	0.4182	Normal Distribution				
Distribution		D'Agostino	o Kurtosis		1.055	2.576	0.2914	Normal Distribution				
Distribution		D'Agostino	o-Pearson I	<2 Omnibus	1.768	9.21	0.4131	Normal Distribution				
Distribution		Anderson-	Darling A2	Normality	1.206	3.878	0.0037	Non-normal Distribution				
Reproduction	Sum	mary					Versite and a construction of the construction of the cons	oraccockes canadamente commes éclisico estac				
C-μg/L		rol Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Nega	tive Control		18.5	14.61	22.39	16.5	12	31	1.721	29.41%	0.0%
3			10	20.4	13.21	27.59	19.5	0	33	3.177	49.25%	-10.27%
5			10	30.5	26.18	34.82	30	21	39	1.91	19.81%	-64.86%
10			10	24.5	19.12	29.88	25	12	38	2.377	30.68%	-32.43%
30			10	4.1	-2.086	10.29	0	0	21	2.734	210.9%	77.84%
50			10	0	0	0	0	0	0	0		100.0%
Reproduction	Deta	i)										
C-μg/L		rol Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Nega	tive Control	31	15	16	17	16	22	17	12	16	23
3			33	14	17	17	28	22	0	33	15	25
5			39	23	35	28	34	21	31	27	29	38
10			38	29	30	26	26	23	12	23	14	24
30			0	0	0	0	0	21	0	0	0	20
50			0	0	0	0	0	0	0	0	0	0
			-	-	-	-			-	-	-	-

Analyst:____QA:___

Report Date:

22 May-15 13:44 (p 2 of 2)

Test Code:

CER050515 | 13-4562-5216

Ceriodaphnia 7-d Survival and Reproduction Test

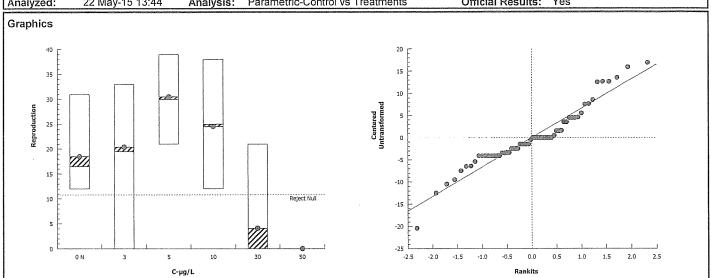
Analysis ID: 20-1482-2036 Endpoint: Reproduction

Analyzed: 22 May-15 13:44 Analysis: Parametric-Control vs Treatments

Aquatic Bio-assay & Consulting Labs, Inc.

CETIS Version: CETISv1.8.7

Official Results: Yes



Report Date:

22 May-15 13:44 (p 1 of 3)

Test Code:

CER050515 | 13-4562-5216

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 01-4885-9422 Endpoint: 7d Survival Rate

Analyzed: 22 May-15 13:44 Analysis: Linear Interpolation (ICPIN)

CETIS Version: CETISv1.8.7

Official Results: Yes

Linear	Interpola	tion Options					
X Trans	sform	Y Transform	seed	Resamples	Exp 95% CL	Method	
Linear		Linear	0	280	Yes	Two-Point Interpolation	
Point E	stimates						1900 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 1
Level	μg/L	95% LCL	95% UCL				
EC5	10.38	1.5	11.84				
EC10	11.71	6	13.68				
EC15	13.05	7	15.53				
EC20	14.38	8	17.37				
EC25	15.71	8.75	19.21				
EC40	19.71	14	25.11				
EC50	22.38	18	29.17				

7d Surviv	al Rate Summary										
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	Α	В
0	Negative Control	10	0.9	0	1	0.1	0.3162	35.14%	0.0%	9	10
3		10	0.9	0	1	0.1	0.3162	35.14%	0.0%	9	10
5		10	1	1	1	0	0	0.0%	-11.11%	10	10
10		10	0.9	0	1	0.1	0.3162	35.14%	0.0%	9	10
30		10	0.2	0	1	0.1333	0.4216	210.8%	77.78%	2	10
50		10	0	0	0	0	0		100.0%	0	10

7d Surviva	al 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	0	1	1	1	1	1	1
3		1	1	1	1	1	1	0	1	1	1
5		1	1	1	1	1	1	1	1	1	1
10		1	1	1	1	1	1	1	1	0	1
30		0	0	0	0	0	1	0	0	0	1
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	0/1	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	0/1	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	0/1	1/1
30		0/1	0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	1/1
50		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1

Analyst: ____QA:___

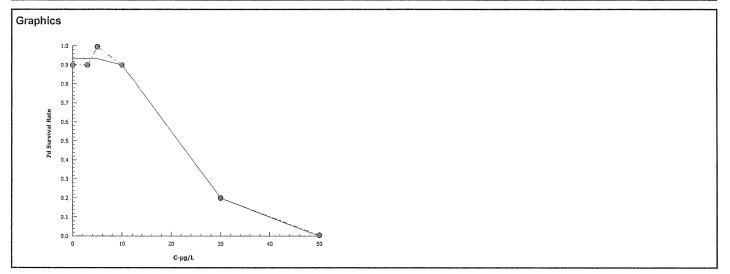
Report Date:

22 May-15 13:44 (p 2 of 3)

Test Code:

CER050515 | 13-4562-5216

Ceriodaphnia	17-d Survival and Re	production To	est	Aquatic Bio	passay & Consulting Labs, Inc.
Analysis ID:	01-4885-9422	Endpoint:	7d Survival Rate	CETIS Version:	CETISv1.8.7
Analyzed:	22 May-15 13:44	Analysis:	Linear Interpolation (ICPIN)	Official Results:	Yes



Report Date:

22 May-15 13:44 (p 3 of 3)

Test Code:

CER050515 | 13-4562-5216

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

13-1268-4519 Analysis ID:

Endpoint: Reproduction

Analysis: Linear Interpolation (ICPIN)

CETISv1.8.7 CETIS Version: Official Results: Yes

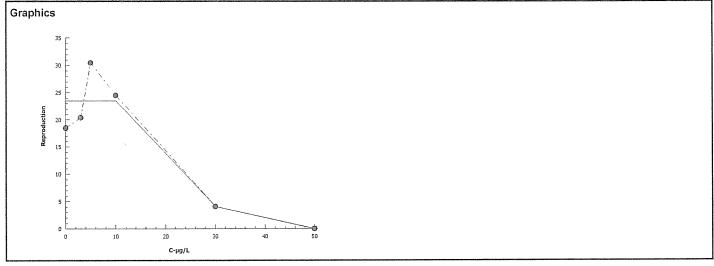
Analyzed: 22 May-15 13:44

Linear Interpola	tion Options				
X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	1389248	280	Yes	Two-Point Interpolation

Point E	stimates		
Level	μg/L	95% LCL	95% UCL
IC5	11.21	6.515	11.54
IC10	12.42	8.029	13.09
IC15	13.63	9.544	14.63
IC20	14.85	11.05	16.18
IC25	16.06	12.55	17.77
IC40	19.69	16.81	22.42
IC50	22.12	19.29	25.63

Reproduc	tion Summary								
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	18.5	12	31	1.721	5.442	29.41%	0.0%
3		10	20.4	0	33	3.177	10.05	49.25%	-10.27%
5		10	30.5	21	39	1.91	6.042	19.81%	-64.86%
10		10	24.5	12	38	2.377	7.517	30.68%	-32.43%
30		10	4.1	0	21	2.734	8.647	210.9%	77.84%
50		10	0	0	0	0	0		100.0%

Reproduc	tion 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	31	15	16	17	16	22	17	12	16	23
3		33	14	17	17	28	22	0	33	15	25
5		39	23	35	28	34	21	31	27	29	38
10		38	29	30	26	26	23	12	23	14	24
30		0	0	0	0	0	21	0	0	0	20
50		0	0	0	0	0	0	0	0	0	0



Report Date:

22 May-15 13:44 (p 1 of 1)

Test Code:

CER050515 | 13-4562-5216

	тария жоло от технология станова под предостана под предостана под предостана под предостана под предостана под							rest	Coae:	UEI	KU5U515 1	3-4002-02
Ceriodaphnia	a 7-d Survival and	l Repr	oducti	on Test					Aquatic B	ioassay &	Consulting	g Labs, Ind
Analysis ID:	18-4360-1609		Endpo	oint: 7d	Survival Ra	te		CETI	S Version:	CETISv	1.8.7	
Analyzed:	22 May-15 13:4		Analys			ngency Table	es	Offic	ial Results:			
Data Transfo	rm	Zeta		Alt Hyp	Trials	Seed			NOEL	LOEL	TOEL	TU
Untransforme				C > T	NA	NA			10	30	17.32	
							contains and the second			00000000000000000000000000000000000000		
Fisher Exact	/Bonferroni-Holm	Test										
Control	vs C-μg/L		-	Test Stat	P-Value	P-Type	Decision	<u> </u>				
Negative Con				0.7632	1.0000	Exact	_	ificant Effect				
	5			1	1.0000	Exact	-	ificant Effect				
	10			0.7632	1.0000	Exact	-	ificant Effect				
	30			0.002739 5.0545.0		Exact	Significan Significan					
	50			5.954E-0	0.0003	Exact	Significan	it miect				
Data Summa	ıry											
C-µg/L	Control Type	NR	8	R	NR + R	Prop NR	Prop R	%Effect				
0	Negative Contr	9	,	1	10	0.9	0.1	0.0%				
3		9		1	10	0.9	0.1	0.0%				
5		10		0	10	1	0	-11.11%				
10		9		1	10	0.9	0.1	0.0%				
30		2		8	10	0.2	0.8	77.78%				
50		0		10	10	0	1	100.0%			CONTRACTOR OF THE PROPERTY OF	
7d Survival F	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	0	1	1	1	1	1	1
3		1		1	1	1	1	1	0	1	1	1
5		1		1	1	1	1	1	1	1	1	1
10		1		1	1	1	1	1	1	1	0	1
30		0	1	0	0	0	0	1	0	0	0	1
50		0	(0	0	0	0	0	0	0	0	0
7d Survival F	Rate Binomials			***************************************								
C-µg/L	Control Type	Rep 1	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	0/1	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	0/1	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	0/1	1/1
30		0/1		0/1	0/1	0/1	0/1	1/1	0/1	0/1	0/1	1/1
50		0/1		0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1	0/1
Graphics						10000000000000000000000000000000000000					October 1994 Control of the Control	Extensive and the attribute
•												
1.0		0										
0.9	0		0									
0.8												
9.7 E												
7d Survival Rate 5.0 6.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7.0 7												
d Sun												
PZ 0.5												
0.4												
0.3												
Ē				6								
0.2				•								
0.1												
0,0	0 N 3	5	10) 3() 50							
	0.14 3	2	10	. 31	, 50							

C-µg/L

CETIS Measurement Report

Report Date:

22 May-15 13:47 (p 1 of 2)

Test Code: CER050515 | 13-4562-5216

								Test Code:	CE	R050515	13-4562-5216	
Ceriodaphnia	7-d Survival ar	nd Repr	oduction Te	est				Aquatic	Bioassay &	Consultin	g Labs, Inc.	
Batch ID: Start Date: Ending Date: Duration:	11-4798-6754 05 May-15 11: 12 May-15 10:0 6d 23h		Test Type: Protocol: Species: Source:	Reproduction-5 EPA/821/R-02 Ceriodaphnia of Aquatic Biosys	-013 (2002) dubia			Analyst: Diluent: Laboratory Water Brine: Not Applicable Age:				
Sample ID: Sample Date: Receive Date Sample Age:		29	Code: Material: Source: Station:	CER050515c Copper chlorid Reference Tox REF TOX				Client: In	ternal Lab			
Alkalinity (Ca	CO3)-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	62.5	60.6	64.4	61	66	0.8018	2.268	3.63%	0	
50		3	69	69	69	69	69	0	0	0.0%	0	
Overall		11	65.75			61	69			***************************************	0 (0%)	
Conductivity-	∤µmhos											
C-μg/L	Control Type	Count	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	327.9	323.6	332.1	323	334	1.807	5.111	1.56%	0	
3		8	329	324.9	333.1	321	337	1.722	4.87	1.48%	0	
5		8	323.5	320	327	320	333	1.476	4.175	1.29%	0	
10		8	322.1	317.6	326.7	313	332	1.922	5.436	1.69%	0	
30		8	321.8	318.2	325.3	319	332	1.497	4.234	1.32%	0	
50		3	320	320	320	320	320	0	0	0.0%	0	
Overall		43	324			313	337				0 (0%)	
Dissolved Ox	ygen-mg/L											
C-µg/L	Control Type	Count	t Mean	95% LCL	95% UCL	Min	Мах	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	8.088	7.81	8.365	7.7	8.5	0.1172	0.3314	4.1%	0	
3		8	8.213	7.874	8.551	7.8	9	0.1432	0.4051	4.93%	0	
5		8	8.188	7.846	8.529	7.7	9	0.1445	0.4086	4.99%	0	
10		8	8.263	7.928	8.597	7.7	9	0.1413	0.3998	4.84%	0	
30		8	8.263	7.94	8.585	7.7	9	0.1362	0.3852	4.66%	0	
50		3	8.2	7.543	8.857	8	8.5	0.1528	0.2646	3.23%	0	
Overall		43	8.202	***************************************		7.7	9				0 (0%)	
Hardness (Ca	, ,											
C-μg/L	Control Type	Coun	t Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr	8	89.75	87.67	91.83	88	94	0.8814	2.493	2.78%	0	
50		3	84	84	84	84	84	0	0	0.0%	0	
Overall		11	86.88			84	94				0 (0%)	
pH-Units												
C-μg/L	Control Type	Coun		95% LCL			Max	Std Err	Std Dev	CV%	QA Count	
0	Negative Contr		8.125	8.066	8.184	8	8.2	0.025	0.07072	0.87%	0	
3		8	8.163	8.086	8.239	8	8.3	0.03239	0.09162	1.12%	0	
5		8	8.137	8.075	8.2	8	8.2	0.02631	0.07441	0.91%	0	
10		8	8.15	8.087	8.213	8	8.2	0.02673	0.0756	0.93%	0	
30		8	8.163	8.1	8.225	8	8.2	0.02631	0.07441	0.91%	0	
50 Overall		3	8.167	8.023	8.31	8.1	8.2	0.03334	0.05775	0.71%	0 (0%)	
Overall		43	8.151			8	8.3				0 (0%)	

 Report Date:
 22 May-15 13:47 (p 2 of 2)

 Test Code:
 CER050515 | 13-4562-5216

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

Ceriodaphi	hnia 7-d Survival and Reproduction Test Aquatic Bioassay & Consulting Labs, In								ig Labs, Inc.		
Temperatu	re-°C										
C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Coun
0	Negative Contr	8	24.44	23.93	24.94	24	25.5	0.2146	0.607	2.48%	0
3		8	24.44	23.93	24.94	24	25.5	0.2146	0.607	2.48%	0
5		8	24.45	23.95	24.95	24	25.5	0.2113	0.5976	2.44%	0
10		8	24.45	23.95	24.95	24	25.5	0.2113	0.5976	2.44%	0
30		8	24.5	24	25	24	25.5	0.2096	0.5928	2.42%	0
50		3	24.57	23.07	26.06	24	25.2	0.348	0.6028	2.45%	0
Overall		43	24.47			24	25.5				0 (0%)
	CaCO3)-mg/L		_	_		_		_	_		
C-µg/L	Control Type	1	2	3	4	5	6	7	8		
0	Negative Contr	63	61	61	61	61	61	66	66		
50		69	69	69							
Conductivi				•		_	•				
C-μg/L	Control Type	1	2	3	4	5	6	7	8		······································
0	Negative Contr	323	334	323	332	323	334	324	330		
3		333	325	328	329	328	337	321	331		
5		321	321	322	325	324	333	320	322		
10		321	320	320	322	323	332	313	326		
30 50		320	320	320	321	322	332	319	320		
50	0	320	320	320							
	Oxygen-mg/L	4	2	2	4	e.	6	7	0		
C-μg/L 0	Control Type Negative Contr	7.8		7.8	8.5	7.7	6 8	7 8.5	8 8.4		
3	Negative Conti	8.1		7.8 7.8	7.8	8.1			8.4		
5 5		8.1	8.5 8.5	7.6 7.9			8	9	8.3		
3 10		8.1			7.7 7.7	8	8	9			
30			8.6	8		8.2	8.1	9	8.4		
50 50		8.2 8.1	8.5 8.5	8 8	7.7	8.2	8.1	9	8.4		
	CaCO3)-mg/L		0.0								
riaiαiless (C-μg/L	Control Type	1	2	3	4	5	6	7	8		
0- <u>ру</u> г.	Negative Contr	94	88	88	88	88	88	92	92		
50	wegative Conti	84	84	84	00	00	00	32	32		
pH-Units											
C-µg/L	Control Type	1	2	3	4	5	6	7	8		
0	Negative Contr	8.1	8.2	8.1	8.1	8.2	8.2	8.1	8		
3		8.1	8.2	8.2	8.1	8.3	8.2	8	8.2		
5		8.1	8.2	8.2	8.2	8.2	8.1	8	8.1		
10		8.2	8.2	8.2	8.2	8.2	8.1	8	8.1		
30		8.2	8.2	8.2	8.2	8.2	8.2	8	8.1		
50		8.1	8.2	8.2							
Temperatu	re-°C										
C-μg/L	Control Type	1	2	3	4	5	6	7	8		
0	Negative Contr	24.1	25.1	24	24	24	24	24.8	25.5		
3		24.1	25.1	24	24	24	24	24.8	25.5		
5		24.1	25.1	24	24	24	24.1	24.8	25.5		
10		24.1	25.1	24	24	24	24.1	24.8	25.5		
30		24.3	25.2	24	24	24	24.2	24.8	25.5		
50		24.5	25.2	24							



CHRONIC SELENASTRUM GROWTH BIOASSAY

DATE:

7 May - 2015

STANDARD TOXICANT: Cadmium Chloride

NOEC =

40.00 ug/l

IC25 =

83.81 ug/l

IC50 =

117.30 ug/l

Yours very truly,

Scott Johnson

Laboratory Director

CETIS Summary Report

Report Date:

27 May-15 16:21 (p 1 of 1)

Test Code:

SEL050715 | 18-8435-2907

Selenastrum (Growth Test								Aquatic E	Bioassay & C	Consulting	g Labs, Inc
Batch ID: 10-7042-0884 Test Type: Cell Growth							F	Analy	st:			
Start Date:	07 May-15 11:30	6 Prot	ocol: l	EPA/821/R-02-	013 (2002)			Diluer	nt: Laboratory Water		er	
Ending Date:	11 May-15 11:5) Spe	cies: 3	Selenastrum ca	pricornutum	1	E	3rine:	: Not	Applicable		
Duration:	4d 0h	Sou	rce: /	Aquatic Biosyst	ems, CO		Į.	Age:				
Sample ID:	06-0398-6060	Cod	e: (SEL050715s			C	Client	: Inte	rnal Lab		
Sample Date:	07 May-15 11:30	6 Mate	erial: (Cadmium chlor	ide		F	Projec	ct:			
Receive Date:	:	Sou	rce: l	Reference Toxi	cant							
Sample Age:	NA	Stat	ion: l	REF TOX		100						
Comparison S	Summary											
Analysis ID	Endpoint		NOEL	LOEL	TOEL	PMSD	TU		Method			
04-8768-8781	Cell Density		40	80	56.57	6.32%			Dunnett N	/lultiple Comp	oarison Te	st
Point Estimate	e Summary											
Analysis ID	Endpoint		Level	μg/L_	95% LCL	95% UCL	TU		Method			
08-2307-9213	Cell Density		IC5	43.85	27.59	54.3			Linear Int	erpolation (IC	CPIN)	
			IC10	54.39	40.92	65.14						
			IC15	64.92	52.73	77.19						
			IC20	75.46	62.4	87.02						
			IC25	83.81	72.8	91.75						
			IC40	103.9	97.7	109.3						
	·		IC50	117.3	112.8	121.2						
Test Acceptab	oility											
Analysis ID	Endpoint		Attribu		Test Stat	TAC Limi	its		Overlap	Decision		
04-8768-8781	Cell Density		Control		0.01792	NL - 0.2			Yes	Passes Ad		
08-2307-9213	Cell Density		Control		0.01792	NL - 0.2			Yes	Passes Ad		
04-8768-8781	Cell Density		Control	· ·	1.03E+6	1.00E+6 -			Yes	Passes Ad		
08-2307-9213	Cell Density		Control	Resp	1.03E+6	1.00E+6 -			Yes	Passes Ad		
04-8768-8781	Cell Density		PMSD		0.06324	0.091 - 0.2	29		Yes	Below Acc	eptability	Criteria
Cell Density S	Summary											
C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max		Std Err	Std Dev	CV%	%Effect
0	Negative Control		1.034E		1.063E+6	1.018E+6	1.057		9.265E+3		1.79%	0.0%
20		4	1.063E		1.139E+6	1.012E+6				4.815E+4		-2.76%
40		4	1.015E			9.690E+5				5.557E+4		1.84%
80		4		+5 7.339E+5								21.08%
140		4		+5 3.171E+5								66.44%
180		4	1.068E	+5 9.141E+4	1.221E+5	9.700E+4	1.160	Ŀ +5	4.820E+3	9.639E+3	9.03%	89.68%
Cell Density D												
	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	···			· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
0	Negative Control				1.020E+6							
20				+6 1.012E+6								
40				+6 9.690E+5								
80		8.050E+5	8.810E	+5 7.560E+5	8.220E+5							
140		3.570E+5	3.220E	+5 3.440E+5	3.650E+5							
180		9.700E+4	1.000E	+5 1.160E+5	1.140E+5							

Report Date:

27 May-15 16:20 (p 1 of 2)

Test Code:

SEL050715 | 18-8435-2907

Selenastrum	Growth Test	Market voter in the second of		10000000000000000000000000000000000000				Aquatic B	ioassay & 0	onsultin	g Labs, Inc	
Analysis ID: Analyzed:	04-8768-8781 27 May-15 16:1	point: Cell lysis: Par	Il Density rametric-Control vs Treatments			CETIS Version: CETISv1.8.7 Official Results: Yes			8.7			
Data Transfo	rm	Zeta	Alt Hyp	Trials	Seed		PMSD	NOEL	LOEL	TOEL	TU	
Untransforme	d	NA	C > T	NA	NA		6.32%	40	80	56.57		
Dunnett Mult	iple Comparison	Test										
Control	vs C-μg/L		Test Stat	Critical	MSD DF	P-Value	P-Type	Decision(α:5%)			
Negative Con			-1.049	2.407	65390 6	0.9849	CDF		icant Effect			
	40		0.6994	2.407	65390 6	0.5583	CDF	Non-Signif	icant Effect			
	80*		8.025	2.407	65390 6	<0.0001	CDF	Significant	Effect			
•	140*		25.29	2.407	65390 6	<0.0001	CDF	Significant	Effect			
	180*		34.13	2.407	65390 6	<0.0001	CDF	Significant	Effect			
ANOVA Table)	P. 10 (100 (100 (100 (100 (100 (100 (100							R-MANUSCHI (COCO COCO COCO COCO COCO COCO COCO CO			
Source	Sum Squa	ares	Mean Squ	are	DF	F Stat	P-Value	Decision(α:5%)			
Between	3.30689E+		6.61378E+		5	448.1	<0.0001	Significant	Effect			
Error	265677500		147598600	00	18							
Total	3.333458E	+12			23		CAN A COMMISSION OF THE COMMIS			er Westellander ider velenseren.		
Distributiona	l Tests											
Attribute	Test			Test Stat	Critical	P-Value	Decision(α:1%)				
Variances		quality of Va		10.29	15.09	0.0673	Equal Variances					
Variances			of Variance	1.844	4.248	0.1548	Equal Variances					
Variances	Levene E	quality of Va	ariance	2.35	4.248	0.0828	Equal Variances					
Distribution		Vilk W Norm	-	0.9376	0.884	0.1444	Normal Distribution					
Distribution	_	ov-Smirnov		0.1343	0.2056	0.3141	Normal Distribution					
Distribution		o Skewness	3	0.8474	2.576	0.3968	Normal Distribution					
Distribution	D'Agostin			0.4202	2.576	0.6743	Normal Distribution					
Distribution			(2 Omnibus		9.21	0.6394	Normal Dis					
Distribution	Anderson	-Darling A2	Normality	0.6261	3.878	0.1036	Normal Dis	stribution				
Cell Density	Summary											
C-µg/L	Control Type	Count	Mean		95% UCL	Median	Min	Max	Std Err	CV%	%Effect	
0	Negative Control		1.034E+6	1.005E+6	1.063E+6	1031000	1.018E+6	1.057E+6	9.264E+3	1.79%	0.0%	
20		4	1.063E+6		1.139E+6	1055000			2.407E+4	4.53%	-2.76%	
40		4			1.103E+6				2.778E+4		1.84%	
80		4			8.981E+5				2.579E+4		21.08%	
140 180		4			3.769E+5				9.390E+3		66.44%	
		4	1.U08E+5	9.14TE+4	1.221E+5	107000	9./∪0⊏+4	1.100E+5	4.820E+3	9.U 3 %	89.68%	
Cell Density												
C-μg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4							
0	Negative Control		1.018E+6		1.020E+6							
20		1.056E+6	1.054E+6		1.128E+6							
40			1.041E+6									
80			8.810E+5									
140			3.220E+5									
180		9.700E+4	1.000E+5	1.160E+5	1.140E+5							

Analyst:_____QA:____

Report Date:

27 May-15 16:20 (p 2 of 2)

Test Code:

SEL050715 | 18-8435-2907

Selenastrum Growth Test Aquatic Bioassay & Consulting Labs, Inc. Analysis ID: 04-8768-8781 Endpoint: Cell Density **CETIS Version:** CETISv1.8.7 Analyzed: Parametric-Control vs Treatments 27 May-15 16:17 Analysis: Official Results: Yes Graphics 1200000 7.0E+04 6.0E+04 5.0E+04 1000000 Reject Null 4.0E+04 -@-2.0E+04 1.0E+04 600000 0.0E+00 -1.0E+04 400000 -2.0E+04 -200000 -4.0E+04 -5.0E+04 80 180 140 -2.0 -1.5 -1,0 -0.5 0.0 0.5 1.0 1.5 2.0 C-µg/L Rankits

Analyst:____QA:___

Report Date:

27 May-15 16:20 (p 1 of 1)

Test Code:

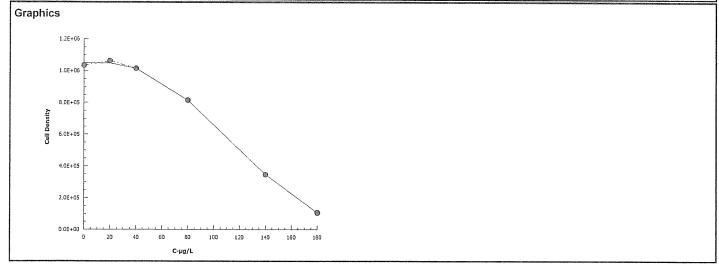
SEL050715 | 18-8435-2907

Selenastrum	Growth Test			Aquatic Bi	oassay & Consulting Labs, Inc.
Analysis ID:	08-2307-9213	Endpoint:	Cell Density	CETIS Version:	CETISv1.8.7
Analyzed:	27 May-15 16:17	Analysis:	Linear Interpolation (ICPIN)	Official Results:	Yes

Linear	Interpola	tion Options				
X Trans	sform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear		Linear	0	280	Yes	Two-Point Interpolation
Point E	stimates		With the second of the second			
Level	μg/L	95% LCL	95% UCL			
IC5	43.85	27.59	54.3			
IC10	54.39	40.92	65.14			
IC15	64.92	52.73	77.19			
IC20	75.46	62.4	87.02			
IC25	83.81	72.8	91.75			
IC40	103.9	97.7	109.3			
IC50	117.3	112.8	121.2			

Cell Dens	ity Summary		Calculated Variate							
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	
0	Negative Control	4	1.034E+6	1.018E+6	1.057E+6	9.264E+3	1.853E+4	1.79%	0.0%	
20		4	1.063E+6	1.012E+6	1.128E+6	2.407E+4	4.815E+4	4.53%	-2.76%	
40		4	1.015E+6	9.690E+5	1.081E+6	2.778E+4	5.557E+4	5.48%	1.84%	
80		4	8.160E+5	7.560E+5	8.810E+5	2.579E+4	5.158E+4	6.32%	21.08%	
140		4	3.470E+5	3.220E+5	3.650E+5	9.390E+3	1.878E+4	5.41%	66.44%	
180		4	1.068E+5	9.700E+4	1.160E+5	4.820E+3	9.639E+3	9.03%	89.68%	

Cell Densi	ty Detail				
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.057E+6	1.018E+6	1.041E+6	1.020E+6
20		1.056E+6	1.054E+6	1.012E+6	1.128E+6
40		1.081E+6	1.041E+6	9.690E+5	9.690E+5
80		8.050E+5	8.810E+5	7.560E+5	8.220E+5
140		3.570E+5	3.220E+5	3.440E+5	3.650E+5
180		9.700E+4	1.000E+5	1.160E+5	1.140E+5



CETIS Measurement Report

000-055-186-6

Report Date:

27 May-15 16:21 (p 1 of 2)

Test Code: SEL050715 | 18-8435-2907

Selenastrum	Growth Test							Aquatic			ng Labs, Inc.
Batch ID:	10-7042-0884		Test Type:	Cell Growth				Analyst:			
Start Date:	07 May-15 11:	36	Protocol:	EPA/821/R-02	:-013 (2002)			Diluent: La	boratory Wa	ter	
Ending Date:	11 May-15 11:	50	Species:	Selenastrum c	•	m		Brine: No	t Applicable		
Duration:	4d 0h		Source:	Aquatic Biosys	stems, CO			Age:			
Sample ID:	06-0398-6060		Code:	SEL050715s					ernal Lab		
	07 May-15 11:	36	Material:	Cadmium chlo				Project:			
Receive Date:			Source:	Reference Tox	cicant						
Sample Age:			Station:	REF TOX				****			· · · · · · · · · · · · · · · · · · ·
Alkalinity (Ca	, -										
C-μg/L 0	Control Type	Count		95% LCL	95% UCL		Max	Std Err	Std Dev	CV%	QA Count
20	Negative Contr	1	61 70	•		61	61	0	0	0.0%	0
40		1	70 63			70 63	70 63	0 0	0	0.0%	0
80		1	65			65	65	0	0	0.0%	0
140		1	67			67	67	0	0	0.0%	0
180		1	65			65	65	0	0	0.0%	0
Overall		6	65.17			61	70	<u> </u>	U	0.0%	0 (0%)
Conductivity-	umhos						70		· · · · · · · · · · · · · · · · · · ·		0 (078)
C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr		430	425.6	434.4	426	434	1.581	3.536	0.82%	0
20	rroganio com	5	413.8	401.5	426.1	400	426	4.432	9.91	2.4%	0
40		5	404.8	399.1	410.5	398	410	2.059	4.604	1.14%	0
80		5	396.6	390.5	402.7	392	404	2.205	4.93	1.24%	0
140		5	380.6	374.4	386.8	374	387	2.249	5.03	1.32%	0
180		5	362.4	355.7	369.1	356	369	2.421	5.413	1.49%	0
Overall		30	398	000.7		356	434	2,721	0.710	1.4570	0 (0%)
Hardness (Ca	CO3)-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	99			99	99	0	0	0.0%	0
20		1	100			100	100	0	0	0.0%	0
40		1	90			90	90	0	0	0.0%	0
80		1	101			101	101	0	0	0.0%	0
140		1	103			103	103	0	0	0.0%	0
180		1	98			98	98	0	0	0.0%	0
Overall		6	98.5			90	103				0 (0%)
pH-Units			,								
C-μg/L	Control Type	Count		95% LCL	95% UCL		Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr		7.94	7.654	8.226	7.7	8.2	0.103	0.2302	2.9%	0
20		5	8.08	7.876	8.284	7.9	8.3	0.07348	0.1643	2.03%	0
40		5	8.06	7.893	8.227	7.9	8.2	0.06	0.1342	1.67%	0
80		5	8.06	7.893	8.227	7.9	8.2	0.06	0.1342	1.67%	0
140		5	8.06	7.893	8.227	7.9	8.2	0.06	0.1342	1.67%	0
180		5	8.06	7.893	8.227	7.9	8.2	0.06	0.1342	1.67%	0
Overall		30	8.043		· · · · · · · · · · · · · · · · · · ·	7.7	8.3				0 (0%)
Temperature-			-				ē				
	Control Type	Count		95% LCL	95% UCL		Max	Std Err	Std Dev	CV%	QA Count
	Negative Contr		24.32	23.95	24.69	24.1	24.8	0.1319	0.2949	1.21%	0
20		5	24.32	23.95	24.69	24.1	24.8	0.1319	0.2949	1.21%	0
40		5	24.32	23.95	24.69	24.1	24.8	0.1319	0.2949	1.21%	0
80		5	24.32	23.95	24.69	24.1	24.8	0.1319	0.2949	1.21%	0
140		5	24.32	23.95	24.69	24.1	24.8	0.1319	0.2949	1.21%	0
180		5	24.32	23.95	24.69	24.1	24.8	0.1319	0.2949	1.21%	0
Overall		30	24.32			24.1	24.8				o (0%) _\

Report Date: Test Code: 27 May-15 16:21 (p 2 of 2) SEL050715 | 18-8435-2907

							Test Code:	SEL050715 18-8435-2907
Selenastrur	n Growth Test						Aquatic Bi	oassay & Consulting Labs, Inc.
Alkalinity (C	aCO3)-mg/L							
C-µg/L	Control Type	1						
0	Negative Contr	61						41.000
20		70						
40		63						
80		65						
140		67						
180		65						
Conductivit	y-µmhos							
C-μg/L	Control Type	1	2	3	4	5		
0	Negative Contr	433	427	426	434	430		
20		410	413	420	426	400		
40		404	404	408	410	398		
80		392	395	399	404	393		
140		379	379	384	387	374		
180		360	360	367	369	356		
Hardness (0	CaCO3)-mg/L							
C-µg/L	Control Type	1						
0	Negative Contr	99						
20		100						
40		90						
80		101						
140		103						
180		98						
pH-Units								
C-μg/L	Control Type	1	2	3	4	5		
0	Negative Contr	7.7	8	8.2	8.1	7.7		
20		7.9	8	8.2	8.3	8		
40		7.9	8	8.2	8.2	8		
80		7.9	8	8.2	8.2	8		
140		7.9	8	8.2	8.2	8		
180		7.9	8	8.2	8.2	8	***************************************	
Temperatur	e-°C							
C-μg/L	Control Type	1	2	3	4	5		
0	Negative Contr	24.8	24.1	24.2	24.4	24.1		
20		24.8	24.1	24.2	24.4	24.1		
40		24.8	24.1	24.2	24.4	24.1		
80		24.8	24.1	24.2	24.4	24.1		
140		24.8	24.1	24.2	24.4	24.1		

Analyst: QA:

24.8

24.1

24.2

24.4

24.1

180