



**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.

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

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

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

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

3.0 CURRENT EVENTS

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

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

Table 2 - Rotating Sampling Locations

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

4.0 SAMPLING EVENTS

During the dry season of the 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 is presented in Appendix B.

Table 3 - Sampling Timeline

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

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

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

	CWIL Order # R4-2010-0186																Total	
	Interim Sampling Event ³ March 2011	YEAR 1				YEAR 2				YEAR 3				YEAR 4				
		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season		
		Event #1	Event #2	Event #1		Event #2												
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
pH	pH units	Field
Temperature	°F	Field
Dissolved Oxygen	mg/L	Field
Turbidity	NTU	Field
Total Dissolved Solids	mg/L	Laboratory
Total Suspended Solids	mg/L	Laboratory
Hardness (as 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

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

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

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

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

5.1 Water Quality Benchmarks

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

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

General Chemistry

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

Table 5 - Water Quality Benchmarks, General Chemistry

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

- * All limits are recorded for milligrams per liter (mg/L)
- a) Limit varies as a factor of temperature and pH. Objectives based on corresponding field readings for WARM water (One-hour average concentration), as outlined in the Water Quality Control Plan, Los Angeles Region
- MUN No site specific objectives have been established. Objectives are based on USEPA guidelines for municipal drinking water standards.
- No numeric benchmarks, water quality benchmarks shall be based on the surface water and groundwater basin objectives currently contained in the Water Quality Control Plan Los Angeles Region (Basin Plan) or other applicable water quality standards established for the Los Angeles Region.

Pesticides

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

Table 6 - Water Quality Benchmarks, Pesticides, CWIL

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

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

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

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

Limits Reported in ug/L

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

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

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

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

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

Toxicity

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

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

Field Monitoring

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

Table 9 - Water Quality Benchmarks, Field Monitoring and Toxicity

Constituent	Narrative Objective	Applicable Benchmarks
pH	The pH of inland surface water shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharges. Ambient pH levels shall not be changed by more than 0.5 pH units from natural conditions as a result of waste discharges.	6.5 ≤ pH ≤ 8.5 Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
Temperature	For water designated WARM, water temperature shall not be altered by more than 5°F above natural temperature. At no time shall WARM-designated waters be raised above 80°F as a result of water discharge	WARM: ≤ 80°F Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established
	For waters designated as COLD, water temperature shall not be altered by more than 5°F above the natural temperature.	COLD: No numeric benchmark. Changes to ambient receiving water conditions are not assessed; "ambient" or "natural" conditions have not been established.
Dissolved Oxygen	No single dissolved oxygen determination shall be less than 5 mg/L, except when natural conditions cause lesser concentrations.	≥ 5 mg/L
	The dissolved oxygen 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 oxygen 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 contrrollable 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 ambient waters outside mixing zones.	≤ 1.0 Tuc ^[3]
Biostimulatory Substances	Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affect beneficial uses.	No Numeric benchmarks. Nutrients listed on Table X.
Total Suspended Solids (TSS)	Waters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses.	No numeric benchmarks.

6.0 INDIVIDUAL SAMPLING SITE RESULTS

6.1 SAMPLING SITES

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

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

6.1.1 GROUP 1

NGA SITE #19

Sampling Group: Group 1
Sampling Frequency - Fixed
Total / Irrigated Acres: 32.0/14.7 Acres
Sample site GPS location: N 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.

Table 10 - Summary of samples collected, NGA #19

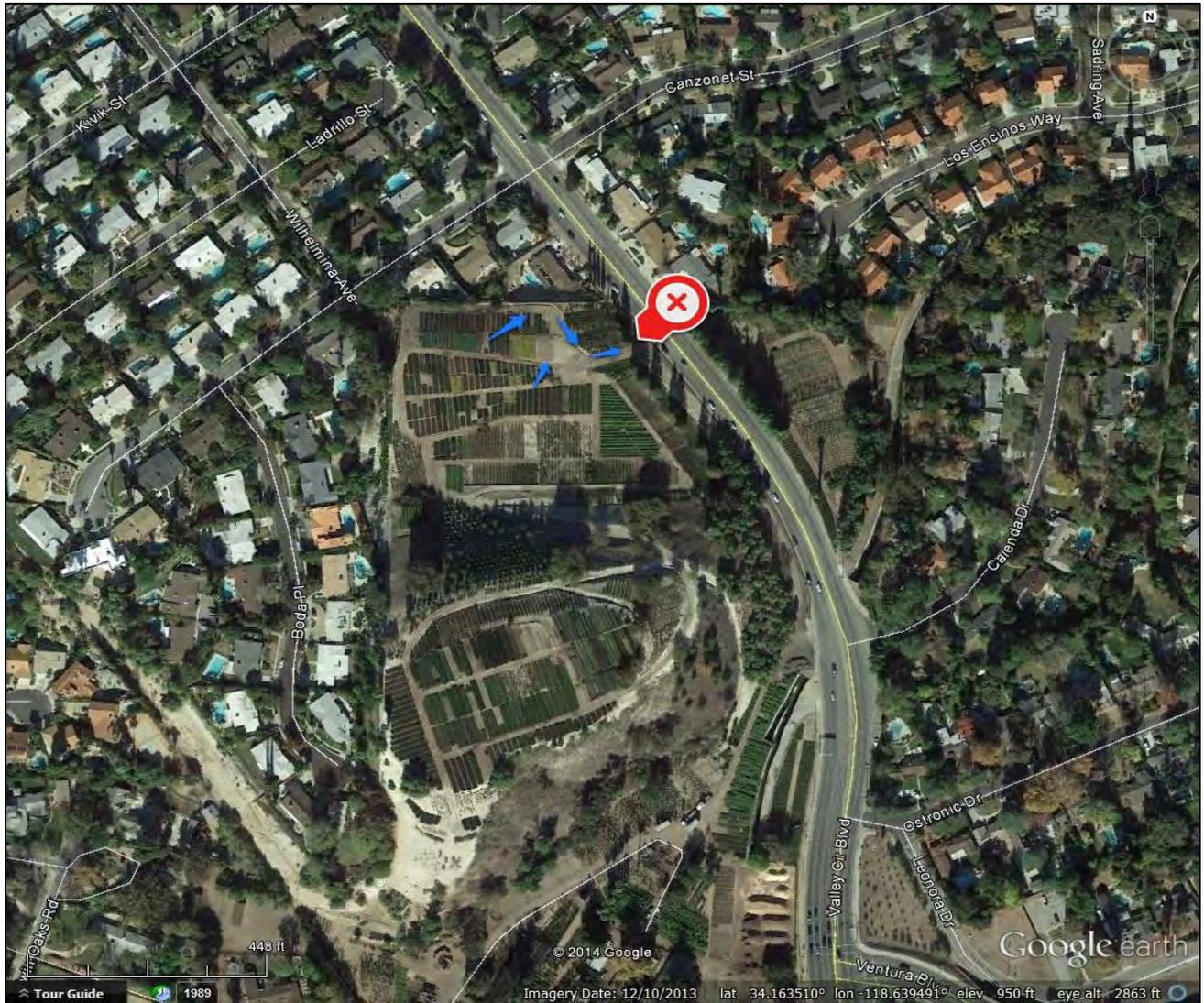
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #19	NGA-#19-LAILG-1	8/13/07	1	108.57	2.2882	10.84	118.85	2.68	772	4.62	5.09	568	na	na	na
NGA #19	LAILG-NGA#19-2	12/18/07	1.4	162.66	11.2352	86.7	290.99	2.13	1,292	4.01	5.544	684	na	na	na
NGA #19	LAILG-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

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

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



General Sampling Location



General Surface Flow to Sampling Location

NGA SITE #124/125

Sampling Group: Group 1
Sampling Frequency - Fixed
Total/Irrigated Acres: 10.4/8.3 Acres
Sample site GPS location: N 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

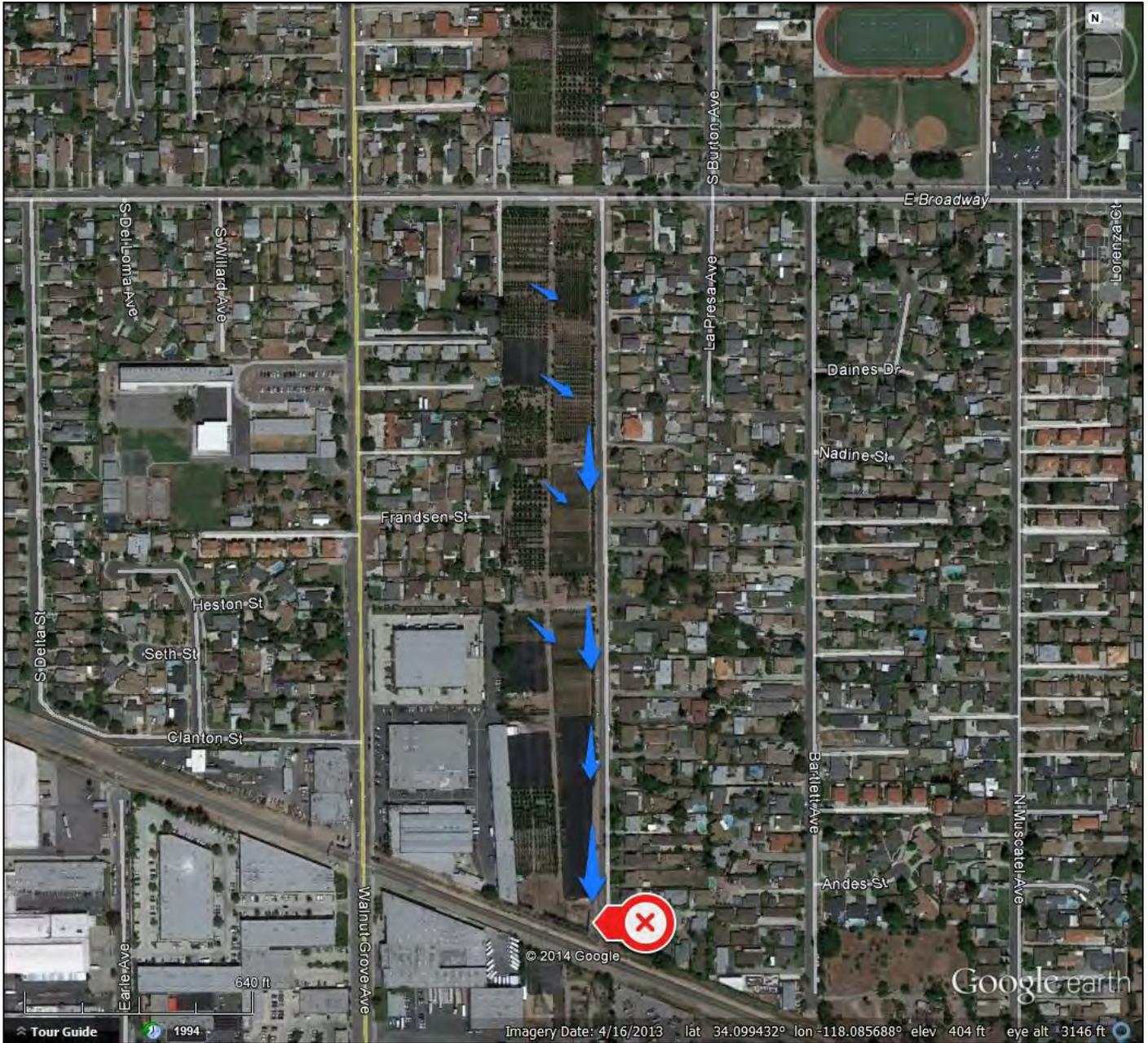
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #124	NGA-#124-LAILG-1	8/13/07	9.8	69.23	3.5006	72.48	206.25	4.31	1,002	3.96	4.627	99.5	na	na	na
NGA #124	NGA-#124-LAILG-2	12/7/07	4.6	33.03	3.9247	45.41	59.24	2.9	550	2.76	3.168	90	na	na	na
NGA #124	LAILG-NGA#124-3	1/5/08	15.5	28.3	0.9814	28.34	57.68	1.66	378	1.66	2.228	40	na	na	na
NGA #124	LAILG-NGA#124-4	11/26/08	0.48	37.78	2.595	28.36	84.22	2.975	568	2.53	3.297	117	na	na	na
NGA #124	LAILG-NGA 124-5	12/15/08	1.68	26.51	24.4087	40.43	45.28	21.115	424	3.66	2.706	115.5	na	na	na
NGA #124	LAILG-NGA 124-6	3/21/11	0.36	9.4	1.8	6.7	24	1.8	240	1.800	2.7	620	61	24	0.045
NGA #124	LAILG-NGA 124-7	2/28/14	4.5	21	1.200**	13	100	1.5	420	1.2	2.2	160	125	50.2	0.049

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

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

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

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



General Sampling Location



General Surface Flow to Sampling Location

NGA SITE #178

Sampling Group: Group 1
Sampling Frequency - Fixed
Total/Irrigated Area: 10.0/8.5 Acres
Sample site GPS location: N 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.

Table 12 - Summary of samples collected, NGA #178

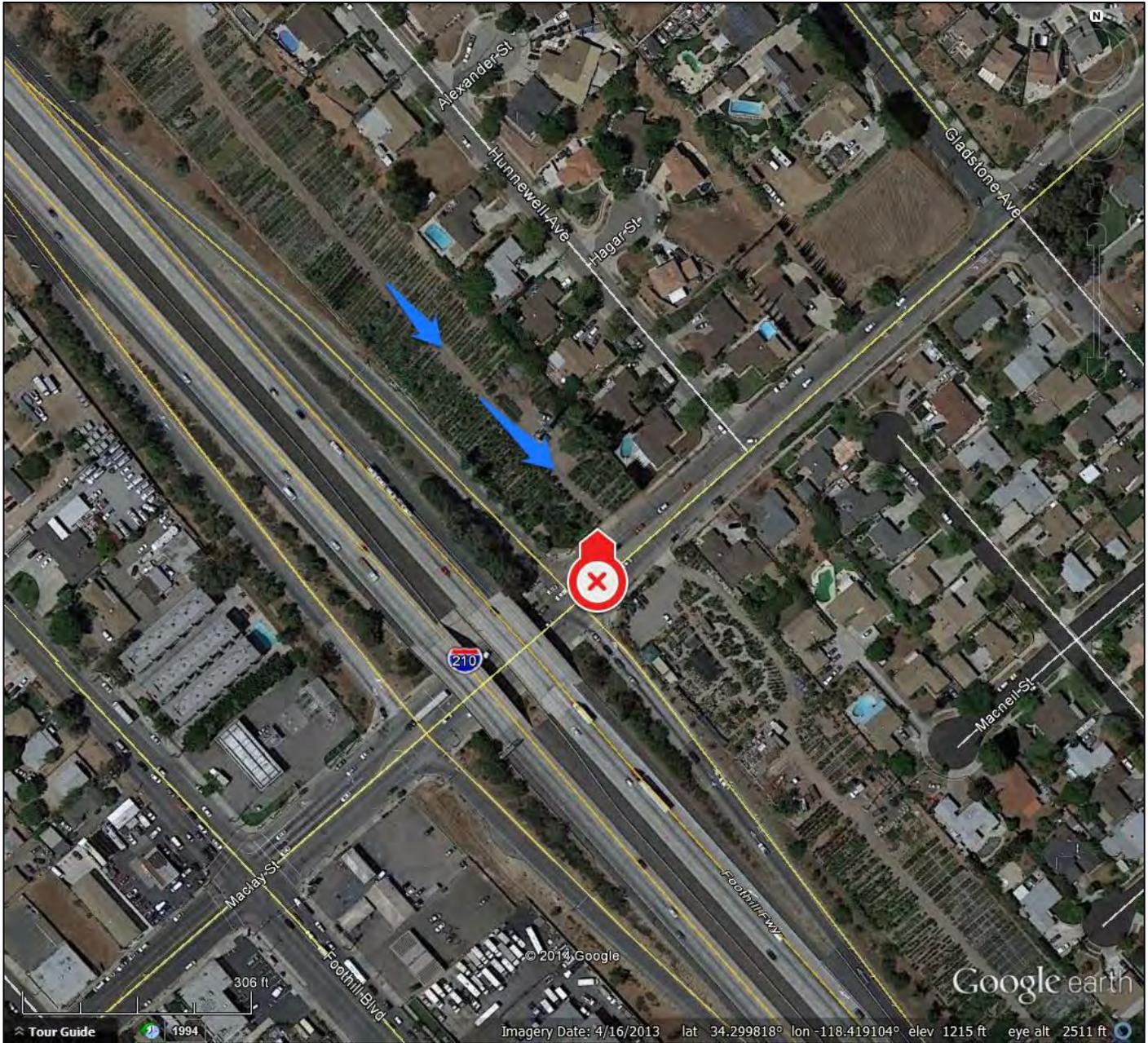
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA # 178	LAILG-NGA 178-1	12/15/08	0.81	85.04	2.4077	12.99	148.27	2.648	462	2.64	2.934	72.7	na	na	na
NGA # 178	LAILG-NGA 178-2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

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

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.

Table 13 - Summary of samples collected, NGA #184

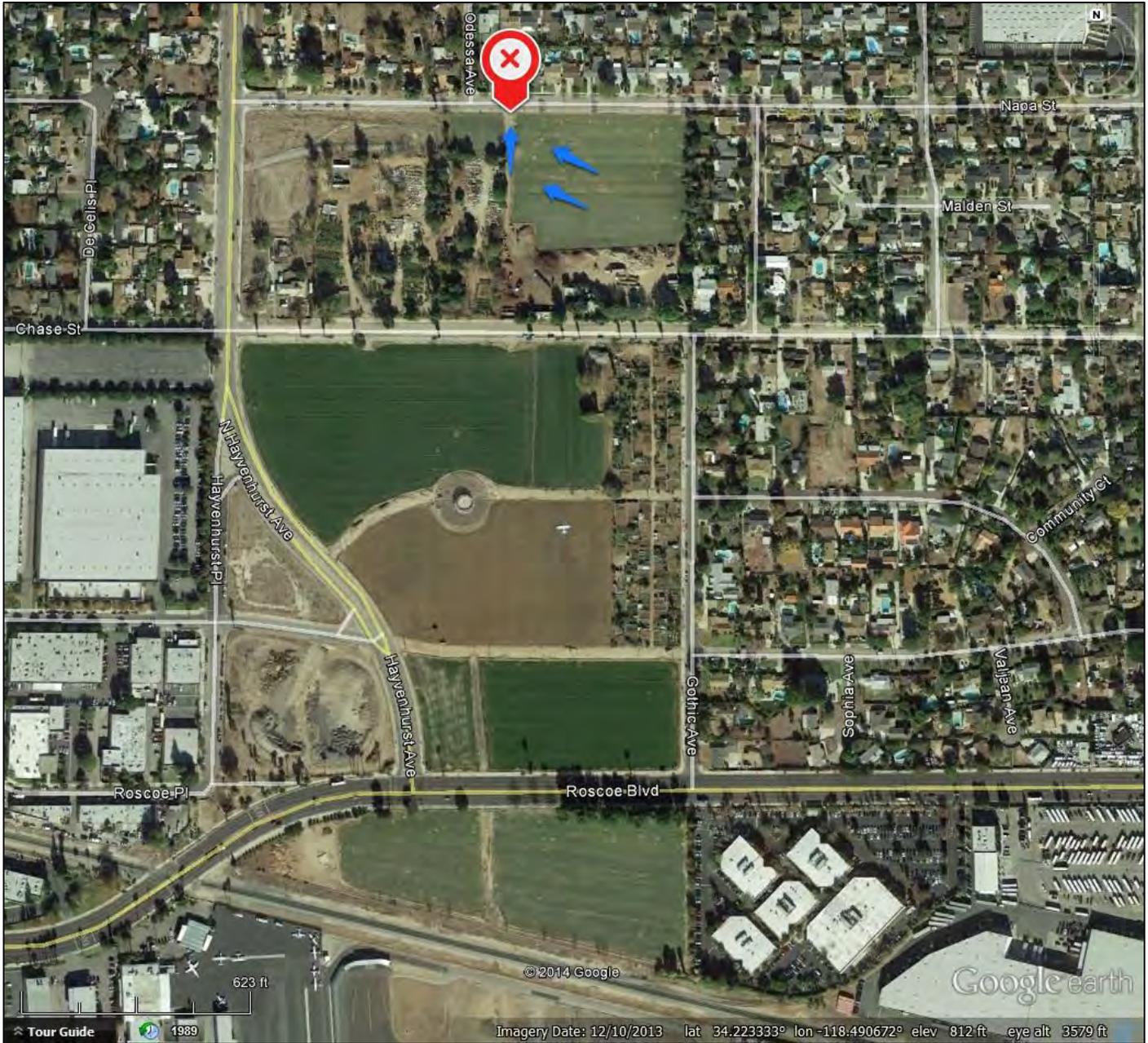
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO ₃	Ca	Cu
NGA #184	LAILG-NGA 184-1	11/26/08	0.46	31.44	0.609	3.12	17.92	0.643	206	0.88	1.3	129.5	na	na	na
NGA #184	LAILG-NGA 184-2	12/15/08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

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

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



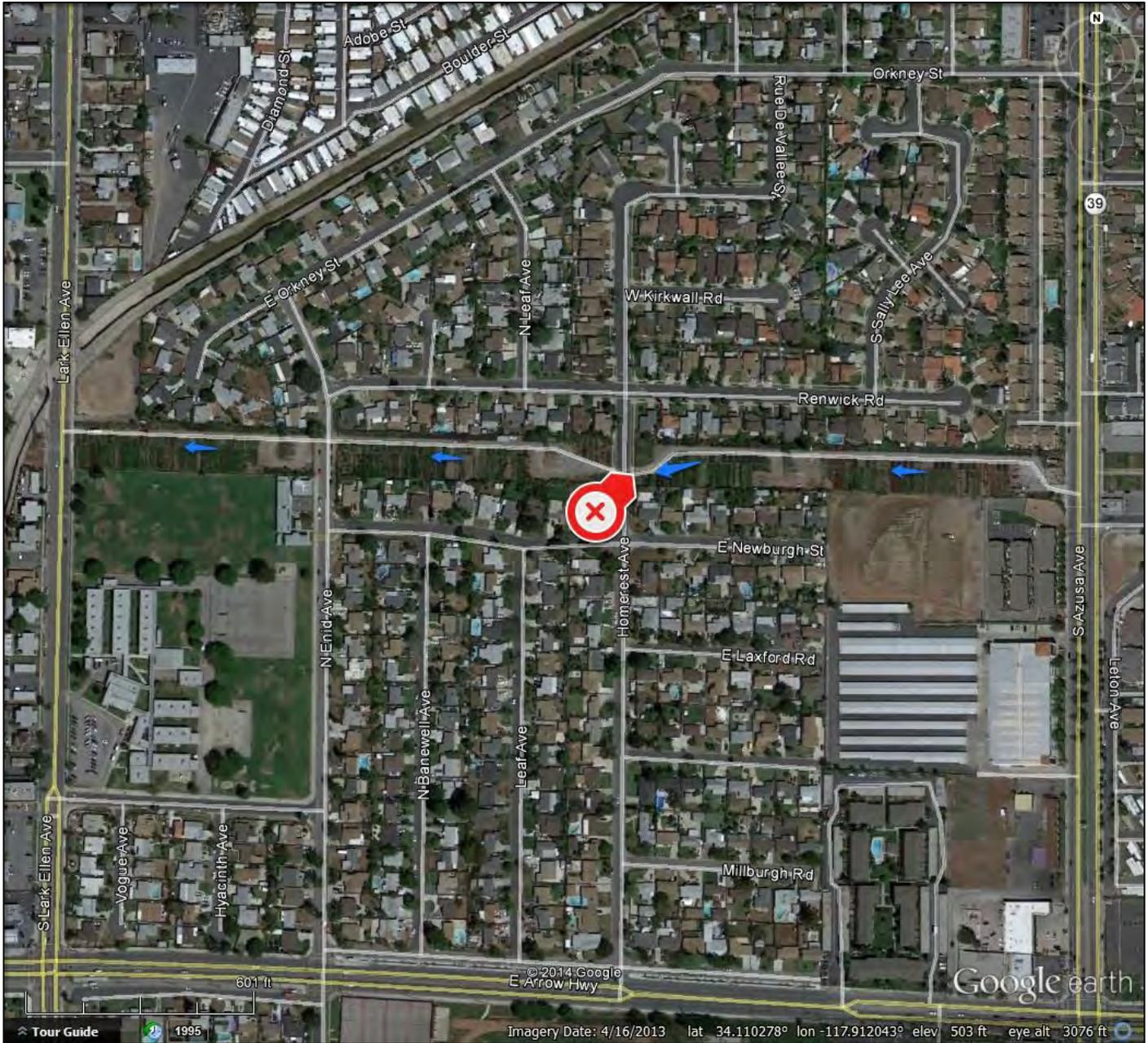
Site Drainage - The topography is relatively flat, and drains west as surface flow. Based on drainage properties and site access, the western gate of the eastern property was chosen as the most likely sampling location. All other gates are also visited during sampling events and checked for runoff.

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

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.

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

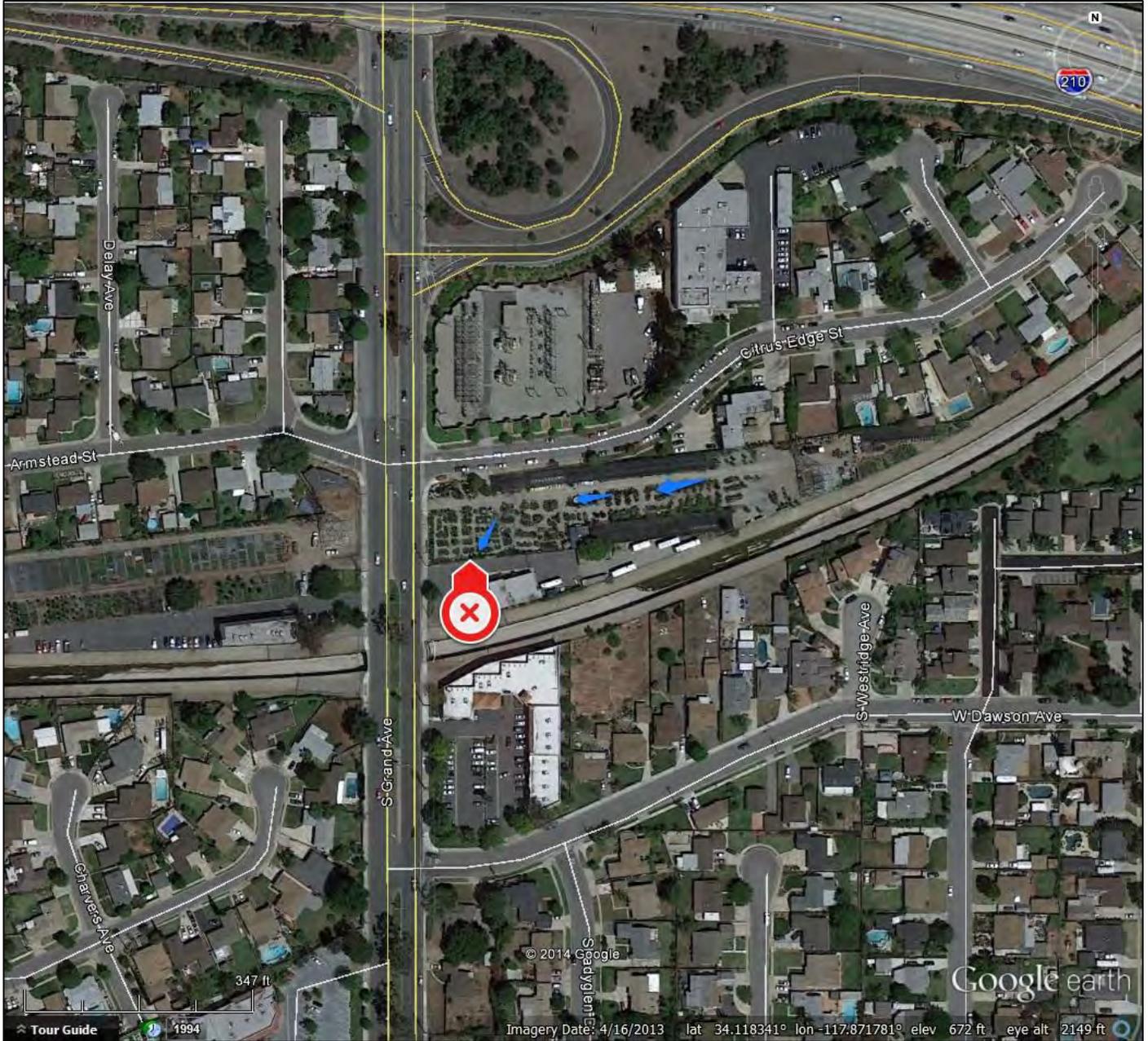
Site	Sample #	Date	General Chemistry (mg/L)									
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS
NGA #110	LAILG-NGA110-1	1/4/08	0.41	10.65	1.3052	2.36	18.22	1.74	162	1.81	2.033	24
NGA # 110	LAILG-NGA 110-2	12/15/08	0.31	28.59	1.186	8.48	50.87	1.469	328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

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)		Pyd Pesticides (ng/L)
			Total DDT and Derivatives	No Detected Chlordanes	Chlorpyrifos	Diazinon	Total DDT and Derivatives
NGA #110	LAILG-NGA110-1	1/4/08	nd	No Detected 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**.

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

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



General Sampling Location



General Surface Flow to Sampling Location

NGA SITE #150

Sampling Group: Group 2
Sampling Frequency - Fixed
Total/Irrigated Acres: 26.0/15.3 Acres
Sample site GPS location: N 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-routes 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 of 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

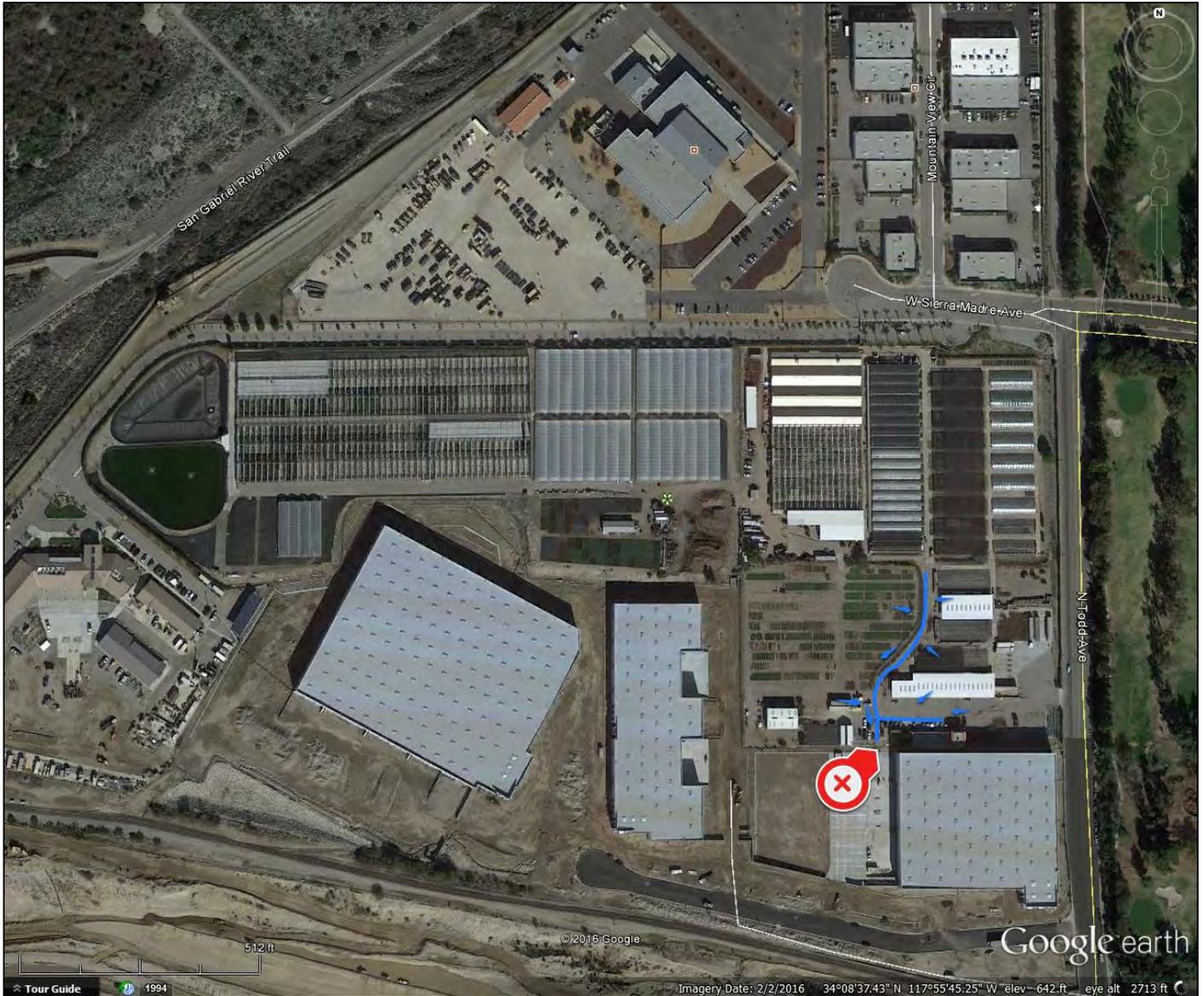
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO ₃	Ca	Cu
NGA #150	NGA-#150-LAILG	9/25/07	52.4	95.9	26.84	355.6	87	22.5	2279	23	24	57	na	na	na
NGA #150	NGA #150-LAILG-2	12/7/07	2.9	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

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



General Sampling Location



General Surface Flow to Sampling Location

NGA SITE #189

Sampling Group: Group 2
Sampling Frequency - Fixed
Total/Irrigated Area: 1.5/1.25 Acres
Sample site GPS location: N 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.

Table 16 - Summary of samples collected, NGA #189

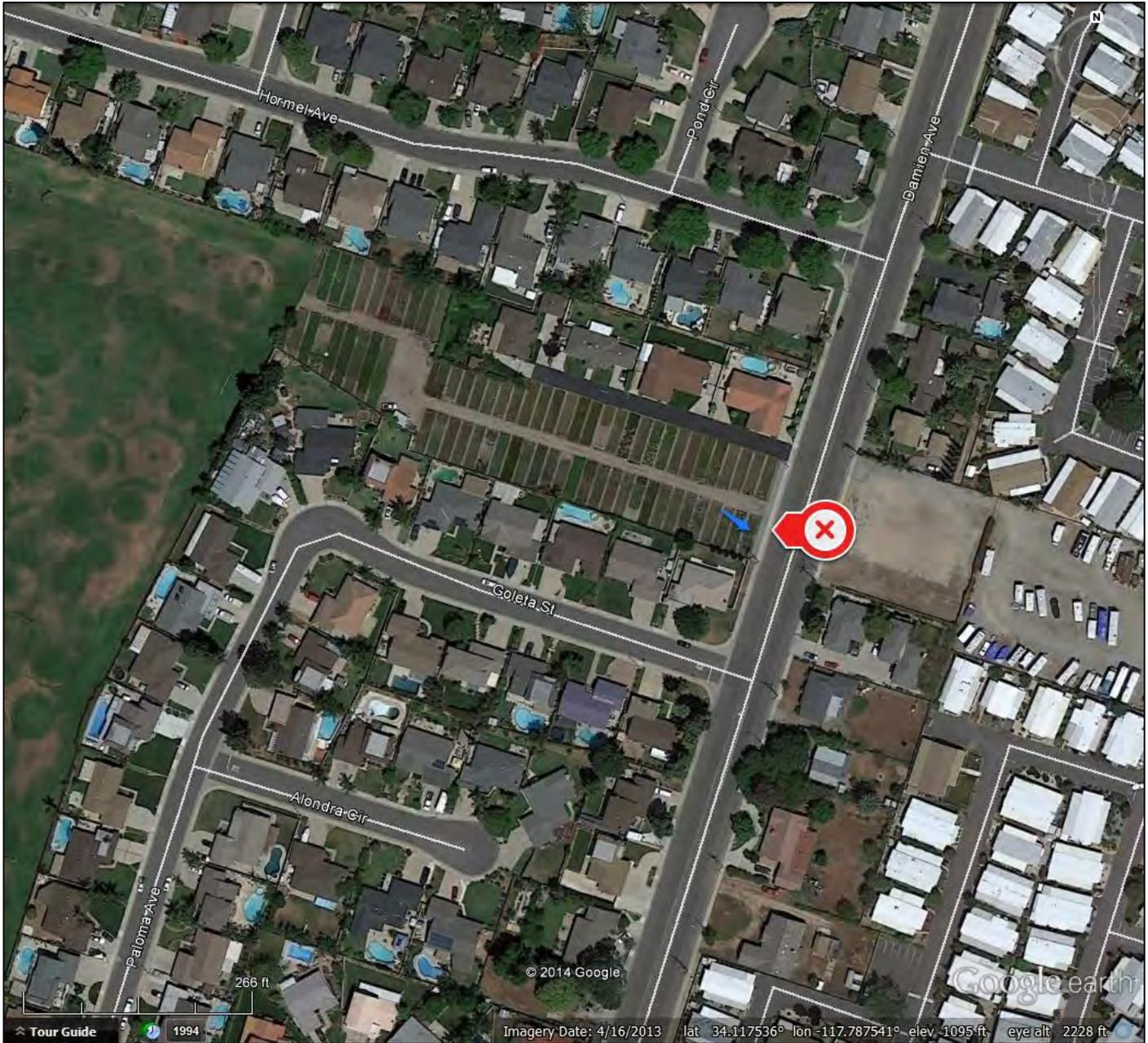
Site	Sample #	Date	General Chemistry (mg/L)									
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS
NGA # 189	LAILG-NGA 189-1	1/4/08	0.59	7.29	0.6851	1.83	26.43	1.33	192	1.8	2.475	20
NGA # 189	LAILG-NGA 189-2	12/15/08	0.54	31.28	0.6795	9.87	41.27	0.813	220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

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



General Sampling Location



General Surface Flow to Sampling Location

6.1.3 GROUP 3

NGA SITE #31

Sampling Group: Group 3
Sampling Frequency - Fixed
Total/Irrigated Acres: 62.0/62.0 Acres
Sample site GPS location: N 33° 3' 0" W 118° 0' 14.4"

May 15, 2015, wet season, no sample collected



Site Drainage - The site drains southwest, through 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.

Table 17 - Summary of samples collected, NGA #31

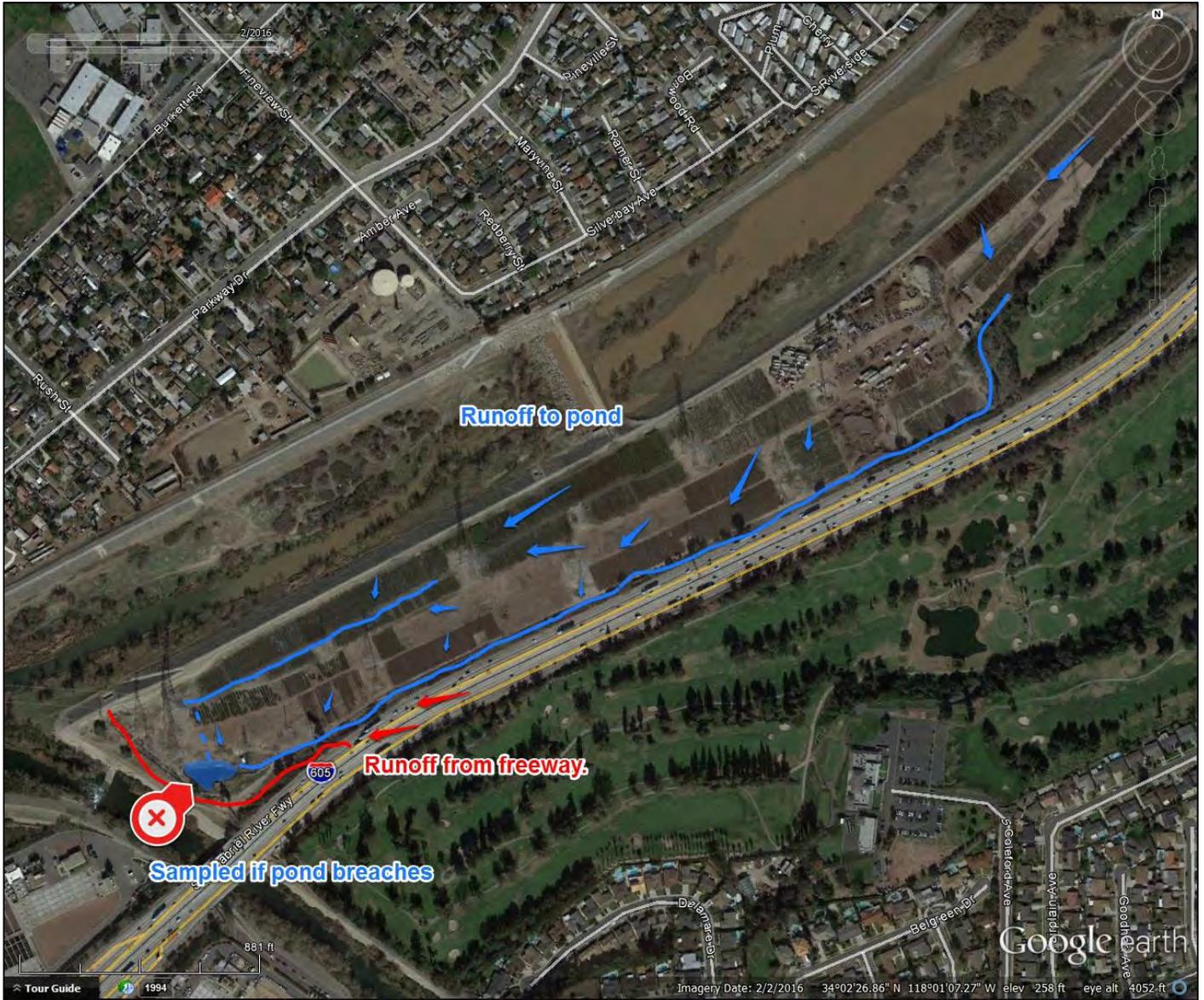
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA # 31	LAILG-NGA 31-1	9/23/08	0.13	82.13	1.562	17.3	134.93	1.472	602	2.34	1.813	162	na	na	na
NGA # 31	LAILG-NGA 31-2	11/26/08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

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

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

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

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



General Sampling Location



General Surface Flow to Sampling Location

NGA SITE #64

Sampling Group: Group 3
Sampling Frequency - Fixed
Total/Irrigated Acres: 5.5/2.5 Acres
Sample site GPS location: N 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.

Table 18 - Summary of samples collected, NGA #64

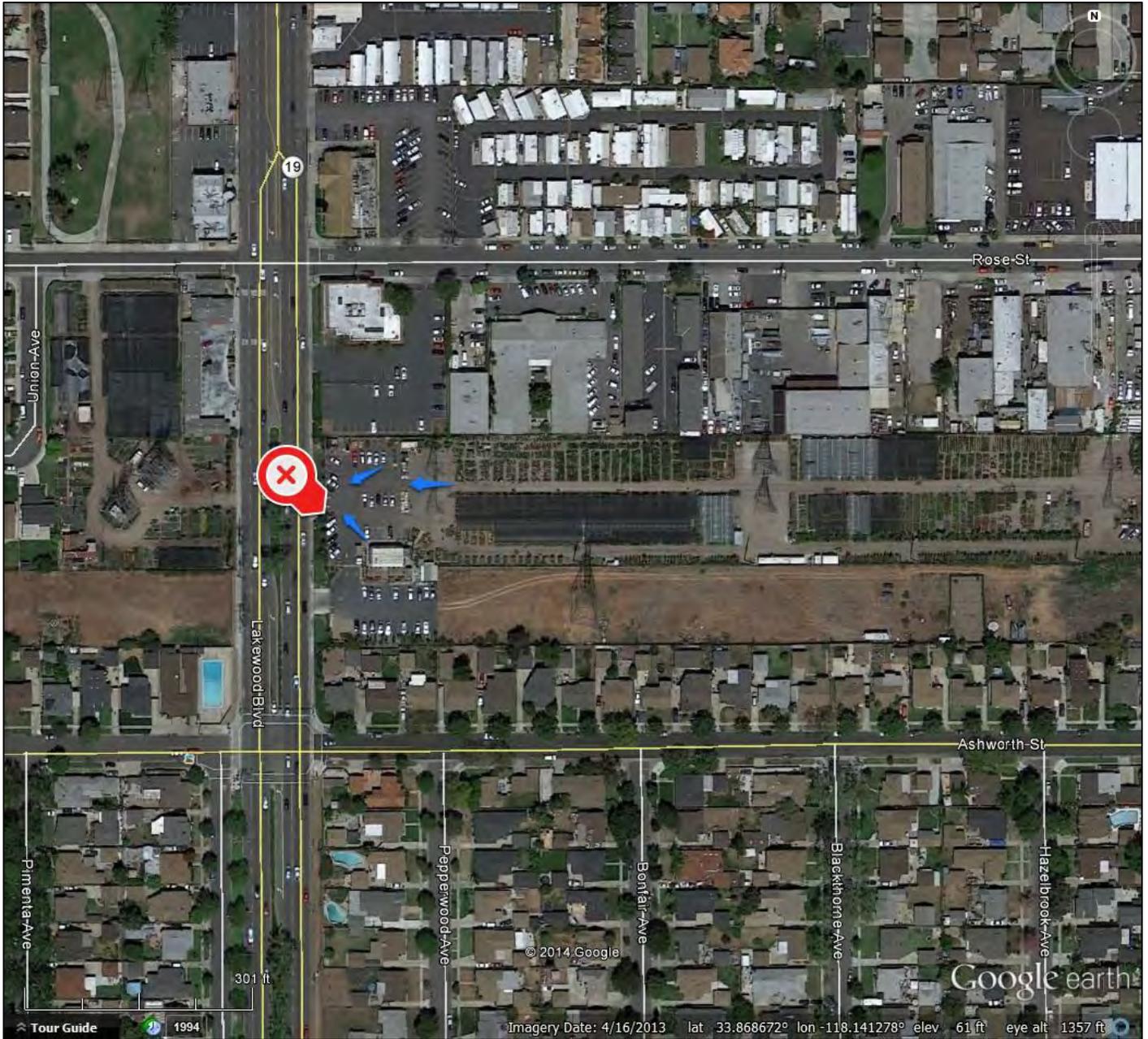
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #64	LAILG-NGA64-1	1/23/08	0.2	3.82	0.2818	3.83	101.1	0.3	nd	0.46	0.393	76	na	na	na
NGA #64	LAILG-NGA 64-2	12/15/08	1.15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

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Toxaphene	No OP Pesticides Detected	Total sum of all detected Pyrethroids
NGA #64	LAILG-NGA64-1	1/23/08	0	0	No OP Pesticides 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



General Sampling Location

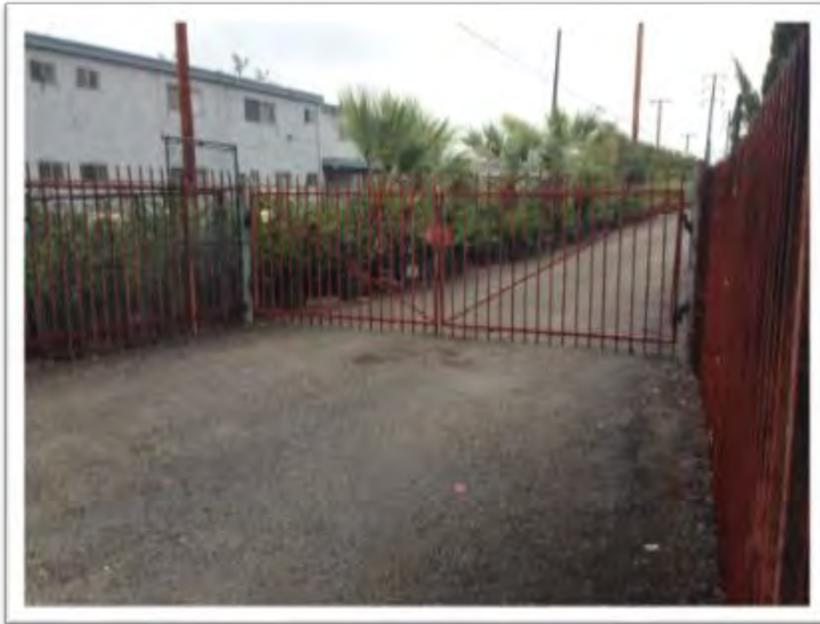


General Surface Flow to Sampling Location

NGA SITE #81

Sampling Group: Group 3
Sampling Frequency - Fixed
Total/Irrigated Acres: 4.7/3.0 Acres
Sample site GPS location: N 33° 52' 46.9" W 118° 09' 20.7"

May 15, 2015, wet season, no sample collected



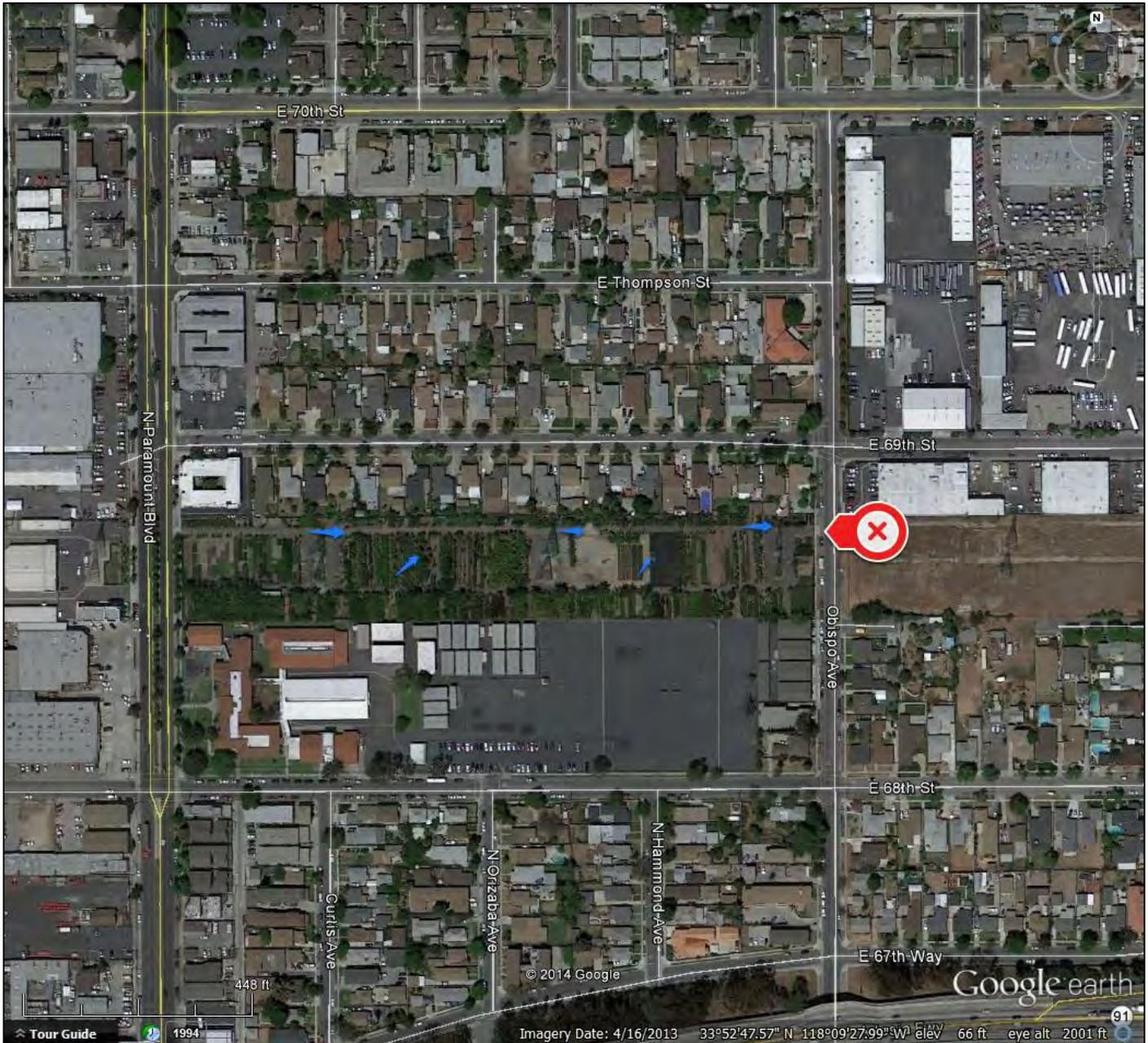
Site Drainage – The site drains to the east as sheet flow towards Obispo Avenue. The site is relatively flat with a small surface gradient.

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



General Surface Flow to Sampling Location

NGA SITE #168

Sampling Group: Group 3
Sampling Frequency - Fixed
Total/Irrigated Acres: 6.0/4.75 Acres
Sample site GPS location: N 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.

Table 19 - Summary of samples collected, NGA #168

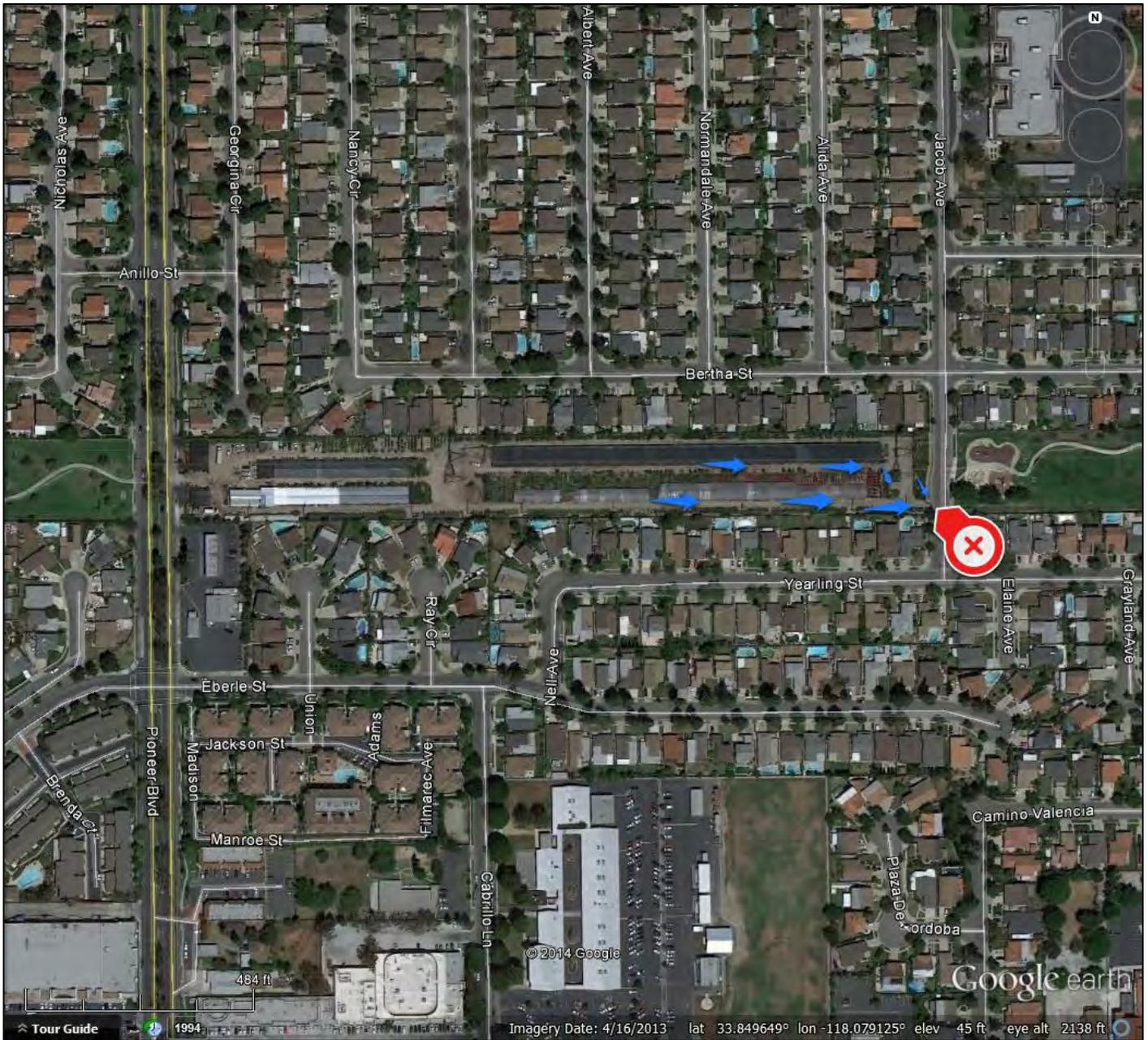
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #168	NGA-#168-LAILG-1	8/13/07	0.4	81.85	1.977	4.93	131.16	2.28	664	2.13	3.243	122	na	na	na
NGA #168	ILGNGA-#168-2	9/28/07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

Site	Sample #	Date	OC Pesticides (ng/L)		OP Pesticides (ng/L)	Pyd Pesticides (ng/L)
			Total DDT and Derivatives	Total Chlordane	Malathion	Total sum of all detected Pyrethroids
NGA #168	NGA-#168-LAILG-1	8/13/07	nd	nd	nd	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**.

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

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



General Sampling Location



General Surface Flow to Sampling Location

6.1.4 GROUP 4

NGA SITE #4

Sampling Group: Group 4
Sampling Frequency - Fixed
Total / Irrigated Acres: 19.2 / 11.5
Sample site GPS location: N 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

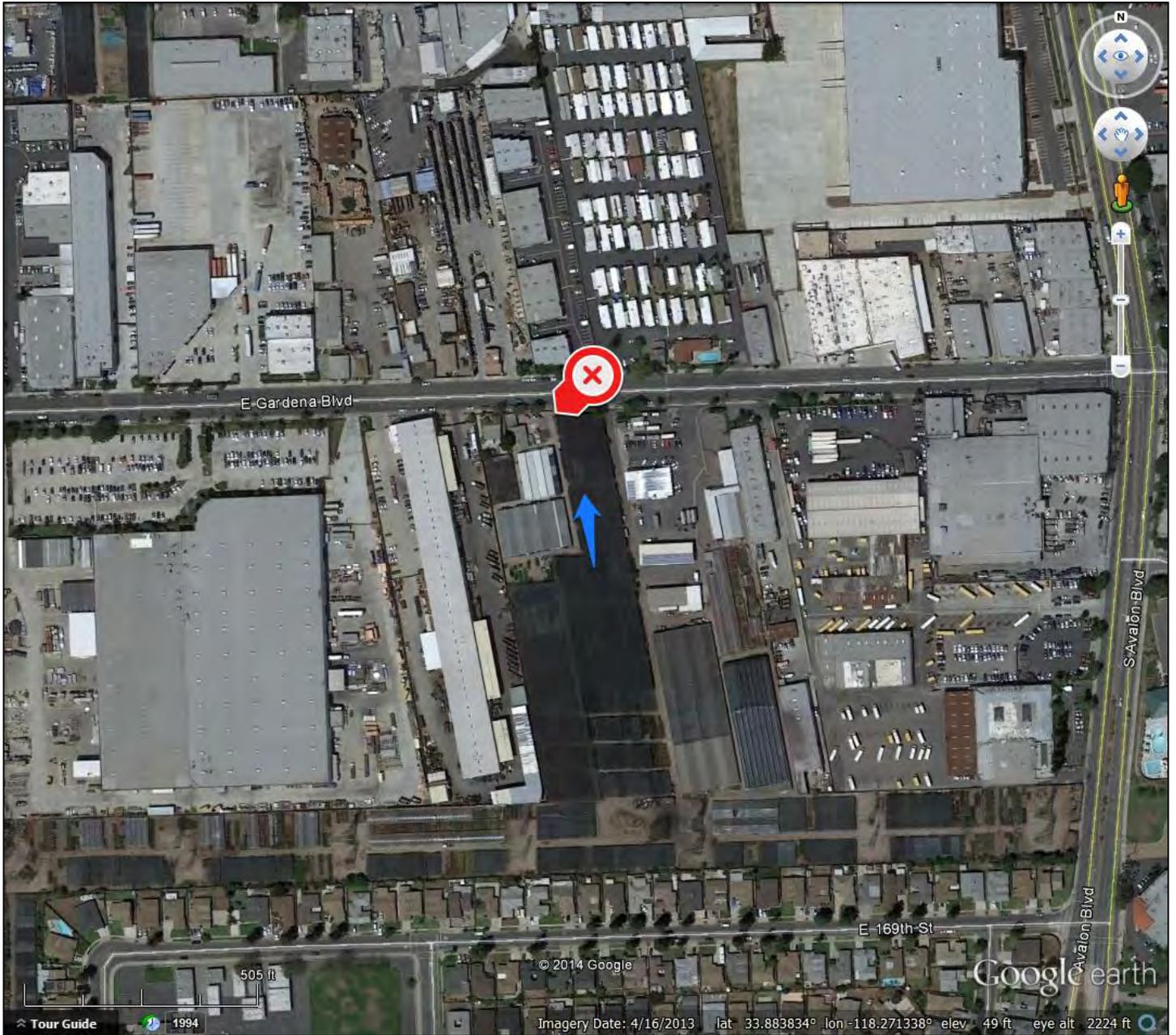
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO ₃	Ca	Cu
NGA #4	NGA #4-LAILG-1	12/7/07	0.48	20.64	1.1355	4.03	20.39	0.8	186	0.77	0.829	58	na	na	na
NGA #4	LAILG-NGA4-2	1/23/08	0.24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

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

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

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

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



General Sampling Location



General Surface Flow to Sampling Location

NGA SITE #53

Sampling Group: Group 4
Sampling Frequency - Fixed
Total/Irrigated Acres: 3.5/1.7 Acres
Sample site GPS location: N 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.

Table 21 - Summary of samples collected, NGA #53

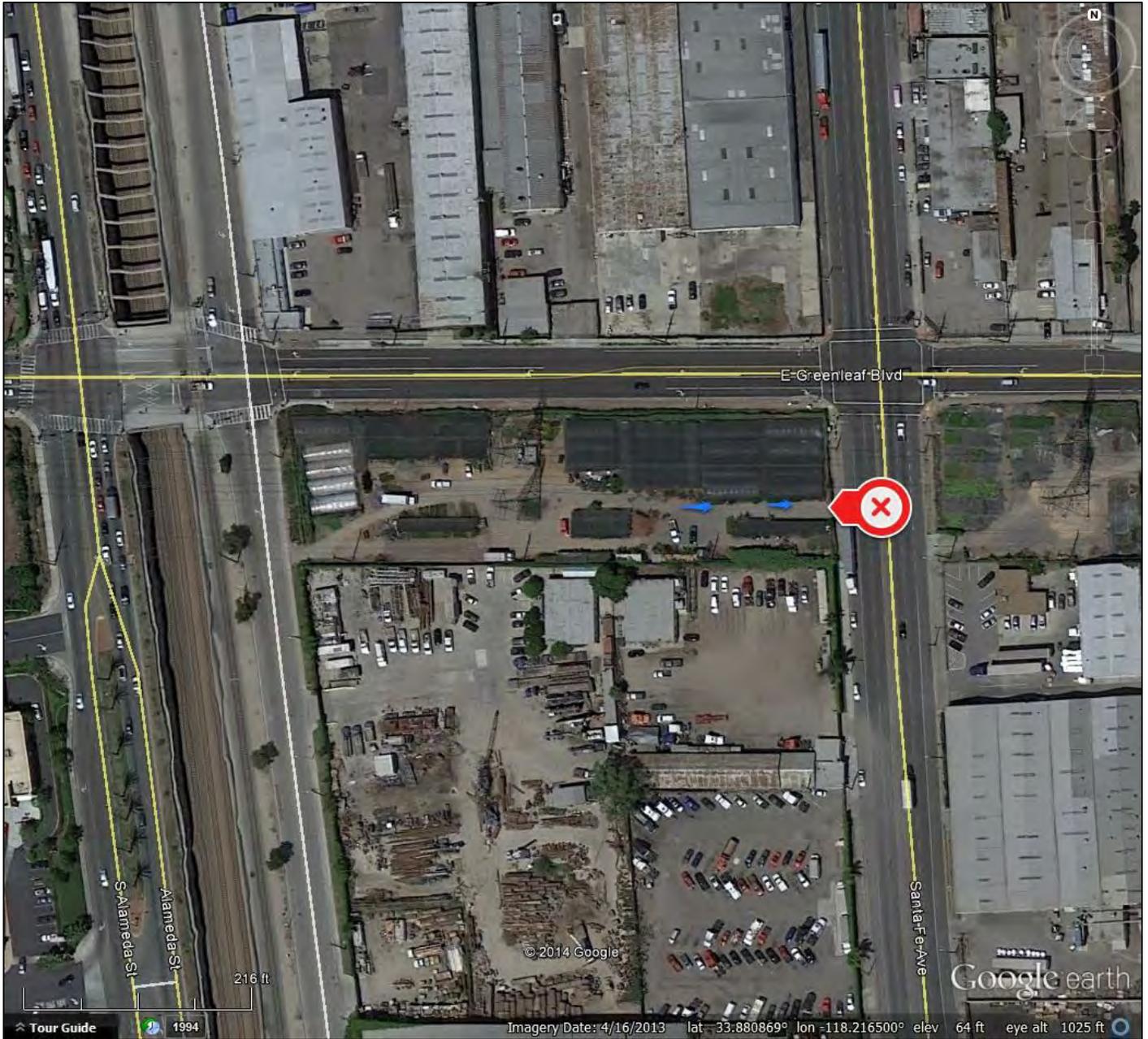
Site	Sample #	Date	General Chemistry (mg/L)									
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS
NGA #53	LAILG-NGA#53-1	12/18/07	0.7	4.72	0.2973	0.49	12.51	0.57	132	0.75	1.188	124
NGA #53	LAILG-NGA#53-2	1/23/08	0.31	2.19	0.6425	0.76	14.92	0.82	nd	0.68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

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

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

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

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



General Sampling Location

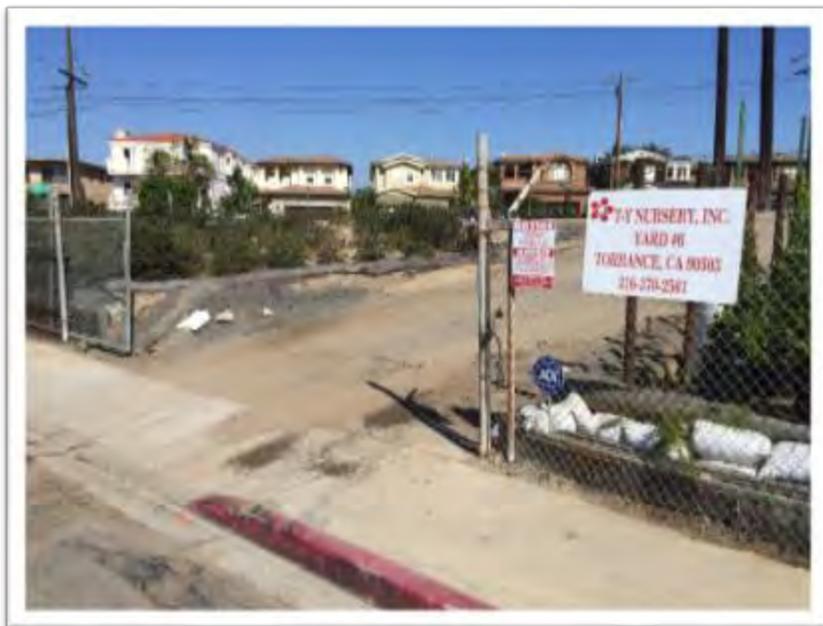


General Surface Flow to Sampling Location

NGA SITE #176

Sampling Group: Group 4
Sampling Frequency - Fixed
Total/Irrigated Acres: 12.0/7.5 Acres
Sample site GPS location: N 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.

Table 22 - Summary of samples collected, NGA #176

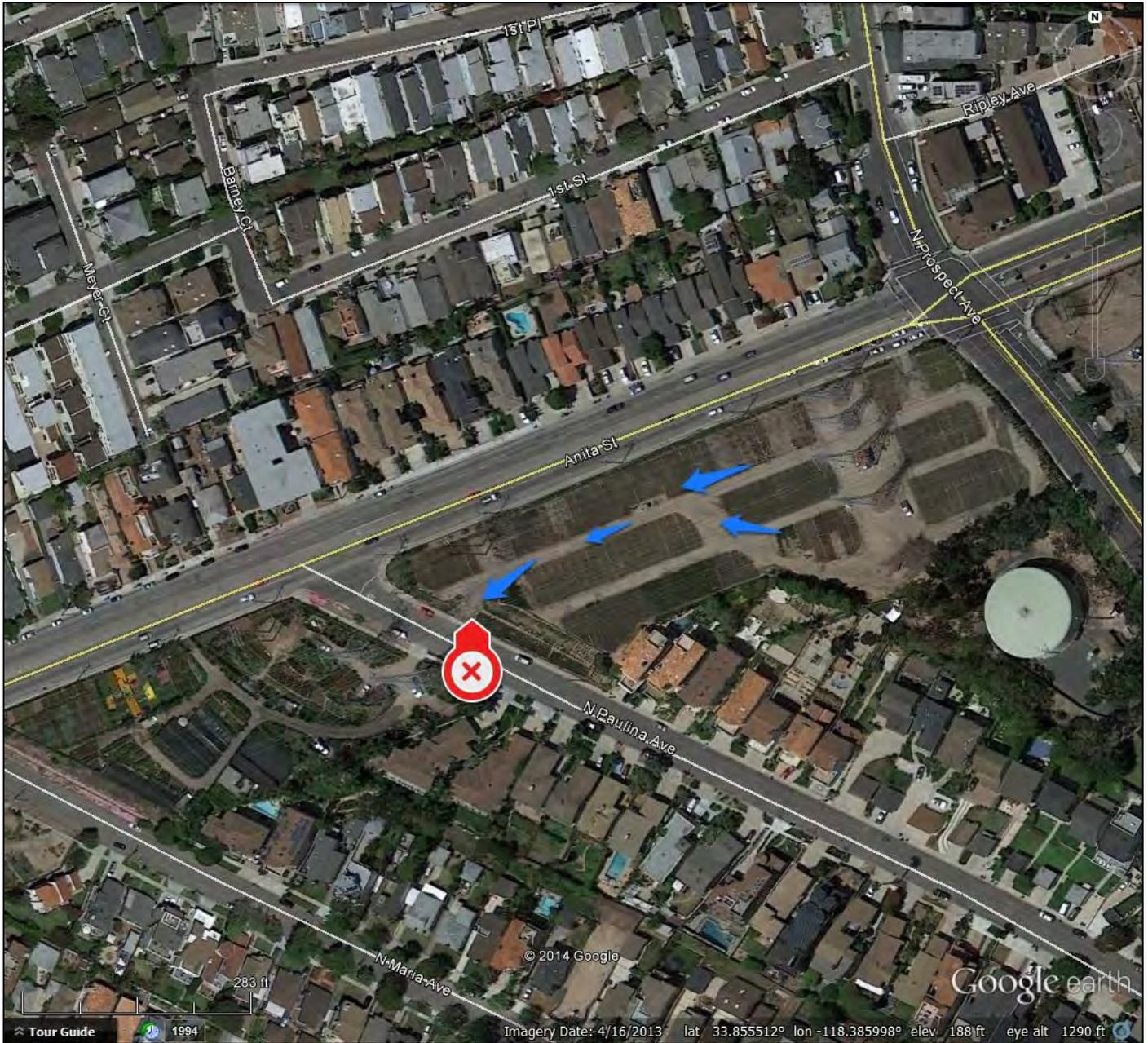
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA #176	NGA-#176-LAILG-1	12/18/07	5.5	56.82	0.7145	3.85	293.12	0.54	680	12.21	3.447	6,168	na	na	na
NGA #176	NGA-#176-LAILG-2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

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

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

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

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



General Sampling Location



General Surface Flow to Sampling Location

NGA SITE #210

Sampling Group: Group 4

Sampling Frequency - Fixed

Total/Irrigated Area: 2.0/1.4 Acres

Approximate sample site GPS location: N 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.

Table 23 - Summary of samples collected, NGA #210

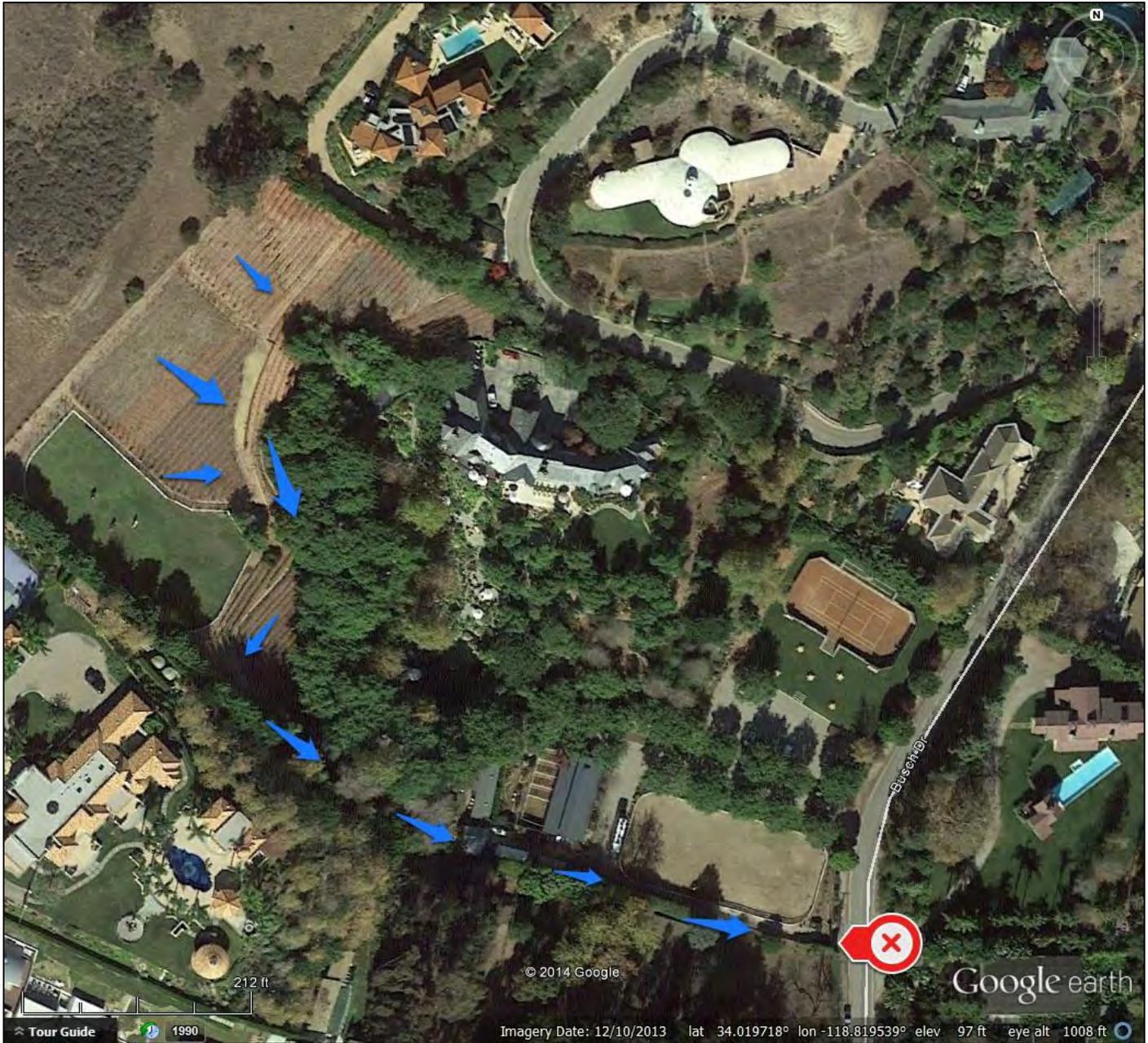
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO3	Ca	Cu
NGA # 210	LAILG-NGA 210-1	11/26/08	0.11	155.92	1.892	0.92	336.78	2.185	884	3.23	3.722	542	na	na	na
NGA # 210	LAILG-NGA 210-2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

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

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

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

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



General Sampling Location



General Surface Flow to Sampling Location

6.2 VISITED REVOLVING SAMPLING SITES

NGA SITE # 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



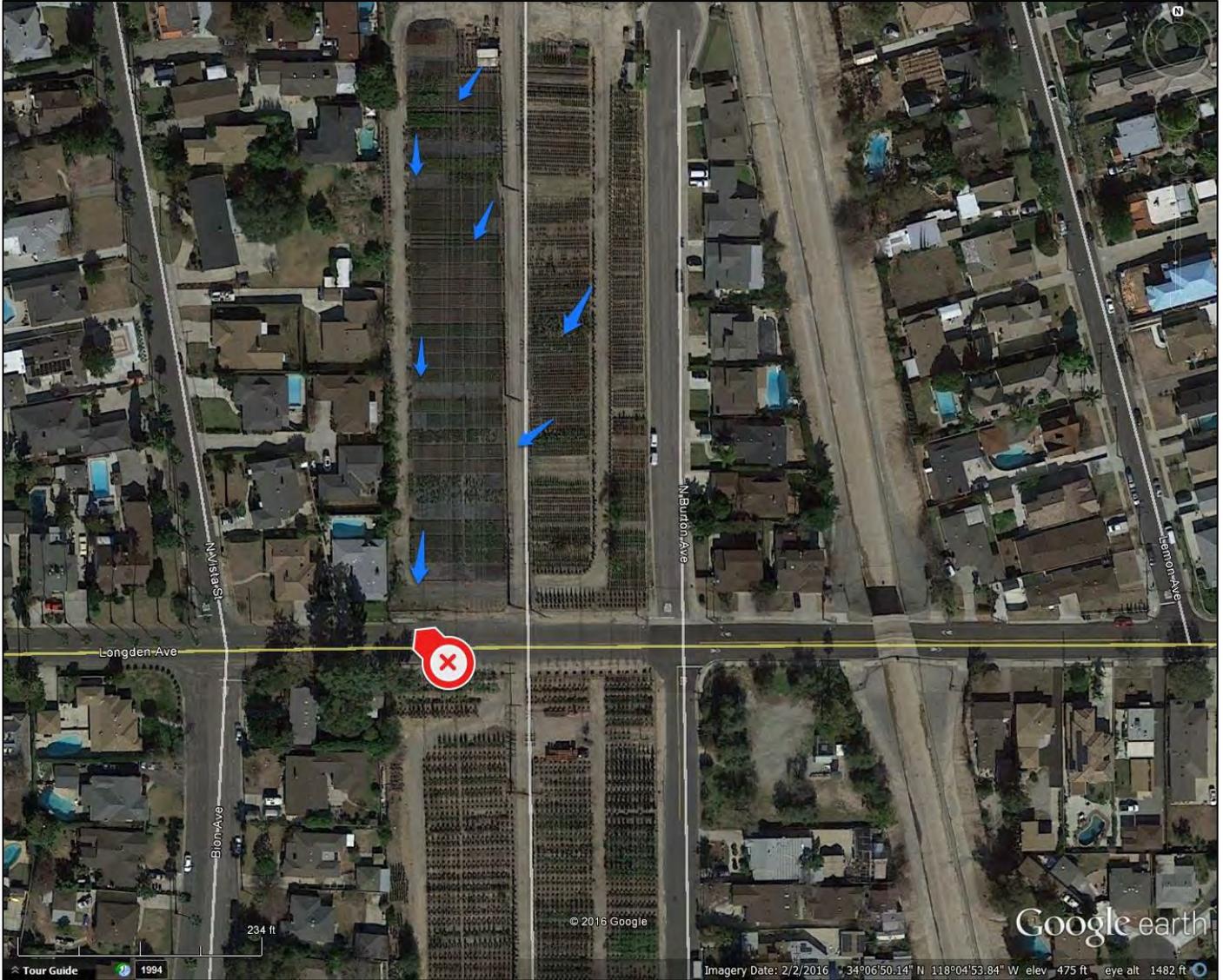
Site Drainage – The topography is relatively flat, and drains as surface flow. Based on drainage properties and site access, the southwestern corner of property to the north of Longden Avenue was chosen as the sampling location.

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



General Sampling Location



General Surface Flow to Sampling Location

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.

Table 24 - Summary of samples collected, NGA #188

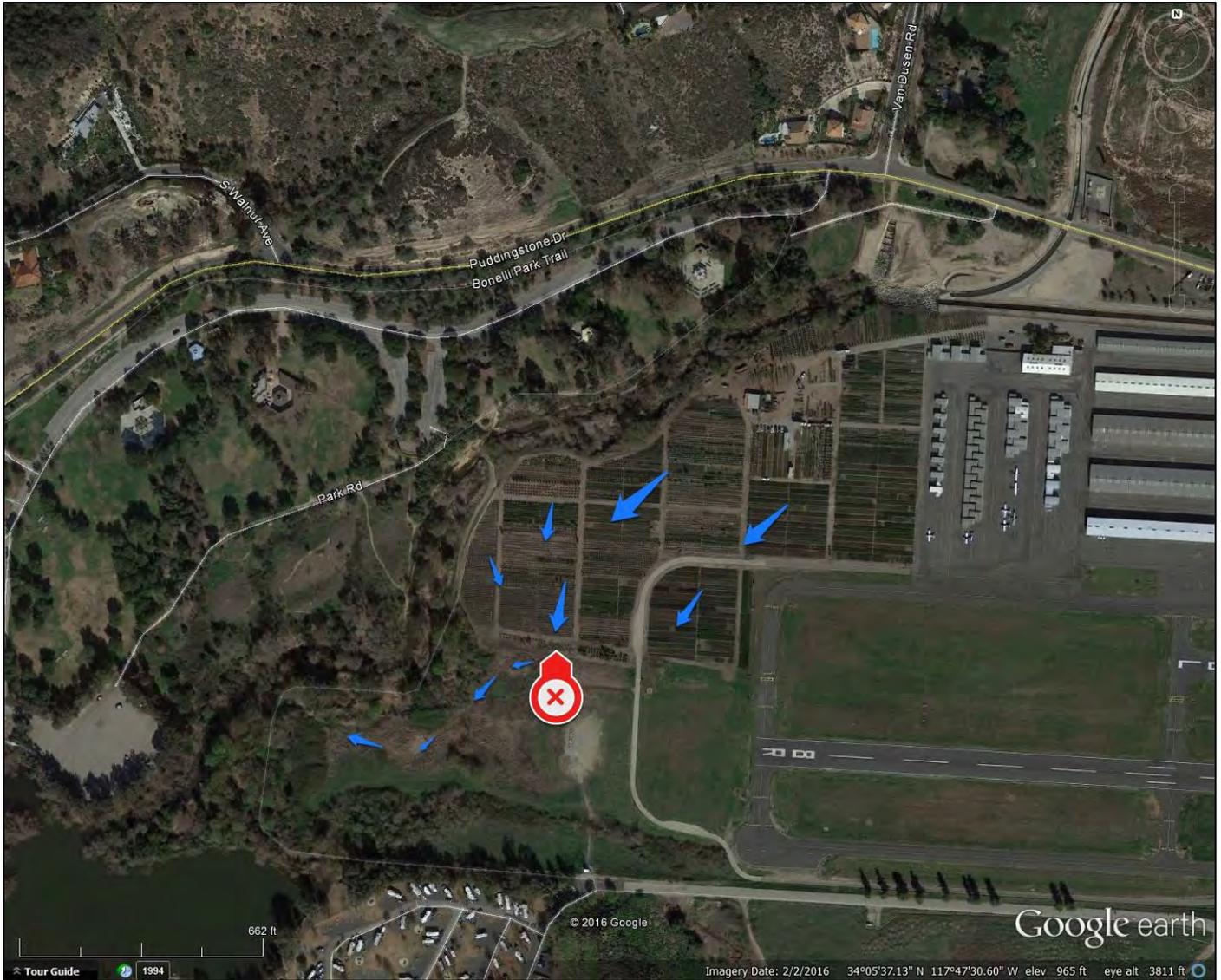
Site	Sample #	Date	General Chemistry (mg/L)												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Total Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO ₃	Ca	Cu
NGA #188	LAILG-NGA-188-1	12/2/14	0.31	38	0.56	4.4	110	0.80	330	0.56	2.0	2000	141	56.3	0.036

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

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



General Sampling Location

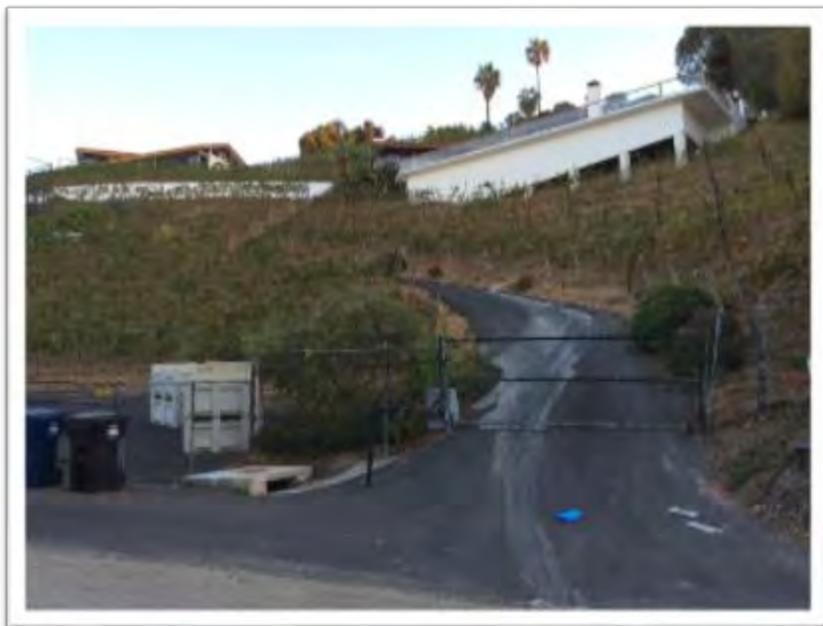


General Surface Flow to Sampling Location

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



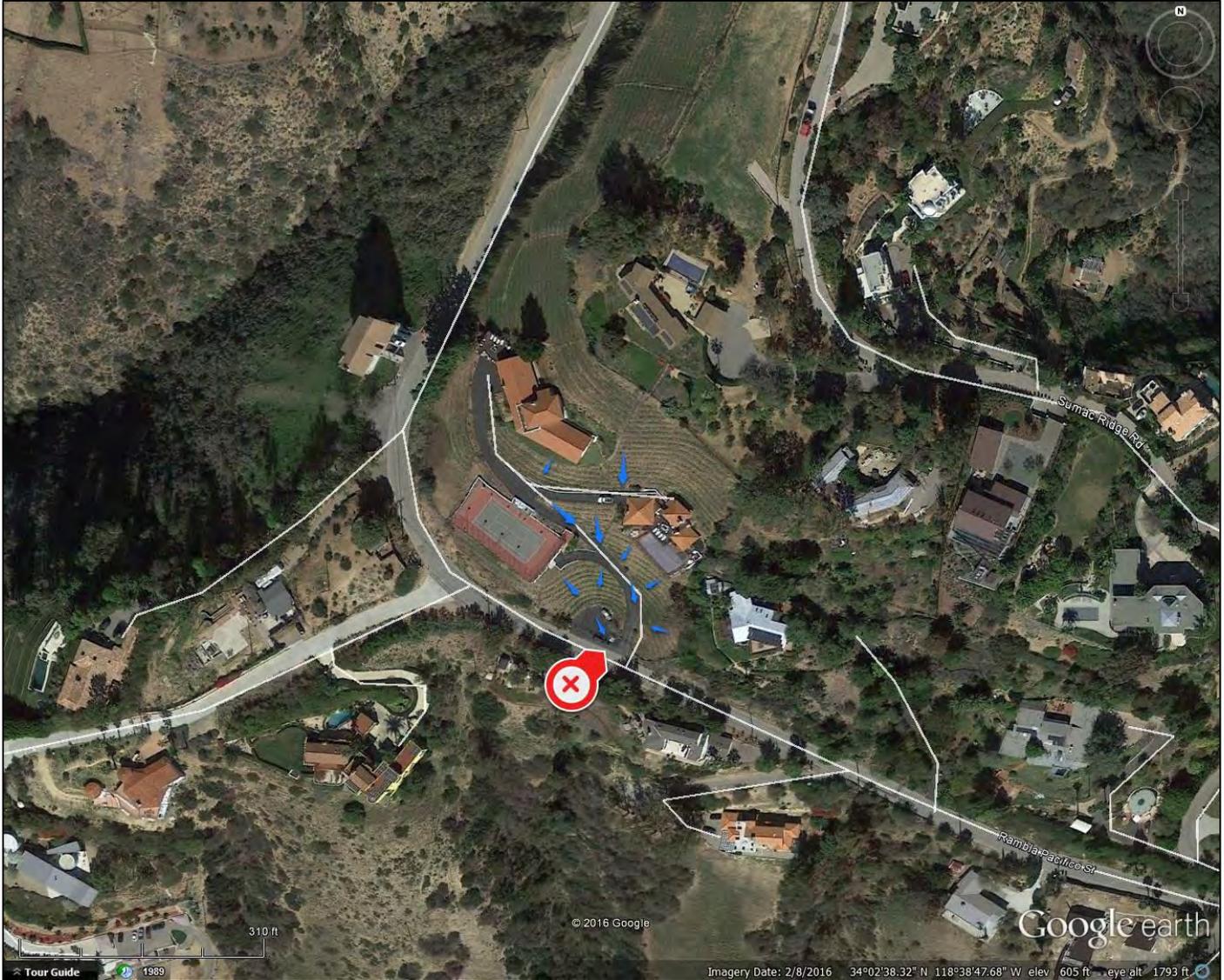
Site Drainage – The site is steeply graded to the south and west, and would run off towards Rambla Pacifico Street via the driveway and surface flow. Based on drainage properties, a storm drain near the bottom of the main asphalt driveway was chosen as the sampling location.

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.

Figure 20 – Aerial Photograph of NGA #221 and General Sampling Location



General Sampling Location

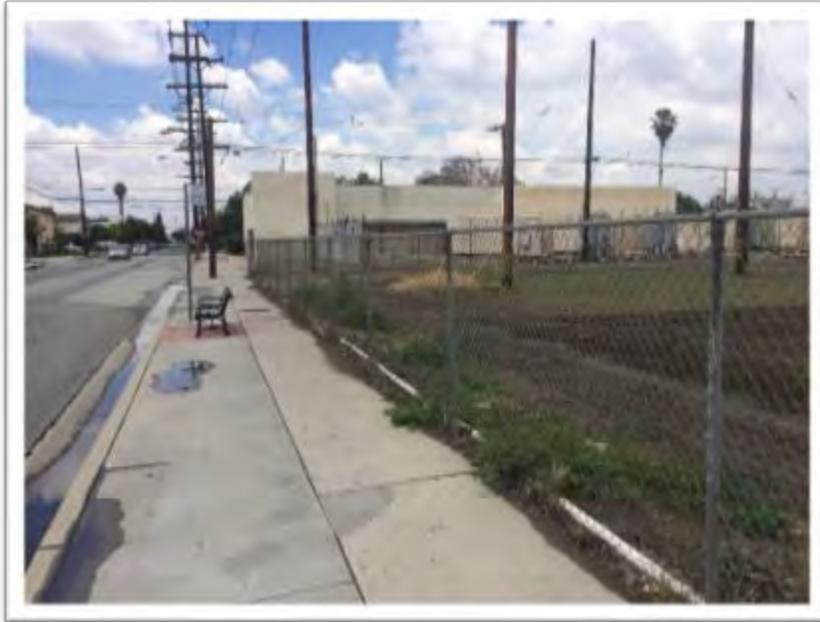


General Surface Flow to Sampling Location

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 EXCEEDANCES

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

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

ns Program suspended, no sample collected

Constituents	CWIL Order # R4-2010-0186														Total	% of samples	
	Interim Sampling	YEAR 1				YEAR 2				YEAR 3		YEAR 4					
		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season	Dry Season	Wet Season				
		March 2011	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #2	Event #1	Event #2				
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	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

Constituent	CWIL Order # R4-2005-0080													Total	% of samples
	YEAR 1				YEAR 2				YEAR 3		YEAR 4				
	Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season	Dry Season	Wet Season			
	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #1	Event #1			
Waiver Limitations															
OC Pesticides															
Clordane	1	0	6	1	2	1	4	3	ns	ns	ns	ns	18	34.62%	
4,4' DDT	2	2	2	1	0	0	0	0	ns	ns	ns	ns	7	13.46%	
4,4' DDD	2	2	2	1	0	0	0	2	ns	ns	ns	ns	9	17.31%	
4,4' DDE	2	1	5	2	0	1	2	4	ns	ns	ns	ns	17	32.69%	
Dieldrin	0	0	0	0	0	0	0	0	ns	ns	ns	ns	0	0.00%	
Toxaphene	0	0	0	0	0	0	0	1	ns	ns	ns	ns	1	1.92%	
Waiver, OC Pesticide # of Exceedances	7	5	15	5	2	2	6	10	0	0	0	0	52		
OP Pesticides															
Chlorpyrifos	0	0	2	1	0	0	1	3	ns	ns	ns	ns	7	13.46%	
Diazinon	0	0	2	1	1	0	0	1	ns	ns	ns	ns	5	9.62%	
Waiver, OP Pesticide # of Exceedances	0	0	4	2	1	0	1	4	0	0	0	0	12		
Aquatic Life Guidelines															
OP Pesticides															
Malathion	0	0	1	1	1	0	0	2	ns	ns	ns	ns	5	9.62%	
ALB, OP Pesticide # of Exceedances	0	0	1	1	1	0	0	2	0	0	0	0	5		
Pyrethroid Pesticides															
Bifenthrin	1	2	4	0	0	0	2	3	ns	ns	ns	ns	12	23.08%	
Cyfluthrin	2	1	4	2	0	0	5	4	ns	ns	ns	ns	18	34.62%	
Fenpropathrin (Danitol)	1	0	3	2	1	0	2	2	ns	ns	ns	ns	11	21.15%	
Fluvalinate	0	1	0	0	1	0	2	3	ns	ns	ns	ns	7	13.46%	
Deltamethrin	0	0	2	2	1	0	0	2	ns	ns	ns	ns	7	13.46%	
Lambda-cyhalothrin	1	0	1	1	1	0	6	2	ns	ns	ns	ns	12	23.08%	
Permethrin	1	1	4	0	1	0	3	4	ns	ns	ns	ns	14	26.92%	
ALB, Pyrethroid Pesticide # of Exceedances	6	5	18	7	5	0	20	20	0	0	0	0	81		
Total Number of Exceedances	13	10	38	15	9	2	27	36	ns	ns	ns	ns	150		
Average # of Exceedances per sample	2.60	3.33	2.71	1.88	4.50	2.00	3.38	3.27	ns	ns	ns	ns	2.88		
Number of Samples Collected	5	3	14	8	2	1	8	11	ns	ns	ns	ns	52		

ni Not included in laboratory analytical suite during this Waiver period
 ns Program suspended, no sample collected

Table 26 cont.- Summary of Water Quality Exceedances, Pesticides

Constituents	CWIL Order # R4-2010-0186														Total	% of samples		
	Interim Sampling	YEAR 1				YEAR 2			YEAR 3			YEAR 4						
		Dry Season		Wet Season		Dry Season		Wet Season	Dry Season		Wet Season		Dry Season				Wet Season	
		Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1	Event #2	Event #1	Event #1	Event #2	Event #1			Event #2	
March 2011																		
Waiver Limitations																		
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		
Aquatic Life Guidelines																		
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	--	--	--	--	--	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		
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

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 mid-range 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.

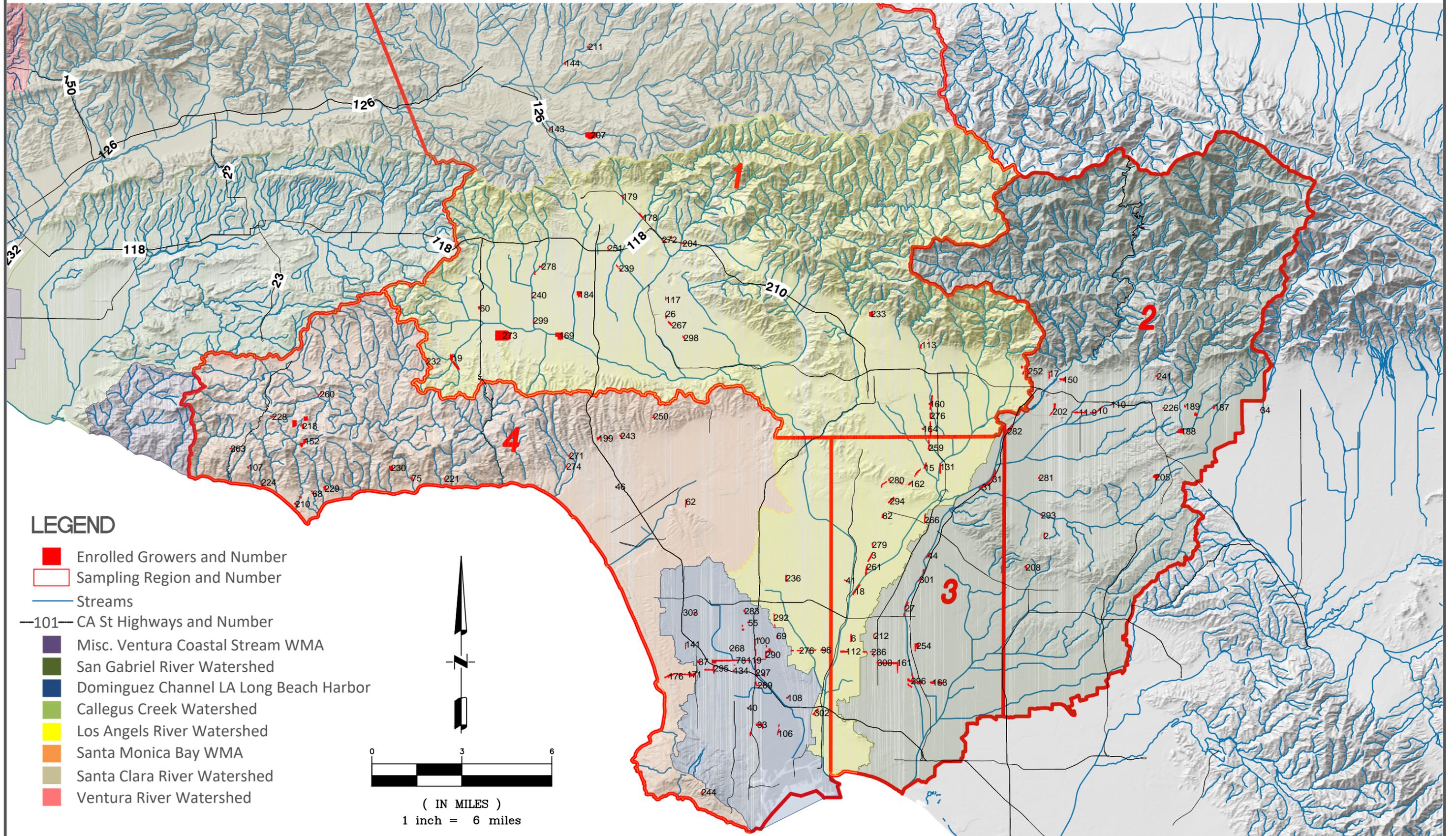
8.0 DISCUSSION / CONCLUSION

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.

FIGURE 1 LOS ANGELES COUNTY IRRIGATED LANDS GROUP

LOS ANGELES REGIONAL WATERSHEDS



**FIGURE 1.1 LOS ANGELES COUNTY IRRIGATED LANDS GROUP
SANTA MONICA BAY WMA**

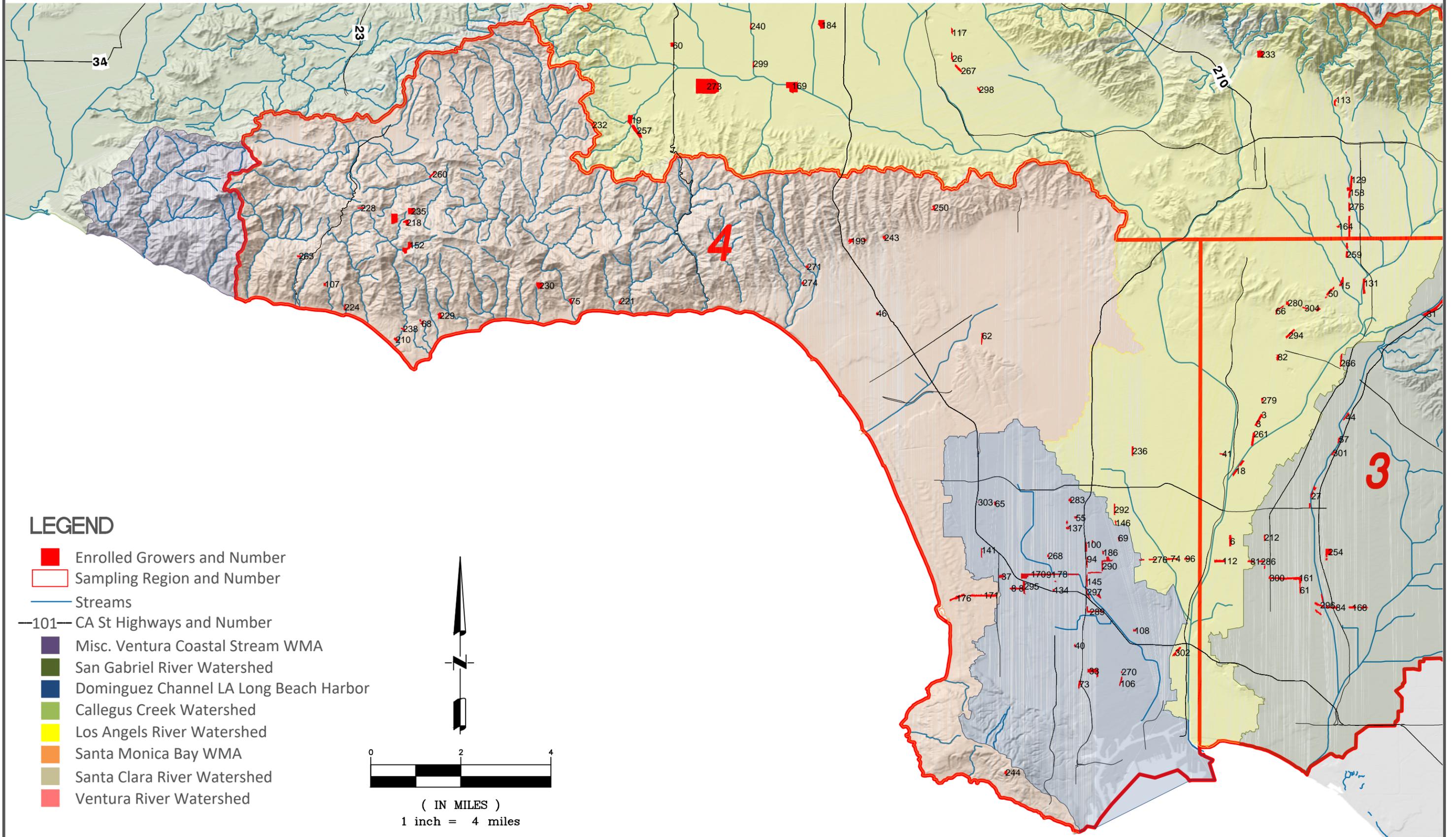
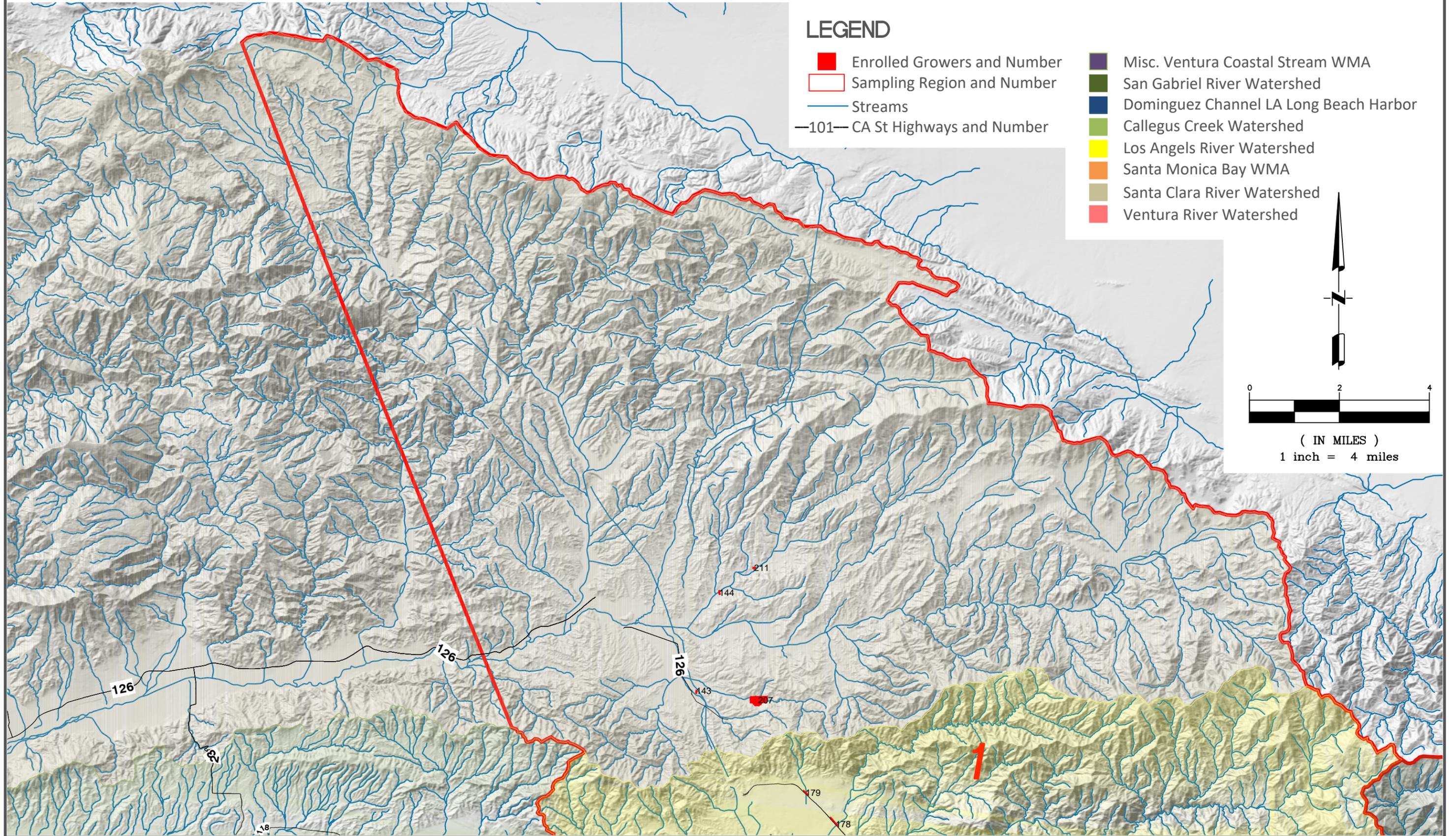
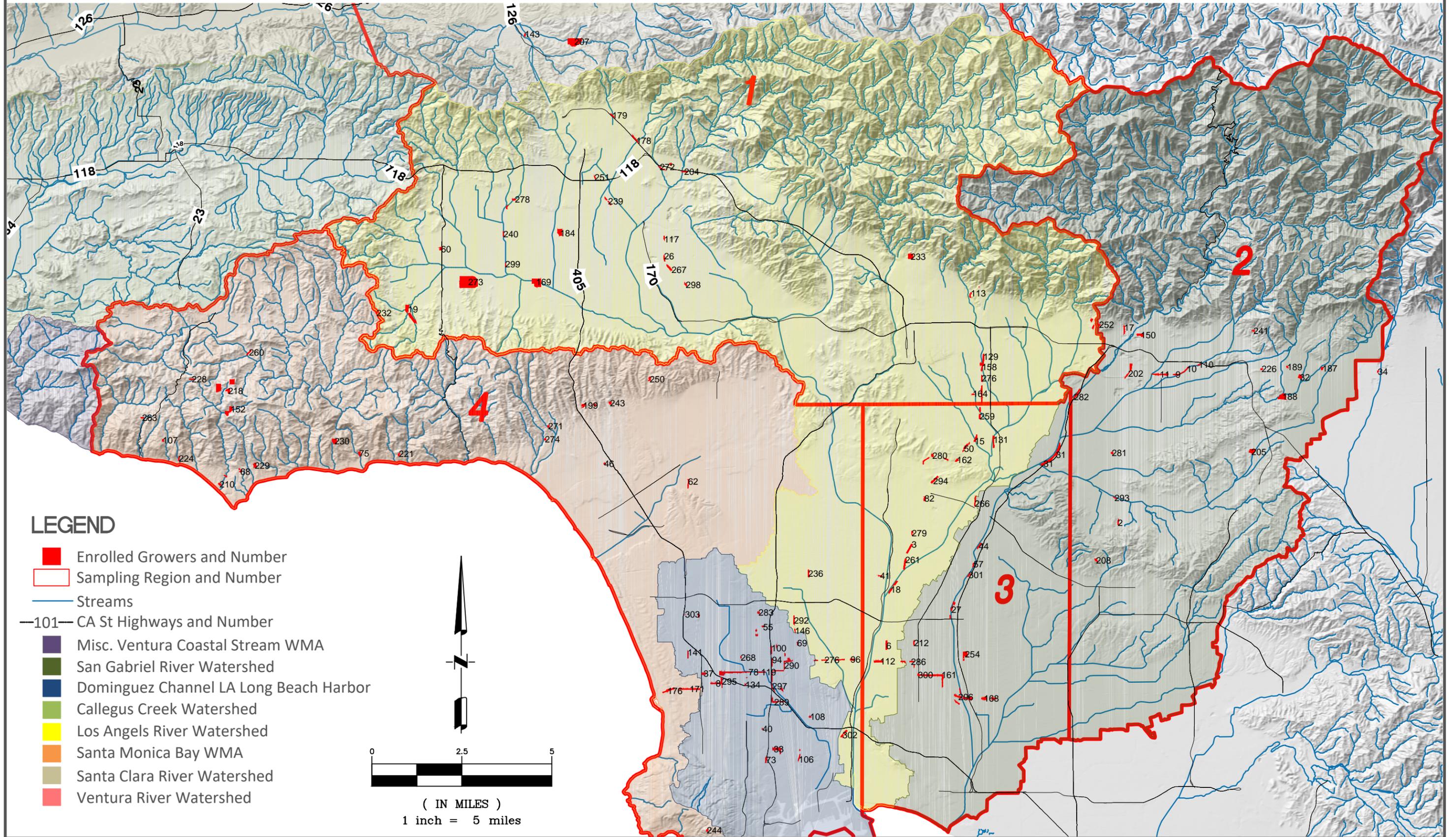


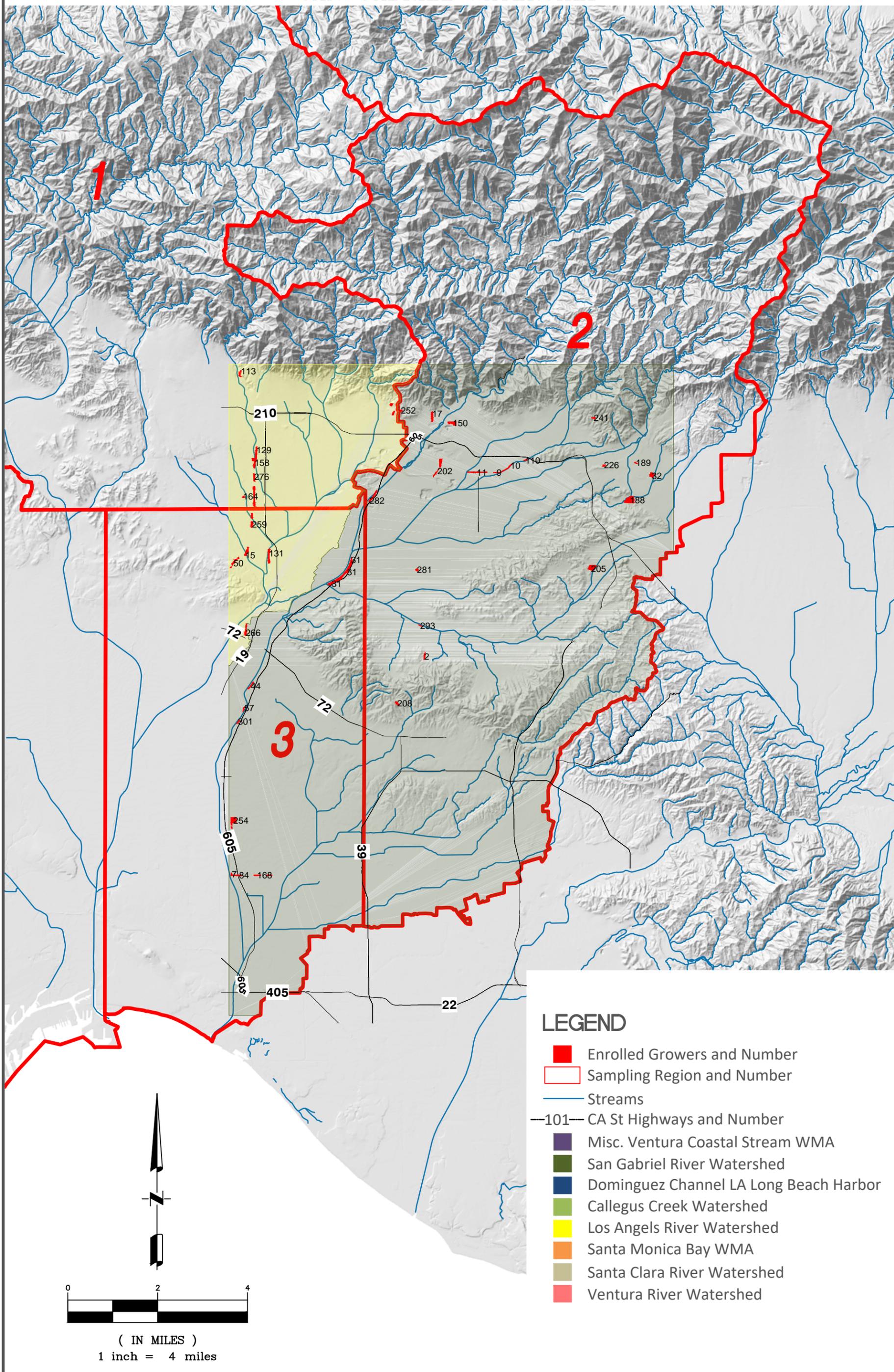
FIGURE 1.2 LOS ANGELES COUNTY IRRIGATED LANDS GROUP SANTA CLARA RIVER WATERSHED



**FIGURE 1.3 LOS ANGELES COUNTY IRRIGATED LANDS GROUP
LOS ANGELES RIVER WATERSHED**



**FIGURE 1.5 LOS ANGELES COUNTY IRRIGATED LANDS GROUP
SAN GABRIEL WATERSHED**



APPENDIX A

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

NGA #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
2	Ayon Nursery	Adriana Ayon - Jesus Ayon	8207019801 8207019802	16448 Haliburton Rd	Hacienda Heights	16448 Haliburton Rd	Hacienda Heights	CA	91745	General Ornamental	SG	6.00	5.00
3	ABC Nursery, Inc.	Eric Yonemura	6329001800 6329001801 6330019801 6330019800	6800 Darwell Avenue	Bell Gardens	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	LA	22.21	10.20
4	ABC Nursery, Inc.	Eric Yonemura	6126011028 6126011029 6126011035 6126011036 6126011800	424 E. Gardena Boulevard	Gardena	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	D	19.19	11.51
5	ABC Nursery, Inc.	Eric Yonemura	7168034800 7168034801 7168034281 7168034285 7168034270 7168034289 7168034276 7168034278 7168034272 7168034280 7168034273 7168034274	6221 Clark Avenue	Lakewood	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	SG	6.40	2.70
6	ABC Nursery, Inc.	Eric Yonemura	624008800 624008801 624008802	7132 Somerset Boulevard	Paramount	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	LA	9.52	4.87
7	ABC Nursery, Inc.	Eric Yonemura	7049021800 7049021801 7049021802 7049021803 7049021802 7049021800	20200 Studebaker	Cerritos	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	LA	13.84	8.30
8	ABC Nursery, Inc.	Eric Yonemura	4089009800, 4089016802, 4089016800, 4089011801, 4089011800, 4089010800, 4089009800 4089010800 4089011800 4089011801 4089017800 4089016802 4089016800	18601 Yukon Avenue	Torrance	424 East Gardena Blvd.	Gardena	CA	90248	General Ornamental	D	21.97	10.20
9	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	8622022270 8622012271 8622013270 8622022006	5359 Citrus Ave	Azusa	18012 E. Alford St.	Azusa	CA	91702	General Ornamental	SG	3.00	2.25
10	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	8630008274 8629002270	1050 E Gladstone St	Azusa	18012 E. Alford St.	Azusa	CA	91702	General Ornamental	SG	7.00	5.25

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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	Acosta Growers Inc.	Eddie Acosta / Carlos Acosta	5283017270 5283017271 5283017271	2450 Charlotte Ave	Rosemead	18012 E. Alford St.	Azusa	CA	91702	General Ornamental	LA	2.50	1.88
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	Calscape Growers	Chester (Dan) Robinson	5860004004	2103 Villa Heights Rd	Pasadena	1969 Oakwood Street	Pasadena	CA	91104	General Ornamental	LA	0.25	0.20
26	Canyon Way Nursery	Mark Wurzel	2317019900 2317018900 2317017900 2317018900 2317019900	11745 Sherman Way	North Hollywood	3214 Oakdell Road	Studio City	CA	91604	General Ornamental	LA	4.98	4.25
27	Certified Plant Growers, Inc.	Tom Miesen	8021020800 8021008806 8021008802 8021008801 8021008902	10400 Downey/Norwalk Rd	Norwalk	P.O. Box 1696	Temecula	CA	92593	Color	SG	10.00	6.50
28	Certified Plant Growers, Inc.	Tom Miesen	8021005915 8021004801 8021004800 8021004805 8021004804	10524 E Firestone Blvd	Norwalk	P.O. Box 1696	Temecula	CA	92593	Color	SG	2.50	1.50

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31	Coiner Nursery	James Coiner	8110029800 8110029910 8110029904 8110029905 8110029906 8110029907 8110029908 8115002908 8115002907 8115002906 8115002800 8115002905 8115002904 8115002801 8115001801 8115001908 8115001800 8115001909	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 7330009908 7330009907 7330009905 7330009903 7330009911	321 W. Sepulveda Blvd	Carson	321 W Sepulveda Blvd.	Carson	CA	90745	Color	D	32.00	18.50
34	Corey Nursery Co.	Jeff Corey	8307002032	1650 Monte Vista Avenue	Claremont	P. O. Box 609	Claremont	CA	91711	Greenhouse	SA	6.80	3.00
35	Cyclamen Growers Inc.(dba C Grows)	Tomoko Copon	2530003017 2530003018	11545 Kagel Canyon St	Sylmar	11545 Kagel Canyon St.	Lake View Terrace	CA	91342	Greenhouse	LA	3.54	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

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46	F K Nursery, Inc.	Eric Kageyama	4261037001 4261037005 4261037006 4261037007 4261037004 4261037008	2027 Colby Ave	Los Angeles	2027 Colby Avenue	Los Angeles	CA	90025	General Ornamental	SM	1.46	0.92
50	Carreon Nursery	Guadalupe Carreon/ Adriana Carreon	5277023802 5277023803 5277023804 5277023805	7900 La Merced Road	Rosemead	472 Giano Avenue	La Puente	CA	91744	General Ornamental	LA	6.00	6.00
53	New West Growers, Inc.	Grace Hernandez	7318004803	1601 S. Santa Fe Ave	Compton	1413 Kenneth Rd. #227	Glendale	CA	91201	General Ornamental	LA	3.50	1.70
54	New West Growers, Inc.	Grace Hernandez		110 West Green Leaf	Compton	1413 Kenneth Rd. #227	Glendale	CA	91201	General Ornamental	LA	3.00	1.00
55	Moneta Nursery, Inc.	Gary Ishii	6115019043 6115019044 6115019045 6115019042	13633 South Vermont Avenue	Gardena	13633 S. Vermont Avenue	Gardena	CA	90247	Retail / Multiple	D	4.75	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

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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	Centeno's Nursery & Landscaping	Jose Centeno/ Rene Centeno	7339006800 7339002803 7339003801 7339003800 7339007802	17514 S. Figueroa Street	Gardena	17514 S. Figueroa St.	Gardena	CA	90248	General Ornamental	D	7.70	6.00
81	Centeno's Nursery & Landscaping	Jose Centeno/ Rene Centeno	7113014800	6850 Paramount Blvd	Long Beach	17514 S. Figueroa St.	Gardena	CA	90248	General Ornamental	SG	4.70	3.00
82	Damas Nursery	Julian Damas/ Yuniva Pierce	6351036800 6351036801 6351036802 6351036803 6351036804 6351036805	6265 E. Hereford Drive	E. Los Angeles	8210 Passons Blvd	Pico Rivera	CA	90660	General Ornamental	LA	7.00	5.00
84	Cerritos Growers	Jose de Jesus Gallo/ Maria Silva	7050005800 7050005801	19805 Gridley Rd	Cerritos	4943 Buffington Rd	El Monte	CA	91732	General Ornamental	SG	3.5	3.00
90	Kobata Growers, Inc.	Jack Mayesh	7336004277 7336004276	20300 Figueroa Street	Carson	17622 Van Ness	Torrance	CA	90504	Color	D	3.00	2.50
91	Kobata Growers, Inc.	Jack Mayesh	4096005800 4096005801 4096005802	17622 Van Ness Avenue	Torrance	17622 Van Ness	Torrance	CA	90504	General Ornamental	D	8.00	6.50
92	Kobata Growers, Inc.	Jack Mayesh	4095001800 4095001802	17629 Van Ness Avenue	Torrance	17622 Van Ness	Torrance	CA	90504	Color	D	5.00	6.50
94	Gardena Nursery & Landscape Maintenance	Janet Mercado	6121004901	551 W. 168th Street	Gardena	551 W. 168th St.	Gardena	CA	90248	General Ornamental	D	1.60	1.60
95	Wilmington Nursery	Juan Ramirez Rodrigo Ramirez (New Owner)	7404034900	898 Deloras Drive	Wilmington	898 E Deloras Drive	Carson	CA	90745	General Ornamental	D	3.50	2.50

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96	Ruiz Nursery	Jose Ruiz	7304024802 7304024801 7304024800 7304012803 7304012804 7304012805 7304012806 7304012807 7304012808 7304012809 7318006801	7045 N. Long Beach Blvd	Long Beach	7045 N. Long Beach Blvd	Long Beach	CA	90805	General Ornamental	LA	4.16	2.00
98	Jauregui Nursery, LLC	Filiberto Jauregui	7336009271	20300 Main	Carson	4185 Paseo de Oro	Cypress	CA	90630	General Ornamental	D	4.80	1.50
100	Jauregui Nursery, LLC	Filiberto Jauregui	6120025900 6120024900 6120026902 6120027901	551 West Alondra	Gardena	4185 Paseo de Oro	Cypress	CA	90630	General Ornamental	D	4.00	3.00
101	Jauregui Nursery, LLC	Filiberto Jauregui	7048021271 7061008270 7061008275 7061008276	6741 Del Amo	Lakewood	4185 Paseo de Oro	Cypress	CA	90630	General Ornamental	SG	3.10	2.00
105	Live Art Plantscapes, Inc.	Larry Tabeling	2763001904 2763030900	18809 Plummer St	Northridge	3351 La Cienega Place	Los Angeles	CA	90016	Greenhouse	LA	3.66	1.80
106	Lomita Plant Growers	Mercedes Sanabria	7404030900	835 E Lomita Blvd	Wilmington	835 East Lomita Blvd.	Wilmington	CA	90744	General Ornamental	D	3.02	2.50
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.	Bob & Leilani Underwood	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 Nursery/Nakayama Nursery Inc.	Lloyd Nakayama	6115013007 6115013008 6115013009 6115013010 6115013011	1341 W. 141st Street	Gardena	1341 W 141st Street	Gardena	CA	90247	General Ornamental	D	0.75	0.75
125	Norman's Nursery, Inc.	Nancy Webb 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

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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	Norman's Nursery, Inc.	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	Sunflower Farms	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 Nursery	Richard Green	2809003270	Rosedel Street	Saugus	26191 Bouquet Canyon Rd.	Saugus	CA	91350	General Ornamental	SC	4.00	2.00
145	Centeno's Nursery & Landscaping	Jose Centeno/ Rene Centeno	7339008913 7339008911 7339007901	565 W. 189th Street	Gardena	17514 S. Figueroa St.	Gardena	CA	90248	General Ornamental	D	4.67	3.00
149	Vargas Nursery	Oscar Vargas/ Reuben Vargas	7162001274	17020 Passage Ave	Bellflower	3925 E. Elizabeth St	Compton	CA	90221	General Ornamental	SG	1.75	1.75
150	Colorama Wholesale Nursery	Richard Wilson	8617001029	1025 N. Todd Ave.	Azusa	1025 N Todd Avenue	Azusa	CA	91702	Color	SG	26.00	15.30
151	Rainforest Flora Inc.	Jerry Robinson	7522006800	19121 Hawthorne Blvd	Torrance	19121 Hawthorne Blvd.	Torrance	CA	90503	Greenhouse	D	5.00	1.00
152	Rancho Escondido Vineyard	George Rosenthal	4464027018 4464027013	Newton Cyn & Kanan Rd	Malibu	Raleigh Enterprises, 100 Wilshire Blvd., 8th Floor	Santa Monica	CA	90401	Vineyard	SM	25.00	25.00
154	Rolling Hills Nursery	Esteban Villafana / Koji Shimohara	7116001800	6944 Orange Ave	Long Beach	PO Box 789	Paramount	CA	90723	General Ornamental	LA	8.00	6.00
158	Sakaida Nursery, Inc.	Mike Gutierrez	5381015802 5381015806 5381015807 5381015808 5381015809	8538-8601 Longden Ave	San Gabriel	8626 E. Grand Ave.	Rosemead	CA	91770	General Ornamental	LA	7.00	6.89

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159	Sakaida Nursery, Inc.	Mike Gutierrez	5389005800 5389005803	8626 E Grand Ave	Rosemead	8626 E. Grand Ave.	Rosemead	CA	91770	General Ornamental	LA	4.50	4.00
160	Sakaida Nursery, Inc.	Mike Gutierrez	5381011011	6544 N. Vista Street	San Gabriel	8626 E. Grand Ave.	Rosemead	CA	91770	General Ornamental	LA	4.00	3.00
161	Salco Growers	Frank Spina	7165001270 7165001011 7165001271 7165001275 7165001272 7165019270 7165001801 7165001800 7165019800 7165019801 7165019805 7165019804 7165019803	6236 Bellflower Rd	Lakewood	6236 Bellflower Blvd	Lakewood	CA	90713	Color	SG	4.00	2.00
162	San Gabriel Nursery & Florist	Fred Yoshimura/ Mary Swanton	5276018003	2015 Potrero Grande	Monterey Park	632 South San Gabriel Blvd.	San Gabriel	CA	91776	General Ornamental	LA	10.00	6.00
164	San Gabriel Nursery & Florist	Fred Yoshimura/ Mary Swanton	5373028024 5373028025 5373028026 5373028027 5373028028 5373028029 5373028036 5373028009 5373028010 5373028011 5373028012 5373028013 5373028014 5373028015 5373028016 5373028017 5373028018 5373028019 5373028020 5373028021	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

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179	Ultra Greens Nursery	Michael Lentz	2504009800	14025 Polk Street	Sylmar	P O Box 922259	Sylmar	CA	91392	General Ornamental	LA	1.23	1.50
180	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	Valley Sod Farm, Inc.	Dan Gibson	2689002910 2689002909	16405 Chase Street	North Hills	16405 Chase Street	North Hills	CA	91343	Sod	LA	36.00	36.00
186	I.T. Nursery Inc	Wayne Tagawa	6125014003	256 East Alondra	Gardena	256 E Alondra Blvd	Gardena	CA	90248	General Ornamental	D	2.76	1.75
187	West Covina Wholesale Nursery	Dave Zylstra	8666021902 8666021904	2820 Amherst Ave	La Verne	P. O. Box 8046	La Verne	CA	91750	General Ornamental	SG	5.00	4.50
188	West Covina Wholesale Nursery	Dave Zylstra	8378022910	West end of Puddingstone West off of Fairplex at Bracket Field	La Verne	P. O. Box 8046	La Verne	CA	91750	General Ornamental	SG	20.00	15.25
189	West Covina Wholesale Nursery	Dave Zylstra	8391003911	3425 Damien Ave	La Verne	P. O. Box 8046	La Verne	CA	91750	General Ornamental	SG	1.50	1.25
190	West Covina Wholesale Nursery	Dave Zylstra	5386015800 5386015801 5386015802 5386015803 5387004801 5387004800 5387004802 5387004803	5815 Burton Ave	San Gabriel	P. O. Box 8046	La Verne	CA	91750	General Ornamental	LA	10.00	9.25
199	Moraga Vineyards	Scott Rich	4368005025 4368006007 4368024020 4368024025	1070 Moraga Dr.	Los Angeles	650 N. Sepulveda Blvd	Los Angeles	CA	90049	Vineyard	LA	8.00	7.00
200	C & S Nursery, Inc.	Santiago Rosales II	5025006900	3615 Hauser Bl	Los Angeles	P.O. Box 642179	Los Angeles	CA	90064	General Ornamental	LA	2.50	2.00
202	El Nativo Growers, Inc.	James Campbell	8533010909 8619002903 8533012908	200 S. Peckham	Azusa	200 South Peckham Rd.	Azusa	CA	91702	General Ornamental	SM	9.00	7.00
204	Worldwide Exotics Inc.	Michele Jennings 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 Polytechnic University	Dan Hostetler	8709023908 8709023907 8709023910	3801 W. Temple	Pomona	3801 W. Temple Ave.	Pomona	CA	91768	Multiple	SG	1,200.00	336.00
206	A & R Nursery, Inc.	Adrian Lopez	5284023801	7950 Graves Ave	Rosemead	7950 Graves Ave	Rosemead	CA	91770	General Ornamental	LA	2.50	0.80
207	Golden Oak Ranch	Steve Sligh	2848010020	19802 Placerita Canyon Rd	Newhall	19802 Placerita Canyon Rd	Newhall	CA	91321	Multiple	SC	890.00	200.00
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 #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			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	The Malibu 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	Choji Matsushita	Richard Matsushita	8392014036 8392014035	724 N. Cataract Avenue	San Dimas	724 N. Cataract Ave	San Dimas	CA	91773	Cutflower	SG	3.80	1.70
228	La Vina Gomez de Malibu	Bob Tobias/ David Gomez	2058014014	32720 Mulholland Hwy	Malibu	P.O. Box 577	Agoura Hills	CA	91376	Vineyard	LA	5.00	0.90
229	Katharina Hahn(Schetter Malibu) Vineyard	Charles Schetter Katharina Hahn/Jaime Page	4467003023	5825 Murphy Way	Malibu	5825 Murphy Way	Malibu	CA	90265	Vineyard	LA	0.80	0.50
230	Rancho Mar LLC	Bob Tobias	4457004048	2800 Malibu Canyon Road	Malibu	1250 4th Street	Santa Monica	CA	90401	Multiple	LA	40.00	5.00
232	Wish Vineyard LLC	Susan Hayes	2049006031	25045 Jim Bridger Rd	Hidden Hills	25045 Jim Bridger Rd	Hidden Hills	CA	93102	Vineyard	LA	0.66	0.66
233	Nuccio's Nursery, Inc.	Julius, Tom & Jim Nuccio	5830018003	3555 Chaney Trail	Altadena	3555 Chaney Trail	Altadena	CA	91001	General Ornamental	LA	80.00	5.00
235	Rocky Oaks Vineyard	Bob Tobias	2058017025	340 Kanan Road	Malibu	340 Kanan Road	Malibu	CA	90265	Vineyard	LA	35.00	7.00
236	Amigos Nursery, LLC	Sergio Vasquez	6049008278 6049009282 6049018292 6049009285	1420 E. 92nd Street	Los Angeles	P.O. Box 927	Downey	CA	90241	General Ornamental	LA	9.00	7.00
237	Saddlerock Ranch/ The Semler Companies Malibu	Ronald H. Semler	2058016008 2058016022	31727 Mulholland Hwy	Malibu	32111 Mulholland Hwy	Malibu	CA	90265	Multiple	LA	90.00	38.00
238	Zuma Canyon Orchids	George Vasquez	4467024003	5949 Bonsall Drive	Malibu	5949 Bonsall Dr.	Malibu	CA	90265	Greenhouse	LA	3.89	0.20
239	California Nurseries	Jose Gutierrez	2647023903 2644002905 2644002904 2644002900 2644004900 2644004902 2644004903 2644004901 2647025902 2647025901 2647025900	14301 Van Nuys Blvd	Arleta	P.O. Box 2778	North Hills	CA	91393	General Ornamental	LA	7.50	7.50
240	California Nurseries	Jose Gutierrez	2784009902	18955 Roscoe Blvd	Northridge	P.O. Box 2778	North Hills	CA	91393	General Ornamental	LA	1.50	1.50
243	Chartwell Estate Vineyard	Roland Venturini	4362016008	750 Bel Air Rd	Los Angeles	750 Bel Air Rd	Los Angeles	CA	90077	Vineyard	SM	1.50	1.00
244	Clark Vineyard	Chris Shaver/ Dave Clark	7567010026	11 Packsaddle Rd East	Rolling Hills	11 Packsaddle Rd East	Rolling Hills	CA	90274	Vineyard	SM	0.90	0.50
246	Elliott Dolin	Elliott Dolin	4467018045	5970 Cavalleri Rd	Malibu	5970 Cavalleri Rd	Malibu	CA	90265	Vineyard	SM	1.80	0.50
247	Fuku Bonsai Nursery	Juan Duran	6121003902 6121002901	560 W. 168th St.	Gardena	11862 Balboa Blvd, PMB 164	Grenada Hills	CA	91344	General Ornamental	D	2.20	1.75

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			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			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	Kenyon Landscape	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	Manassero Farms	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	The Orchid Garden	James Weiss	4088019802 4088019803	3511 W. 182nd St.	Torrance	2506 Ardmore Ave.	Hermosa Beach	CA	90254	General Ornamental	D	1.25	0.20
263	Malibu Vineyards	James Palmer	4472019030	33169 Decker School Rd	Malibu	22631 Pacific Coast Highway, Suite 900	Malibu	CA	90265	Vineyard	SM	4.20	3.00
264	Ben K Bonsai	Young Min/ Edward Min	5284020801	2301 Kelburn Ave	Rosemead	2301 Kelburn Ave	Rosemead	CA	91770	General Ornamental	LA	1.00	0.50
265	Chikugo-En Bonsai Nursery	Gary Ishii	6106019064 6106019063 6106019062	18110 S Western Ave	Gardena	18110 S Western Ave	Gardena	CA	90248	Retail / Multiple	D	1.00	0.75
266	Girasol Nursery	Angela Montoya	6373016270 6373017272 6373021270 6373016906 5272031274 5272032271 5272005271 5272005273	8555 Spruce St	Pico Rivera	PO Box 6862	Pico Rivera	CA	90661	General Ornamental	LA	9.00	2.50
267	Jackson Shrub Supply, Inc.	Gary Jackson	2320001902 2320008904 2320009902 2320006907 2320005904 2320005903	11505 Vanowen St	North Hollywood	11505 Vanowen St	North Hollywood	CA	91605	General Ornamental	LA	9.00	9.00
268	K. Yuge Nursery	Steve Yuge	4066016054	2027 W 164th St	Torrance	2027 W 164th St	Torrance	CA	90504	Greenhouse	D	1.50	0.75
269	K. Yuge Nursery	Steve Yuge	6129004024	336 W Redondo Beach Blvd	Gardena	2027 W 164th St	Torrance	CA	90504	Greenhouse	D	2.00	1.50
270	Lucky Plants	Javier Lopez	7404001278	902 Sepulveda Blvd	Carson	902 Sepulveda Blvd	Carson	CA	90745	General Ornamental	D	1.00	0.75
271	Melhill Vineyard	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 Landscape	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	Pierce College	Larry Kraus- Paul Nieman	2149007902	6201 Winnetka Ave	Woodland Hills	6201 Winnetka Ave	Woodland Hills	CA	91371	Multiple	LA	430.00	200.00

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			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			TOTAL	IRRIGATED
274	SAM Trust- Amalfi Vineyard	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	AJ Nursery, Inc.	Juan Ramos/ Augustin Cazarez	7318001802 7318001801	1600 S. Wilmington Ave	Compton	1600 S. Wilmington Ave	Compton	CA	90220	General Ornamental		6.50	5.00
277	Abeja Nursery	Marlene/Dimas Carbajal Abeja	4089016802	18601 Ermanita Ave.	Torrance	18601 Ermanita Ave.	Torrance	CA	90504	General Ornamental		4.00	3.00
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 #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			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	Kangaru Enterprises, LLC	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	Vineland Growers Nursery	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 #	OWNER/ TENANT	OPERATOR/ CONTACT	PARCEL			MAILING				CROP TYPE	Watershed	ACREAGE	
			APN	ADDRESS	CITY	ADDRESS	CITY	STATE	ZIP			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	12625 Sierra Hwy	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 & Nursery	Kevin Wong		8500 Dorothy St.	Rosemead	8500 Dorothy St.	Rosemead	CA	91770	General Ornamental		6.50	5.00
312	Valley Crest Tree Company	Robert Crudup		9500 Foothill Blvd	Sun Valley	3200 West Telegraph Rd.	Fillmore	CA	93015	General Ornamental		1.00	0.50
313	Alvarez Nursery	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		5761 Ashworth St	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	Saticoy Nursery	Armando Orozco Torres		12205 Saticoy St	North Hollywood	11321 Runnymede St.	Sun Valley	CA	91352	General Ornamental		5.00	4.00

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**

	OWNER/TENANT	NGA #	PROPERTY ADDRESS	ACREAGE (irrigated)	CWIL Order # R4-2005-0080										Interim Sampling Event ¹	CWIL Order # R4-2010-0186										CONTINUATION, CWIL												
					YEAR 1 ¹				YEAR 2 ²				YEAR 3			YEAR 4		YEAR 1		YEAR 2		YEAR 3		YEAR 4		YEAR 5												
					Dry Season		Wet Season		Dry Season		Wet Season		Dry Season	Wet Season		Dry Season	Wet Season	Dry Season		Wet Season ⁶		Dry Season		Wet Season		Dry Season		Wet Season		Dry Season		Wet Season						
					Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #1		Event #1	Event #1	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2	Event #1	Event #2					
GROUP 1	Boething Treeland Farms, Inc.	19	23475 Long Valley Road, Woodland Hills	14.68	8/13/07	9/25/07	12/18/07	1/5/08	8/12/08	9/23/08	11/26/08	12/15/08	10/12/09	ns*	8/19/10	ns*	3/23/11	10/11/11							2/28/14		10/7/14			9/30/15								
	Norman's Nsy-Broadway	124/125	8550 E Broadway, San Gabriel	7.00	8/13/07	9/24/07	12/7/07	1/5/08	8/12/08	9/24/08	11/26/08	12/15/08	10/12/09	ns*	8/18/10	ns*	3/21/11	10/11/11							2/28/14		10/7/14			9/30/15								
	Ultra Greens	178	13102 Maclay Street, Sylmar	8.50	Site not included as a sampling location.								11/26/08	12/15/08	10/12/09	ns*	8/17/10	ns*		10/11/11					2/28/14		10/7/14			9/30/15								
	Valley Sod Farms, Inc.	184	16405 Chase Street, North Hills	36.00	Site not included as a sampling location.								11/26/08	12/15/08	10/12/09	ns*	8/17/10	ns*		10/11/11					2/28/14		10/7/14			9/30/15								
GROUP 2	Acosta Growers Inc.	11	669 S. Azusa Ave., Azusa	7.50	Site not included as a sampling location.											Rotating Site		8/28/12																				
	M Downard-Rainbow Garden Nursery	110	1132 S Grand Avenue, Glendora	3.75	8/8/07	9/25/07	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																				
	R Wilson-Colorama Wholesale Nursery	150	1025 N. Todd Avenue, Azusa	15.30	8/8/07	9/25/07	12/7/07	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										12/2/14										
	West Covina Wholesale-Damien	189	3424 Damien Ave, La Verne	1.25	8/8/07	9/25/07	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																				
GROUP 3	Coiner Nursery	31	285 San Fidel, La Puente	48.00	8/21/07	9/28/07	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				5/15/15			1/15/16		
	H&H Nursery of Lakewood	64	6220 Lakewood Boulevard, Lakewood	2.50	8/21/07	9/28/07	1/23/08	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					5/15/15			1/15/16			
	Centeno's Nursery and Landscaping	81	6850 Paramount Blvd., Long Beach	3.00	Site not included as a sampling location.																																	
	SY Nursery Inc.	168	19900 S Pioneer Blvd, Cerritos	4.75	8/13/07	9/28/07	11/30/07	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					5/15/15			1/15/16			
GROUP 4	ABC Nursery, Inc.	4	424 E. Gardena Boulevard, Gardena	11.51	8/9/07	9/24/07	12/7/07	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				3/25/12			1/25/13			10/11/13							10/8/14				
	G Hernandez-New Westgrowers	53	1601 S. Santa Fe Ave, Compton	1.70	8/9/07	9/24/07	12/18/07	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			10/11/13								10/8/14				
	T-Y Nursery	176	Between Paulina/Prospect, Redondo Beach	7.50	8/9/07	9/24/07	12/18/07	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						10/11/13								10/8/14				
	Church Estate Vineyard	210	6415 Busch Drive, Malibu	2.75	Site not included as a sampling location.										11/26/08	12/15/08	10/13/09	ns*	8/19/10	ns*				3/25/12				10/11/13						10/8/14				
ROTATING SAMPLE SITES	Canyon Way Nursery	26	11745 Sherman Way, Studio City	4.25	Site not included as a sampling location.																																	
	Color Spot Nurseries, Inc.	33	321 W. Sepulveda Blvd., Carson	18.50	Site not included as a sampling location.																																	
	Carron Nursery	50	7900 La Merced Road, Rosemead	6.00	Site not included as a sampling location.																																	
	Live Art Landscapes, Inc.	105	18809 Plummer St, Northridge	1.80	Site not included as a sampling location.																																	
	Sakaida Nursery	158	8601 Longden Ave., San Gabriel	6.89	Site not included as a sampling location.																																	
	San Gabriel Nursery & Florist	162	2015 Potrero Grande, Monterey Park	6.00	Site not included as a sampling location.																																	
	Toro Nursery Inc.	170	17585 Crenshaw Blvd, Torrance	15.78	Site not included as a sampling location.																																	
	West Covina Wholesale-Puddingstone	188	1340 Puddingstone Dr., La Verne	15.25	Site not included as a sampling location.																																	
	Worldwide Exotics	204	11157 Orcas Ave., Lake Terrace	2.00	Site not included as a sampling location.																																	
	Lam Farms	212	8600 Jefferson, Paramount	1.00	Site not included as a sampling location.																																	
	Malibu Vineyard	221	3222 Rambla Pacifica, Malibu	2.00	Site not included as a sampling location.																																	
	Choji Matsushita	226	724 N. Cataract Av., San Dimas	1.70	Site not included as a sampling location.																																	
ABC Rhubarb	261	6208 Clara St., Bell Gardens	5.00	Site not included as a sampling location.																																		
DISCONTINUED SAMPLING SITES	Acosta Growers Inc.	13	16412 Wedgeworth Dr, Hacienda Hights	4.50	8/8/07	9/24/07	12/18/07	ns ⁴	8/13/08	9/24/08	11/26/08	12/15/08	10/12/09	ns*	8/18/10	ns*																			Site no longer in operation.			
	Brothers Nursery, Inc.	20	Cerritos & Newburgh St, Azusa	2.98	Site not included as a sampling location.																															Site no longer in operation.		
	Carlos Soto, Jr [^]	25	600 W. Alondra Blvd, Gardena	3.50	8/9/07	9/24/07	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.		
	Norman's Nursery-Ramona	122	12500 Ramona Blvd, Baldwin Park	39.93	Site not included as a sampling location.																																Site no longer in operation.	
	Norman's Nsy-Rosemead [^]	130	475 Rosemead Blvd, S. El Monte	16.56	8/6/07	9/24/07	12/7/07	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 operation.		
	Valley Crest Tree Company [^]	182	16202 Yarnell St. and 16222 Filbert St, Sylmar	16.00	8/21/07	9/25/07	12/7/07	1/24/08																												Site no longer in operation.		
	Valley Sod Farms, Inc. [^]	183	6301 Balboa Boulevard, Encino	60.00	8/6/07	9/26/07	12/18/07	1/5/08																														Site no longer in operation.
	Schoelkopf Vineyard [^]	224	31499 Pacific Coast Highway, Malibu	0.80	Site not included as a sampling location.										11/26/08	12/15/08	10/11/09	ns*	8/19/10	ns*																		Site no longer in 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

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

Sample Collected

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

Site	Sample #	Date	General Chemistry												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO ₃	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	1.1 ^{O9}	35	470	1.7	1,100	1.1 ^{O9}	8.4	1200	500	200	0.110
NGA #31	LAILG-NGA31-4	3/17/12	1.1	55	1.0 ^{O9}	12	160	0.90	520	1.0 ^{O9}	2.0	81	240	95	0.027
NGA #162	LAILG-NGA162-1	3/17/12	0.16	35	0.96 ^{O9}	5.9	120	0.95	350	0.96 ^{O9}	1.0	5	140	57	0.014
NGA #64	LAILG-NGA64-3	3/17/12	0.79 ^{FD}	5.8	0.28 ^{O9}	0.70 ^{FD}	8.4	0.32	57	0.28 ^{O9}	1.5 ^{FD}	500 ^{FD}	51	21	0.047
Duplicate	LAILG-NGA-DUP	3/17/12	0.60	5.4	0.25 ^{O9}	1.3	8.6	0.27	46	0.25 ^{O9}	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.
EB Estimated concentration, constituent detected at greater than 10% in equipment blank
MS-01 The spike recovery for this QC sample is outside of the established control limits possibly due to matrix interference.
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 inherent in the sample.
FB Estimated concentration, constituent detected at greater than 10% in field blank
na* Ammonia not analyzed due to sample collection via peristaltic pump
p Estimated concentration due to sample collection via peristaltic pump

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

Site	Sample #	Date	General Chemistry												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO ₃	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

Site	Sample #	Date	General Chemistry												
			Ammonia	Chloride	Diss Ortho	Nitrate	Sulfate	Diss Phos	TDS	Total Ortho	Total Phos	TSS	CA Hardness, as CaCO ₃	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.

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 HISTORICAL SAMPLES COLLECTED UNDER CWIL ORDER R4-2005-0080

**GENERAL CHEMISTRY
NURSERY GROWERS ASSOCIATION
LOS ANGELES IRRIGATED LANDS GROUP**

Site	Sample #	Date	General Chemistry									
			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-1	8/13/07	0.04 ^J	nd	nd	nd	nd	nd	32	nd	nd	nd
NGA FBLL	NGA-LAILG-FBLL	8/21/07	0.01 ^J	nd	nd	0.016 ^J	nd	nd	nd	nd	nd	nd
NGA EQBLL	NGA-LAILG-EQBLL	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	1.445 ^{7B}	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 #EQUII	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 #EQUIII	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 Table 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

- CWIL Conditional waiver for irrigated lands, order #R4-2005-0080
- B** Estimated concentration, since RPD of duplicate is >25%
- C Procedural blank Matrix Spike recovery out of limits
- E ESTIMATED CONCENTRATION, matrix spike does not meet acceptance criteria
- F Sulfate detected in lab blank, at 1.09 mg/L.
- J Estimated concentrations, results above MDL but less than RL

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

**GENERAL CHEMISTRY
NURSERY GROWERS ASSOCIATION
LOS ANGELES IRRIGATED LANDS GROUP**

Site	Sample #	Date	General Chemistry									
			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 #189	LAILG-NGA189-1	1/4/08	0.59	7.29	0.6851	1.83	26.43	1.33	192	1.8	2.475	20
NGA #19	LAILG-NGA19-3	1/5/08	0.12	157.52	0.2125	0.44	451.78	0.96	1,030	1.26	1.173	84
NGA #124	LAILG-NGA124-3	1/5/08	15.5	28.3	0.9814	28.34^{Q1}	57.68	1.66	378	1.66	2.228	40
NGA #183	LAILG-NGA183-4	1/5/08	0.73	5.82	1.0874	1.4	6.36	0.23	106	1.29	1.729	510
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
NGA #53	LAILG-NGA53-2	1/23/08	0.31	2.19	0.6425	0.76	14.92	0.82	nd	0.68	1.993	516
NGA #64	LAILG-NGA64-1	1/23/08	0.20	3.82	0.2818	3.83	101.1	0.3	nd	0.46	0.393	76
NGA #130	LAILG-NGA130-3	1/24/08	0.15	58.12	0.264	3.64	107.65	0.26	383	0.27	0.314	16
NGA #182	LAILG-NGA182-2	1/24/08	0.17 ^{M4}	7.39	0.6085	1.91 ^{M4}	14.22	0.76	218	0.81	0.825	64
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
NGA #19	LAILG-NGA 19-4	8/12/08	0.03 ^{FB}	104.03	1.1877	12.65	107.33	1.75	834	1.86	15.494	213
NGA # 4	LAILG-NGA 4-3	8/13/08	0.68	350.11	11.5262	200.18	219.52	69.7 ^{FD}	2,238	13.05	31.713	371 ^{FD}
Duplicate	LAILG-NGA-DUP	8/13/08	0.71	397.47	9.0404	212	252.22	34.87 ^{FD}	2,350	12	26.483	787 ^{FD}
NGA # 31	LAILG-NGA 31-1	9/23/08	0.13 ^{FD}	82.13 ^{EB,FB}	1.562 ^{H,FD}	17.3	134.93	1.472 ^H	602	2.34 ^H	1.813 ^{H,FD}	162
Duplicate	LAILG-NGA-DUP	9/23/08	0.37 ^{FD}	82.37 ^{EB,FB}	2.629 ^{H,FD}	19.64	136.19 ^{M4}	1.84 ^H	626	2.10 ^H	0.883 ^{HM3}	127
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
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	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 ^{FB}	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 ^{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 ^{FB}	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
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

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080 M4 Spike or surrogate compound recovery was out of control due to matrix interference.

EB Estimated concentration, constituent detected at greater than 10% in equipment blank The associated method blank spike or surrogate compound was in control and therefore

FD Estimated concentration. Field Duplicate RPD >25%. the sample data was reported without further clarification.

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

H Sample received and /or analyzed past the recommended holding time. Q1 Spike recovery and RPD control limits do not apply resulting from the parameter

M3 Detection of the analyte was difficult due to matrix interference. 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

Site	Sample #	Date	Chlorinated Pesticides																
			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	Water Quality Benchmarks		
MRL	Method Reporting Limits		
nl	not listed		

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

Site	Sample #	Date	Chlorinated Pesticides																
			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

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 Benchmarks		
MRL	Method Reporting Limits		
nl	not listed		

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

Site	Sample #	Date	Chlorinated Pesticides																
			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 estim

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%.	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.
J	Estimated concentrations, results above MDL but less than RL	BS-L	The recovery of this analyte in the BS/LCS was below the control limit. Sample result is suspect.
MDL	Method Detection Limits		
RL	Reporting Limits		
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

Site	Sample #	Date	Chlorinated Pesticides																
			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 ^{O2,FD}	9.8 ^{M4,O2,FD}	12.7 ^{O2,FD}	nd	485.7 ^{O1,O2,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^{O6}	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 estim

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 surrogate compound was in control and therefore the sample data was reported without further clarification.	Q3	RPD values are not accurate and not applicable because the results for R1 and/or R2 are lower than ten times the MDL.
FD	Estimated concentration. Field Duplicate RPD >25%.				
J	Estimated concentrations, results above MDL but less than RL				
MDL	Method Detection Limits				
RL	Reporting Limits	Q1	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration.	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
nd	not detected				
nl	not listed	Q2	The sample RPD was out of control. Sample is heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices.		

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

Site	Sample #	Date	Chlorinated Pesticides																
			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	nd	12.1	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 FB LI	NGA-LAILG-FB LI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA EQ BLI	NGA-LAILG-EQ BLI	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 estim

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080
A Component of total chlordane, see total chlordane for CWIL limitations
B Estimated concentration, RPD of duplicate sample >25%
C Procedural blank Matrix Spike recovery out of limits
D Procedural blank Matrix Spike Duplicate RPD out of limits
J Estimated concentrations, results above MDL but less than RL

MDL Method Detection Limits
RL Reporting Limits
nd not detected
nl not listed
na not analyzed

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

Site	Sample #	Date	Chlorinated Pesticides											Sample Notes	
			Aroclor XXXX, Sum of	Endrin	Endrin Aldehyde	Chlordane (tech)	Heptachlor	Heptachlor Epoxide	Methoxychlor	Mirex	Toxaphene	trans-Nonachlor	cis-Nonachlor		Total Chlordane
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

CWIL	Conditional waiver for irrigated lands, order #R4-2005-0080	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.
WQB	Water Quality Benchmarks		
MRL	Method Reporting Limits		
nl	not listed		

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

Site	Sample #	Date	Chlorinated Pesticides											Sample Notes		
			Aroclor XXXX, Sum of	Endrin	Endrin Aldehyde	Chlordane (tech)	Heptachlor	Heptachlor Epoxide	Methoxychlor	Mirex	Toxaphene	trans-Nonachlor	cis-Nonachlor		Total Chlordane	
NGA #19	LAILG-NGA19-7	2/28/14	<500	<25	<25	<500	<25	<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	<25	<2500	<25	<25	<25	M-04
NGA #124	LAILG-NGA124-7	2/28/14	<500	<25	<25	<500	<25	<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	<25	<2500	<25	<25	<25	M-04
NGA #184	LAILG-NGA184-3	2/28/14	<500	<25	<25	<500	<25	<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	<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	<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	<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

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 Benchmarks		
MRL	Method Reporting Limits		
nl	not listed		

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

Site	Sample #	Date	Chlorinated Pesticides											
			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	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	nd
NGA # 150	LAILG-NGA 150-3	3/21/11	nd	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	nd
Duplicate	LAILG-NGA-DUP	3/21/11	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
Field Blank	LAILG-NGA- FB	3/21/11	nd	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	nd
NGA #31	LAILG-NGA31-4	3/17/12	nd	nd	nd	nd ^{S4}	nd	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	nd
NGA #64	LAILG-NGA64-3	3/17/12	nd	nd	nd	nd ^{S4}	nd	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	nd
Equip Blank	LAILG-NGA-EB	3/17/12	nd	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	nd
NGA #4	LAILG-NGA4-6	3/25/12	nd	nd	nd	nd ^{SGC}	nd	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	nd
NGA #176	LAILG-NGA176-2	3/25/12	nd	nd	nd	nd ^{SGC}	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
Duplicate	LAILG-NGA-DUP	3/25/12	nd	nd	nd	nd ^{S4}	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
Field Blank	LAILG-NGA- FB	3/25/12	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
CWIL Limits			nl	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	5.0
RL			100	5.0	5.0	20.0	5.0	5.0	5.0	5.0	500	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 estim

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.
MDL	Method Detection Limits		
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.
RL	Reporting Limits		
nd	not detected	BS-L	The recovery of this analyte in the BS/LCS was below the control limit. Sample result is suspect.
nl	not listed		
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	Pesticides															trans-Nonachlor	Total Chlordane		
			Endosulfan Sulfate	Endosulphan-I	Endosulfan-II	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Kepone	Mirex	Oxychlordane	Perthane	Toxaphene					
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	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	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	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	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	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	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	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	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	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	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	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	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 ^{M4}	nd	nd ^{M4}	nd	nd	nd	nd ^{M4}	nd ^{M4}	nd	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	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	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	nd	nd	8.5	20.1	
NGA # 19	LAILG-NGA 19-5	11/26/08	nd	nd	nd	nd	nd	nd	339.4 ^{Q3}	nd	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	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	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	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	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 ^{Q6}	nd	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	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	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	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	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	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	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	nd	nd	nd
NGA # 178	LAILG-NGA 178-1	12/15/08	nd	nd ^{M4}	nd ^{M4}	nd	nd	nd	nd	nd	nd	nd ^{M4}	nd	nd	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	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	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	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	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 estim

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 surrogate compound was in control and therefore the sample data was reported without further clarification.	Q3	RPD values are not accurate and not applicable because the results for R1 and/or R2 are lower than ten times the MDL.
MDL	Method Detection Limits				
J	Estimated concentrations, results above MDL but less than RL				
RL	Reporting Limits			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
nd	not detected	Q2	The sample RPD was out of control. Sample is heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices.		
nl	not listed				
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	Pesticides															
			Endosulfan Sulfate	Endosulphan-I	Endosulfan-II	Endrin	Endrin Aldehyde	Endrin Ketone	Heptachlor	Heptachlor Epoxide	Methoxychlor	Kepone	Mirex	Oxychlorane	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	
NGA #183	NGA-#183-LAILG-1	8/6/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	na	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	
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 FB LI	NGA-LAILG-FB LI	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA EQB LI	NGA-LAILG-EQB LI	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 estim

CWIL Conditional waiver for irrigated lands, order #R4-2005-0080
A Component of total chlordane, see total chlordane for CWIL limitations
B Estimated concentration, RPD of duplicate sample >25%
C Procedural blank Matrix Spike recovery out of limits
D Procedural blank Matrix Spike Duplicate RPD out of limits
J Estimated concentrations, results above MDL but less than RL

MDL Method Detection Limits
RL Reporting Limits
nd not detected
nl not listed
na not analyzed

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

Site	Sample #	Date	Organophosphorus Pesticide:																							Sample Notes
			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	
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
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

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

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

Site	Sample #	Date	Organophosphorus Pesticides:																							Sample Notes		
			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		
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	<10	
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	<10	
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	<10	
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	<10	
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	<10	
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	<10	
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	<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	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

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

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

Site	Sample #	Date	Organophosphorus Pesticide:																							Sample Notes	
			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	nd ^{MS-05}	nd ^{Q-02}	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	nd ^{MS-05}	nd ^{Q-02}	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	nd ^{MS-05}	nd ^{Q-02}	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	nd ^{MS-05}	nd ^{BS-03}	nd	nd	nd ^{MS-05}	nd ^{BS-03}	nd	nd	nd ^{Q-08}	nd	nd	nd	nd ^{MS-05}	nd	nd	nd
Duplicate	LAILG-NGA-DUP	3/21/11	nd	nd	11	nd	nd ^{Q-02}	nd ^{Q-02}	nd	nd	nd	nd ^{MS-05}	nd ^{Q-02}	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	
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	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	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	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	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	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd	nd	nd
NGA #64	LAILG-NGA64-3	3/17/12	nd ^{BS-03}	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{MS-05}	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd ^{BS-03}	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	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	nd	nd	nd
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	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	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	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd	nd ^{Q-08}	nd ^{Q-08}	nd	nd	nd ^{Q-08}	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	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	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd
NGA #170	LAILG-NGA170-1	3/25/12	nd ^{MS-05,BS-L}	nd	nd	nd ^{BS-03}	nd	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	nd ^{Q-08,A-01}	nd	nd	nd ^{BS-03}	nd
NGA #176	LAILG-NGA176-2	3/25/12	nd ^{MS-05,BS-L}	nd	nd	nd ^{BS-03}	nd	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	nd ^{Q-08,A-01}	nd	nd	nd ^{BS-03}	nd
NGA #210	LAILG-NGA210-2	3/25/12	nd ^{MS-05,BS-L}	nd	nd	nd ^{BS-03}	nd	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	nd ^{Q-08,A-01}	nd	nd	nd ^{BS-03}	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	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	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd
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	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	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd
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	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	nd ^{BS-03}	nd	nd	nd ^{BS-03}	nd
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			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

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.
MDL	Method Detection Limits	S4	The surrogate recovery for this sample is outside of established control limits due to possible sample matrix effect
RL	Reporting Limits	Q-08	High bias in the QC sample does not affect sample result since analyte was not detected or below the reporting limit
FD	Estimated concentration. Field Duplicate RPD >25%.	A-01	High bias in MS and MSD. However, ll-ccv has an acceptable recovery. The batch was accepted since all samples were ND for this analyte
nl	not listed	A-01a	Low recovery in BS and high recoveries in both MS/MSD. However, ll-ccv has an acceptable recovery. The batch was accepted since samples were either ND or yielded very high results.
nd	not detected	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.
(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	Q-02	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.
		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.
		BS-L	The recovery of this analyte in the BS/LCS was below the control limit. Sample result is suspect
		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

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

Site	Sample #	Date	Organophosphorus Pesticides:																		
			Bolstar	Chlorpyrifos	Demeton	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethoprop	Fenclorpos	Fensulfothion	Fenthion	Malathion	Merphos	Methyl Parathion	Mevinphos	Phorate	Tetrachlorvinphos	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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
NGA # 4	LAILG-NGA 4-3	8/13/08	nd ^{M4}	nd ^{M4}	nd ^{M4}	6,058.9 ^{Q1,Q2,FD}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	nd ^{M4}	1,148,630 ^{Q1}	nd ^{M4}	nd ^{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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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 ^{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	
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	
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	
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	
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	
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	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 surrogate compound was in control and therefore the sample data was reported without further clarification.	Q1	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration.
MDL	Method Detection Limits				
RL	Reporting Limits				
FD	Estimated concentration. Field Duplicate RPD >25%.				
nl	not listed			Q2	The sample RPD was out of control. Sample is heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices.
nd	not detected				
(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
ORGANOPHOSPHORUS PESTICIDES
NURSERY GROWERS ASSOCIATION
LOS ANGELES IRRIGATED LANDS GROUP

Site	Sample #	Date	Organophosphorus Pesticides																		
			Bolstar	Chlorpyrifos	Demeton	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Ethoprop	Fenclorphos	Fensulfothion	Fenthion	Malathion	Merphos	Methyl Parathion	Mevinphos	Phorate	Tetrachlorvinphos	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	
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	
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	
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	
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	
NGA BLANK	NGA LAILG-BLANK	8/13/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	
NGA FBLL	NGA-LAILG-FBLL	8/21/07	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	
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	
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	
NGA #183-DU	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	
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	
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	
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	
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	
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	
NGA #182-DU	NGA-Duplicate	12/7/07	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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
CWIL Limits			nl	25	nl	100	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 Conditional waiver for irrigated lands, order #R4-2005-0080
D Procedural blank Matrix Spike Duplicate RPD out of limits
nl not listed

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

Site	Sample #	Date	Pyrethroid Pesticides													Sample Notes		
			Allethrin	Bifenthrin	Cyfluthrin	Cypermethrin	Deltamethrin /Tralomethrin	Dichloran	Fenpropathrin (Danitol)	Fenvalerate /Esfenvalerate	L-Cyhalothrin	Pendimethalin	Permethrin	Prallethrin	Sumithrin		Telfluthrin	
NGA #150	LAILG-NGA-150-6	12/2/14	<2.0	4000	<2.0	<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	<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	<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	<2.0	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	<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	<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	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 estim

CWIL
WQB
nl

Conditional waiver for irrigated lands, order #R4-2005-0080
Water Quality Benchmark
not listed

M-04
S-GC

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

Site	Sample #	Date	Pyrethroid Pesticides													Sample Notes		
			Allethrin	Bifenthrin	Cyfluthrin	Cypermethrin	Deltamethrin /Tralomethrin	Dichloran	Fenpopathrin (Danitol)	Fenvalerate /Esfenvalerate	L-Cyhalothrin	Pendimethalin	Permethrin	Prallethrin	Sumithrin		Telfluthrin	
NGA #19	LAILG-NGA19-7	2/28/14	<2.0	<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	<2.0	<5.0	<2.0	<10	<2.0	
NGA #124	LAILG-NGA124-7	2/28/14	<10	3,700	<10	<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	<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	<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	<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	<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	<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	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 estim

CWIL
WQB
nl

Conditional waiver for irrigated lands, order #R4-2005-0080
Water Quality Benchmark
not listed

M-04
S-GC

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

Site	Sample #	Date	Pyrethroid Pesticides													Sample Notes	
			Allethrin	Bifenthrin	Cyfluthrin	Cypermethrin	Deltamethrin	Dichloran	Esfenvalerate	Fenvalerate	L-Cyhalothrin	Pendimethalin	Permethrin	Prallethrin	Sumithrin		Tellfluthrin
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 estim

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 for this constituent. See Table 8.	BS-L BS-03 A-01a	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. Low recovery in BS and high recoveries in both MS/MSD. However, LL-cv has an acceptable 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

Site	Sample #	Date	Pyrethroid Pesticides													
			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	nd
NGA #189	LAILG-NGA189-1	1/4/08	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	6.8	nd	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	nd
NGA #183	LAILG-NGA183-4	1/5/08	nd	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	nd
NGA #53	LAILG-NGA53-2	1/23/08	nd	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	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	nd
NGA #182	LAILG-NGA182-2	1/24/08	nd	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	nd
NGA # 19	LAILG-NGA19-4	8/12/08	nd	nd	nd	nd	82	nd	nd	nd	9.8	nd	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}	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	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	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	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}	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	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	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	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	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	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	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	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	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	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	nd
NGA # 189	LAILG-NGA 189-2	12/15/08	nd	nd	nd	nd	0.7 ^J	nd	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	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	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	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	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}	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	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	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	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	nd
CWIL Limits			nl	nl	nl	nl	nl	nl	nl	nl	nl	nl	nl ⁽¹⁾	nl	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	5
RL			2	2	2	2	2	2	2	2	2.0	2	25	2	25	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 estim

M4 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 was reported without further clarification.

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

FD Estimated concentration. Field Duplicate RPD >25%

nl not listed

nd not detected

J 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.

Q1 Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration.

Q2 The sample RPD was out of control. Sample is heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices.

Q3 RPD values are not accurate and not applicable because the results for R1 and/or R2 are lower than ten times the MDL.

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

Site	Sample #	Date	Pyrethroid Pesticides												
			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 FBLL	NGA-LAILG-FBLL	8/21/07	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd
NGA EQBLL	NGA-LAILG-EQBLL	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

Site	Sample #	Date	Ceriodaphnia		Fathead Minnow		Selenastrum	TIE	
			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		

Y significantly different from control group
N no significant difference between control group
P 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)
NR not required

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

Site	Sample #	Date	Ceriodaphnia		Fathead Minnow		Selenastrum	TIE	
			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%)

Y significantly different from control group
N no significant difference between control group
P 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
NR not required

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

Site	Sample #	Date	Ceriodaphnia		Fathead Minnow		Selenastrum	TIE	
			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		

Y significantly different from control group
N no significant difference between control group
P 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
NR not required

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

Site	Sample #	Date	Ceriodaphnia		Fathead Minnow		Selenastrum	TIE		
			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	TIE initiated based in results from sample 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 results from sample NGA #124-LAILG-2					1/8/08	TIE was initiated, did not show an observed effect	
NGA #4	LAILG-NGA4-2	1/23/08	TIE initiated based in results from sample NGA #4-LAILG-1					1/24/08	Non-polar organic compounds	
NGA #53	LAILG-NGA53-2	1/23/08	TIE initiated based in results from sample NGA #53-LAILG-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 results from sample NGA #182-LAILG-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	NR		NR			
NGA # 4	LAILG-NGA 4-3	8/13/08	0.00%	Y	NR		NR	8/26/08	Non-polar organics and particulate-bound toxicants	
NGA # 31	LAILG-NGA 31-1	9/23/08	20.00%	Y	NR		NR			
NGA # 19	LAILG-NGA19-5	11/26/08	70.00%	Y	NR		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	NR		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	NR		NR		N			
NGA # 150	LAILG-NGA 150-3	11/26/08	NR		NR		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	NR		NR	12/16/08	TIE was initiated, did not show an observed effect	
NGA # 189	LAILG-NGA 189-2	12/15/08	NR		NR		Y	1/15/09	Particulate Bound toxicants and OP compounds	
NGA # 110	LAILG-NGA 110-2	12/15/08	90.00%	N	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	NR		NR			
NGA # 4	LAILG-NGA 4-4	12/15/08	0.00%	Y	NR		NR	12/16/08	Metals,copper,cadmium,zink,manganese,lead,and nickle	

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

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

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

* Runoff streams were assumed to have a parabolic shape unless field measurements indicated otherwise. The cross sectional area of a parabola is 2/3*width*depth
ft/s feet per second mg/L milligrams per liter
°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)	pH	E.C. (uS)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
NGA #170	LAILG-NGA#170-1	3/25/12	Grab	14:35	nm	nm	13.81	6.18	25.8	10.59	512
				14:37		nm	13.98	6.32	22.1	10.23	452
				14:40		nm	13.73	6.27	19.8	10.31	446
NGA #176	LAILG-NGA#176-2	3/25/12	Grab	15:15	nm	nm	13.17	6.49	39.7	10.69	>800
				15:17		nm	13.16	6.63	38.4	10.41	>800
				15:21		nm	12.73	6.44	40.2	10.69	>800
NGA #210	LAILG-NGA#210-2	3/25/12	Grab	17:45	nm	nm	13.21	7.22	0.129	10.55	5.8
				17:47		nm	13.35	7.75	0.130	10.40	3.8
				17:50		nm	13.88	7.93	0.133	10.24	5.5

* Runoff streams were assumed to have a parabolic shape unless field measurements indicated otherwise. The cross sectional area of a parabola is 2/3*width*depth
ft/s feet per second mg/L milligrams per liter
°C degrees celcius NTU Nephelometric Turbidity Units
uS microsiemens nm not monitored

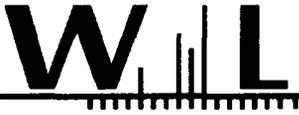
SUMMARY OF SAMPLES COLLECTED - CWIL ORDER R4-2010-0186 YEAR 3
FIELD MONITORING RESULTS
NURSERY GROWERS ASSOCIATION
LOS ANGELES IRRIGATED LANDS GROUP

Site	Sample ID	Date	Sample Type	Time (24hr)	*Approximate Flow Cross Section (ft ²)	Flow (ft/s)	Temperature (°C)	pH	E.C. (uS)	Dissolved Oxygen (mg/L)	Turbidity (NTU)
NGA #19	LAILG-NGA19-7	2/28/14	Bucket	6:11	nm	nm	12.4	7.92	1114	9.08	815
				6:12		nm	12.3	7.98	1152	9.52	820
				6:13		nm	12.4	7.87	1112	9.61	810
NGA #26	LAILG-NGA26-1	2/28/14	Bucket	9:01	nm	nm	14.8	7.77	1081	7.84	212
				9:02		nm	14.7	7.82	1057	7.95	225
				9:03		nm	14.7	7.83	1072	7.88	220
NGA #124	LAILG-NGA124-7	2/28/14	Bucket	11:22	nm	nm	14.7	7.65	894	9.10	475
				11:23		nm	14.6	7.50	910	9.01	450
				11:24		nm	14.7	7.51	915	8.80	482
NGA #178	LAILG-NGA178-2	2/28/14	Bucket	10:00	nm	nm	15.0	7.88	928	10.15	468
				10:01		nm	14.9	7.92	952	10.28	472
				10:02		nm	15.0	7.81	943	10.21	490
NGA #184	LAILG-NGA184-3	2/28/14	Bucket	7:10	nm	nm	14.7	8.01	1213	8.11	512
				7:11		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 feet per second mg/L milligrams per liter
°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



CERTIFICATE OF ANALYSIS

Client: PW Environmental 230 Dove Ct. Santa Paula CA, 93060	Report Date: 01/07/15 15:09
Attention: Bryn Home	Received Date: 12/02/14 15:25
Phone: (805) 525-5563	Turn Around: Normal
Fax: (805) 525-2896	Client Project: Nursery Growers Association
Work Order(s): 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.

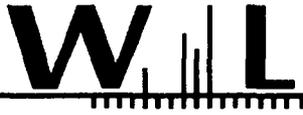
Case Narrative:

Reviewed by:



Brandon Gee
Project Manager





PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 12/02/14 15:25
Date Reported: 01/07/15 15:09

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-150-8	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 8058

Chlorinated Pesticides and/or PCBs

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

Metals by EPA 200 Series Methods

Pyrethroid Pesticides by GC/MS SIM

Semivolatile Organic Compounds by GC/MS



PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 12/02/14 15:25
Date Reported: 01/07/15 15:09

Sampled: 12/02/14 05:00

4L02094-01 LAILG-NGA-EB

Sampled By: Scott Jordan

Matrix: Water

Anions by IC, EPA Method 9058

Method: EPA 300.0

Batch: W4L0288

Prepared: 12/04/14 11:30

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	

Chlorinated Pesticides and/or PCBs

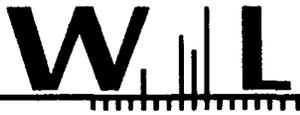
Method: EPA 608

Batch: W4L0182

Prepared: 12/03/14 09:50

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	5.0	ng/l	1	12/12/14 17:40	
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'-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	
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 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	
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 II	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	
Toxaphene	ND	500	ng/l	1	12/12/14 17:40	
trans-Nonachlor	ND	5.0	ng/l	1	12/12/14 17:40	



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

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	60 %	Conc:59.9	0.1-118	%		
Surr: Tetrachloro-meta-xylene	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 10:49	Analyst: Rebecca Juea Song			
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 12:54	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as N	ND	100	ug/l	1	12/03/14 15:24	

Method: EPA 365.1	Batch: W4L0241	Prepared: 12/03/14 22:42	Analyst: Nina Katrina 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 Christian			
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 Christian			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	ND	0.010	mg/l	1	12/15/14 15:24	

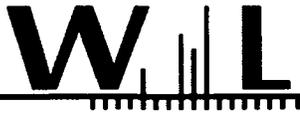
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 10:32	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	10	10	mg/l	1	12/04/14 12:15	

Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 11:45	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	ND	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 09:16	Analyst: Jessie Kristie			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium Hardness as CaCO3	1.64	0.250	mg/l	1	12/05/14 11:17	

Method: EPA 200.7	Batch: W4L0253	Prepared: 12/04/14 09:16	Analyst: Jessie Kristie			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	0.656	0.100	mg/l	1	12/05/14 11:17	



PW Environmental
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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

Metals by EPA 200 Series Methods

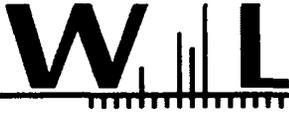
Method: EPA 200.8	Batch: W4L0255	Prepared: 12/04/14 09:25	Analyst: Royuan Rosario Lopez				
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier	
Copper, Total	1.1	0.50	ug/l	1	12/08/14 15:07		

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM	Batch: W4L0557	Prepared: 12/09/14 13:26	Analyst: Chris Samatmanakit				
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/l	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/l	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

Method: EPA 525.2	Batch: W4L0243	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 11:44		
Bolstar	ND	10	ng/l	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/l	1	12/05/14 11:44		
Fenthion	ND	10	ng/l	1	12/05/14 11:44		



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4L02094-01 LAILG-NGA-EB

Sampled: 12/02/14 05:00

Sampled By: Scott Jordan

Matrix: Water

Semivolatile Organic Compounds by GC/MS

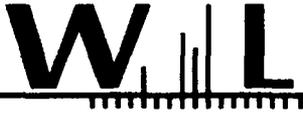
Method: EPA 525.2

Batch: W4L0243

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	%		



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Date Received: 12/02/14 15:25
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4L02094-02 LAILG-NGA-150-8

Sampled: 12/02/14 08:00

Sampled By: Scott Jordan

Matrix: Water

Anions by IC, EPA Method 9056

Method: EPA 300.0

Batch: W4L0288

Prepared: 12/04/14 11:30

Analyst: Alice T. Lee

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	60	2.5	mg/l	5	12/04/14 12:33	
Sulfate as SO4	130	2.5	mg/l	5	12/04/14 12:33	

Chlorinated Pesticides and/or PCBs

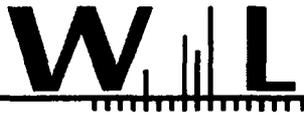
Method: EPA 608

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-Chlordane	ND	50	ng/l	10	12/12/14 18:11	M-04
Aroclor 1016	ND	1000	ng/l	10	12/12/14 18:11	M-04
Aroclor 1221	ND	1000	ng/l	10	12/12/14 18:11	M-04
Aroclor 1232	ND	1000	ng/l	10	12/12/14 18:11	M-04
Aroclor 1242	ND	1000	ng/l	10	12/12/14 18:11	M-04
Aroclor 1248	ND	1000	ng/l	10	12/12/14 18:11	M-04
Aroclor 1254	ND	1000	ng/l	10	12/12/14 18:11	M-04
Aroclor 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



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Date Received: 12/02/14 15:25
Date Reported: 01/07/15 15:09

4L02094-02 LAILG-NGA-160-8
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: Tetrachloro-meta-xylene	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 10:49	Analyst: Rebecca 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 12:54	Analyst: Angela 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 22:42	Analyst: Nina Katrina Reyes Aranas			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	2.6	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 Christian			
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 16:03	Analyst: Marilyn 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

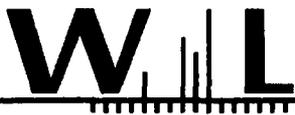
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 10:32	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	630	10	mg/l	1	12/04/14 12:15	

Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 11:45	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	240	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 09:16	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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Date Received: 12/02/14 15:25
Date Reported: 01/07/15 15:09

4L02094-02 LAILG-NGA-160-6
Sampled: 12/02/14 08:00 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	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	95	0.50	ug/l	1	12/08/14 15:29	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM Batch: W4L0557 Prepared: 12/09/14 13:26 Analyst: Chris 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/l	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	%		
Surr: Triphenyl phosphate	191 %	Conc:478	6-222	%		

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2 Batch: W4L0243 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	
Disulfoton	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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4L02094-02 LAILG-NGA-150-6

Sampled: 12/02/14 08:00

Sampled By: Scott Jordan

Matrix: Water

Semivolatile Organic Compounds by GC/MS

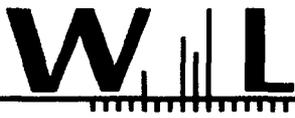
Method: EPA 525.2

Batch: W4L0243

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	%		



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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

Anions by IC, EPA Method 9056

Method: EPA 300.0

Batch: W4L0288

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

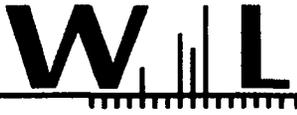
Method: EPA 608

Batch: W4L0182

Prepared: 12/03/14 09:50

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/l	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	
Aroclor 1016	ND	100	ng/l	1	12/12/14 18:41	
Aroclor 1221	ND	100	ng/l	1	12/12/14 18:41	
Aroclor 1232	ND	100	ng/l	1	12/12/14 18:41	
Aroclor 1242	ND	100	ng/l	1	12/12/14 18:41	
Aroclor 1248	ND	100	ng/l	1	12/12/14 18:41	
Aroclor 1254	ND	100	ng/l	1	12/12/14 18:41	
Aroclor 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	



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4L02094-03 LAILG-NGA-188-1

Sampled: 12/02/14 13:55

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	72 %	Conc:71.5	0.1-118	%		
Surr: Tetrachloro-meta-xylene	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 10:49	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 12:54	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
NO2+NO3 as 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 Katrina Reyes Aranas			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
o-Phosphate as P	0.66	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: Marilyn 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 16:03	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

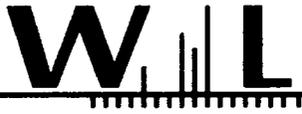
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 10:32	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	330	10	mg/l	1	12/04/14 12:15	

Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 11:45	Analyst: 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 EPA 200 Series Methods

Method: EPA 200.7	Batch: [CALC]	Prepared: 12/04/14 09:16	Analyst: 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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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 Lopez			
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	Prepared: 12/09/14 13:26	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 phosphate	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 Samatmanakit			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Azinphos methyl (Guthion)	ND	10	ng/l	1	12/05/14 12:35	
Bolstar	ND	10	ng/l	1	12/05/14 12:35	
Chlorpyrifos	ND	10	ng/l	1	12/05/14 12:35	
Coumaphos	ND	10	ng/l	1	12/05/14 12:35	
Demeton-o	ND	10	ng/l	1	12/05/14 12:35	
Demeton-s	ND	10	ng/l	1	12/05/14 12:35	
Diazinon	ND	10	ng/l	1	12/05/14 12:35	
Dichlorvos	ND	10	ng/l	1	12/05/14 12:35	
Dimethoate	ND	10	ng/l	1	12/05/14 12:35	
Disulfoton	ND	10	ng/l	1	12/05/14 12:35	
Ethoprop	ND	10	ng/l	1	12/05/14 12:35	
Ethyl parathion	ND	10	ng/l	1	12/05/14 12:35	
Fensulfothion	ND	10	ng/l	1	12/05/14 12:35	
Fenthion	ND	10	ng/l	1	12/05/14 12:35	



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4L02094-03 LAILG-NGA-188-1

Sampled: 12/02/14 13:55

Sampled By: Scott Jordan

Matrix: Water

Semivolatile Organic Compounds by GC/MS

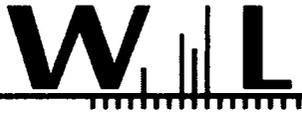
Method: EPA 525.2

Batch: W4L0243

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 12:35	
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



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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

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

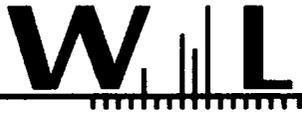
Method: EPA 608

Batch: W4L0182

Prepared: 12/03/14 09:50

Analyst: Maxwell Wang

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
2,4'-DDD	ND	5.0	ng/l	1	12/12/14 19:12	
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	
Aroclor 1016	ND	100	ng/l	1	12/12/14 19:12	
Aroclor 1221	ND	100	ng/l	1	12/12/14 19:12	
Aroclor 1232	ND	100	ng/l	1	12/12/14 19:12	
Aroclor 1242	ND	100	ng/l	1	12/12/14 19:12	
Aroclor 1248	ND	100	ng/l	1	12/12/14 19:12	
Aroclor 1254	ND	100	ng/l	1	12/12/14 19:12	
Aroclor 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 (Lindane)	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	



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Sampled: 12/02/14 00:00 4L02094-04 LAILG-NGA-DUP 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	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: Rebecca 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 12:54 Analyst: Angela 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 Katrina 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 16:03 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 10:32 Analyst: Angela 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: Angela J Whittington

Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	430	5	mg/l	1	12/03/14 20:15	

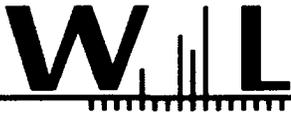
Metals by EPA 200 Series Methods

Method: EPA 200.7 Batch: [CALC] Prepared: 12/04/14 09:16 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	60.6	0.100	mg/l	1	12/05/14 11:25	



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Sampled: 12/02/14 00:00

4L02094-04 LAILG-NGA-DUP

Sampled By: Scott Jordan

Matrix: Water

Metals by EPA 200 Series Methods

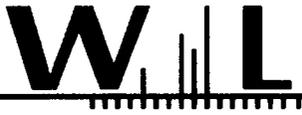
Method: EPA 200.8	Batch: W4L0255	Prepared: 12/04/14 09:25	Analyst: Royuan Rosario Lopez			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	31	0.50	ug/l	1	12/08/14 15:37	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM	Batch: W4L0557	Prepared: 12/09/14 13:26	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	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 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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4L02094-04 LAILG-NGA-DUP

Sampled: 12/02/14 00:00

Sampled By: Scott Jordan

Matrix: Water

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2

Batch: W4L0243

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 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



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4L02094-05 LAILG-NGA-FB

Sampled: 12/02/14 11:45

Sampled By: Scott Jordan

Matrix: Water

Anions by IC, EPA Method 9056

Method: EPA 300.0

Batch: W4L0288

Prepared: 12/04/14 11:30

Analyst: Alice T. Lee

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

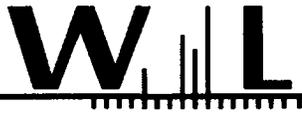
Method: EPA 608

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	
Aroclor 1016	ND	100	ng/l	1	12/12/14 19:43	
Aroclor 1221	ND	100	ng/l	1	12/12/14 19:43	
Aroclor 1232	ND	100	ng/l	1	12/12/14 19:43	
Aroclor 1242	ND	100	ng/l	1	12/12/14 19:43	
Aroclor 1248	ND	100	ng/l	1	12/12/14 19:43	
Aroclor 1254	ND	100	ng/l	1	12/12/14 19:43	
Aroclor 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/l	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
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Date Received: 12/02/14 15:25
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4L02094-05 LAILG-NGA-FB

Sampled: 12/02/14 11:45

Sampled By: Scott Jordan

Matrix: Water

Chlorinated Pesticides and/or PCBs

Method: EPA 808	Batch: W4L0182	Prepared: 12/03/14 09:50	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 10:49	Analyst: Rebecca Juea Song			
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 12:54	Analyst: Angela 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 22:42	Analyst: Nina Katrina 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 Christian			
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 16:03	Analyst: Marilyn B Christian			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Phosphorus, Dissolved	ND	0.010	mg/l	1	12/15/14 15:32	

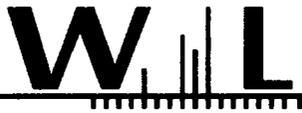
Method: SM 2540C	Batch: W4L0262	Prepared: 12/04/14 10:32	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Dissolved Solids	ND	10	mg/l	1	12/04/14 12:15	

Method: SM 2540D	Batch: W4L0198	Prepared: 12/03/14 11:45	Analyst: Angela J Whittington			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Total Suspended Solids	ND	5	mg/l	1	12/03/14 20:15	

Metals by EPA 200 Series Methods

Method: EPA 200.7	Batch: [CALC]	Prepared: 12/11/14 08:43	Analyst: 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 08:43	Analyst: 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	Result	MRL	Units	Dil	Analyzed	Qualifier
Copper, Total	ND	0.50	ug/l	1	12/08/14 15:55	

Pyrethroid Pesticides by GC/MS SIM

Method: GC/MS NCI-SIM	Batch: W4L0557	Prepared: 12/09/14 13:26	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 07:08	Analyst: Chris Samatmanakit			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Azinphos 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

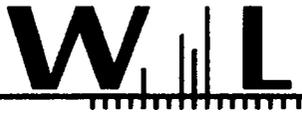
Method: EPA 525.2

Batch: W4L0243

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 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	%		
Surr: Triphenyl phosphate	111 %	Conc:555	40-163	%		



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QUALITY CONTROL SECTION



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Anions by IC, EPA Method 9056 - Quality Control

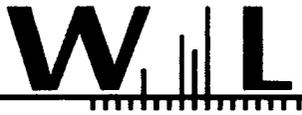
Batch W4L0288 - EPA 300.0

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: 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: 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: 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: 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: 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: 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	Data 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							
Aroclor 1016	ND	100	ng/l							
Aroclor 1221	ND	100	ng/l							
Aroclor 1232	ND	100	ng/l							
Aroclor 1242	ND	100	ng/l							



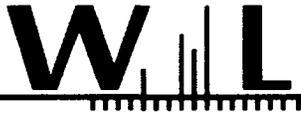
PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

Date Received: 12/02/14 15:25
Date Reported: 01/07/15 15:09

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
Blank (W4L0182-BLK1)				Analyzed: 12/12/14 15:07						
Aroclor 1248	ND	100	ng/l							
Aroclor 1254	ND	100	ng/l							
Aroclor 1260	ND	100	ng/l							
beta-BHC	ND	5.0	ng/l							
Chlordane (tech)	ND	100	ng/l							
cis-Nonachlor	ND	5.0	ng/l							
delta-BHC	ND	5.0	ng/l							
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	86.7		ng/l	100		87	0.1-118			
Surr: Tetrachloro-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			



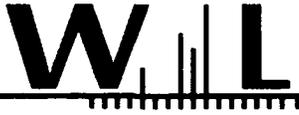
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230 Dove Ct.
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Date Received: 12/02/14 15:25
Date Reported: 01/07/15 15:09

Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4L0182 - EPA 608

Table with columns: Analyte, Result, MRL, Units, Spike Level, Source Result, %REC, % REC Limits, RPD, RPD Limit, Data Qualifiers. Includes sections for LCS (W4L0182-BS1) and Matrix Spike (W4L0182-MS1) with various pesticide entries and their corresponding values.



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Chlorinated Pesticides and/or PCBs - Quality Control

Batch W4L0182 - EPA 808

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W4L0182-MSD1)		Source: 4L02137-01								
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

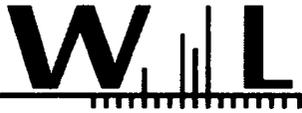
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0198-BLK1)										
Total Suspended Solids	ND	5	mg/l							
Duplicate (W4L0198-DUP1)		Source: 4L01052-02								
Total Suspended Solids	25.0	5	mg/l		22.0			13	20	
Duplicate (W4L0198-DUP2)		Source: 4L02094-05								
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 Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0208-BLK1)										
NO2+NO3 as N	ND	100	ug/l							
LCS (W4L0208-BS1)										
NO2+NO3 as N	1060	100	ug/l	1000		106	90-110			
Matrix Spike (W4L0208-MS1)		Source: 4L03012-02								
NO2+NO3 as N	2200	100	ug/l	2000	149	102	90-110			
Matrix Spike (W4L0208-MS2)		Source: 4L03012-03								
NO2+NO3 as N	2050	100	ug/l	2000	71.0	99	90-110			
Matrix Spike Dup (W4L0208-MSD1)		Source: 4L03012-02								
NO2+NO3 as N	2150	100	ug/l	2000	149	100	90-110	2	20	
Matrix Spike Dup (W4L0208-MSD2)		Source: 4L03012-03								
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)										
o-Phosphate as P	ND	0.0020	mg/l							
o-Phosphate as P, dissolved	ND	2.0	ug/l							
Blank (W4L0241-BLK2)										
o-Phosphate as P	ND	0.0020	mg/l							
o-Phosphate as P, dissolved	ND	2.0	ug/l							
LCS (W4L0241-BS1)										
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 Limits	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)				Source: 4L02094-06 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)				Source: 4L02094-06 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

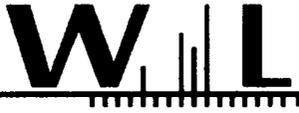
Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0262-BLK1)				Analyzed: 12/04/14 12:15						
Total Dissolved Solids	ND	10	mg/l							
LCS (W4L0262-BS1)				Analyzed: 12/04/14 12:15						
Total Dissolved Solids	819	10	mg/l	824		99	96-102			
Duplicate (W4L0262-DUP1)				Source: 4L02094-02 Analyzed: 12/04/14 12:15						
Total Dissolved Solids	525	10	mg/l		530			0.9	10	
Duplicate (W4L0262-DUP2)				Source: 4L02097-01 Analyzed: 12/04/14 12:15						
Total Dissolved Solids	412	10	mg/l		407			1	10	

Batch W4L0527 - EPA 360.1

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/l							
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)				Source: 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)				Source: 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 (W4L0658-BLK1)				Analyzed: 12/18/14 18:48						
Phosphorus as P, Total	ND	0.010	mg/l							
LCS (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: 4L02094-05 Analyzed: 12/18/14 19:07						



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

Batch W4L0658 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Duplicate (W4L0658-DUP1)				Source: 4L02094-06		Analyzed: 12/18/14 19:07				
Phosphorus as P, Total	0.00214	0.010	mg/l		0.00217			1	20	
Matrix Spike (W4L0658-MS1)				Source: 4L03064-01		Analyzed: 12/18/14 18:53				
Phosphorus as P, Total	0.990	0.050	mg/l	0.250	0.740	100	90-110			
Matrix Spike (W4L0658-MS2)				Source: 4L04059-01		Analyzed: 12/18/14 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)				Source: 4L03064-01		Analyzed: 12/18/14 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: 4L04059-01		Analyzed: 12/18/14 18:58				
Phosphorus as P, Total	0.386	0.020	mg/l	0.100	0.270	116	90-110	1	20	MS-02

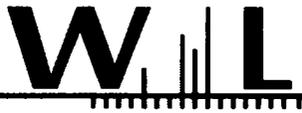
Batch W4L0660 - EPA 365.1

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0660-BLK1)				Analyzed: 12/15/14 15:21						
Phosphorus, Dissolved	ND	0.010	mg/l							
LCS (W4L0660-BS1)				Analyzed: 12/15/14 15:22						
Phosphorus, Dissolved	0.0495	0.010	mg/l	0.0500		99	90-110			
Matrix Spike (W4L0660-MS1)				Source: 4L02094-01		Analyzed: 12/15/14 15:25				
Phosphorus, Dissolved	0.0509	0.010	mg/l	0.0500	0.00147	99	90-110			
Matrix Spike (W4L0660-MS2)				Source: 4L02094-05		Analyzed: 12/15/14 15:34				
Phosphorus, Dissolved	0.0488	0.010	mg/l	0.0500	ND	98	90-110			
Matrix Spike Dup (W4L0660-MSD1)				Source: 4L02094-01		Analyzed: 12/15/14 15:27				
Phosphorus, Dissolved	0.0501	0.010	mg/l	0.0500	0.00147	97	90-110	2	20	
Matrix Spike Dup (W4L0660-MSD2)				Source: 4L02094-05		Analyzed: 12/15/14 15:35				
Phosphorus, Dissolved	0.0485	0.010	mg/l	0.0500	ND	97	90-110	0.6	20	

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 Limit	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)				Source: 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)				Source: 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)				Source: 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

Batch W4L0263 - EPA 200.7

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike Dup (W4L0263-MSD2)		Source: 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 W4L0265 - EPA 200.8

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0265-BLK1)		Analyzed: 12/08/14 13:52								
Copper, Total	ND	0.50	ug/l							
LCS (W4L0265-BS1)		Analyzed: 12/08/14 13:43								
Copper, Total	52.5	0.50	ug/l	50.0		105	85-115			
Matrix Spike (W4L0265-MS1)		Source: 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 (W4L0265-MS2)		Source: 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 (W4L0265-MSD1)		Source: 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 (W4L0265-MSD2)		Source: 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	

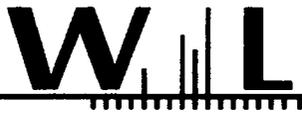
Batch W4L0701 - EPA 200.7

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0701-BLK1)		Analyzed: 12/11/14 12:17								
Calcium, Total	ND	0.100	mg/l							
LCS (W4L0701-BS1)		Analyzed: 12/11/14 12:22								
Calcium, Total	47.8	0.100	mg/l	50.2		95	85-115			
Matrix Spike (W4L0701-MS1)		Source: 4L09049-01		Analyzed: 12/11/14 13:21						
Calcium, Total	109	0.100	mg/l	50.2	59.9	97	70-130			
Matrix Spike (W4L0701-MS2)		Source: 4L09049-02		Analyzed: 12/11/14 13:27						
Calcium, Total	109	0.100	mg/l	50.2	60.0	97	70-130			
Matrix Spike Dup (W4L0701-MSD1)		Source: 4L09049-01		Analyzed: 12/11/14 13:24						
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 13:29						
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 Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0557-BLK1)		Analyzed: 12/16/14 12:31								
Allethrin	ND	2.0	ng/l							
Bifenthrin	ND	2.0	ng/l							



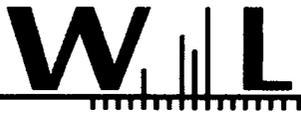
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Pyrethroid Pesticides by GC/MS SIM - Quality Control

Batch W4L0557 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0557-BLK1)				Analyzed: 12/16/14 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			
LCS (W4L0557-BS1)				Analyzed: 12/16/14 13:04						
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 phosphate	255		ng/l	250		102	6-222			
LCS Dup (W4L0557-BSD1)				Analyzed: 12/16/14 13:36						
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

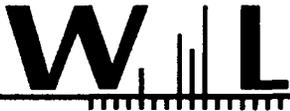
Batch W4L0557 - GC/MS NCI-SIM

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS Dup (W4L0557-BSD1)				Analyzed: 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: Triphenyl 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)				Analyzed: 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			



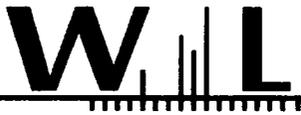
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Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W4L0243 - EPA 525.2

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W4L0243-BLK1)				Analyzed: 12/05/14 09:42						
Surr: Triphenyl phosphate	587		ng/l	500		117	40-163			
LCS (W4L0243-BS1)				Analyzed: 12/05/14 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/l	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: 4L03064-01		Analyzed: 12/05/14 10:31				
Azinphos methyl (Guthion)	101	10	ng/l	50.0	ND	202	0.1-154			MS-05
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/l	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	Data Qualifiers
Matrix Spike (W4L0243-MS1)			Source: 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/l	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/l	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-MS1
Matrix Spike Dup (W4L0243-MSD1)			Source: 4L03064-01		Analyzed: 12/05/14 10:55					
Azinphos methyl (Guthion)	99.2	10	ng/l	50.0	ND	198	0.1-154	2	30	MS-05
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-05
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-05
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	

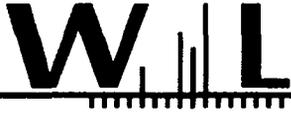


PW Environmental
230 Dove Ct.
Santa Paula CA, 93060

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)		Source: 4L03064-01		Analyzed: 12/05/14 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



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
- 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.



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 %
	TU _c =	1.00
	EC25 =	>100.00 %
	EC50 =	>100.00 %

GROWTH	NOEC =	100.00 %
	TU _c =	1.00
	IC25 =	>100.00 %
	IC50 =	>100.00 %

Yours very truly,



Scott Johnson
Laboratory Director

CETIS Summary Report

Report Date: 30 Dec-14 10:03 (p 1 of 2)
 Test Code: PWE1214.036fml | 15-9813-9094

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 10-0145-7354	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 03 Dec-14 14:55	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 10 Dec-14 14:25	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:
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	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
05-9167-8964	7d Survival Rate	100	>100	NA	NA	1	Wilcoxon Rank Sum Two-Sample Test
16-7632-0097	Mean Dry Biomass-mg	100	>100	NA	9.9%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
04-0255-1158	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
13-1412-4479	Mean Dry Biomass-mg	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
04-0255-1158	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
05-9167-8964	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
13-1412-4479	Mean Dry Biomass-mg	Control Resp	0.376	0.25 - NL	Yes	Passes Acceptability Criteria
16-7632-0097	Mean Dry Biomass-mg	Control Resp	0.376	0.25 - NL	Yes	Passes Acceptability Criteria
16-7632-0097	Mean Dry Biomass-mg	PMSD	0.09899	0.12 - 0.3	Yes	Below Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	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 Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.376	0.3252	0.4268	0.3353	0.4133	0.01596	0.03191	8.49%	0.0%
100		4	0.3782	0.3444	0.4119	0.3607	0.4087	0.0106	0.0212	5.61%	-0.58%

7d Survival Rate 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 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

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 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		15/15	15/15	15/15	15/15

CETIS Analytical Report

Report Date: 30 Dec-14 10:03 (p 2 of 2)
 Test Code: PWE1214.036fml | 15-9813-9094

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 13-1412-4479	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.8.7
Analyzed: 30 Dec-14 10:03	Analysis: Linear Interpolation (ICPIN)	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	

Linear Interpolation Options

X Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	2086526	280	Yes	Two-Point Interpolation

Point Estimates

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

Mean Dry Biomass-mg Summary

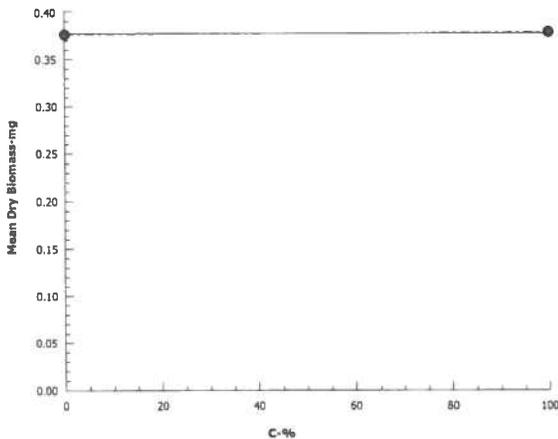
Calculated Variate

C-%	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.376	0.3353	0.4133	0.01596	0.03191	8.49%	0.0%
100		4	0.3782	0.3607	0.4087	0.0106	0.0212	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



CETIS Measurement Report

Report Date: 30 Dec-14 10:03 (p 2 of 2)
 Test Code: PWE1214.036fml | 15-9813-9094

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	69	69	69	69	69	68	68	68
100		108	108	108	108	108	108	108	108

Conductivity-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

Temperature-°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:

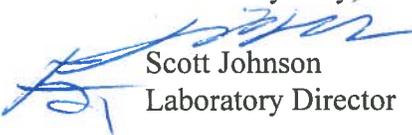
CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA150-6
DATE RECEIVED:	3 Dec -14
ABC LAB. NO.:	PWE1214.036

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

CETIS Summary Report

Report Date: 30 Dec-14 10:08 (p 1 of 2)
 Test Code: PWE1214.036cer | 10-7784-2683

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 02-2078-0717	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 03 Dec-14 14:55	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 10 Dec-14 14:25	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:
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	Source: Bioassay Report	
Sample Age: 25h (8.2 °C)	Station: LAILG-NGA150-6	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
13-6780-2235	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact Test
09-8580-2891	Reproduction	<100	100	NA	23.8%	>1	Wilcoxon Rank Sum Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
02-6199-2610	7d Survival Rate	EC5	50	16.67	N/A	2	Linear Interpolation (ICPIN)
		EC10	100	33.33	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	
12-9569-7159	Reproduction	IC5	5	5	5	20	Linear Interpolation (ICPIN)
		IC10	10	10	10	10	
		IC15	15	15	15	6.667	
		IC20	20	20	20	5	
		IC25	25	25	25	4	
		IC40	40	40	40	2.5	
		IC50	50	50	50	2	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
02-6199-2610	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
13-6780-2235	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
09-8580-2891	Reproduction	Control Resp	17.2	15 - NL	Yes	Passes Acceptability Criteria
12-9569-7159	Reproduction	Control Resp	17.2	15 - NL	Yes	Passes Acceptability Criteria
09-8580-2891	Reproduction	PMSD	0.2385	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	1	1	1	1	1	0	0	0.0%	0.0%
100		10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	10.0%

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	17.2	11.85	22.55	11	32	2.365	7.48	43.49%	0.0%
100		10	0	0	0	0	0	0	0		100.0%

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		0	1	1	1	1	1	1	1	1	1

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	32	18	28	20	12	12	11	12	11	16
100		0	0	0	0	0	0	0	0	0	0



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

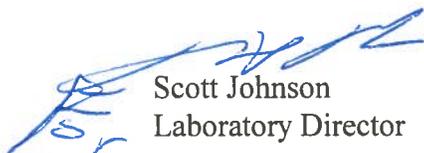
NOEC = <100.00 %

TUc = >1.00

IC25 = >100.00 %

IC50 = >100.00 %

Yours very truly,



Scott Johnson
Laboratory Director

CETIS Summary Report

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.

Batch ID: 12-4253-0679	Test Type: Cell Growth	Analyst:
Start Date: 04 Dec-14 12:25	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 08 Dec-14 11:30	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 95h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 04-5464-1883	Code: PWE1214.036sel	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: 52h (8.2 °C)	Station: LAILG-NGA150-6	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
03-1365-6575	Cell Density	<100	100	NA	2.0%	>1	Equal Variance t Two-Sample Test

Point Estimate 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 Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
03-1365-6575	Cell Density	Control CV	0.01892	NL - 0.2	Yes	Passes Acceptability Criteria
09-3598-6310	Cell Density	Control CV	0.01892	NL - 0.2	Yes	Passes Acceptability Criteria
03-1365-6575	Cell Density	Control Resp	1.26E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
09-3598-6310	Cell Density	Control Resp	1.26E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
03-1365-6575	Cell Density	PMSD	0.01995	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.262E+6	1.224E+6	1.299E+6	1.230E+6	1.281E+6	1.193E+4	2.387E+4	1.89%	0.0%
100		4	1.188E+6	1.172E+6	1.204E+6	1.176E+6	1.197E+6	5.039E+3	1.008E+4	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



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:

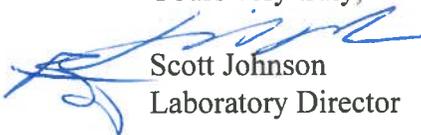
CLIENT:	PW Environmental
SAMPLE I.D.:	LAILG-NGA188-1
DATE RECEIVED:	3 Dec -14
ABC LAB. NO.:	PWE1214.037

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 %

Yours very truly,



Scott Johnson
Laboratory Director

CETIS Summary Report

Report Date: 30 Dec-14 10:16 (p 1 of 2)
 Test Code: PWE1214.037fml | 13-4985-9434

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID:	10-0145-7354	Test Type:	Growth-Survival (7d)	Analyst:	
Start Date:	03 Dec-14 14:55	Protocol:	EPA/821/R-02-013 (2002)	Diluent:	Laboratory Water
Ending Date:	10 Dec-14 14:25	Species:	Pimephales promelas	Brine:	Not Applicable
Duration:	6d 23h	Source:	Aquatic Biosystems, CO	Age:	

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		

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
17-9952-6406	7d Survival Rate	100	>100	NA	5.84%	1	Equal Variance t Two-Sample Test
12-8810-9697	Mean Dry Biomass-mg	100	>100	NA	11.0%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
10-7461-0870	7d Survival Rate	EC5	100	20	N/A	1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
07-2338-4101	Mean Dry Biomass-mg	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
10-7461-0870	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
17-9952-6406	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
07-2338-4101	Mean Dry Biomass-mg	Control Resp	0.376	0.25 - NL	Yes	Passes Acceptability Criteria
12-8810-9697	Mean Dry Biomass-mg	Control Resp	0.376	0.25 - NL	Yes	Passes Acceptability Criteria
12-8810-9697	Mean Dry Biomass-mg	PMSD	0.1099	0.12 - 0.3	Yes	Below Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1	1	1	1	1	0	0	0.0%	0.0%
100		4	0.95	0.8484	1	0.8667	1	0.03191	0.06383	6.72%	5.0%

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.376	0.3252	0.4268	0.3353	0.4133	0.01596	0.03191	8.49%	0.0%
100		4	0.4062	0.3614	0.4509	0.3747	0.442	0.01407	0.02813	6.93%	-8.02%

7d Survival Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	1	1	1
100		0.8667	0.9333	1	1

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

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 17-9952-6406	Endpoint: 7d Survival Rate	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
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
Angular (Corrected)	NA	C > T	NA	NA	5.84%	Passes 7d survival rate

Equal Variance t Two-Sample Test

Control	vs C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	100	1.595	1.943	0.115	6	0.0809	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.01767464	0.01767464	1	2.544	0.1619	Non-Significant Effect
Error	0.04169257	0.006948761	6			
Total	0.0593672		7			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	11.15	13.75	0.0156	Equal Variances
Variances	Levene Equality of Variance	16.72	13.75	0.0064	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.8612	0.6451	0.1235	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.25	0.3313	0.1599	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.6739	3.878	0.0786	Normal Distribution

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	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 (Corrected) Transformed Summary

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 Rate Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	1	1	1
100		0.8667	0.9333	1	1

Angular (Corrected) Transformed Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1.441	1.441	1.441	1.441
100		1.197	1.31	1.441	1.441

7d Survival Rate Binomials

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

CETIS Measurement Report

Report Date: 30 Dec-14 10:16 (p 1 of 2)
 Test Code: PWE1214.037fml | 13-4985-9434

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 10-0145-7354	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 03 Dec-14 14:55	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 10 Dec-14 14:25	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:
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	

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	336.5	334.5	338.5	333	340	0.8452	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 Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.738	7.459	8.016	7.5	8.5	0.1179	0.3335	4.31%	0
100		8	7.45	6.881	8.019	6.2	8.6	0.2405	0.6803	9.13%	0
Overall		16	7.594			6.2	8.6				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.763	7.539	7.986	7.3	8.1	0.09437	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	Count	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	24.04	23.95	24.13	24	24.3	0.03751	0.1061	0.44%	0
Overall		16	24.03			24	24.3				0 (0%)

CETIS Measurement 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.

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

Conductivity-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

Temperature-°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 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 17-9747-2628	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 03 Dec-14 14:55	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 10 Dec-14 14:25	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 03-7380-4237	Code: PWE1214.037cer	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	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
10-4510-8813	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact Test
18-6202-5288	Reproduction	100	>100	NA	36.1%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
17-3391-6106	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
19-2708-8918	Reproduction	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
10-4510-8813	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
17-3391-6106	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
18-6202-5288	Reproduction	Control Resp	17.2	15 - NL	Yes	Passes Acceptability Criteria
19-2708-8918	Reproduction	Control Resp	17.2	15 - NL	Yes	Passes Acceptability Criteria
18-6202-5288	Reproduction	PMSD	0.3613	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

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

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	17.2	11.85	22.55	11	32	2.365	7.48	43.49%	0.0%
100		10	25	18.91	31.09	5	33	2.692	8.511	34.05%	-45.35%

7d Survival Rate Detail

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

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	32	18	28	20	12	12	11	12	11	16
100		26	29	33	23	27	5	24	32	33	18

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.

7d Survival Rate Binomials

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

CETIS Analytical Report

Report Date: 30 Dec-14 10:34 (p 1 of 2)
 Test Code: PWE1214.037cer | 08-3644-0158

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 18-6202-5288	Endpoint: Reproduction	CETIS Version: CETISv1.8.7
Analyzed: 30 Dec-14 10:34	Analysis: Parametric-Two Sample	Official Results: Yes
Sample ID: 03-7380-4237	Code: PWE1214.037cer	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	

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	Test Result
Untransformed	NA	C > T	NA	NA	36.1%	Passes reproduction

Equal Variance t Two-Sample Test

Control	vs	C-%	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		100	-2.177	1.734	6.214	18	0.9785	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	304.2	304.2	1	4.738	0.0431	Significant Effect
Error	1155.6	64.2	18			
Total	1459.8		19			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Variance Ratio F	1.295	6.541	0.7067	Equal Variances
Variances	Mod Levene Equality of Variance	0.00571	8.285	0.9406	Equal Variances
Variances	Levene Equality of Variance	0.005069	8.285	0.9440	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.959	0.866	0.5244	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1347	0.2235	0.4526	Normal Distribution
Distribution	D'Agostino Skewness	0.83	2.576	0.4065	Normal Distribution
Distribution	D'Agostino Kurtosis	1.22	2.576	0.2225	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	2.177	9.21	0.3367	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.3634	3.878	0.4449	Normal Distribution

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	10	17.2	11.85	22.55	14	11	32	2.365	43.49%	0.0%
100		10	25	18.91	31.09	26.5	5	33	2.692	34.05%	-45.35%

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

CETIS Analytical Report

Report Date: 30 Dec-14 10:34 (p 1 of 2)
 Test Code: PWE1214.037cer | 08-3644-0158

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 17-3391-6106	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.8.7
Analyzed: 30 Dec-14 10:34	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes
Sample ID: 03-7380-4237	Code: PWE1214.037cer	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 Transform	Y Transform	Seed	Resamples	Exp 95% CL	Method
Linear	Linear	0	280	Yes	Two-Point Interpolation

Point Estimates

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

7d Survival Rate Summary

Calculated Variate(A/B)

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

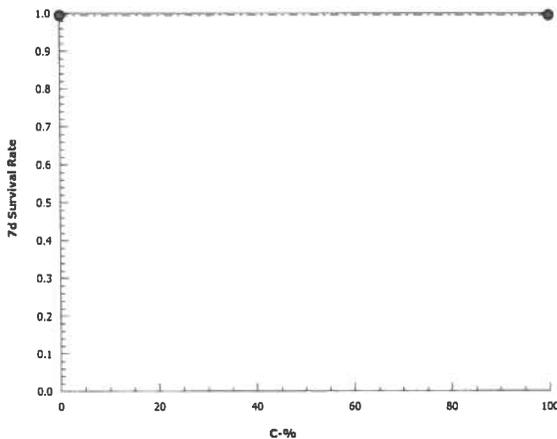
7d Survival Rate Detail

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

7d Survival Rate Binomials

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

Graphics



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 and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 17-9747-2628 Test Type: Reproduction-Survival (7d)
 Start Date: 03 Dec-14 14:55 Protocol: EPA/821/R-02-013 (2002)
 Ending Date: 10 Dec-14 14:25 Species: Ceriodaphnia dubia
 Duration: 6d 23h Source: Aquatic Biosystems, CO

Analyst:
 Diluent: Laboratory Water
 Brine: Not Applicable
 Age:

Sample ID: 03-7380-4237 Code: PWE1214.037cer
 Sample Date: 02 Dec-14 13:55 Material: Sample Water
 Receive Date: 03 Dec-14 10:55 Source: Bioassay Report
 Sample Age: 25h (8.2 °C) Station: LAILG-NGA188-1

Client: PW Environmental
 Project: Los Angeles Irrigated Lands Group

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	336.5	334.5	338.5	333	340	0.8452	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 Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.738	7.459	8.016	7.5	8.5	0.1179	0.3335	4.31%	0
100		8	7.45	6.881	8.019	6.2	8.6	0.2405	0.6803	9.13%	0
Overall		16	7.594			6.2	8.6				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.763	7.539	7.986	7.3	8.1	0.09437	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	Count	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	24.04	23.95	24.13	24	24.3	0.03751	0.1061	0.44%	0
Overall		16	24.03			24	24.3				0 (0%)

CETIS Measurement 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.

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

Conductivity-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

Temperature-°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:

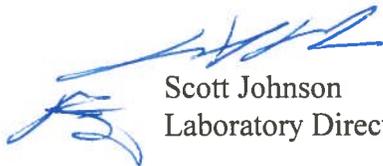
We are pleased to present the enclosed bioassay report. The test was conducted under guidelines prescribed in *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms EPA-821-R-02-013*. "All acceptability criteria were met and the concentration-response 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 %
TU _c =	1.00
IC ₂₅ =	>100.00 %
IC ₅₀ =	>100.00 %

Yours very truly,



Scott Johnson
Laboratory Director

CETIS Summary Report

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.

Batch ID: 08-9961-5917	Test Type: Cell Growth	Analyst:
Start Date: 04 Dec-14 12:26	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 08 Dec-14 11:40	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 95h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 05-6093-8487	Code: PWE1214.037sel	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: 47h (8.2 °C)	Station: LAILG-NGA188-1	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-9305-3413	Cell Density	100	>100	NA	8.86%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
06-7715-0900	Cell Density	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
00-9305-3413	Cell Density	Control CV	0.02005	NL - 0.2	Yes	Passes Acceptability Criteria
06-7715-0900	Cell Density	Control CV	0.02005	NL - 0.2	Yes	Passes Acceptability Criteria
00-9305-3413	Cell Density	Control Resp	1.26E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
06-7715-0900	Cell Density	Control Resp	1.26E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
00-9305-3413	Cell Density	PMSD	0.08855	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.263E+6	1.222E+6	1.303E+6	1.230E+6	1.286E+6	1.266E+4	2.532E+4	2.01%	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 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

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 08-9961-5917	Test Type: Cell Growth	Analyst:
Start Date: 04 Dec-14 12:26	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 08 Dec-14 11:40	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 95h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 05-6093-8487	Code: PWE1214.037sel	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: 47h (8.2 °C)	Station: LAILG-NGA188-1	

Alkalinity (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	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 Err	Std Dev	CV%	QA Count
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 (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	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 Err	Std Dev	CV%	QA Count
0	Negative Contr	5	7.88	7.696	8.064	7.7	8.1	0.06633	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	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	24.56	24.39	24.73	24.5	24.8	0.06001	0.1342	0.55%	0
100		5	24.56	24.39	24.73	24.5	24.8	0.06001	0.1342	0.55%	0
Overall		10	24.56			24.5	24.8				0 (0%)



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

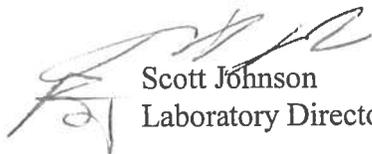
ENDPOINT: GROWTH

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)
 Test Code: FML120314 | 04-7153-1004

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 05-2128-8231	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 03 Dec-14 14:45	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 10 Dec-14 14:00	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 04-2446-4971	Code: FML120314f	Client: ABC Labs
Sample Date: 03 Dec-14 14:45	Material: Copper chloride	Project: REF TOX
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-1830-5347	7d Survival Rate	38	75	53.39	13.6%		Steel Many-One Rank Sum Test
10-1333-8874	Mean Dry Biomass-mg	38	75	53.39	25.1%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
03-7140-5322	7d Survival Rate	EC5	31.15	21.38	48.11		Linear Interpolation (ICPIN)
		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		
02-0535-0060	Mean Dry Biomass-mg	IC5	22.72	12.02	26.79		Linear Interpolation (ICPIN)
		IC10	26.45	17.65	34.59		
		IC15	30.17	22.03	42.68		
		IC20	33.9	25.42	50.88		
		IC25	37.62	28.57	59.75		
		IC40	60.19	40.87	97.03		
IC50	75.96	54.43	118.8				

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
00-1830-5347	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
03-7140-5322	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
02-0535-0060	Mean Dry Biomass-mg	Control Resp	0.3787	0.25 - NL	Yes	Passes Acceptability Criteria
10-1333-8874	Mean Dry Biomass-mg	Control Resp	0.3787	0.25 - NL	Yes	Passes Acceptability Criteria
10-1333-8874	Mean Dry Biomass-mg	PMSD	0.2512	0.12 - 0.3	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	0.0%
10		4	1	1	1	1	1	0	0	0.0%	-1.7%
19		4	1	1	1	1	1	0	0	0.0%	-1.7%
38		4	0.9167	0.7832	1	0.8	1	0.04194	0.08389	9.15%	6.78%
75		4	0.65	0.3848	0.9152	0.4667	0.8667	0.08333	0.1667	25.64%	33.9%
150		4	0.3833	0.02229	0.7444	0.2	0.6667	0.1134	0.2269	59.19%	61.02%

Mean Dry Biomass-mg Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.3787	0.2368	0.5205	0.2853	0.4947	0.04458	0.08916	23.54%	0.0%
10		4	0.4772	0.4205	0.5338	0.4247	0.4993	0.01781	0.03562	7.46%	-26.01%
19		4	0.4397	0.3989	0.4805	0.4153	0.4653	0.01283	0.02565	5.83%	-16.11%
38		4	0.3217	0.2457	0.3976	0.272	0.3847	0.02386	0.04771	14.83%	15.05%
75		4	0.2173	0.1168	0.3178	0.1553	0.3047	0.03158	0.06316	29.06%	42.61%
150		4	0.1062	0.02513	0.1872	0.05267	0.1727	0.02546	0.05092	47.97%	71.96%

CETIS Analytical Report

Report Date: 29 Dec-14 10:09 (p 1 of 4)
 Test Code: FML120314 | 04-7153-1004

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 00-1830-5347	Endpoint: 7d Survival Rate	CETIS Version: CETISv1.8.7
Analyzed: 29 Dec-14 10:08	Analysis: Nonparametric-Control vs Treatments	Official Results: Yes
Sample ID: 04-2446-4971	Code: FML120314f	Client: ABC Labs
Sample Date: 03 Dec-14 14:45	Material: Copper chloride	Project: REF TOX
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Angular (Corrected)	NA	C > T	NA	NA	13.6%	38	75	53.39	

Steel Many-One Rank Sum Test

Control	vs	C-µg/L	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		10	20	10	1	6	0.9516	Asymp	Non-Significant Effect
		19	20	10	1	6	0.9516	Asymp	Non-Significant Effect
		38	13.5	10	2	6	0.2853	Asymp	Non-Significant Effect
		75*	10	10	0	6	0.0417	Asymp	Significant Effect
		150*	10	10	0	6	0.0417	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	2.100407	0.4200814	5	21.78	<0.0001	Significant Effect
Error	0.3471767	0.0192876	18			
Total	2.447584		23			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	3.783	4.248	0.0162	Equal Variances
Variances	Levene Equality of Variance	4.985	4.248	0.0049	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.8793	0.884	0.0081	Non-normal Distribution
Distribution	Kolmogorov-Smirnov D	0.25	0.2056	0.0004	Non-normal Distribution
Distribution	D'Agostino Skewness	0.9099	2.576	0.3629	Normal Distribution
Distribution	D'Agostino Kurtosis	1.16	2.576	0.2459	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	2.174	9.21	0.3372	Normal Distribution
Distribution	Anderson-Darling A2 Normality	1.538	3.878	<0.0001	Non-normal Distribution

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	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	0.8	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	0.7444	0.3333	0.2	0.6667	0.1134	59.19%	61.02%

Angular (Corrected) Transformed Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contr	4	1.408	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	19.68%	32.72%
150		4	0.6587	0.2768	1.041	0.6078	0.4636	0.9553	0.12	36.44%	53.23%

CETIS Analytical Report

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

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: FML120314f	Client: ABC Labs
Sample Date: 03 Dec-14 14:45	Material: Copper chloride	Project: REF TOX
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Linear Interpolation Options

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

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC5	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 Survival Rate Summary

Calculated Variate(A/B)

C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	4	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	0.8	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 Measurement Report

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

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 05-2128-8231	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 03 Dec-14 14:45	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 10 Dec-14 14:00	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 23h	Source: Aquatic Biosystems, CO	Age:

Sample ID: 04-2446-4971	Code: FML120314f	Client: ABC Labs
Sample Date: 03 Dec-14 14:45	Material: Copper chloride	Project: REF TOX
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	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 Oxygen-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.738	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 (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.763	7.539	7.986	7.3	8.1	0.09437	0.2669	3.44%	0
10		8	7.788	7.601	7.974	7.5	8.2	0.07892	0.2232	2.87%	0
19		8	7.725	7.507	7.943	7.4	8.2	0.0921	0.2605	3.37%	0
38		8	7.65	7.46	7.84	7.4	8.1	0.08018	0.2268	2.96%	0
75		8	7.613	7.41	7.815	7.3	8.1	0.08543	0.2416	3.17%	0
150		8	7.563	7.326	7.799	7.2	8.1	0.09989	0.2825	3.74%	0
Overall		48	7.683			7.2	8.2				0 (0%)



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,

Elizabeth Watson

Tom
Scott Johnson
Laboratory Director

CETIS Summary 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: 04-3152-5006	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 04 Dec-14 15:00	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 11 Dec-14 13:20	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 11-1556-0619	Code: CER120414	Client: Internal Lab
Sample Date: 04 Dec-14 15:00	Material: Copper chloride	Project:
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-6967-7996	7d Survival Rate	30	50	38.73	NA		Fisher Exact/Bonferroni-Holm Test
18-3272-9495	Reproduction	3	5	3.873	23.3%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
17-8344-9027	7d Survival Rate	EC5	12.05	11.25	15.57		Linear Interpolation (ICPIN)
		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		
15-1730-2976	Reproduction	IC5	3.167	0.7539	3.297		Linear Interpolation (ICPIN)
		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				

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
00-6967-7996	7d Survival Rate	Control Resp	0.9	0.8 - NL	Yes	Passes Acceptability Criteria
17-8344-9027	7d Survival Rate	Control Resp	0.9	0.8 - NL	Yes	Passes Acceptability Criteria
15-1730-2976	Reproduction	Control Resp	19.2	15 - NL	Yes	Passes Acceptability Criteria
18-3272-9495	Reproduction	Control Resp	19.2	15 - NL	Yes	Passes Acceptability Criteria
18-3272-9495	Reproduction	PMSD	0.2326	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	0.0%
3		10	1	1	1	1	1	0	0	0.0%	-11.11%
5		10	1	1	1	1	1	0	0	0.0%	-11.11%
10		10	1	1	1	1	1	0	0	0.0%	-11.11%
30		10	0.5	0.123	0.877	0	1	0.1667	0.527	105.4%	44.44%
50		10	0.1	0	0.3262	0	1	0.1	0.3162	316.2%	88.89%

Reproduction Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	19.2	15.83	22.57	11	28	1.489	4.709	24.53%	0.0%
3		10	18.9	14.83	22.97	9	30	1.798	5.685	30.08%	1.56%
5		10	11	9.28	12.72	8	16	0.7601	2.404	21.85%	42.71%
10		10	9.6	6.58	12.62	4	20	1.335	4.222	43.98%	50.0%
30		10	4.6	0.7818	8.418	0	12	1.688	5.337	116.0%	76.04%
50		10	1.3	-0.6678	3.268	0	7	0.8699	2.751	211.6%	93.23%

CETIS Summary Report

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.

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

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

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 Analytical 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.

Analysis ID: 18-3272-9495	Endpoint: Reproduction	CETIS Version: CETISv1.8.7
Analyzed: 19 Dec-14 12:37	Analysis: Parametric-Control vs Treatments	Official Results: Yes
Sample ID: 11-1556-0619	Code: CER120414	Client: Internal Lab
Sample Date: 04 Dec-14 15:00	Material: Copper chloride	Project:
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	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(α: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(α: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(α: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

CETIS Analytical Report

Report Date: 29 Dec-14 09:57 (p 1 of 3)

Test Code: CER120414 | 19-1751-8351

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 17-8344-9027 Endpoint: 7d Survival Rate CETIS Version: CETISv1.8.7
 Analyzed: 19 Dec-14 12:37 Analysis: Linear Interpolation (ICPIN) Official Results: Yes

Sample ID: 11-1556-0619 Code: CER120414 Client: Internal Lab
 Sample Date: 04 Dec-14 15:00 Material: Copper chloride Project:
 Receive Date: Source: Reference Toxicant
 Sample Age: NA Station: REF TOX

Linear Interpolation Options

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

Point Estimates

Level	µg/L	95% LCL	95% UCL
EC5	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

Calculated Variate(A/B)

C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	10	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
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 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: 04-3152-5006	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 04 Dec-14 15:00	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 11 Dec-14 13:20	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 11-1556-0619	Code: CER120414	Client: Internal Lab
Sample Date: 04 Dec-14 15:00	Material: Copper chloride	Project:
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	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 Oxygen-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.813	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 (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	7.75	7.595	7.905	7.5	8	0.06547	0.1852	2.39%	0
3		8	7.325	6.872	7.778	6.2	7.8	0.1916	0.5418	7.4%	0
5		8	7.325	6.872	7.778	6.2	7.8	0.1916	0.5418	7.4%	0
10		8	7.388	7.052	7.723	6.6	7.8	0.142	0.4016	5.44%	0
30		8	7.388	7.055	7.72	6.6	7.7	0.1407	0.398	5.39%	0
50		8	7.275	6.969	7.581	6.6	7.6	0.1292	0.3655	5.02%	0
Overall		48	7.408			6.2	8				0 (0%)



CHRONIC SELENASTRUM GROWTH BIOASSAY

DATE: 4 December - 2014

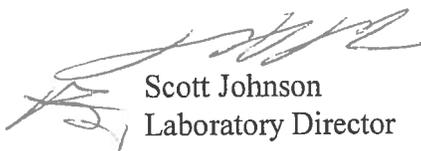
STANDARD TOXICANT: Cadmium Chloride

NOEC = 80.00 ug/l

IC25 = 99.96 ug/l

IC50 = 130.30 ug/l

Yours very truly,



Scott Johnson
Laboratory Director

CETIS Summary Report

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

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 05-9141-0513	Test Type: Cell Growth	Analyst:
Start Date: 04 Dec-14 12:27	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 08 Dec-14 12:10	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 96h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 03-5807-2018	Code: SEL120414s	Client: Internal Lab
Sample Date: 04 Dec-14 12:27	Material: Cadmium chloride	Project:
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
15-1215-5961	Cell Density	80	140	105.8	7.9%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
05-0013-4451	Cell Density	IC5	63.37	51.18	90.53		Linear Interpolation (ICPIN)
		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 Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
05-0013-4451	Cell Density	Control CV	0.02005	NL - 0.2	Yes	Passes Acceptability Criteria
15-1215-5961	Cell Density	Control CV	0.02005	NL - 0.2	Yes	Passes Acceptability Criteria
05-0013-4451	Cell Density	Control Resp	1.26E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
15-1215-5961	Cell Density	Control Resp	1.26E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
15-1215-5961	Cell Density	PMSD	0.07896	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.263E+6	1.222E+6	1.303E+6	1.230E+6	1.286E+6	1.266E+4	2.532E+4	2.01%	0.0%
20		4	1.315E+6	1.214E+6	1.416E+6	1.237E+6	1.393E+6	3.185E+4	6.371E+4	4.85%	-4.14%
40		4	1.404E+6	1.230E+6	1.579E+6	1.290E+6	1.541E+6	5.482E+4	1.096E+5	7.81%	-11.21%
80		4	1.214E+6	1.130E+6	1.297E+6	1.168E+6	1.276E+6	2.617E+4	5.233E+4	4.31%	3.88%
140		4	5.578E+5	5.105E+5	6.050E+5	5.160E+5	5.860E+5	1.485E+4	2.969E+4	5.32%	55.83%
180		4	1.610E+5	1.357E+5	1.863E+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

CETIS Analytical Report

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

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 15-1215-5961	Endpoint: Cell Density	CETIS Version: CETISv1.8.7
Analyzed: 19 Dec-14 9:29	Analysis: Parametric-Control vs Treatments	Official Results: Yes
Sample ID: 03-5807-2018	Code: SEL120414s	Client: Internal Lab
Sample Date: 04 Dec-14 12:27	Material: Cadmium chloride	Project:
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	7.9%	80	140	105.8	

Dunnett Multiple Comparison Test

Control	vs C-µg/L	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	20	-1.261	2.407	99710	6	0.9917	CDF	Non-Significant Effect
	40	-3.416	2.407	99710	6	1.0000	CDF	Non-Significant Effect
	80	1.183	2.407	99710	6	0.3440	CDF	Non-Significant Effect
	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 Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5.102629E+12	1.020526E+12	5	297.4	<0.0001	Significant Effect
Error	61775000000	3431944000	18			
Total	5.164404E+12		23			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	11.82	15.09	0.0374	Equal Variances
Variances	Mod Levene Equality of Variance	3.217	4.248	0.0300	Equal Variances
Variances	Levene Equality of Variance	3.457	4.248	0.0230	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9652	0.884	0.5513	Normal Distribution
Distribution	Kolmogorov-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 Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	2.858	9.21	0.2395	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.4621	3.878	0.2623	Normal Distribution

Cell Density Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1.263E+6	1.222E+6	1.303E+6	1268000	1.230E+6	1.286E+6	1.266E+4	2.01%	0.0%
20		4	1.315E+6	1.214E+6	1.416E+6	1315000	1.237E+6	1.393E+6	3.185E+4	4.85%	-4.14%
40		4	1.404E+6	1.230E+6	1.579E+6	1393000	1.290E+6	1.541E+6	5.482E+4	7.81%	-11.21%
80		4	1.214E+6	1.130E+6	1.297E+6	1206000	1.168E+6	1.276E+6	2.617E+4	4.31%	3.88%
140		4	5.578E+5	5.105E+5	6.050E+5	564500	5.160E+5	5.860E+5	1.485E+4	5.32%	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	1.256E+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

CERTIFICATE OF ANALYSIS

Client: Pacific Ridgeline Inc. 230 Dove Ct. Santa Paula CA, 93060	Report Date: 06/15/15 09:20
Attention: Bryn Home	Received Date: 05/15/15 14:13
Phone: (805) 525-5563	Turn Around: Normal
Fax: (805) 525-2896	Client Project: Nursery Growers Association
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





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

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

Sampled: 05/15/15 11:00

5E15070-01 LAILG-NGA-168-7

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	Result	MRL	Units	Dil	Analyzed	Qualifier
Chloride, Total	57	5.0	mg/l	10	05/15/15 18:55	
Sulfate as SO4	120	5.0	mg/l	10	05/15/15 18:55	

Chlorinated Pesticides and/or PCBs

Method: EPA 608

Batch: W5E1115

Prepared: 05/20/15 07:58

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

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

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

Chlorinated Pesticides and/or PCBs

Method: EPA 608	Batch: W5E1115	Prepared: 05/20/15 07:58	Analyst: Paolo Lorenzo 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 08:20	Analyst: 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 09:05	Analyst: 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 16:41	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 16:24	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 16:43	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 08:21	Analyst: 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 10:17	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

Method: EPA 200.7	Batch: [CALC]	Prepared: 05/19/15 10:32	Analyst: 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 10:32	Analyst: Jessie Kristie			
Analyte	Result	MRL	Units	Dil	Analyzed	Qualifier
Calcium, Total	53.7	0.100	mg/l	1	05/20/15 11:04	



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

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

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

Metals by EPA 200 Series Methods

Method: EPA 200.8 Batch: W5E1026 Prepared: 05/19/15 10:40 Analyst: Royuan 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 Prepared: 05/22/15 13:37 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 08:04 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	



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

Date Received: 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

Semivolatile Organic Compounds by GC/MS

Method: EPA 525.2

Batch: W5E1199

Prepared: 05/21/15 08:04

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	%		



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

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

QUALITY CONTROL SECTION



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

Date Received: 05/15/15 14:13
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							
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		99	90-110			
Sulfate as SO4	8.03	0.50	mg/l	8.00		100	90-110			
Duplicate (W5E0838-DUP1)			Source: 5E14074-01		Analyzed: 05/15/15 15:53					
Chloride, Total	882	25	mg/l		872			1	20	
Sulfate as SO4	471	25	mg/l		447			5	20	
Matrix Spike (W5E0838-MS1)			Source: 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: 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: 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: 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

Batch W5E1115 - EPA 608

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1115-BLK1)			Analyzed: 06/04/15 18:03							
2,4'-DDD	ND	5.0	ng/l							
2,4'-DDE	ND	5.0	ng/l							
2,4'-DDT	ND	5.0	ng/l							
4,4'-DDD	ND	5.0	ng/l							
4,4'-DDE	ND	5.0	ng/l							
4,4'-DDT	ND	5.0	ng/l							
Aldrin	ND	5.0	ng/l							
alpha-BHC	ND	5.0	ng/l							
alpha-Chlordane	ND	5.0	ng/l							
Aroclor 1016	ND	100	ng/l							
Aroclor 1221	ND	100	ng/l							
Aroclor 1232	ND	100	ng/l							
Aroclor 1242	ND	100	ng/l							



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

Date Received: 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
Blank (W5E1115-BLK1)				Analyzed: 06/04/15 18:03						
Aroclor 1248	ND	100	ng/l							
Aroclor 1254	ND	100	ng/l							
Aroclor 1260	ND	100	ng/l							
beta-BHC	ND	5.0	ng/l							
Chlordane (tech)	ND	100	ng/l							
cis-Nonachlor	ND	5.0	ng/l							
delta-BHC	ND	5.0	ng/l							
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							
<i>Surr: Decachlorobiphenyl</i>	96.4		ng/l	100		96	0.1-118			
<i>Surr: Tetrachloro-meta-xylene</i>	88.3		ng/l	100		88	12-117			
LCS (W5E1115-BS1)				Analyzed: 06/04/15 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			



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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
LCS (W5E1115-BS1)				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)				Source: 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/l	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-04
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)				Source: 5E15110-02		Analyzed: 06/04/15 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



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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 (W5E1115-MS2)		Source: 5E15110-02		Analyzed: 06/04/15 20:06						
Surr: Decachlorobiphenyl	100		ng/l	100		100	0.1-118			M-04
Surr: Tetrachloro-meta-xylene	79.7		ng/l	100		80	12-117			M-04
Matrix Spike Dup (W5E1115-MSD1)		Source: 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/l	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/l	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: 5E15110-02		Analyzed: 06/04/15 20:37						
4,4'-DDD	105	25	ng/l	100	ND	105	23-124	14	30	M-04
4,4'-DDE	105	25	ng/l	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



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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: 5E15110-02		Analyzed: 06/04/15 20:37						
<i>Surr: Tetrachloro-meta-xylene</i>	89.0		ng/l	100		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								
o-Phosphate as P	ND	0.0020	mg/l							
o-Phosphate as P, dissolved	ND	2.0	ug/l							
LCS (W5E0880-BS1)		Analyzed: 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)		Source: 5E15070-01		Analyzed: 05/15/15 21:22						
o-Phosphate as P	0.407	0.010	mg/l	0.0500	0.360	94	90-110			
Matrix Spike Dup (W5E0880-MSD1)		Source: 5E15070-01		Analyzed: 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: 05/18/15 16:34								
Ammonia as N	ND	0.10	mg/l							
LCS (W5E0919-BS1)		Analyzed: 05/18/15 16:34								
Ammonia as N	0.252	0.10	mg/l	0.250		101	90-110			
Matrix Spike (W5E0919-MS1)		Source: 5E15110-02		Analyzed: 05/18/15 16:34						
Ammonia as N	0.263	0.10	mg/l	0.250	ND	105	90-110			
Matrix Spike Dup (W5E0919-MSD1)		Source: 5E15110-02		Analyzed: 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: 05/18/15 11:07								
NO2+NO3 as N	ND	100	ug/l							
LCS (W5E0926-BS1)		Analyzed: 05/18/15 11:09								
NO2+NO3 as N	944	100	ug/l	1000		94	90-110			
Duplicate (W5E0926-DUP1)		Source: 5E08028-01		Analyzed: 05/18/15 11:18						
NO2+NO3 as N	5850	100	ug/l		5800			0.8	20	
Matrix Spike (W5E0926-MS1)		Source: 5E08028-01		Analyzed: 05/18/15 12:42						
NO2+NO3 as N	7840	100	ug/l	2000	5800	102	90-110			
Matrix Spike (W5E0926-MS2)		Source: 5E15110-02		Analyzed: 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)		Source: 5E15110-02		Analyzed: 05/18/15 11:27						
NO2+NO3 as N	2140	100	ug/l	2000	289	93	90-110			
Matrix Spike Dup (W5E0926-MSD1)		Source: 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: 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								
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: 5E15079-01		Analyzed: 05/21/15 16:55						
Total Dissolved Solids	11800	10	mg/l		11200			5	10	
Duplicate (W5E1208-DUP2)		Source: 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: 5E15003-01		Analyzed: 05/21/15 14:27						
Total Suspended Solids	124	5	mg/l		120			3	20	
Duplicate (W5E1225-DUP2)		Source: 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: 5E14073-01RE1		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: 5E14074-01		Analyzed: 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: 5E15110-02		Analyzed: 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: 5E14074-01		Analyzed: 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)		Source: 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							
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)		Source: 5E14073-01RE1		Analyzed: 05/28/15 12:05						
Phosphorus, Dissolved	0.0420	0.010	mg/l		0.0412			2	20	
Matrix Spike (W5E1340-MS1)		Source: 5E14074-01		Analyzed: 05/28/15 11:57						
Phosphorus, Dissolved	0.188	0.010	mg/l	0.0500	0.138	100	90-110			
Matrix Spike (W5E1340-MS2)		Source: 5E15110-02		Analyzed: 05/28/15 12:01						
Phosphorus, Dissolved	0.0578	0.010	mg/l	0.0500	0.00510	105	90-110			
Matrix Spike Dup (W5E1340-MSD1)		Source: 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	
Matrix Spike Dup (W5E1340-MSD2)		Source: 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							
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)		Source: 5E15070-01		Analyzed: 05/20/15 11:15						
Calcium, Total	106	0.100	mg/l	50.2	53.7	104	70-130			
Matrix Spike Dup (W5E1025-MSD1)		Source: 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)		Source: 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: 5E13096-02		Analyzed: 05/20/15 16:33						
Copper, Total	48.9	0.50	ug/l	50.0	1.64	95	70-130			
Matrix Spike Dup (W5E1026-MSD1)		Source: 5E13096-02		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)		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/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 (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)		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 19:38								
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			



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

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

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			
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	333		ng/l	250		133	6-222			
LCS (W5E1327-BS2)				Analyzed: 06/11/15 20:19						
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-2
Surr: Triphenyl phosphate	193		ng/l	250		77	6-222			QC-2
Matrix Spike (W5E1327-MS1)				Source: 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)				Source: 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



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

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

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: 5E14095-01		Analyzed: 06/10/15 20:43						
Prallethrin	113	2.0	ng/l	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

Batch W5E1199 - EPA 525.2

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Blank (W5E1199-BLK1)		Analyzed: 06/08/15 21:31								
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)		Analyzed: 06/08/15 21:55								
Azinphos methyl (Guthion)	85.8	10	ng/l	50.0		172	0.1-188			



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

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

Semivolatile Organic Compounds by GC/MS - Quality Control**Batch W5E1199 - EPA 525.2**

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
LCS (W5E1199-BS1)				Analyzed: 06/08/15 21:55						
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/l	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/l	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)				Source: 5E14095-02		Analyzed: 06/08/15 22:20				
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			



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

Date Received: 05/15/15 14:13
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Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W5E1199 - EPA 525.2

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	% REC Limits	RPD	RPD Limit	Data Qualifiers
Matrix Spike (W5E1199-MS1)		Source: 5E14095-02		Analyzed: 06/08/15 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)		Source: 5E14095-02		Analyzed: 06/08/15 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/l	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			



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

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

Semivolatile Organic Compounds by GC/MS - Quality Control

Batch W5E1199 - EPA 525.2

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



Pacific Ridgeline Inc.
230 Dove Ct.
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Date Received: 05/15/15 14:13
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Notes and Definitions

- QC-2** This QC sample was reanalyzed to complement samples that require re-analysis on different date. See analysis date.
- 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 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
- % Rec** Percent Recovery
- Sub** Subcontracted analysis, original report available upon request
- MDL** Method Detection Limit
- MDA** Minimum Detectable Activity
- MRL** Method Reporting Limit

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.



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:

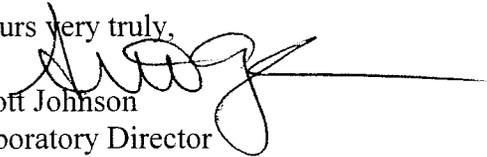
CLIENT: Pacific Ridgeline, Inc.
SAMPLE I.D.: LAILG-NGA168-7
DATE RECEIVED: 19 May -15
ABC LAB. NO.: PRI0515.222

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 Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 13-3729-4277	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 19 May-15 15:36	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 26 May-15 13:40	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 17-2407-4701	Code: PRI0515.222fml	Client: Pacific Ridgeline, Inc.
Sample Date: 15 May-15 11:00	Material: Sample Water	Project: Los Angeles Irrigated Lands Group
Receive Date: 19 May-15 09:30	Source: Bioassay Report	
Sample Age: 4d 5h (6 °C)	Station: LAILG-NGA168-7	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
20-1839-5646	7d Survival Rate	100	>100	NA	3.43%	1	Wilcoxon Rank Sum Two-Sample Test
03-5507-5630	Mean Dry Biomass-mg	100	>100	NA	16.4%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
00-0812-0486	7d Survival Rate	EC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		EC10	>100	N/A	N/A	<1	
		EC15	>100	N/A	N/A	<1	
		EC20	>100	N/A	N/A	<1	
		EC25	>100	N/A	N/A	<1	
		EC40	>100	N/A	N/A	<1	
21-1245-3032	Mean Dry Biomass-mg	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
00-0812-0486	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
20-1839-5646	7d Survival Rate	Control Resp	0.9833	0.8 - NL	Yes	Passes Acceptability Criteria
03-5507-5630	Mean Dry Biomass-mg	Control Resp	0.293	0.25 - NL	Yes	Passes Acceptability Criteria
21-1245-3032	Mean Dry Biomass-mg	Control Resp	0.293	0.25 - NL	Yes	Passes Acceptability Criteria
03-5507-5630	Mean Dry Biomass-mg	PMSD	0.1637	0.12 - 0.3	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

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

Mean Dry Biomass-mg Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.293	0.2303	0.3557	0.2713	0.352	0.01972	0.03943	13.46%	0.0%
100		4	0.3848	0.3376	0.4321	0.358	0.4233	0.01484	0.02969	7.71%	-31.34%

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

Mean Dry Biomass-mg Detail

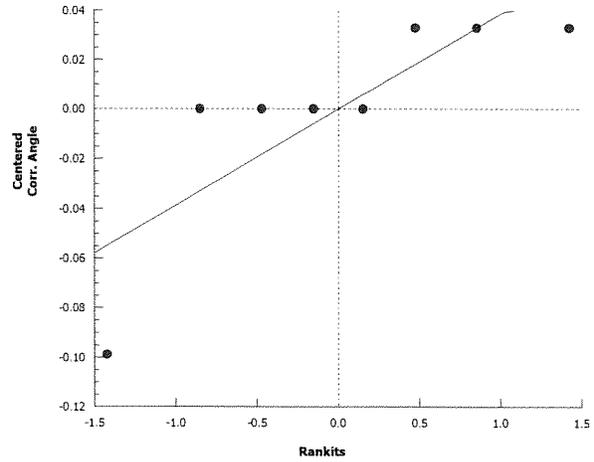
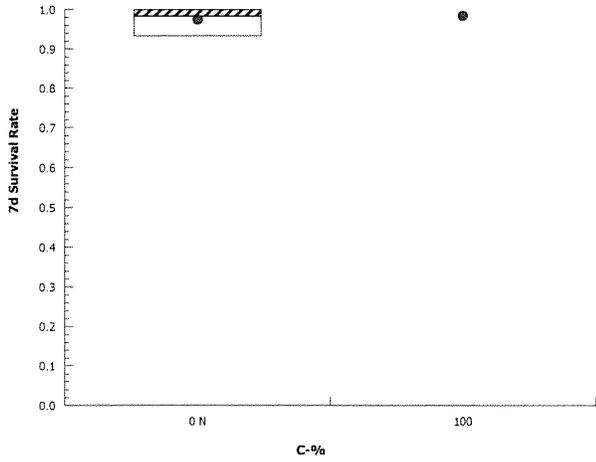
C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	0.2713	0.2713	0.2773	0.352
100		0.3927	0.3653	0.4233	0.358

CETIS Analytical Report

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	Official Results: Yes
Analyzed: 10 Jun-15 14:33	Analysis: Nonparametric-Two Sample		

Graphics



CETIS Measurement Report

Report Date: 10 Jun-15 14:33 (p 1 of 2)
 Test Code: PRI0515.222fml | 15-0849-4568

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 13-3729-4277	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 19 May-15 15:36	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 26 May-15 13:40	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 17-2407-4701	Code: PRI0515.222fml	Client: Pacific Ridgeline, Inc.
Sample Date: 15 May-15 11:00	Material: Sample Water	Project: Los Angeles Irrigated Lands Group
Receive Date: 19 May-15 09:30	Source: Bioassay Report	
Sample Age: 4d 5h (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	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
Overall		16	70.5			61	80				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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 Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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 (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	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	Count	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 Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	61	61	61	61	61	61	61	61
100		80	80	80	80	80	80	80	80

Conductivity-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

Temperature-°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:

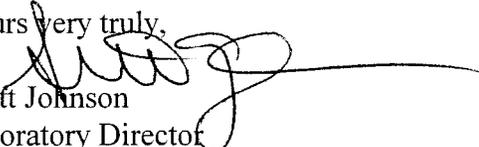
CLIENT:	Pacific Ridgeline, Inc.
SAMPLE I.D.:	LAILG-NGA168-7
DATE RECEIVED:	19 May -15
ABC LAB. NO.:	PRI0515.222

CHRONIC CERIODAPHNIA SURVIVAL & REPRODUCTION BIOASSAY

SURVIVAL	NOEC =	100.00 %
	TU _c =	1.00
	EC25 =	>100.00 %
	EC50 =	>100.00 %

REPRODUCTION	NOEC =	100.00 %
	TU _c =	1.00
	IC25 =	>100.00 %
	IC50 =	>100.00 %

Yours very truly,


Scott Johnson
Laboratory Director

CETIS Summary Report

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.

Batch ID: 12-8088-6861	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 19 May-15 15:36	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 26 May-15 13:40	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 10-1824-0185	Code: PRI0515.222c	Client: Pacific Ridgeline, Inc.
Sample Date: 15 May-15 11:00	Material: Sample Water	Project: Los Angeles Irrigated Lands Group
Receive Date: 19 May-15 09:30	Source: Bioassay Report	
Sample Age: 4d 5h (6 °C)	Station: LAILG-NGA168-7	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
05-8175-6164	7d Survival Rate	100	>100	NA	NA	1	Fisher Exact Test
16-8143-9850	Reproduction	100	>100	NA	33.0%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
18-6158-9701	7d Survival Rate	EC5	50	16.67	N/A	2	Linear Interpolation (ICPIN)
		EC10	100	33.33	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	
17-8922-9501	Reproduction	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
05-8175-6164	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
18-6158-9701	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
16-8143-9850	Reproduction	Control Resp	21.1	15 - NL	Yes	Passes Acceptability Criteria
17-8922-9501	Reproduction	Control Resp	21.1	15 - NL	Yes	Passes Acceptability Criteria
16-8143-9850	Reproduction	PMSD	0.3296	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	1	1	1	1	1	0	0	0.0%	0.0%
100		10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	10.0%

Reproduction Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	21.1	16.72	25.48	10	33	1.935	6.118	29.0%	0.0%
100		10	22.4	14.45	30.35	12	42	3.513	11.11	49.59%	-6.16%

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	0	1	1	1	1	1

Reproduction Detail

C-%	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6	Rep 7	Rep 8	Rep 9	Rep 10
0	Negative Control	18	27	10	33	22	24	18	21	19	19
100		19	38	12	42	12	20	15	33	19	14

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 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

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 and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 12-8088-6861	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 19 May-15 15:36	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 26 May-15 13:40	Species: Ceriodaphnia dubia	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 10-1824-0185	Code: PRI0515.222c	Client: Pacific Ridgeline, Inc.
Sample Date: 15 May-15 11:00	Material: Sample Water	Project: Los Angeles Irrigated Lands Group
Receive Date: 19 May-15 09:30	Source: Bioassay Report	
Sample Age: 4d 5h (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	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
Overall		16	70.5			61	80				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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 Oxygen-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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 (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	8	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	Count	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	Count	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 14:27 (p 2 of 2)
 Test Code: PRI0515.222cer | 00-6380-4051

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-%	Control Type	1	2	3	4	5	6	7	8
0	Negative Contr	61	61	61	61	61	61	61	61
100		80	80	80	80	80	80	80	80

Conductivity-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

Temperature-°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

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 02-3949-3759	Test Type: Cell Growth	Analyst:
Start Date: 19 May-15 11:30	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 23 May-15 11:00	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 96h	Source: Aquatic Biosystems, CO	Age:

Sample ID: 18-0420-2352	Code: PRI0515.222s	Client: Pacific Ridgeline, Inc.
Sample Date: 15 May-15 11:00	Material: Sample Water	Project: Los Angeles Irrigated Lands Group
Receive Date: 19 May-15 09:30	Source: Bioassay Report	
Sample Age: 4d 0h (6 °C)	Station: LAILG-NGA168-7	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
16-5927-8179	Cell Density	100	>100	NA	4.18%	1	Equal Variance t Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level	%	95% LCL	95% UCL	TU	Method
01-7791-9875	Cell Density	IC5	>100	N/A	N/A	<1	Linear Interpolation (ICPIN)
		IC10	>100	N/A	N/A	<1	
		IC15	>100	N/A	N/A	<1	
		IC20	>100	N/A	N/A	<1	
		IC25	>100	N/A	N/A	<1	
		IC40	>100	N/A	N/A	<1	
		IC50	>100	N/A	N/A	<1	

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
01-7791-9875	Cell Density	Control CV	0.006985	NL - 0.2	Yes	Passes Acceptability Criteria
16-5927-8179	Cell Density	Control CV	0.006985	NL - 0.2	Yes	Passes Acceptability Criteria
01-7791-9875	Cell Density	Control Resp	1.69E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
16-5927-8179	Cell Density	Control Resp	1.69E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
16-5927-8179	Cell Density	PMSD	0.04176	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.692E+6	1.673E+6	1.711E+6	1.681E+6	1.707E+6	5.907E+3	1.181E+4	0.7%	0.0%
100		4	1.833E+6	1.719E+6	1.947E+6	1.752E+6	1.920E+6	3.587E+4	7.175E+4	3.91%	-8.36%

Cell Density 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

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 02-3949-3759	Test Type: Cell Growth	Analyst:
Start Date: 19 May-15 11:30	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 23 May-15 11:00	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 96h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 18-0420-2352	Code: PRI0515.222s	Client: Pacific Ridgeline, Inc.
Sample Date: 15 May-15 11:00	Material: Sample Water	Project: Los Angeles Irrigated Lands Group
Receive Date: 19 May-15 09:30	Source: Bioassay Report	
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	CV%	QA Count
0	Negative Contr	1	70			70	70	0	0	0.0%	0
100		1	89			89	89	0	0	0.0%	0
Overall		2	79.5			70	89				0 (0%)

Conductivity-µmhos

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	419.8	417.6	422	418	422	0.8	1.789	0.43%	0
100		5	675	669.2	680.8	668	679	2.074	4.637	0.69%	0
Overall		10	547.4			418	679				0 (0%)

Hardness (CaCO3)-mg/L

C-%	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	99			99	99	0	0	0.0%	0
100		1	184			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%)

CETIS Measurement Report

Report Date: 04 Jun-15 15:38 (p 2 of 2)
Test Code: PRI0515.222sel | 15-6379-3588

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO₃)-mg/L

C-%	Control Type	1
0	Negative Contr	70
100		89

Conductivity-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

Temperature-°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

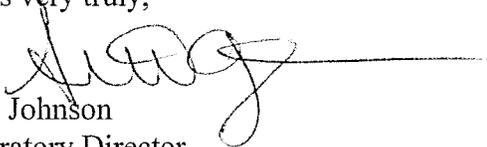
ENDPOINT: GROWTH

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

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 02-5679-1191	Test Type: Growth-Survival (7d)	Analyst:
Start Date: 19 May-15 17:15	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 26 May-15 15:15	Species: Pimephales promelas	Brine: Not Applicable
Duration: 6d 22h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 08-4364-6620	Code: FML051915f	Client: ABC Labs
Sample Date: 19 May-15 17:15	Material: Copper chloride	Project: REF TOX
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
13-7810-2889	7d Survival Rate	19	38	26.87	8.96%		Steel Many-One Rank Sum Test
14-7442-1965	Mean Dry Biomass-mg	19	38	26.87	11.8%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
07-8743-7656	7d Survival Rate	EC5	28.5	13.3	36.1		Linear Interpolation (ICPIN)
		EC10	41.08	31.08	49.31		
		EC15	50.33	40.47	77.96		
		EC20	59.58	46.86	89.7		
		EC25	68.83	53.33	92.34		
		EC40	89.58	75.72	106.3		
		EC50	102.1	87.17	116		
12-2364-4544	Mean Dry Biomass-mg	IC5	19.13	13.18	23.42		Linear Interpolation (ICPIN)
		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		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
07-8743-7656	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
13-7810-2889	7d Survival Rate	Control Resp	1	0.8 - NL	Yes	Passes Acceptability Criteria
12-2364-4544	Mean Dry Biomass-mg	Control Resp	0.2943	0.25 - NL	Yes	Passes Acceptability Criteria
14-7442-1965	Mean Dry Biomass-mg	Control Resp	0.2943	0.25 - NL	Yes	Passes Acceptability Criteria
14-7442-1965	Mean Dry Biomass-mg	PMSD	0.1179	0.12 - 0.3	Yes	Below Acceptability Criteria

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1	1	1	1	1	0	0	0.0%	0.0%
10		4	1	1	1	1	1	0	0	0.0%	0.0%
19		4	0.9833	0.9303	1	0.9333	1	0.01667	0.03333	3.39%	1.67%
38		4	0.9167	0.8636	0.9697	0.8667	0.9333	0.01667	0.03333	3.64%	8.33%
75		4	0.7167	0.498	0.9354	0.6	0.8667	0.06872	0.1374	19.18%	28.33%
150		4	0.1167	0	0.2978	0	0.2667	0.05693	0.1139	97.59%	88.33%

Mean Dry Biomass-mg Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	0.2943	0.2716	0.3171	0.2767	0.3087	0.007141	0.01428	4.85%	0.0%
10		4	0.383	0.348	0.418	0.3573	0.41	0.011	0.02201	5.75%	-30.12%
19		4	0.3223	0.3099	0.3347	0.312	0.3307	0.003892	0.007784	2.42%	-9.51%
38		4	0.2373	0.2002	0.2744	0.2153	0.27	0.01166	0.02331	9.82%	19.37%
75		4	0.1285	0.07543	0.1816	0.08733	0.162	0.01668	0.03335	25.96%	56.34%
150		4	0.01083	-0.004128	0.02579	0	0.02133	0.004701	0.009403	86.79%	96.32%

CETIS Analytical Report

Report Date: 10 Jun-15 14:24 (p 1 of 4)
 Test Code: FML051915 | 17-2539-1994

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

Analysis ID: 13-7810-2889 Endpoint: 7d Survival Rate CETIS Version: CETISv1.8.7
 Analyzed: 10 Jun-15 14:24 Analysis: Nonparametric-Control vs Treatments Official Results: Yes

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Angular (Corrected)	NA	C > T	NA	NA	8.96%	19	38	26.87	

Steel Many-One Rank Sum Test

Control	vs	C-µg/L	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		10	18	10	1	6	0.8333	Asymp	Non-Significant Effect
		19	16	10	1	6	0.6105	Asymp	Non-Significant Effect
		38*	10	10	0	6	0.0417	Asymp	Significant Effect
		75*	10	10	0	6	0.0417	Asymp	Significant Effect
		150*	10	10	0	6	0.0417	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	3.794484	0.7588968	5	72.14	<0.0001	Significant Effect
Error	0.1893621	0.01052012	18			
Total	3.983846		23			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	5.328	4.248	0.0035	Unequal Variances
Variances	Levene Equality of Variance	7.979	4.248	0.0004	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.9162	0.884	0.0482	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.25	0.2056	0.0004	Non-normal Distribution
Distribution	D'Agostino Skewness	0.3451	2.576	0.7300	Normal Distribution
Distribution	D'Agostino Kurtosis	1.311	2.576	0.1900	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	1.837	9.21	0.3991	Normal Distribution
Distribution	Anderson-Darling A2 Normality	1.211	3.878	0.0036	Non-normal Distribution

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1	1	1	1	1	1	0	0.0%	0.0%
10		4	1	1	1	1	1	1	0	0.0%	0.0%
19		4	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 (Corrected) Transformed Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Contr	4	1.441	1.441	1.442	1.441	1.441	1.441	0	0.0%	0.0%
10		4	1.441	1.441	1.442	1.441	1.441	1.441	0	0.0%	0.0%
19		4	1.408	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 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		0.8	0.8667	0.6	0.6
150		0.2667	0	0.1333	0.06667

CETIS Analytical Report

Report Date: 10 Jun-15 14:24 (p 3 of 4)
 Test Code: FML051915 | 17-2539-1994

Fathead Minnow 7-d Larval Survival and Growth Test				Aquatic Bioassay & Consulting Labs, Inc.			
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Analysis ID: 14-7442-1965	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.8.7
Analyzed: 10 Jun-15 14:24	Analysis: Parametric-Control vs Treatments	Official Results: Yes

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	11.8%	19	38	26.87	

Dunnnett Multiple Comparison Test									
Control	vs	C-µg/L	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		10	-6.151	2.407	0.035	6	1.0000	CDF	Non-Significant Effect
		19	-1.943	2.407	0.035	6	0.9989	CDF	Non-Significant 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

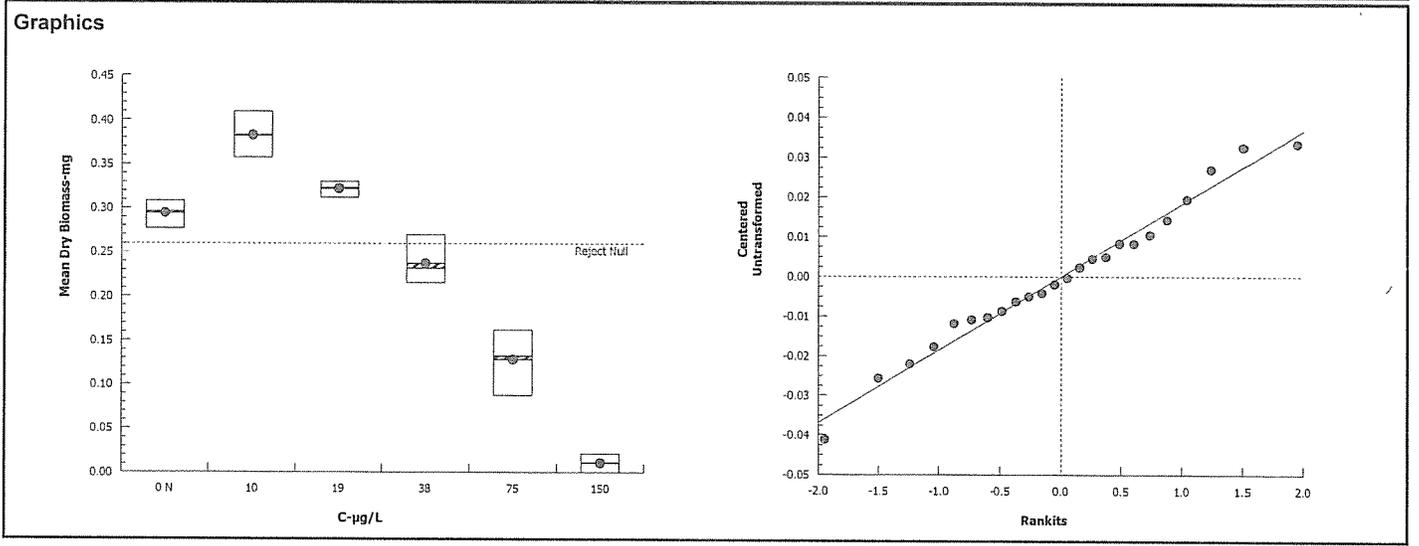
ANOVA Table						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.3778442	0.07556883	5	181.9	<0.0001	Significant Effect
Error	0.007479335	0.0004155186	18			
Total	0.3853235		23			

Distributional Tests						
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)	
Variances	Bartlett Equality of Variance	7.378	15.09	0.1940	Equal Variances	
Variances	Mod Levene Equality of Variance	2.015	4.248	0.1251	Equal Variances	
Variances	Levene Equality of Variance	2.419	4.248	0.0762	Equal Variances	
Distribution	Shapiro-Wilk W Normality	0.9822	0.884	0.9322	Normal Distribution	
Distribution	Kolmogorov-Smirnov D	0.08918	0.2056	1.0000	Normal Distribution	
Distribution	D'Agostino Skewness	0.05348	2.576	0.9574	Normal Distribution	
Distribution	D'Agostino Kurtosis	0.4718	2.576	0.6370	Normal Distribution	
Distribution	D'Agostino-Pearson K2 Omnibus	0.2255	9.21	0.8934	Normal Distribution	
Distribution	Anderson-Darling A2 Normality	0.1977	3.878	0.9338	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	0.2943	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 Biomass-mg Detail						
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	

Fathead Minnow 7-d Larval Survival and Growth Test		Aquatic Bioassay & Consulting Labs, Inc.	
Analysis ID: 14-7442-1965	Endpoint: Mean Dry Biomass-mg	CETIS Version: CETISv1.8.7	Official Results: Yes
Analyzed: 10 Jun-15 14:24	Analysis: Parametric-Control vs Treatments		



CETIS Analytical Report

Report Date: 10 Jun-15 14:25 (p 1 of 3)
 Test Code: FML051915 | 17-2539-1994

Fathead Minnow 7-d Larval Survival and Growth 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	

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

Point Estimates			
Level	µg/L	95% LCL	95% UCL
EC5	28.5	13.3	36.1
EC10	41.08	31.08	49.31
EC15	50.33	40.47	77.96
EC20	59.58	46.86	89.7
EC25	68.83	53.33	92.34
EC40	89.58	75.72	106.3
EC50	102.1	87.17	116

7d Survival Rate Summary			Calculated Variate(A/B)									
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B	
0	Negative Control	4	1	1	1	0	0	0.0%	0.0%	60	60	
10		4	1	1	1	0	0	0.0%	0.0%	60	60	
19		4	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 Survival Rate Detail					
C-µg/L	Control Type	Rep 1	Rep 2	Rep 3	Rep 4
0	Negative Control	1	1	1	1
10		1	1	1	1
19		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

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

CETIS Analytical Report

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

Test Code: FML051915 | 17-2539-1994

Fathead Minnow 7-d Larval Survival and Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Analysis ID: 07-8743-7656

Endpoint: 7d Survival Rate

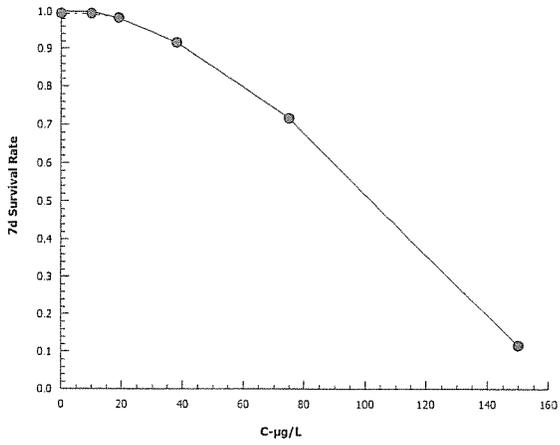
CETIS Version: CETISv1.8.7

Analyzed: 10 Jun-15 14:24

Analysis: Linear Interpolation (ICPIN)

Official Results: Yes

Graphics





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: 22 May-15 13:44 (p 1 of 2)
 Test Code: CER050515 | 13-4562-5216

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

Batch ID: 11-4798-6754	Test Type: Reproduction-Survival (7d)	Analyst:
Start Date: 05 May-15 11:29	Protocol: EPA/821/R-02-013 (2002)	Diluent: Laboratory Water
Ending Date: 12 May-15 10:00	Species: Ceriodaphnia dubia	Brine: Not Applicable
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:
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
18-4360-1609	7d Survival Rate	10	30	17.32	NA		Fisher Exact/Bonferroni-Holm Test
20-1482-2036	Reproduction	10	30	17.32	41.5%		Dunnett Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level	µg/L	95% LCL	95% UCL	TU	Method
01-4885-9422	7d Survival Rate	EC5	10.38	1.5	11.84		Linear Interpolation (ICPIN)
		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		
13-1268-4519	Reproduction	IC5	11.21	6.515	11.54		Linear Interpolation (ICPIN)
		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		

Test Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	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
13-1268-4519	Reproduction	Control Resp	18.5	15 - NL	Yes	Passes Acceptability Criteria
20-1482-2036	Reproduction	Control Resp	18.5	15 - NL	Yes	Passes Acceptability Criteria
20-1482-2036	Reproduction	PMSD	0.415	0.13 - 0.47	Yes	Passes Acceptability Criteria

7d Survival Rate Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	0.0%
3		10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	0.0%
5		10	1	1	1	1	1	0	0	0.0%	-11.11%
10		10	0.9	0.6738	1	0	1	0.1	0.3162	35.14%	0.0%
30		10	0.2	0	0.5016	0	1	0.1333	0.4216	210.8%	77.78%
50		10	0	0	0	0	0	0	0		100.0%

Reproduction Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	10	18.5	14.61	22.39	12	31	1.721	5.442	29.41%	0.0%
3		10	20.4	13.21	27.59	0	33	3.177	10.05	49.25%	-10.27%
5		10	30.5	26.18	34.82	21	39	1.91	6.042	19.81%	-64.86%
10		10	24.5	19.12	29.88	12	38	2.377	7.517	30.68%	-32.43%
30		10	4.1	-2.086	10.29	0	21	2.734	8.647	210.9%	77.84%
50		10	0	0	0	0	0	0	0		100.0%

CETIS Summary Report

Report Date: 22 May-15 13:44 (p 2 of 2)
 Test Code: CER050515 | 13-4562-5216

Ceriodaphnia 7-d Survival and Reproduction Test

Aquatic Bioassay & Consulting Labs, Inc.

7d Survival Rate Detail

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

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	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 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

Ceriodaphnia 7-d Survival and Reproduction Test					Aquatic Bioassay & Consulting Labs, Inc.						
Analysis ID: 20-1482-2036		Endpoint: Reproduction			CETIS Version: CETISv1.8.7						
Analyzed: 22 May-15 13:44		Analysis: Parametric-Control vs Treatments			Official Results: Yes						
Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU		
Untransformed	NA	C > T	NA	NA	41.5%	10	30	17.32			
Dunnett Multiple Comparison Test											
Control	vs	C-µg/L	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)		
Negative Control		3	-0.55	2.222	7.677	18	0.9310	CDF	Non-Significant Effect		
		5	-3.474	2.222	7.677	18	1.0000	CDF	Non-Significant Effect		
		10	-1.737	2.222	7.677	18	0.9977	CDF	Non-Significant Effect		
		30*	4.169	2.222	7.677	18	0.0003	CDF	Significant Effect		
ANOVA Table											
Source	Sum Squares		Mean Square		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 Tests											
Attribute	Test		Test Stat	Critical	P-Value	Decision(α:1%)					
Variances	Bartlett Equality of Variance		4.265	13.28	0.3713	Equal Variances					
Variances	Mod Levene Equality of Variance		0.8273	3.767	0.5148	Equal Variances					
Variances	Levene Equality of Variance		0.9998	3.767	0.4176	Equal Variances					
Distribution	Shapiro-Wilk W Normality		0.9513	0.9367	0.0384	Normal Distribution					
Distribution	Kolmogorov-Smirnov D		0.1603	0.1453	0.0025	Non-normal Distribution					
Distribution	D'Agostino Skewness		0.8095	2.576	0.4182	Normal Distribution					
Distribution	D'Agostino Kurtosis		1.055	2.576	0.2914	Normal Distribution					
Distribution	D'Agostino-Pearson K2 Omnibus		1.768	9.21	0.4131	Normal Distribution					
Distribution	Anderson-Darling A2 Normality		1.206	3.878	0.0037	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	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 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

CETIS Analytical Report

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	CETIS Version: CETISv1.8.7			
Analyzed: 22 May-15 13:44	Analysis: Linear Interpolation (ICPIN)	Official Results: Yes			

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	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 Survival Rate Summary			Calculated Variate(A/B)									
C-µg/L	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B	
0	Negative Control	10	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 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	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



CHRONIC SELENASTRUM GROWTH BIOASSAY

DATE: 7 May - 2015

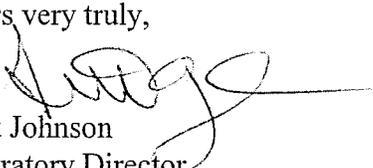
STANDARD TOXICANT: Cadmium Chloride

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 Bioassay & Consulting 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: Laboratory Water
Ending Date: 11 May-15 11:50	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 4d 0h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 06-0398-6060	Code: SEL050715s	Client: Internal Lab
Sample Date: 07 May-15 11:36	Material: Cadmium chloride	Project:
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
04-8768-8781	Cell Density	40	80	56.57	6.32%		Dunnett Multiple Comparison Test

Point Estimate 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 Interpolation (ICPIN)
		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 Acceptability

Analysis ID	Endpoint	Attribute	Test Stat	TAC Limits	Overlap	Decision
04-8768-8781	Cell Density	Control CV	0.01792	NL - 0.2	Yes	Passes Acceptability Criteria
08-2307-9213	Cell Density	Control CV	0.01792	NL - 0.2	Yes	Passes Acceptability Criteria
04-8768-8781	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
08-2307-9213	Cell Density	Control Resp	1.03E+6	1.00E+6 - NL	Yes	Passes Acceptability Criteria
04-8768-8781	Cell Density	PMSD	0.06324	0.091 - 0.29	Yes	Below Acceptability Criteria

Cell Density Summary

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	4	1.034E+6	1.005E+6	1.063E+6	1.018E+6	1.057E+6	9.265E+3	1.853E+4	1.79%	0.0%
20		4	1.063E+6	9.859E+5	1.139E+6	1.012E+6	1.128E+6	2.407E+4	4.815E+4	4.53%	-2.76%
40		4	1.015E+6	9.266E+5	1.103E+6	9.690E+5	1.081E+6	2.778E+4	5.557E+4	5.48%	1.84%
80		4	8.160E+5	7.339E+5	8.981E+5	7.560E+5	8.810E+5	2.579E+4	5.158E+4	6.32%	21.08%
140		4	3.470E+5	3.171E+5	3.769E+5	3.220E+5	3.650E+5	9.390E+3	1.878E+4	5.41%	66.44%
180		4	1.068E+5	9.141E+4	1.221E+5	9.700E+4	1.160E+5	4.820E+3	9.639E+3	9.03%	89.68%

Cell Density 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 Analytical Report

Report Date: 27 May-15 16:20 (p 1 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: 27 May-15 16:17	Analysis: Parametric-Control vs Treatments		Official Results: Yes				

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	6.32%	40	80	56.57	

Dunnett Multiple Comparison Test								
Control	vs C-µg/L	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control	20	-1.049	2.407	65390	6	0.9849	CDF	Non-Significant Effect
	40	0.6994	2.407	65390	6	0.5583	CDF	Non-Significant 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						
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	3.30689E+12	6.61378E+11	5	448.1	<0.0001	Significant Effect
Error	26567750000	1475986000	18			
Total	3.333458E+12		23			

Distributional Tests					
Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	10.29	15.09	0.0673	Equal Variances
Variances	Mod Levene Equality of Variance	1.844	4.248	0.1548	Equal Variances
Variances	Levene Equality of Variance	2.35	4.248	0.0828	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.9376	0.884	0.1444	Normal Distribution
Distribution	Kolmogorov-Smirnov D	0.1343	0.2056	0.3141	Normal Distribution
Distribution	D'Agostino Skewness	0.8474	2.576	0.3968	Normal Distribution
Distribution	D'Agostino Kurtosis	0.4202	2.576	0.6743	Normal Distribution
Distribution	D'Agostino-Pearson K2 Omnibus	0.8946	9.21	0.6394	Normal Distribution
Distribution	Anderson-Darling A2 Normality	0.6261	3.878	0.1036	Normal Distribution

Cell Density Summary											
C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	4	1.034E+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	9.859E+5	1.139E+6	1055000	1.012E+6	1.128E+6	2.407E+4	4.53%	-2.76%
40		4	1.015E+6	9.266E+5	1.103E+6	1005000	9.690E+5	1.081E+6	2.778E+4	5.48%	1.84%
80		4	8.160E+5	7.339E+5	8.981E+5	813500	7.560E+5	8.810E+5	2.579E+4	6.32%	21.08%
140		4	3.470E+5	3.171E+5	3.769E+5	350500	3.220E+5	3.650E+5	9.390E+3	5.41%	66.44%
180		4	1.068E+5	9.141E+4	1.221E+5	107000	9.700E+4	1.160E+5	4.820E+3	9.03%	89.68%

Cell Density 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

Report Date: 27 May-15 16:21 (p 1 of 2)
 Test Code: SEL050715 | 18-8435-2907

Selenastrum Growth Test

Aquatic Bioassay & Consulting 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: Laboratory Water
Ending Date: 11 May-15 11:50	Species: Selenastrum capricornutum	Brine: Not Applicable
Duration: 4d 0h	Source: Aquatic Biosystems, CO	Age:
Sample ID: 06-0398-6060	Code: SEL050715s	Client: Internal Lab
Sample Date: 07 May-15 11:36	Material: Cadmium chloride	Project:
Receive Date:	Source: Reference Toxicant	
Sample Age: NA	Station: REF TOX	

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	61			61	61	0	0	0.0%	0
20		1	70			70	70	0	0	0.0%	0
40		1	63			63	63	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				0 (0%)

Conductivity-µmhos

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	430	425.6	434.4	426	434	1.581	3.536	0.82%	0
20		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			356	434				0 (0%)

Hardness (CaCO3)-mg/L

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	1	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	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	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-°C

C-µg/L	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	QA Count
0	Negative Contr	5	24.32	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				0 (0%)

CETIS Measurement Report

Report Date: 27 May-15 16:21 (p 2 of 2)
Test Code: SEL050715 | 18-8435-2907

Selenastrum Growth Test

Aquatic Bioassay & Consulting Labs, Inc.

Alkalinity (CaCO3)-mg/L

C-µg/L	Control Type	1
0	Negative Contr	61
20		70
40		63
80		65
140		67
180		65

Conductivity-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 (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

Temperature-°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
180		24.8	24.1	24.2	24.4	24.1