County of Los Angeles
Department of Public Works

October 2014 Water Quality Monitoring Report

for the

Big Tujunga Wash Mitigation Area

December 2014

MWH

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Water Quality Monitoring
October 2014

BACKGROUND

The County of Los Angeles Department of Public Works (LACDPW) purchased an approximately 210-acre parcel in Big Tujunga Wash as a mitigation area for Los Angeles County Flood Control District (LACFCD) projects throughout Los Angeles County. In coordination with local agencies, the LACDPW defined a number of measures to improve habitat quality at the site. A Final Master Mitigation Plan (FMMP) was prepared to guide the implementation of these enhancements. The FMMP also includes a monitoring program to gather data on conditions at the site during implementation of the improvements. The FMMP was prepared and is currently being implemented by ECORP Consulting, Inc. (ECORP). MWH, a subconsultant to ECORP, is responsible for the water quality monitoring program described in the FMMP. Water quality monitoring was conducted on a quarterly basis from the fourth quarter of 2000 through the fourth quarter of 2005. In 2006, monitoring was conducted on a semi-annual basis. In 2007 through 2009 monitoring was conducted annually, in December. In 2010, monitoring was conducted in November; pesticide sampling was conducted in early December. In 2012, monitoring was conducted in February and November, and in 2013 and 2014, monitoring was conducted in October. This report presents the results of the water quality sampling for October 2014.

The project site is located just east of Hansen Dam in the Shadow Hills area of the City of Los Angeles. Both Big Tujunga Wash, an intermittent stream, and Haines Canyon Creek, a perennial stream, traverse the project site in an east-to-west direction. The two Tujunga Ponds are located outside of the site boundary, at the far eastern side of the site.

Project Site Activities

A timeline of project-related activities including water quality sampling events is presented in **Table 1**.

Table 1
Major Activities to Date at the Big Tujunga Wash Mitigation Area

Date	Activity
4/2000	Baseline water quality sampling
11/2000 to 11/2001	Arundo, tamarisk, and pepper tree removal Chemical (Rodeo®) application
12/2000 to 11/2002	Water hyacinth removal
12/2000	Fish Sampling at Haines Canyon Creek
12/2000	Water quality sampling
1/2001 to present	Exotic aquatic wildlife (non-native fish, crayfish, bullfrog, and turtle) removal – conducted quarterly
2/2001	Partial riparian planting
3/2001	Selective clearing at Canyon Trails Golf Club
3/2001	Water quality sampling
6/2001	Water quality sampling
7/2001	Fish Sampling at Haines Canyon Creek
9/2001	Water quality sampling

Date	Activity
10/2001 to 11/2001	Fish Sampling at Haines Canyon Creek
12/2001	Water quality sampling
1/2002	Final riparian planting
2/2002	Upland replacement planting
3/2002	Water quality sampling
6/2002	Water quality sampling
7/2002	Fish Sampling at Haines Canyon Creek
9/2002	Water quality sampling
10/2002	Grading at Canyon Trails Golf Club begins
11/2002	Fish Sampling at Haines Canyon Creek
12/2002	Water quality sampling
3/2003	Water quality sampling
4/2003	Meeting with Canyon Trails Golf Club to discuss future use of herbicides and fertilizers
6/2003	Water quality sampling
8/2003	Fish Sampling at Haines Canyon Creek
9/2003	Water quality sampling
Fall 2003	Completion of the golf course construction
12/2003	Water quality sampling
1/2004	Fish Sampling at Haines Canyon Creek
4/2004	Water quality sampling
4/2004	Rock Dam Removal Day
6/2004	Angeles National Golf Club (previously named Canyon Trails) opens to the public
7/2004	Water quality sampling
10/2004	Water quality sampling
12/2004	Water quality sampling
4/2005	Water quality sampling
6/2005	Water quality sampling
10/2005	Water quality sampling
12/2005	Water quality sampling
7/2006	Water quality sampling
12/2006	Water quality sampling
12/2007	Water quality sampling
12/2008	Water quality sampling
8/2009 to 10/2009	The Station Fire was the largest fire in the recorded history of Angeles National Forest and the 10th largest fire in California since 1933. The fire burned a total of 160,577 acres. The fire was fully contained on October 16, 2009. (Source: Angeles National Forest Incident Update available - http://www.inciweb.org/incident/1856/)
12/2009	Water quality sampling
11/2010	Water quality sampling
12/2010	Water quality sampling for pesticides
9/2011 to 1/2012	Water lettuce removal
2/2012	Water quality sampling
11/2012	Water quality sampling
10/2013	Water quality sampling
10/29/14	Water quality sampling

Upstream Land Uses

The monitoring program has been designed to specifically address inputs to the site from upstream land uses such as the Angeles National Golf Club (previously named Canyon Trails Golf Club). The golf course has been operating since June 2004. Potential impacts to aquatic species from run-on to the site that contains excessive nutrients or pesticides are of primary concern. Pesticides potentially used at the Angeles National Golf Course include herbicides, insecticides, fungicides, and grass growth inhibitors (**Table 2**).

Actual use of pesticides is based on golf course maintenance needs. Based on the pesticide use information from the Golf Club, analysis of water samples for glyphosate, chlorpyrifos, other organophosphorous pesticides, and organochlorine pesticides is included in the sampling program for the Big Tujunga Wash Mitigation Area.

Table 2
Pesticides Potentially Used at the Angeles National Golf Club

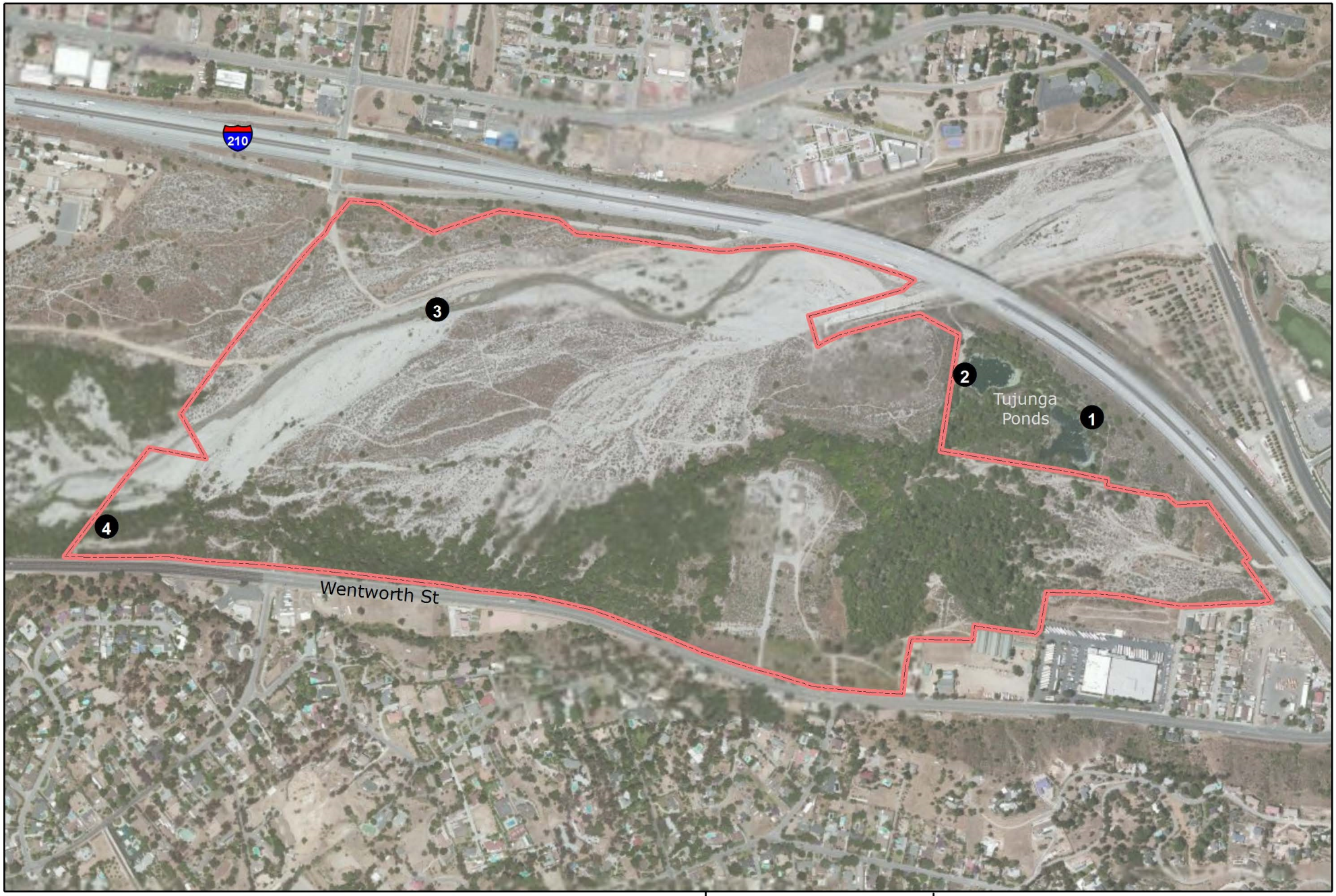
Manufacturer and Product Name	Active Ingredient	Use
Syngenta Primo Maxx	trinexapac-ethyl	grass growth inhibitor used for turf management
Syngenta Reward	diquat dibromide	landscape and aquatic herbicide
Syngenta Barricade	prodiamine	pre-emergent herbicide
Bayer Prostar 70 WP	flutolanil	fungicide
Monsanto QuikPRO	ammonium salt of glyphosphate and diquat dibromide	herbicide
Monsanto Rodeo® Verdicon Kleenup® Pro Lesco Prosecutor	glyphosate	emerged aquatic weed and brush herbicide
Valent ProGibb T&O	gibberellic acid	plant growth regulator
BASF Insignia 20 WG	pyraclostrobin	fungicide
BASF Stalker	Isopropylamine salt of Imazapyr	herbicide
Dow Agrosciences Surflan A.S.	oryzalin	herbicide
Dow Agrosciences Dursban Pro	chlorpyrifos	insecticide
Mycogen Scythe	pelargonic acid	herbicide

Source: J. Reidinger, Angeles National Golf Club, pers. comm. to M. Chimienti, LACDPW, March 18, 2004 and Angeles National Golf Club Monthly Summary Pesticide Use Reports (December 2004, February 2005 and April 2007).

MATERIALS AND METHODS

Sampling Stations

Four sampling locations have been identified for the monitoring program for the Big Tujunga Wash Mitigation Area (**Figure 1**). **Table 3** summarizes sampling locations and the conditions observed on October 29, 2014. Due to sample preservation issues, bacteria samples in Haines Canyon Creek were re-taken on October 30, 2014. Also due to sample preservation issues, total phosphorus, Kjeldahl nitrogen and ammonia samples were re-taken in all three stations with flows on November 17, 2014.



Key to Features

Mitigation Area

Station Number	Name
1	Inflow to Tujunga Ponds
2	Outflow from Tujunga Ponds
3	Big Tujunga Wash
4	Haines Canyon Creek, just before exit from site

N

0 450 900 Feet

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Date: April 19, 2012

Big Tujunga Wash Mitigation Area
Water Quality Sampling Stations

MWH.

Figure 1

Table 3
Water Quality Sampling Locations and Conditions for October 2014

Date	October 29, 2014		
Air Temperature	Approximately 73-77 degrees Fahrenheit during sample collection period		
Skies	Clear, sunny		
Observations	Water clear at all locations, relatively low turbidity, horses crossing at outflow from Tujunga Ponds		
Sampling Locations	**Latitude**	**Longitude**	**Time of sample**
Haines Canyon Creek	34 16’ 0.092’’ N	118 21’ 25.716’ ’W	1130
Haines Canyon Creek, inflow to Tujunga Ponds	34 16’ 6.040’’ N	118 20’ 22.616’’ W	1310
Haines Canyon Creek, outflow from Tujunga Ponds	34 16’ 8.263’’ N	118 20’ 30.824’’ W	1230
Big Tujunga Wash	34 16’ 11.615’’ N	118 21’ 4.519’’ W	station dry

Sampling Parameters

Water Quality. **Table 4** summarizes the sampling parameters included in the water quality monitoring program. The following meter was used in the field:

- Dissolved oxygen, pH and temperature – YSI 556-01 Multi Probe System

Pesticides were analyzed by Emax Laboratories, Inc., Torrance, California. All other analyses were performed at Eurofin Eaton Laboratories, Monrovia, California. Samples were taken at mid-depth, along a transect perpendicular to the stream channel alignment. Quality assurance/quality control (QA/QC) procedures in each laboratory followed the methods described in their respective Quality Assurance Manuals.

Table 4
Water Quality Sampling Parameters

Parameter	Analysis Location	Analytical Method
total Kjeldahl nitrogen (TKN)	laboratory	EPA 351.2
nitrite - nitrogen (NO_2-N)	laboratory	EPA 300.0 by IC
nitrate-nitrogen (NO_3-N)	laboratory	EPA 300.0 by IC
ammonia (NH_4)	laboratory	EPA 350.1
orthophosphate - P	laboratory	Standard Methods 4500PE/EPA 365.1
total phosphorus - P	laboratory	Standard Methods 4500PE/EPA 365.1
total coliform	laboratory	Standard Methods 9221B
fecal coliform	laboratory	Standard Methods 9221C
turbidity	laboratory	EPA 180.1
glyphosate (Roundup/Rodeo)[1]	laboratory	EPA 547
chlorpyrifos and organophosphorous pesticides[2]	laboratory	EPA 8141A
organochlorine pesticides[3]	laboratory	EPA 608
dissolved oxygen	field	Standard Methods 4500-O G
total residual chlorine	laboratory	Standard Methods 4500-Cl
temperature	field	Standard Methods 2550
pH	field	Standard Methods 4500-H+

Sources for analytical methods:
EPA. Method and Guidance for Analysis of Water.
American Public Health Association, American Waterworks Association, and Water Environment Federation. 1998. Standard Methods for the Examination of Water and Wastewater, 20th Edition. Washington D.C.

1 First analysis completed in the first quarter of 2004

2 First analysis completed in the fourth quarter of 2004. This analytical method tests for the following chemicals: azinphos-methyl, bolster, coumaphos, diazinon, chlorpyrifos, demeton, dichlorvos, disulfoton, ethoprop, fensulfothion, fenthion, mevinphos, naled, phorate, runnel, stirophos, parathion-methyl, tokuthion, and trichloronate.

3 First analysis completed in December 2007. EPA method 608 tests for aldrin, BHC, Chlordane, DDD, DDE, DDT, dieldrin, endrin, endosulfan, heptaclor, methoxychlor, toxaphene and PCB.

Discharge Measurements. In addition to the water quality monitoring, flows in the outlet from the Tujunga Ponds and in Haines Canyon Creek leaving the site were estimated using a simple field procedure. The technique uses a float to measure stream velocity.

Calculating flow then involves solving the following equation:

$$Flow = ALC / T$$

Where:

A = Average cross-sectional area of the stream (stream width multiplied by average water depth)

L = Length of the stream reach measured (usually 20 feet)

C = A coefficient or correction factor (0.8 for rocky-bottom streams or 0.9 for muddy-bottom streams). This allows you to correct for the fact that water at the surface travels faster than near the stream bottom due to resistance from gravel, cobble, etc. Multiplying the surface velocity by a correction coefficient decreases the value and gives a better measure of the stream's overall velocity.

T = Time, in seconds, for the float to travel the length of L

RESULTS

Baseline Water Quality

Sampling and analysis conducted by LACDPW prior to implementation of the FMMP is considered the baseline for water quality conditions at the site. The results of baseline analyses conducted in April 2000 are presented in **Table 5**. Higher bacteria and turbidity observed in the 4/18/2000 samples are attributable to a rain event. Phosphorus levels were also high in the 4/18/2000 samples, due to release from sediments.

October 2014 Results

Water Quality

Results of analyses conducted by Eurofin Eaton and Emax Laboratories are appended to this report (**Appendix A**) and summarized in **Table 6**.

Table 5
Baseline Water Quality (2000)

Parameter	Units	Date	Haines Canyon Creek, Inflow to Tujunga Ponds	Haines Canyon Creek, Outflow from Tujunga Ponds	Big Tujunga Wash	Haines Canyon Creek, just before exit from site
Total coliform	MPN/ 100 ml	4/12/00	3,000	5,000	170	1,700
		4/18/00	2,200	170,000	2,400	70,000
Fecal coliform	MPN/ 100 ml	4/12/00	500	300	40	80
		4/18/00	500	30,000	2,400	50,000
Ammonia-N	mg/L	4/12/00	0	0	0	0
		4/18/00	0	0	0	0
Nitrate-N	mg/L	4/12/00	8.38	5.19	0	3.73
		4/18/00	8.2	3.91	0.253	0.438
Nitrite-N	mg/L	4/12/00	0.061	0	0	0
		4/18/00	0.055	0	0	0
Kjeldahl-N	mg/L	4/12/00	0	0.1062	0.163	0
		4/18/00	0	0.848	0.42	0.428
Dissolved phosphorus	mg/L	4/12/00	0.078	0.056	0	0.063
		4/18/00	0.089	0.148	0.111	0.163
Total phosphorus	mg/L	4/12/00	0.086	0.062	0	0.066
		4/18/00	0.113	0.153	0.134	0.211
pH	std units	4/12/00	7.78	7.68	7.96	7.91
		4/18/00	7.18	7.47	7.45	7.06
Turbidity	NTU	4/12/00	1.83	0.38	1.75	0.6
		4/18/00	4.24	323	4070	737

Table 6
Summary of Water Quality Results – October 29, 2014

Parameter	Units	Haines Canyon Creek, Inflow to Tujunga Ponds	Haines Canyon Creek, Outflow from Tujunga Ponds	Big Tujunga Wash	Haines Canyon Creek, just before exit from site
Temperature	°C	20.8	18.4	NA	16.6
Dissolved Oxygen	mg/L	7.7	8.7	NA	9.7
pH	std units	6.79	6.90	NA	7.61
Total residual chlorine	mg/L	ND	ND	NA	ND
Ammonia-Nitrogen	mg/L	ND*	ND*	NA	ND*
Kjeldahl Nitrogen	mg/L	0.41*	ND*	NA	ND*
Nitrite-Nitrogen	mg/L	ND	ND	NA	ND
Nitrate-Nitrogen	mg/L	7.6	5.4	NA	4.9
Orthophosphate-P	mg/L	ND	ND	NA	0.013
Total phosphorus-P	mg/L	ND*	ND*	NA	ND*
Glyphosate	µg/L	ND	ND	NA	ND
Chloropyrifos**	µg/L	ND	ND	NA	ND
Pesticides (EPA 608)***	µg/L	ND	ND	NA	ND
Turbidity	NTU	0.79	0.42	NA	0.18
Fecal Coliform Bacteria	(MPN/100 ml)	33	230	NA	330*
Total Coliform Bacteria	(MPN/100 ml)	490	680	NA	490*

NA – data not available; station dry on the sample date

NTU – nephelometric turbidity units MPN – most probable number ND – non-detect

* Due to sample preservation issues, bacteria results in Haines Canyon Creek are from samples taken October 30, 2014. Also due to sample preservation issues, TP, TKN and NH3-N results are from samples taken on November 17, 2014.

** The analytical method used for chloropyrifos (EPA 8141A) also tests for the following chemicals: azinphos-methyl, bolster, coumaphos, diazinon, demeton, dichlorvos, disulfoton, ethoprop, fensulfothion, fenthion, mevinphos, naled, phorate, runnel, stirophos, parathion-methyl, tokuthion, and trichloronate.

*** EPA method 608 tests for aldrin, BHC, Chlordane, DDD, DDE, DDT, dieldrin, endrin, endosulfan, heptaclor, methoxychlor, and toxaphene.

Discharge Measurements

Using the field technique described above, flows in the outlet from the Tujunga Ponds and in Haines Canyon Creek (leaving the site) were approximated. Estimated flows for October 2014 are summarized in **Table 7**.

Table 7
Estimated Flows for October 2014

Sampling Date	Approximate Flow (cubic feet per second)		
	Haines Canyon Creek, Outflow from Tujunga Ponds	Haines Canyon Creek, just before exit from site	Big Tujunga Wash
10/29/14	3	2	station dry on sample date

Comparison of Results with Aquatic Life Criteria

Tables 8 through **13** present objectives established by the United States Environmental Protection Agency (USEPA) and the Los Angeles Regional Water Quality Control Board (Regional Board) for protection of beneficial uses including freshwater aquatic life.

Table 8
National and Local Recommended Water Quality Criteria - Freshwaters

Parameter	Basin Plan Objectives[a]	EPA Criteria		
		CMC	CCC	Human Health
Temperature (°C)	b	See Table 13	See Table 13	--
Dissolved oxygen (mg/L)	>7.0 mean >5.0 min	5.0[c] (warmwater, early life stages, 1-day minimum)	6.0[c] (warmwater, early life stages, 7-day mean)	--
pH	6.5 - 8.5	--	6.5-9.0[d,e]	5.0-9.0[d,e]
Total residual chlorine (mg/L)	0.1	0.019[d,e]	0.011[d,e]	4.0 (maximum residual disinfectant level goal)
Fecal coliform (MPN/100 ml)	126[f] (geometric mean for *E. coli*) (water contact recreation)	--	--	Swimming stds: 33[g] (geometric mean for enterococci) 126[g] (geometric mean for *E. coli*)
Ammonia-nitrogen (mg/L)	See Tables 11 and 12	See Table 9	See Table 10	--
Nitrite-nitrogen (mg/L)	1	--	--	1 (primary drinking water std.)
Nitrate-nitrogen (mg/L)	10	--	--	10 (primary drinking water std.)
Total phosphorus (mg/L)	--	<0.05 – 0.1[e] (recommendation for streams, no criterion)		--
Turbidity (NTU)	h	i	i	5 (secondary drinking water standard) 0.5 – 1.0 (std. for systems that filter)

Notes:

-- No criterion

CMC Criteria Maximum Concentration or acute criterion

CCC Criteria Continuous Concentration or chronic criterion

a Source: California Regional Water Quality Control Board, Los Angeles Region. 1994. Water Quality Control Plan (Basin Plan). As amended.

b Narrative criterion: "The natural receiving water temperature of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses."

c Source: USEPA. 1986. Ambient Water Quality Criteria for Dissolved Oxygen. EPA 440-5-86-003. Washington, D.C.

d Source: USEPA. 1999. National Recommended Water Quality Criteria – Correction. EPA 822-Z-99-001. Washington, D.C.

e Source: USEPA. 1986. Quality Criteria for Water. EPA 440/5-86-001. Washington, D.C.

f Single sample limits – *E. coli* density shall not exceed 235/100 ml.

g Source: USEPA. 1986. Ambient Water Quality Criteria for Bacteria – 1986. EPA 440-5-84-002. Washington, D.C.

h Narrative criterion: "Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses."

i Narrative criterion for freshwater fish and other aquatic life: "Settleable and suspended solids should not reduce the depth of the compensation point for photosynthetic activity by more than 10 percent from the seasonally established norm for aquatic life."

Table 9
Temperature and pH-Dependent Values of the CMC (Acute Criterion)
Mussels Absent

CMC: Mussels Absent, mg N/L										
pH	Temperature, C									
	0	14	16	18	20	22	24	26	28	30
6.5	58.0	58.0	58.0	58.0	43.7	37.0	31.4	26.6	22.5	19.1
6.6	55.7	55.7	55.7	55.7	41.9	35.5	30.1	25.5	21.6	18.3
6.7	53.0	53.0	53.0	53.0	39.9	33.8	28.6	24.3	20.6	17.4
6.8	49.9	49.9	49.9	49.9	37.6	31.9	27.0	22.9	19.4	16.4
6.9	46.5	46.5	46.5	46.5	35.1	29.7	25.2	21.3	18.1	15.3
7.0	42.9	42.9	42.9	42.9	32.3	27.4	23.2	19.7	16.7	14.1
7.1	39.1	39.1	39.1	39.1	29.4	24.9	21.1	17.9	15.2	12.8
7.2	35.1	35.1	35.1	35.1	26.4	22.4	19.0	16.1	13.6	11.5
7.3	31.2	31.2	31.2	31.2	23.5	19.9	16.8	14.3	12.1	10.2
7.4	27.3	27.3	27.3	27.3	20.6	17.4	14.8	12.5	10.6	8.98
7.5	23.6	23.6	23.6	23.6	17.8	15.1	12.8	10.8	9.18	7.77
7.6	20.2	20.2	20.2	20.2	15.3	12.9	10.9	9.27	7.86	6.66
7.7	17.2	17.2	17.2	17.2	12.9	11.0	9.28	7.86	6.66	5.64
7.8	14.4	14.4	14.4	14.4	10.9	9.21	7.80	6.61	5.60	4.74
7.9	12.0	12.0	12.0	12.0	9.07	7.69	6.51	5.52	4.67	3.96
8.0	9.99	9.99	9.99	9.99	7.53	6.38	5.40	4.58	3.88	3.29
8.1	8.26	8.26	8.26	8.26	6.22	5.27	4.47	3.78	3.21	2.72
8.2	6.81	6.81	6.81	6.81	5.13	4.34	3.68	3.12	2.64	2.24
8.3	5.60	5.60	5.60	5.60	4.22	3.58	3.03	2.57	2.18	1.84
8.4	4.61	4.61	4.61	4.61	3.48	2.95	2.50	2.11	1.79	1.52
8.5	3.81	3.81	3.81	3.81	2.87	2.43	2.06	1.74	1.48	1.25
8.6	3.15	3.15	3.15	3.15	2.37	2.01	1.70	1.44	1.22	1.04
8.7	2.62	2.62	2.62	2.62	1.97	1.67	1.42	1.20	1.02	0.862
8.8	2.19	2.19	2.19	2.19	1.65	1.40	1.19	1.00	0.851	0.721
8.9	1.85	1.85	1.85	1.85	1.39	1.18	1.00	0.847	0.718	0.608
9.0	1.57	1.57	1.57	1.57	1.19	1.00	0.851	0.721	0.611	0.517

Note: Native species of freshwater mussels are not known for Big Tujunga Wash or Haines Canyon Creek.
CMC – Criteria Maximum Concentration (ammonia)
Source: USEPA. 2009. Draft 2009 Update Aquatic Life Ambient Water Quality Criteria for Ammonia - Freshwater. EPA 822-D-09-001. Washington, D.C.

Table 10
Temperature and pH-Dependent Values of the CCC (Chronic Criterion)
Mussels Absent and Early Fish Life Stages Present

CCC: Mussels Absent and Early Fish Life Stages Present, mg N/L										
pH	Temperature (° Celsius)									
	0	14	16	18	20	22	24	26	28	30
6.5	6.36	6.36	6.36	6.36	6.36	6.11	5.37	4.72	4.15	3.65
6.6	6.26	6.26	6.26	6.26	6.26	6.02	5.29	4.65	4.09	3.60
6.7	6.15	6.15	6.15	6.15	6.15	5.91	5.19	4.57	4.01	3.53
6.8	6.00	6.00	6.00	6.00	6.00	5.77	5.08	4.46	3.92	3.45
6.9	5.84	5.84	5.84	5.84	5.84	5.61	4.93	4.34	3.81	3.35
7.0	5.64	5.64	5.64	5.64	5.64	5.42	4.76	4.19	3.68	3.24
7.1	5.41	5.41	5.41	5.41	5.41	5.20	4.57	4.02	3.53	3.10
7.2	5.14	5.14	5.14	5.14	5.14	4.94	4.35	3.82	3.36	2.95
7.3	4.84	4.84	4.84	4.84	4.84	4.66	4.09	3.60	3.16	2.78
7.4	4.52	4.52	4.52	4.52	4.52	4.34	3.82	3.36	2.95	2.59
7.5	4.16	4.16	4.16	4.16	4.16	4.00	3.52	3.09	2.72	2.39
7.6	3.79	3.79	3.79	3.79	3.79	3.65	3.21	2.82	2.48	2.18
7.7	3.41	3.41	3.41	3.41	3.41	3.28	2.89	2.54	2.23	1.96
7.8	3.04	3.04	3.04	3.04	3.04	2.92	2.57	2.26	1.98	1.74
7.9	2.67	2.67	2.67	2.67	2.67	2.57	2.26	1.98	1.74	1.53
8.0	2.32	2.32	2.32	2.32	2.32	2.23	1.96	1.72	1.52	1.33
8.1	2.00	2.00	2.00	2.00	2.00	1.92	1.69	1.49	1.31	1.15
8.2	1.71	1.71	1.71	1.71	1.71	1.64	1.45	1.27	1.12	0.982
8.3	1.45	1.45	1.45	1.45	1.45	1.40	1.23	1.08	0.949	0.835
8.4	1.23	1.23	1.23	1.23	1.23	1.18	1.04	0.914	0.804	0.706
8.5	1.04	1.04	1.04	1.04	1.04	0.999	0.878	0.772	0.679	0.597
8.6	0.878	0.878	0.878	0.878	0.878	0.844	0.742	0.652	0.573	0.504
8.7	0.742	0.742	0.742	0.742	0.742	0.714	0.628	0.552	0.485	0.426
8.8	0.631	0.631	0.631	0.631	0.631	0.606	0.533	0.469	0.412	0.362
8.9	0.539	0.539	0.539	0.539	0.539	0.518	0.455	0.400	0.352	0.309
9.0	0.464	0.464	0.464	0.464	0.464	0.446	0.392	0.345	0.303	0.266

Note: Native species of freshwater mussels are not known for Big Tujunga Wash or Haines Canyon Creek.
CCC – Criteria Continuous Concentration (ammonia)
Source: USEPA. 2009. Draft 2009 Update Aquatic Life Ambient Water Quality Criteria for Ammonia - Freshwater. EPA 822-D-09-001. Washington, D.C.

Table 11
30-Day Average Objective for Ammonia-N for Freshwaters Applicable to Waters Subject to the "Early Life Stage Present" Condition (mg N/L)

pH	Temperature (° Celsius)								
	14	16	18	20	22	24	26	28	30
6.5	6.67	6.06	5.33	4.68	4.12	3.62	3.18	2.80	2.46
6.6	6.57	5.97	5.25	4.61	4.05	3.56	3.13	2.75	2.42
6.7	6.44	5.86	5.15	4.52	3.98	3.50	3.07	2.70	2.37
6.8	6.29	5.72	5.03	4.42	3.89	3.42	3.00	2.64	2.32
6.9	6.12	5.56	4.89	4.30	3.78	3.32	2.92	2.57	2.25
7.0	5.91	5.37	4.72	4.15	3.65	3.21	2.82	2.48	2.18
7.1	5.67	5.15	4.53	3.98	3.50	3.08	2.70	2.38	2.09
7.2	5.39	4.90	4.31	3.78	3.33	2.92	2.57	2.26	1.99
7.3	5.08	4.61	4.06	3.57	3.13	2.76	2.42	2.13	1.87
7.4	4.73	4.30	3.78	3.32	2.92	2.57	2.26	1.98	1.74
7.5	4.36	3.97	3.49	3.06	2.69	2.37	2.08	1.83	1.61
7.6	3.98	3.61	3.18	2.79	2.45	2.16	1.90	1.67	1.47
7.7	3.58	3.25	2.86	2.51	2.21	1.94	1.71	1.50	1.32
7.8	3.18	2.89	2.54	2.23	1.96	1.73	1.52	1.33	1.17
7.9	2.80	2.54	2.24	1.96	1.73	1.52	1.33	1.17	1.03
8.0	2.43	2.21	1.94	1.71	1.50	1.32	1.16	1.02	0.897
8.1	2.10	1.91	1.68	1.47	1.29	1.14	1.00	0.879	0.773
8.2	1.79	1.63	1.43	1.26	1.11	0.973	0.855	0.752	0.661
8.3	1.52	1.39	1.22	1.07	0.941	0.827	0.727	0.639	0.562
8.4	1.29	1.17	1.03	0.906	0.796	0.700	0.615	0.541	0.475
8.5	1.09	0.990	0.870	0.765	0.672	0.591	0.520	0.457	0.401
8.6	0.920	0.836	0.735	0.646	0.568	0.499	0.439	0.386	0.339
8.7	0.778	0.707	0.622	0.547	0.480	0.422	0.371	0.326	0.287
8.8	0.661	0.601	0.528	0.464	0.408	0.359	0.315	0.277	0.244
8.9	0.565	0.513	0.451	0.397	0.349	0.306	0.269	0.237	0.208
9.0	0.486	0.442	0.389	0.342	0.300	0.264	0.232	0.204	0.179

Source: California Regional Water Quality Control Board, Los Angeles Region. 2005. Amendments to the Water Quality Control Plan – Los Angeles Region with Respect to Early Life Stage Implementation Provisions of the Inland Surface Water Ammonia Objectives for Freshwaters. Taken from USEPA. 1999. 1999 Update of Ambient Water Quality Criteria for Ammonia. EPA 822-R-99-014. Washington, D.C.

Table 12
One-Hour Average Objective for Ammonia-N for Freshwaters (mg N/L)

pH	Waters Designated COLD and/or MIGR	Waters Not Designated COLD and/or MIGR
6.5	32.6	48.8
6.6	31.3	46.8
6.7	29.8	44.6
6.8	28.1	42.0
6.9	26.2	39.1
7.0	24.1	36.1
7.1	22.0	32.8
7.2	19.7	29.5
7.3	17.5	26.2
7.4	15.4	23.0
7.5	13.3	19.9
7.6	11.4	17.0
7.7	9.65	14.4
7.8	8.11	12.1
7.9	6.77	10.1
8.0	5.62	8.40
8.1	4.64	6.95
8.2	3.83	5.72
8.3	3.15	4.71
8.4	2.59	3.88
8.5	2.14	3.20
8.6	1.77	2.65
8.7	1.47	2.20
8.8	1.23	1.84
8.9	1.04	1.56
9.0	0.885	1.32

Cold – Beneficial use designation of Cold Freshwater Habitat
MIGR – Beneficial use designation of Migration of Aquatic Organisms
Source: California Regional Water Quality Control Board, Los Angeles Region. 2002. Amendments to the Water Quality Control Plan – Los Angeles Region with Respect to Inland Surface Water Ammonia Objectives. Taken from USEPA. 1999. 1999 Update of Ambient Water Quality Criteria for Ammonia. EPA 822-R-99-014. Washington, D.C.

Table 13
Example Calculated Values for Maximum Weekly Average Temperature for Growth and Short-Term Maxima for Survival of Juvenile and Adult Fishes During the Summer

Species	Growth (°Celsius)	Maxima (°Celsius)
Black crappie	27	--
Bluegill	32	35
Channel catfish	32	35
Emerald shiner	30	--
Largemouth bass	32	34
Brook trout	19	24

Source: USEPA. 1986. Quality Criteria for Water. EPA 440/5-86-001. Washington, D.C.

DISCUSSION

Results from the October 2014 sampling are described by parameter in **Table 14**.

Table 14
Discussion of October 2014 Water Quality Sampling Results

Parameter	Discussion
Temperature	• Observed temperatures were below levels of concern for growth and survival of warmwater fish species at all stations.
Dissolved oxygen	• Dissolved oxygen levels ranged from 7.7 mg/L in the inflow to the Tujunga Ponds to 9.7 in Haines Canyon Creek leaving the site. DO levels at all stations were above the recommended minimum (5.0 mg/L) and recommended mean (7.0 mg/L) for warmwater fish species.
pH	• Lowest pH was observed in the inflow to Tujunga Ponds (6.79), with highest pH observed in Haines Canyon Creek leaving the site (7.61). On this date, pH readings in Haines Canyon Creek and the Tujunga Ponds were within the 6.5 to 8.5 range identified in the Basin Plan.
Total residual chlorine	• No residual chlorine was detected at any station.
Nitrogen	• Nitrate-nitrogen measurements at all stations were below the drinking water standard of 10 mg/L. • Ammonia was below the detection limit at all stations.
Phosphorus	• Total phosphorus levels at all sites were below the method reporting limit of 0.031 mg/L, and therefore below EPA's recommended range for streams to prevent excess algae growth (recommended range is <0.05 – 0.1 mg/L).
Glyphosate	• Glyphosate was not detected at any station.
Chloropyrifos and Organophosphorous Pesticides	• Chloropyrifos and the other pesticides tested using EPA's analytical method 8141A were not detected at any station.
Organochlorine Pesticides	• Pesticides analyzed by EPA Method 608 were not detected at any station.
Turbidity	• Turbidity levels were very low (<1 NTU) at all stations.
Bacteria	• The fresh water bacteria standard for water contact recreation is for *E. coli* (126 MPN/100 ml geometric mean, 235 MPN/100 ml single sample limits). The observed fecal coliform levels were below the standard at two stations (Haines Canyon Creek inflow to and outflow from Tujunga Ponds). Fecal coliform was 330 MPN/100 ml in Haines Canyon Creek just before exit from site. Previously, the water contact standard was 200 MPN/100 ml fecal coliform. Sampling specifically for *E. coli* was not conducted. • Total coliform levels ranged from 490 MPN/100ml in Haines Canyon Creek inflow to Tujunga Ponds and just before exit from site to 680 MPN/100 ml in the outflow from the ponds. [Note that recreation standards are for *E. coli*. Total coliform standards apply to waterbodies where shellfish can be harvested for human consumption.]

GLOSSARY

Ammonia-Nitrogen – NH_3-N is a gaseous alkaline compound of nitrogen and hydrogen that is highly soluble in water. Un-ionized ammonia (NH_3) is toxic to aquatic organisms. The proportions of NH_3 and ammonium (NH_4^+) and hydroxide (OH^-) ions are dependent on temperature, pH, and salinity.

Chlorine, residual – The chlorination of water supplies and wastewaters serves to destroy or deactivate disease-producing organisms. Residual chlorine in natural waters is an aquatic toxicant.

Chloropyrifos - white crystal-like solid insecticide widely used in homes and on farms. Used to control cockroaches, fleas, termites, ticks crop pests.

Coliform Bacteria – several genera of bacteria belonging to the family Enterobacteriaceae. Based on the method of detection, the coliform group is historically defined as facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria that ferment lactose with gas and acid formation within 48 hours at 35°C.

Fecal Coliform Bacteria – part of the intestinal flora of warm-blooded animals. Presence in surface waters is considered an indication of pollution.

Glyphosate - white compound broad-spectrum herbicide used to kill weeds.

Kjeldahl Nitrogen – Named for the laboratory technique used for detection, Kjeldahl nitrogen includes organic nitrogen and ammonia nitrogen.

Nitrate-Nitrogen – $NO3^-$-N is an essential nutrient for many photosynthetic autotrophs.

Nitrite-Nitrogen – $NO2^-$-N is an intermediate oxidation state of nitrogen, both in the oxidation of ammonia to nitrate and in the reduction of nitrate.

Orthophosphorus – the reactive form of phosphorus, commonly used as fertilizer.

pH – the hydrogen ion activity of water (pH) is measured on a logarithmic scale, ranging from 0 to 14. The pH of "pure" water at 25°C is 7.0 (neutral). Low pH is acidic; high pH is basic or alkaline.

Total Phosphorus – In natural waters, phosphorus occurs almost solely as orthophosphates, condensed phosphates, and organically bound phosphate. Phosphorus is essential to the growth of organisms.

Turbidity – attributable to the suspended and colloidal matter in water, including clay, silt, finely divided organic and inorganic matter, soluble colored organic compounds, and plankton and other microscopic organisms. The reduction of clearness in turbid waters diminishes the penetration of light and therefore can adversely affect photosynthesis.

APPENDIX A

BIG TUJUNGA WASH MITIGATION AREA
WATER QUALITY MONITORING PROGRAM

LABORATORY RESULTS
October 2014

eurofins | Eaton Analytical

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

NELAP ACCREDITED TNI LABORATORY
ORELAP 4034

ilac-MRA

ACLASS ACCREDITED TESTING
AT-1807

Laboratory Report

for

MWH Americas - Pasadena
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101
Attention: Sarah Garber

Date of Issue
12/09/2014

EUROFINS EATON ANALYTICAL

DST: David S Tripp

Project Manager

Report: 505701
Project: BIG-TUJUNGA
Group: Water Quality Monitoring
PO#: 10506132

* Accredited in accordance with TNI 2009 and ISO/IEC 17025:2005.
* Laboratory certifies that the test results meet all **TNI 2009 and ISO/IEC 17025:2005** requirements unless noted under the individual analysis.
* Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.
* Test results relate only to the sample(s) tested.

STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	**Mississippi**	Certified
Alaska	CA00006	**Montana**	Cert 0035
Arizona	AZ0778	**Nebraska**	Certified
Arkansas	Certified	**Nevada**	CA00006-2014-1
California-Monrovia-ELAP	2813	**New Hampshire ***	2959
California-Colton- ELAP	2812	**New Jersey ***	CA 008
California-Folsom- ELAP	2820	**New Mexico**	Certified
Colorado	Certified	**New York ***	11320
Connecticut	PH-0107	**North Carolina**	06701
Delaware	CA 006	**North Dakota**	R-009
Florida *	E871024	**Oregon (Primary AB) ***	**ORELAP 4034**
Georgia	947	**Pennsylvania ***	68-565
Guam	14-003r	**Rhode Island**	LAO00326
Hawaii	Certified	**South Carolina**	87016
Idaho	Certified	**South Dakota**	Certified
Illinois *	200033	**Tennessee**	TN02839
Indiana	C-CA-01	**Texas ***	T104704230-14-7
Kansas *	E-10268	**Utah ***	CA000062014-7
Kentucky	90107	**Vermont**	VT0114
Louisiana *	LA140009	**Virginia ***	460260
Maine	CA0006	**Washington**	C838
Maryland	224	**West Virginia**	9943 C
Commonwealth of Northern Marianas Is.	MP0004	**Wisconsin**	998316660
Massachusetts	M-CA006	**Wyoming**	8TMS-L
Michigan	9906	**EPA Region 5**	Certified
Los Angeles County Sanitation Districts	10264		

* NELAP/TNI Recognized Accreditation Bodies

The tests listed below are accredited and meet the requirements of ISO 17025 as verified by the ANSI-ASQ National Accreditation Board/ACLASS.
Refer to Certificate and scope of accreditation (AT 1807) found at: http://www.eatonanalytical.com

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
1,4-Dioxane	EPA 522	x	x	
2,3,7,8-TCDD	Modified EPA 1613B	x	x	
Acrylamide	In House Method	x	x	
Alkalinity	SM 2320B	x	x	x
Ammonia	EPA 350.1		x	x
Ammonia	SM 4500-NH3 H (18th)		x	x
Anions and DBPs by IC	EPA 300.0	x	x	x
Anions and DBPs by IC	EPA 300.1	x	x	
Asbestos	EPA 100.2	x		
Bicarbonate Alkalinity as HCO3	SM 2330B	x	x	x
BOD / CBOD	SM 5210B		x	x
Bromate	In House Method	x	x	
Carbamates	EPA 531.2	x	x	
Carbonate as CO3	SM 2330B	x	x	x
Carbonyls	EPA 556	x	x	
COD	EPA 410.4 / SM 5220D			x
Chloramines	SM 4500-CL G	x	x	x
Chlorinated Acids	EPA 515.4	x	x	
Chlorinated Acids	EPA 555	x	x	
Chlorine Dioxide	SM 4500-CLO2 D	x	x	
Chlorine -Total/Free/ Combined Residual	SM 4500-Cl G	x	x	x
Conductivity	EPA 120.1			x
Conductivity	SM 2510B	x	x	x
Corrosivity (Langelier Index)	SM 2330B	x	x	
Cyanide, Amenable	SM 4500-CN G	x		x
Cyanide, Free	SM 4500CN F	x	x	x
Cyanide, Total	EPA 335.4	x	x	x
Cyanogen Chloride (screen)	In House Method	x	x	
Diquat and Paraquat	EPA 549.2	x	x	
DBP/HAA	SM 6251B	x	x	
Dissolved Oxygen	SM 4500-O G		x	x
E. Coli	(MTF/EC+MUG)	x		
E. Coli	CFR 141.21(f)(6)(i)		x	x
E. Coli	SM 9223			x
E. Coli (Enumeration)	SM 9221B.1/ SM 9221F	x	x	
E. Coli (Enumeration)	SM 9223B	x	x	
EDB/DCBP	EPA 504.1	x		
EDB/DBCP and DBP	EPA 551.1	x	x	
EDTA and NTA	In House Method	x	x	
Endothall	EPA 548.1	x	x	
Enterococci	SM 9230B	x		x
Fecal Coliform	SM 9221 E (MTF/EC)	x		
Fecal Coliform	SM 9221C, E (MTF/EC)			x
Fecal Coliform (Enumeration)	SM 9221E (MTF/EC)	x	x	
Fecal Coliform with Chlorine Present	SM 9221E			x
Fecal Streptococci	SM 9230B	x		x
Fluoride	SM 4500-F C	x	x	x
Glyphosate	EPA 547	x	x	
Gross Alpha/Beta	EPA 900.0	x	x	x
HAAs/ Dalapon	EPA 552.3	x	x	
Hardness	SM 2340B	x	x	x
Heterotrophic Bacteria	In House Method	x	x	
Heterotrophic Bacteria	SM 9215 B	x	x	
Hexavalent Chromium	EPA 218.6	x	x	x
Hexavalent Chromium	EPA 218.7	x	x	
Hexavalent Chromium	SM 3500-Cr B or C (20th)			x

SPECIFIC TESTS	METHOD OR TECHNIQUE USED	Drinking Water	Food & Beverage	Waste Water
Hormones	EPA 539	x	x	
Hydroxide as OH Calc.	SM 2330B	x	x	
Kjeldahl Nitrogen	EPA 351.2			x
Mercury	EPA 245.1	x	x	x
Metals	EPA 200.7 / 200.8	x	x	x
Microcystin LR	ELISA	x	x	
NDMA	EPA 521	x	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x	x
OCL, Pesticides/PCB	EPA 505	x	x	
Ortho Phosphate	EPA 365.1	x	x	
Ortho Phosphate and Total Phosphorous	EPA 365.1/SM 4500-P E			x
Ortho Phosphorous	SM 4500P E	x	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	x	
Perchlorate	EPA 331.0	x	x	
Perchlorate	EPA 314.0	x	x	
Perfluorinated Alkyl Acids	EPA 537	x	x	
pH	EPA 150.1	x		
pH	SM 4500-H+B	x	x	x
Phenylurea Pesticides/ Herbicides	In House Method	x	x	
Pseudomonas	IDEXX Pseudalert	x	x	
Radium-226	RA-226 GA	x	x	
Radium-228	RA-228 GA	x	x	
Radon-222	SM 7500RN	x	x	
Residue, Filterable	SM 2540C	x	x	x
Residue, Non-filterable	SM 2540D			x
Residue, Total	SM 2540B		x	x
Residue, Volatile	EPA 160.4			x
Semi-VOC	EPA 525.2	x	x	
Semi-VOC	EPA 625	x	x	x
Silica	SM 4500-Si D	x	x	x
Silica	SM 4500-SiO2 C	x		x
Sulfide	SM 4500-$S^{=}$ D			x
Sulfite	SM 4500-SO^{3}B	x	x	x
Surfactants	SM 5540C	x	x	x
Taste and Odor Analytes	SM 6040E	x	x	
Total Coliform	SM 9221 A, B	x	x	
Total Coliform (Enumeration)	SM 9221 A, B, C	x	x	
Total Coliform / E. coli	Colisure	x	x	
Total Coliform	SM 9221B			x
Total Coliform with Chlorine Present	SM 9221B			x
Total Coliform / E.coli	SM 9223	x	x	
TOC	SM 5310C		x	x
TOC/DOC	SM 5310C	x	x	
TOX	SM 5320B			x
Total Phenols	EPA 420.1			x
Total Phenols	EPA 420.4	x	x	x
Total Phosphorous	SM 4500 P F			x
Turbidity	EPA 180.1	x	x	x
Turbidity	SM 2130B	x		x
Uranium by ICP/MS	EPA 200.8	x	x	
UV 254	SM 5910B	x		
VOC	EPA 524.2/EPA 524.3	x	x	
VOC	EPA 624	x	x	x
VOC	EPA SW 846 8260	x	x	
VOC	In House Method	x	x	
Yeast and Mold	SM 9610	x	x	

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Acknowledgement of Samples Received

Addr: **MWH Americas - Pasadena**
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Attn: Sarah Garber
Phone: 626-568-6071

Client ID: MWH-ECORP
Folder #: 505701
Project: BIG-TUJUNGA
Sample Group: Water Quality Monitoring

Project Manager: David S Tripp
Phone: (626) 386-1158
PO #: 10506132.011601

The following samples were received from you on **October 29, 2014** at **1446**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date
201410290482	Haines Cyn Ck	10/29/2014 1130
	Variable ID: HCC102914	
	@608_PCBS / @608_PEST / @8141EDD	
	Ammonia Nitrogen / Fecal Coliform Bacteria / Glyphosate	
	Nitrate as Nitrogen by IC / Nitrate as NO3 (calc) / Nitrite Nitrogen by IC	
	Orthophosphate as P (OPO4) / Orthophosphate as PO4 / Total Chlorine Residual	
	Total Coliform Bacteria / Total Kjeldahl Nitrogen / Total phosphorus as P	
	Total phosphorus as PO4- Calc. / Turbidity	
201410290483	TJ Ponds Out	10/29/2014 1230
	Variable ID: TJPOUT102914	
	@608_PCBS / @608_PEST / @8141EDD	
	Ammonia Nitrogen / Fecal Coliform Bacteria / Glyphosate	
	Nitrate as Nitrogen by IC / Nitrate as NO3 (calc) / Nitrite Nitrogen by IC	
	Orthophosphate as P (OPO4) / Orthophosphate as PO4 / Total Chlorine Residual	
	Total Coliform Bacteria / Total Kjeldahl Nitrogen / Total phosphorus as P	
	Total phosphorus as PO4- Calc. / Turbidity	
201410290484	TJ Ponds IN	10/29/2014 1310
	Variable ID: TJPIN102914	
	@608_PCBS / @608_PEST / @8141EDD	
	Ammonia Nitrogen / Fecal Coliform Bacteria / Glyphosate	
	Nitrate as Nitrogen by IC / Nitrate as NO3 (calc) / Nitrite Nitrogen by IC	
	Orthophosphate as P (OPO4) / Orthophosphate as PO4 / Total Chlorine Residual	
	Total Coliform Bacteria / Total Kjeldahl Nitrogen / Total phosphorus as P	
	Total phosphorus as PO4- Calc. / Turbidity	
201410300575	Haines Cyn Ck	10/30/2014 1330
	Variable ID: HCC103014	
	Fecal Coliform Bacteria / Total Coliform Bacteria	
201411170096	Haines Cyn CK	11/17/2014 1030
	Ammonia Nitrogen / Total Kjeldahl Nitrogen / Total phosphorus as P	
	Total phosphorus as PO4- Calc.	
201411170097	Tujunga Ponds IN	11/17/2014 1125
	Ammonia Nitrogen / Total Kjeldahl Nitrogen / Total phosphorus as P	
	Total phosphorus as PO4- Calc.	
201411170098	Tujunga Ponds OUT	11/17/2014 1110

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Acknowledgement of Samples Received

Addr: **MWH Americas - Pasadena**
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Attn: Sarah Garber
Phone: 626-568-6071

Client ID: MWH-ECORP
Folder #: 505701
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The following samples were received from you on **October 29, 2014** at **1446**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical.

Sample #	Sample ID	Sample Date

Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total phosphorus as P
Total phosphorus as PO4- Calc.		

Test Description

@608_PCBS -- Organochlorine PCBs

@608_PEST -- Organochlorine Pesticides

@8141EDD -- Organophosphorous Pesticides (Sub)

CHAIN OF CUSTODY RECORD

eurofins | Eaton Analytical

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Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

SGS 701

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY: JDL

SAMPLES LOGGED IN BY: DS

SAMPLE TEMP RECEIVED AT:

☐ Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)

☑ Monrovia 17.9 - 0.3 = 12.6 °C (Compliance: 4 ± 2 °C)

SAMPLES REC'D DAY OF COLLECTION? ☑ (check for yes)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice ✓ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: MWH - ECORP

PROJECT CODE: 10506132.011601

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP: Big T WQ Monitoring

TAT requested: rush by adv notice only STD ___ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES (check for yes) ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES (check for yes) ☒

REGULATION INVOLVED: _____

Type of samples (circle one): **ROUTINE SPECIAL CONFIRMATION** (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA												SAMPLER COMMENTS
10/29	1130	Haines Cyn CK	HCC102914	RSW					No Air Space									
10/29	1230	TJ PONDS OUT	TJPOUT102914	RSW														
10/29	1310	TJ PONDS IN	TJPIN102914	RSW														
									LDR 10/29/14 1458									

* **MATRIX TYPES:** **RSW** = Raw Surface Water **RGW** = Raw Ground Water **CFW** = Chlor(am)inated Finished Water **FW** = Other Finished Water **SEAW** = Sea Water **WW** = Waste Water **BW** = Bottled Water **SW** = Storm Water **SO** = Soil **SL** = Sludge **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:		SARAH GARBER	NWH	10/29/14	1446
RELINQUISHED BY:					
RECEIVED BY:		KARLOS RUECKER	EEA	10/29/14	1446
RELINQUISHED BY:					
RECEIVED BY:					

QA FO 0029 (06/26/2013)

PAGE ___ OF ___

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for MWH Americas - Pasadena

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 99577
Created By: DST
Deliver By: 10/27/2014
STG: Bottle Orders
Ice Type: W

Client ID: MWH-ECORP
Project Code: BIG-TUJUNGA Bottle Orders
Group Name: Water Quality Monitoring
PO#/JOB#: [redacted].011601

10506132.011601

Ship Sample Kits to	Send Report to	Billing Address
MWH Americas - Pasadena 300 N. Lake Avenue Suite 400 Pasadena, CA 91101 Attn: Sarah Garber Phone: 626-568-6071	MWH Americas - Pasadena 300 N. Lake Avenue Suite 400 Pasadena, CA 91101 Attn: Sarah Garber Phone: 626-568-6071	MWH Americas Inc PO Box 6610 Broomfield, CO 80021 Attn: Accounts Payable

# of Samples	Tests	Bottles - Qty for each sample, type & preservative if a	UN DOT #
4	@8081A	2 1L amber glass no preservative	
4	@8141EDD	2 1L amber glass 8141WRD_NO_PRESERVATIVE	
4	Ammonia Nitrogen, Total Kjeldahl Nitrogen, Total phosphorus as P	1 250ml poly 0.5ml H2SO4 (50%)	UN1830
4	Fecal Coliform Bacteria, Total Coliform Bacteria	1 250ml poly sterilized 0.25ml thio (8%)	
4	Glyphosate	1 125ml amber glass no preservative	
4	Nitrate as Nitrogen by IC, Nitrate as NO3 (calc), Nitrite Nitrogen by IC, Orthophosphate as P, Turbidity	1 125ml poly no preservative	
4	Orthophosphate as PO4	1 125ml poly OPO4_no preservative	
4	Total Chlorine Residual	1 125ml amber glass CHL_no preservative	

Comments

SHIPPING: Please label "BIG T WASH" and include wet ice packing instructions. Client will pickup the sample kits on Monday 10/27 in the AM.

SAMPLER: Please return samples on fresh wet ice to the lab same day collected.

Code	Status	Date Shipped	Via	Tracking #	# of Coolers	Prepared By

505701

CHAIN OF CUSTODY RECORD

eurofins | Eaton Analytical

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629
Phone: 626 386 1100
Fax: 626 386 1101
800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: ~~8.0-0.2=7.8~~ 0 i

SAMPLES CHECKED AGAINST COC BY: W

SAMPLES LOGGED IN BY:

SAMPLES REC'D DAY OF COLLECTION? [✓] (check for yes)

SAMPLE TEMP RECEIVED AT:
[ ] Colton / No. California / Arizona ____ °C (Compliance: 4 ± 2 °C)
[✓] Monrovia 7.8 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen ____ Partially Frozen ____ Thawed ____ Wet Ice i No Ice ____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: ____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME:	PROJECT CODE:
MWH - ECorp	10506132.011601

EEA CLIENT CODE:	COC ID:	SAMPLE GROUP:

COMPLIANCE SAMPLES (check for yes) [ ] - Requires state forms [ ]
NON-COMPLIANCE SAMPLES (check for yes) [ ]
REGULATION INVOLVED:
Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES [ ] (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

TAT requested: rush by adv notice only STD ___ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	fecal	total coliform												SAMPLER COMMENTS
10/30	1330	Haines Cyn Ck	HCC103014	RSW			✓	✓												
									LDR	10/30/14				1429						

* **MATRIX TYPES:** **RSW** = Raw Surface Water **RGW** = Raw Ground Water **CFW** = Chlor(am)inated Finished Water **FW** = Other Finished Water **SEAW** = Sea Water **WW** = Waste Water **BW** = Bottled Water **SW** = Storm Water **SO** = Soil **SL** = Sludge **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:		T. Gamber	MWH	10/30/14	
RELINQUISHED BY:		T Gamber	MWH	10/30/14	1427
RECEIVED BY:		Chris Cabrera	ESS	10/30/14	1427
RELINQUISHED BY:					
RECEIVED BY:					

QA FO 0029 (06/26/2013)

PAGE ____ OF ____

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Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for MWH Americas - Pasadena

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 100082
Created By: DST
Deliver By: 10/30/2014
STG: Bottle Orders
Ice Type: W

Client ID: MWH-ECORP
Project Code: BIG-TUJUNGA Bottle Orders
Group Name: Water Quality Monitoring
PO#/JOB#: 10506132

Ship Sample Kits to
MWH Americas - Pasadena
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Attn: Sarah Garber
Phone: 626-568-6071

Send Report to
MWH Americas - Pasadena
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Attn: Sarah Garber
Phone: 626-568-6071

Billing Address
MWH Americas Inc
PO Box 6610
Broomfield, CO 80021

Attn: Accounts Payable

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if a	UN DOT #
1	Fecal Coliform Bacteria, Total Coliform Bacteria	1 250ml poly sterilized 0.25ml thio (8%)	

Comments

SHIPPING: Label "BIG T WASH" and include wet ice packing instructions. Client will pickup the sample kits on TODAY 10/30 at noon.

SAMPLER: Return samples on fresh wet ice to the lab same day collected.

LOGIN: Add to folder # 505701.

Code	Status	Date Shipped	Via	Tracking #	# of Coolers	Prepared By

eurofins | Eaton Analytical

CHAIN OF CUSTODY RECORD

~~508329~~

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: Lab Temp: 4.4°C - 0.2°CF = 4.2°C

SAMPLES CHECKED AGAINST COC BY: [illegible]

SAMPLES LOGGED IN BY: [illegible]

SAMPLE TEMP RECEIVED AT:

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

☐ Colton / No. California / Arizona _____ °C (Compliance: 4 ± 2 °C)

☒ Monrovia _____ °C (Compliance: 4 ± 2 °C) FROZEN

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice ✓ No Ice _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: _____

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: MWH/ECORP

PROJECT CODE: Big Tujunga

EEA CLIENT CODE: 10506132

COC ID:

SAMPLE GROUP: resamples

TAT requested: rush by adv notice only — STD 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES (check for yes) ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES (check for yes) ✓ REGULATION INVOLVED: _____

Type of samples (circle one): **ROUTINE SPECIAL CONFIRMATION** (eg. SDWA, Phase V, NPDES, FDA,...)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ✓ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
11/17	1030	Haines Cyn CK	HCC111714	RSW			
11/17	1125	Tujunga Ponds IN	TJPIN111714	RSW			
11/17	1110	Tujunga Ponds OUT	TJPOUT111714	RSW			

2014

*** MATRIX TYPES:** **RSW** = Raw Surface Water; **RGW** = Raw Ground Water; **CFW** = Chlor(am)inated Finished Water; **FW** = Other Finished Water; **SEAW** = Sea Water; **WW** = Waste Water; **BW** = Bottled Water; **SW** = Storm Water; **SO** = Soil; **SL** = Sludge; **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY:	[signature]	SARAH GARBER	MWH	11/17/14	1232
RELINQUISHED BY:	[signature]	SARAH GARBER	MWH	11/17/14	1235
RECEIVED BY:	[signature]	LONNY KUKITA	EEA	11/17/14	1235
RELINQUISHED BY:					
RECEIVED BY:					

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Monrovia, California 91016-3629
(626) 386-1100 FAX (626) 386-1101

Kit Order for MWH Americas - Pasadena

David S Tripp is your Eurofins Eaton Analytical Project Manager

Note: Sampler Please return this paper with your samples

Kit #: 100842
Created By: DST
Deliver By: 11/14/2014
STG: Bottle Orders
Ice Type: W

Client ID: MWH-ECORP
Project Code: BIG-TUJUNGA Bottle Orders
Group Name: Resamples
PO#/JOB#: 10506132

Ship Sample Kits to
MWH Americas - Pasadena
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Attn: Sarah Garber
Phone: 626-568-6071

Send Report to
MWH Americas - Pasadena
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Attn: Sarah Garber
Phone: 626-568-6071

Billing Address
MWH Americas Inc
PO Box 6610
Broomfield, CO 80021

Attn: Accounts Payable

# of Sample	Tests	Bottles - Qty for each sample, type & preservative if a	UN DOT #
3	Ammonia Nitrogen, Total Kjeldahl Nitrogen, Total phosphorus as P	1 250ml poly 0.5ml H2SO4 (50%)	UN1830

Comments

SHIPPING: One cooler. Label "BIG T WASH" and include wet ice packing instructions. Client will pickup the sample kit early Monday morning Nov 17.

SAMPLER: Return samples on fresh wet ice to the lab same day collected.

LOGIN: Add to folder # 505701.

Code	Status	Date Shipped	Via	Tracking #	# of Coolers	Prepared By

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Comments
Report: 505701

MWH Americas - Pasadena
Sarah Garber
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Folder Comments

Analytical results for 8141 and 608 are submitted by Emax Laboratories, Inc. Torrance, CA, CA Certification No. 02116CA

Flags Legend:

H5 - This test is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

M2 - Matrix spike recovery was low; the associated blank spike recovery was acceptable.

Q5 - Sample received with inadequate chemical preservation, but preserved by the laboratory.

R1 - RPD/RSD exceeded the method acceptance limit. See case narrative.

The Comments Report may be blank if there are no comments for this report.

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Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Hits
Report: 505701

MWH Americas - Pasadena
Sarah Garber
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Samples Received on:
10/29/2014 1446

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201410290482	**Haines Cyn Ck**				
10/29/2014 17:11	Fecal Coliform Bacteria		70		MPN/100 mL	1.8
10/29/2014 17:23	Nitrate as Nitrogen by IC		4.9	10	mg/L	0.2
10/29/2014 17:23	Nitrate as NO3 (calc)		22	45	mg/L	0.88
10/29/2014 18:15	Orthophosphate as P		0.013		mg/L	0.01
10/30/2014 17:37	Orthophosphate as PO4		0.040		mg/L	0.031
10/29/2014 17:11	Total Coliform Bacteria		790		MPN/100 mL	1.8
10/29/2014 18:19	Turbidity		0.18	5	NTU	0.05
	201410290483	**TJ Ponds Out**				
10/29/2014 17:11	Fecal Coliform Bacteria		230		MPN/100 mL	1.8
10/29/2014 17:36	Nitrate as Nitrogen by IC		5.4	10	mg/L	0.2
10/29/2014 17:36	Nitrate as NO3 (calc)		24	45	mg/L	0.88
10/29/2014 17:11	Total Coliform Bacteria		680		MPN/100 mL	1.8
10/29/2014 18:21	Turbidity		0.42	5	NTU	0.05
	201410290484	**TJ Ponds IN**				
10/29/2014 17:11	Fecal Coliform Bacteria		33		MPN/100 mL	1.8
11/12/2014 19:33	Kjeldahl Nitrogen		0.64		mg/L	0.2
10/29/2014 17:49	Nitrate as Nitrogen by IC		7.6	10	mg/L	0.2
10/29/2014 17:49	Nitrate as NO3 (calc)		33	45	mg/L	0.88
10/29/2014 17:11	Total Coliform Bacteria		490		MPN/100 mL	1.8
11/20/2014 15:08	Total phosphorus as P		0.043		mg/L	0.02
10/31/2014 12:19	Total phosphorus as PO4- Calc.		0.13		mg/L	0.031
10/29/2014 18:18	Turbidity		0.79	5	NTU	0.05
	201410300575	**Haines Cyn Ck**				
10/30/2014 17:18	Fecal Coliform Bacteria		330		MPN/100 mL	1.8
10/30/2014 17:18	Total Coliform Bacteria		490		MPN/100 mL	1.8
	201411170097	**Tujunga Ponds IN**				
12/05/2014 18:26	Kjeldahl Nitrogen		0.41		mg/L	0.2

SUMMARY OF POSITIVE DATA ONLY

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 505701

MWH Americas - Pasadena
Sarah Garber
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Samples Received on:
10/29/2014 1446

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
Haines Cyn Ck (201410290482)						**Sampled on 10/29/2014 1130**		
	Variable ID: HCC102914							
			SM 9221C - Fecal Coliform Bacteria					
	10/29/2014 17:11	801742	(SM 9221C)	Fecal Coliform Bacteria	70	MPN/100 mL	1.8	1
			SM 9221B - Total Coliform Bacteria					
	10/29/2014 17:11	801741	(SM 9221B)	Total Coliform Bacteria	790	MPN/100 mL	1.8	1
			S4500PE/ 365.1 - Total phosphorus as PO4- Calc.					
	10/31/2014 12:19		(S4500PE/ 365.1)	Total phosphorus as PO4- Calc.	ND	mg/L	0.031	1
			4500P-E/365.1 - Orthophosphate as PO4 (CAL)					
	10/30/2014 17:37		(4500P-E/365.1)	Orthophosphate as PO4	0.040	mg/L	0.031	1
			EPA 547 - Glyphosate					
	11/05/2014 13:09	802347	(EPA 547)	Glyphosate	ND	ug/L	6	1
			EPA 300.0 - Nitrate, Nitrite by EPA 300.0					
	10/29/2014 17:23	801199	(EPA 300.0)	Nitrate as Nitrogen by IC	4.9	mg/L	0.2	2
	10/29/2014 17:23	801199	(EPA 300.0)	Nitrate as NO3 (calc)	22	mg/L	0.88	2
	10/29/2014 17:23	801199	(EPA 300.0)	Nitrite Nitrogen by IC	ND	mg/L	0.1	2
			SM4500-PE/EPA 365.1 - Total phosphorus as P (T-P)					
	10/30/2014 16:25	801528	(SM4500-PE/EPA 365.1)	Total phosphorus as P	ND (Q5)	mg/L	0.02	1
			EPA 351.2 - Total Kjeldahl Nitrogen					
	11/12/2014 19:27	803642	(EPA 351.2)	Kjeldahl Nitrogen	ND (Q5)	mg/L	0.2	1
			EPA 350.1 - Ammonia Nitrogen					
	11/04/2014 16:00	802049	(EPA 350.1)	Ammonia Nitrogen	ND	mg/L	0.05	1
			EPA 8141A - Organophosphorous Pesticides (Sub)					
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Azinphos methyl	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Bolstar	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Chlorpyrifos	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Coumaphos	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Demeton	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Diazinon	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Dichlorvos	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Disulfoton	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Ethoprop	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Fensulfothion	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Fenthion	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Methyl Parathion	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Mevinphos	ND	ug/L	1	1
11/3/2014	11/04/2014 15:08		(EPA 8141A)	Naled	ND	ug/L	1	1

Rounding on totals after summation.
(c) - indicates calculated results

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (626) 386-1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 505701

MWH Americas - Pasadena
Sarah Garber
300 N. Lake Avenue
Suite 400
Pasadena, CA 91101

Samples Received on:
10/29/2014 1446

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
11/3/2014	11/04/2014	15:08	(EPA 8141A)	Phorate	ND	ug/L	1	1
11/3/2014	11/04/2014	15:08	(EPA 8141A)	Ronnel	ND	ug/L	1	1
11/3/2014	11/04/2014	15:08	(EPA 8141A)	Stirophos	ND	ug/L	1	1
11/3/2014	11/04/2014	15:08	(EPA 8141A)	Tokuthion	ND	ug/L	1	1
11/3/2014	11/04/2014	15:08	(EPA 8141A)	Trichloronate	ND	ug/L	1	1
11/3/2014	11/04/2014	15:08	(EPA 8141A)	Tributylphosphate	106	%		1
11/3/2014	11/04/2014	15:08	(EPA 8141A)	Triphenyl Phosphate	123	%		1
			EPA 608 - Organochlorine Pesticides					
11/3/2014	11/04/2014	18:58	(EPA 608)	4,4-DDD	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	4,4-DDE	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	4,4-DDT	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Aldrin	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	alpha-BHC	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	alpha-Chlordane	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	beta-BHC	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	delta-BHC	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Dieldrin	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Endosulfan I (Alpha)	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Endosulfan II (Beta)	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Endosulfan Sulfate	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Endrin	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Endrin Aldehyde	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Endrin Ketone	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Gamma-BHC	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	gamma-Chlordane	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Heptachlor	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Heptachlor Epoxide	ND	ug/L	0.11	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Methoxychlor	ND	ug/L	1.1	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Toxaphene	ND	ug/L	2.2	1
11/3/2014	11/04/2014	18:58	(EPA 608)	Decachlorobiphenyl	86	%		1
11/3/2014	11/04/2014	18:58	(EPA 608)	Tetrachlorometaxylene	76	%		1
			EPA 608 - Organochlorine PCBs					
11/3/2014	11/05/2014	21:15	(EPA 608)	PCB 1016 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014	21:15	(EPA 608)	PCB 1221 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014	21:15	(EPA 608)	PCB 1232 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014	21:15	(EPA 608)	PCB 1242 Aroclor	ND	ug/L	1.1	1

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Laboratory Data
Report: 505701

MWH Americas - Pasadena
Sarah Garber
300 N. Lake Avenue
Suite 400
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Samples Received on:
10/29/2014 1446

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
11/3/2014	11/05/2014 21:15		(EPA 608)	PCB 1248 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:15		(EPA 608)	PCB 1254 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:15		(EPA 608)	PCB 1260 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:15		(EPA 608)	Decachlorobiphenyl	118	%		1
11/3/2014	11/05/2014 21:15		(EPA 608)	Tetrachlorometaxylene	85	%		1
	EPA 180.1 - Turbidity							
	10/29/2014 18:19	801168	(EPA 180.1)	Turbidity	0.18	NTU	0.05	1
	4500P-E/365.1 - Orthophosphate as P (OPO4)							
	10/29/2014 18:15	801182	(4500P-E/365.1)	Orthophosphate as P	0.013	mg/L	0.01	1
	SM 4500-CL G - Total Chlorine Residual (H3=past HT not compliant)							
	10/29/2014 16:00	801410	(SM 4500-CL G)	Total Chlorine Residual (H3=past HT not compliant)	ND (H5)	mg/L	0.1	1
TJ Ponds Out (201410290483)						**Sampled on 10/29/2014 1230**		
	Variable ID: TJPOUT102914							
	SM 9221C - Fecal Coliform Bacteria							
	10/29/2014 17:11	801742	(SM 9221C)	Fecal Coliform Bacteria	230	MPN/100 mL	1.8	1
	SM 9221B - Total Coliform Bacteria							
	10/29/2014 17:11	801741	(SM 9221B)	Total Coliform Bacteria	680	MPN/100 mL	1.8	1
	S4500PE/ 365.1 - Total phosphorus as PO4- Calc.							
	10/31/2014 12:19		(S4500PE/ 365.1)	Total phosphorus as PO4- Calc.	ND	mg/L	0.031	1
	4500P-E/365.1 - Orthophosphate as PO4 (CAL)							
	10/30/2014 17:37		(4500P-E/365.1)	Orthophosphate as PO4	ND	mg/L	0.031	1
	EPA 547 - Glyphosate							
	11/05/2014 13:21	802347	(EPA 547)	Glyphosate	ND	ug/L	6	1
	EPA 300.0 - Nitrate, Nitrite by EPA 300.0							
	10/29/2014 17:36	801199	(EPA 300.0)	Nitrate as Nitrogen by IC	5.4	mg/L	0.2	2
	10/29/2014 17:36	801199	(EPA 300.0)	Nitrate as NO3 (calc)	24	mg/L	0.88	2
	10/29/2014 17:36	801199	(EPA 300.0)	Nitrite Nitrogen by IC	ND	mg/L	0.1	2
	SM4500-PE/EPA 365.1 - Total phosphorus as P (T-P)							
	10/30/2014 16:27	801528	(SM4500-PE/EPA 365.1)	Total phosphorus as P	ND (Q5)	mg/L	0.02	1
	EPA 351.2 - Total Kjeldahl Nitrogen							
	11/12/2014 19:32	803642	(EPA 351.2)	Kjeldahl Nitrogen	ND (Q5)	mg/L	0.2	1
	EPA 350.1 - Ammonia Nitrogen							
	11/04/2014 16:04	802049	(EPA 350.1)	Ammonia Nitrogen	ND (M2)	mg/L	0.05	1
	EPA 8141A - Organophosphorous Pesticides (Sub)							
11/3/2014	11/04/2014 16:53		(EPA 8141A)	Azinphos methyl	ND	ug/L	1	1
11/3/2014	11/04/2014 16:53		(EPA 8141A)	Bolstar	ND	ug/L	1	1

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Samples Received on:
10/29/2014 1446

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Chlorpyrifos	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Coumaphos	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Demeton	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Diazinon	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Dichlorvos	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Disulfoton	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Ethoprop	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Fensulfothion	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Fenthion	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Methyl Parathion	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Mevinphos	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Naled	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Phorate	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Ronnel	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Stirophos	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Tokuthion	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Trichloronate	ND	ug/L	1	1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Tributylphosphate	75	%		1
11/3/2014	11/04/2014	16:53	(EPA 8141A)	Triphenyl Phosphate	82	%		1
		EPA 608 - Organochlorine Pesticides						
11/3/2014	11/04/2014	19:17	(EPA 608)	4,4-DDD	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	4,4-DDE	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	4,4-DDT	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Aldrin	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	alpha-BHC	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	alpha-Chlordane	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	beta-BHC	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	delta-BHC	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Dieldrin	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Endosulfan I (Alpha)	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Endosulfan II (Beta)	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Endosulfan Sulfate	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Endrin	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Endrin Aldehyde	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Endrin Ketone	ND	ug/L	0.11	1
11/3/2014	11/04/2014	19:17	(EPA 608)	Gamma-BHC	ND	ug/L	0.11	1

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Samples Received on:
10/29/2014 1446

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
11/3/2014	11/04/2014 19:17		(EPA 608)	gamma-Chlordane	ND	ug/L	0.11	1
11/3/2014	11/04/2014 19:17		(EPA 608)	Heptachlor	ND	ug/L	0.11	1
11/3/2014	11/04/2014 19:17		(EPA 608)	Heptachlor Epoxide	ND	ug/L	0.11	1
11/3/2014	11/04/2014 19:17		(EPA 608)	Methoxychlor	ND	ug/L	1.1	1
11/3/2014	11/04/2014 19:17		(EPA 608)	Toxaphene	ND	ug/L	2.3	1
11/3/2014	11/04/2014 19:17		(EPA 608)	Decachlorobiphenyl	84	%		1
11/3/2014	11/04/2014 19:17		(EPA 608)	Tetrachlorometaxylene	81	%		1
	EPA 608 - Organochlorine PCBs							
11/3/2014	11/05/2014 21:36		(EPA 608)	PCB 1016 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:36		(EPA 608)	PCB 1221 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:36		(EPA 608)	PCB 1232 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:36		(EPA 608)	PCB 1242 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:36		(EPA 608)	PCB 1248 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:36		(EPA 608)	PCB 1254 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:36		(EPA 608)	PCB 1260 Aroclor	ND	ug/L	1.1	1
11/3/2014	11/05/2014 21:36		(EPA 608)	Decachlorobiphenyl	115	%		1
11/3/2014	11/05/2014 21:36		(EPA 608)	Tetrachlorometaxylene	91	%		1
	EPA 180.1 - Turbidity							
	10/29/2014 18:21	801168	(EPA 180.1)	Turbidity	0.42	NTU	0.05	1
	4500P-E/365.1 - Orthophosphate as P (OPO4)							
	10/29/2014 18:14	801182	(4500P-E/365.1)	Orthophosphate as P	ND	mg/L	0.01	1
	SM 4500-CL G - Total Chlorine Residual (H3=past HT not compliant)							
	10/29/2014 16:00	801410	(SM 4500-CL G)	Total Chlorine Residual (H3=past HT not compliant)	ND (H5)	mg/L	0.1	1
TJ Ponds IN (201410290484)						**Sampled on 10/29/2014 1310**		
Variable ID: TJPIN102914								
	SM 9221C - Fecal Coliform Bacteria							
	10/29/2014 17:11	801742	(SM 9221C)	Fecal Coliform Bacteria	33	MPN/100 mL	1.8	1
	SM 9221B - Total Coliform Bacteria							
	10/29/2014 17:11	801741	(SM 9221B)	Total Coliform Bacteria	490	MPN/100 mL	1.8	1
	S4500PE/ 365.1 - Total phosphorus as PO4- Calc.							
	10/31/2014 12:19		(S4500PE/ 365.1)	Total phosphorus as PO4- Calc.	0.13	mg/L	0.031	1
	4500P-E/365.1 - Orthophosphate as PO4 (CAL)							
	10/30/2014 17:37		(4500P-E/365.1)	Orthophosphate as PO4	ND	mg/L	0.031	1
	EPA 547 - Glyphosate							
	11/05/2014 13:32	802347	(EPA 547)	Glyphosate	ND	ug/L	6	1
	EPA 300.0 - Nitrate, Nitrite by EPA 300.0							
	10/29/2014 17:49	801199	(EPA 300.0)	Nitrate as Nitrogen by IC	7.6	mg/L	0.2	2

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Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	10/29/2014	17:49	801199	(EPA 300.0)	Nitrate as NO3 (calc)	33	mg/L	0.88	2
	10/29/2014	17:49	801199	(EPA 300.0)	Nitrite Nitrogen by IC	ND	mg/L	0.1	2
				SM4500-PE/EPA 365.1 - Total phosphorus as P (T-P)					
	11/20/2014	15:08	805461	(SM4500-PE/EPA 365.1)	Total phosphorus as P	0.043 (Q5)	mg/L	0.02	1
				EPA 351.2 - Total Kjeldahl Nitrogen					
	11/12/2014	19:33	803642	(EPA 351.2)	Kjeldahl Nitrogen	0.64 (Q5)	mg/L	0.2	1
				EPA 350.1 - Ammonia Nitrogen					
	11/04/2014	16:07	802049	(EPA 350.1)	Ammonia Nitrogen	ND	mg/L	0.05	1
				EPA 8141A - Organophosphorous Pesticides (Sub)					
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Azinphos methyl	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Bolstar	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Chlorpyrifos	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Coumaphos	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Demeton	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Diazinon	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Dichlorvos	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Disulfoton	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Ethoprop	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Fensulfothion	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Fenthion	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Methyl Parathion	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Mevinphos	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Naled	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Phorate	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Ronnel	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Stirophos	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Tokuthion	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Trichloronate	ND	ug/L	0.93	1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Tributylphosphate	89	%		1
11/3/2014	11/04/2014	17:28		(EPA 8141A)	Triphenyl Phosphate	94	%		1
				EPA 608 - Organochlorine Pesticides					
11/3/2014	11/04/2014	19:35		(EPA 608)	4,4-DDD	ND	ug/L	0.095	1
11/3/2014	11/04/2014	19:35		(EPA 608)	4,4-DDE	ND	ug/L	0.095	1
11/3/2014	11/04/2014	19:35		(EPA 608)	4,4-DDT	ND	ug/L	0.095	1
11/3/2014	11/04/2014	19:35		(EPA 608)	Aldrin	ND	ug/L	0.095	1
11/3/2014	11/04/2014	19:35		(EPA 608)	alpha-BHC	ND	ug/L	0.095	1

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Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
11/3/2014	11/04/2014 19:35		(EPA 608)	alpha-Chlordane	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	beta-BHC	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	delta-BHC	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Dieldrin	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Endosulfan I (Alpha)	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Endosulfan II (Beta)	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Endosulfan Sulfate	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Endrin	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Endrin Aldehyde	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Endrin Ketone	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Gamma-BHC	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	gamma-Chlordane	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Heptachlor	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Heptachlor Epoxide	ND	ug/L	0.095	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Methoxychlor	ND	ug/L	0.95	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Toxaphene	ND	ug/L	1.9	1
11/3/2014	11/04/2014 19:35		(EPA 608)	Decachlorobiphenyl	83	%		1
11/3/2014	11/04/2014 19:35		(EPA 608)	Tetrachlorometaxylene	87	%		1
	EPA 608 - Organochlorine PCBs							
11/3/2014	11/05/2014 21:56		(EPA 608)	PCB 1016 Aroclor	ND	ug/L	0.095	1
11/3/2014	11/05/2014 21:56		(EPA 608)	PCB 1221 Aroclor	ND	ug/L	0.95	1
11/3/2014	11/05/2014 21:56		(EPA 608)	PCB 1232 Aroclor	ND	ug/L	0.95	1
11/3/2014	11/05/2014 21:56		(EPA 608)	PCB 1242 Aroclor	ND	ug/L	0.95	1
11/3/2014	11/05/2014 21:56		(EPA 608)	PCB 1248 Aroclor	ND	ug/L	0.95	1
11/3/2014	11/05/2014 21:56		(EPA 608)	PCB 1254 Aroclor	ND	ug/L	0.95	1
11/3/2014	11/05/2014 21:56		(EPA 608)	PCB 1260 Aroclor	ND	ug/L	0.95	1
11/3/2014	11/05/2014 21:56		(EPA 608)	Decachlorobiphenyl	115	%		1
11/3/2014	11/05/2014 21:56		(EPA 608)	Tetrachlorometaxylene	94	%		1
	EPA 180.1 - Turbidity							
	10/29/2014 18:18	801168	(EPA 180.1)	Turbidity	0.79	NTU	0.05	1
	4500P-E/365.1 - Orthophosphate as P (OPO4)							
	10/29/2014 18:13	801182	(4500P-E/365.1)	Orthophosphate as P	ND	mg/L	0.01	1
	SM 4500-CL G - Total Chlorine Residual (H3=past HT not compliant)							
	10/29/2014 16:00	801410	(SM 4500-CL G)	Total Chlorine Residual (H3=past HT not compliant)	ND (H5)	mg/L	0.1	1

Haines Cyn Ck (201410300575) **Sampled on 10/30/2014 1330**

Variable ID: HCC103014

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Samples Received on:
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Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
		SM 9221C - Fecal Coliform Bacteria						
	10/30/2014 17:18	801753	(SM 9221C)	Fecal Coliform Bacteria	330	MPN/100 mL	1.8	1
		SM 9221B - Total Coliform Bacteria						
	10/30/2014 17:18	801749	(SM 9221B)	Total Coliform Bacteria	490	MPN/100 mL	1.8	1
Haines Cyn CK (201411170096)						**Sampled on 11/17/2014 1030**		
		S4500PE/ 365.1 - Total phosphorus as PO4- Calc.						
	12/03/2014 15:02		(S4500PE/ 365.1)	Total phosphorus as PO4- Calc.	ND	mg/L	0.031	1
		SM4500-PE/EPA 365.1 - Total phosphorus as P (T-P)						
	12/02/2014 16:44	806334	(SM4500-PE/EPA 365.1)	Total phosphorus as P	ND	mg/L	0.02	1
		EPA 351.2 - Total Kjeldahl Nitrogen						
	12/05/2014 18:19	807707	(EPA 351.2)	Kjeldahl Nitrogen	ND (M2)	mg/L	0.2	1
		EPA 350.1 - Ammonia Nitrogen						
	11/24/2014 19:27	805850	(EPA 350.1)	Ammonia Nitrogen	ND	mg/L	0.05	1
Tujunga Ponds IN (201411170097)						**Sampled on 11/17/2014 1125**		
		S4500PE/ 365.1 - Total phosphorus as PO4- Calc.						
	12/03/2014 15:02		(S4500PE/ 365.1)	Total phosphorus as PO4- Calc.	ND	mg/L	0.031	1
		SM4500-PE/EPA 365.1 - Total phosphorus as P (T-P)						
	12/02/2014 16:48	806334	(SM4500-PE/EPA 365.1)	Total phosphorus as P	ND	mg/L	0.02	1
		EPA 351.2 - Total Kjeldahl Nitrogen						
	12/05/2014 18:26	807707	(EPA 351.2)	Kjeldahl Nitrogen	0.41	mg/L	0.2	1
		EPA 350.1 - Ammonia Nitrogen						
	11/24/2014 19:28	805850	(EPA 350.1)	Ammonia Nitrogen	ND	mg/L	0.05	1
Tujunga Ponds OUT (201411170098)						**Sampled on 11/17/2014 1110**		
		S4500PE/ 365.1 - Total phosphorus as PO4- Calc.						
	12/03/2014 15:02		(S4500PE/ 365.1)	Total phosphorus as PO4- Calc.	ND	mg/L	0.031	1
		SM4500-PE/EPA 365.1 - Total phosphorus as P (T-P)						
	12/02/2014 16:53	806334	(SM4500-PE/EPA 365.1)	Total phosphorus as P	ND	mg/L	0.02	1
		EPA 351.2 - Total Kjeldahl Nitrogen						
	12/05/2014 18:36	807707	(EPA 351.2)	Kjeldahl Nitrogen	ND (M2,R1)	mg/L	0.2	1
		EPA 350.1 - Ammonia Nitrogen						
	11/24/2014 19:29	805850	(EPA 350.1)	Ammonia Nitrogen	ND	mg/L	0.05	1

Rounding on totals after summation.
(c) - indicates calculated results

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QC Ref # 801168 - Turbidity — **Analysis Date: 10/29/2014**

201410290482	Haines Cyn Ck	Analyzed by: MXT
201410290483	TJ Ponds Out	Analyzed by: MXT
201410290484	TJ Ponds IN	Analyzed by: MXT

QC Ref # 801182 - Orthophosphate as P (OPO4) — **Analysis Date: 10/29/2014**

201410290482	Haines Cyn Ck	Analyzed by: MIA8
201410290483	TJ Ponds Out	Analyzed by: MIA8
201410290484	TJ Ponds IN	Analyzed by: MIA8

QC Ref # 801199 - Nitrate, Nitrite by EPA 300.0 — **Analysis Date: 10/29/2014**

201410290482	Haines Cyn Ck	Analyzed by: CYP
201410290483	TJ Ponds Out	Analyzed by: CYP
201410290484	TJ Ponds IN	Analyzed by: CYP

QC Ref # 801410 - Total Chlorine Residual (H3=past HT not complian — **Analysis Date: 10/29/2014**

201410290482	Haines Cyn Ck	Analyzed by: NJR
201410290483	TJ Ponds Out	Analyzed by: NJR
201410290484	TJ Ponds IN	Analyzed by: NJR

QC Ref # 801528 - Total phosphorus as P (T-P) — **Analysis Date: 10/30/2014**

201410290482	Haines Cyn Ck	Analyzed by: KXS
201410290483	TJ Ponds Out	Analyzed by: KXS

QC Ref # 801741 - Total Coliform Bacteria — **Analysis Date: 10/29/2014**

201410290482	Haines Cyn Ck	Analyzed by: YE5A
201410290483	TJ Ponds Out	Analyzed by: YE5A
201410290484	TJ Ponds IN	Analyzed by: YE5A

QC Ref # 801742 - Fecal Coliform Bacteria — **Analysis Date: 10/29/2014**

201410290482	Haines Cyn Ck	Analyzed by: YE5A
201410290483	TJ Ponds Out	Analyzed by: YE5A
201410290484	TJ Ponds IN	Analyzed by: YE5A

QC Ref # 801749 - Total Coliform Bacteria — **Analysis Date: 10/30/2014**

201410300575	Haines Cyn Ck	Analyzed by: FHC

QC Ref # 801753 - Fecal Coliform Bacteria — **Analysis Date: 10/30/2014**

201410300575	Haines Cyn Ck	Analyzed by: FHC

QC Ref # 802049 - Ammonia Nitrogen — **Analysis Date: 11/04/2014**

201410290482	Haines Cyn Ck	Analyzed by: KXS
201410290483	TJ Ponds Out	Analyzed by: KXS
201410290484	TJ Ponds IN	Analyzed by: KXS

QC Ref # 802347 - Glyphosate — **Analysis Date: 11/05/2014**

201410290482	Haines Cyn Ck	Analyzed by: SZZ
201410290483	TJ Ponds Out	Analyzed by: SZZ
201410290484	TJ Ponds IN	Analyzed by: SZZ

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QC Ref # 803642 - Total Kjeldahl Nitrogen — **Analysis Date: 11/12/2014**

201410290482	Haines Cyn Ck	Analyzed by: KXS
201410290483	TJ Ponds Out	Analyzed by: KXS
201410290484	TJ Ponds IN	Analyzed by: KXS

QC Ref # 805461 - Total phosphorus as P (T-P) — **Analysis Date: 11/20/2014**

201410290484	TJ Ponds IN	Analyzed by: KXS

QC Ref # 805850 - Ammonia Nitrogen — **Analysis Date: 11/24/2014**

201411170096	Haines Cyn CK	Analyzed by: KXS
201411170097	Tujunga Ponds IN	Analyzed by: KXS
201411170098	Tujunga Ponds OUT	Analyzed by: KXS

QC Ref # 806334 - Total phosphorus as P (T-P) — **Analysis Date: 12/02/2014**

201411170096	Haines Cyn CK	Analyzed by: MYH
201411170097	Tujunga Ponds IN	Analyzed by: MYH
201411170098	Tujunga Ponds OUT	Analyzed by: MYH

QC Ref # 807707 - Total Kjeldahl Nitrogen — **Analysis Date: 12/05/2014**

201411170096	Haines Cyn CK	Analyzed by: KXS
201411170097	Tujunga Ponds IN	Analyzed by: KXS
201411170098	Tujunga Ponds OUT	Analyzed by: KXS

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Laboratory QC
Report: 505701

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 801168 - Turbidity by EPA 180.1						**Analysis Date: 10/29/2014**			
DUP1_201410290359	Turbidity	0.070	0.05	0.0670	NTU		(0-20)	20	4.4
LCS1	Turbidity		20	21.2	NTU	106	(90-110)		
LCS2	Turbidity		20	21.1	NTU	106	(90-110)	20	0.47
MBLK	Turbidity			<0.05	NTU				
MRL_CHK	Turbidity		0.05	0.0530	NTU	106	(50-150)		
QC Ref# 801182 - Orthophosphate as P (OPO4) by 4500P-E/365.1						**Analysis Date: 10/29/2014**			
LCS1	Orthophosphate as P		0.25	0.233	mg/L	93	(90-110)		
LCS2	Orthophosphate as P		0.25	0.237	mg/L	95	(90-110)	20	1.7
MBLK	Orthophosphate as P			<0.01	mg/L				
MRL_CHK	Orthophosphate as P		0.01	0.0140	mg/L	140	(50-150)		
MS_201410290115	Orthophosphate as P	0.085	0.5	0.574	mg/L	98	(90-110)		
MSD_201410290115	Orthophosphate as P	0.085	0.5	0.566	mg/L	96	(90-110)	20	1.4
QC Ref# 801199 - Nitrate, Nitrite by EPA 300.0 by EPA 300.0						**Analysis Date: 10/29/2014**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.35	mg/L	94	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.32	mg/L	93	(90-110)	20	1.3
MBLK	Nitrate as Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0449	mg/L	90	(50-150)		
MS_201410290106	Nitrate as Nitrogen by IC	ND	1.3	1.23	mg/L	93	(80-120)		
MS_201410290141	Nitrate as Nitrogen by IC	ND	1.3	2.40	mg/L	89	(80-120)		
MSD_201410290106	Nitrate as Nitrogen by IC	ND	1.3	1.23	mg/L	93	(80-120)	20	0.0
MSD_201410290141	Nitrate as Nitrogen by IC	ND	1.3	2.44	mg/L	91	(80-120)	20	1.6
LCS1	Nitrite Nitrogen by IC		1.0	1.06	mg/L	106	(90-110)		
LCS2	Nitrite Nitrogen by IC		1.0	1.06	mg/L	106	(90-110)	20	0.0
MBLK	Nitrite Nitrogen by IC			<0.10	mg/L				
MRL_CHK	Nitrite Nitrogen by IC		0.05	0.0483	mg/L	97	(50-150)		
MS_201410290106	Nitrite Nitrogen by IC	ND	0.5	0.534	mg/L	107	(80-120)		
MS_201410290141	Nitrite Nitrogen by IC	ND	0.5	1.04	mg/L	104	(80-120)		
MSD_201410290141	Nitrite Nitrogen by IC	ND	0.5	1.02	mg/L	102	(80-120)	20	1.9
MSD_201410290106	Nitrite Nitrogen by IC	ND	0.5	0.531	mg/L	106	(80-120)	20	0.56
QC Ref# 801410 - Total Chlorine Residual (H3=past HT not compliant) by SM 4500-CL G						**Analysis Date: 10/29/2014**			
LCS1	Total Chlorine Residual		1.0	1.01	mg/L	101	(85-115)		
LCS2	Total Chlorine Residual		1.0	1.00	mg/L	100	(85-115)	20	1
MBLK	Total Chlorine Residual			<0.1	mg/L				
MRL_CHK	Total Chlorine Residual		0.1	0.0900	mg/L	90	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 801528 - Total phosphorus as P (T-P) by SM4500-PE/EPA 365.1						**Analysis Date: 10/30/2014**			
LCS1	Total phosphorus as P		0.4	0.407	mg/L	102	(90-110)		
LCS2	Total phosphorus as P		0.4	0.389	mg/L	97	(90-110)	20	4.5
MBLK	Total phosphorus as P			<0.01	mg/L				
MRL_CHK	Total phosphorus as P		0.02	0.0275	mg/L	138	(50-150)		
MS_201410130052	Total phosphorus as P		0.4	0.510	mg/L	101	(90-110)		
MS_201409040685	Total phosphorus as P	ND	0.4	0.377	mg/L	94	(90-110)		
MSD_201409040685	Total phosphorus as P	ND	0.4	0.383	mg/L	96	(90-110)	20	1.6
MSD_201410130052	Total phosphorus as P		0.4	0.511	mg/L	101	(90-110)	20	0.20
QC Ref# 802049 - Ammonia Nitrogen by EPA 350.1						**Analysis Date: 11/04/2014**			
LCS1	Ammonia Nitrogen		0.5	0.499	mg/L	100	(90-110)		
LCS2	Ammonia Nitrogen		0.5	0.497	mg/L	99	(90-110)	20	0.40
MBLK	Ammonia Nitrogen			<0.025	mg/L				
MRL_CHK	Ammonia Nitrogen		0.05	0.0451	mg/L	90	(53-118)		
MS_201410280683	Ammonia Nitrogen	ND	0.5	0.383	mg/L	**77**	(90-110)		
MS_201410290483	Ammonia Nitrogen	ND	0.5	0.429	mg/L	**84**	(90-110)		
MSD_201410280683	Ammonia Nitrogen	ND	0.5	0.394	mg/L	**79**	(90-110)	20	2.8
MSD_201410290483	Ammonia Nitrogen	ND	0.5	0.414	mg/L	**81**	(90-110)	20	3.6
QC Ref# 802347 - Glyphosate by EPA 547						**Analysis Date: 11/05/2014**			
CCCH	Glyphosate		25	21.6	ug/L	86	(80-120)		
CCCM	Glyphosate		10	9.23	ug/L	92	(80-120)		
LCS1	Glyphosate		10	9.91	ug/L	99	(70-130)		
MBLK	Glyphosate			<6	ug/L				
MRL_CHK	Glyphosate		6.0	6.45	ug/L	107	(50-150)		
MS_201410290471	Glyphosate	ND	10	9.26	ug/L	93	(70-130)		
MS2_201410300011	Glyphosate	ND	10	9.22	ug/L	92	(70-130)		
MSD_201410290471	Glyphosate	ND	10	9.08	ug/L	91	(70-130)	20	2.0
QC Ref# 803642 - Total Kjeldahl Nitrogen by EPA 351.2						**Analysis Date: 11/12/2014**			
LCS1	Kjeldahl Nitrogen		4.0	4.20	mg/L	105	(90-110)		
LCS2	Kjeldahl Nitrogen		4.0	4.15	mg/L	104	(90-110)	20	1.2
MBLK	Kjeldahl Nitrogen			<0.1	mg/L				
MRL_CHK	Kjeldahl Nitrogen		0.2	0.198	mg/L	99	(50-150)		
MS_201411030353	Kjeldahl Nitrogen	ND	4.0	4.23	mg/L	102	(90-110)		
MS_201410290482	Kjeldahl Nitrogen	ND	4.0	4.18	mg/L	103	(90-110)		
MSD_201411030353	Kjeldahl Nitrogen	ND	4.0	4.01	mg/L	96	(90-110)	10	5.3
MSD_201410290482	Kjeldahl Nitrogen	ND	4.0	4.27	mg/L	106	(90-110)	10	2.1

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
(S) - Indicates surrogate compound.
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Laboratory QC
Report: 505701

MWH Americas - Pasadena

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 805461 - Total phosphorus as P (T-P) by SM4500-PE/EPA 365.1						**Analysis Date: 11/20/2014**			
LCS1	Total phosphorus as P		0.4	0.379	mg/L	95	(90-110)		
LCS2	Total phosphorus as P		0.4	0.375	mg/L	94	(90-110)	20	1.1
MBLK	Total phosphorus as P			<0.01	mg/L				
MRL_CHK	Total phosphorus as P		0.02	0.0279	mg/L	140	(50-150)		
MS_201411070112	Total phosphorus as P	ND	0.4	0.379	mg/L	91	(90-110)		
MS_201411040313	Total phosphorus as P	0.022	0.4	0.376	mg/L	**89**	(90-110)		
MSD_201411040313	Total phosphorus as P	0.022	0.4	0.386	mg/L	91	(90-110)	20	2.6
MSD_201411070112	Total phosphorus as P	ND	0.4	0.349	mg/L	**83**	(90-110)	20	8.2
QC Ref# 805850 - Ammonia Nitrogen by EPA 350.1						**Analysis Date: 11/24/2014**			
LCS1	Ammonia Nitrogen		0.5	0.505	mg/L	101	(90-110)		
LCS2	Ammonia Nitrogen		0.5	0.504	mg/L	101	(90-110)	20	0.20
MBLK	Ammonia Nitrogen			<0.025	mg/L				
MRL_CHK	Ammonia Nitrogen		0.05	0.0481	mg/L	96	(53-118)		
MS_201411220065	Ammonia Nitrogen	32	0.5	79.9	mg/L	95	(90-110)		
MS_201411130874	Ammonia Nitrogen	0.40	0.5	0.830	mg/L	**85**	(90-110)		
MSD_201411130874	Ammonia Nitrogen	0.40	0.5	0.839	mg/L	**87**	(90-110)	20	1.1
MSD_201411220065	Ammonia Nitrogen	32	0.5	80.8	mg/L	97	(90-110)	20	1.1
QC Ref# 806334 - Total phosphorus as P (T-P) by SM4500-PE/EPA 365.1						**Analysis Date: 12/02/2014**			
LCS1	Total phosphorus as P		0.4	0.417	mg/L	104	(90-110)		
LCS2	Total phosphorus as P		0.4	0.419	mg/L	105	(90-110)	20	0.48
MBLK	Total phosphorus as P			<0.01	mg/L				
MRL_CHK	Total phosphorus as P		0.02	0.0205	mg/L	102	(50-150)		
MS_201411120148	Total phosphorus as P	ND	0.4	0.395	mg/L	99	(90-110)		
MS_201411170097	Total phosphorus as P	ND	0.4	0.414	mg/L	100	(90-110)		
MSD_201411170097	Total phosphorus as P	ND	0.4	0.432	mg/L	104	(90-110)	20	4.3
MSD_201411120148	Total phosphorus as P	ND	0.4	0.421	mg/L	105	(90-110)	20	6.4
QC Ref# 807707 - Total Kjeldahl Nitrogen by EPA 351.2						**Analysis Date: 12/05/2014**			
LCS1	Kjeldahl Nitrogen		4.0	3.66	mg/L	92	(90-110)		
LCS2	Kjeldahl Nitrogen		4.0	3.84	mg/L	96	(90-110)	20	4.8
MBLK	Kjeldahl Nitrogen			<0.1	mg/L				
MRL_CHK	Kjeldahl Nitrogen		0.2	0.226	mg/L	113	(50-150)		
MS_201411170098	Kjeldahl Nitrogen	ND	4.0	4.28	mg/L	107	(90-110)		
MS_201411170096	Kjeldahl Nitrogen	ND	4.0	3.13	mg/L	**78**	(90-110)		
MSD_201411170096	Kjeldahl Nitrogen	ND	4.0	3.48	mg/L	**87**	(90-110)	10	**11**
MSD_201411170098	Kjeldahl Nitrogen	ND	4.0	3.50	mg/L	**88**	(90-110)	10	**20**

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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(S) - Indicates surrogate compound.
(I) - Indicates internal standard compound.

TABLE OF CONTENTS

CLIENT: **EUROFINS EATON ANALYTICAL**

PROJECT: **505701**

SDG: **14J225**

** - Not Requested

LABORATORIES, INC.
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Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 11-12-2014
EMAX Batch No.: 14J225

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 505701

Enclosed is the Laboratory report for samples received on 10/31/14.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
201410290482	J225-01	10/29/14	WATER	PCBS
				PESTICIDES
				PESTICIDES ORGANOPHOSPHORUS
201410290483	J225-02	10/29/14	WATER	PCBS
				PESTICIDES
				PESTICIDES ORGANOPHOSPHORUS
201410290484	J225-03	10/29/14	WATER	PCBS
				PESTICIDES
				PESTICIDES ORGANOPHOSPHORUS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAC Accredited Certificate Number 02116CA
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing

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Ship To:
EMAX Laboratories, Inc.
1835 W. 205th St.

Torrance, CA 90501

Phone: 310-618-8889 Fax: 310-618-0818

Submittal Form & Purchase Order 99-31495 14J225 Date: 10/30/2014

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **505701** Sub PO# **99-31495** and Job # **1000014**

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: us20_subcontract@eurofinsus.com
Eurofins Eaton Analytical 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified State Certification # & Exp Date for requested tests + matrix.

Samples from: **CALIFORNIA**

Folder #:	Report Due:	Sub PO #:
505701	**11/14/2014**	**99-31495**

	JLS	Eurofins Sample ID	Client Sample ID for reference only	Analysis Requested	Sample Date & Time	Matrix	PWS Systemcode	PWSID
(1)		201410290482	Haines Cyn Ck		10/29/14 1130	DW		
	EPA 608	@608_PEST		Organochlorine Pesticides				
	EPA 608	@608_PCBS		Organochlorine PCBs				
	EPA 8141A	@8141EDD		Organophosphorous Pesticides (Sub)				
(2)		201410290483	TJ Ponds Out		10/29/14 1230	DW		
	EPA 608	@608_PEST		Organochlorine Pesticides				
	EPA 608	@608_PCBS		Organochlorine PCBs				
	EPA 8141A	@8141EDD		Organophosphorous Pesticides (Sub)				
(3)		201410290484	TJ Ponds IN		10/29/14 1310	DW		
	EPA 608	@608_PEST		Organochlorine Pesticides				
	EPA 608	@608_PCBS		Organochlorine PCBs				
	EPA 8141A	@8141EDD		Organophosphorous Pesticides (Sub)				

Relinquished by: M. DE MESA Sample Control EEA Date 10-30-14 Time 1246

Received by: _____ Date _____ Time _____

Relinquished by: _____ Sample Control _____ Date _____ Time _____

Received by: _____ Date 10/31/14 Time 11:45

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Temp - 4.5°C

Reference Number: SM02.7.3

SAMPLE RECEIPT FORM 1

Type of Delivery	Airbill / Tracking Number	ECN
☑ Fedex ☐ UPS ☐ GSO ☐ Others	6159 5298 0808	Recipient Chavez
☐ EMAX Courier ☐ Client Delivery		Date 10/31/14 Time 11:45

COC INSPECTION

☑ Client Name	☐ Client PM/FC	☐ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☐ Matrix
☑ Address	☐ Tel # / Fax #	☐ Courier Signature	☑ Analysis Required	☐ Preservative (if any)	☑ TAT
Safety Issues (if any)	☐ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note: _____

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other _____		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 4.5 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
	☐ Cooler 6 _____ °C	☐ Cooler 7 _____ °C	☐ Cooler 8 _____ °C	☐ Cooler 9 _____ °C	☐ Cooler 10 _____ °C
Thermometer:	*A - S/N* 130538505	*B - S/N* 140253070	*C - S/N* _____	*D - S/N* _____	

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.** FM 10/27/14

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
4-3		D8	PCBs { instead received two bottles for 8141 }	R8

10/31/14 AM

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis
D9	Sample received is not listed in COC	D21	No sample for moisture determination
D10	No initial/date on corrections in COC/label	D22	_____
D11	Container count mismatch COC vs received	D23	_____
D12	Container size mismatch COC vs received	D24	_____

☐ **Continue to next page.**

Code	Description-Sample Management
R1	Proceed as indicated in ☐ COC ☐ Label
R2	Refer to attached instruction
R3	*Cancel the analysis*
R4	Use vial with smallest bubble first
R5	Log-in with latest sampling date and time+1 min
R6	Adjust pH as necessary
R7	Filter and preserved as necessary
R8	Inform client
R9	_____
R10	_____
R11	_____
R12	_____

REVIEWS:

Sample Labeling _____ Date 10/31/14 & 10/31/14

SRF _____ Date 10/31/14

PM _____ Date 10/31/14

ORIGIN ID:WHPA (626) 386-1100
KARLOS RUECKER
EUROFINS EATON ANALYTICAL
750 ROYAL OAKS DR SUITE 100

MONROVIA, CA 91016
UNITED STATES US

SHIP DATE: 30OCT14
ACTWGT: 89.5 LB
CAD: 31999/CAFE2806
DIMS: 28x15x16 IN

BILL SENDER

SAMPLE RECEIVING
EMAX LABORATORIES, INC.
1835 W. 205TH STREET

TORRANCE CA 90501
(310) 618-8889 X 118 REF: 99-31495
PO: MLD DEPT: SAMPLE PREP. / SHIPPING

FedEx Express

TRK# 0201 6159 8298 0808

FRI - 31 OCT AA
STANDARD OVERNIGHT

92 HHRA

90501
CA-US LAX

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

505701

METHOD 608
PESTICIDES

SDG#: 14J225

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 505701

SDG : 14J225

METHOD 608
PESTICIDES

A total of three (3) water samples were received on 10/31/14 for Pesticides analysis, Method 608 in accordance with USEPA Wastewater Test Methods at 40 CFR Part 136.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for CPK001WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits. Refer to sample result forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter. Positive sample results were confirmed by a second column. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram is checked for anomalies and results are selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.

LAB CHRONICLE
PESTICIDES

Client : EUROFINS EATON ANALYTICAL
Project : 505701

SDG NO. : 14J225
Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPK001WB	1	NA	11/04/1418:03	11/03/1410:00	RK04019A	RK04016A	CPK001W	Method Blank
LCS1W	CPK001WL	1	NA	11/04/1418:21	11/03/1410:00	RK04020A	RK04016A	CPK001W	Lab Control Sample (LCS)
LCD1W	CPK001WC	1	NA	11/04/1418:40	11/03/1410:00	RK04021A	RK04016A	CPK001W	LCS Duplicate
201410290482	J225-01	1.09	NA	11/04/1418:58	11/03/1410:00	RK04022A	RK04016A	CPK001W	Field Sample
201410290483	J225-02	1.14	NA	11/04/1419:17	11/03/1410:00	RK04023A	RK04016A	CPK001W	Field Sample
201410290484	J225-03	0.95	NA	11/04/1419:35	11/03/1410:00	RK04024A	RK04016A	CPK001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 608
PESTICIDES

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290482	Date Analyzed: 11/04/14 18:58
Lab Samp ID: J225-01	Dilution Factor: 1.09
Lab File ID: RK04022A	Matrix : WATER
Ext Btch ID: CPK001W	% Moisture : NA
Calib. Ref.: RK04016A	Instrument ID : F9

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ALPHA-BHC	(ND) | ND	0.11	0.011 | 0.011
GAMMA-BHC (LINDANE)	(ND) | ND	0.11	0.011 | 0.011
BETA-BHC	(ND) | 0.12	0.11	0.011 | 0.011
HEPTACHLOR	(ND) | ND	0.11	0.011 | 0.011
DELTA-BHC	(ND) | ND	0.11	0.011 | 0.011
ALDRIN	(ND) | 0.014J	0.11	0.011 | 0.011
HEPTACHLOR EPOXIDE	(ND) | ND	0.11	0.011 | 0.011
GAMMA-CHLORDANE	(ND) | ND	0.11	0.011 | 0.011
ALPHA-CHLORDANE	(ND) | ND	0.11	0.011 | 0.011
ENDOSULFAN I	(ND) | ND	0.11	0.011 | 0.011
4,4'-DDE	(ND) | ND	0.11	0.011 | 0.011
DIELDRIN	(ND) | ND	0.11	0.011 | 0.011
ENDRIN	(ND) | ND	0.11	0.011 | 0.011
4,4'-DDD	(ND) | ND	0.11	0.011 | 0.011
ENDOSULFAN II	(ND) | ND	0.11	0.011 | 0.011
4,4'-DDT	(ND) | ND	0.11	0.011 | 0.011
ENDRIN ALDEHYDE	(ND) | ND	0.11	0.011 | 0.011
ENDOSULFAN SULFATE	(ND) | ND	0.11	0.011 | 0.011
ENDRIN KETONE	(ND) | ND	0.11	0.011 | 0.011
METHOXYCHLOR	(ND) | ND	1.1	0.11 | 0.11
TOXAPHENE	(ND) | ND	2.2	0.55 | 0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.2932 | (0.3330)	0.4360	67.3 | (76.4)	30-140
DECACHLOROBIPHENYL	0.3534 | (0.3732)	0.4360	81.0 | (85.6)	60-130

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

METHOD 608
PESTICIDES

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290483	Date Analyzed: 11/04/14 19:17
Lab Samp ID: J225-02	Dilution Factor: 1.14
Lab File ID: RK04023A	Matrix : WATER
Ext Btch ID: CPK001W	% Moisture : NA
Calib. Ref.: RK04016A	Instrument ID : F9

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ALPHA-BHC	(ND) | ND	0.11	0.011 | 0.011
GAMMA-BHC (LINDANE)	(ND) | ND	0.11	0.011 | 0.011
BETA-BHC	(ND) | 0.40	0.11	0.011 | 0.011
HEPTACHLOR	(ND) | ND	0.11	0.011 | 0.011
DELTA-BHC	(ND) | ND	0.11	0.011 | 0.011
ALDRIN	(ND) | 0.031J	0.11	0.011 | 0.011
HEPTACHLOR EPOXIDE	(ND) | (0.027J)	0.11	0.011 | 0.011
GAMMA-CHLORDANE	(ND) | ND	0.11	0.011 | 0.011
ALPHA-CHLORDANE	(ND) | ND	0.11	0.011 | 0.011
ENDOSULFAN I	(ND) | ND	0.11	0.011 | 0.011
4,4'-DDE	(ND) | ND	0.11	0.011 | 0.011
DIELDRIN	(ND) | ND	0.11	0.011 | 0.011
ENDRIN	(ND) | ND	0.11	0.011 | 0.011
4,4'-DDD	(ND) | ND	0.11	0.011 | 0.011
ENDOSULFAN II	(ND) | ND	0.11	0.011 | 0.011
4,4'-DDT	(ND) | ND	0.11	0.011 | 0.011
ENDRIN ALDEHYDE	(ND) | ND	0.11	0.011 | 0.011
ENDOSULFAN SULFATE	(ND) | ND	0.11	0.011 | 0.011
ENDRIN KETONE	(ND) | ND	0.11	0.011 | 0.011
METHOXYCHLOR	(ND) | ND	1.1	0.11 | 0.11
TOXAPHENE	(ND) | ND	2.3	0.57 | 0.57

SURROGATE PARAMETERS	RESULTS	SPK AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.3276 | (0.3685)	0.4560	71.8 | (80.8)	30-140
DECACHLOROBIPHENYL	0.3629 | (0.3824)	0.4560	79.6 | (83.9)	60-130

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

METHOD 608
PESTICIDES

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290484	Date Analyzed: 11/04/14 19:35
Lab Samp ID: J225-03	Dilution Factor: 0.95
Lab File ID: RK04024A	Matrix : WATER
Ext Btch ID: CPK001W	% Moisture : NA
Calib. Ref.: RK04016A	Instrument ID : F9

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ALPHA-BHC	(ND) | ND	0.095	0.0095 | 0.0095
GAMMA-BHC (LINDANE)	(ND) | ND	0.095	0.0095 | 0.0095
BETA-BHC	(ND) | ND	0.095	0.0095 | 0.0095
HEPTACHLOR	(ND) | ND	0.095	0.0095 | 0.0095
DELTA-BHC	(ND) | ND	0.095	0.0095 | 0.0095
ALDRIN	(ND) | 0.030J	0.095	0.0095 | 0.0095
HEPTACHLOR EPOXIDE	(ND) | ND	0.095	0.0095 | 0.0095
GAMMA-CHLORDANE	(ND) | ND	0.095	0.0095 | 0.0095
ALPHA-CHLORDANE	(ND) | ND	0.095	0.0095 | 0.0095
ENDOSULFAN I	(ND) | ND	0.095	0.0095 | 0.0095
4,4'-DDE	(ND) | ND	0.095	0.0095 | 0.0095
DIELDRIN	(ND) | ND	0.095	0.0095 | 0.0095
ENDRIN	(ND) | ND	0.095	0.0095 | 0.0095
4,4'-DDD	(ND) | ND	0.095	0.0095 | 0.0095
ENDOSULFAN II	(ND) | ND	0.095	0.0095 | 0.0095
4,4'-DDT	(ND) | ND	0.095	0.0095 | 0.0095
ENDRIN ALDEHYDE	(ND) | ND	0.095	0.0095 | 0.0095
ENDOSULFAN SULFATE	(ND) | ND	0.095	0.0095 | 0.0095
ENDRIN KETONE	(ND) | ND	0.095	0.0095 | 0.0095
METHOXYCHLOR	(ND) | ND	0.95	0.095 | 0.095
TOXAPHENE	(ND) | ND	1.9	0.48 | 0.48

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.2815 | (0.3301)	0.3800	74.1 | (86.9)	30-140
DECACHLOROBIPHENYL	0.2987 | (0.3163)	0.3800	78.6 | (83.2)	60-130

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

QC SUMMARIES

METHOD 608
PESTICIDES

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 505701	Date Received: 11/03/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: MBLK1W	Date Analyzed: 11/04/14 18:03
Lab Samp ID: CPK001WB	Dilution Factor: 1
Lab File ID: RK04019A	Matrix : WATER
Ext Btch ID: CPK001W	% Moisture : NA
Calib. Ref.: RK04016A	Instrument ID : F9

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ALPHA-BHC	(ND) | ND	0.10	0.010 | 0.010
GAMMA-BHC (LINDANE)	(ND) | ND	0.10	0.010 | 0.010
BETA-BHC	(ND) | ND	0.10	0.010 | 0.010
HEPTACHLOR	(ND) | ND	0.10	0.010 | 0.010
DELTA-BHC	(ND) | ND	0.10	0.010 | 0.010
ALDRIN	(ND) | ND	0.10	0.010 | 0.010
HEPTACHLOR EPOXIDE	(ND) | ND	0.10	0.010 | 0.010
GAMMA-CHLORDANE	(ND) | ND	0.10	0.010 | 0.010
ALPHA-CHLORDANE	(ND) | ND	0.10	0.010 | 0.010
ENDOSULFAN I	(ND) | ND	0.10	0.010 | 0.010
4,4'-DDE	(ND) | ND	0.10	0.010 | 0.010
DIELDRIN	(ND) | ND	0.10	0.010 | 0.010
ENDRIN	(ND) | ND	0.10	0.010 | 0.010
4,4'-DDD	(ND) | ND	0.10	0.010 | 0.010
ENDOSULFAN II	(ND) | ND	0.10	0.010 | 0.010
4,4'-DDT	(ND) | ND	0.10	0.010 | 0.010
ENDRIN ALDEHYDE	(ND) | ND	0.10	0.010 | 0.010
ENDOSULFAN SULFATE	(ND) | ND	0.10	0.010 | 0.010
ENDRIN KETONE	(ND) | ND	0.10	0.010 | 0.010
METHOXYCHLOR	(ND) | ND	1.0	0.10 | 0.10
TOXAPHENE	(ND) | ND	2.0	0.50 | 0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.2630 | (0.2795)	0.4000	65.7 | (69.9)	30-130
DECACHLOROBIPHENYL	0.3063 | (0.3216)	0.4000	76.6 | (80.4)	60-130

RL : Reporting limit
Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 505701
BATCH NO.: 14J225
METHOD: METHOD 608

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: CPK001WB CPK001WL CPK001WC
LAB FILE ID: RK04019A RK04020A RK04021A
DATE EXTRACTED: 11/03/1410:00 11/03/1410:00 11/03/1410:00 DATE COLLECTED: NA
DATE ANALYZED: 11/04/1418:03 11/04/1418:21 11/04/1418:40 DATE RECEIVED: 11/03/14
PREP. BATCH: CPK001W CPK001W CPK001W
CALIB. REF: RK04016A RK04016A RK04016A

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
gamma-BHC (Lindane)	(ND)|ND	0.200	0.153|(0.167)	76|(84)	0.200	0.156|(0.163)	78|(82)	2|(2)	70-130	30
Heptachlor	(ND)|ND	0.200	0.154|(0.162)	77|(81)	0.200	0.153|(0.166)	76|(83)	1|(2)	60-130	30
Aldrin	(ND)|ND	0.200	0.157|(0.204)	78|(102)	0.200	0.161|(0.184)	80|(92)	3|(10)	70-130	30
Dieldrin	(ND)|ND	0.200	0.168|(0.170)	84|(85)	0.200	0.169|(0.170)	84|(85)	1|(0)	70-140	30
Endrin	(ND)|ND	0.200	0.166|(0.170)	83|(85)	0.200	0.168|(0.171)	84|(86)	1|(1)	70-140	30
4,4'-DDT	(ND)|ND	0.200	(0.176)|0.175	(88)|88	0.200	(0.179)|0.174	(90)|87	(2)|1	70-140	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	0.4000	0.2906|(0.3073)	72.7|(76.8)	0.4000	0.2751|(0.2930)	68.8|(73.3)	30-130
Decachlorobiphenyl	0.4000	0.3227|(0.3426)	80.7|(85.6)	0.4000	0.3187|(0.3370)	79.7|(84.2)	60-130

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

505701

METHOD 608
PCBs

SDG#: 14J225

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 505701

SDG : 14J225

METHOD 608
PCBS

A total of three (3) water samples were received on 10/31/14 for PCBs analysis, Method 608 in accordance with USEPA Wastewater Test Methods at 40 CFR Part 136.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for 60K001WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits. Refer to sample result forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
PCBs

Client : EUROFINS EATON ANALYTICAL
Project : 505701

SDG NO. : 14J225
Instrument ID : GCT071

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPK001WB	1	NA	11/05/1420:15	11/03/1410:00	KK05034A	KK05033A	CPK001W	Method Blank
LCS1W	60K001WL	1	NA	11/05/1420:35	11/03/1410:00	KK05035A	KK05033A	CPK001W	Lab Control Sample (LCS)
LCD1W	60K001WC	1	NA	11/05/1420:55	11/03/1410:00	KK05036A	KK05033A	CPK001W	LCS Duplicate
201410290482	J225-01	1.09	NA	11/05/1421:15	11/03/1410:00	KK05037A	KK05033A	CPK001W	Field Sample
201410290483	J225-02	1.14	NA	11/05/1421:36	11/03/1410:00	KK05038A	KK05033A	CPK001W	Field Sample
201410290484	J225-03	0.95	NA	11/05/1421:56	11/03/1410:00	KK05039A	KK05033A	CPK001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 608
PCBs

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290482	Date Analyzed: 11/05/14 21:15
Lab Samp ID: J225-01	Dilution Factor: 1.09
Lab File ID: KK05037A	Matrix : WATER
Ext Btch ID: CPK001W	% Moisture : NA
Calib. Ref.: KK05033A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
PCB-1016	(ND)|ND	1.1	0.55|0.55
PCB-1221	(ND)|ND	1.1	0.55|0.55
PCB-1232	(ND)|ND	1.1	0.55|0.55
PCB-1242	(ND)|ND	1.1	0.55|0.55
PCB-1248	(ND)|ND	1.1	0.55|0.55
PCB-1254	(ND)|ND	1.1	0.55|0.55
PCB-1260	(ND)|ND	1.1	0.55|0.55

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.3609|(0.3717)	0.4360	82.8|(85.3)	40-140
DECACHLOROBIPHENYL	(0.5131)|0.4842	0.4360	(118)|111	60-130

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD 608
PCBs

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290483	Date Analyzed: 11/05/14 21:36
Lab Samp ID: J225-02	Dilution Factor: 1.14
Lab File ID: KK05038A	Matrix : WATER
Ext Btch ID: CPK001W	% Moisture : NA
Calib. Ref.: KK05033A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
PCB-1016	(NO) | ND	1.1	0.57 | 0.57
PCB-1221	(ND) | ND	1.1	0.57 | 0.57
PCB-1232	(ND) | ND	1.1	0.57 | 0.57
PCB-1242	(ND) | ND	1.1	0.57 | 0.57
PCB-1248	(ND) | ND	1.1	0.57 | 0.57
PCB-1254	(ND) | ND	1.1	0.57 | 0.57
PCB-1260	(ND) | ND	1.1	0.57 | 0.57

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.4008 | (0.4157)	0.4560	87.9 | (91.2)	40-140
DECACHLOROBIPHENYL	(0.5248) | 0.4859	0.4560	(115) | 107	60-130

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

METHOD 608
PCBs

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290484	Date Analyzed: 11/05/14 21:56
Lab Samp ID: J225-03	Dilution Factor: 0.95
Lab File ID: KK05039A	Matrix : WATER
Ext Btch ID: CPK001W	% Moisture : NA
Calib. Ref.: KK05033A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
PCB-1016	(ND) | ND	0.95	0.48 | 0.48
PCB-1221	(ND) | ND	0.95	0.48 | 0.48
PCB-1232	(ND) | ND	0.95	0.48 | 0.48
PCB-1242	(ND) | ND	0.95	0.48 | 0.48
PCB-1248	(ND) | ND	0.95	0.48 | 0.48
PCB-1254	(ND) | ND	0.95	0.48 | 0.48
PCB-1260	(ND) | ND	0.95	0.48 | 0.48

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.3432 | (0.3571)	0.3800	90.3 | (94.0)	40-140
DECACHLOROBIPHENYL	(0.4382) | 0.4059	0.3800	(115) | 107	60-130

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

QC SUMMARIES

METHOD 608
PCBs

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 505701	Date Received: 11/03/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: MBLK1W	Date Analyzed: 11/05/14 20:15
Lab Samp ID: CPK001WB	Dilution Factor: 1
Lab File ID: KK05034A	Matrix : WATER
Ext Btch ID: CPK001W	% Moisture : NA
Calib. Ref.: KK05033A	Instrument ID : GCT071

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
PCB-1016	(ND)|ND	1.0	0.50|0.50
PCB-1221	(ND)|ND	1.0	0.50|0.50
PCB-1232	(ND)|ND	1.0	0.50|0.50
PCB-1242	(ND)|ND	1.0	0.50|0.50
PCB-1248	(ND)|ND	1.0	0.50|0.50
PCB-1254	(ND)|ND	1.0	0.50|0.50
PCB-1260	(ND)|ND	1.0	0.50|0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	0.3109|(0.3137)	0.4000	77.7|(78.4)	20-140
DECACHLOROBIPHENYL	(0.4410)|0.4092	0.4000	(110)|102	70-130

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )
* Out side of QC Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 505701
BATCH NO.: 14J225
METHOD: METHOD 608

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: CPK001WB 60K001WL 60K001WC
LAB FILE ID: KK05034A KK05035A KK05036A
DATE EXTRACTED: 11/03/1410:00 11/03/1410:00 11/03/1410:00 DATE COLLECTED: NA
DATE ANALYZED: 11/05/1420:15 11/05/1420:35 11/05/1420:55 DATE RECEIVED: 11/03/14
PREP. BATCH: CPK001W CPK001W CPK001W
CALIB. REF: KK05033A KK05033A KK05033A

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
PCB-1016	(ND) | ND	5.00	(5.25) | 4.63	(105) | 93	5.00	(5.59) | 5.02	(112) | 100	(6) | 8	60-140	30
PCB-1260	(ND) | ND	5.00	5.28 | (5.32)	106 | (106)	5.00	5.54 | (5.58)	111 | (112)	5 | (5)	70-140	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
Tetrachloro-m-xylene	0.4000	0.3602 | (0.3636)	90.0 | (90.9)	0.4000	0.3488 | (0.3569)	87.2 | (89.2)	20-140
Decachlorobiphenyl	0.4000	(0.4796) | 0.4456	(120) | 111	0.4000	(0.4729) | 0.4393	(118) | 110	70-130

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

505701

METHOD 3520C/8141A
ORGANOPHOSPHOROUS COMPOUNDS BY GC

SDG#: 14J225

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project : 505701

SDG : 14J225

METHOD 3520C/8141A
ORGANOPHOSPHOROUS COMPOUNDS BY GC

A total of three (3) water samples were received on 10/31/14 for Pesticides Organophosphorus analysis, Method 3520C/8141A in accordance with USEPA SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was analyzed at the frequency required by the project. For this SDG, one method blank was analyzed with the samples. Results were compliant to project requirement.

Lab Control Sample
A set of LCS/LCD was analyzed with the samples in this SDG.
Percent recoveries for NPK001WL/C were all within QC limits.

Matrix QC Sample
No matrix QC sample was designated in this SDG.

Surrogate
Surrogates were added on QC and field samples. Surrogate recoveries were within project QC limits. Refer to sample result forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. All project requirements were met; otherwise, anomalies were discussed within the associated QC parameter.

LAB CHRONICLE
ORGANOPHOSPHOROUS COMPOUNDS BY GC

Client : EUROFINS EATON ANALYTICAL
Project : 505701

SDG NO. : 14J225
Instrument ID : GCT012

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	NPK001WB	1	NA	11/04/1412:51	11/03/1410:00	ZK04003A	ZK04002A	NPK001W	Method Blank
LCS1W	NPK001WL	1	NA	11/04/1413:26	11/03/1410:00	ZK04004A	ZK04002A	NPK001W	Lab Control Sample (LCS)
LCD1W	NPK001WC	1	NA	11/04/1414:01	11/03/1410:00	ZK04005A	ZK04002A	NPK001W	LCS Duplicate
201410290482	J225-01	1	NA	11/04/1415:08	11/03/1410:00	ZK04006A	ZK04002A	NPK001W	Field Sample
201410290483	J225-02	1.03	NA	11/04/1416:53	11/03/1410:00	ZK04009A	ZK04008A	NPK001W	Field Sample
201410290484	J225-03	0.93	NA	11/04/1417:28	11/03/1410:00	ZK04010A	ZK04008A	NPK001W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8141A
ORGANOPHOSPHOROUS COMPOUNDS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290482	Date Analyzed: 11/04/14 15:08
Lab Samp ID: J225-01	Dilution Factor: 1
Lab File ID: ZK04006A	Matrix : WATER
Ext Btch ID: NPK001W	% Moisture : NA
Calib. Ref.: ZK04002A	Instrument ID : GCT012

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
DICHLORVOS	(ND) | ND	1.0	0.50 | 0.50
MEVINPHOS	(ND) | ND	1.0	0.50 | 0.50
DEMETON	(ND) | ND	1.0	0.50 | 0.50
ETHOPROP	(ND) | ND	1.0	0.50 | 0.50
PHORATE	(ND) | ND	1.0	0.50 | 0.50
NALED	(ND) | ND	1.0	0.50 | 0.50
DIAZINON	(ND) | ND	1.0	0.50 | 0.50
DISULFOTON	(ND) | ND	1.0	0.50 | 0.50
RONNEL	(ND) | ND	1.0	0.50 | 0.50
CHLORPYRIFOS	(ND) | ND	1.0	0.50 | 0.50
FENTHION	(ND) | ND	1.0	0.50 | 0.50
TRICHLORONATE	(ND) | ND	1.0	0.50 | 0.50
METHYL PARATHION	(ND) | ND	1.0	0.50 | 0.50
TOKUTHION	(ND) | ND	1.0	0.50 | 0.50
STIROPHOS	(ND) | ND	1.0	0.50 | 0.50
BOLSTAR	(ND) | ND	1.0	0.50 | 0.50
FENSULFOTHION	(ND) | ND	1.0	0.50 | 0.50
AZINPHOS-METHYL	(ND) | ND	1.0	0.50 | 0.50
COUMAPHOS	(ND) | ND	1.0	0.50 | 0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TRIBUTYL PHOSPHATE	1.220 | (1.584)	1.500	81.3 | (106)	30-130
TRIPHENYL PHOSPHATE	1.354 | (1.840)	1.500	90.3 | (123)	50-130

METHOD 3520C/8141A
ORGANOPHOSPHOROUS COMPOUNDS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290483	Date Analyzed: 11/04/14 16:53
Lab Samp ID: J225-02	Dilution Factor: 1.03
Lab File ID: ZK04009A	Matrix : WATER
Ext Btch ID: NPK001W	% Moisture : NA
Calib. Ref.: ZK04008A	Instrument ID : GCT012

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
DICHLORVOS	(ND) | ND	1.0	0.52 | 0.52
MEVINPHOS	(ND) | ND	1.0	0.52 | 0.52
DEMETON	(ND) | ND	1.0	0.52 | 0.52
ETHOPROP	(ND) | ND	1.0	0.52 | 0.52
PHORATE	(ND) | ND	1.0	0.52 | 0.52
NALED	(ND) | ND	1.0	0.52 | 0.52
DIAZINON	(ND) | ND	1.0	0.52 | 0.52
DISULFOTON	(ND) | ND	1.0	0.52 | 0.52
RONNEL	(ND) | ND	1.0	0.52 | 0.52
CHLORPYRIFOS	(ND) | ND	1.0	0.52 | 0.52
FENTHION	(ND) | ND	1.0	0.52 | 0.52
TRICHLORONATE	(ND) | ND	1.0	0.52 | 0.52
METHYL PARATHION	(ND) | ND	1.0	0.52 | 0.52
TOKUTHION	(ND) | ND	1.0	0.52 | 0.52
STIROPHOS	(ND) | ND	1.0	0.52 | 0.52
BOLSTAR	(ND) | ND	1.0	0.52 | 0.52
FENSULFOTHION	(ND) | ND	1.0	0.52 | 0.52
AZINPHOS-METHYL	(ND) | ND	1.0	0.52 | 0.52
COUMAPHOS	(ND) | ND	1.0	0.52 | 0.52

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TRIBUTYL PHOSPHATE	(1.159) | 1.084	1.545	(75.0) | 70.1	30-130
TRIPHENYL PHOSPHATE	(1.269) | 1.130	1.545	(82.1) | 73.1	50-130

METHOD 3520C/8141A
ORGANOPHOSPHOROUS COMPOUNDS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: 10/29/14
Project : 505701	Date Received: 10/31/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: 201410290484	Date Analyzed: 11/04/14 17:28
Lab Samp ID: J225-03	Dilution Factor: 0.93
Lab File ID: ZK04010A	Matrix : WATER
Ext Btch ID: NPK001W	% Moisture : NA
Calib. Ref.: ZK04008A	Instrument ID : GCT012

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
DICHLORVOS	(ND) | ND	0.93	0.47 | 0.47
MEVINPHOS	(ND) | ND	0.93	0.47 | 0.47
DEMETON	(ND) | ND	0.93	0.47 | 0.47
ETHOPROP	(ND) | ND	0.93	0.47 | 0.47
PHORATE	(ND) | ND	0.93	0.47 | 0.47
NALED	(ND) | ND	0.93	0.47 | 0.47
DIAZINON	(ND) | ND	0.93	0.47 | 0.47
DISULFOTON	(ND) | ND	0.93	0.47 | 0.47
RONNEL	(ND) | ND	0.93	0.47 | 0.47
CHLORPYRIFOS	(ND) | ND	0.93	0.47 | 0.47
FENTHION	(ND) | ND	0.93	0.47 | 0.47
TRICHLORONATE	(ND) | ND	0.93	0.47 | 0.47
METHYL PARATHION	(ND) | ND	0.93	0.47 | 0.47
TOKUTHION	(ND) | ND	0.93	0.47 | 0.47
STIROPHOS	(ND) | ND	0.93	0.47 | 0.47
BOLSTAR	(ND) | ND	0.93	0.47 | 0.47
FENSULFOTHION	(ND) | ND	0.93	0.47 | 0.47
AZINPHOS-METHYL	(ND) | ND	0.93	0.47 | 0.47
COUMAPHOS	(ND) | ND	0.93	0.47 | 0.47

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TRIBUTYL PHOSPHATE	(1.246) | 1.162	1.395	(89.3) | 83.3	30-130
TRIPHENYL PHOSPHATE	(1.310) | 1.242	1.395	(93.9) | 89.0	50-130

QC SUMMARIES

METHOD 3520C/8141A
ORGANOPHOSPHOROUS COMPOUNDS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 505701	Date Received: 11/03/14
Batch No. : 14J225	Date Extracted: 11/03/14 10:00
Sample ID: MBLK1W	Date Analyzed: 11/04/14 12:51
Lab Samp ID: NPK001WB	Dilution Factor: 1
Lab File ID: ZK04003A	Matrix : WATER
Ext Btch ID: NPK001W	% Moisture : NA
Calib. Ref.: ZK04002A	Instrument ID : GCT012

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
DICHLORVOS	(ND) | ND	1.0	0.50 | 0.50
MEVINPHOS	(ND) | ND	1.0	0.50 | 0.50
DEMETON	(ND) | ND	1.0	0.50 | 0.50
ETHOPROP	(ND) | ND	1.0	0.50 | 0.50
PHORATE	(ND) | ND	1.0	0.50 | 0.50
NALED	(ND) | ND	1.0	0.50 | 0.50
DIAZINON	(ND) | ND	1.0	0.50 | 0.50
DISULFOTON	(ND) | ND	1.0	0.50 | 0.50
RONNEL	(ND) | ND	1.0	0.50 | 0.50
CHLORPYRIFOS	(ND) | ND	1.0	0.50 | 0.50
FENTHION	(ND) | ND	1.0	0.50 | 0.50
TRICHLORONATE	(ND) | ND	1.0	0.50 | 0.50
METHYL PARATHION	(ND) | ND	1.0	0.50 | 0.50
TOKUTHION	(ND) | ND	1.0	0.50 | 0.50
STIROPHOS	(ND) | ND	1.0	0.50 | 0.50
BOLSTAR	(ND) | ND	1.0	0.50 | 0.50
FENSULFOTHION	(ND) | ND	1.0	0.50 | 0.50
AZINPHOS-METHYL	(ND) | ND	1.0	0.50 | 0.50
COUMAPHOS	(ND) | ND	1.0	0.50 | 0.50

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TRIBUTYL PHOSPHATE	1.075 | (1.159)	1.500	71.7 | (77.3)	30-130
TRIPHENYL PHOSPHATE	1.207 | (1.347)	1.500	80.5 | (89.8)	50-130

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 505701
BATCH NO.: 14J225
METHOD: METHOD 3520C/8141A

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: NPK001WB NPK001WL NPK001WC
LAB FILE ID: ZK04003A ZK04004A ZK04005A
DATE EXTRACTED: 11/03/1410:00 11/03/1410:00 11/03/1410:00 DATE COLLECTED: NA
DATE ANALYZED: 11/04/1412:51 11/04/1413:26 11/04/1414:01 DATE RECEIVED: 11/03/14
PREP. BATCH: NPK001W NPK001W NPK001W
CALIB. REF: ZK04002A ZK04002A ZK04002A

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Phorate	(ND) | ND	1.50	0.896J | (1.02)	60 | (68)	1.50	0.805J | (0.906J)	54 | (60)	11 | (12)	10-130	30
Ronnel	(ND) | ND	1.50	1.21 | (1.30)	81 | (87)	1.50	1.11 | (1.15)	74 | (77)	9 | (12)	30-140	30
Chlorpyrifos	(ND) | ND	1.50	1.31 | (1.40)	87 | (93)	1.50	1.21 | (1.25)	81 | (83)	8 | (11)	40-140	30
Tokuthion	(ND) | ND	1.50	1.34 | (1.36)	89 | (91)	1.50	(1.24) | 1.24	(83) | 83	(8) | 9	40-130	30
Bolstar	(ND) | ND	1.50	(1.37) | 1.17	(91) | 78	1.50	(1.31) | 1.15	(87) | 77	(4) | 2	20-130	30

SURROGATE PARAMETER	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	QC LIMIT (%)
Tributyl Phosphate	1.500	1.213 | (1.427)	80.9 | (95.1)	1.500	1.022 | (1.121)	68.1 | (74.7)	30-130
Triphenyl Phosphate	1.500	(1.507) | 1.507	(100) | 100	1.500	1.255 | (1.471)	83.7 | (98.1)	50-130